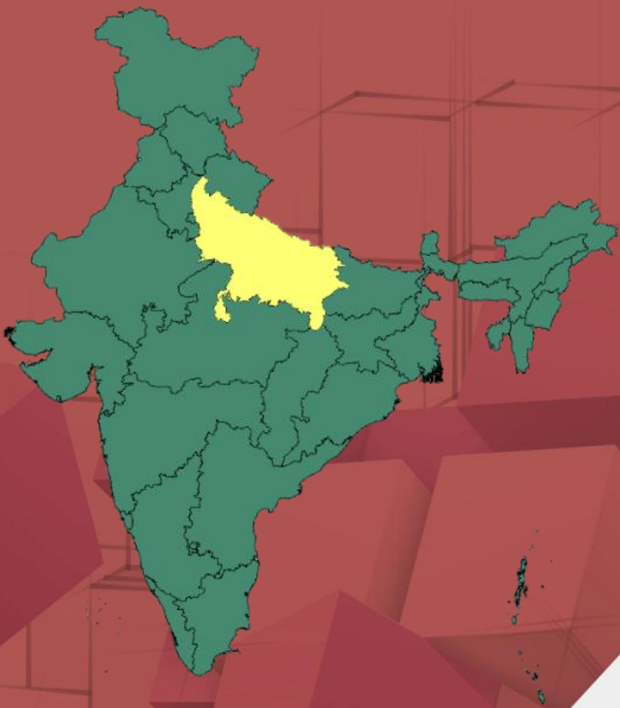

Final Geological Report (GR) on
“Reconnaissance Survey (G4 Stage) for Mailar Base Metal - Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh”

October, 2025

Geovale Services Pvt. Ltd.

Earth System Science for sustainable Development

GEOVALE SERVICES
SOLUTIONS TO GLOBAL MINERAL EXPLORATION & MINING INDUSTRY

Project Title: Reconnaissance Survey (G4 Stage) for Mailar Base Metal - Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh.

Project code: 23/446/2024-NMET/601

Project Timeline: 12th March 2024 to 31st October 2025

Project Location: Mailar, Lalitpur District, Uttar Pradesh

National Mineral Exploration and Development Trust

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1. Summary (Hindi and English)

कार्यकारी सारांश (EXECUTIVE SUMMARY)

1. पृष्ठभूमि, वित्तपोषण और उद्देश्य

उत्तर प्रदेश के ललितपुर ज़िले में स्थित लगभग 206 किमी² के मेलार G4 अन्वेषण परियोजना (SOI टोपोशीट 54L/5) को Geovale Services Pvt. Ltd. द्वारा राष्ट्रीय खनिज अन्वेषण एवं विकास ट्रस्ट (NMEDT) के वित्तपोषण से एक पायलट-स्तर अध्ययन के रूप में संपादित किया गया।

परियोजना का मुख्य उद्देश्य केवल ज्ञात तांबे (Cu) की घटनाओं को आगे बढ़ाना नहीं था, बल्कि एक स्पष्ट वैचारिक अनुमानों का परीक्षण करना था:

1. पश्चिमी बुन्देलखंड क्रेटन में महाद्वीपीय-आर्क प्रकृति का हाइड्रोथर्मल पोर्फिरी Cu–Mo–Au सिस्टम उपस्थित है।

2. इस व्यापक सिस्टम के भीतर, दो छोटे "फर्टाइल ज़ोन"—दक्षिण में मेलार पायरोफिलाइट क्षेत्र और उत्तर में गुलेंदा–बुरेरा क्षेत्र में एपिथर्मल-शैली सिस्टम—पहले से उपलब्ध डेटा के आधार पर अनुमानित किए जा सकते हैं।

ये निष्कर्ष मिनरल सिस्टम एनालिसिस (MSA) द्वारा पुराने GSI मानचित्रण, NGCM भू-रसायन, और NAGMP एयरोमैग्नेटिक डेटा से निकले।

NMEDT के सहयोग से Geovale ने पहली बार एक व्यवस्थित MSA-आधारित अन्वेषण कार्यक्रम—दूरस्थ भविष्यवाणी, भूमि सत्यापन और चयनित स्काउट ड्रिलिंग सहित—G4 स्तर पर लागू किया।

2. संकल्पनात्मक आधार: पुराने डेटा का मिनरल सिस्टम विश्लेषण (MSA)

MSA ढांचे ने चार मुख्य शर्तों को आवश्यक बताया:

- उपजाऊ, ऑक्सीकृत, जलयुक्त मैग्मा

- बड़े पैमाने पर हाइड्रोथर्मल द्रव प्रवाह
- प्रभावी संरचनात्मक/लिथोलॉजिकल मार्ग
- धातु संचयन के लिए उपयुक्त ट्रैप

पुराने डेटा पहले से ही पश्चिमी बुन्देलखंड में इन सभी का संकेत देते थे।

सबसे महत्वपूर्ण कमी थी—एक स्पष्ट वॉल्केनो–प्लूटोनिक केंद्र की पहचान, जो पोर्फिरी सिस्टम को संचालित करता।

इस परियोजना ने यह "लापता तत्व" खोज निकाला:

- विस्तृत फेल्सिक ज्वालामुखीय–उपज्वालामुखीय इकाइयाँ
- सल्फाइड-समृद्ध डियोराइट स्टॉक
- उच्च-Mg बेसाल्टिक डाइक

इससे पहली बार पश्चिमी बुन्देलखंड के लिए एकीकृत मैग्मैटिक–हाइड्रोथर्मल मॉडल तैयार हो सका।

3. कार्य कार्यक्रम एवं विधियाँ

G4 कार्यक्रम तीन स्तरों पर आधारित था:

1. दूरसंवेदी आधारित भविष्यवाणी (RED वर्गीकरण)
2. भूमि आधारित सत्यापन
3. स्काउट ड्रिलिंग

मुख्य उपलब्धियाँ:

- 16 RMI डोनट-आकार की एनॉमली—जो पोर्फिरी प्रणाली के विशिष्ट "मैग्नेटाइट-डिस्ट्रक्टिव" केंद्रों को दर्शाती हैं।
- पहले के 1:50,000 मानचित्रों में छूटे ~40 किमी² विशाल फेल्सिक ज्वालामुखीय–उपज्वालामुखीय चट्टानों की खोज।
- दो प्रमुख अल्टरेशन डोमेन की पहचान:
  - o गुलेंदा (उत्तर) – गहरी Ca–Na और पोटैसिक अल्टरेशन
  - o मेलार (दक्षिण) – उच्च-सल्फिडेशन लिथोकैप व एडवांस्ड आर्जिलिक अल्टरेशन

भू-रसायन ने बेस-मेटल की व्यापक उपस्थिति दर्शाई:

- एपिथर्मल क्वार्ट्ज नसें: Cu ~400–7000 ppm तक
- पायरोफिलाइट खदान: Cu ~5000 ppm
- डियोराइट एवं हाई-Mg डाइक: Cu–Mo–Zn उच्च

भूभौतिकी (GM, VES, SP) ने गहरी सल्फाइडिक/कंडक्टिव ज़ोनों का संकेत दिया।

43 मिनरल एनॉमलस टारगेट्स निर्धारित किए गए, जिनसे तीन प्रमुख लक्ष्यों को ड्रिलिंग हेतु चुना गया।

4. मुख्य भूवैज्ञानिक एवं मिनरल सिस्टम खोजें

सबसे महत्वपूर्ण खोज:

एक बड़ा वॉल्केनो–प्लूटोनिक केंद्र, जो बुन्देलखंड में पहले अज्ञात था।

अल्टरेशन पैटर्न ने एक "टेक्स्टबुक" पोर्फिरी–एपिथर्मल संरचना दर्शाई:

- दक्षिण (मेलार)

- उच्च-सल्फिडेशन लिथोकैप
- एडवांस्ड आर्जिलिक–आर्जिलिक–फिलिक–पोटैसिक अनुक्रम
- सतही स्तर: 1.5–3 किमी

- उत्तर (गुलेंदा)
  - Ca–Na, पोटैसिक अल्टरेशन
  - एपिथर्मल क्वार्ट्ज लोड्स
  - गहरा स्तर: 3–5 किमी

यह क्षेत्र एक ही पोर्फिरी–एपिथर्मल प्रणाली का ऊर्ध्वाधर सेक्शन प्रस्तुत करता है—अत्यंत दुर्लभ विशेषता।

5. लक्ष्य (Targets) एवं स्काउट ड्रिलिंग परिणाम

43 लक्ष्यों में से तीन पर पाँच स्काउट बोरहोल किए गए:

दक्षिण (मेलार लिथोकैप) – BH-01, BH-05

- गहरा पोटैसिक कोर अभी नहीं मिला, परंतु
- मजबूत अल्टरेशन, सल्फाइड संकेत
- Cu–Mo–Ag–Au एनॉमली

उत्तर (गुलेंदा–बुरेरा) – BH-02, BH-03

- BH-02: एपिथर्मल क्वार्ट्ज–सल्फाइड नसों में Cu ~950 ppm, Ag ~50 ppm
- BH-03: दो मजबूत पोलिमेटैलिक ज़ोन—

- Cu 3.1% तक, Mo 13–61 ppm, Zn 400–800 ppm, Sn 92 ppm

ललवोन (BH-04)

- Ag-समृद्ध एपिथर्मल खनिजीकरण

परिणाम:

- पोर्फिरी Cu–Mo–Au प्रणाली की फर्टिलिटी सिद्ध
- एपिथर्मल कैप और गहरे पोटैसिक संकेत स्थापित
- गहरे ड्रिलिंग हेतु स्पष्ट वेक्टर उपलब्ध

6. बुन्देलखंड और भारत के लिए रणनीतिक महत्व

परियोजना ने यह सिद्ध किया कि:

- पश्चिमी बुन्देलखंड में नया पोर्फिरी Cu–Mo–Au जिला विकसित होने की क्षमता है।
- 43 उच्च-प्राथमिकता लक्ष्यों के साथ, भारत के भविष्य के डीप-सीटेड कॉपर अन्वेषण का नया मॉडल स्थापित हुआ।

मेलार क्षेत्र के भूवैज्ञानिक गुण Cadia (Australia) जैसे वैश्विक पोर्फिरी जिलों से मिलते-जुलते हैं—जो राष्ट्रीय स्तर पर बड़े संभावित पोर्फिरी–एपिथर्मल बेल्ट का संकेत देते हैं।

7. सिफारिशें (संक्षेप)

- मेलार लिथोकैप (दक्षिण) और गुलेंदा–बुरेरा एपिथर्मल क्षेत्र (उत्तर) को G3-स्तर ड्रिलिंग तक उन्नत किया जाए।
  - 500–1200 m गहरी दिशात्मक ड्रिलिंग सुझाई जाती है।

- केंद्रीय बेल्ट के RMI डोनट एनॉमली वाले क्षेत्रों को अनदेखा न किया जाए।
- IP/Resistivity, EM, भू-रसायन, मिनरलॉजी और सीमित ट्रेंचिंग से लक्ष्यों को प्री-ड्रिल अवस्था में लाया जाए।
- पूरा बुन्देलखंड—विशेषकर पश्चिमी भाग—मेलेर मॉडल पर आधारित MSA कार्यक्रम से अन्वेषित किया जाए।

8. निष्कर्ष

NMEDT द्वारा वित्तपोषित और Geovale द्वारा संचालित यह परियोजना सिद्ध करती है कि:

- पश्चिमी बुन्देलखंड क्रेटन में एक बड़ा, फर्टाइल, पोर्फिरी Cu–Mo–Au हाइड्रोथर्मल सिस्टम मौजूद है।
- एक नए वॉल्केनो–प्लूटोनिक केंद्र की खोज हुई है।
- 43 लक्ष्यों की पहचान हुई और तीन का सफल ड्रिलिंग परीक्षण किया गया।

यह परियोजना भारत के भविष्य के गहरे कॉपर और क्रिटिकल-मेटल अन्वेषण के लिए एक मजबूत वैज्ञानिक आधार प्रदान करती है।

9. अनुशंसित अन्वेषण ब्लॉक और अगली चरण की रणनीति

Mailar में G4 कार्यक्रम अवधारणात्मक भविष्यवाणी से आगे बढ़कर स्थापित खनिज प्रणाली तक पहुँच गया है, और अंततः G3-स्तर के ठोस निवेश अवसरों के एक समूह में परिवर्तित हुआ है। एकीकृत भूविज्ञान, परिवर्तन (alteration), भू-रसायन (geochemistry) और एयरो-जियोफिज़िक्स के आधार पर परिभाषित 43 अनोमैलस लक्ष्यों में से, अगले चरण के कार्य हेतु आठ परिचालन अन्वेषण ब्लॉकों की पहचान की गई है: **बुरेरा, गुलेंदा, मैलार, राजपुर, जाखोरा, घिसौली, गोरा और सतगट्टा**।

प्रत्येक ब्लॉक उन लक्ष्यों को समूहित करता है जिनका अनागमक (intrusive) और संरचनात्मक ढाँचा समान है, और कई मामलों में इनमें पहले से ही स्काउट ड्रिलहोल मौजूद हैं जो खनिजीकरण की पुष्टि करते हैं या गहराई में खनिजीकरण तक पहुँचने के लिए मज़बूत संकेत प्रदान करते हैं।

उत्तर में स्थित **बुरेरा और गुलेंदा** मुख्य रूप से उच्च-ग्रेड एपिथर्मल क्वार्ट्ज–सल्फ़ाइड शिराओं तथा गहरी EHT संरचनाओं से प्रभुत्वशाली हैं। दक्षिण में स्थित **मैलार** एक बड़े पाइरोफिलाइट लिथोकैप के इर्द-गिर्द केंद्रित है, जो एक ढके हुए पॉर्फिरी कोर के ऊपर स्थित है।

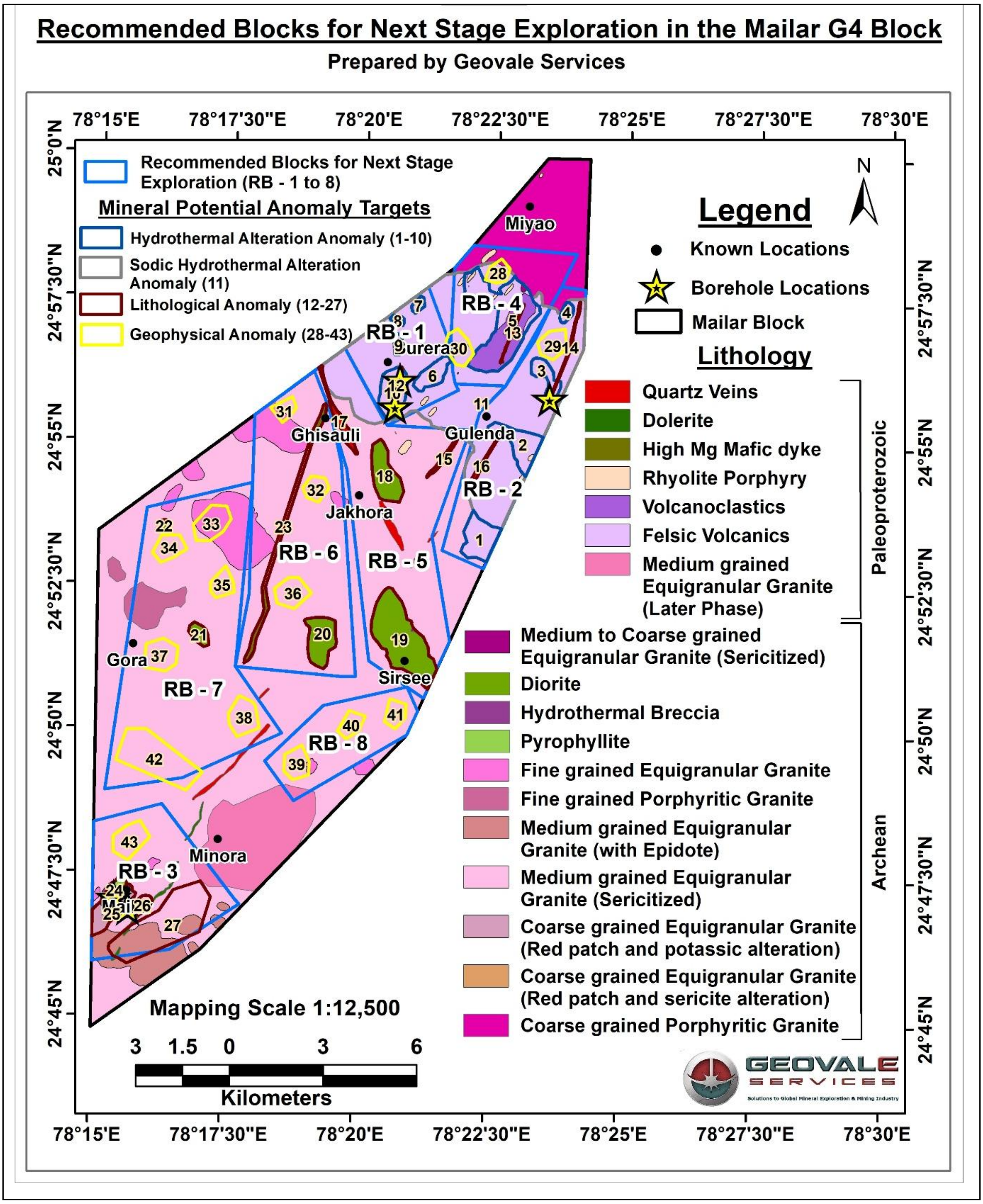
राजपुर उत्तरी फ़ेल्सिक ज्वालामुखीय–उपज्वालामुखीय अनुक्रम को दक्षिण की ओर विस्तारित करता है, जबकि **जाखोरा और घिसौली** केंद्रीय डायोराइट–हाई-Mg डाइक कॉरिडोर को समाहित करते हैं। **गोरा और सतगट्टा** पतले आवरण के नीचे स्थित अतिरिक्त अनागमक कपोलों (intrusive cupolas) के रूप में व्याख्यायित RMI “डोनट” विसंगतियों के समूह को परिभाषित करते हैं। अगले स्तर के खनिज अन्वेषण (जी3 और उससे ऊपर) के लिए आठ अनुशंसित ब्लॉक (आरबी 1-8) नीचे दिए गए हैं।

ब्लॉक	क्षेत्रफल (किमी²)	प्रमुख विशेषताएँ
Burera Block	9	उत्तरी एपिथर्मल कॉरिडोर; फेल्सिक ज्वालामुखीय चट्टानों में सुविकसित क्वार्ट्ज़-सल्फाइड शिराएँ और पोटैसिक हाइड्रोथर्मल परिवर्तन; सतह पर अत्यंत प्रबल भू-रसायन (Cu ~7,000 ppm तक, Mo, Zn, Sn, W); NW–SE प्रवृत्ति की संरचनाएँ जिनमें उच्च ग्राउंड मैग्नेटिक प्रतिक्रिया; दो बोरहोल (BH-02, BH-03) जिनमें बहुधात्विक खनिजीकरण का प्रतिछेदन, Cu ~3% तक और Ag ~50 ppm तक, तथा गहराई के साथ ग्रेड में सुधार।
Gulenda Block	15	एपिथर्मल क्वार्ट्ज़-सल्फाइड शिराएँ और फेल्सिक ज्वालामुखीय चट्टानों में पोटैसिक परिवर्तन; उर्वर सतही भू-रसायन (Cu ~1,500 ppm तक, Mo ~4 ppm); एक-

		दूसरे को काटती हुई NW–SE और N–S मैग्नेटिक लीनामेंट्स, जिनमें कम से कम एक एयरोमैग्नेटिक "डोनट" प्रकार विचलन; एक बोरहोल (BH-04) जिसमें Ag-धारक क्वार्ट्ज़ (Ag ~13 ppm तक) की पुष्टि और डाउन-प्लंज दिशा के लिए वेक्टर प्रदान।
Mailar Block	16	दक्षिणी पाइरोफिलाइट लिथोकैप, जो पोटैसिक ग्रेनाइट के ऊपर विकसित उन्नत-आर्गिलिक परिवर्तन में बना है; सतह पर प्रबल Cu–Mo विसंगतियाँ (Cu ~5,000 ppm तक); पूर्वी भाग में उच्च मैग्नेटिक क्षेत्र जिसमें "डोनट" शैली की विसंगति, जिसे गुप्त पोर्फिरी कोर के रूप में व्याख्यायित किया गया है; दो गहरे बोरहोल (BH-01, BH-05) जिनमें मोटा, परतदार परिवर्तन प्रोफ़ाइल का प्रतिछेदन, गहराई के साथ Sn और Mo में वृद्धि, जो लिथोकैप के नीचे एक सुदृढ़ पोर्फिरी तंत्र का संकेत देती हैं।
Rajpur Block	12	Gulenda फेल्सिक ज्वालामुखीय-सबवॉल्कैनिक पैकेज का विस्तार; पोटैसिक-फिलिक परिवर्तन के साथ एपिथर्मल क्वार्ट्ज़ शिराएँ; सतह पर उच्च Cu (~3,800 ppm तक), Zn और Mo; NW–SE और N–S मैग्नेटिक लीनामेंट्स जिनके साथ अनेक एयरोमैग्नेटिक "डोनट" विचलन, जो अतिरिक्त अंत:प्रवेशी केन्द्रों का संकेत देते हैं; अब तक कोई ड्रिलिंग

		नहीं, परंतु सतही साक्ष्य अत्यंत मजबूत।
Jakhora Block	26	केंद्रीय कॉरिडोर में डाइओराइट अंत:प्रवेशों और क्वार्ट्ज़ शिराओं का प्रभुत्व; सल्फाइड-धारक डाइओराइट की आउटक्रॉप में पुष्टि; डाइओराइट निकायों के साथ मेल खाती प्रबल मैग्नेटिक विसंगति, जो पर्याप्त आकार के मैग्नेटाइट-धारक अंत:प्रवेशों का संकेत देती है; भू-रसायन सीमित, किन्तु हाइड्रोथर्मल सक्रियता के स्पष्ट प्रमाण तथा उत्तर और दक्षिण तंत्रों के बीच एक महत्त्वपूर्ण संरचनात्मक कड़ी।
Ghisauli Block	27	क्षेत्र में सल्फाइड के लक्षणों सहित डाइओराइट और उच्च-Mg मैफिक चट्टानें; संभावित अंत:प्रवेशी कूपोलाओं को दर्शाते कई एयरोमैग्नेटिक "डोनट" और लोब प्रकार विचलन; सतह पर विरल भू-रसायन, परंतु केंद्रीय मैग्मैटिक कॉरिडोर के साथ अनुकूल अंत:प्रवेशी एवं संरचनात्मक ढाँचा।
Gora Block	34	पश्चिमी आवेष्टित पट्टी, जहाँ सतह पर केवल अल्प मात्रा में डाइओराइट दिखाई देता है; आवरण के कारण भू-रसायन लगभग अनुपस्थित; छह स्पष्ट रूप से परिभाषित एयरोमैग्नेटिक "डोनट" विसंगतियाँ, जो गुप्त अंत:प्रवेशी केन्द्रों के समूह और संभावित पोर्फिरी कोर का संकेत देती हैं; उच्च-प्रभाव वाला, परंतु आँकड़ों की कमी युक्त वैचारिक ब्लॉक।

Satgata Block	9	दक्षिण-पश्चिमी आवेष्टित क्षेत्र, जिसकी पहचान लगभग पूर्णतः भूभौतिकीय हस्ताक्षर से; तीन प्रबल एयरोमैग्नेटिक “डोनट” विसंगतियाँ, जिनके लिए वर्तमान में कोई भू-रासायनिक नियंत्रण उपलब्ध नहीं; गहराई में स्थित शुद्ध, भूभौतिक-आधारित पोर्फिरी लक्ष्य का प्रतिनिधित्व करता है और भारत की “डीप टार्गेट” रणनीति के अंतर्गत प्रूफ-ऑफ-कंसेप्ट ड्रिलिंग के लिए प्राथमिक क्षेत्र है।



अगले स्तर के खनिज अन्वेषण (जी3 और उससे ऊपर) के लिए आठ अनुशंसित ब्लॉक (आरबी 1-8)

EXECUTIVE SUMMARY

1. Background, Funding and Objectives

The Mailar G4 exploration project in Lalitpur district, Uttar Pradesh (SOI toposheet 54L/5; ~206 km^2) was undertaken by Geovale Services Pvt. Ltd. as a pilot-scale study funded by the National Mineral Exploration and Development Trust (NMEDT). The core mandate of the project was not simply to pursue known copper showings, but to test a clear conceptual hypothesis: first, that the western Bundelkhand Craton hosts a hydrothermal porphyry Cu–Mo–Au system of continental-arc affinity; and second, that within this broader system, two small "fertile zones" could be predicted from available legacy data—one linked to the Mailar pyrophyllite mine area in the south, and the other to an epithermal-style system in the Gulenda–Burera area in the northern part of the Mailar block.

These predictions emerged from a Mineral Systems Analysis (MSA) of legacy datasets, particularly GSI mapping, NGCM geochemical data and NAGMP aeromagnetics. The legacy information suggested oxidised, hydrous granitoids, widespread hydrothermal quartz–pyrophyllite occurrences, and scattered Cu–Mo–Au anomalies that were compatible with a porphyry-style hydrothermal system but had never been integrated into such a model. NMEDT's funding allowed Geovale to build and implement a conceptual exploration programme explicitly based on MSA: identifying fertile magmas, mapping fluid pathways and structural conduits, locating potential traps, and then designing modern exploration to test this model—from remote predictive mapping, through ground validation, to selective scout drilling—at G4 level.

2. Conceptual Basis: Mineral Systems Analysis of Legacy Data

The MSA framework adopted for the Mailar recognised that porphyry Cu systems require a conjunction of four conditions: fertile, oxidised magmas; large-scale hydrothermal fluid circulation; permeable structural and lithological conduits; and effective traps for metal deposition. Legacy evidence for western Bundelkhand Craton already pointed in this direction. The granitoids were known to be subduction-related, oxidised and hydrous, consistent with fertile arc magmas capable of scavenging Cu–Mo from the lower crust and mantle. Large quartz veins and pyrophyllite quarries aligned along regional lineaments implied the presence of significant hydrothermal fluid flow. Sporadic records of copper, gold and molybdenum indicated mineralising events but had not been tied to a coherent system.

What had been missing from existing geological models of Bundelkhand was the explicit identification of a volcano–plutonic centre and associated intrusive system that could serve as the causative magmatic engine for a porphyry-style hydrothermal system. Through this project, Geovale has discovered and "plugged in" that missing element by mapping an extensive felsic volcanic–subvolcanic association and sulphide-rich diorite stocks, and high-Mg basaltic dyke within the Mailar Block. This recognition, coupled with the earlier geochemical and geophysical anomalies, has allowed the first integrated magmatic–hydrothermal model to be constructed for western Bundelkhand and has fundamentally changed the understanding of its mineral potential.

3. Work Programme and Methods

The G4 programme in Mailar combined remote predictive mapping, ground verification and scout drilling into a single, coherent workflow. Geospatial and regolith studies using remote sensing–derived RED classification (Residual–Erosional–Depositional) showed that most of the block is under residual and erosional soils, with only limited transported cover. This implies that surface geochemistry is generally a reliable proxy for underlying bedrock composition. Drainage, slope and landform analysis were used to plan geochemical sampling campaigns and to design the layout of geophysical surveys.

Regional NAGMP aeromagnetic data were reprocessed to derive TMI, RMI, RTP, analytical signal and first vertical derivative products. Interpretation of these datasets revealed several deep, penetrative magnetic lineaments that correlate with crustal-scale structures, as well as sixteen "doughnut-shaped" RMI anomalies. These bulls-eye features, characterised by central magnetic lows rimmed by higher magnetisation, were interpreted as magnetite-destructive potassic cores surrounded by more magnetic outer shells and are typical signatures of porphyry systems. Localised high magnetic hotspots were validated in the field as diorite stocks proximal to a volcanic–subvolcanic complex.

Geological mapping at 1:12,500 scale then built on this geophysical framework. This mapping led to the discovery of more than ~40 km² of felsic volcanic–subvolcanic rocks in the northern part of the block and several sulphide-rich diorite stocks in the north-central area, as well as NNE–SSW giant quartz veins and a >30 km long high-Mg mafic dyke. Many of these units were either poorly represented or misinterpreted on earlier 1:50,000-scale maps, underlining the added value of this project. Regional and detailed alteration mapping, combined with petrography, identified a full spectrum of alteration assemblages—propylitic, potassic, phyllic, argillic, advanced argillic and Ca–Na—organised into two major alteration domains: the Gulenda alteration area in the north, and the Mailar alteration area in the south. More than 100 samples were collected for XRF litho-geochemistry and alteration signatures, with around 200 samples analysed by ICP–MS (for bedrock, pit and stream geochemistry), and 50 samples submitted for fire assays of gold.

These analyses revealed unusually rich base-metal budgets across various units, including felsic volcanics, diorites, the pyrophyllite mine and the high-Mg dyke. In the north, epithermal quartz veins returned copper values ranging roughly from 400 to 7,000 ppm, with molybdenum up to 21 ppm and zinc up to about 1,700 ppm. In the south, pyrophyllite-quarry dumps showed copper up to 5,000 ppm and molybdenum around 4 ppm. Sulphide-rich diorites and the high-Mg dyke also carried elevated copper, molybdenum and zinc. Ground geophysics complemented this picture: about 50 km² of ground magnetics, 122 VES stations along 22 line-km and SP profiles were acquired. In the Mailar lithocap, VES identified low-resistivity conductors at 60–80 m depth, interpreted as argillic and sulphidic zones beneath leached caps, and SP lows indicated the likely presence of sulphide potential. In Gulenda, VES responses were subtler, but when combined with magnetics and SP, still highlighted fluid pathways and structural nodes.

On the basis of this integrated dataset, an initial set of 27 mineral anomalous potential targets was defined in well-exposed areas and 16 additional targets were defined from aeromagnetic in relatively concealed areas. Further integration of lithology, alteration, geochemistry and geophysics ultimately yielded a refined portfolio of 43 mineral anomalous potential targets, grouped into alteration-led, lithological-based and geophysical-based mineral anomalous potential targets. Most of the outcropping targets were advanced to ground-survey level, and from this portfolio three conceptually distinct targets were selected for scout drilling. Five boreholes, totalling approximately 1,000 m, were drilled with the specific aim of testing two different mineralisation styles and validating the overall mineral systems concept rather than delineating ore bodies.

4. Key Geological and Mineral Systems Discoveries

The most significant geological discovery of the project is the recognition of a large felsic volcanic–subvolcanic complex in the northern part of the Mailar block, linked to sulphide-rich diorite stocks and a high-Mg dyke swarm. This complex constitutes a volcano–plutonic centre that had not previously been defined in Bundelkhand Craton and now stands as the likely magmatic driver for the hydrothermal system in Mailar. Its combination of felsic to intermediate volcanic rocks with associated epithermal quartz veins, diorite stocks, late granites and mafic dykes, cut by giant quartz veins, resembles the architecture of well-studied continental-arc porphyry belts such as the Cadia district in eastern Australia and other shoshonitic–alkaline porphyry provinces.

Alteration mapping and petrography collectively show a textbook porphyry–epithermal architecture. In the southern part of the Mailar block, the Mailar alteration area displays an outer propylitic halo overprinted by advanced argillic, argillic and potassic alteration in granitic hosts. The pyrophyllite quarry marks a high-sulphidation lithocap, while "gusano" textures, typically associated with intense acid leaching, define the basal parts of this advanced-argillic zone. Alteration mineralogy suggests that the current exposure level in the south corresponds to a shallow level—on the order of 1.5–3 km above the porphyry core. In contrast, the Gulenda alteration area in the north is dominated by Ca–Na alteration of felsic volcanics and subvolcanics, with discrete potassic zones and disseminated sulphide halos (Early Halo Type) and numerous epithermal quartz lodes. These features point to a deeper level of the porphyry system, perhaps 3–5 km, and suggest that the northern part of the Mailar block is structurally uplifted relative to the south. Together, these domains can be interpreted as providing a rare vertical section through a porphyry–epithermal system in an Archean craton.

Geochemical and mineralogical data reveal three key mineralisation styles that are characteristic of porphyry Cu systems: deeper-level EHT-style disseminated mineralisation in Ca–Na and potassic halos around fluid pathways; A-vein–type quartz veinlet mineralisation within potassic-altered granite in the Mailar area; and shallow (~1 km level) epithermal quartz–sulphide lodes in the Gulenda alteration zone, northern part of the Mailar block. Metal associations and zonation patterns—copper with molybdenum, zinc, silver and gold, accompanied by W–Sn–Bi pathfinders—are consistent with porphyry–epithermal systems elsewhere in continental arcs.

5. Target Portfolio and Scout Drilling Outcomes

The integrated work in Mailar has produced a portfolio of 43 mineral anomalous potential targets distributed across the block. 11 of these are alteration-based targets, including lithocap zones, advanced-argillic areas. 16 are lithological targets, dominated by quartz veins, diorite stocks and the high-Mg dyke. 16 are geophysical targets, defined by RMI donut anomalies and associated magnetic lows or edges. Many of these targets show convergence of multiple lines of evidence—alteration, geochemistry and geophysics—and can be regarded as high-priority anomalies consistent with a hydrothermal porphyry Cu–Mo–Au system. Most outcropping targets have been brought to detailed ground-survey status, while those under cover in the central belt are constrained by aeromagnetic signatures and by VES and SP profiles but await more invasive exploration.

Because much of the most prospective northern corridor lies beneath notified forest, drilling had to be confined to non-forest sites. Within these constraints, three conceptual targets were selected for scout drilling, and five boreholes were completed. In the south, two boreholes (BH-01 and BH-05) tested the Mailar lithocap–porphyry target. BH-01, drilled vertically to 343.5 m, passed through a hematitic leach cap, silicified zones and brecciated potassic granite containing relict pyrite–covellite and traces of chalcopyrite and molybdenum. BH-05, drilled to 242.5 m in the pyrophyllite quarry, intersected a vertical alteration sequence from pyrophyllite and gussano (advanced argillic) down through argillic and sericitic zones into potassic and kaolinite-bearing granite, with discrete Cu–Mo–Ag–Au anomalies and visible chalcopyrite at depth. These holes did not yet intercept the main ore core (only BH 05 contains 25-41 ppm, Ag up to 8.29 ppm) but provide strong alteration and geochemical vectors towards a deeper potassic centre.

In the Northern part of the Mailar Block (Gulenda–Burera area), two inclined boreholes (BH-02 and BH-03) tested an epithermal vein system. BH-02 intersected quartz–sulphide epithermal veins and brecciated volcanics with copper up to roughly 950 ppm, zinc around 300 ppm, molybdenum around 3–4 ppm and silver up to about 50 ppm; gold is present at anomalous levels. BH-03, collared approximately 500 m away along strike, intersected two polymetallic mineralised zones with copper up to approximately 3.1%, molybdenum between 13 and 61 ppm, zinc between about 400 and 800 ppm and silver between 1 and 5 ppm, Sn 92 ppm. Petrography and EPMA show chalcopyrite, bornite and pyrite with covellite and chalcocite overprints, confirming a fertile epithermal quartz–sulphide system. A short vertical hole (BH-04) drilled on the Lalaon epithermal quartz vein confirmed silver-rich mineralisation (4–13 ppm Ag) within potassic-altered felsic volcanics, indicating another epithermal style in the north.

Overall, the scout drilling has confirmed the presence of a fertile hydrothermal porphyry Cu–Mo–Au system with epithermal caps and lithocaps, has demonstrated significant polymetallic mineralisation in epithermal veins, and has provided well-constrained vectors for future deep-seated drilling, particularly in the South Mailar lithocap where the main mineralised core remains untested at depth.

6. Strategic Significance for Bundelkhand and India

The Mailar project has fulfilling and, in many respects, exceeded its original mandate. It has demonstrated a large, fertile porphyry Cu–Mo–Au system in the Mailar Block and has shown that all three key mineralisation styles characteristic of porphyry systems—EHT, AVT and epithermal lode quartz—occur in a coherent vertical and lateral architecture. It has defined a portfolio of 43 ranked mineral anomalous potential targets and has already demonstrated mineralisation or strong vectors at three of them through scout drilling. Perhaps most importantly, it has identified and characterised a volcano–plutonic centre and associated intrusions that were previously missing from regional models of the Bundelkhand craton. This discovery effectively opens a new porphyry copper district in India.

In global terms, the Mailar system can be compared with continental-arc porphyry belts where shoshonitic intrusive–volcanic suites host large Cu–Au resources, such as the Cadia–Ridgeway system in the Lachlan Fold Belt or other well-known porphyry camps. Because similar geological, structural and geophysical signatures are found along strike in western Bundelkhand, the implications are national in scale: the work in Mailar strongly suggests that western Bundelkhand may host an entire porphyry–epithermal Cu–Au–Mo province, with Mailar as its first well-characterised node.

7. Recommendations (Summary)

The next phase of work should focus on both deepening and widening the investigation. At the project scale, the Mailar pyrophyllite-lithocap in the southern and the Gulenda–Burera epithermal quartz veins with altered felsic volcanics in the northern part of the Mailar block should be advanced to G3-level programmes. This will require deep, directional drilling in the range of 500–1,200 m to intersect potassic cores and stockwork systems predicted from the existing vector data. Such work should be explicitly aligned with India's emerging deep-seated target drilling strategy, which emphasises concealed porphyry centres over only near-surface occurrences.

For the remaining future exploration blocks, a programme of pre-drill de-risking is recommended. This should include additional alteration mineralogy, detailed geochemistry, IP/resistivity and possibly EM surveys, along with selected trenching, to convert more conceptual targets into fully drill-ready candidates. Rather than carving out a few small G3 blocks around obvious exposures, a unified programme across the central part of the Mailar block and adjacent ground is advisable, to ensure that RMI donut anomalies and covered targets in the central belt are not neglected. Regionally, the Mailar MSA workflow—legacy synthesis, remote predictive mapping, focused ground work, integrated targeting and selective scout drilling—should be applied to other parts of western Bundelkhand where similar magmatic, structural and aeromagnetic signatures occur.

8. Conclusion

Funded by NMEDT and executed by Geovale, the Mailar project has successfully validated the concept that the western Bundelkhand Craton hosts a fertile hydrothermal porphyry Cu–Mo–Au system. By discovering a previously unrecognised volcano–plutonic centre, demonstrating block-scale fertility, defining 43 mineral anomalous potential targets and successfully testing three of them by drilling, the project has laid a robust foundation for India's future deep-seated copper and critical metals exploration strategy in Bundelkhand and beyond.

9. Recommended Exploration Blocks and Next-Stage Strategy

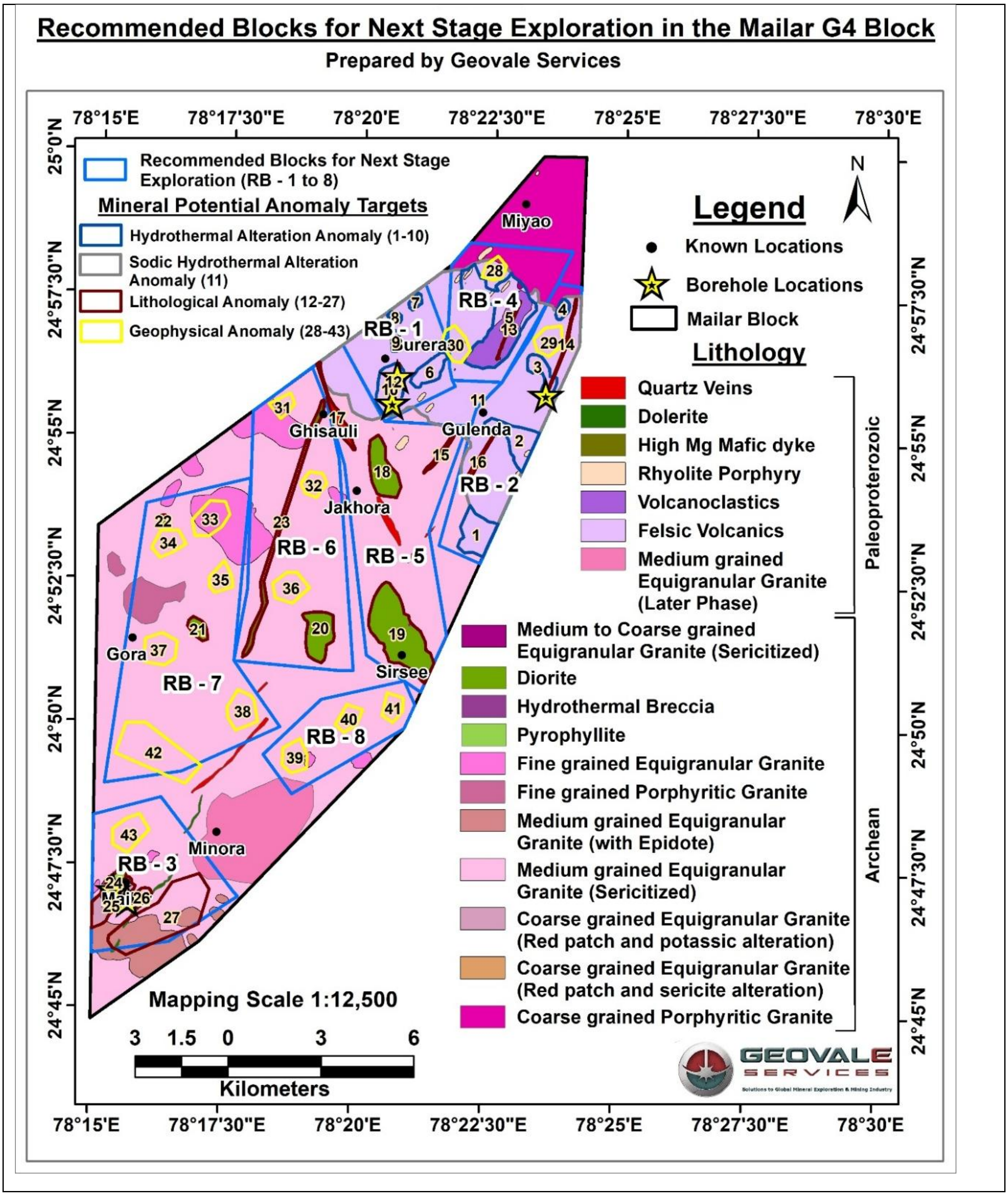
The G4 programme at Mailar has progressed from conceptual prediction to demonstrated mineral system, and finally to a concrete set of G3-scale investment opportunities. On the basis of the 43 anomalous targets defined from integrated geology, alteration, geochemistry and aerogeophysics, eight operational exploration blocks have been delineated for the next phase of work: Burera, Gulenda, Mailar, Rajpur, Jakhora, Ghisauli, Gora and Satgata. Each block groups targets that share a common intrusive and structural framework, and in several cases already contains scout drillholes that confirm mineralisation or provide strong vectors to mineralisation at depth. Burera and Gulenda, in the north, are dominated by high-grade epithermal quartz–sulphide veins and deeper EHT haloes; Mailar, in the south, is centred on a large pyrophyllite lithocap above a concealed porphyry core; Rajpur extends the northern felsic volcanic–subvolcanic package southwards; while Jakhora and Ghisauli capture the central diorite–high-Mg dyke corridor, and Gora and Satgata define clusters of covered RMI "donut" anomalies interpreted as additional intrusive cupolas under thin cover.

Table 1: Recommended Blocks (RB-1-8) for Further Exploration in Mailar Project

Block	Area (km^2)	Characteristic features
Burera Block	9	Northern epithermal corridor; well-developed quartz-sulphide veins and potassic hydrothermal alteration in felsic volcanics; very strong surface geochemistry (Cu to ~7,000 ppm, Mo, Zn, Sn, W); NW–SE structures with high ground magnetic response; two boreholes (BH-02, BH-03) intersecting polymetallic mineralisation with Cu up to ~3% and Ag to ~50 ppm, grades improving with depth.
Gulenda Block	15	Epithermal quartz-sulphide veins and potassic alteration in felsic volcanics; fertile surface geochemistry (Cu to ~1,500 ppm, Mo ~4 ppm); intersecting NW–SE and N–S magnetic lineaments with at least one aeromagnetic donut; one borehole (BH-04) confirming Ag-bearing quartz (Ag to ~13 ppm) and providing vectors down-plunge.
Mailar Block	16	Southern pyrophyllite lithocap developed in advanced-argillic alteration over potassic granite; strong Cu–Mo anomalism at surface (Cu to ~5,000 ppm); eastern magnetic high with donut-style anomaly interpreted as concealed porphyry core; two deep boreholes (BH-01, BH-05) intersecting a thick stacked alteration profile with increasing Sn and Mo at depth, indicating a robust porphyry system beneath the lithocap.
Rajpur Block	12	Extension of the Gulenda felsic volcanic–subvolcanic package; epithermal quartz veins with potassic–phyllic alteration; high surface Cu (to ~3,800 ppm), Zn and Mo; NW–SE and N–S magnetic lineaments with multiple aeromagnetic donuts suggesting additional intrusive centres; no drilling yet, but strong surface support.
Jakhora Block	26	Central corridor dominated by diorite intrusions and quartz veins; sulphide-bearing diorite confirmed in outcrop; strong magnetic anomaly coincident with diorite bodies, indicating sizeable magnetite-bearing intrusions; limited geochemistry but clear evidence of hydrothermal activity and a key structural link between north and south systems.

Block	Area (km²)	Characteristic features
Ghisauli Block	27	Diorite and high-Mg mafic rocks with sulphide traces in the field; several aeromagnetic donuts and lobes marking possible intrusive cupolas; sparse surface geochemistry but favourable intrusive and structural framework along the central magmatic corridor.
Gora Block	34	Western covered belt with only minor diorite seen at surface; geochemistry largely absent due to cover; six well-defined aeromagnetic donut anomalies suggesting a cluster of concealed intrusive centres and potential porphyry cores; high-impact but data-poor conceptual block.
Satgata Block	9	South-western covered area defined almost entirely by geophysical signature; three strong aeromagnetic donut anomalies with no current geochemical control; represents a pure deep-seated, geophysics-led porphyry target and a priority area for proof-of-concept drilling under India's deep target strategy.

Collectively, these blocks translate the mineral-systems understanding of Mailar into spatially coherent domains where India can now pursue systematic G3 exploration and deep-seated target drilling. Blocks containing drilled and strongly mineralised targets (Burera, Gulenda, Mailar and Rajpur) are recommended for immediate follow-up through deeper, directional drilling into the predicted potassic cores and stockwork zones, supported by high-resolution IP/RES and refined ground magnetics. The intrusion-dominated and covered blocks (Jakhora, Ghisauli, Gora and Satgata) provide a pipeline of conceptual but compelling porphyry targets, to be advanced through detailed mapping, reconnaissance geochemistry and targeted geophysics before proof-of-concept deep drilling. In terms of architecture, scale and metal associations, the Mailar blocks compare well with global continental-arc porphyry camps, and their systematic advancement is strongly aligned with India's strategic need to secure domestic copper, molybdenum, gold and associated critical metals for the energy transition and long-term resource security. Eight recommended blocks (RB 1-8) for next level mineral exploration (G3 and above) is given below.



Eight recommended blocks (RB 1-8) for next level mineral exploration (G3 and above)

CHAPTER-1
INTRODUCTION

1.1 Introduction

The National Mineral Exploration and Development Trust (NMEDT) of Ministry of Mines, India awards different exploration projects to different Notified Private Exploration Agencies (NEPAs) after thorough review of proposals received from them. Accordingly, M/s. Geovale Services (one of the NEPAs) was given a G4 stage exploration project titled "Reconnaissance Survey (G4 Stage) for Mailar Base Metal - Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh". The project area covers an area of 206 sq. km. in the Lalitpur district of Uttar Pradesh, under the toposheet no. 54L/5 & 54L/6. The project timeline was March 2024 to October 2025.

1.2 Administrative details of project

1	**Project Name**	Reconnaissance Survey (G4 Stage) for Mailar Base Metal - Gold Prospect Block in Mailar Area, Lalitpur District, Uttar Pradesh.
2	**Project Code:**	23/446/2024-NMET/601
3	**Commodity**	Base metal and Gold
4	**Tahasil**	Lalitpur, Mahrauni
5	**District**	Lalitpur
6	**Nearby villages**	Jakhora, Mailar, Bharatpur.
6	**State**	Uttar Pradesh
7	**Project area**	206 sq. km
8	**Survey of India Toposheet No.**	54L/5, 54L/6
9	**Date of commencement of the Project**	March, 2024

10	**Boundary coordinates of the project area**	Boundary Coordinates	Latitude	Longitude
		A	24.7464	78.2506
		B	24.8901	78.2501
		C	24.9676	78.3613
		D	24.9997	78.3904
		E	24.9997	78.4038
		F	24.9448	78.4027
		G	24.8324	78.3489
		H	24.7694	78.2848

1.3 Investigating agency

Name:	Geovale Services Private Limited
Postal address:	3rd Floor, Anaya Chambers, Block GN, Plot 38/5, Sector V, Salt Lake, Kolkata- 700091, West Bengal.
Telephone Number (Office):	033 4601 2887
Mobile No.:	+91 9007706145
Telephone Number (Residence):	+91 9330825226
E-Mail address:	biplob.chatterjee@geovale.com
Date of accreditation granted by QCI-NABET:	**March, 2022**
Date of expiry of accreditation:	**March, 2025**
Category of the NPEA	**Category A**

1.4 Objectives of Investigation

a. To explore the mineral potential for base metal and gold in the block area and extension areas.

b. To identify base metal and gold mineralization targets for next stage of exploration.

1.5 Basis for taking up investigation

a. An analysis of the available geological information from the western part of the Bundelkhand Craton in a Mineral System Analyses (MSA) framework indicated that the area could be fertile for a Late Archean porphyry copper mineral system (details of MSA analyses in subsequent sections).

b. Some reports of discrete mineralization incidences of Cu, Mo and Au in the western part of the Bundelkhand Craton (details in Chapter 3).

c. Some encouraging assay for copper associated metals in the NGCM data set (details in Chapter 3)

1.6 Nature, Quantum and Timeline of Work (NQT)

Table 1.6 NQT of Work

Sl. No.	Nature of work	Approved Quantum	Achieved Quantum
1.	Geospatial Data Analysis	206 sq. km	206 sq. km
2.	Large Scale Geological Mapping (LSM, 1:12500) and Sampling	206 sq. km	206 sq. km
3.	Laboratory Studies		
	a. XRF Assay (+check samples)	100+10 samples	100+10 samples
	b. ICPMS Assay	200 samples	200 samples
	c. Analysis of Gold by fire assay technique (+ check samples)	50+5 samples	50+5 samples
	d. Analysis for Hg by fire assay technique	5 samples	5 samples
	e. XRD	50 samples	50 samples

Sl. No.	*Nature of work*	*Approved Quantum*	*Achieved Quantum*
4	Petrological Studies		
	a. Thin Section Preperation	50 samples	60 samples
	b. Microscopic Study	50 samples	50 samples
5.	Pitting	250 cu. m	322.02 cu. m
6.	Geophysical Survey		
	a. Magnetic Survey (20 sq. km)	2000 stations	6240 stations
	b. S.P & Shallow electrical Resistivity (10-20 sq. km)	20 line-km	22.316-line km (VES) and 20.05-line km (SP)
7	Core Driling (target 1000 mt)	1000 m.	960 m.
	Core Preservation	600 m	600 m.
8.	Geochemical Analysis		
	a. XRF (Major Oxide) (+check samples)	100+10 samples	100+10 samples
	b. ICPMS (34 elements)	250 samples	250 samples
	c. Analysis for gold by Fire Assay (+check samples)	50+5 samples	50+5 samples
	d. XRD	20 samples	20 samples
	e. EPMA	10 hours	8 hours.
9.	Geological Report	1	1

1.7 Personnel Involved

Sl. No.	Team Members	Role
1	Biplob Chatterjee	Supervision
2	Dr. Joy Gopal Ghosh	
3	Dr. Taraknath Pal	
4	Dr. Tapan Pal	
5	Dr. Tanwita Deb	Senior Project Manager
6	Nupur Adhikary	Project Admin
7	Prasen Saha	Geologist
8	Dakshi Sarkar	
9	Krishna Gangishetty	Geologist/Geophysicist
10	Sarita Mahato	

Sl. No.	Team Members	Role
11	Upasana Mandal	
12	Sujay Payra	Geospatial
13	Prabir Bhattacharya	
14	Rabiya Parween	

1.8 Mode of Operation of Different Work Components and Associated Agency

All field components, encompassing both geological and geophysical aspects, are conducted in-house by Geovale Services Pvt. Ltd. Geochemical analyses are performed in collaboration with the Inspectorate Griffith Commodities Division, Bureau Veritas, at Gandhidham Laboratories in Gujarat and Shiva Analytical in Bengaluru, Karnataka. Additional analyses, XRD (X-Ray Diffraction) were carried out at Geological Survey of India (GSI) in Nagpur including EPMA (Electron Probe Microanalysis) in carried out at Geological Survey of India (GSI) facilities in Kolkata.

1.9 Acknowledgment

This project is funded by National Mineral Exploration and Development Trust (NMEDT) Ministry of Mines, New Delhi (vide project sanction File No: 23/446/2024-NMET/601 dated 12th March, 2024). We express our sincere gratitude to the HOD, EC, TCC of NMEDT for awarding us this project. The technical and quantum review made by the TCC NMEDT and the State Unit, Uttar Pradesh, Geological Survey of India, Lucknow are sincerely acknowledged. We express our sincere gratitude to Dr. Rajgopal Mohanty, Addl. Director (Retd), AMD, for scrutinizing our report as the NMEDT nominated Peer Reviewer. Geovale Services Private Limited (Kolkata) expresses sincere thanks to all including Mining Department (Lalitpur, UP), Local Administration and villagers for their invaluable support in executing the project in and around Mailar area, Uttar Pradesh.

1.10 Summary of work strategy and report writing

Brief strategy of the Mailar project is given below.

Mailar Block Exploration Workflow

The exploration program for the Mailar Block in the Bundelkhand Craton followed a systematic, five-stage workflow, aligned with a Mineral Systems approach to assess the potential for a hydrothermal Porphyry Cu–Au–Mo system. Each stage was structured to progressively narrow down from regional-scale predictions to specific target testing, and is directly reflected in the report's chapter structure.

Stage 1: Legacy Data Assessment & Block Selection

Existing datasets (geology, NGCM geochemistry, NAGMP aerogeophysics, past mineral occurrences) were analyzed to predict porphyry fertility.

Predictive fertility analysis identified the Mailar Block as a high-potential area based on subduction-related geochemical signatures and hydrothermal indicators.

Stage 2: Model Validation & Fertile Zone Identification

Field mapping, petrography, and geochemistry were conducted to test the porphyry model. Alteration zoning and subduction-affinity granitoids confirmed a fertile magmatic-hydrothermal system, outlining two key alteration centers (Mailar and Gulenda).

Stage 3: Ground Survey & Target Generation

Detailed sampling, alteration mapping, and ground geophysical surveys were executed in fertile zones. Multidataset integration (geology, geochemistry, geophysics) identified high-priority targets where coincident anomalies confirmed potential mineralization centers.

Stage 4: Target Testing

Selective pitting, trenching, and ~960 m of scout drilling were conducted to validate targets.

Borehole results confirmed subsurface alteration, sulphide presence, and porphyry-style features, supporting continued investigation.

Stage 5: Conclusions & Recommendations

Synthesis of results confirmed the presence of a porphyry-style mineral system.

Recommendations include upgrading Mailar Block to G3 stage, with deeper drilling, geophysical extensions, and 3D modeling.

Report Framework

This Final Geological Report is organized to mirror the above exploration workflow and to document the project from inception through results:

- **Chapter 1 – Introduction:** Project background, objectives, methodology overview (including the exploration workflow described here), and administrative details.
- **Chapter 2 – Location & Site Characteristics:** Description of the project location, accessibility, climate, physiography, regolith, and a remote sensing-based alteration map of the area, providing context for the fieldwork.
- **Chapter 3 – Background Data Study (Stage 1):** Regional geological setting of the Bundelkhand craton, summaries of known mineral occurrences and previous exploration in and around the project area, and analysis of **NGCM geochemical data and aeromagnetic (NAGMP) data**. This chapter establishes the exploration rationale and explains why the Mailar Block was selected (predictive criteria and anomalous legacy data pointing to a porphyry system).
- **Chapters 4–6 – Mineral System Concept & Reconnaissance Findings (Stage 2):** These chapters cover the application of the Mineral Systems approach and the initial field validation in Mailar. **Chapter 4** introduces the Porphyry Copper–Gold–Molybdenum mineral system model and outlines the critical parameters (host rock fertility, metal-bearing fluids, crustal architecture, and trapping structures) in the Bundelkhand context. **Chapter 5** presents the results of large-scale geological mapping and petro-mineralogical studies, describing rock types, structures, alteration features, and

geochemical characteristics of the Mailar area. **Chapter 6** focuses on alteration mineralogy mapping and styles of mineralization identified in the project area, highlighting evidence of hydrothermal alteration zones. Together, these chapters document how the Stage 2 investigations confirmed a porphyry-style hydrothermal system and pinpointed the most altered (fertile) zones.

- **Chapters 7–10 – Data Integration and Target Generation (Stage 3):** These chapters detail the intensive follow-up exploration in the fertile zones. **Chapter 7** synthesizes the outcomes of mapping, geochemical analysis, alteration studies, and geophysics to discuss the tectonic evolution and propose an evolution model of the porphyry system in Mailar. **Chapter 8** lists the specific exploration targets identified based on lithological/structural criteria, alteration signatures, bedrock assay results, and interpretation of available aeromagnetic anomalies (with sub-sections for targets in the northern, central, and southern parts of the block). **Chapter 9** describes the targeted ground surveys carried out – including detailed alteration intensity studies, systematic geochemical sampling programs (of soils, stream sediments, rock chips, pits/trenches), and ground geophysical surveys (magnetic, resistivity and self-potential) – which were designed to investigate the Chapter 8 targets. **Chapter 10** then presents the integration of all these datasets (geology, geochemistry, geophysics, remote sensing) using geospatial analysis to delineate mineralized zones. It also discusses the genetic model of the mineralization. By the end of Chapter 10, the report has refined a set of high-potential zones recommended for drilling.
- **Chapter 11 – Target Testing Results (Stage 4):** This chapter documents the limited **scout drilling and surface excavations** conducted to test the priority targets. It details the selection and rationale for drill sites in the Mailar and Gulenda alteration areas, the drilling methodology (core drilling parameters, borehole spacing, depths, deviation surveys), and the outcomes of each borehole. Borehole lithologs, mineralization observed, geophysical log results, and any assay highlights are presented. If pitting or trenching was done, their locations and findings are also included here or in an annexure. Chapter 11 thus provides the first subsurface confirmation of the targets identified in previous chapters.

- **Chapter 12 – Conclusions and Recommendations (Stage 5):** The final chapter discusses the significance of the exploration findings in terms of the project objectives. It provides an overall assessment of the Mailar Block's prospectivity for porphyry Cu-Au-Mo mineralization and notes any challenges or limitations encountered. Importantly, this chapter lists the **recommendations for the next phase**: it suggests advancing the project to the G3 Prospecting stage, outlines further exploration work required (e.g. deeper or infill drilling, geophysical extensions, deposit modeling), and identifies any portions of the block that warrant immediate detailed investigation. It may also propose additional G3 blocks in adjacent areas if justified by the G4 results. The recommendations are intended to guide the Government or exploration agencies in planning the subsequent exploration program, ensuring continuity from the reconnaissance findings to more detailed exploration.

(Chapters 13–15 of the report contain references, expenditure details, and a locality index, which support the main text but are not part of the exploration workflow.)

CHAPTER-2

PROPERTY DESCRIPTION

2.1 Location and Accessibility

The exploration block (henceforth named as the **Mailar Block**) is in the southern part of the Lalitpur district of Uttar Pradesh (Fig. 2.1). It is in the Survey of India Toposheet no. 54 L/5. Jhansi is a major railway station situated ~125 km north of Lalitpur and is connected to Lalitpur both by road (National Highway 44) and railway (Lalitpur railway junction). The Mailar Block is situated ~25 km NW of Lalitpur and is connected to Lalitpur by a metalled road (Fig. 2.1). The interior parts of the block area are approachable by some metalled road and cart tracts.

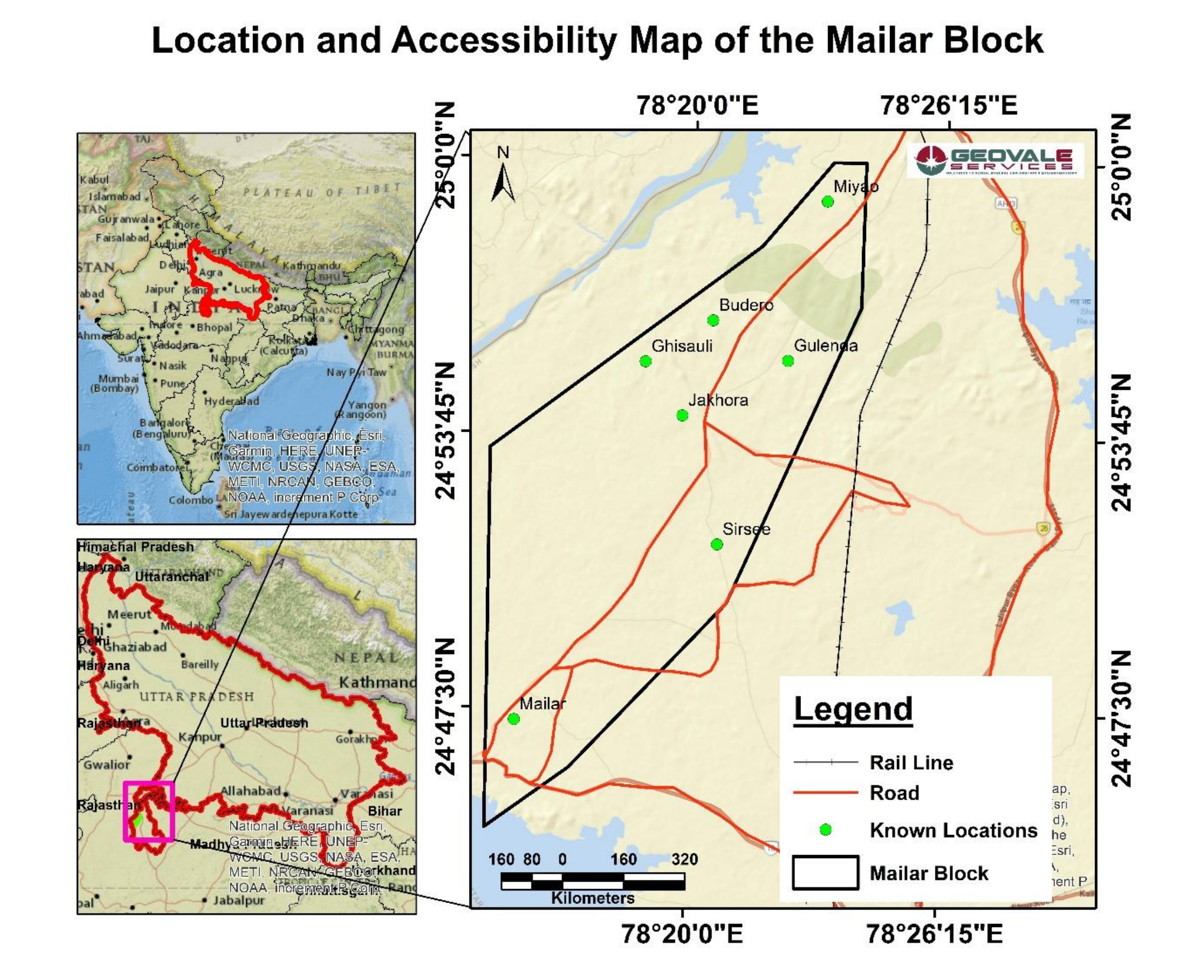


Fig. 2.1 Location and Accessibility Map of Mailar Block

2.2 Climate

The area experiences subtropical arid climate with temperatures varies from 45°-35°C during the summer and dips to 3°C-15°C during the winter seasons. The annual rainfall varies from 600 mm to 1300 mm and most of the precipitation occurs during the monsoon season.

2.3 Vegetation and Fauna

A major part of the area is cultivated. The uncultivated parts are mainly having thorny bushes. A substantial part of the northern part of the block is under a reserve forest (Burautha Reserve Forest). The wild animals are rare. However, some jackal, fox, rabbit etc. is common. Some of the water bodies in the southern part of the block are habitats of crocodiles.

CHAPTER-3

PREVIOUS WORK AND REGIONAL GEOLOGY (STAGE-1)

3.1 Geological evolution of the Bundelkhand Craton:

The Mailar block is in the southwestern part of the Bundelkhand Craton. The craton covers ~29,000 sq. km^2, lying between 24°11' to 26°27' N and 78°10' to 81°24' E, and is semicircular in shape. Two major lineaments broadly define its boundary with other cratons of Indian Peninsula. In the west it is the Great Boundary Fault (GBF) that separates the Bundelkhand Craton from the Aravalli craton and in the south, it is the Son-Narmada Lineament that separates it from the Bastar craton. Geologically, the northern and northeastern parts are covered by Gangetic alluvium and the southeast, south and the western sides are overlapped by the Vindhyan Supergroup. Low-grade metamorphic rocks of the Bijawar Group (Paleoproterozoic) fringes parts of the southern boundary and the Gwalior Group of rocks (Paleoproterozoic) fringes part of the northern boundary.

The earliest reference to the Bundelkhand region was made by Medlicot (1859), who conducted mapping in various parts Bundelkhand Craton. Detailed geology of the Bundelkhand Craton is reported by the Basu (1986). Geological mapping of the Bundelkhand Granitoid Complex, carried out by the Geological Survey of India at a 1: 50,000 scale, identified distinct granite phases and aimed to interpret their chronological and genetic interrelationships (Basu, 1986, Goyal *et. al.,* 1973). Specialized thematic mapping at a larger scale of 1:25,000 was undertaken during the 1990s. Notable contributions include the work of Raju et. al., (1993), and Pati (1998), who mapped various sectors across the districts of Jhansi, Lalitpur, Hamirpur, Mahoba, and Banda.

The craton is primarily covered by stocks and batholiths of Late Archean-Paleoproterozoic Tonalite-rondhjemite-Granodiorite (TTG) granitoids, termed as the 'Bundelkhand Granitoids (BG)'. This unit spans an age range between 1.9 Ga and 2.58 Ga (Pati et. al., 2020; Kaur et al., 2024). There are minor occurrences of Paleoarchean to Neoarchean granitoids and supracrustals aged between ~3.4 Ga to 2.5 Ga. These Archean vestiges comprise of sodic and potassic TTG rocks, amphibolite, BIF, and metavolcanic rocks (Kaur et al., 2024 and references therein). This rock association is termed as the 'Bundelkhand Gneissic Complex (BGC)', which commonly occurs along an E-W belt across the central part of the craton. A conspicuous feature of the Bundelkhand Craton, especially the western part of the craton, is the presence of dense network of NE-SW to NNE-SSW trending Giant Quartz Veins (GQVs) that has strike lengths of few kilometers to 10s of kilometers and have few 10s of meters widths (Basu, 2007). One of these GQVs has been dated to be 1.87 Ga (Slavunov and Singh, 2022). Another conspicuous feature is the NW-SE trending mafic dykes that have an age range between 3.25 Ga and 1.1 Ga (Rao et al., 2005; Pradhan et al., 2012). Bundelkhand Granitoids (BG) is overlapped by the >~1.7Ga Gwalior Group in the north and ~1800–1600 Ga Bijawar Group in the South. The Bijawar Group is again overlapped by the Vindhyan Supergroup (<1.67Ga, Colleps et al., 2021).

A summarized account of geochronology of different lithological units of the Bundelkhand Craton is given below.

Table 3.1 Geochronology of Lithological units of Bundelkhand Craton

Mafic flows in Bijawar and Gwalior Group (~2.1 Ga, Samom et al., 2018; ~1.87 Ga; Absar et al., 1999)
Giant Quartz Veins (GQVs) of Bundelkhand Craton (~1.87 Ga, Slavunov and Singh, 2022)
Bundelkhand Granitoids (BG) Late phase pink granite (2.23 Ga, Saha et al., 2011)
Upper supracrustals (volcanics, volcanoclastics, sediments, BIF) (~2.54 Ga; Singh and Slabunov, 2015)
Bundelkhand Granitoids (BG) (~2.64 Ga, Singh et al., 2019; ~2.52 Ga, ~2.48 Ga, Mondal et al., 2002; ~2.29 Ga, Bishui et al., 1998)
Bundelkhand Mafic-Ultramafic dykes (3.23 Ga, Pradhan et al., 2012; ~2.75 Ga, ~2.63Ga, ~2.02 Ga; ~1.45 Ga, Mallikharjuna Rao et al., 2005)
Bundelkhand Gneissic Complex (BGC) (~3.55 Ga, Kaur et al., 2016, ~3.38 Ga, Mondal et al., 2002; ~3.2 Ga; Mondal et al., 1998) (Granite–gneisses, calc silicate, gneisses, quartzites, BMQ)

An analysis of the available geochronological data of different lithological units of the Bundelkhand Craton clearly indicates a very complex history of the craton that would defy any attempt for generalization. As indicated in Table-3.1, many reliable age markers are now made available from the Bundelkhand Craton by several workers. However, yet the Bundelkhand Craton lacks consummate maps of these dated lithological markers. And so, such dates have largely remained unusable for a comprehensive understanding of the tectonic evolution of craton. A few broad evolutionary events that can be inferred from available dates are as below:

i. **Paleoarchean (~3.55 Ga to ~3.2 Ga) continental evolution** represented by the **Bundelkhand Gneissic Complex (BGC)**: This evolutionary event is largely marked by a few discrete continental granitic magmatism and mafic dyke systems interspaced by shallow marine chemogenic to argillaceous sedimentation.

ii. **Mesoarchean** (between ~3.2 Ga and ~2.8 Ga, i.e., spanning ~400 Ma) is largely absent in the Bundelkhand Craton in terms of any magmatic activity.

iii. **Neoarchearn** (i.e., from ~2.8 Ga to ~2.5 Ga) is represented by some discrete largely granitic activities represented by largely felsic plutonic (with minor volcanic) associations, collectively named as the **Bundelkhand Granitoids (BG)**. They are largely products of continental arc type of tectonic events.

iv. **Paleoproterozoic** (between ~2.5 Ga and ~1.6 Ga) **late-subduction to post-orogenic granitic magmatism and mafic dyke systems:** This evolutionary event is marked by some hornblende granite but mostly evolved potassic and leucogranites along with a system of mafic dykes that ended by ~2.0 Ga. However, the latest thermal event in the Bundelkhand is marked by emplacement of ~1.87 Ga Giant Quartz Veins (GQVs) marking a massive scale hydrothermal activity within a much-thickened crust.

3.2 Brief description of different geological units of the Bundelkhand Craton

Bundelkhand Gneissic Complex (BGC; Paleoarchean):

The Bundelkhand Gneissic Complex (BGC) is referred here to include Paleoarchean, generally high-grade granitic gneisses that are usually foliated and include a host of high-grade supracrustal rock association that includes pelitic (garnet–cordierite–sillimanite gneiss, garnet–sillimanite gneiss, biotite gneiss and garnet–biotite gneiss) and mafic (hornblende–biotite gneiss and garnetiferous amphibolite), psammitic and ultramafic lithologies rocks. Granulite facies metamorphism of the complex initiated with breaking down of biotite to produce garnet and cordierite in the pelitic gneisses (Singh and Diwedi, 2015). These rocks are present mainly as discrete outcrops between Mehoba in the east and Babina in the west through Mauranipur in the central part along a ~5- km wide E-W zone of ~1 km width across the central part of the Bundelkhand Craton. Smaller discrete outcrops of BGC are also present in the southern part of the craton between Rungaon and Lalitpur (Fig. 3.2). These rocks are generally strongly deformed and folded by multiple deformation phases. However, not much mapping work is available to delineate their disposition throughout the craton. Also, there are some Paleoarchean granitoids that are weakly deformed and have only low greenschist facies of metamorphism (e.g., in the Lalitpur area).

Bundelkhand Granitoids (BG; Neoarchean-Paleoproterzoic): After a hiatus during the Mesoarchean time (i.e., between ~3.2 Ga and ~2.8 Ga), Bundelkhand Craton experienced large-scale intrusion of granitoid rocks between ~2.8 Ga and ~2.4 Ga that cover over 80% area of the craton. Together with younger stocks of hornblende granite and leucogranites that are dated ~1.9 Ga, the Bundelkhand Granitioids (BG) span a long history of granite magmatism spanning over ~700 Ma without distinct widespread deformation event or metamorphism (Pati et al., 2020). These granitoid rocks are largely massive and unmetamorphosed. It is now known that in many parts, especially in the southwestern parts, there are large areas of associated Neoarchean felsic volcanic association and isolated stocks of diorite that are spatially and likely genetically related with different phases of Bundelkhnad Granitoids (BG). The granitoids exhibit a large compositional range from quartz diorite to syenogranite and show a calc-alkaline trend. They are metaluminous to peraluminous and have I-type characteristics. The SiO_2 content ranges from 49 to 77 wt % and they generally have low K_2O/Na_2O (Mandal and Zainuddin, 1996).

Paleoproterozoic granites, quartz veins and mafic dikes:

The youngest phases of Bundelkhnad Granitoids are represented by some stocks of Paleoproterozoic hornblende granite and leucogranite (~1.9 Ga, Pati et al., 2020). The granitoid intrusions are followed by large scale intrusion of NNE-SSW trending Giant Quartz Vein system (GQVs, ~1.87 Ga) (Fig. 3.1). Individual veins are few kilometres to 10s of kilometres long and width varies from few 10s of meters to 100s of meters (Basu, 1986; Bhattacharya and Singh, 2013). At places, GQVs and the locales of advanced argillic alteration are spatially associated (Basu, 1986). Such large vein system indicates an event of metamorphic devolatization (Jia and Kerrich, 2000).

There are a few ductile shear zones identified in the Bundelkhand Craton. The Bundelkhand Tectonic zone (BTZ) passes through the central part of the craton. Besides, Babina and Sonrai shear zones, Mauranipur shear zone are also reported (Pati et. al., 2020) (Fig. 3.2).

The Bundelkhand Craton has undergone multiple episodes of metamorphism reflecting its complex Archean to Proterozoic tectono-thermal evolution. The dominant metamorphic grade in the region is greenschist to amphibolite facies. Archean metamorphism, associated with the emplacement of TTG (tonalite-trondhjemite-granodiorite) gneisses and greenstone belt formation, marks the earliest high-grade events around 3.3 to 2.5 Ga. Metamorphic rocks such as amphibolites, schists, and migmatite gneisses in the region preserve a diverse mineral assemblage.

Tectonically, the craton has undergone several episodes of deformation—from early crustal accretion and subduction-related magmatism in the Archean to reactivation during Proterozoic orogenic events. Three prominent E-W trending shear zones, the Bundelkhand Tectonic zone (BTZ) in the central part, the Sonrai shear zone in the south and the Raksha Shear zone in the northcentral part are traceable for 100s of kilometres (Fig. 3.2). All these shear zones record these multiple tectono-thermal events, reflecting the craton's long and active geological history. Multiple episodes of metamorphism reflecting its complex Archean to Proterozoic tectono-thermal evolution. The dominant metamorphic grade in the region is greenschist to amphibolite facies, discrete tracts of granulite are identified in the BGC. Archean metamorphism, associated with the emplacement of TTG (tonalite-trondhjemite-granodiorite) gneisses and greenstone belt formation, marks the earliest high-grade events around 3.3 to 2.5 Ga. Metamorphic rocks such as amphibolites, schists, and migmatite gneisses in the region preserve a diverse mineral assemblage.

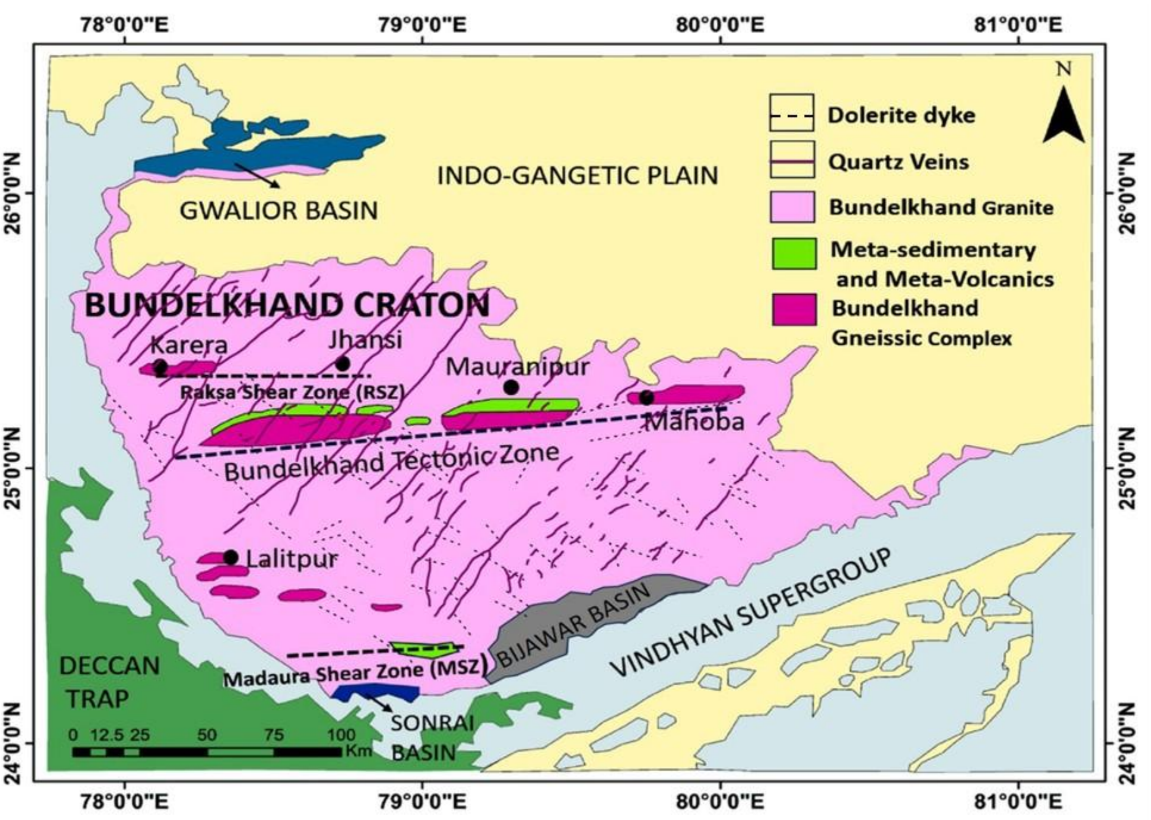


Fig 3.2: Regional geological map of the Bundelkhand Craton (After Basu, 1986)

3.3 Reports of Basemetal-Gold mineralization incidents from the project area and surroundings

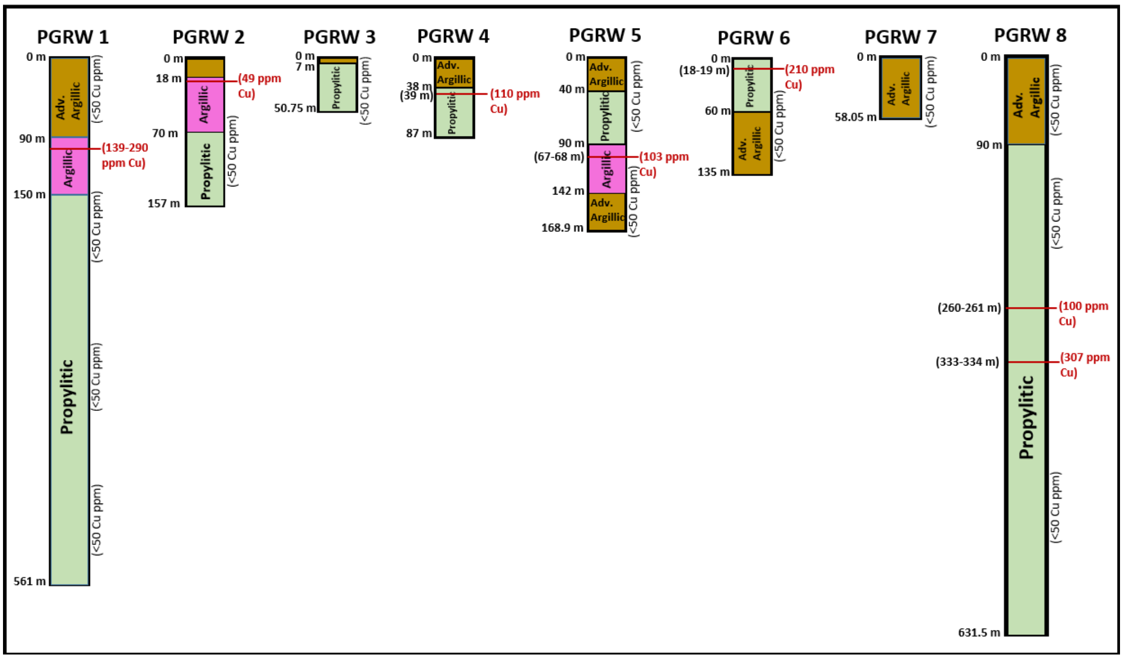
Pati et. al., (1997, 2014) reported molybdenite mineralization in granitic pegmatite, coarse-grained pink porphyritic granite, medium-grained grey granites, and medium-grained pink granites, predominantly associated with Bundelkhand Tectonic Zone in the southern part of Babina (situated northern part of the proposed block). Pati et. al., (1997) also reported gold mineralization around the block. Singh and Singh (1986) reported base metal mineralization along the Karesara Kakan–Sahpur–Talbehat Shear Zone situated in the ~40 km north of the Mailar block. According to them, mineralization in form specks of pyrite, specularite and rare specks of chalcopyrite was reported at Sahpur, Bamorisar and Jamalpur areas, near Talbehat. Srivastava and Banerjee, 2016; had done an alteration map near Mailar area. Abser et al., 1999, Tank and Kumari (2019), Rai et al., 2021 have been done basemetal investigation around the Mailar block (detail given below).

3.4 Previous exploration activities in the project area and surroundings

GSI Basemetal investigation near Harpura–Bar, Lalitpur, UP (Abser et al., 1999)

GSI explored the potential for a copper deposit in the Palar-Gaurari area—approximately 45 km northeast of the Mailar block—by drilling several GQVs (Giant Quartz Veins) associated with advanced argillic pyrophyllite-diaspore alteration (Absar et. al., 1999) (Fig. 3.4). The area was bounded by~ 25.5637:25.500 latitude and ~78.6419:78.7346 longitude. A total of eight boreholes were drilled, with a cumulative depth of 1,849 meters, the deepest reaching 632 meters. One of the key findings was the presence of systematic alteration zones typically linked with porphyry copper systems. In one deep borehole, a clear vertical zonation of alteration was observed: advanced argillic alteration transitioning into chloritic, sericitic, and ultimately potassic alteration with increasing depth. Another significant observation was the increase in copper concentration with depth at some borehole. Based on these findings, the authors strongly recommended continued exploration at greater depths to evaluate the potential for a buried porphyry copper deposit. Abser et. al., 1999 carried out the drilling in the Palar area based on the presence of the argillic–pyrophyllite–diaspore alteration and on the assumption that the argillic pyrophyllite dioaspore alteration was related to a porphyry copper system. A summary of the alteration zones and copper assay obtained by drilling in the Palar area is given in Table 3.4.1. It may be noted that drilling sites were not decided on the basis of presence or absence of a systematic array of alteration zones that is very characteristic of any porphyry copper system. Also, even within a porphyry copper system mineralization is generally restricted to the interface of potassic alteration zones and argillic alteration zones. Chloritic (meaning the propilitic alteration zones) and advance argillic alteration zones as encountered by drilling in the Palar area are generally devoid of any copper mineralization.

Table 3.4.1 Borehole information including alteration given by Absar et al. 1999



Base Metal Investigations (Singh & Singh, 1986)

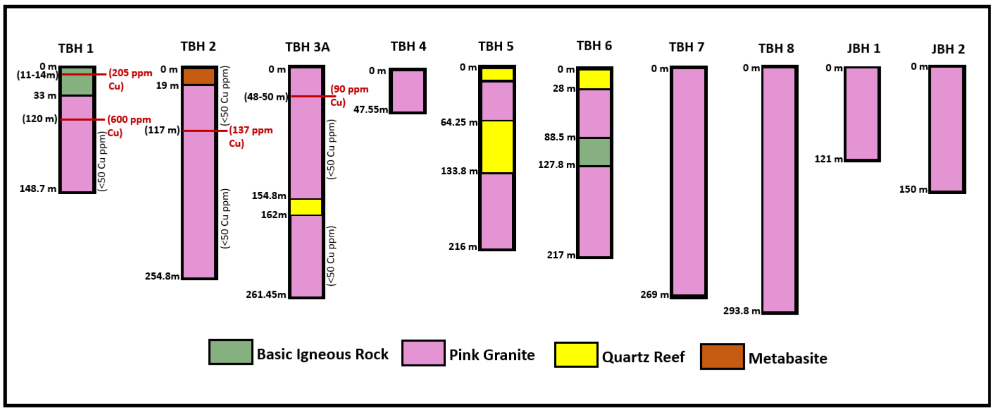
Geological Survey of India (GSI) also conducted a Base metal investigation over a 30 sq. km. area extending from Talbahat in the north to Jamalpur in the south, covering parts of Toposheet Nos. 54L/5, 54L/9, 54K/08, and 54K/11 (Singh and Singh 1984). The area is bounded by latitude 24°25:25°00 and longitude 78°26:78°35. It is situated ~15 north of the Mailar block. They reported,

- Scattered signs of mineralization, including malachite staining, pyrite, specularite, and occasional chalcopyrite were reported at discrete places.
- Copper concentrations up to 700 ppm in dacite porphyry and upto 0.30% were reported in malachite-stained quartz reefs near Bijapura area, Lalitpur.

- Geophysical surveys delineated a significant shear zone approximately 100 meters wide and extending for 6 km.

- The programme included 11 boreholes totaling 1,986 meters. All the boreholes were drilled within granitic rocks. Borehole locations in the Talbehat area were determined using a combination of geophysical anomalies (EM and IP surveys) and surface geology. The operation targeted electromagnetic (EM) and induced polarization (IP) anomalies along the Karesara Kalan–Sahpur–Talbehat Shear Zone to locate basemetal mineralization. Borehole TBH-1 intersected the EM zone but yielded only poor mineralization. The borehole yielded 100-140ppm copper between 104m and 110m. The highest copper assay in TBH-1 borehole was 600 ppm at 120 m meters depth. Similarly, borehole TBH-2 yielded highest copper assay of ranging 115 to 135 ppm in a 50 cm zone at depth of 117m. Borehole TBH-3A, intersected low copper values between 25 and 90 ppm alongside poor zinc and nickel mineralization. Similarly, boreholes TBH-7, TBH-8, JBH-1, JBH-2 tested geological lineaments but found no significant mineralization (Details are given in Table 3.4.2). It was interpreted that the geophysical anomalies were primarily caused by basic rocks and sheared country rock rather than any sulphide mineralization. The drilling programme could not confirm the high values for copper in the surface samples (for example 700 ppm in dacite porphyry, near Bijapur and 0.39% in quartz reefs near SSE of Karesara Kalan).

Table 3.4.2. Details of Borehole information with notified Cu values (by Singh and Singh, 1986)



Gold and Molybdenite Incidence Reports (Pati et al., 1997, 2014)

Occurrences of gold and molybdenite mineralization have been reported around Talbehat and Babina area, Uttar Pradesh.

GSI REE and Basemetal Investigation (Tank and Kumari, 2019):

The Geological Survey of India (GSI) investigated an area of 127 km² of the Pichor block, Shivpuri district, MP; in and around the ~30km north west of the Mailar block in toposheet 54K/04 (Tank & Kumari, 2019). The study aimed to delineate potential zones of Rare Earth Elements (REEs), and associated base metal mineralization. They reported:

- Elevated Cu, Pb, Zn, Ni, and Cr values were reported near quartz reef–granite contacts and in lateritic zones.
- Trench samples from coarse-grained granite terrain recorded Zn up to 440 ppm and Cu up to 175 ppm.
- Total REE values in granite samples ranged from 513 to 574 ppm, while soil samples from some trenches and pits recorded TREE values up to 2092 ppm, dominated by LREE over HREE.
- Petrography, SEM-EDS, and EPMA analyses confirmed REE-bearing minerals such as zircon, monazite, allanite, thorite, and sphene in granite. This study highlighted the potential for economic REE mineralization in both coarse- and fine-grained granite.

GSI RMT Project on Base Metals and REEs (Rai et al., 2021)

A Regional Mineral Targeting (RMT) project by GSI covered parts of Lalitpur district (U.P.) and Tikamgarh & Sagar districts (M.P.), ~20 km south of the Mailar (toposheets 54L/06, 07, 10, 11, 14, and 15). The area is bounded by 24°15′ to 24° 30′ latitudes and 78° 15′ to 79°00′ longitude.

- Geochemical data shows that five bedrock samples have >1000 ppm Cu with maximum 2054 ppm near Bagrodha village (54L/15) and REE values of the bedrock up to 1000 ppm; regolith 47–1778 ppm. It indicated the potential of REE and Base metal mineralization of the block.

- Based on the investigation, GSI have recommended detailed exploration for primary and secondary REE mineralization near Narayanpur–Lakhaura (Tikamgarh, M.P.) and Ramnagar–Gangora (Lalitpur, U.P.).

Reconnaissance Survey for REEs and Rare Metals (Gupta & Mohanty, 2024*)*

In 2023–24, GSI conducted a reconnaissance survey for REE and Rare Metal (RM) mineralization in Ramnagar–Gangora area (~14 km south-east of the proposed Mailar-block, toposheets 54L/05 and 54L/06).

- Geochemical analyses show anomalous REE values in regolith and bed rock (Regolith: 158–1734 ppm REE and granite bedrock: 120–868 ppm REE (11 samples >500 ppm).

GSI Kimberlite Investigations (Singha & Rajak, 2009)

Singha and Rajak, 2009 working on kimberlite in the stream sediment of the parts of Shivpuri and Datia district of the Madhya Pradesh, however they do not report the presence of the any kimberlite.

Table 3.4 Summary of Previous Exploration

Previous Work	Rock Type	Remarks
Singh and Singh 1986	Dacite Porphyry (Bedrock sample), Near Talbehat	700 ppm copper
Pati et al 1997	Banded Gneissic Complex, Bundelkhand Tectonic Zone	5 and 1000 ppb Gold
Absar et al., 1999	Pyrophyllite, near Palar, UP.	Hunched copper mineralization.
Pati et al., 2014	Tonalite trondhjemite-granodiorite (TTG) gneisses.	61.58 ppm Molybdenite
Tank and Kumari, 2019	Quartz reef–granite contacts	Copper uoto 175 ppm and Zinc upto 400 ppm.
Rai et al., 2021	Granite	2054 ppm Copper

Previous Work	Rock Type	Remarks
Gupta and Mohanty, 2024	Granite	158–1734 ppm REE and granite bedrock
Singha & Rajak, 2009	Stream sediment study on mafic body	Try to identify the kimberlite hosted rock.

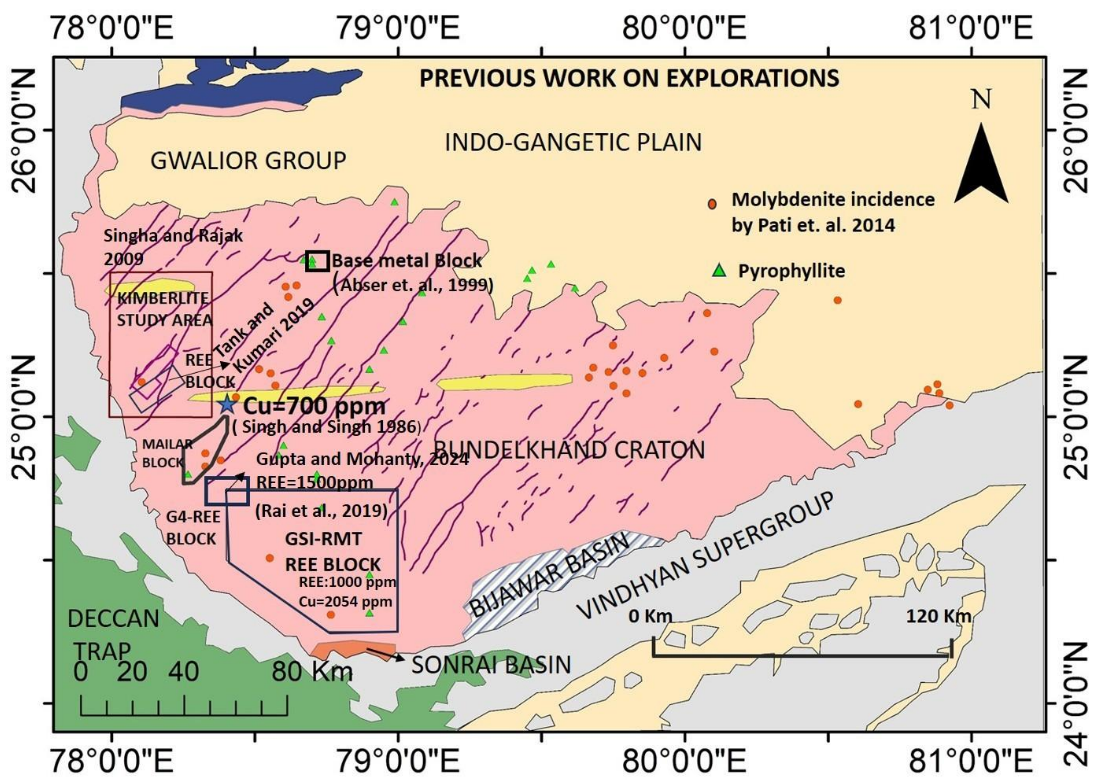


Fig. 3.4: Regional geological map of Bundelkhand Craton shows the previous exploration in the Region. (modified after Basu, 1986)

3.5 National Geochemical Mapping (NGCM) data from the project area

The project area is covered by GSI's NGCM survey. In the Mailar block, the Cu (max- 41 ppm) -Mo (max-0.9 ppm) show high values along with the high values for Co (upto 19 ppm), Cr (upto 120 ppm), Ni (upto 43 ppm), Pb (upto 33 ppm), Sr (upto 284 ppm), V (upto 183 ppm), Zn (upto 70 ppm), As (upto 24 ppm), Hg (upto 45 ppb), W (upto 75.1189 ppm) U (upto 4.9103 ppm), Bismuth (0.5 ppm). Analysis of NGCM data reveals high Mercury (45ppb), high Arsenic (24 ppm) in a large area of the Mailar block. Besides, anomalous Gold (10-200 ppb) and Bismuth (> 0.5 ppm) are also present in and around the Mailar block (Toposheet no. 54L/5 and 54L/9) (Fig. 3.5).

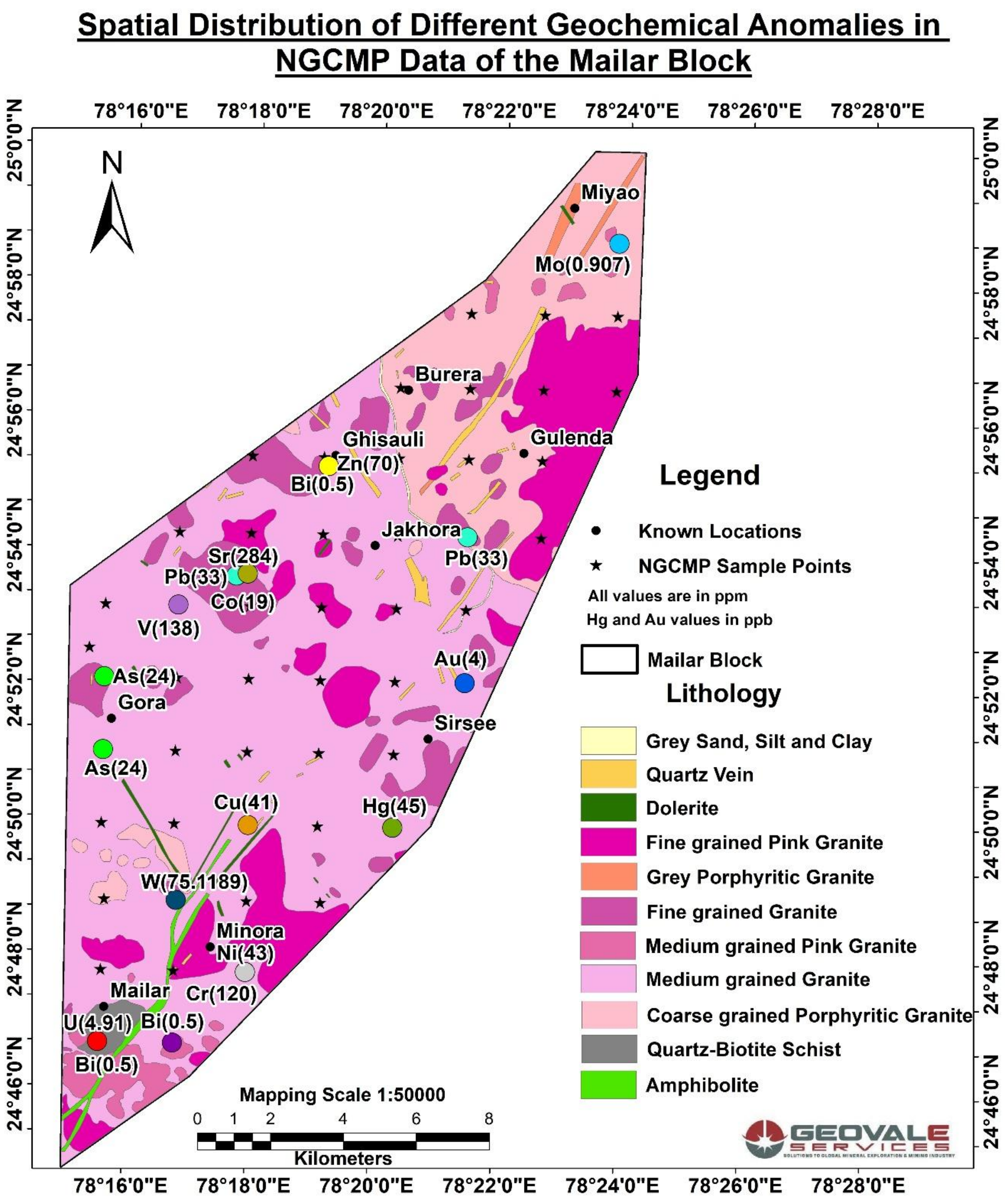


Fig. 3.5: NGCM data for the Mailar Block show high mercury (>30 ppb) and arsenic (>20 ppm) concentrations in the southern area, along with localized anomalous bismuth (up to 0.5 ppm) in parts of Toposheet 54L/5

CHAPTER-4

BASE METAL FERTILITY OF THE BUNDELKHAND CRATON IN A MINERAL SYSTEM ANALYSIS (MSA) FRAMEWORK (STAGE-2)

4.1 Introduction of Mineral System Analyses and its parameters

The premise of the Mineral System Analyses (MSA) is that mineral deposits will only form and remain preserved where there have been a spatial and temporal coincidence of critical earth processes (geodynamic setting, lithosphere architecture, fluid, ligand and ore component reservoir(s), fluid flow drivers and pathways, depositional mechanisms, post-depositional processes).

A mineral system analyses revolves round four important components

a. A fertile host rock terrain,

b. Fluids to scavenge metals from fertile host rocks,

c. Tectonic force and architecture to channelize the metal bearing fluids, and

d. Suitable structural or lithological traps.

These critical components need to be recognized as mappable geological features expected to result from them. Usually, the MSA framework is used for regional mineral targeting so that prospective zones are identified. At regional scale the MSA approach is more a knowledge-driven endeavour and once the prospective zones are identified, prospectivity data using direct ore detection tools are used to complement a knowledge-driven approach to track down the ore fluids and their depositional sites. Thus, as the scale of exploration increases, the MSA framework transcends to Ore System Analysis (OSA). Both the knowledge-driven approach and the data-driven approach depend much on the availability and quality of information that are critically needed for MSA or OSA analyses.

4.2 Constraints on an MSA framework in the Bundelkhand Craton:

A major handicap of using MSA framework (Fig 4.2) for the Bundelkhand Craton is the near non-availability of information required for MSA analyses. For example, recent efforts by researchers to bring out geochronological and geochemical data from different parts of the craton is not backed up by concomitant geological maps delineating discrete geochronological and geochemical distinctive units. Thus, even though we are now aware of presence of distinctive geochemical units and presence of magmatic rocks of different ages, we are unable to put them in geotectonic or geodynamic contexts, which are crucial component for any meaningful MSA analysis. Additionally, geochemical data often lack proper location and sample descriptions as well lack crucial elements' analyses for constraining melting conditions of magmas.

In the case of the prospectivity analyses of the Bundelkhand Craton, and especially, the area selection process for the Mailar project, an MSA framework is attempted despite serious deficiencies in the available data as noted above. A brief description of the MSA framework for the area selection is provided below:

4.2.1 Host Rock Fertility

Bundelkhand Gneissic Complex (BGC): As mentioned in Chapter 3, about one-fifth of the Bundelkhand Craton is likely covered by the Paleoarchean (~3.55 Ga to ~3.2 Ga) Bundelkhand Gneissic Complex (BGC) that are made up of generally high-grade TTG granitic gneisses and essentially oceanic supracrustal rocks (BIF, high-grade metapelites, oceanic metavolcanics, ultramafic rocks etc.), even though low-grade non-foliated granites (TTG) also occur at places (viz., near Lalitpur). These Paleoarchean TTG suite of rocks show modal variation from dioritic to granitic composition. Both sodic and potassic variety of TTE are present and have moderate to high $(La/Yb)_{CN}$ (14.7-33.50) and Sr/Y values (4.85-98.7) (Ram Mohan et al., 2017). Such values indicate their derivation from partial melting of hydrous basaltic mantle rocks. The likely tectonic setup for the Paleoarchean crustal evolution is an oceanic or island-arc type of subduction process. Such a tectonic setup is less likely to host fertile rocks for a porphyry copper type of mineralization that would ideally require a substantially thick reduced crustal section for trapping the mantle derived base-metals. However, the oceanic mafic crusts and metapelites of the BGC might have hosted VMS style or SEDEX type of base metal mineralization. The non-foliated and low-grade metamorphosed variety of granites of the BGC (viz., near Lalitpur) might represent post-tectonic granites in thickened crust. Such granitoids might host continental crust derived rare metals and REE.

Bundelkhand Granitoids (BG):

Younger granitic rocks mostly span a period of ~700 My between 1.9 Ga and 2.58 Ga (Pati et al., 2020). They are represented by different varieties of granite like mozogranite, syenogranite, high potash anatectic granite, granodiorite etc. Available geochemical data (Ram Mohan et al., 2012; Joshi et al., 2017; Singh et al., 2019) suggests derivation of these granites in a subarc subdection settings (Ramiz and Mondal, 2017).

(A subarc setting refers to the geological conditions above a subducting tectonic plate. Such settings may include Island arc setting, developed due to subduction of an oceanic plate under another oceanic plate or it may include continental arc developed by subduction of an oceanic plate under a continental plate. A continental arc setting is better suited to host porphyry copper type of deposits than island arc settings).

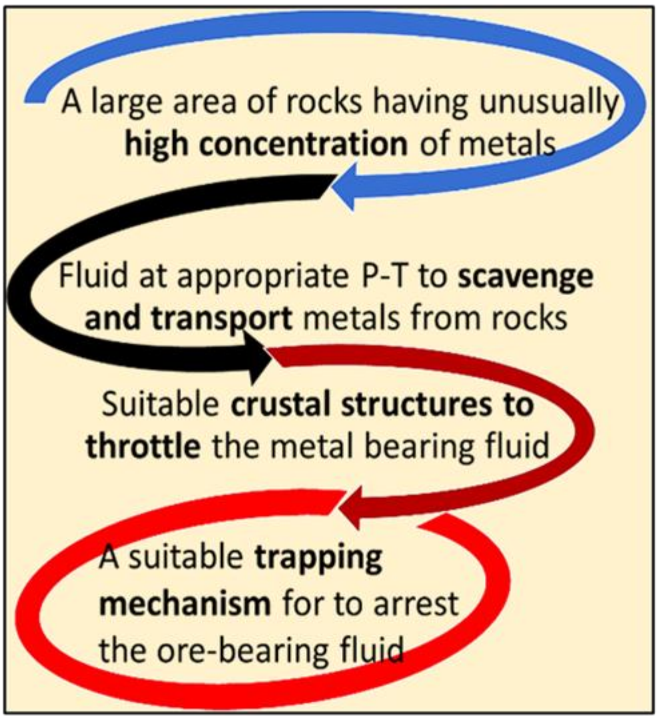


Fig 4.2: Principal components of a Mineral System Analysis (MSA) and their relationship

4.2.2 Fluids to scavenge metals

Two very conspicuous features of the southern and western part of the Bundelkhand Craton that suggest the presence of extensive hydrothermal activities are:

a. Common occurrences of advance argillic alteration of granitic rocks that are represented by formation of pyrophyllite-diaspore rocks, usually along some NNE-SSW lineaments.

b. The presence of numerous NE-SW trending Giant Quartz Veins (GQVs) that continue for a few tens of kilometers in length with a width of tens of meters (Basu, 1986; Bhattacharya and Singh, 2013).

At places, GQVs and the locales of advanced argillic alteration are spatially associated (Basu, 1986).

However, the knowledge about the genetic relationship between the advanced argillic alteration zones and the GQVs, as well as knowledge of the fluids responsible for the common advanced argillic alterations are limited. Recently, it is known that GQVs are emplaced at around ~1.86 Ga (Slabunov and Singh, 2022). Whether or not the advanced argillic alteration is temporally and genetically related with these GQVs remains unresolved. Two possibilities exist. One, the advanced argillic alterations (represented by pyrophyllite-diaspore alterations) are genetically and temporally related to same hydrothermal system. The other possibility is that the advanced argillic alteration is older the genetically unrelated to the GQVs. Resolution of these possibilities is important for the mineralization potential of the area.

There is a strong possibility that large tracts of advanced argillic alteration represent either high sulphidic alteration (commonly associated with porphyry Cu-Mo-Au deposits), or chloride-dominated acidic alteration (commonly associated with Iron Oxide Cupper Gold/IOCG type of deposits). The GQVs on the other hand, are related to extensive hydrothermal activity associated with some epigenetic mineralization.

The Mailar block has pyrophyllite-diaspore alteration that are being mined and spatially associated Giant Quartz Veins (GQVs). Pyrophyllite-diaspore association ominously indicate advanced argillic alteration due to passage of highly acidic hydrothermal fluids through the area. Advanced argillic alteration is typically found in high-sulfidation (or high-chloride dominated) epithermal systems at shallow depths where K^+/H^+ and Na^+/H^+ activity ratios as well as temperatures of aqueous hydrothermal fluids are very low, resulting in the formation of minerals such as alunite (in case of high sulphidic fluid) or scapolite (in high hydrogen chloride dominated fluid) along with pyrophyllite at the higher temperature ends, and kaolinite, dickite, etc at lower temperatures. The formation of acidic hydrothermal fluids responsible for advanced argillic alteration assemblages can occur through several processes. At depth, a degassing magma releases aqueous fluid rich in SO_2, H_2S, or HCl that can remain as a single fluid phase or may undergo exsolution to produce a liquid brine and low-salinity vapor phase if the pressure decreases. Ascending magmatic vapor may condense where it encounters cooler, shallow meteoric water to form low-pH, moderate-temperature fluids that produce acid-sulfate high-sulfidation alteration characterized by alunite, quartz, pyrophyllite, and dickite (Al). Ascending dilute, nearly neutral, low-temperature (200-300°C) fluids typical of low-sulfidation environments can boil upon ascension. Vapors produced by such boiling condensation at 100°C to produce steam-heated acid-sulfate alteration typified by alunite, kaolinite, and chalcedonic or opaline silica.

Current models of porphyry copper deposits propose that a shallow, epithermal ore environment may lie above a porphyry copper system that servers as the discharge area for deep-seated ore-bearing fluids (White and Hedenquist, 1995; Hedenquist et al., 1998). Thus, possibility exists for a whole range of mineral system from porphyry copper (in case the fluid is high sulphidic fluid) or IOCG type deposits (in case the fluid is hydrogen chloride dominated) at depth (1-5km) to epithermal deposits of gold-tellurides might exists along with low-sulphidation or advanced argillic alteration (at depths 0-3km). Usually, high-sulphidic alteration exists close to and above the porphyry copper alteration system. The low-sulphidic alteration, on the other hand, are developed away from porphyry copper alteration system, usually within a spatial distance of 5-10 km from the epicentre of porphyry system.

4.2.3 Crustal architecture to throttle mineralizing fluids:

The fluid that scavenges metals from the fertile rocks need to be throttled through a narrow crustal structure that usually represents a prominent lineament. Suitable tectonic force is necessary for ore fluid to get throttled along the lineament. The strong NNE-SSW trending orientation bias of the GQVs and associated advanced argillic alteration is a favorable indication that the mineralizing fluids might have moved in response to some crustal extensional regime. This is a positive factor for localizing mineralization.

4.2.4 Suitable structural or lithological traps

For a porphyry copper system, even though the mineralizing fluid moves along some the trap rock is usually lithological where a reducing environment is created by some magmato-thermal process to cause sulphate phases to get reduced to sulphide phases and get precipitated because of low solubility of sulphide phases. Crystallizing magma may get reduced by combination of different mechanisms that include: (i) Potassic alteration causing availability of more of Ca^{+2} ions that easily scavenge SO_4^{-2} causing magma depleted in oxygen, (ii) crystallization of magnetite that cause remaining magma depleted in oxygen, (iii) reaction with reducing rocks of the crust like limestone, carbon-bearing rocks etc. Presence of magnetite rich granitoids in the Bundelkhand Craton itself indicates the availability of lithological traps in the area.

CHAPTER-5

GEOLOGY AND GEOCHEMISTRY OF THE PROJECT AREA (STAGE-2)

5.1 Large Scale Geological Mapping

Large Scale Geological Mapping (LSM) in 1:12,500 has been prepared for an area 206 sq.km. of the block. The area was earlier mapped on 1:50,000 scale by different groups of Geological Survey of India (GSI) and a compiled version for the area is available on the BHUKOSH website of GSI (Fig. 5.1.1). The BHUKOSH map shows that the northeastern part of the map is dominated by coarse-grained porphyritic granite while much of the central and southern part is dominated by medium-grained granite. Both these dominant varieties of coarse-grained and medium-grained granite dominant areas contain numerous irregular discrete mappable enclaves of fine-grained granites. Minor occurrences of biotite-rich granite and quartz-biotite schists are present in the southern part of the block. The map also separates out similar grain-sized granites based on their colour. For example, medium grained grey granite, medium grained granite, and then coarse-grained granite and coarse-grained pink granites etc.

While mapping (Annexure I, for field observation point) on 1:12,500 scale during this project it was found that intricate relationship between the fine-grained granites with those of the coarse-grained granite (in the northern part) and with those of the medium grained granite (in the central and southern part) as shown in the 1:50,000 scale map in the BHUKOSH is not tenable as mapping units. In fact, much of the central part of the lack rock exposures to justify such intricate relationship on map scale. In small exposures that are available, relationship amongst different grain sizes is very intricate to be mapped as separate units. Especially colour variation of similar sized granites is too intricate to be mapped out as separate units. Also, at many places, altered volcanic rocks have either been shown as fine-grained or medium-grained granites in the BHUKOSH compiled map.

Some significant departures in lithological identification and their mapped boundaries in the present map (Fig. 5.1.1) from the BHUKOSH compiled map (Fig. 5.1.2) are as below:

i. Granite dominated areas: Many granite phases marked in the BHUKOSH Map (like medium grained pink granite, medium grained grey granite, medium grained granites are merged as variation are very intricate even on outcrop scale and untenable as mappable units. Also, although granite exhibits a wide range of colours, the transitions are subtle and, in many places, lack distinct boundaries, making colour as an unsuitable criterion for classification. Instead, we adopted simple grain-sized based classification (Fig. 5.1.1).

ii. Volcanics: About 30 sq. km area in the northern part of the block is now marked as felsic volcanic-volcanoclastic assemblage (Fig. 5.1.2) in areas marked as coarse/fine-grained granites in the BHUKOSH map (Fig. 5.1.1).

iii. Diorite: Five discrete diorite bodies (Fig. 5.1.2) mapped measuring total ~5 sq. km are now mapped in areas marked as fine/medium grained granite in the BHUKOSH map (Fig. 5.1.1).

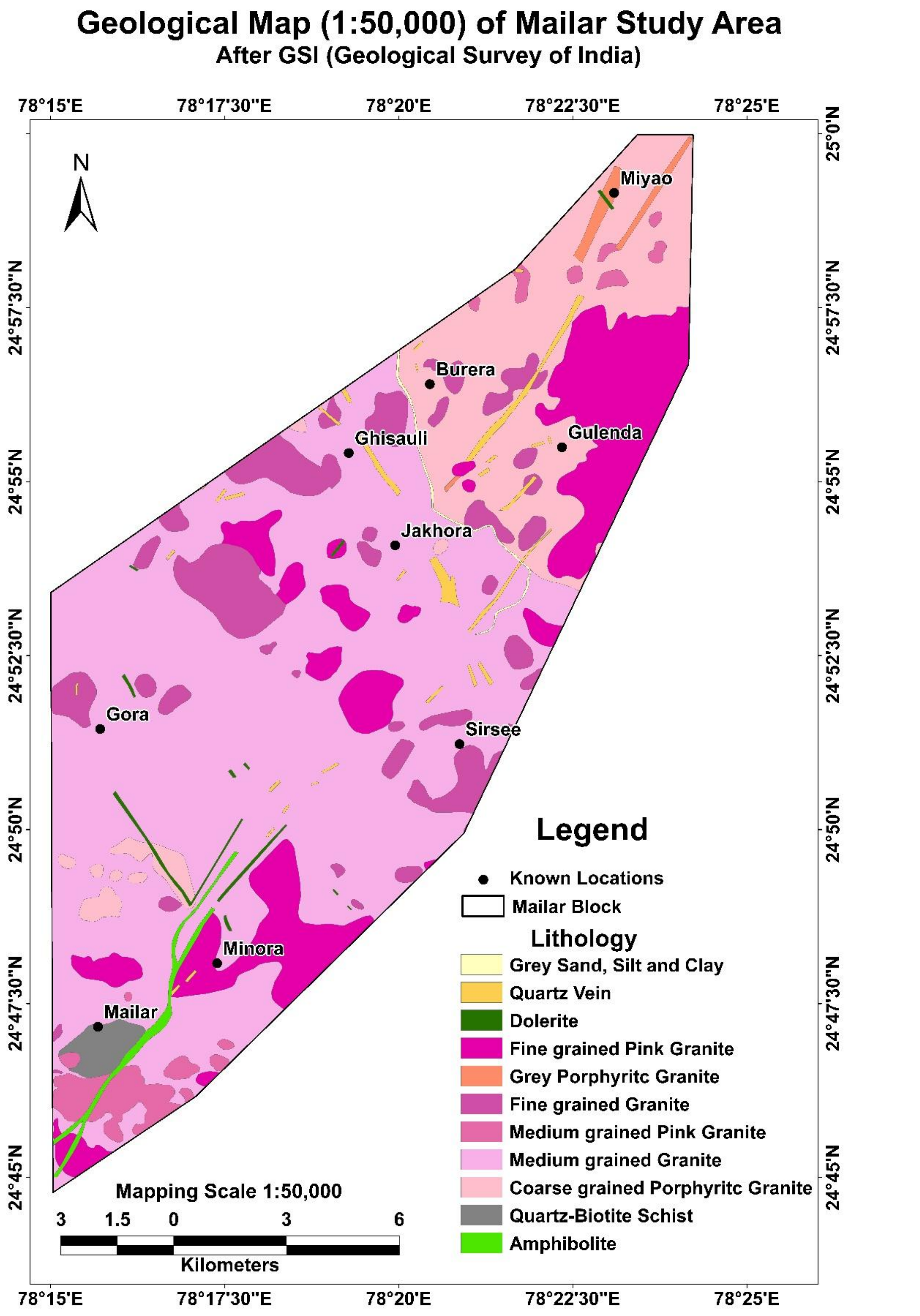


Fig 5.1.1: 1:50,00 Scale Geological Map by GSI.

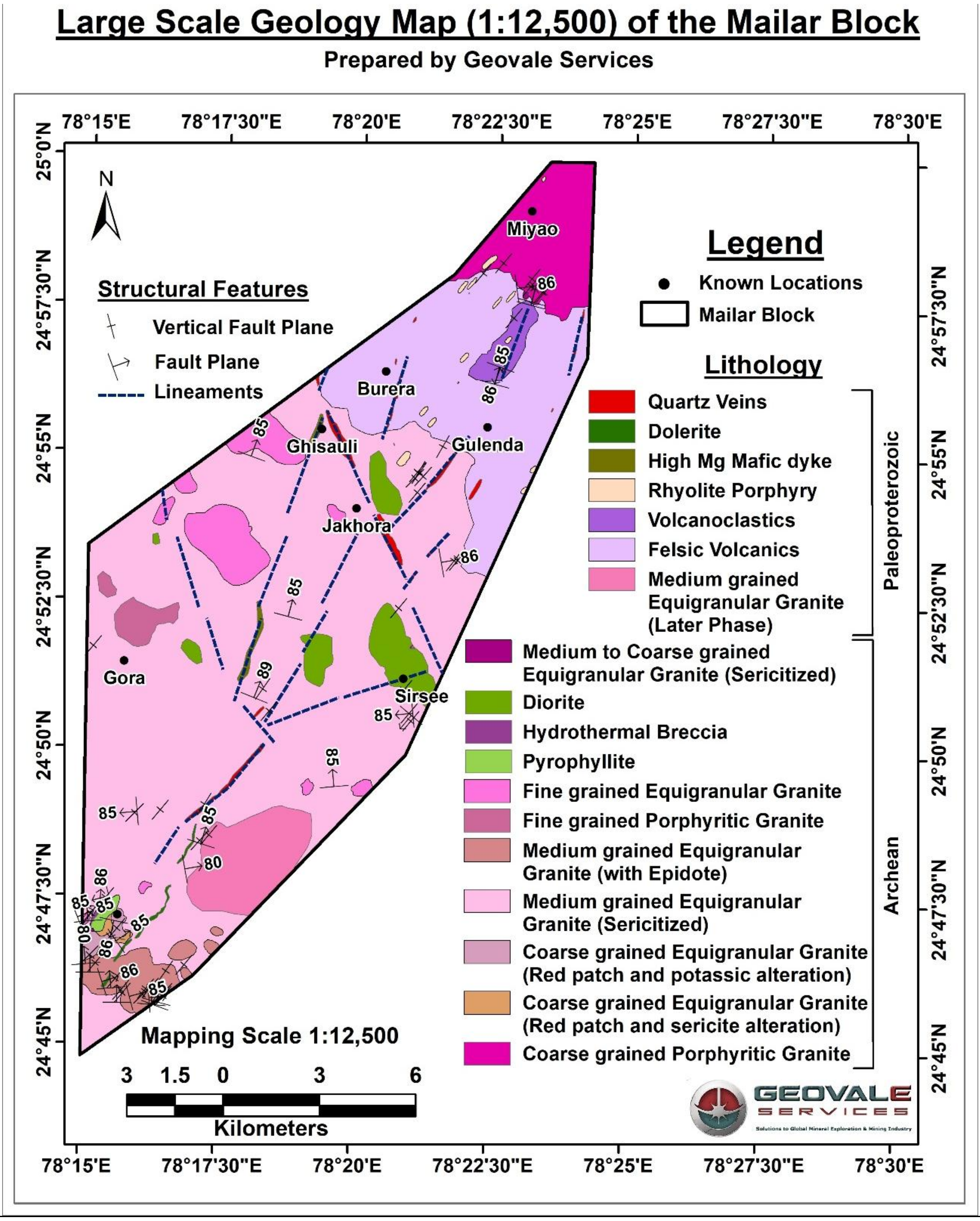


Fig 5.1.2: (Plate-I) Large Scale (1:12500) Geological map of the Mailar Block by Geovale Services

5.2 Structure

The granitic rocks of the Mailar Block are largely undeformed, indicating minimal tectonic disturbance after their emplacement. However, in certain areas, weakly developed foliation is observed, primarily marked by the alignment of mafic minerals in coarse to medium-grained granites, possibly reflecting magmatic flow or mild tectonic overprint. A prominent structural feature is the presence of multiple sets of vertical fractures trending NE–SW, NW–SE, and E–W, which suggest a complex post-emplacement stress regime (Fig 5.2.1). Additionally, NE–SW trending quartz veins (older) and NW–SE trending giant quartz reefs near Jhakhora, are aligned with regional tectonic trends, indicating that these features are structurally controlled and formed due to fluid movement along pre-existing fractures during tectonic activity. However, a few quartz veins synchronous to granite (having cuspate lobate contact and folded) are reported (Fig 5.2.2). NNE-SSW trending mafic dyke in the western part of the block also indicating structurally controlled emplacement.

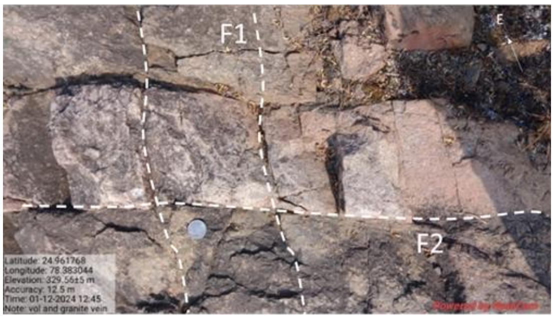


Fig 5.2.1: Two sets of fractures (~E-W, F1 and NE-SW trending, F2) in granite, near Bharatpura.

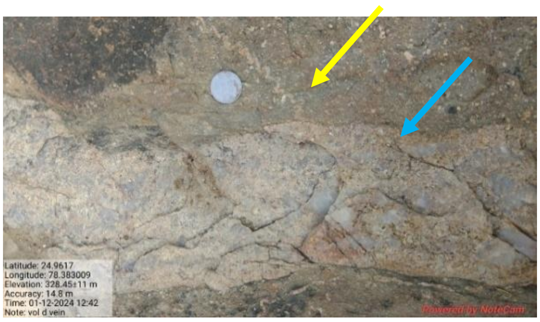


Fig 5.2.2: Quartz vein with cuspate shape (marked by blue arrow) and ptygmatic fold (marked by yellow arrow) in granite.

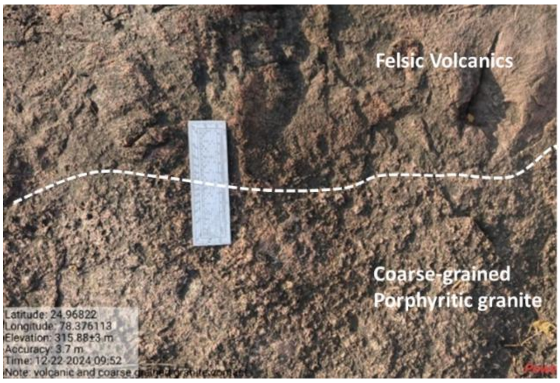
5.3 Brief description of different rock types:

Detailed petrographical study of various rock types of Mailar Block have been done (Annexure II)

5.3.1 Coarse-grained Porphyritic Granite:

Field Observation: In the northern part of the blocks, near Miyao village, discrete bodies of coarse-grained granite (Fig. 5.3.1.1) are observed. The rock is characterized by massive, coarse-grained, porphyritic rock. Large, distinct phenocrysts of feldspar and quartz (upto a few cm long) are set in fine quartzo-feldpathic groundmass. This variety have intruded spatially associated potassic altered felsic volcanic rocks and so is considered a younger granitic (sub-volcanic) intrusive (Fig. 5.3.1.2).

Petrological study: The coarse-grained porphyritic granite mainly composed of coarse (>5mm) grained with phenocryst of quartz (45% by volume), feldspar (50% by volume), epidote minerals and opaque (5%) present as accessory phase (Fig. 5.3.1.3). The quartz grains are sub-angular and subhedral and the feldspar having intense altered to mica and epidote. The presence of the epidote grains implying the signature of propylitic alteration (Fig. 5.3.1.4 and 5.3.1.5). Specs of chalcopyrite and pyrite are also observed (Fig. 5.3.1.6).

	
Fig. 5.3.1.1 Coarse-grained porphyritic Granite, near Miyao Village.	*Fig-5.3.1.2 Contact of and coarse-grained porphyritic granite and felsic volcanics, near Miyao Village.*

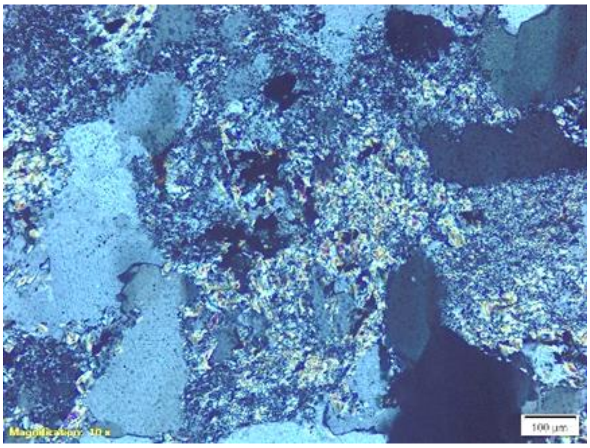


Fig -5.3.1.3 Coarse- grained porphyritic granite with feldspar and quartz phenocrysts. Felspar shows the sericite and sassuritized alteration, under cross polar

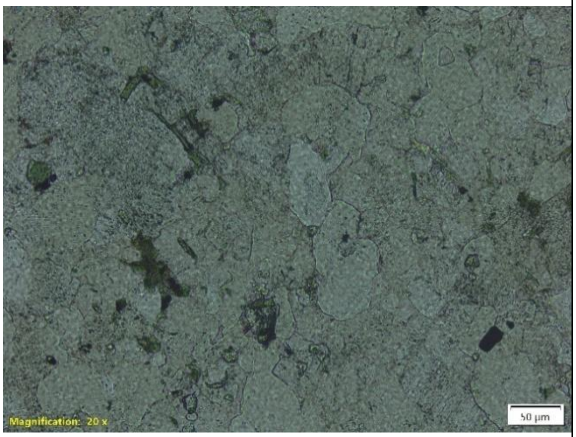


Fig- 5.3.1.4 Feldspar phenocrysts with epidote inclusions showing signatures of propylitic alteration, under plane polarized light.

Fig 5.3.1.5 Plagioclase phenocrysts with epidote inclusions showing signatures of propylitic alteration, under cross polar.

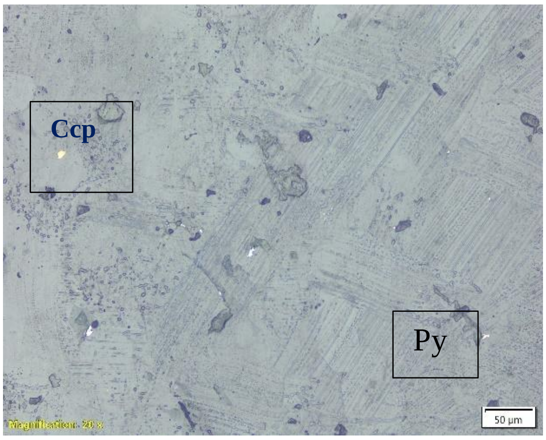


Fig 5.3.1.6: Pyrite and chalcopyrite specs in coarse-grained porphyritic granite, under reflected light.

Mineralization Evidences in Coarse Grained Porphyritic Granite (Fig 5.3.1.7- 5.3.1.8)

	
Fig 5.3.1.7: Chalcopyrite (under hand lens) in Coarse Grained Porphyritic Granite	*Fig 5.3.1.8: Patches of Sulphides, in hand specimen*

5.3.2 Coarse-grained Equigranular granite

Near east of Mailar mine area, the coarse-grained euigranular granite is reported. This granite is two types: i. with hematitic red patches (Fig. 5.3.2.1) with potassic alteration (as evidences by cutting the feldspar phenocrysts by biotite), ii. with hematitic red patches with sericite alteration.

Fig. 5.3.2.1: Red patched in coarse grained equigranular granite, near Mailar.

5.3.3 Medium-grained Equigranular Granite (Sericitized):

Field Observation: The medium-grained equigranular is observed in the central and southern part of the block, and it covers almost 60% of the entire block (Fig. 5.3.3.1). The granite is composed mainly of quartz, feldspar, and mica. The feldspar grains are mainly sericitized. Sericite is typically very fine-grained and gives the rock a soft, silky appearance in altered zones. (Fig 5.3.3.5 and Fig 5.3.3.6).

Petrological study: The medium-grained equigranular granite (sericitized) is composed of medium grained quartz (40% by volume), feldspar (about 55% by volume) with minor amount of opaque (5%) (Fig. 5.3.3.2). Quartz grains are mainly subhedral, often shows undulose extinction. A few elongated quartz grains are also observed. The elongated quartz grains are possibly the later forming quartz formed due to release of the silica during sericitization of feldspar. Most of the granite thin sections shows sericitization of feldspar (mainly altered to muscovite) implying rock is highly altered by hydrothermal fluid. Besides, a few magnetite-ilmenite and pyrite grains are also present (Fig. 5.3.3.3 and 5.3.3.4).

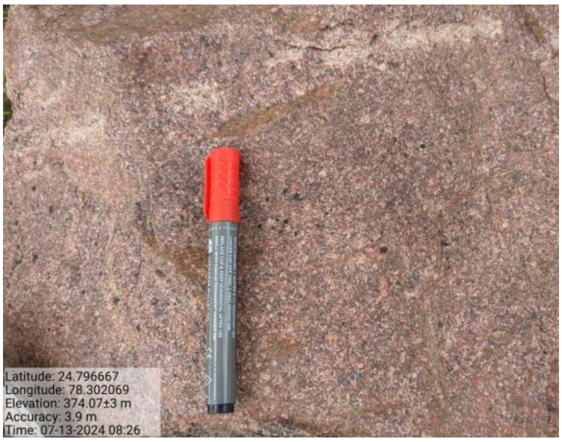


Fig 5.3.3.1 Medium-grained equigranular granite, near Sirsee village.

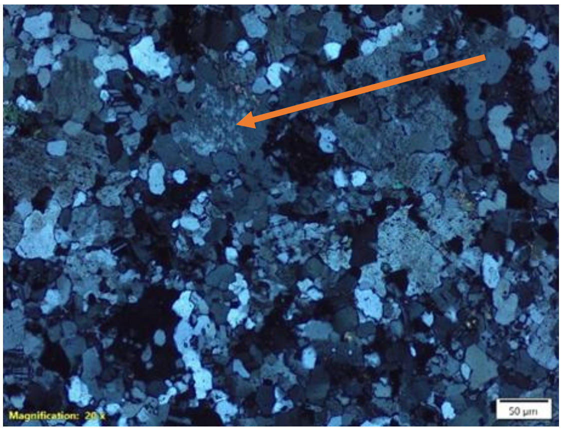


Fig 5.3.3.2 Mediun-grained equigranular granite shows sericitic alteration of feldspar (Marked by an arrow), under cross polar.

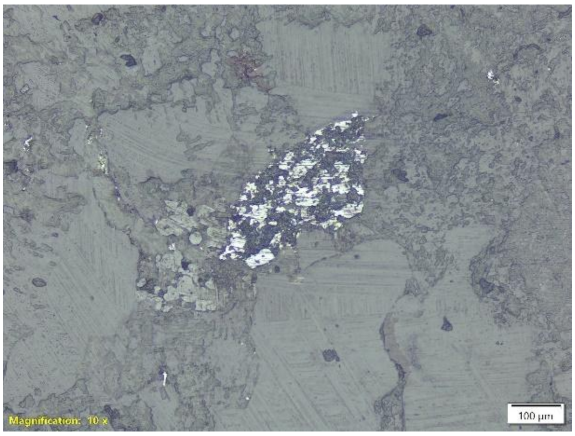


Fig 5.3.3.3 1Medium-grained equigranular granite with hematite, under reflected light.

Fig 5.3.3.4 Specs of pyrite and chalcopyrite in a medium grained granite, under reflected light.

Fig 5.3.3.5: Sulphide Traces in Sericitized Granite, near sirsee.

Fig 5.3.3.6: Sulphide Traces in Sericitized Granite, near sirsee.

5.3.4 Medium-grained Equigranular Granite (with epidote):

Field Observation: The medium-grained equigranular granite containing epidote veins is observed in the southern part of the block, south of the Mailar mines (Fig. 5.3.4.1). The epidote and chlorite commonly occur as veinlets in this granite.

Petrological study: The medium-grained equigranular granite (with epidote) (Fig. 5.3.4.2) shows the equigranular texture of quartz (25% by volume), feldspar (60% by volume), amphibole, chlorite and epidote (~10%), opaques (~5%). The quartz grains are subhedral and shows undulose extinction. Feldspar grains are including alkali and plagioclase feldspar, subhedral in shape. A few amphiloles are greenish in colour, having two sets of cleavages, mostly present as patches (Fig. 5.3.4.3) The chlorite and epidote veins are present throughout the slides shows random orientation. The presence of the epidote and choritic veins (Fig. 5.3.4.4-5) indicate the rock have propylitic alteration. The opaque is mainly cubic pyrite (Fig–5.3.4.6) and chalcopyrite, which are associated with the amphibole or associated with chloritic veins. In few slides, the plagioclase phenocrysts containing grains of epidote with moderate relief and high birefringence which show compromising evidence of propylitic alteration. From the reflected microscopy analysis, the opaque minerals are deduced to be pyrite (Fig -5.3.4.7-8) and ilmenite formed from the surrounding sphene.

Fig 5.3.4.1: Medium-grained equigranular granite with epidote veins (yellow arrow), south of Mailar mine.

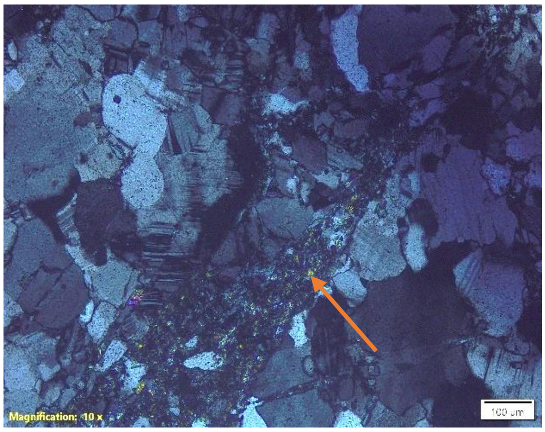


Fig 5.3.4.2: Medium-grained granite with quartz (undulose extinction), altered feldspar and epidote (orange arrow), under cross polar.

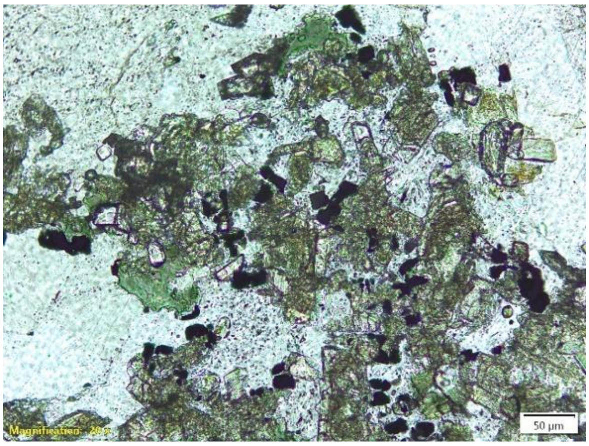


Fig 5.3.4.3: Medium-grained granite with amphibole and opaque minerals, under plane polarized light.

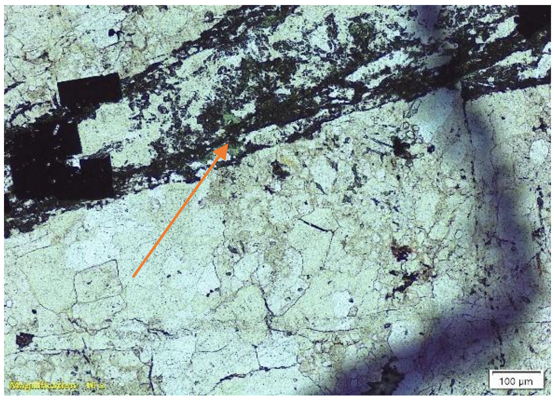


Fig 5.3.4.4: Medium-grained granite with chlorite veins, under plane polarized light.

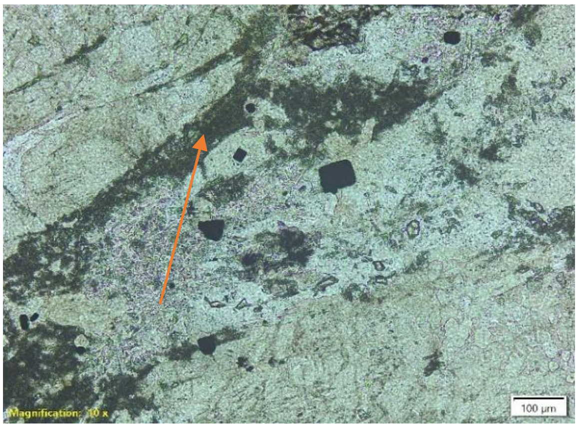


Fig 5.3.4.5: Opaque minerals (pyrite) oriented along the chlorite vein (arrow), under plane polarized light.

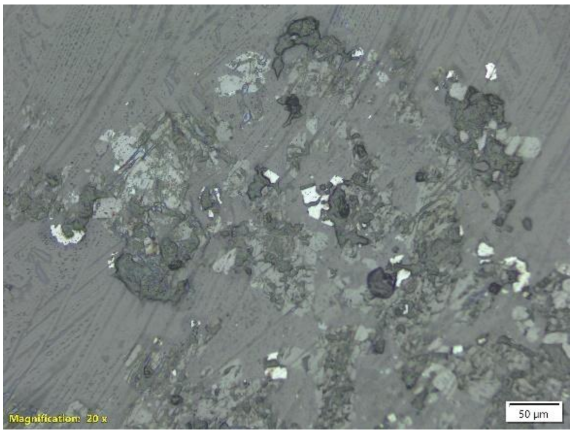


Fig 5.3.4.6: Specs of pyrite and chalcopyrite in amphibole grain, under reflected light.

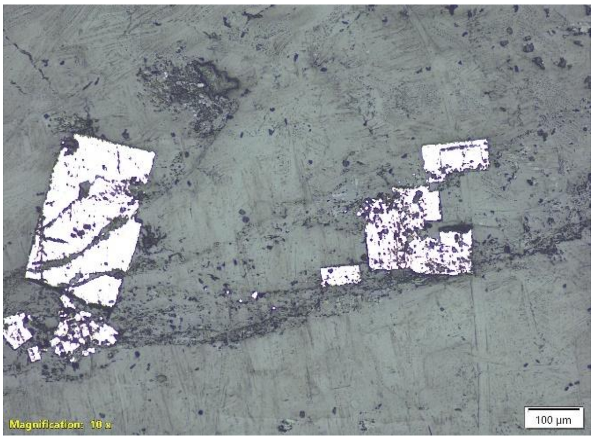


Fig 5.3.4.7: Pyrite (cubic grains) in medium-grained granite, under reflected light.

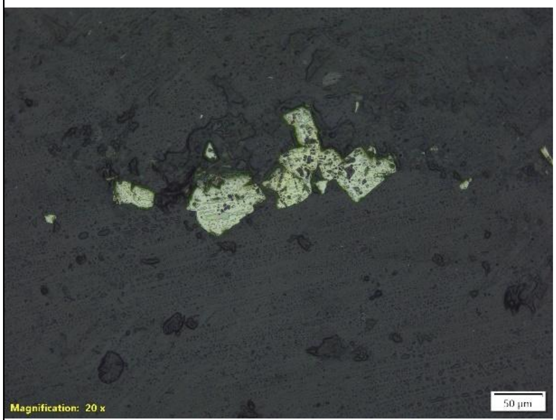


Fig 5.3.4.8: Grains of pyrite and chalcopyrite in altered vein, under reflected light.

5.3.5 Medium to Coarse-grained Equigranular granite (Sericitized):

Medium to coarse-grained Equigranular granite is younger than the diorite and felsic volcanics which present as veins and cross cut the diorite and volcanics (Fig. 5.3.5.1 and 5.3.5.2).

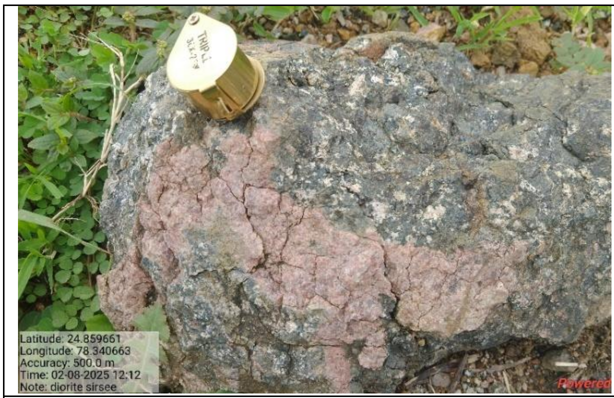


Fig 5.3.5.1: The medium to coarse-grained equigranular granite intrusion in diorite, near Sirsee.	*Fig 5.3.5.2: The medium to coarse-grained equigranular granite veins in diorite, near Sirsee.*

5.3.6 Fine-grained Porphyritic Granite:

Field Observation: In fine-grained porphyritic granite, the feldspar phenocrysts set in fine- to medium grained granitic matrix (Fig. 5.3.6.1). This rock type is commonly present in the central and western part of the block, mainly in between Tilhari, Bhadra and Gora Village (see the locality index). This rock shows ductile deformation at places.

Petrological study: The fine-grained granite shows the porphyritic texture. The rock is mainly consisting of the quartz (35% by volume), feldspar (60% by volume), and opaque (~5%). The quartz grains are recrystallized, subhedral to ribbon shaped shows the evidences of undulose extinction (Fig. 5.3.6.2). The feldspar is including plagioclase and alkali having large grain, with biotite grains. However, the rocks contain opaque minerals pyrite, chalcopyrite which are aligned parallel to the deformation (Fig. 5.3.6.3-5.3.6.4).

Fig 5.3.6.1: Fine-grained porphyritic granite, near Tilhari village.

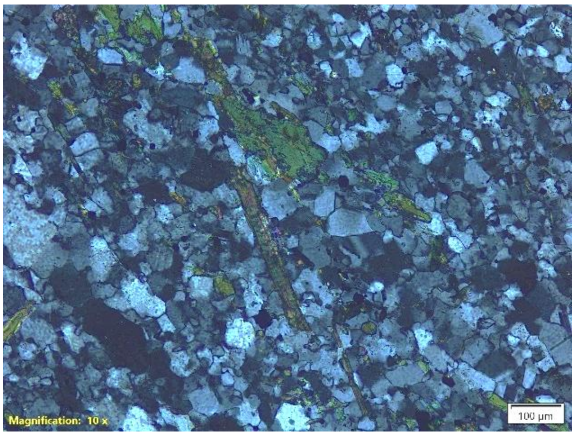


Fig 5.3.6.2: Fine to medium-grained porphyritic granite with recrystallized quartz of the deformed granite, under cross polar.

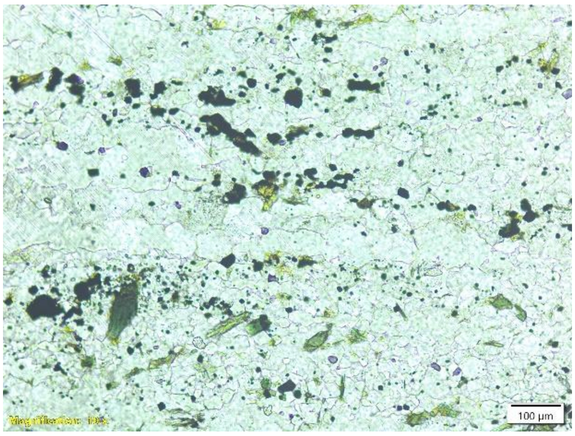


Fig 5.3.6.3: Fine- grained granite with opaque minerals aligned parallel to foliation, under polarized light.

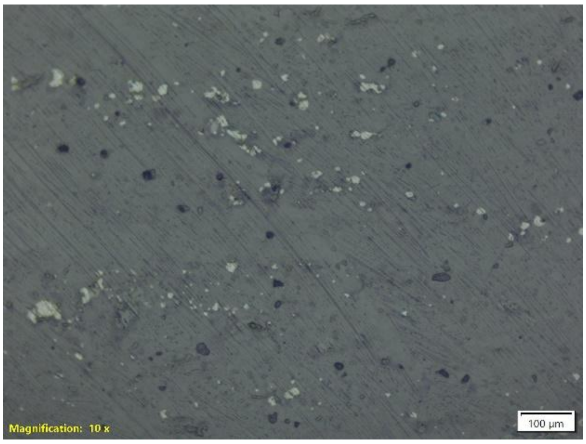
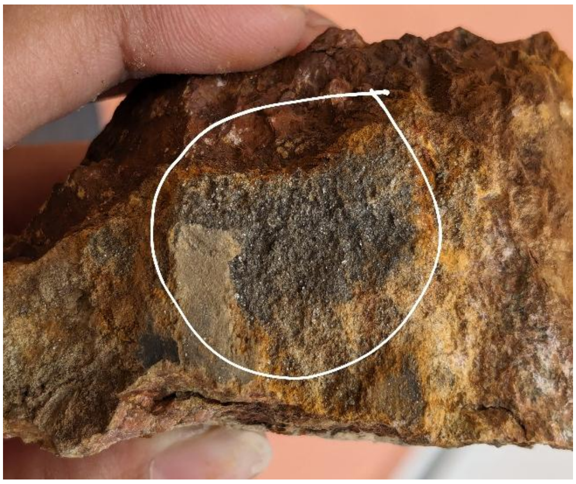


Fig 5.3.6.4: Pyrite minerals in fine- grained granite, under reflected light.

5.3.7 Fine-grained equigranular granite and unaltered medium-grained equigranular granite

A few discrete outcrops of the fine-grained equigranular granite are reported near the Siron Khurd, Barodaswami, Ghisauli, Jhakhora, and Sankarwar Khurd. The is composed mainly of quartz, feldspar, and mafic minerals. The feldspar grain is sericitied hence the boundary of the grains is fuzzy.

An outcrop of less altered medium-grained equigranular granite is reported from the Minora and Thanwara villages. The rock is mainly composed of the quartz and feldspar. The grain boundaries are very sharps and feldspar do not show ant alteration.

	
Fig 5.3.7.1: Evidence of sulphide fluids in unweathered Granite	*Fig 5.3.7.2: Presence of pyrite and chalcopyrite with other sulphides*

5.3.8 Diorite

Field Observation: The diorite rock is observed in the central and eastern part of the block in and around Bhadra Village along with in between Rasoi, Sirsee and Vinekamafi Village (see locality index). The rock is medium to coarse-grained, composed of the amphibole and feldspar (Fig. 5.3.8.1). At places diorites contain high proportions of sulphide minerals dominantly pyrite and subordinate chalcopyrite (Fig. 5.3.8.2). Near the periphery of the diorite stocks veins of fine-grained porphyritic granite are present. The contrast in composition and texture between the two rocks makes this feature visually striking.

Petrological study: Diorite is composed of amphibole (30% by volume), feldspar (65% by volume), opaque minerals (5% by vol.). The amphibole grains are green coloured (Fig -5.3.8.3), euhedral to subhedral and medium to coarse-grained with 2 sets of cleavage. The plagioclase feldspar grains are subhedral and are highly altered with signatures of sericitic alteration (Fig-5.3.8.4). Opaque minerals observed (Fig- 5.3.8.5), which under reflected microscopy showed specs of pyrite and chalcopyrite (Fig –5.3.8.6) in the sample.

Geochemical analyses: Diorite have 54 wt % of SiO2, 6-8 wt % of MgO, 0.09-2 wt %, 7-10 wt % of the Fe2 O3, 8-11 wt %, 8-11 wt % of the CaO.

Fig 5.3.8.1: Medium to coarse grain diorite near Sirsee.

Fig 5.3.8.2: Coarse grain diorite with granite vein near Sirsee.

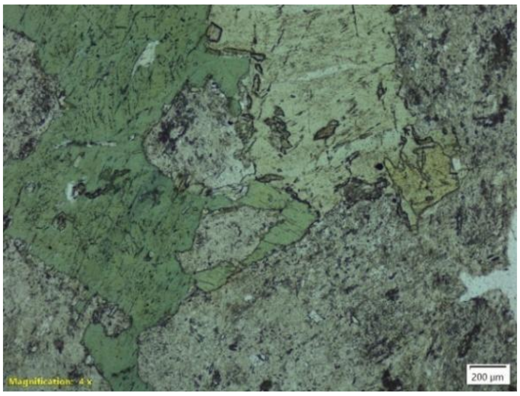


Fig 5.3.8.3 Diorite rock composed of the amphibole and feldspar, under plane polarized light.

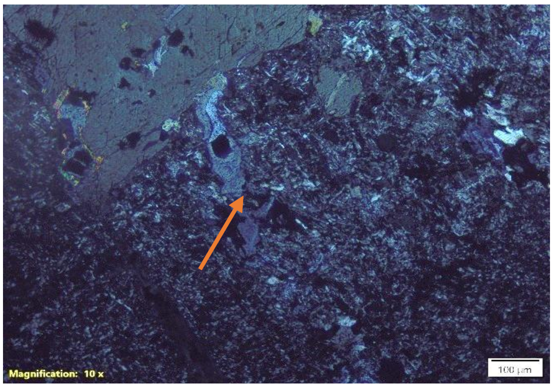


Fig 5.3.8.4 Sericitized feldspar grains in diorite (marked arrow), under cross polar.

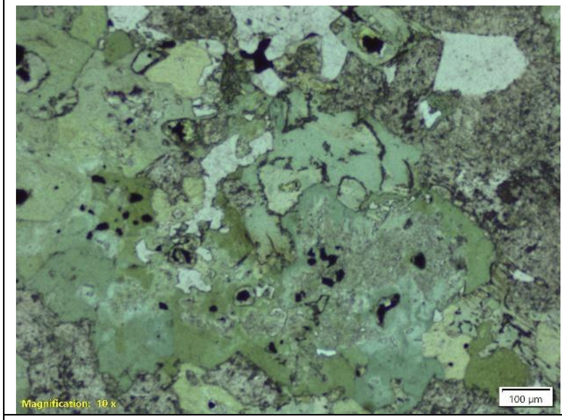


Fig 5.3.8.5 Medium to coarse-grained amphibole grains with 2 sets of cleavage of diorite and opaques, under plane polarized light.

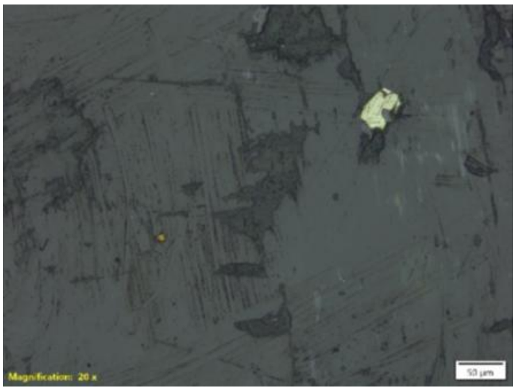


Fig 5.3.8.6 Chalcopyrite grains observed in diorite, under reflected light.

Mineralization Evidences in Diorite (Fig 5.3.8.7- 5.3.8.7.8)

Fig 5.3.8.7: Chalcopyrite (Under hand Lens) in Diorite near Sirsee

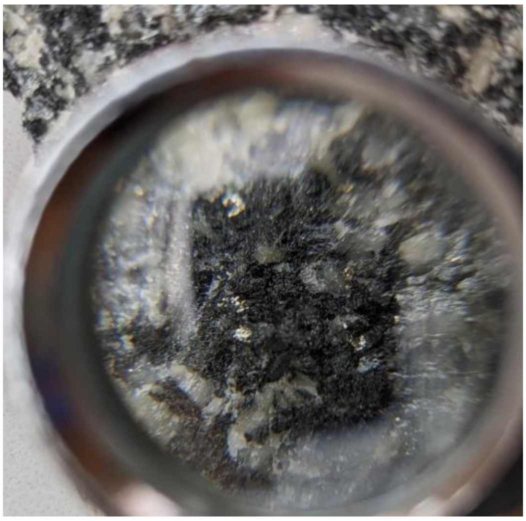


Fig 5.3.8.8: Pyrite (Under hand Lens) in Diorite near Sirsee

5.3.9 Felsic Volcanics

Field Observation: The felsic volcanics (mainly rhyolite and rhyodacite) are present over a large (~30 sq. km) in the northern part of the block in and around Burera, Gulenda, Bhawar Kali and Pipra villages (see the locality index). It covers around 20% of the entire Block. (Fig

5.3.9.1). In field felsic volcanics also show the evidence of volvanic tuff, lapilli tuff and agglomerate. (Fig 5.3.9.2- 5.3.9.4)

Petrological study: Felsic volcanics is felsic extrusive igneous rock consists of very fine-grained matrix of quartzo-feldspathic phase with euhedral to subhedral phenocrysts of quartz and microcline (Fig 5.3.9.5). The modal amount of quartz phenocryst is much greater than the feldspar phenocrysts of plagioclase and microcline. Under microscope Epidote-chloritic patches (Fig 5.3.9.6) present along with sericitic alteration in some of the feldspar phenocrysts. Some of the plagioclase feldspar show rims with cross hatched twinning maybe signs of potassic alteration (Fig 5.3.9.7). Specs of chalcopyrite and pyrite (Fig 5.3.9.8) observed in the sample. Opaque minerals are also present.

Fig 5.3.9.1: Volcanics rock near Gulenda.

Fig 5.3.9.2: Banded volcanics tuff near Gundelda.

Fig 5.3.9.3: The evidences of the lapili tuff, Guldenda.

Fig 5.3.9.4: Agglomerate near Guldenda Village.

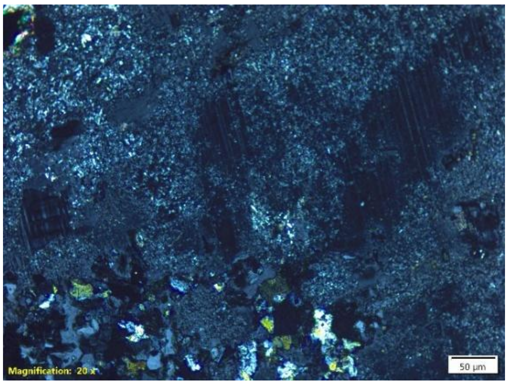


Fig 5.3.9.5: Euhedral phenocrysts of microcline and quartz, under cross polar.

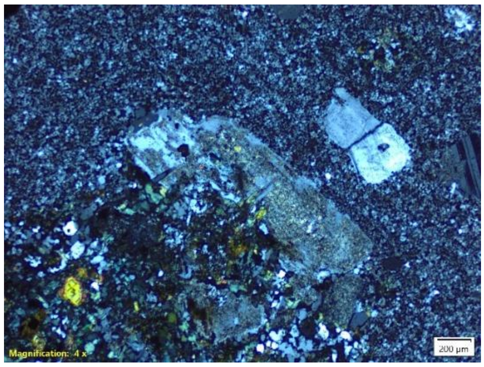


Fig 5.3.9.6: Epidote grains in feldspar phenocrysts showing signatures of propylitic alteration, under cross polar

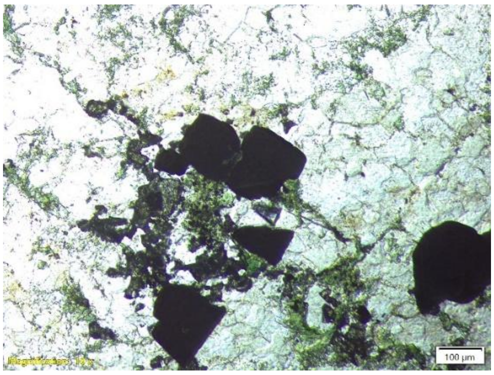


Fig 5.3.9.7: Opaque minerals observed, , under reflected light.

Fig 5.3.9.8: Specs of chalcopyrites observed, under reflected light.

Mineralization Evidences in the volcanics (Fig 5.3.9.9- 5.3.9.12)

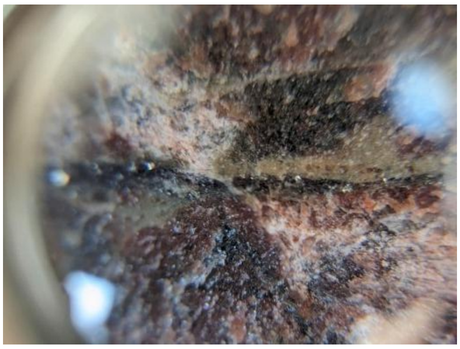


Fig 5.3.9.9: Chalcopyrite (under Hand Lens) in Volcanics near Gulenda

Fig 5.3.9.10: Chalcopyrite and Chalcocite in Volcanics near Gulenda

Fig 5.3.9.11: Bornite in Volcanics near Rajpur

Fig 5.3.9.12: Pyrite in Volcanics near Rajpur

5.3.10 Rhyolite Porphyry

Rhyolite porphyry is a volcanic/sub-volcanic rock of rhyolitic composition where the phenocrysts make up more than half of the rock. Phenocrysts are dominantly of feldspar with subordinate quartz. These rocks are mainly present along the periphery of volcanic rock exposure. They are commonly present around Burera, Gulenda (northern part of the study area) (Fig 5.3.10.1 - 5.3.10.4).

Fig 5.3.10.1: Rhyolite Porphyry, near Gulenda village.

Fig 5.3.10.2: Contact of Rhyolite Porphyry and coarse grained granite, near Gulenda village.

Fig 5.3.10.3: Rhyolite with Chalcocite

Fig 5.3.10.4: Rhyolite with Chalcocite (Vuggy due to hydrothermal alteration)

5.3.11 Basaltic Dyke

Field Observation i. High-Mg basaltic dike: A dark green colored dike of ~30-50m width is traced for about 30 km in the north and central part of the block. The dike is NNE-SSW trending and intruded within coarse grained pink granite. It is traced from near south of Jhakhora village in the SSW to Ghishauli village in the NNW. The very distinctive feature of this dyke is that it contains many resorbed fragments of the country rock granite (Fig. 5.3.11.1 to 5.3.11.2). Calcite and sulphide minerals like pyrite and chalcopyrite have been observed. Basalt have the 50-65 wt % of the SiO_2, MgO 4.5 wt %, Fe_2O_3 4 to 12 wt %, Al_2O_3 4-12 wt %.

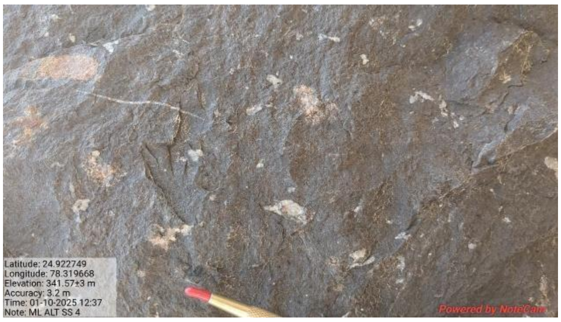


Fig 5.3.11.1: Basalt with quartz blebs, near Burera Village.

Fig 5.3.11.2 Basalt with quartz blebs, near Ghisauli Village.

Mineralization in Basalt (Fig 5.3.11.3)

Fig 5.3.11.3: Pyrite in Basalt, Near Ghisauli

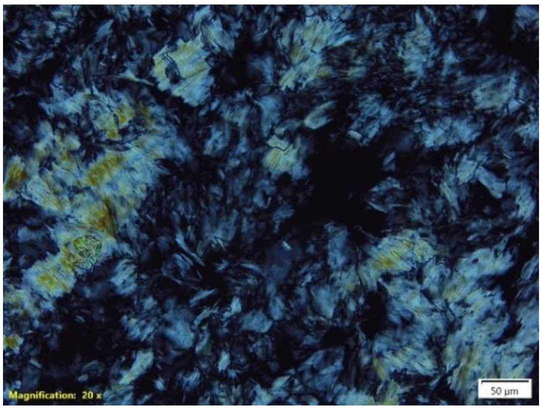
5.3.12 Pyrophyllite

Field Observation: Pyrophyllite is a hydrous aluminum silicate mineral, often found in metamorphic and hydrothermal environments. At places pyrophyllite occurs as a rock mass large enough to be mined as a minor mineral. It is similar in appearance and properties to talc and is known for its soft, soapy texture. Pyrophyllite is observed in the Southern part of the block along an NNE-SSW trending lineament and is mined near Mailar village. (Fig 5.3.12.1)

Petrological study: The pyrophyllite exhibit equigranular fibrous texture, with high birefringence and opaque minerals. The pyrophyllite in the Mailar block is the product of the advanced argillic alteration (i.e. high sulfidation epithermal deposit). (Fig 5.3.12.2 & Fig 5.3.12.3). Patch of magnetite also present as opaque. (Fig 5.3.12.4).

In the western part of pyrophyllite mines, Hydrothermal Breccia is also present. (Mailar Area). (Fig 5.3.12.5 & Fig 5.3.12.6).

Fig 5.3.12.1: Pyrophyllite showing gusano texture, in Mailar mine, Mailar village.



.Fig 5.3.12.2: Pyrophillite shows fibrous texture. Under cross polarized.

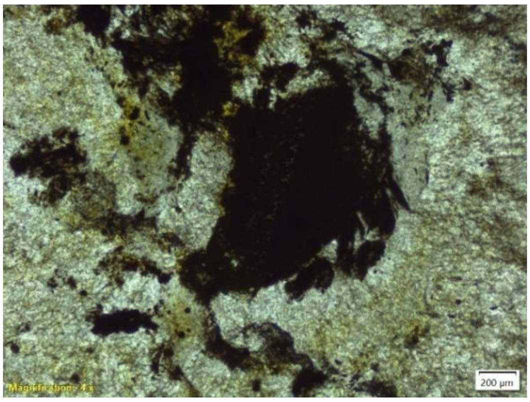


Fig 5.3.12.3: Opaque mineral observed, under plane polarized light

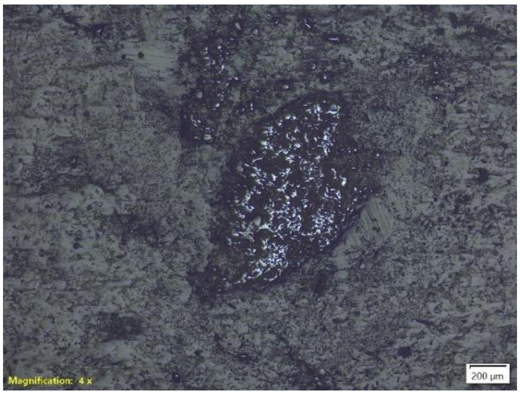


Fig 5.3.12.4: Pyrophyllite with patches of magnetite. Under reflected light.

Fig 5.3.12.5: Hydrothermal Breccia near Mailar Mine

Fig 5.3.12.6: Hydrothermal Breccia near Mailar Mine

5.3.13 Quartz Vein

Field Observation: There are numerous small (few 10s of meters to ~100m) and few large mappable (> few km strike lengths) quartz veins in the area. Large mappable quartz veins are termed as 'Giant Quartz Veins (GQVs) in the Bundelkhand Craton. These GQVs are generally coarsely crystalline milky white in color and generally lack any sulphide minerals. One of the largest GQVs that is present in the block trends NW-SE and is traced for about 5.5 km from near Jakhora village in the SE to near Ghisauli village in the NW. Another GQV present in the block area is in the southern part of the block. This GQV trends NE-SW and is traceable for 4.1 km from near Minora village in the southwest to near Mailar village in the NE. Small sized quartz veins are numerous in the area and trends in different directions with dominant N-S to NNE-SSW trends. They are generally few 10s of meters thick and few 100s to few kilometers in length. These small sized quartz veins are common in the felsic volcanic terrain in the northern part of the block. These small quartz veins are generally mineralized in visible sulphide minerals like pyrite, chalcopyrite and rare molybdenite. Secondly copper minerals like malachite, cuprite, chalcocite are common in these small sized quartz veins. (Fig 5.3.13.1-5.3.13.4)

Petrological study: Under the microscope, quartz vein exhibits a granular texture with interlocking recrystallized quartz (95% by volume). These quartz grains are typically anhedral to subhedral (Fig 5.3.13.5), often display a mosaic-like arrangement. The quartz grains show undulose extinction and sub-grain formation. Later forming quartz veins are also present indicating repeated formation of quartz. The quartzite also contains chalcopyrite, pyrite, iron oxide (Fig 6.3.34) as opaque and rare apatite. Cherty variety (Fig 5.3.13.6) also present, consist very fine-grained quartz crystals, often appearing cryptocrystalline. It typically exhibits a smooth, homogeneous texture. Quartz vein with pyrite or chalcopyrite and arsenopyrite (Fig 5.3.13.7 & Fig 5.3.13.8) with some iron oxides are observed under reflected light.

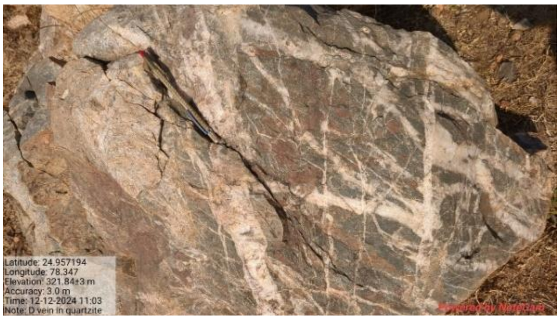


Fig 5.3.13.1: Quartz vein near Burera village.

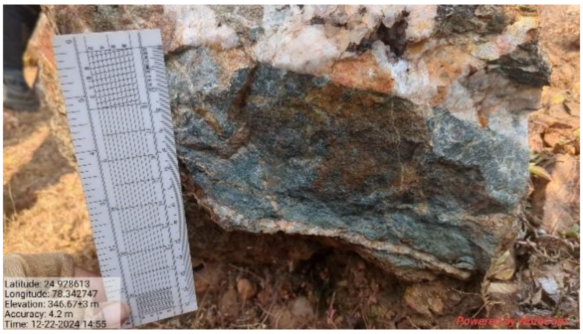


Fig 5.3.13.2: Smoky quartz near Burera village.

Fig 5.3.13.3: Brecciated quartz near Burera village.

Fig 5.3.13.4: Malachite crystals in smoky quartz near Burera village

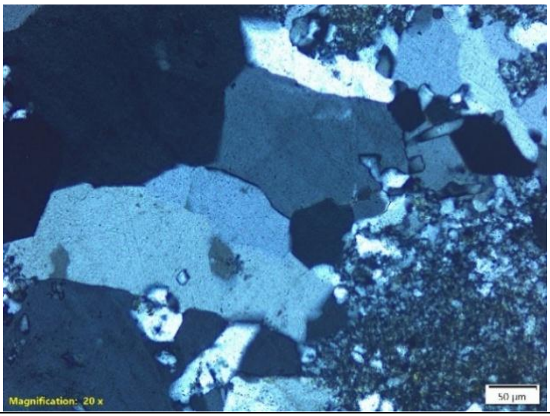


Fig 5.3.13.5: Quartz vein with both coarse grained quartz and recrystallized quartz, under cross polar.

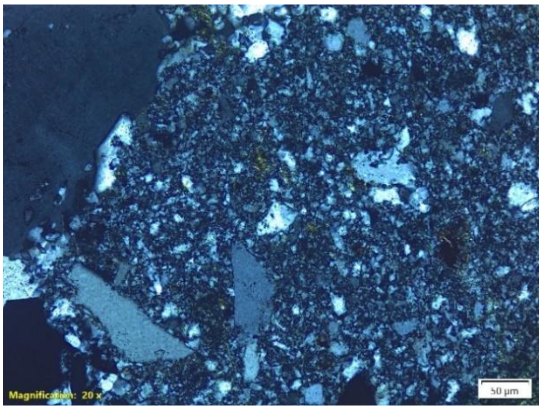


Fig 5.3.13.6: Chert or microcrystalline quartz grains, under cross polar.

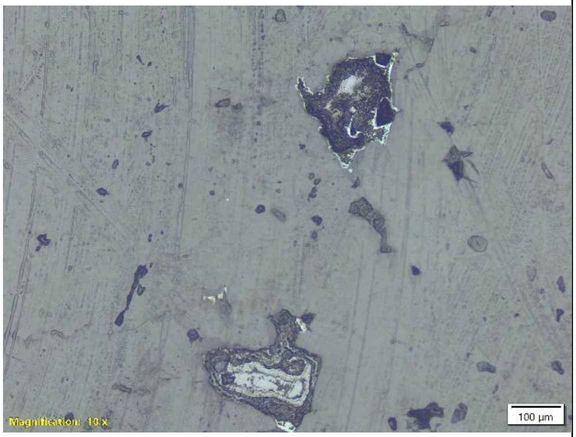


Fig 5.3.13.7: Fine grained to medium grained quartz in quartz vein with iron rich minerals,under reflected light.

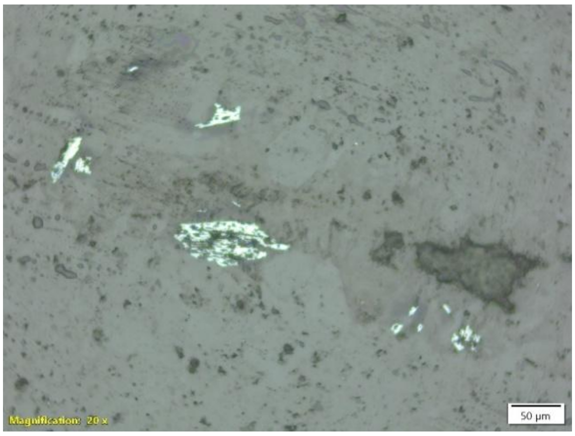


Fig 5.3.13.8: Fine grained to medium grained quartz in quartz vein with pyrite or chalcopyrite, under reflected light.

Evidences of mineralization in quartz vein (Fig 5.3.13.9-5.3.13.16)

Fig 5.3.13.9: Malachite associated with quartz, near Gulenda

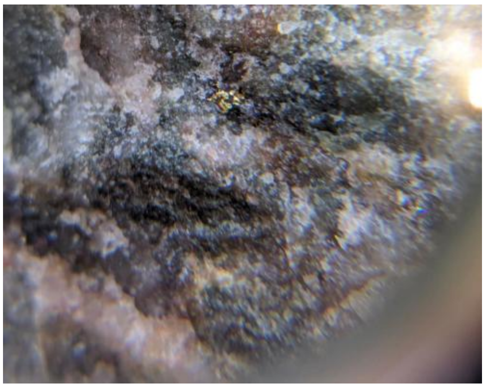


Fig 5.3.13.10: Chalcopyrite (under the hand lens) associated with quartz, near Gulenda

Fig 5.3.13.11: Molybdenite and Malachite associated with quartz, near Burera.

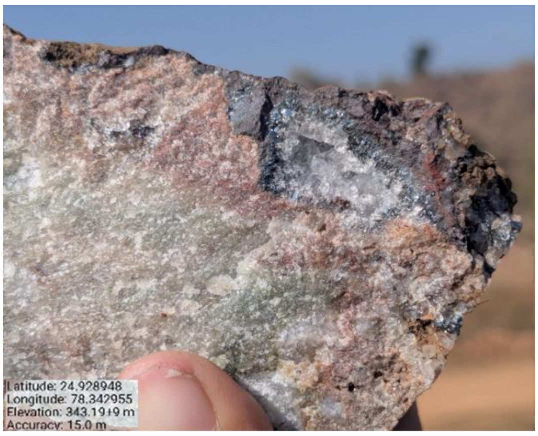


Fig 5.3.13.12: Silver associated with quartz, near Burera.

Fig 5.3.13.13: Cuprite in quartz vein under the lens near Burera

Fig 5.3.13.14: Chalcocite and Cuprite in Quartz vein near Burera

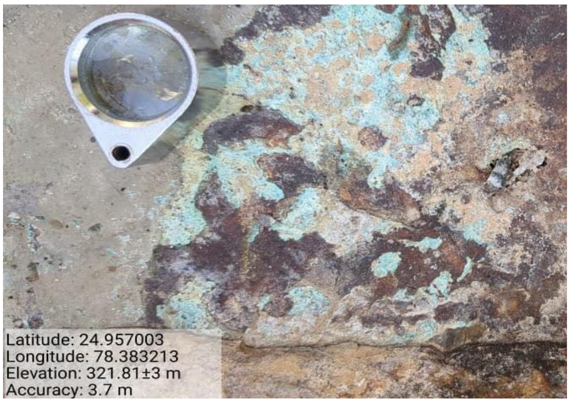


Fig 5.3.13.15: Chryscolla in quartz vein, near Burera

Fig 5.3.13.16: Malachite and Silver within Quartz vein, near Lalaon

5.3.14 Dolerite

A few NNE-SSW trending medium-grained dolerite dykes are present in the southern part of the block, near Mailar Rajghat areas especially east of Lagaon village, west of Minora, and in between the Mailar pyrophyllite mine and Bharatpura village.

5.4 XRD Study

50 sample XRD analyses have been done from the Mineral Physical Laboratory, GSI Nagpur. Analyses show the presence of the Albite, Clinoclore, Biotite, Chlorite, Mica, Hematite as opaque, Malachite, Chalcopyrite as sulphide mineral, traces of Beryl, Fluorite, Cerussite are also reported (Annexure III).

5.5 EPMA Study

The major mineral assemblages as observed under petrographic study is confirmed by EPMA analyses: the opaque is mainly goethite, magnetite, and a few traces of alunite are also observed (Annexure IV).

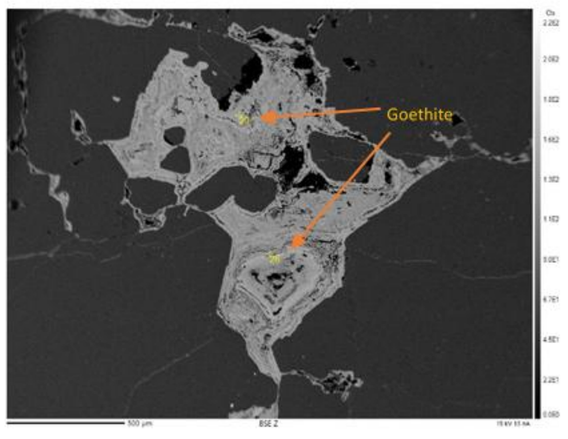


Fig:6.3.40: Goethite under Back scattered Image (ID 107008)

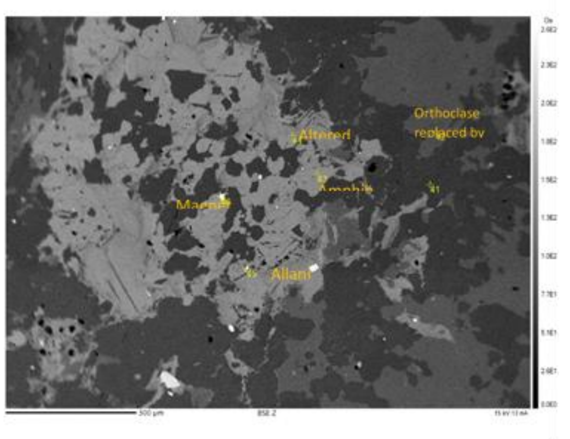


Fig:6.3.41: Magnetite, Alunite under Back Scattered Image (ID 107008)

5.6 Geochemistry of the rocks of the area

The geochemical investigations conducted in the Mailar Block as part of the reconnaissance survey (G4 stage), offer compelling insights into the potential of mineralization of the region. These studies involved comprehensive chemical analyses of various lithologies using X-ray Fluorescence (XRF) and Inductively Coupled Plasma Mass Spectrometry (ICPMS) (Annexure-V). Bedrock and stream sediment samples were analyzed, targeting base metals and gold, which revealed significant geochemical anomalies. In this section a total of 91 fresh bedrock samples analyzed (Annexure VI and VII). Out of these 78 samples are of felsic volcanics, 10 samples are of granite, and 3 samples belong to diorite and basaltic dyke. The analyzed samples are classified and plotted in different variation diagrams and tectonic discriminant diagrams for an understanding of the tectonic setting and inter alia the mineralization potential of the block. 50 Gold Fire assay samples were also studied. (Annexure VIII, IX)

5.6.1 AFM (Molar Alkali–FeO–MgO) and Molar Na_2O-Al_2O_3-K_2O plots:

The AFM (Alkali–FeO–MgO) diagram (Irvin and Baragar, 1971) classifies volcanic rocks based on magmatic differentiation trends (Fig 5.6.1.1). This plot uses molar percentages to represent rock compositions in terms of their Alkali (Al_2O_3+K_2O), Ferromagnesian (FeO+MgO+MnO), and Magnesium (MgO). In this diagram all 31 volcanic samples from the Mailar block (except one sample), all the granite and diorite plot within the calc-alkaline field, suggesting their formation in a subduction-related magmatic environment.

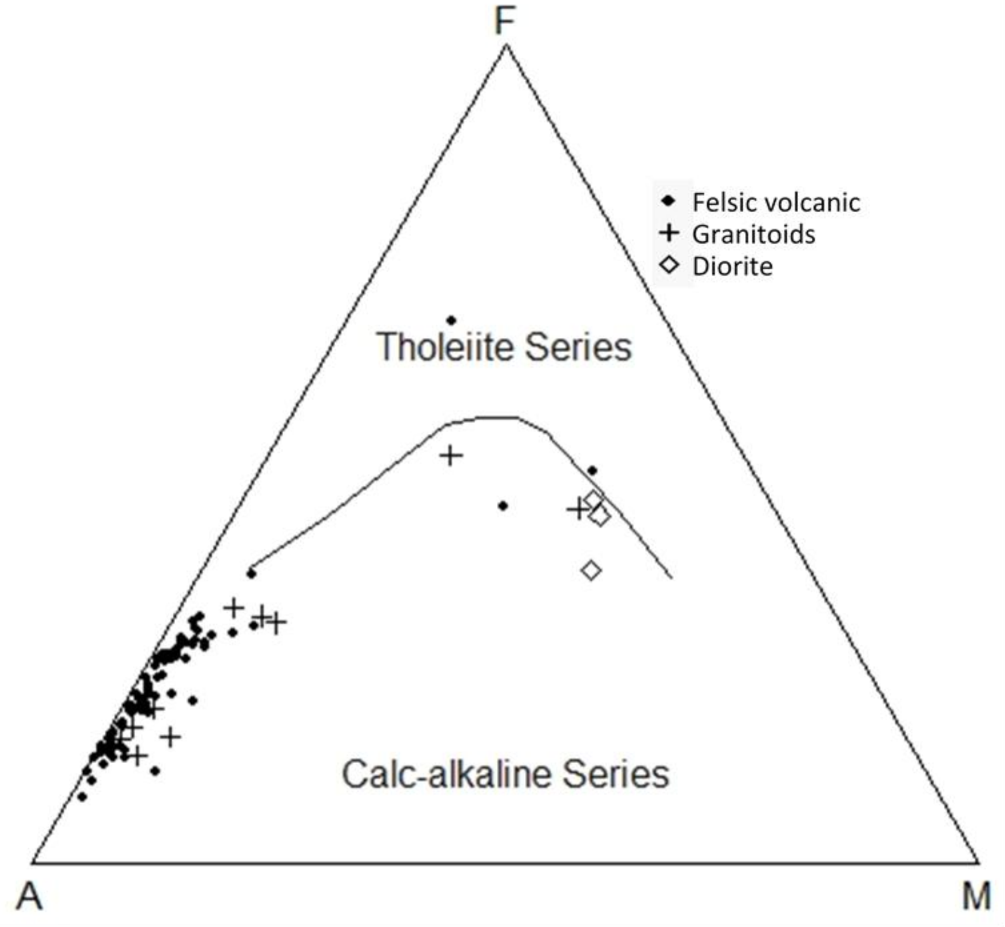


Fig 5.6.1.1: AFM (Molar alkali-FeO-MgO) plot of Irvine and Baragar (1971). Please note all samples of felsic volcanics (except one), of granitoids and of diorites plot in the calc-alkaline field

Calc-alkaline trends are typically associated with volcanic arcs, indicating a tectonic setting where the magma has evolved through fractional crystallization and interaction with continental crust. The position of these rocks in the calc- alkaline domain further aligns with the presence of hydrothermal mineralization and suggests magmatic fluids enriched in volatile and ore-forming elements. Therefore, establishes a direct link between the observed volcanic lithologies and subduction-related magmatism, supporting the broader metallogenic model. (Fig 5.6.1.2)

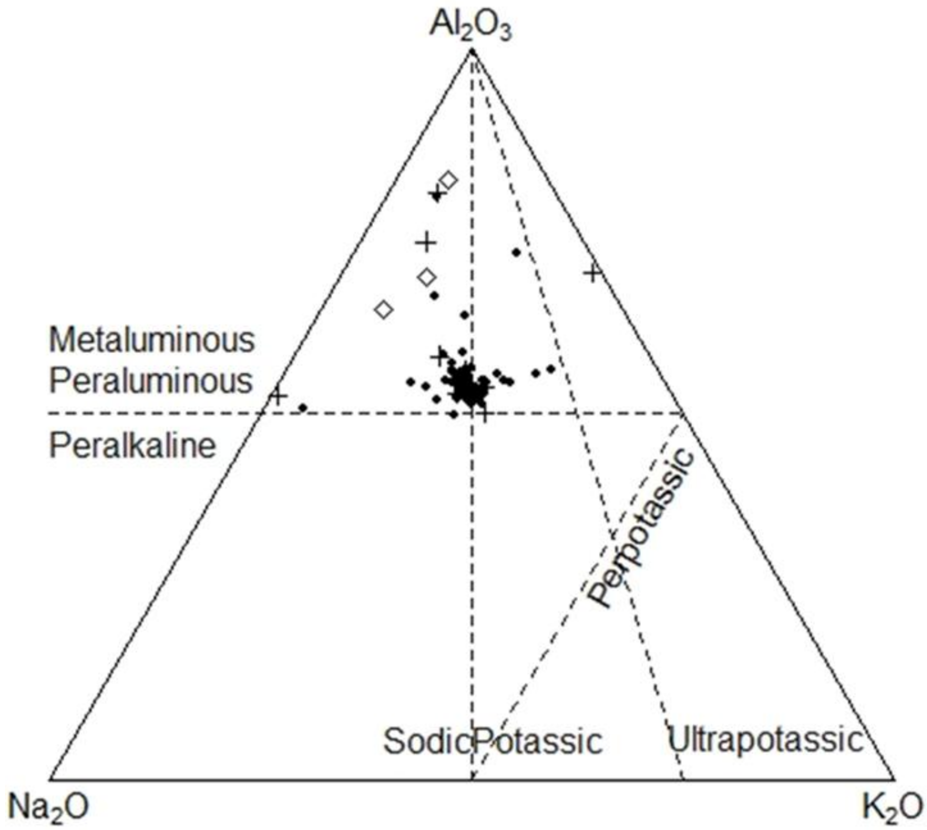


Fig 5.6.1.2 The molar Na_2O-Al_2O_3-K_2O plot show that all rocks of the area belong to metaluminous/peraluminous group

5.6.2 TAS (Total Alkali-Silica) plot:

In the TAS diagram (Le Bas et al., 1986) most of the felsic volcanic rock straddles between the Rhyolite-Trachydacite field. In other words they straddle the alkalic-subalkalic divide. Most of the granitoids also straddle these fields suggesting that felsic volcanic rocks and the granitoids could be genetically related to each other.

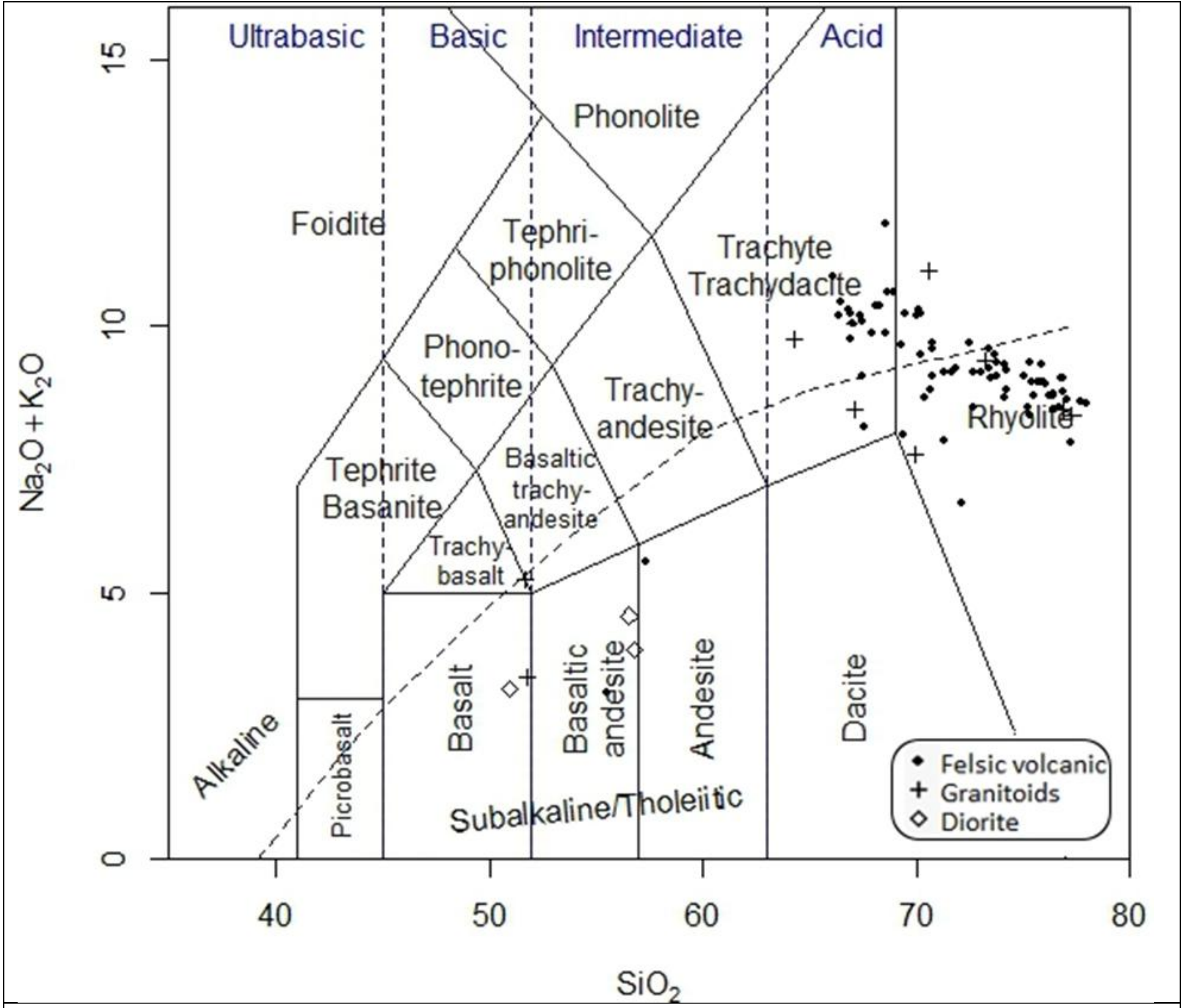


Fig 5.6.2: Total Alkali-Silica (TAS) diagram of LeBas (1986) for felsic volcanic rocks. It is noted that much of the felsic volcanic rocks stradles the boundary between the alkaline/subalkaline field

5.6.3 The K_2O vs SiO_2 diagram (Peccerillo and Taylor, 1976):

The K_2O vs. SiO_2 classification scheme of (Peccerillo and Taylor, 1976) classifies volcanic rocks into different series based on their potassium content (Fig 5.6.3). This classification scheme especially addresses the need to distinguish different magmatic series within the sub- alkaline family common to any subduction zone setting. The different magma series (low-K tholeiitic, calc-alkaline, high-K calc-alkaline, and shoshonitic) correspond to varying magma sources and processes associated with subduction zones. The Mailar volcanic rocks span from high-K calc-alkaline to shoshonitic series, reinforcing the notion of a continental arc setting. High-K and shoshonitic compositions typically form in mature arcs with interaction with thickened crust and are commonly associated with porphyry copper and epithermal systems. The enrichment in potassium (K) is also indicative of metasomatism in the mantle wedge due to subducted slab- derived fluids. This diagram is critical because potassium-rich magmas are often fertile in metals like Cu, Mo, and Au, which supports the mineralization potential highlighted by the geochemical survey.

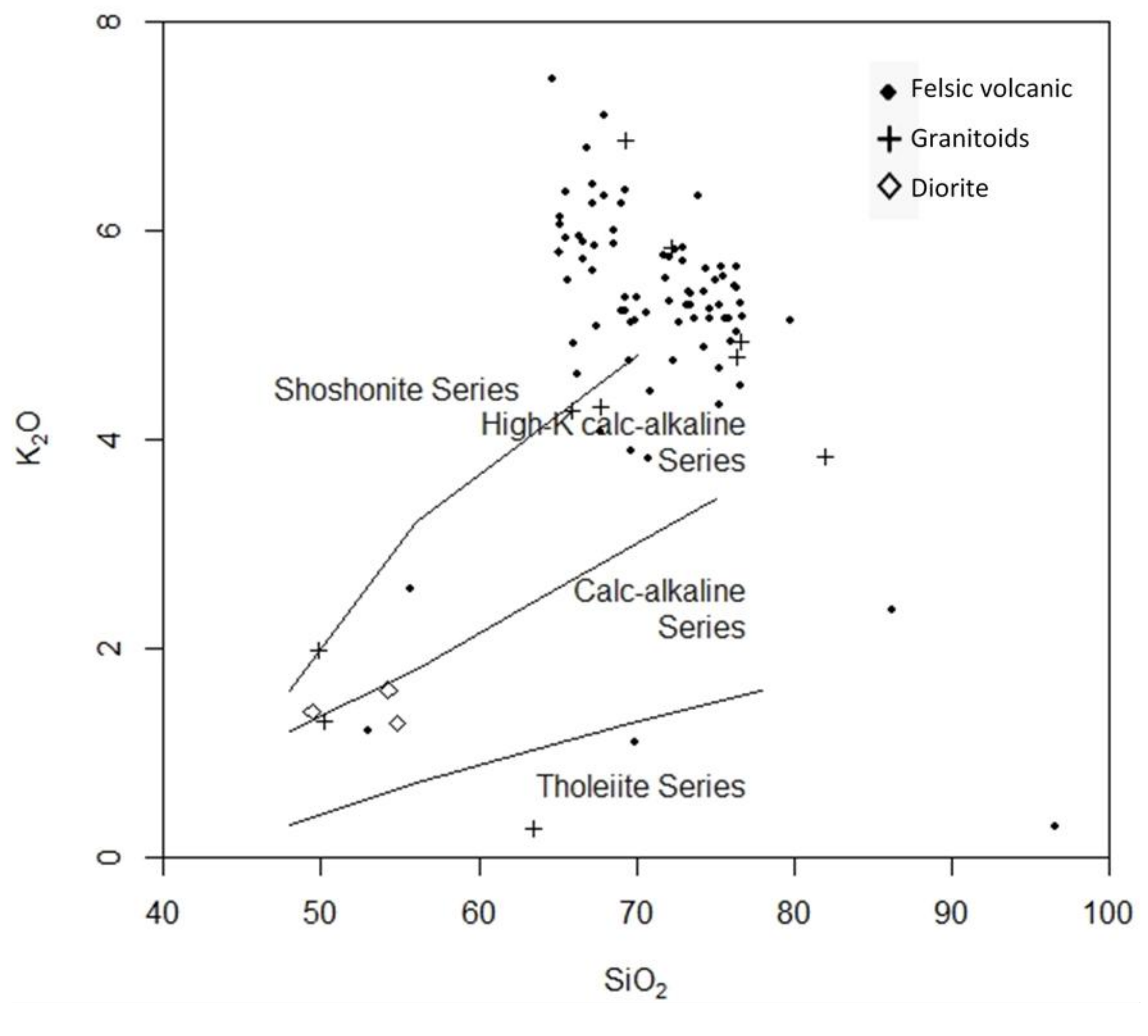


Fig 5.6.3: K_2O vs SiO_2 Diagram

5.6.4 Bivariate plots (with respect to SiO_2 wt%)

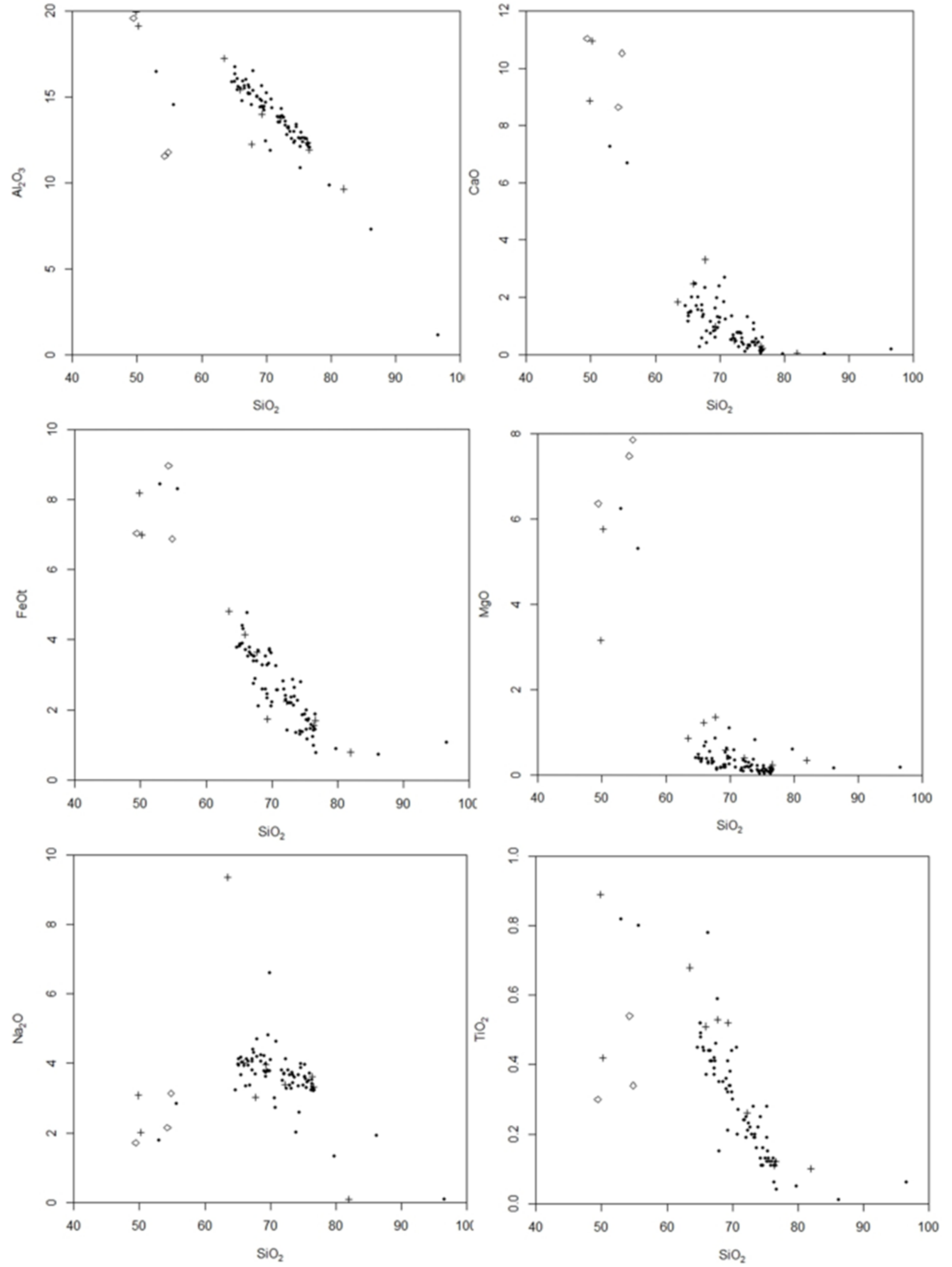


Fig 5.6.4: Bivariate plots (with respect to SiO_2 wt%)

The bivariate plots show variation major oxides against silica (SiO_2) enables interpretations of magmatic differentiation (Fig 5.6.4). For Mailar felsic volcanics there is negative vatiation for FeO, MgO, TiO_2, and CaO with increasing SiO_2. Such negative correlation between FeO, MgO, TiO_2 and CaO with increasing SiO_2 indicate fractional crystallization. As magma evolves, early crystallizing mafic minerals (e.g., olivine, pyroxene) remove Fe, Mg, and Ca, resulting in more felsic residual melt. These trends also suggest a closed magmatic system with limited magma mixing or contamination during its ascent. These characteristics is essential for understanding the enrichment of incompatible elements and the localization of mineralizing fluids during late-stage magmatic evolution.

5.6.5 Chondrite normalised (after Boynton, 1984) Rare Earth Element (REE) diagram:

Varaition of Rare Earth Elements normalized to chondritic values and renormalized to sample Lutetium values to make Lu(N)=1. Such plots highlight the variation of the REE within the sample set. (Fig 5.6.5).

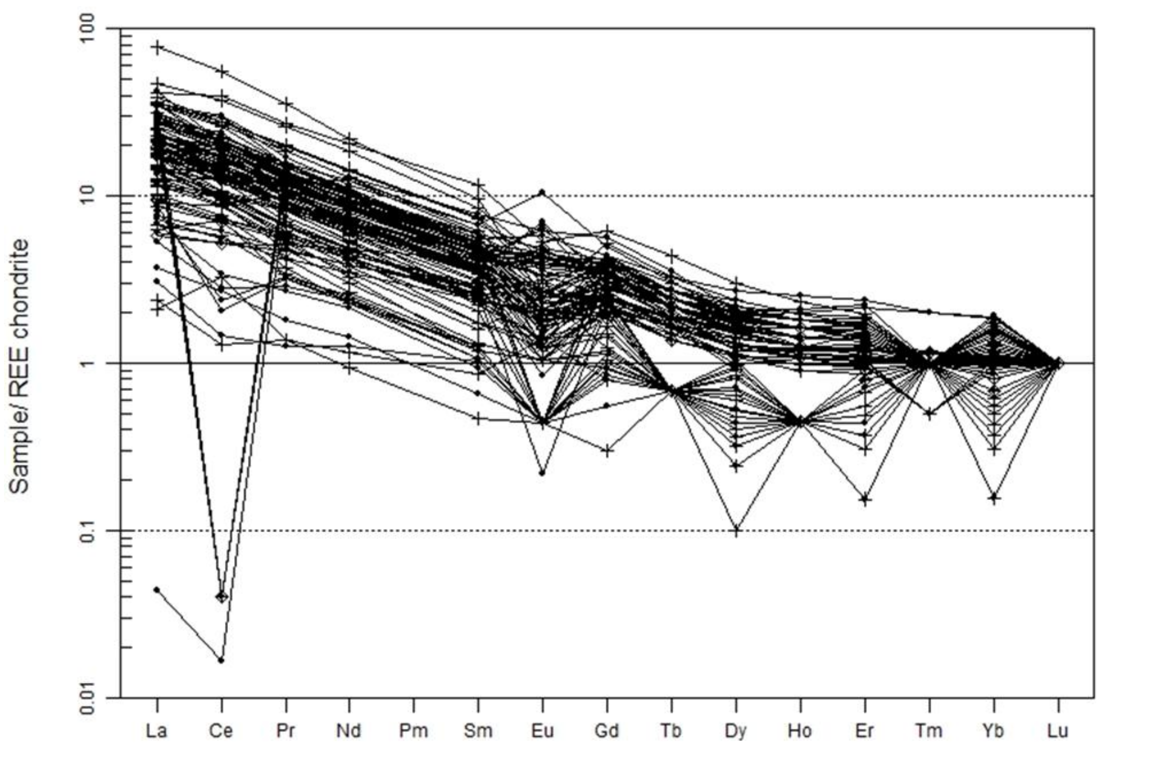


Fig 5.6.5: Chondrite normalized REE plot for rocks of Mailar project area. Chondrite normalized plots are renormalized to sample Lu values such that Lu(N)=1

In the Mailar area the felsic volcanic rocks plot reveal enrichment in Light Rare Earth Elements (LREEs) over Heavy Rare Earth Elements (HREEs), with Sample/Chondrite values varying between 2 to 50. This pattern reflects partial melting of a metasomatised mantle source and/or crustal assimilation, which are typical of arc-related magmas. The LREE enrichment suggests residual garnet in the source, possibly in the lower crust or lithospheric mantle. Such enrichment is favourable for hydrothermal ore deposits as LREEs commonly associate with fluids that transport base and precious metals.

5.6.6 Multi-element spider diagram:

The Normal Mid-Ocean Ridge Basalts (NMORB) (Sun and McDonough, 1989) normalised multi-element spider diagram shows values greater than 1, particularly for LREEs and incompatible elements like Rb, Ba, Th, Pb and U, pointing toward crustal contamination (Fig 5.6.6.1)

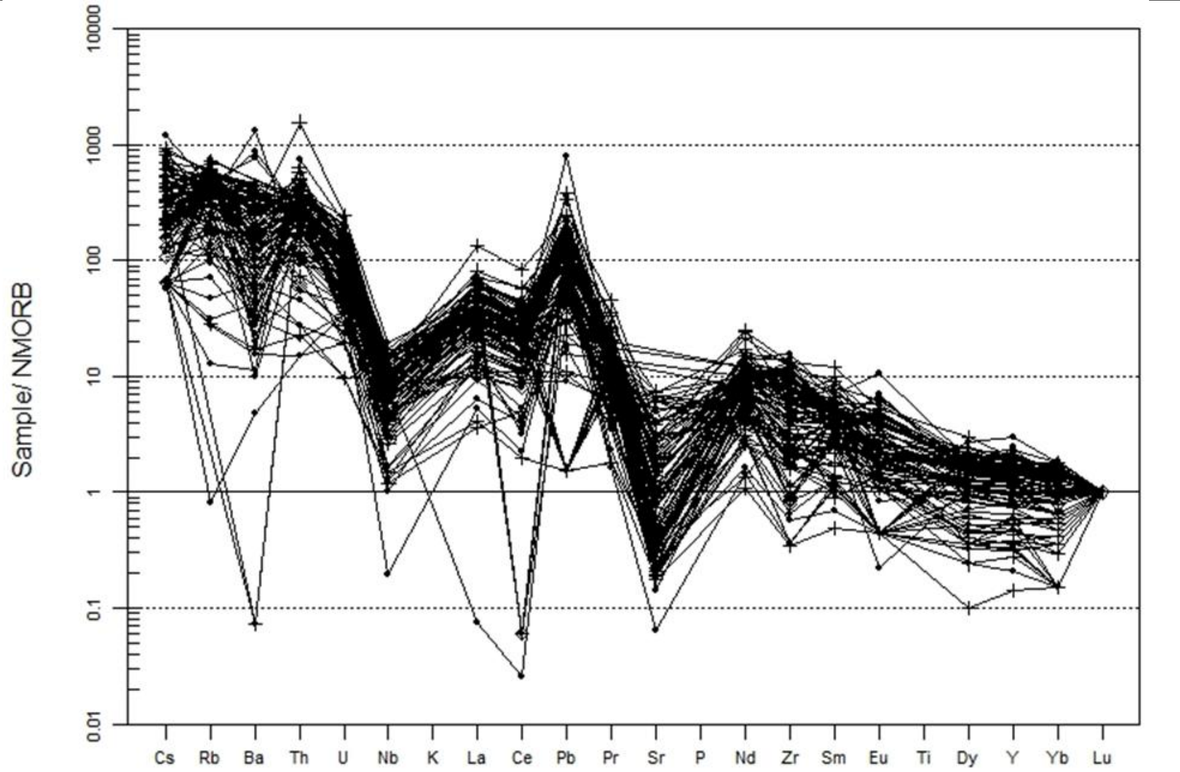


Fig 5.6.6.1: NMORB (Sun adn McDonough 1989) and Lu(N)=1 diagram. Note strong depletion in Nb, Sr and Ti.

The depletion in elements like Nb and Ti, alongside the enrichment in fluid-mobile elements, aligns with subduction zone geochemistry. These patterns indicate that the volcanic rocks derived from a mantle source modified by slab-derived fluids and subduction components. The crustal overprint provides geochemical evidence for the hybrid nature of the magma and further underscores the Mailar Block's mineralization potential.

The Enriched Mid-Ocean Ridge Basalts (EMORB) (Sun and McDonough, 1989) normalised multi element diagram of volcanics shows that most element values are greater than 1, with pronounced LREE enrichment.

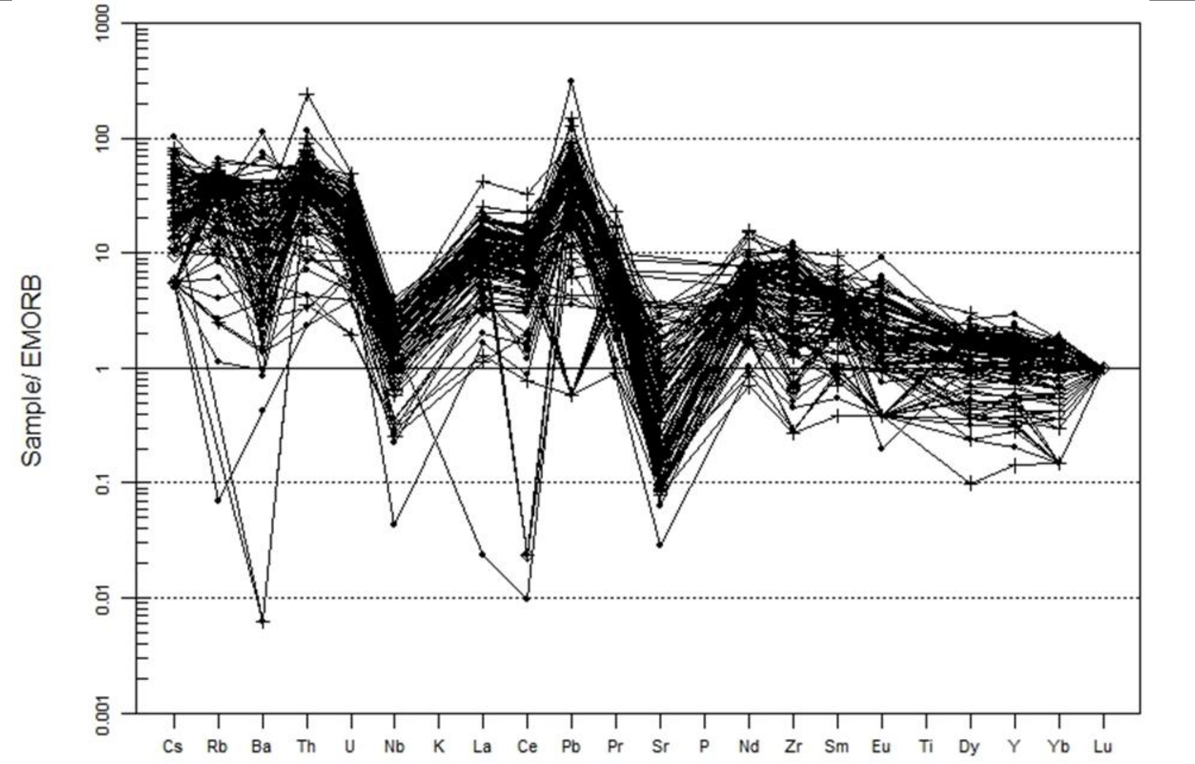


Fig 5.6.6.2: Spider plot normalized to Enriched MORB (Sun and McDonough, 1989) and renormalized to Lu content so that Lu(N)=1

These geochemical signatures support a subduction-modified mantle source, with contributions from continental crust (Fig 5.6.6.2).

The consistent crustal contamination trend across different normalizations reinforces the model of fertile, evolved magmas responsible for mineral deposition. The elevated incompatible element contents also point to the generation of volatile-rich magmas capable of transporting and depositing metal-bearing fluids (Fig 5.6.6.3).

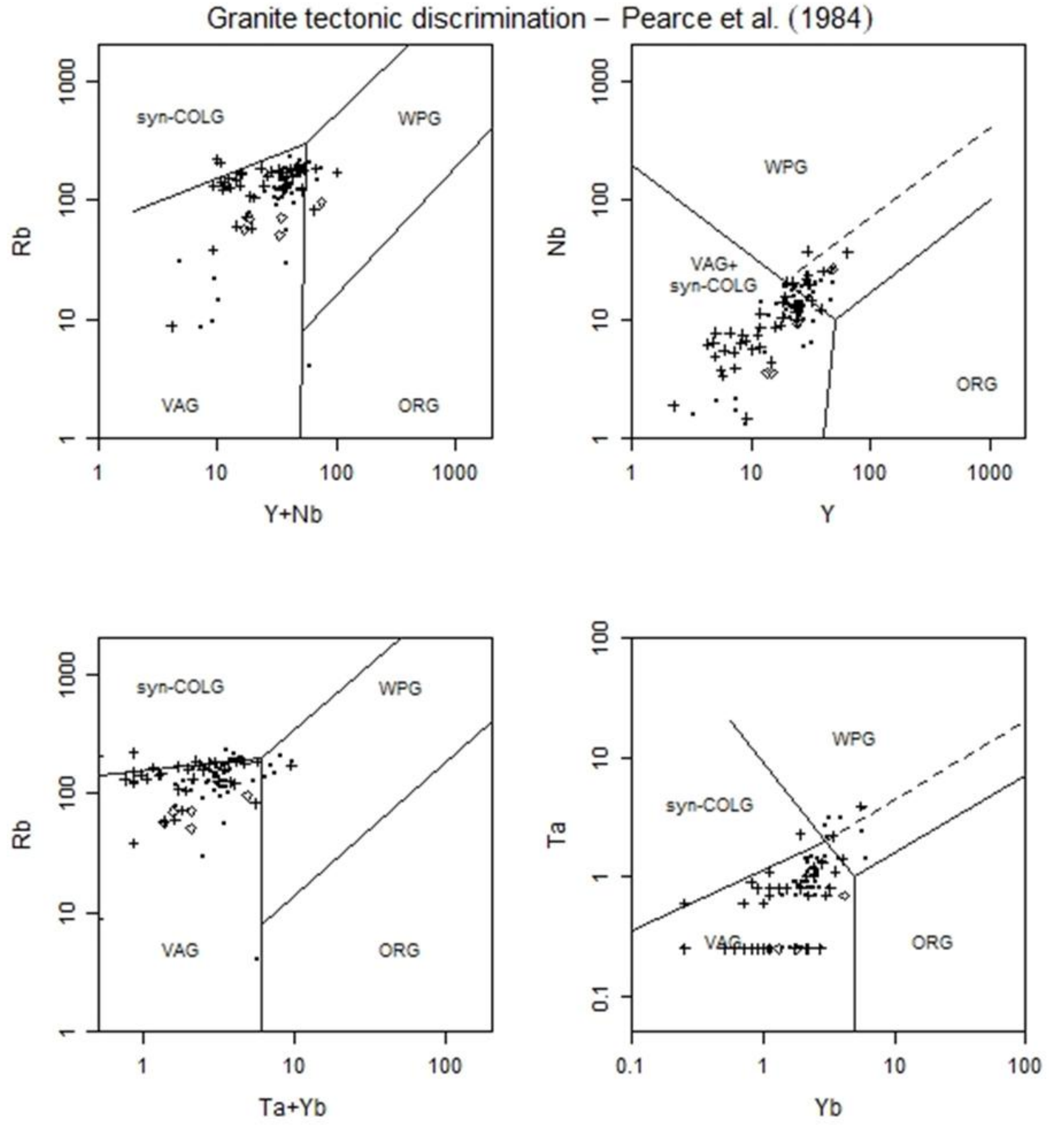


Fig 5.6.6.3: Granitic tectonic discrimination diagrams

5.7 Interpretation of Geochemical Data

Calc-alkaline trends as indicated by the AFM diagram are typically associated with volcanic arcs, indicating a tectonic setting where the magma has evolved through fractional crystallization and interaction with continental crust. The position of these rocks in the calc-alkaline domain further aligns with the presence of hydrothermal mineralization and suggests magmatic fluids enriched in volatile and ore-forming elements. Therefore, establishes a direct link between the observed volcanic lithologies and subduction-related magmatism, supporting the broader metallogenic model.

Granites are common in subduction settings and are often associated with porphyry-type mineralization systems. Their silica-rich nature, along with high alkali content, enhances the potential for volatile saturation and ore fluid exsolution during crystallization.

The high K_2O relative to Na_2O and Al_2O_3 of felsic magmas suggest a high-K calc-alkaline trend, characteristic of evolved, crustally derived melts. This trend often correlates with the development of metal-rich hydrothermal systems, particularly those involving gold and molybdenum.

The negative correlation of oxides like FeO, MgO, and CaO with SiO_2 denotes magmatic differentiation and removal of Fe-Mg-Ca-rich phases such as amphibole or biotite during magma evolution. This geochemical behaviour is consistent with a fractionating granitic magma system, reinforcing the potential for late-stage magmatic fluids enriched in incompatible elements to generate mineralized zones.

The tectonic discrimination diagrams of Pearce et. al., 1984 (Fig 5.6.6.3) show the felsic magmatic rocks plots within the Volcanic Arc Granite (VAG) field. VAG-type granitic melt is derived from depleted mantle sources modified by subducted sediments and oceanic crust. The Rb vs. Y+Nb diagram (Pearce et. al., 1984) is used to determine the tectonic setting of granitic rocks by plotting trace elements or ratios that are sensitive to geodynamic environments. All the Mailar granite samples fall within the Volcanic Arc Granite (VAG) field. This tectonic field suggests a subduction-related magmatic origin, where partial melting of the mantle wedge and lower crust occurs due to slab dehydration and crustal thickening. It supports the hypothesis that these granites were formed in a continental arc setting, where mantle-derived magmas were modified by crustal assimilation and fractional crystallization. This setting is well-known for generating mineralized granitic suites, particularly those associated with Cu-Mo-Au porphyry systems.

These multi-parameter tectonic discrimination diagrams (Fig 5.6.6.3) and EMORB normalized multi-element patterns (Fig 5.6.6.2) further classify granites into their tectonic affinity (after, Batchelor and Bowden, 1985; Sun and Mcdonough, 1989). The Mailar granites consistently fall into arc-related granite fields. These interpretations reiterate the arc magmatic affinity and suggest that the granitic magmas interacted with or derived from metasomatized mantle beneath a continental arc. The data also indicate that these granites likely evolved in a tectonic scenario where magmas were enriched in volatiles and metals due to fluid input from the subducting slab.

In the chondrite (Sun and McDonough, 1989) normalised REE patterns (Fig 5.6.6.1), granitic samples show a strong LREE enrichment and negative Eu anomalies, indicative of feldspar fractionation and magmatic evolution. The Eu anomaly reflects plagioclase removal, which is common in evolved felsic systems. Such anomalies are significant because they point toward fractional crystallization, and they support the presence of a residual melt enriched in incompatible elements such as Mo, W, and Au. The LREE/HREE fractionation also reflects a source with garnet stability, supporting deep crustal melting scenarios.

The N-MORB (Sun and McDonough, 1989) normalised multi-element patterns reveals that granites are enriched in Large Ion Lithophile Elements (LILEs) such as Rb, Ba, and Th, and show negative anomalies in HFSEs like Nb and Ti is a classic subduction zone signature. This pattern reflects melting of a source modified by subduction fluids, as well as interaction with continental crust. It supports the hypothesis of a fertile magmatic system capable of generating porphyry-style mineralization, particularly Cu-Au-Mo systems.

In summary, the geochemical diagrams confirm that the Mailar Block underwent subduction-related magmatism involving both volcanic and granitic suites. All geochemical indicators including AFM trends, K-series classification, REE patterns, and tectonic discrimination plots—converge on a continental arc model characterized by crustal contamination, fractional crystallization, and volatile-rich magmatism. Importantly, spatial overlap of geochemical anomalies with alteration zones mapped in the field (arigilc, chloritic, sericitic, and propylitic) strongly aligns with porphyry-style mineralization systems. The data suggest that the magmatic evolution culminated in the release of hydrothermal fluids enriched in Cu, Mo, Au, and associated trace metals. Thus, the diagrams not only support the tectonomagmatic evolution model but also reinforce the block's high potential for targeted drilling and advanced exploration.

CHAPTER-6

ALTERATION MINERALOGY MAPPING AND MINERALIZATION STYLES IN THE PROJECT AREA (STAGE-2)

6.1 Regional Alteration mapping

In Mailar block evidences of the extensive hydrothermal are observed which is shown by the

i. Pyrophyllite mines present along some NNE-SSW trending lineaments.
ii. The presence of NW-SE and NNE-SSW trending quartz reefs/veins.
iii. Extensive occurrences of alteration halos around the thin veins of felsic volcanics.

Such evidences of hydrothermal alteration in rocks of Mailar blocks encourage to do regional alteration mapping to understand hydrothermal fluid path. A few traverses have been taken throughout the entire blocks for regioal alteration map. Based on the field study 5 different alteration zones are identified 1. Sodic-Calcic alteration, 2. Potassic alteration, 3. Sericite alteration, 4. Prophylitic alteration, and 5. Advance Argillic alteration. In the southern part of the Mailar block, in and around the Mailar Mine area, several alteration types were identified, including propylitic, advanced argillic, and potassic alteration affecting the granitic country rock. The northern part of the study area is marked by widespread Ca-Na alteration of felsic to subvolcanic rocks, along with localized patches of potassic and sodic-calcic alteration, particularly along the northwestern boundary. Propylitic alteration is also prevalent in the northernmost region. In the central part of the block, sericitic alteration dominates, with isolated patches of propylitic alteration. The extensive development of sericitic alteration in the central zone suggests that this area may have initially experienced greenschist facies metamorphism, which was subsequently overprinted by hydrothermal processes. (Fig 6.1)

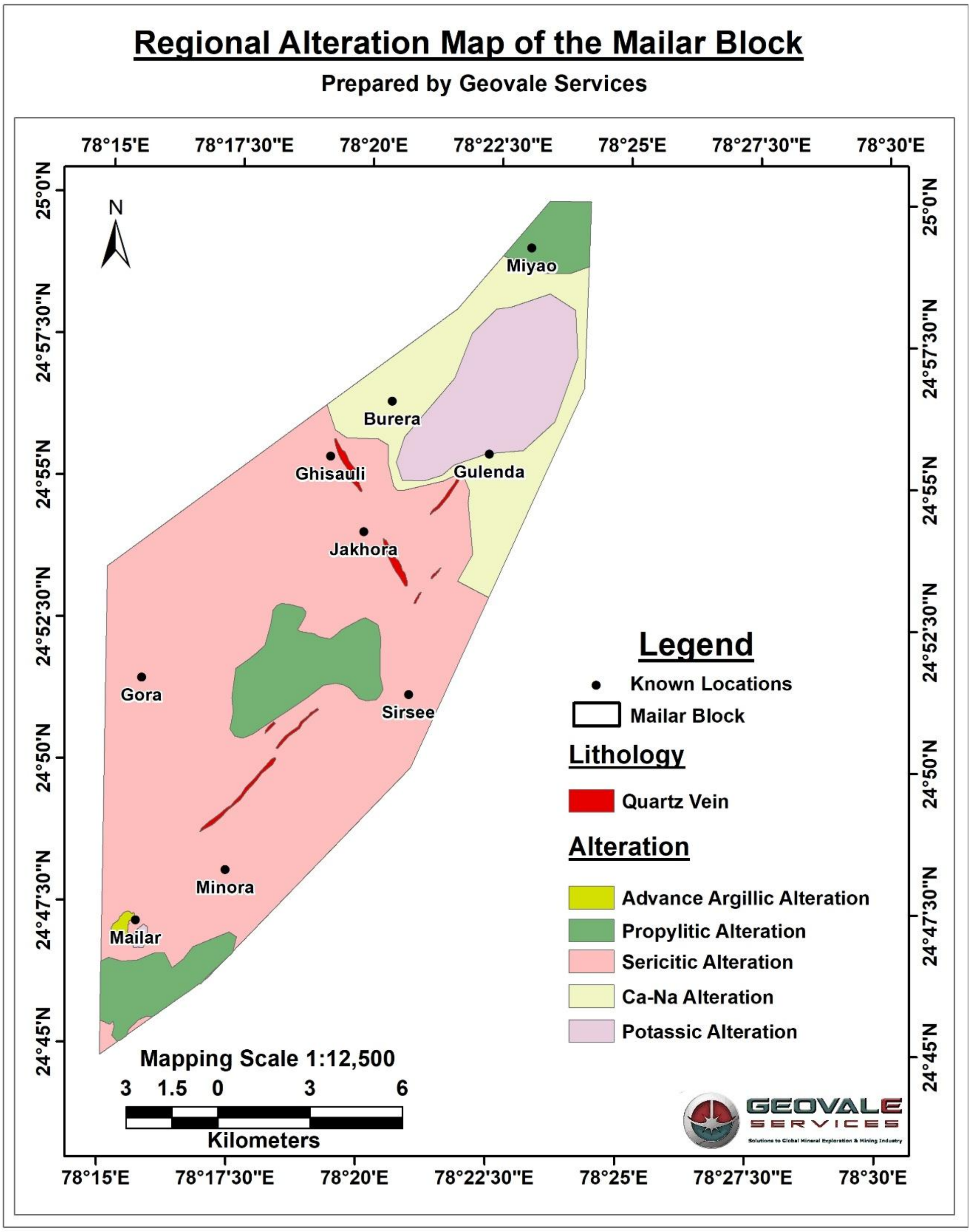


Fig 6.1: Regional alteration mapping of the Mailar Block reveals various alteration types

6.1.1 Detailed alteration mineralogy and alteration geochemistry of selected areas:

The regional alteration mineralogy studies show the presence of the potassic zones in two areas: one in the Mailar area another in the northern part of the blocks in felsic volcanics. Based on the significance of potassic alteration in Sulphide mineralization, the northern part (covering an approximately 30 sq. km.) within volcanic-subvolcanic rock association (henceforth named as the Gulenda alteration area and another in the southern part of the area (covering about 5 sq. km of area) in the granitoids area (henceforth named as the Mailar alteration area) were taken up for systematic detailed alteration mineralogy studies for ore fluid vectorization.

i. Mailar alteration area: The Mailar alteration area shows systematic alteration zonation with regionally extensive outer zones of propylitic overprinted systematically by advanced argillic alteration, argillic alteration, and potassic alteration (Fig. 6.1.1.1). This alteration zonation is much akin to the alteration zonation usually occur in a high-sulphidation porphyry type mineral system. Later granitic rocks have intruded this systematic alteration zonation. The Mailar alteration area (southern part of the study area) exhibits a well-defined, systematic hydrothermal alteration zonation, indicative of a large-scale, long-lived mineralizing system.

This zonation consists of:

- Outer zones of propylitic alteration, which are regionally extensive and represent the earliest and most distal alteration phase, commonly associated with low-temperature fluids. This zone is typically marked by chlorite, epidote, calcite, and abundant pyrite mineral assemblages. This zone is mainly present in the southeastern part of the Mailar pyrophyllite mine.
- Advanced argillic alteration: A ~500m wide pyrophyllite quarry marks the advanced argillic alteration. Intense alteration has resulted in the formation of economically valuable pyrophyllite, a mineral used in ceramics, refractories, and fillers.

- Argillic alteration: This zone is ~100-200m wide and lies in between the advanced argillic and the potassic zones in the eastern part of the Mailar pyrophyllite mine and is typically composed of clay minerals such as illite and smectite, formed under moderately acidic conditions. Another argillic zone present in the eastern part of the potassic alteration of this

- Potassic alteration, Further east of the argillic alteration is a zone of ~500m wide potassic alteration zone. However, the innermost and typically higher-temperature zone, associated with veinlets of biotite and K-feldspar. There is extensive leach cap development in this zone with patchy hematitic alteration (Fig 6.1.1.1).

The western margin of the advanced argillic alteration (the pyrophyllite quarry) is intruded by a late-stage pink granite (Fig 6.1.1.1). This intrusion may have contributed additional heat or fluids, potentially modifying earlier alteration patterns.

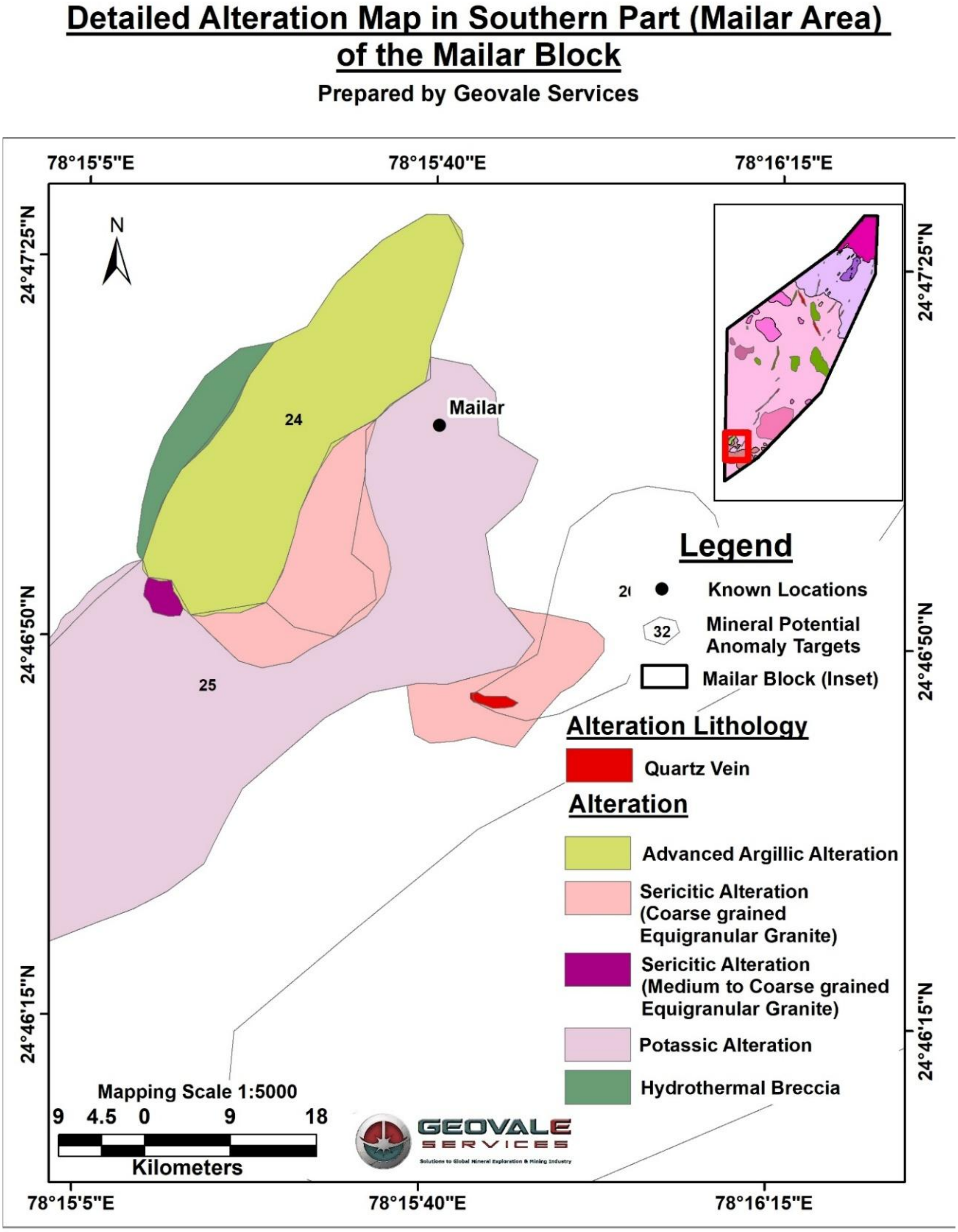


Fig 6.1.1.1 : Alteration map of the southern part of the study area

ii. Gulenda alteration area: The Gulenda alteration area (northern alteration study area) is typified by extensive Ca-Na alteration of essentially volcanic-subvolcanic rock association.

There are discrete zones of potassic alteration within this extensive Ca-Na alteration zone. In addition, there are many isolated few 100m to a few km long quartz veins mostly trending N-S to NNE-SSE within this alteration area. Like the Mailar alteration area, the systematic alteration zonation in this northern area is also intruded by late granitic rocks. The Gulenda alteration area was also analysed for alteration geochemistry studies that support the petrography-based alteration zones identification.

The potassic alteration zones are distinguished by the abundance and assemblage of biotite and magnetite, along with characteristic vein types (EHT and A-veins). In contrast, the Ca-Na alteration zones are recognized by the presence of amphibole-rich veinlets. The qualitative assessment of vein density and alteration intensity was also mapped.

Based on the data potassic and Ca-Na zones are marked on the map, and 3 different fluid pathways are reported. Along the 3 fluid paths quartz veins associated with volcanics are observed. These quartz veins show the evidences of extensive sulphide mineralization. (Fig 6.1.1.2)

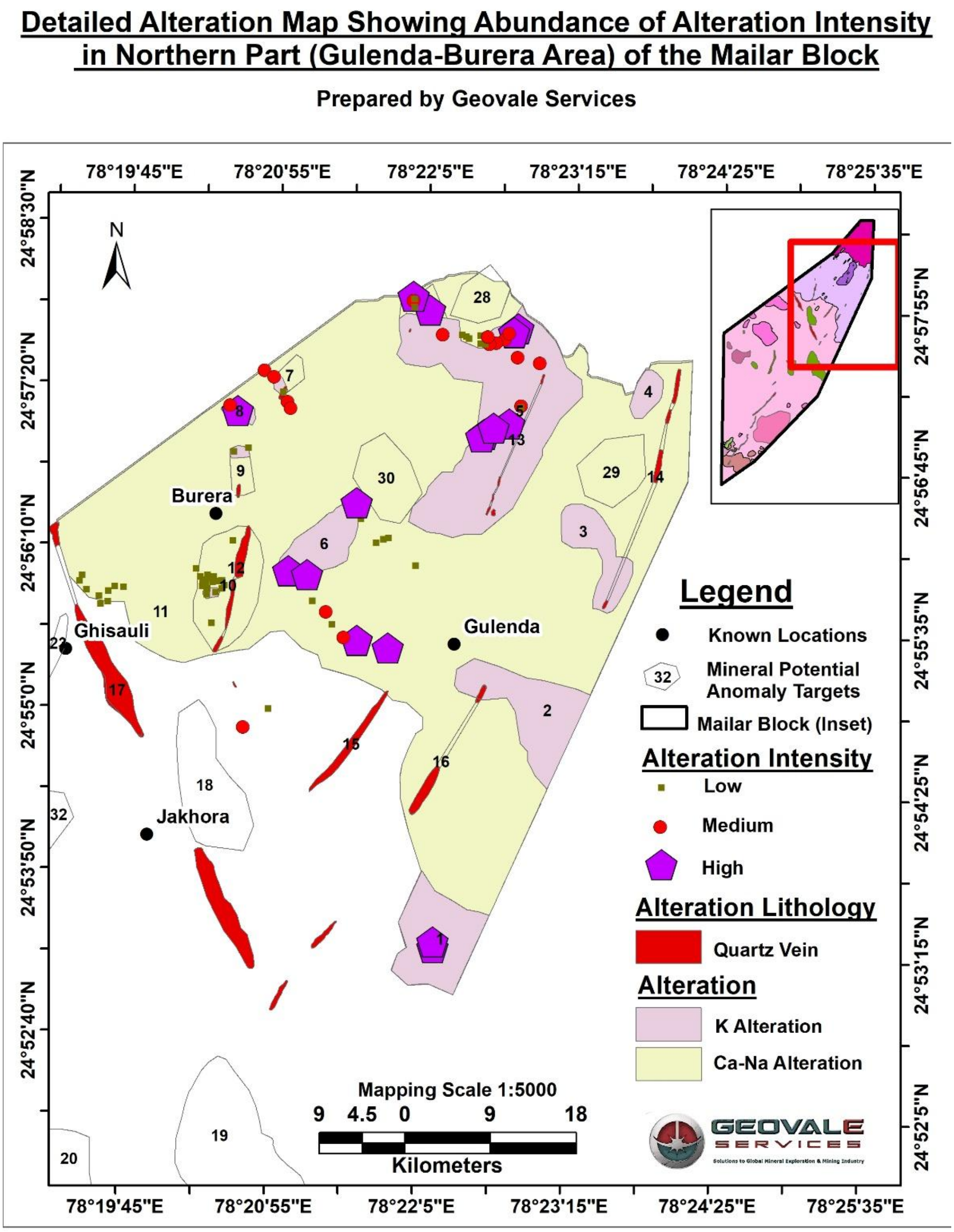


Fig 6.1.1.2: Northern part alteration map of Gulenda area

6.1.2 Significance of alteration in Sulphide mineralization:

In parallel with the occurrences of systematic distribution of high-sulphidation alteration zones that are characteristics of porphyry copper mineral systems, the block reveals ample evidences of porphyry copper mineral system related copper (+gold) mineralization in the area.

There are significant differences in the host rocks, morphology and styles of alteration, alteration mineral composition between those in the Gulenda alteration area and the Mailar alteration area.

Table 6.1.2 Alteration pattern of Northen and Southern part of Mailar Block

Criteria	Mailar alteration area	Gulenda alteration area
Host rocks	Coarse grey granite	Felsic volcanics
Ca-Na alteration	Not recognized	Most common alteration type along intense alteration halos
Potassic alteration	Pervasive and B-vein types common	Restrictive in occurrence. Pervasive in the rock. Lacks B-vein types
Sericitic alteration	Common	Not common
Mineralization	Mostly along B-veins	In alteration halos.

While in the southern Mailar alteration area the potassic alteration has different types of centimetre-scale quartz veins that hosts the main mineralization, the potassic alteration in the Gulenda alteration area, the mineralization is mainly disseminated types in the alteration halos surrounding the fluid channel ways. Beside later forming quartz veins associated with this volcanism also contain sulphide mineralization.

This difference in styles of alteration and mineralization, the presence of the B veins suggests that potassic alteration and mineralization in the Mailar alteration area is of shallower level (estimated depth of ~1.5-3 km) in which silica could be exsolved as quartz mineral phase than in the Gulenda alteration area that represent a deeper level (estimated depth of ~3-5 km) of potassic alteration (as associated with early halo types) where silica could not be exsolved as quartz instead silica caused mineralogical alteration in the host rock as alteration halos around the channel ways. In fact, the dominant Ca-Na alteration in the Gulenda alteration area represents a higher temperature (and so likely higher pressure) alteration. That the northern felsic volcanic rock association represents a deeper level of porphyry system than the southern granite-hosted shallower level porphyry system suggests that the northern part is tectonically uplifted with respect to the southern part.

6.2 Mineralogy of the ore zone and texture:

In the northern part of the Mailar block, near Burera and Gulenda villages, NNE–SSW trending quartz veins intrude the volcanic rock sequences and are notable for hosting a suite of hydrothermal mineralization. These veins are commonly associated with vuggy silica zones, brecciated zones, and having colloidal silica which form as a result of intense hydrothermal alteration, particularly acid-sulfate leaching that removes most components except for silica, leaving behind a porous, vug-filled texture (Fig 6.2.1- 6.2.4). Mineral assemblages observed within these veins include malachite, a green copper carbonate mineral, and cuprite, a copper oxide—both indicative of oxidizing supergene conditions near the surface. In addition, chalcopyrite ($CuFeS_2$), chalcocite (Cu_2S), and enargite (Cu_3AsS_4) are also present (Fig 6.2.5-6.2.14). Notably, traces of native gold have also been reported, suggesting that the system may be part of a broader epithermal to mesothermal mineralizing event.

In the southern part of the Mailar Block, near the Mailar area, the presence of pyrophyllite-bearing rocks marks an important zone of advanced argillic alteration, indicative of intense acidic hydrothermal activity. These rocks typically occur in the upper levels of a hydrothermal system, often above or adjacent to zones of significant mineralization. The association of pyrophyllite with alunite, a sulphide mineral, further supports the involvement of high-sulfidation fluids, which are rich in sulphuric acid and capable of leaching most rock-forming elements except for aluminium and silica. The presence of gusano texture—a wormy, porous texture commonly formed by acid-sulphide alteration—confirms strong sulphide fluid interaction with the host rocks.

Fig 6.2.1: Vuggy silica reported near Burera.

Fig 6.2.2: Bleded quartz near Burera.

Fig 6.2.3: Collidol Silica near Burera.

Fig 6.2.4: Brecciated Silica near Burera.

Fig 6.6.5: Malachite in quartz, near Gulenda.

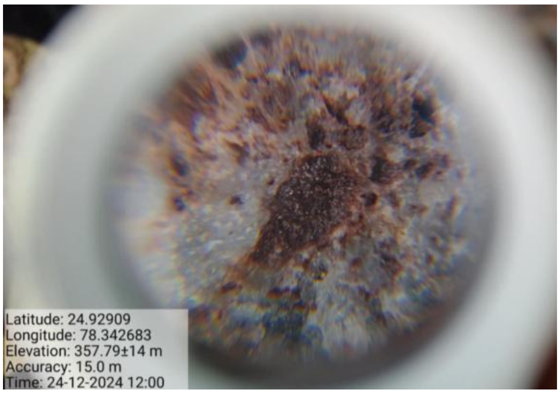


Fig 6.2.6: Cuprite in quartz vein, near Burera.

Fig 6.2.7: Pyrite in granite, near Minora.

Fig 6.2.8: Chalcopyrite in smoky quartz, near Gulenda.

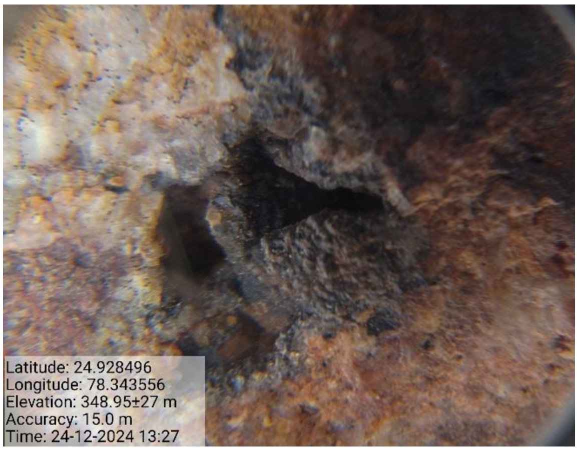


Fig 6.2.9: Chalcosite associated with quartz veins, near Burera.

Fig 6.2.10: Molybdenite associated with quartz veins, near Burera.

Fig 6.2.11: Enargite associated with the cherty quartz, near Gulenda.

Fig 6.2.12: Specs of Gold, under the lens, near Burera.

	
Fig 6.2.13: Alunite observed from Mailar Phyrophyllite mines.	*Fig 6.2.14 Gusano texture observed from Mailar Phyrophyllite mines.*

CHAPTER-7

TECTONIC EVOLUTION, FERTILITY AND EVOLUTION OF THE PORPHYRY COPPER MINERAL SYSTEM IN THE MAILAR BLOCK (STAGE-3)

7.1 Collation of outcomes of geological mapping, geochemistry, alteration mapping and aeromagnetic data interpretation in terms the tectonic evolution and evolution of the porphyry copper system in the block

Several lines of evidences support a porphyry copper style mineralization in area. These include:

i. Geological mapping and bedrock geochemistry
ii. Alteration mineralogy and alteration geochemistry
iii. Mineralization styles
iv. Model of tectonic setting

A. Outcome of geological mapping and bedrock geochemistry:

The geological mapping at a scale of 1:12,500 of 206 sq. km of the Mailar block has led to an much improved understanding of the complex geological framework of the block over the ones available from earlier works. Significant outcomes area as below:

i. Much of the central and southern part of the block comprises a diverse suite granitoids including coarse- to fine-grained granitoids (both porphyritic and equigranular types) that lack foliation and mostly unmetamorphosed to weakly metamorphosed to low greenschist facies as evidenced by common presence of chlorite, epidote, carbonates in them. This mineral assemblage is common to both low greenschist facies and propylitic hydrothermal alteration that characterize the outer parts of hydrothermal alteration aureole in a porphyry copper system. Paucity of exposures in the central part of the block area does not permit whether much of these central part represents hydrothermal alteration or regional low greenschist metamorphism. However, discrete presence of argillitic alteration (Clay-Calcite-Pyrite-Chalcedony) in the granitic rocks suggest that at least some of the chlorite-epidote-calcite-pyrite association represent propylitic alteration.

ii. Four diorite stocks, totalling about 5sq. km. area are recorded and mapped in the block area for the first time. These diorites are pyrite-rich and have anomalous content of Zinc (143ppm), Nickel (182 ppm), V (279ppm), Tin (3.9 ppm), W (5.4 ppm), thereby suggesting they could be related to some mineralizing system in the area. It may be noted that sulphide-rich diorites in a porphyry system are often known to be good host for gold deposits.

iii. Some rhyolite porphyry dykes that intrude both the diorite and adjacent felsic volcanics. Thus, diorite intrusion is also interspaced between different phases of felsic magmatism.

iv. Extensive felsic volcanics are now recorded and mapped spanning for ~30 sq. km in the northern part of the block area. They have common presence of agglomerate, lapilli tuff, bedded tuff, ignimbrite etc. suggesting subaerial eruption of felsic volcanics.

v. Major and trace element geochemistry of the granites and felsic volcanics of the area indicated that the granites and felsic volcanic rocks of the area are likely sourced in a continental arc setup with substantial crustal contamination of mantle derived magmas. Also, that the magma responsible for the granite intrusion and felsic volcanic eruption underwent substantial crystal fractionation before being emplaced or erupted. The geochemical data thus align with the field-based and alteration mineralogy-based interpretation of porphyry style mineralization in the area.

vi. A fertile porphyry copper district is generally identified with high Sr/Y ratio as this ratio is a proxy for generation of the magma by mantle melting in an oxizing and hydrous environment where Y gets scavenged by amphibole crystallizing at mantle depth in a hydrous condition. However, the Sr/Y of Bundelkhand Granite and felsic volcanics are rather low (<40 except some outliers). This could be explained by high Na_2O and K_2O that could have promoted biotite crystallization in preference to amphibole, thereby scavenging the magma of Fe, Mg that would have been necessary for amphibole crystallization. Thus, a magma could still be fertile for porphyry copper even with low Sr/Y if it has high alkalies.

vii. Presence of subaerial felsic volcanics, concomitant granitic intrusions, geochemical characteristics indicating derivation from mantle with substantial crustal contamination and subsequent crystal fractionation all align to a continental arc setup for the area. It may be noted that continental arc setup is the best suited for hosting porphyry copper mineralization as it offers substantial reducing environment that is crucial for reduction of mantle-derived oxidizing sulphate solutions to reduced sulphide forms. Presence of definitive presence of systematic alteration pattern characteristic of porphyry copper system substantiate presence of suitable tectonic environment for porphyry copper mineralization.

B. Outcome of the alteration studies

i. Discrete occurrences of phyllic, advanced argillic and potassic alteration and presence of systematic zonations among these alteration zones as documented in the Mailar alteration area indicate porphyry style alteration pattern in the area.

ii. Presence of hydrothermal breccia (Fig 5.3.12.5) and alunite, dickite and anhydrite in the advanced argillic alteration in the Mailar alteration area supports high-sulphidation hydrothermal activity.

iii. Similarly, in the Gulenda alteration area, porphyry system related hydrothermal alteration is very widespread in the felsic volcanics rocks. Hydrothermal alteration in these felsic volcanics is dominated by Ca-Na alteration typified by development of amphibole-albite along thin (few mm) channel ways within the rocks. Alteration halos extend for few 10s of cm across these channel ways that also show new development of albite and amphibole. Within the extensive Ca-Na alteration there exists discrete mappable patches of potassic alteration that is typified by development of magnetite and biotite along channel ways and in the alteration halos. Sulphide mineralization is restricted to halos around the channel ways and the mineralization is more developed in the alteration halos.

iv. Both the Mailar alteration area and the Gulenda alteration area, the systematic porphyry style alteration patterns are truncated by late pink porphyritic granite. This indicates that the porphyry style alteration in the area is interspaced in between intrusion of different phases of granitic intrusions or volcanism. This is a common characteristics of any large porphyry district where mineralization and concomitant alteration are generally restricted to one or few phases of magmatic activity.

v. There is difference in the styles of alterations in the Mailar alteration area in the southern part and the Gulenda alteration area in the northern part of the block. The Mailar alteration area is characterized by presence of A-, B- and D-vein type quartz veins indicating the depth of hydrothermal activity that is shallow (~3 to ~1.5 km) where quartz could be exsolved during the hydrothermal alteration. In contrast, the Gulenda alteration area is characterized by Early Halo Type (EHT) alteration. EHT type of alteration indicate a deeper level of hydrothermal alteration (~3 to ~5km) where quartz could not be exsolved instead silica caused development of alteration halos around fluid channel ways. This significant differences in the anticipated depth of alteration suggests that the volcanic pile in the Gulenda area had been very thick (~3 to ~5 km) that are presently eroded away while the anticipated volcanic pile in the Mailar area was thinner (~1.5 to ~3km). In other words, this suggests that there had been significant post volcanism uplift of the northern part of the block along some major dislocation zones. One possible candidate for such dislocation zones is the NNE-SSW trending high-Mg mafic dyke reported in this work (Fig 5.1.2).

C. Outcome of mineralization studies:

i. Primary copper mineralization in the area is essentially dessiminated types with minor stringers. While in the Early Halo Type (EHT) alteration in the Gulenda alteration area, copper mineralization is restricted to alteration halos around fluid channelways, in the A-Vein Type (AVT) alteration in the Mailar alteration area, dissiminated copper primary mineralization is restricted to A-type veinlets. Both these types of disseminated primary copper mineralization is characteristic of any porphyry copper mineralized area.

ii. Other than the primary porphyry type mineralization, the region records substantial late epithermal hydrothermal activities that are present as numerous few 100s meter to few km long quartz veins trending mostly N-S to NNE-SSW (Fig 5.1.2). These quartz veins show evidences secondary copper mineralization along with silver mineralization. Secondary copper minerals include cuprite, chalcocite, enargite that bear clear evidences of hypogene enrichment over primary chalcopyrite-bornite minerals. Such hypogene enrichment of copper mineralization is common in many porphyry copper districts related to later uplift of the terrain with quartz-rich hydrothermal veins (Sillito and Perello, 2023).

iii. Epithermal quartz veins also contain substantial silver (upto 50 ppm found in boreholes discussed in subsequent section) and suspected gold (petrographic study, unconfirmed by EPMA or fire assay analyses). Presence of these such precious metal enriched late epithermal veins is a common feature of any large porphyry copper district (Sillitoe, 2010)

D. Tectonic Setting:

The outcome of geological mapping, geochemical analyses, alteration studies and mineralization styles all align with a model of porphyry copper mineral system in an continental arc tectonic setting in the Mailar Block. (Fig 7.1)

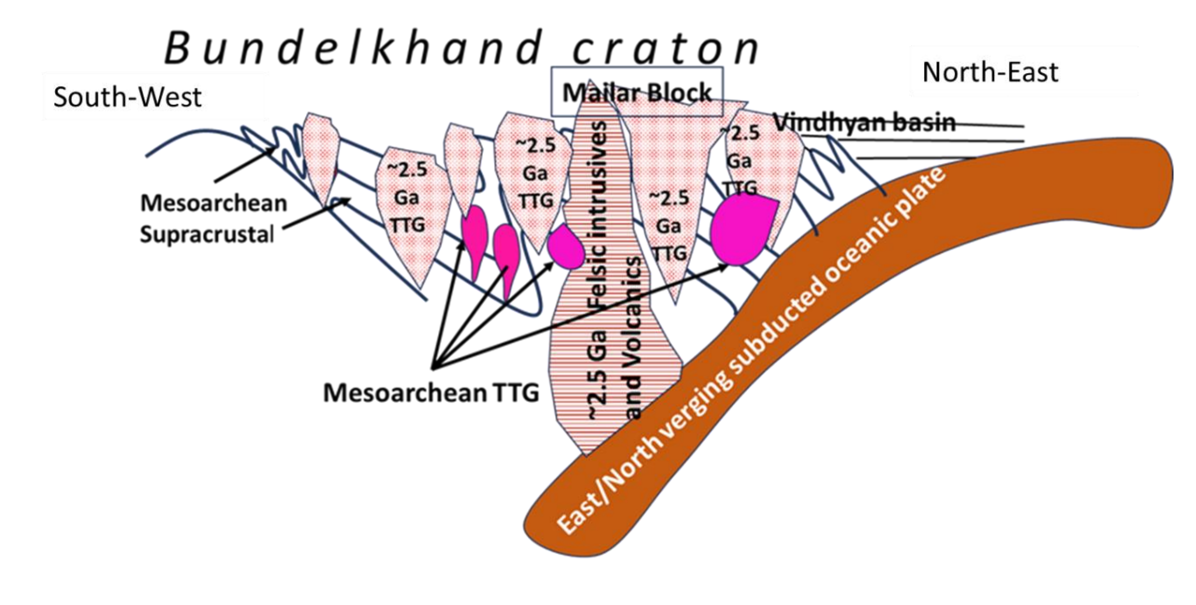


Fig 7.1: A hypothetical scenario of continental arc setting for the wetstern part of the Bundelkhand Craton showing likely position of the Mailar Block in such setting. The remnants of hypothetical subduction trech is presently covered by the Vindhyan basin.

Large tract of felsic volcanics with concomitant granodioritic intrusives, all having geochemical signatures indicating derivation from hydrated mantle melt being contaminated with crustal rocks suggests a continental arc setup for the Mailar Block. The hypothetical scenario of the tectonic setting of the western part of the Bundelkhand Craton and the probable position of the Mailar Block is given in (Fig 3.2.1). In this model a hypothetical oceanic plate subducted below a Mesoarchean proto-Bundelkhand continent with a north or eastward polarity. The subduction caused second phase of cratonizatioon at around ~2.5 Ga with concomitant large-scale granodioritic magmatism and felsic volcanism within the Mesoarchean proto-Bundelkhand continent forming a continental arc. A continental arc setting is the most ideal tectonic setting to host giant porphyry copper districts (viz., Andes Mountains and Rocky Mountains together hosts most of world's porphyry copper districts). The Mailar Block thus represents a significant prospect for base metal (mainly copper) and gold mineralization associated with hydrothermal activities related to porphyry mineral systems.

7.2 Evolution of the porphyry copper mineral system in the Mailar Block:

Having strong indications of presence of porphyry copper mineral system in the Mailar Block, it is necessary to work out details of evolution of the porphyry system to that suitable exploration model is worked out.

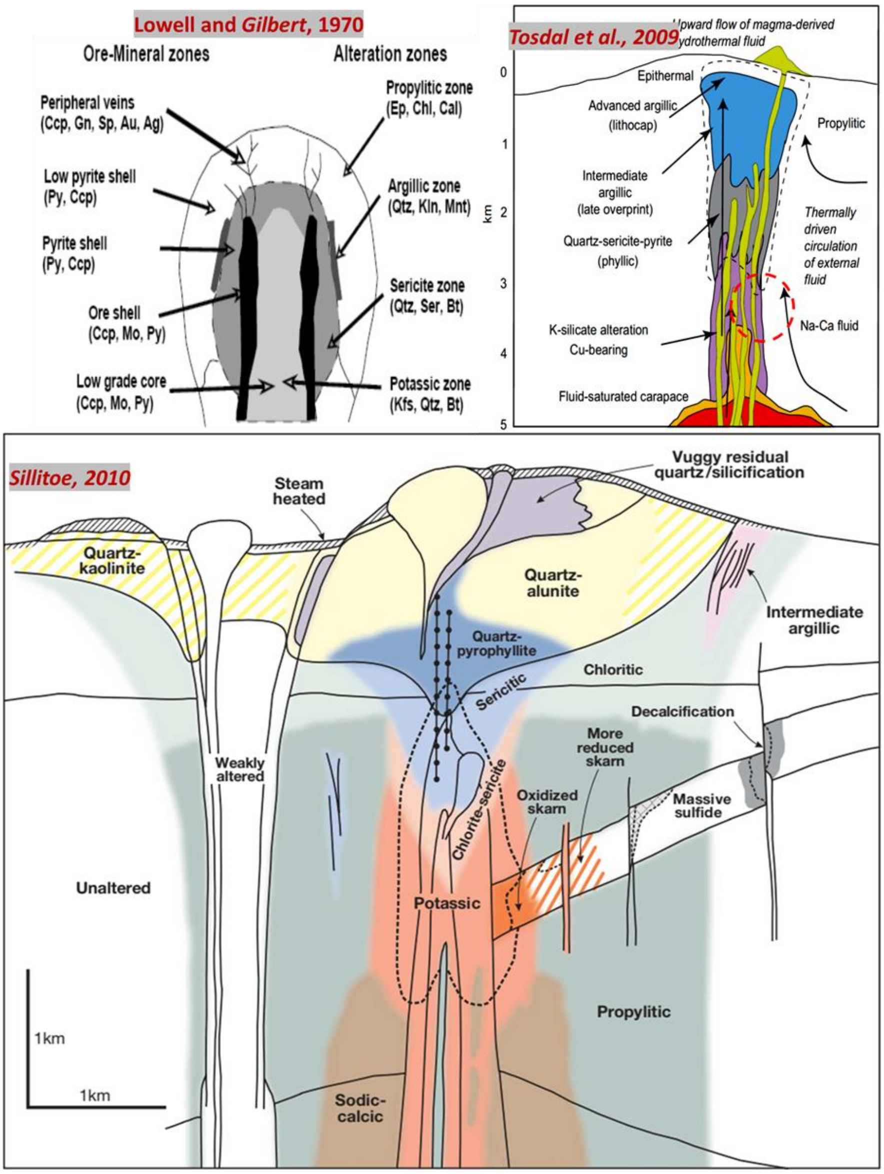


Fig 7.2: Illustration of important porphyry related mineral system models.

The conceptual basis for porphyry copper mineral system is now well established (Lowell and Gilbert, 1970; Tostal et al., 2009 and Sillitoe, 2010). Essential features of these models is illustrated in Fig 7.2. While the Lowell and Gilbert, 1970 illustrate prospect scale alteration and concominant distribution of sulphide mineralization, the Tosdel et al., 2009 model illustrate a larger scale vertical distribution of different alteration mineralogy zones and relations between mineralizing magma and related hydrothermal fluids. The Sillitoe, 2010 model illustrates a larger scale regional distribution between different mineralization types (viz., high-sulphidation, intermediate sulphidation and low-sulphidation epithermal mineralization. It also illustrates possible relations between porphyry systems related mineralization on a regional scale. Even though there is broad understanding and agreement on the distribution of different alteration zones and their distribution with mineralization, in detail there is large vatiation depending on the host rock, minieralizing hydrothermal fluid, temperature and pressure of hydrothermal alteration etc. In fact, within the generalities of a porphyry copper system, each deposit is different. With these possibilities in mind, we enumerate special characteristics of the porphyry copper system in the Mailar Block.

7.3 Features of mineralization and alteration that define evolution of the porphyry system in the Mailar Block

Overall, the geological mapping, alteration mineralogy mapping, whole rock geochemistry and selected chemical assay of visibly mineralized samples from the Mailar Block indicated the following things:

(i) Different granitic phases, diorite stocks, the felsic volcanics are broadly time-contemporaneous and gradations from intrusive granites, to felsic volcanics through subvolcanic felsic porphyries exist.

(ii) Hydrothermal alteration of granites and felsic volcanics and associated mineralization is related to certain phase(s) of magmatic activity. This mineralizing phase(s) is again intruded by a later phase of granitic intrusion as the systematic pattern of hydrothermal alterations in both the volcanic rocks (in the Gulenda alteration area) and the granitic rocks (in the Mailar alteration area) are intruded by a later pink granite phase.

(iii) Thus, the Block area includes three different types of mineralization, all of these types are related to a high-sulphidation porphyry copper system (Fig 7.3.1).

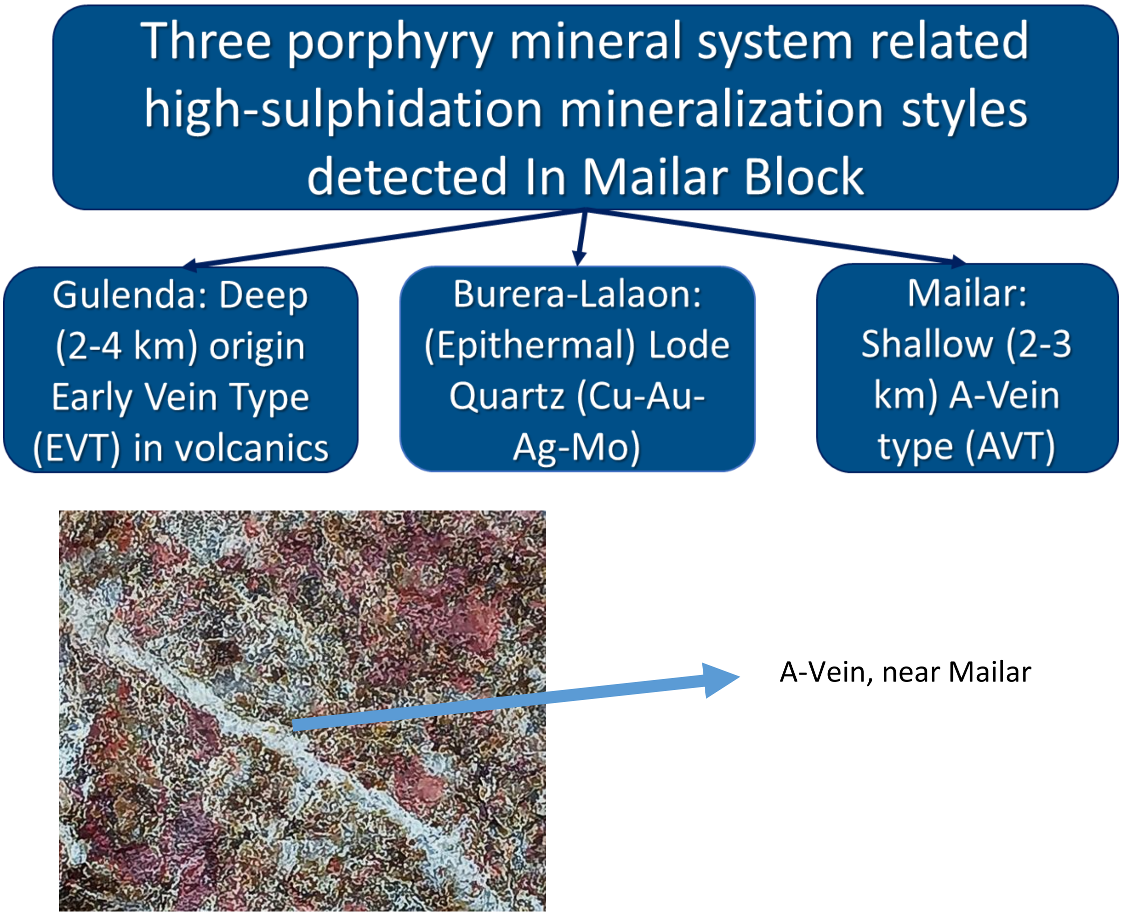


Fig 7.3.1: Three different types of porphyry related high-sulphidation mineralization in the Mailar Block and their locations. Styles 1 & 2 are present in the Gulenda alteration area and style 3 is recorded in the Mailar alteration area (A-vein).

(iv) The pattern of hydrothermal alteration in both the granitic area (Mailar alteration area) and the volcanic area (Gulenda alteration area) reflect systematic zonation of alteration characteristic of any high-sulphidation porphyry copper mineral system. (Fig 7.3.2)

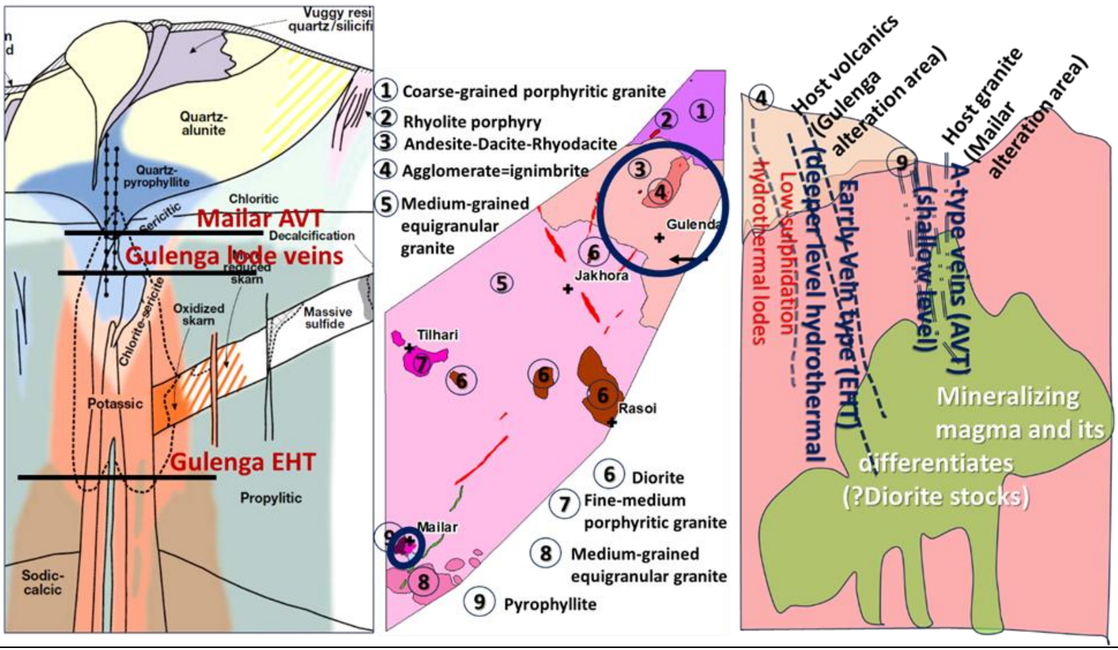


Fig 7.3.2: A simplified model shows EHT and hypogene lode mineralization in northern Gulenda, shallow AVT mineralization in Mailar, and central sulphide-rich diorite stocks that may have driven mineralization, with accompanying panels illustrating their evolution and depth relation to the Sillitoe (2010) porphyry model.

(v) The felsic volcanic terrain in the northern part of the block represented a greater depth of hydrothermal alteration (being dominated by EHT type of alteration that usually forms at 3-5km depth) than the hydrothermal alteration in the granitic terrain (being dominated by A-vein type mineralization that usually forms at ~1.5 to ~3km depth) (viz., Profett, 2009).

(vi) A major vertical crustal displacement zone between these two areas is thus a probability.

(vii) Other than primary copper (+gold) mineralization potential in the vicinity of intense potassic alteration zones in the granitic and felsic volcanic terrains, there is substantial epithermal Cu-Ag-(Au) mineralization in numerous quartz veins that are characterized by vuggy silica zones and secondary copper mineralization. There is evidence of hypogene enrichment of copper in these epigenetic veins.

(viii) Thus, the Block area includes three different types of mineralization, all of these types are related to a high-sulphidation porphyry copper system (Fig 7.3.1).

(ix) The broad sequence of events that has bearing on the porphyry related mineralization in the Mailar Block is given in Fig 7.3.4.

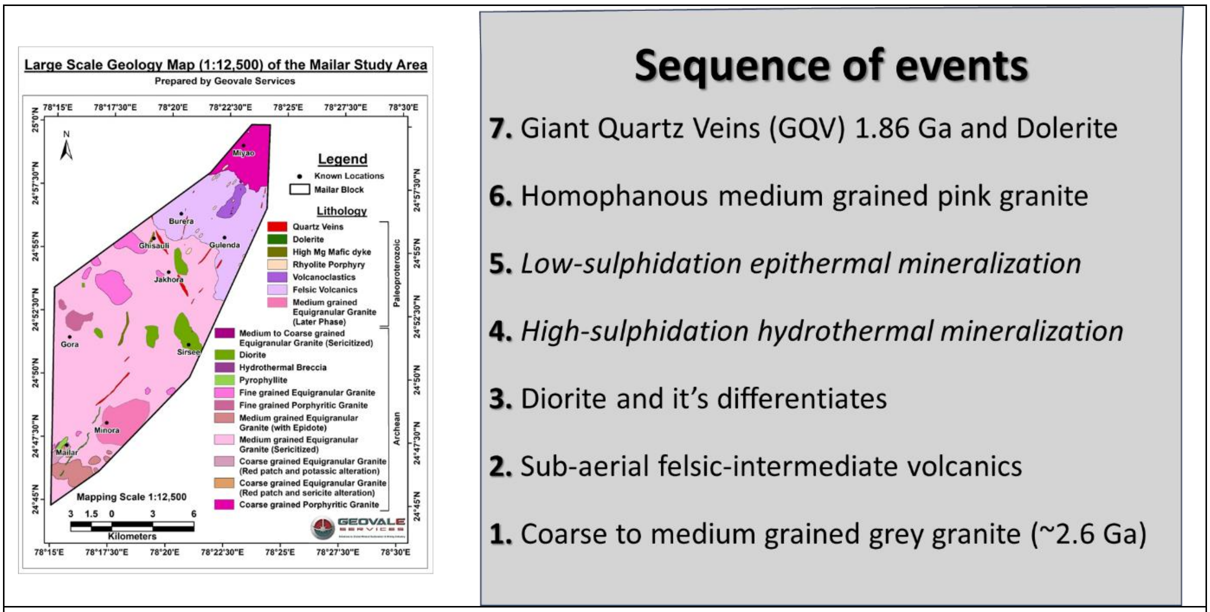


Fig 7.3.4: The Mailar Block sequence suggests hydrothermal mineralization linked to diorite stocks and their differentiates, with metals now hosted in granites and felsic volcanics.

CHAPTER-8

IDENTIFICATION OF EXPLORATION TARGETS IN THE MAILAR BLOCK (STAGE-3)

8. Overview of Anomalous Targets Identified in the Mailar Block

A comprehensive Mineral Systems-based evaluation of the Mailar Block has enabled the identification and systematic characterization of 43 Mineral Potential Anomalous Targets, each representing potential loci of mineralisation within a regional-scale Hydrothermal Porphyry Cu–Mo–Au system.

These targets emerged from a multi-parameter integration (discussed in Chapter 9 and 10 in further details) involving:

- lithological mapping of felsic volcanics, diorites, granites, basaltic–mafic dykes;
- regional and detailed hydrothermal alteration mapping (potassic, sodic, sericitic, argillic, advanced argillic);
- systematic ground and stream geochemical sampling;
- spectral alteration indices (AHI- Alteration Halo Intensity, VCD- Vein Count Density); and
- reconnaissance aeromagnetic analysis (NGDR RMI dataset).

For clarity in exploration design, the 43 mineral potential anomalous targets, naturally group into three principal target types:

Hydrothermal Alteration–Driven Targets (Targets 1–11)

- Dominantly exposed in the northern part of the Mailar block, hosted in felsic volcanics.
- Defined by intense potassic and sodic alteration.
- Supported by anomalous Cu–Mo–Sn–W–Bi–Ag geochemistry (Details in Chapter-9)
- Commonly associated with epithermal quartz–sulphide vein systems.

Lithology-Controlled Targets (Targets 12–27)

- Include epithermal quartz reefs, diorite stocks, high-Mg mafic dykes, and altered granites.
- Display strong mineralisation signatures including Cu, Mo, Zn, Pb, Sn, W), Ag (discussed in chapter 9) with sulphides minerals like chalcopyrite, enargite, chalcocite, bornite).

Aeromagnetic Anomaly–Driven Targets (Targets 28–43)

- Located primarily in the Central and Southern Blocks, often under thin soil cover.
- Dominated by donut-shaped RMI anomalies (central magnetic lows encircled by magnetic highs).

Table 8.1 below provides a summarized features of the anomalous exploration targets in the Mailar Block. Annexure X gives the detail characteristics of each of the 43 Mineral Potential Anomalous Targets. Figure 8 shows the location of these anomalies in the Mailar Block.

Table 8 Summary of Mineral Potential Anomalous Targets in the Mailar Block

Target ID	Target Type	Key Geological / Lithological Features	Alteration Characteristics	Geochemical Indicators	Geophysical Signature
1–11	Alteration-Based	Felsic volcanics	Strong potassic, high VCD & AHI	Cu–Mo–W–Sn anomalism	NW–SE magnetic highs lineamnets.
12	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
13	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
14	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
15	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
16	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
17	Lithology based-Epithermal Quartz Vein	Quartz	Silicic	Cu-Mo-Ag-Zn-Sn-W	N–S magnetic highs lineaments.
18	Lithology based-Diorite	Diorite	Potassic	Cu–Mo–Sn-W	Magnetic high zones
19	Lithology based-Diorite	Diorite	Potassic	Cu–Mo–Sn-W	Magnetic high zones
20	Lithology based-Diorite	Diorite	Potassic	Cu–Mo–Sn-W	Magnetic high zones

Target ID	Target Type	Key Geological / Lithological Features	Alteration Characteristics	Geochemical Indicators	Geophysical Signature
21	Lithology based-Diorite	Diorite	Potassic	Cu–Mo–Sn-W	Magnetic high zones
22	Lithology based-Diorite	Diorite	Potassic	Cu–Mo–Sn-W	Magnetic high zones
23	Lithology based – High-Mg Dyke Corridor	Mafic dyke	-	Cr–Ni–V	Linear magnetic high
24	Lithology based – Southern Argillic Zone	Pyrophyllite+Granite	Advance Argillic + potassic	Cu-Mo-Sn-W	Regional magnetic low
25	Lithology based – Granite	Granite with hematitic and potassic alteration	Potassic	Cu–Mo	Discrete magnetic low
26	Lithology based – Granite	Granite	Potassic alteration	Cu-Sn-W	Magnetic high
27	Lithology based – Granite	Granite	Potassic alteration	Cu-Sn-W	Magnetic high
28–43	Aeromagnetic Targets	Mostly concealed intrusive / dyke-related settings	Inferred potassic or phyllic	Limited surface data; distal stream anomalies	“Donut-shaped” RMI anomalies; central lows with magnetic rims, fault-controlled edges

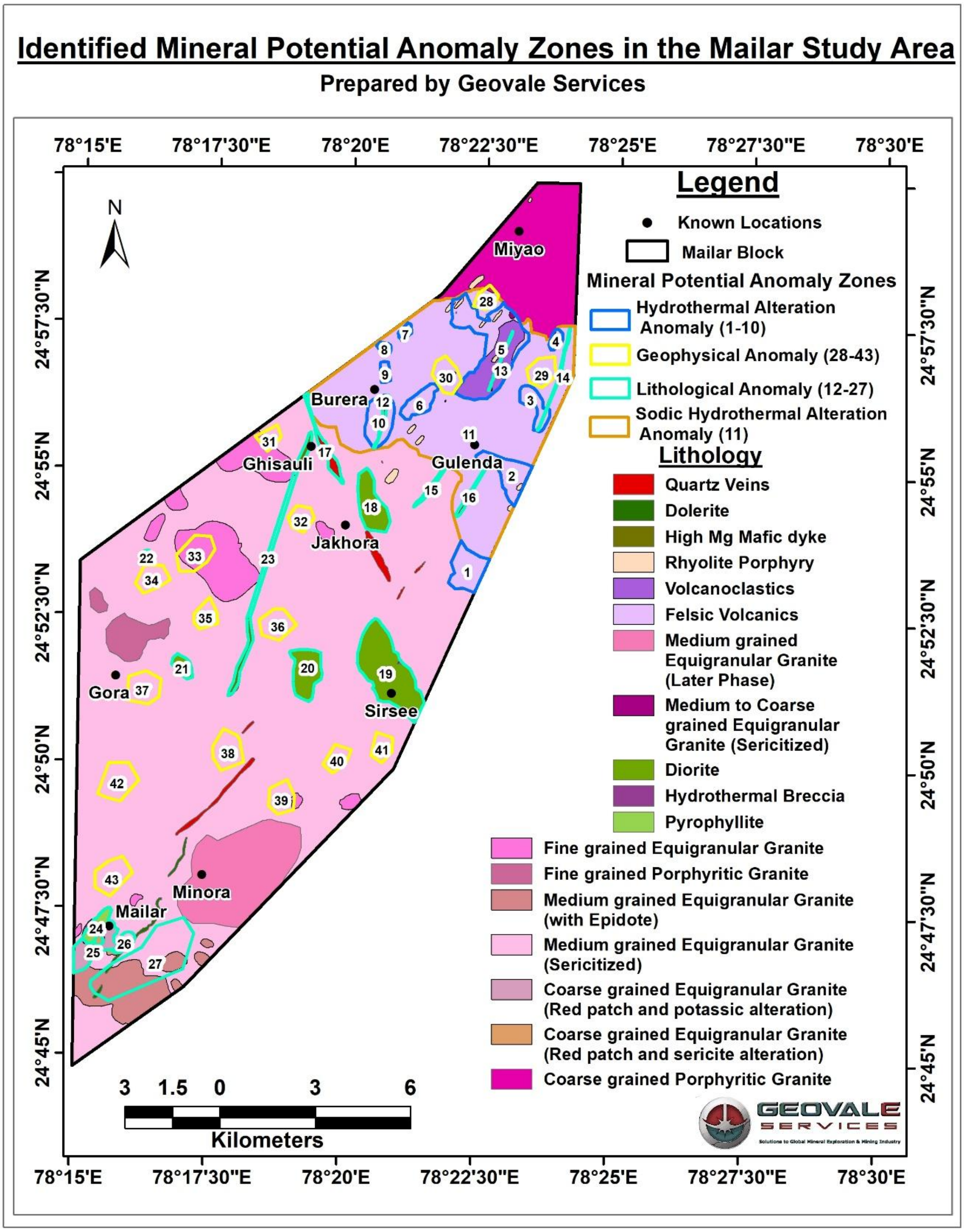


Fig 8: 43 Mineral Potential Anomalous Targets in Mailar Block

8.1 Mineral potential anomalous Targets Identified from Lithology, Alteration Mapping and Surface Geochemistry

These include 11 alteration-based Mineral Potential Anomalous Targets and 16 lithology Mineral Potential Anomalous Targets and 16 aerogeophysical data based Mineral Potential Anomalous Targets, distributed across the northern, central, and southern parts of the block.

8.1.1 Northern part of the Mailar Block – Alteration Dominated Mineral potential anomalous Targets (1 – 11) and Epithermal quartz veins (12-17)

The northern block forms the most intensely altered and structurally favourable terrain within the Mailar concession (Fig. 8). It is dominated by felsic volcanics, hosting:

- **potassic alteration zones**
- **sodic–calcic zones**

Integrated Characteristics of Mineral Potential Anomalous Targets 1–11

Alteration Signatures: All 11 targets show strong potassic ± epithermal overprint, with AHI and VCD anomalies confirming pervasive hydrothermal activity. Intensity ranges from strong to very strong.

Geochemistry: Multiple targets exhibit high Cu (~100–3000 ppm), Mo (~1–16 ppm), and associated indicator elements (Bi, V) in bedrock samples (details discussed later). Target 2 stands out as a Very High Priority anomaly with Cu at 1484 ppm and W at 38 ppm.

Geophysical Indicators: Most northern targets coincide with NW–SE-trending magnetic highs, interpreted as structurally oriented intrusions or magnetically altered host rocks.

Interpretation: Collectively, these anomalies indicate shallow-level expression of a porphyry Cu–Mo system.

Implication for Target Ranking: Targets 1–11 form the core high-priority cluster for the post-G4 exploration phase.

Integrated Characteristics of Mineral Potential Anomalous Targets 12-17

Alteration Signatures: All 12 targets are epithermal quartz veins associated with potassic alterated quartz veins.

Geochemistry: Multiple targets exhibit high Cu (~100–7000 ppm), Mo (~1–50 ppm), with elevated SN-W and associated indicator elements (Bi, V) in bedrock samples (details discussed later).

Geophysical Indicators: Most northern targets coincide with N–S-trending magnetic highs, interpreted as structurally oriented intrusions or magnetically altered host rocks.

Implication for Target Ranking: Targets 12-17 form the core high-priority cluster for the post-G3 and G4 exploration phase.

8.1.2 Southern Mailar Block – Advanced Argillic and Granite – Hosted Targets (Targets 24 – 27)

The southern Mailar region includes:

- **pyrophyllite-dominated high-sulphidation zones**,
- **associated alunite, anhydrite, and silica**;
- **granite-hosted potassic–argillic caps**.

Key Geological and Alteration Observations

- Presence of **advanced argillic alteration** (alunite–pyrophyllite ± anhydrite) suggests **high-sulphidation epithermal** to **porphyry lithocap** settings.
- **Gusano textures** imply strong acid alteration, typically forming above or lateral to mineralised porphyry cores.
- Mine dump observations show **malachite and chalcopyrite**, confirming copper enrichment.

- Targets display strong Mo (up to 28 ppm), Sn (up to 40 ppm), W (up to 7 ppm) and widespread Fe–Mn oxides.

Geophysical Expression

The southern anomalies commonly show:

- **magnetic lows** associated with deeply altered caps,
- **magnetic highs and faults** marking intrusion-related structures (e.g., Target 26).

Interpretation:

The southern block likely hosts **porphyry roots beneath advanced argillic caps**, making these anomalies excellent candidates for **G3-stage drill testing**.

8.1.3 Central Mailar Block: Diorite, Mafic Dykes and Concealed Potassic Systems (Targets 18 – 23)

The central block is structurally dominated by:

- multiple diorite intrusions,
- a high-Mg mafic dyke corridor,
- patchy exposures due to soil cover.

Target Highlights

- **Diorite-hosted Cu–Mo–W anomalies** (Targets 18–22), typically exhibiting moderate–strong potassic alteration.
- **High-Mg mafic dyke** (Target 23) carrying notable V (316 ppm), indicating a potential magmatic–hydrothermal conduit.
- Mineralisation is usually subtle at surface but strongly supported by **geophysics and alteration indices**.

Interpretation- This block likely conceals **multiple intrusive centres**, making it a high-value zone for follow-up ground geophysics and reconnaissance drilling.

8.2 Targets Identified from Aeromagnetic Analysis (Targets 28-43)

The aeromagnetic RMI map from NGDR reveals at least 16 discrete or twinned "donut-shaped" anomalies. These anomalies are defined by:

- **Central magnetic lows** (demagnetised potassic cores)
- **Rimmed magnetic highs** (magnetite-bearing alteration halos or intrusive margins)

This anomaly geometry is highly characteristic of:

- **potassic alteration shells**,
- **porphyry intrusions**,
- **mineralised cupolas beneath alteration caps**.

Integration with Ground Data

Notably, RMI-based anomalies **1, 2, 3, and 15** spatially coincide with alteration and geochemical targets identified on ground surveys, validating the aeromagnetic proxy.

8.3 Integrated Interpretation and Target Ranking

Across the block, the 43 Mineral Potential Anomalous Targets reflect a coherent, large-scale, multi-phase hydrothermal system characterised by:

- potassic ± advanced argillic ± epithermal telescoping,
- felsic volcanic and diorite–granite intrusive architecture,
- donut-shaped magnetic anomalies,
- high-order Cu–Mo–Sn–W–Pb–Zn–Bi anomalies.

Table 8.3: Priority Target Domains

Zone	Principal Target Types	Priority Level
Northern Mineral Potential Anomalous Targets	Alteration-based + Quartz-vein epithermal	Very High – High
Central Mineral Potential Anomalous Targets	Diorite intrusions, mafic dyke, concealed RMI anomalies	High – Medium
Southern Mineral Potential Anomalous Targets	Advanced argillic caps + concealed magnetic anomalies	Very High – Medium

These ranked target domains guided the target testing strategy (Pitting–Trenching–Drilling) in Stage 4 and Stage-5 and subsequent G3 Exploration Block delineation.

8.3 Concluding Remarks and Transition to Ground Investigation

The integrated identification and characterisation of 43 Mineral Potential Anomalous Targets establishes the Mailar Block as a substantial, district-scale porphyry–epithermal hybrid mineral system. The diversity of target types—ranging from exposed alteration zones to concealed intrusion-centred magnetic anomalies—demonstrates the complexity and fertility of the system.

The next phase of the exploration programme focuses on:

- validating these Mineral Potential Anomalous Targets through surface geological investigation,
- systematic multi-element geochemistry,
- ground geophysics, and
- ranking and prioritising drill-ready targets.

These activities, including their results and interpretations, are presented in Chapter 9 (Surface Geological & Geochemical Investigations) and Chapter 10 (Integrated Target Assessment and Prioritisation), which together form the core of the Stage-3 exploration outcomes.

CHAPTER-9

GEOSCIENCE INVESTIGATIONS (STAGE-3)

Chapter 9 presents the detailed surface exploration programme undertaken to validate and refine the 43 Mineral Potential Anomalous Targets in Chapter 8 across the Mailar Block. Building on the predictive mineral-systems framework, this chapter documents the full set of field investigations—including geological and alteration mapping, alteration intensity assessment, multi-tier geochemical sampling, ground magnetics, VES and SP geophysics—that were designed to test the structural, lithological and hydrothermal characteristics of each target area. The integrated results provide empirical evidence for the presence, continuity, and nature of mineralised centres within the block, forming the critical foundation for the target prioritisation and drilling strategy developed in Chapter 10.

9.1 Developing a Ground Exploration Strategy

The identification of 43 Mineral Potential Anomalous Targets in the Mailar Block (Chapter 8) represents the culmination of the predictive, mineral systems based approach combining legacy datasets, satellite-derived alteration patterns, aeromagnetic interpretation, and reconnaissance field mapping. These targets fall into three principal categories:

1. **Alteration-driven Mineral Potential Anomalous Targets** – concentrated in the Gulenda–Burera volcanic corridor, defined by intense potassic and phyllic alteration, EHT veins, silica flooding, and multi-element Cu–Mo–W–Sn–Bi enrichment.

2. **Lithology-driven Mineral Potential Anomalous Targets** – including epithermal quartz reefs, diorite stocks, high-Mg dykes, and advanced argillic caps in Mailar; these targets host significant mineralised veins, sulphide-bearing structures, and polymetallic signatures.

3. **Aeromagnetic anomaly Mineral Potential Anomalous Targets**– largely concealed intrusive centres characterised by donut-shaped RMI anomalies, magnetic lows rimmed by highs, and structural breaks suggestive of porphyry cupolas or feeder conduits.

The purpose of Chapter 9 is to transition from conceptual identification to empirical validation, testing whether the predicted hydrothermal centres possess surface and shallow subsurface expressions consistent with a fertile Porphyry Cu–Mo–Au ± Epithermal system.

To achieve this, the exploration strategy was designed as a progressive, multi-layered field program, wherein each dataset strengthens, challenges, or refines the interpretations derived from Chapter 8.

This strategy integrates five investigative components, executed in a sequence that mirrors how mineral systems express themselves at surface. Each of these aspects have been discussed in detail in subsequent sections of this chapter.

(1) Geological and Alteration Mapping: Establishing the Surface Framework

The first stage involved systematic 1:12,500-scale mapping across the three mineralised area—northern Gulenda–Burera, central diorite–dyke, and southern Mailar–advanced argillic zones. This mapping focused on:

- delineating lithological contacts (felsic volcanics, diorites, granites, mafic dykes),
- identifying structural controls (E–W shears, NW–SE dykes, NE–SW cross-faults),
- mapping alteration halos (potassic, phyllic, argillic, advanced argillic),
- recording all vein types (EHT veins, A-veins, sulphide veinlets, quartz reefs).

This step allowed the 43 Mineral Potential Anomalous Targets from Chapter 8 to be spatially anchored in a coherent geological and structural architecture.

(2) Hydrothermal Alteration Intensity Mapping: Testing the Footprints of the Mineral System

Since porphyry systems express themselves as broad hydrothermal footprints, alteration intensity mapping (AHI) and vein/channel density (VCD) studies were undertaken to quantify fluid–rock interaction. This method proved especially powerful in the alteration-dominated targets (1–11), where:

- AHI reached 70–100% in several sites,

- VCD exceeded 60–100 cm/m²,
- secondary biotite and magnetite confirmed proximal potassic alteration,
- the distribution of EHT and A-veins validated core–peripheral zoning models.

These metrics helped discriminate between core porphyry centres and epithermal overprints thereby refining the priorities established in Chapter 8.

(3) Multi-Tier Geochemical Sampling: Verifying Metal Zonation Patterns

Geochemical sampling was conducted across all three target domains:

- **bedrock sampling** in volcanic, intrusive, and vein-hosted zones,
- **stream sediment sampling** to detect catchment-scale dispersion,
- **pitting** to assess shallow subsurface continuity.

This revealed:

- widespread Cu–Mo–Sn–W–Pb–Bi anomalies in the Gulenda, northern part of Mailar block.
- high-grade Cu mineralization (up to 7000 ppm) in the northern and southern part of the Mailar blocks,
- polymetallic signatures (Cu–Bi-Mo) in the Mailar advanced argillic zone, southern part of the Mailar block.
- metal clustering near diorite stocks and mafic dykes in the central block.

These results validated several high-priority targets from Chapter 8 and provided the first empirical evidence of a fertile magmatic–hydrothermal system active across the block.

(4) Ground Geophysics: Subsurface Continuity and Structural Architecture

Ground geophysical surveys—particularly magnetics, VES, and SP were deployed to investigate subsurface continuity beneath the 43 targets.

- Ground magnetics refined the geometry of intrusive centres, dyke, and shear-bound alteration zones, confirming multiple magnetic anomalies corresponding to targets 28–43.
- VES highlighted conductive zones under argillic caps and alteration corridors (notably in Targets 24–27).
- SP anomalies indicated electrochemical responses linked to shallow sulphides, particularly in the northern and southern mineralised windows.

The geophysical evidence provided depth constraints and strengthened the interpretation of concealed porphyry centres suggested in Chapter 8.

(5) Integrated Interpretation Leading to Target Prioritisation (Transition to Chapter 10)

After mapping, alteration quantification, geochemistry, and geophysics, all datasets were brought together to:

- test the validity of the 43 Mineral Potential Anomalous Targets against surface and subsurface evidence,
- differentiate porphyry centres from epithermal expressions and lithological anomalies.
- refine target confidence levels and rank them for drilling (Chapter 10),
- build a spatially coherent mineralisation model for northern, central, and southern corridors.

This integrated framework forms a direct bridge between the conceptual target definition in Chapter 8 and the target-specific exploration outcomes and prioritisation in Chapter 10.

Relationship Between Chapters 8, 9, and 10

- **Chapter 8** identifies 43 targets using predictive analysis and reconnaissance validation.
- **Chapter 9** (this chapter) presents the field evidence—geological, alteration, geochemical, and geophysical—that tests and refines these targets.

- **Chapter 10** integrates all datasets into a final target ranking and mineralisation model, forming the basis for the drilling strategy outlined in Chapter 11.

Through this structured approach, the exploration strategy ensures that each of the 43 targets is evaluated rigorously, and that priority drill targets are supported by multi-parameter convergence rather than any single line of evidence.

9.2 Remote Sensing Data Analysis

9.2.1 Elevation and Drainage

The block area is mostly plain land with elevation varying between ~200 m and ~450 m (Fig 9.2.1). The southern and eastern part of the block is more elevated than the northwestern part. Accordingly, the main drainage of the area flows from the southeastern part to the northwestern part that ultimately joins with the Betwa river further west of the area. The main water channel of the area runs in a northerly direction through the central part of the block. It remains seasonally dry. Tributaries of this channel make a dendritic pattern. Two important reservoirs, the Matatila Dam and the Rajghat Dam exist in the northwest and south of the block area (Fig. 9.2.1).

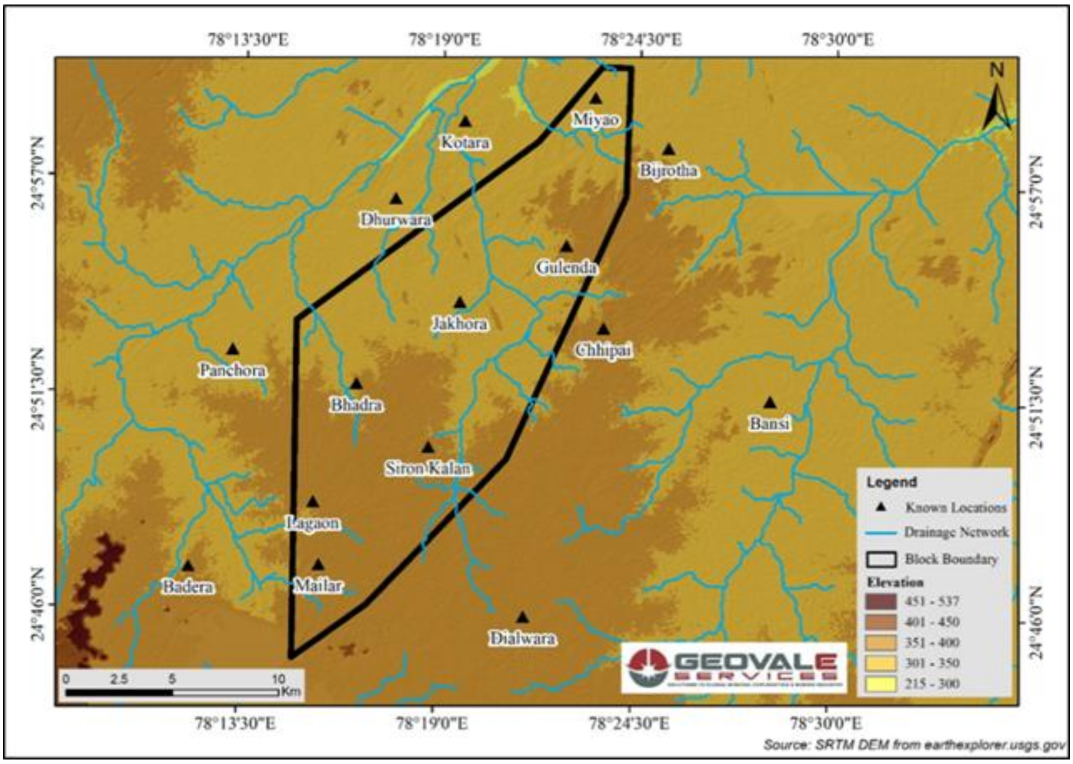


Fig. 9.2.1: Drainage map of the Mailar Block and surrounding.

9.2.2 Regolith Type

The **RED** (Residual, Erosional, and Depositional) scheme (Fig 9.2.2) for regolith classification is used for the block as this classification is useful for proper selection and weightage given to geochemical soil sampling. In this classification **R** stands for Residual Regolith representing ancient, stable parts that have survived prolonged weathering. **E** stands for Erosional Regolith representing regolith that are actively shaped and sculpted by erosional processes; and **D** stands for Depositional Regolith that are deposited by sediment accumulation processes. Available Survey of India topographic map, satellite imageries (including ASTER and DEMs) are used for RED scheme regolith map and such maps are subsequently validated in field.

Sentinel-2 imagery was employed to delineate **Residual regolith** areas (exposed rock outcrops), using band combinations and indices to separate bare ground from vegetation. Bare grounds were inspected using high-resolution Google Earth Pro imagery to identify rock exposure.

Erosional regolith areas are delineated using a combination of SRTM DEM, Sentinel-2 multispectral imagery, and Google Earth Pro. Slope analysis using 30m resolution SRTM data was used to highlight areas of high relief and active erosion.

Depositional regolith areas are extracted through the integration of Google Earth Pro high-resolution imagery and SRTM DEM-derived slope data.

The terrain is dominated by dissected hills and valleys, extracted through elevation and slope analysis from 30 m resolution SRTM data, highlighting areas of high relief and active erosion.

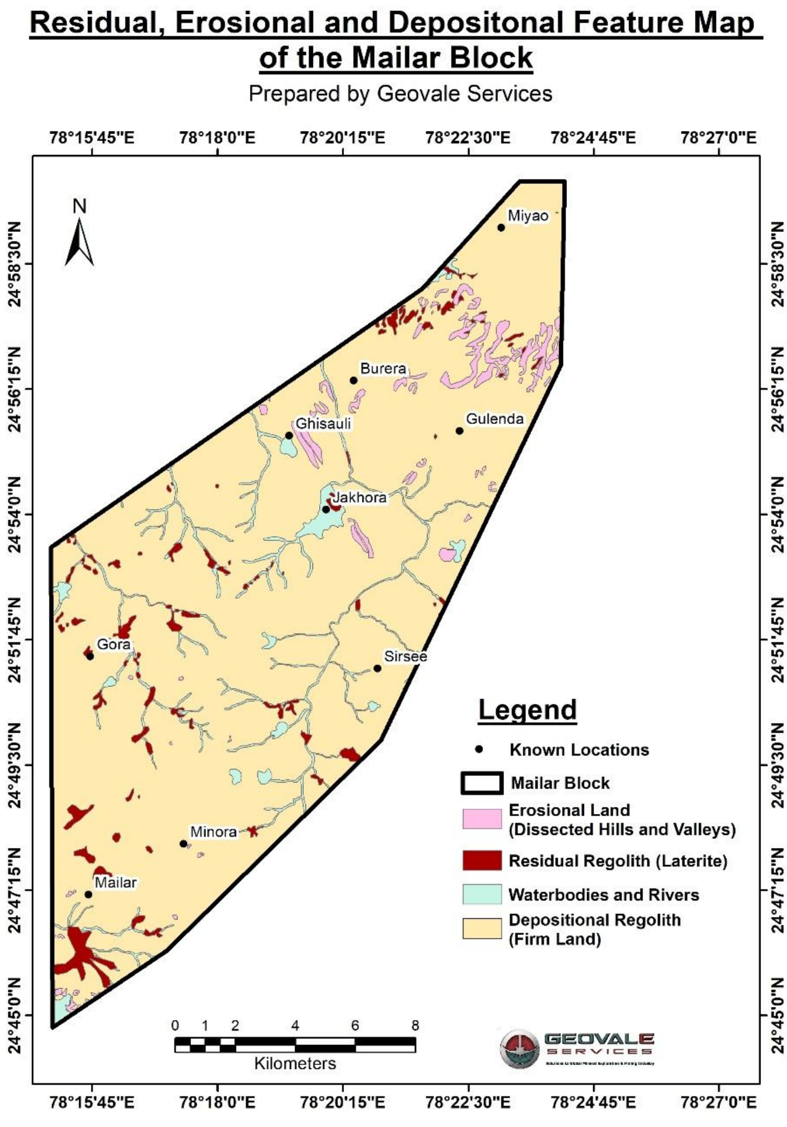


Fig 9.2.2: Residual, Erosional & Depositional Features of the Mailar block.

9.2.3 Remote Sensing Based Alteration Map

Combinations of 14 different ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) spectral bands are used for generating alteration geochemistry maps:

For example, lateritic alteration zones are delineated using the ASTER 4/2 band ratio (SWIR Band 4 at 1.65 µm divided by VNIR Band 2 at 0.66 µm) is applied in ENVI software. This ratio enhances spectral responses of ferric and aluminum oxides common in lateritic Surfaces. (Fig 9.2.3)

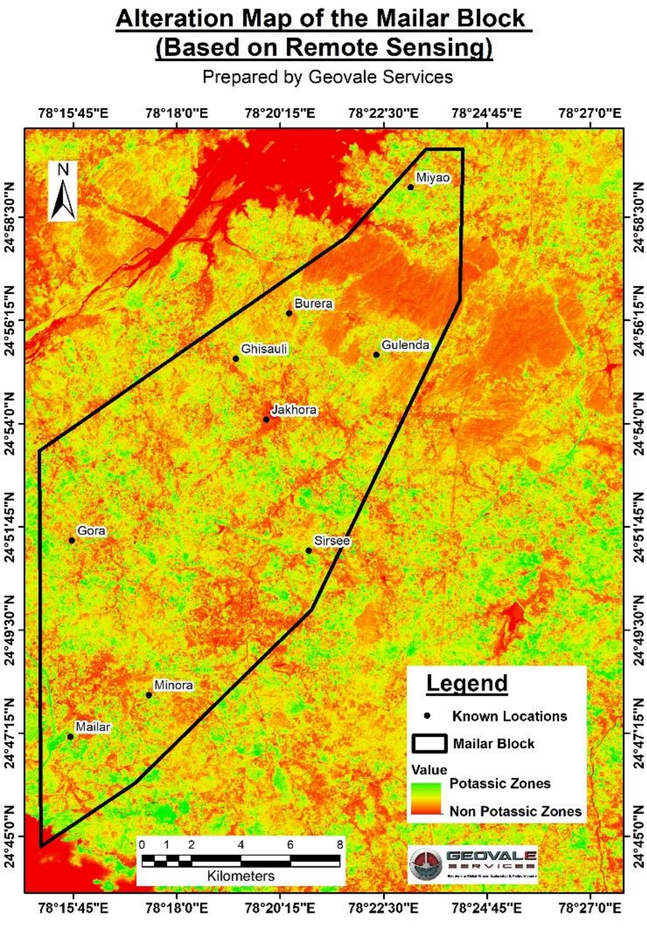


Fig 9.2.3: Alteration map based on remote sensing data of the Mailar block.

• VNIR (Visible and Near-Infrared, 15 m): Three bands in the 0.52–0.86 µm range for lithological contrast and vegetation discrimination.

• SWIR (Shortwave Infrared, 30 m): Six bands in the 1.6–2.43 µm range, ideal for identifying clay, carbonate, and Fe–Mg-bearing minerals, making it particularly useful for hydrothermal and lateritic alteration studies.

• TIR (Thermal Infrared, 90 m): Five bands in the 8.125–11.65 µm range for silicate mineral mapping and emissivity analysis.

9.3 Hydrothermal Alteration Mapping and Alteration Intensity Analysis

Hydrothermal alteration mapping (see Annexure XI, for alteration data) formed the core of the surface validation programme designed to evaluate the 43 mineral potential anomalous targets identified in Chapter 8. Given that porphyry–epithermal systems produce large, zoned alteration footprints that extend beyond the immediate mineralised centres, alteration mapping was employed both as a diagnostic tool and as a spatial framework for interpreting mineral potential across the Mailar Block. The work combined detailed field observations with structured alteration intensity (AHI) and Vein/Channel Density (VCD) assessments to quantify the strength and distribution of hydrothermal processes driving the mineral system.

Field mapping revealed four dominant alteration assemblages across the block: **potassic, phyllic, argillic, and advanced argillic**, along with localised silica flooding and epithermal overprints. These assemblages exhibit a clear spatial relationship to lithological controls (felsic volcanics, diorites, granites, and mafic dykes), structural corridors (E–W shears, NW–SE dykes, NE–SW cross-faults), and geophysical anomalies recognised in Chapter 8. In particular, the northern part of the Mailar block (Gulenda–Burera area) recorded pervasive potassic and phyllic alteration with high AHI–VCD values, validating the high-priority alteration-based targets (Targets 1–11) (Fig 8). Advanced argillic alteration around Mailar, southern part of the Mailar block correlates with sulphide-bearing structures, and the lithocap-style anomalies mapped in Targets 24–27. These observations confirm strong vertical and lateral zoning consistent with a telescoped porphyry–epithermal system.

The VCD assessments illustrate the density and distribution of quartz–sulphide veins, stockworks, and sheeted vein arrays, which enhance permeability and metal focusing. Many of the alteration-based targets—particularly Targets 2, 4, 7, and 10—show vein densities exceeding 60–100 cm/m², indicative of robust hydrothermal flux and favourable trapping conditions. These metrics also helped distinguish between alteration cores, thereby refining the modelled positions of porphyry centres proposed in Chapter 8. The advanced argillic signatures mapped in the south, dominated by pyrophyllite–alunite assemblages, delineate the uppermost levels of the mineral system, consistent with deeper porphyry roots inferred from aeromagnetic anomalies (Targets 28–43).

Collectively, the alteration mapping and intensity studies validate the conceptual targeting framework established in Chapter 8 and provide robust, field-based evidence for a large, multi-centre magmatic–hydrothermal system within the Mailar Block. These results directly inform the geochemical, structural, and geophysical analyses presented in subsequent sections and establish the foundation for integrated target ranking in Chapter 10.

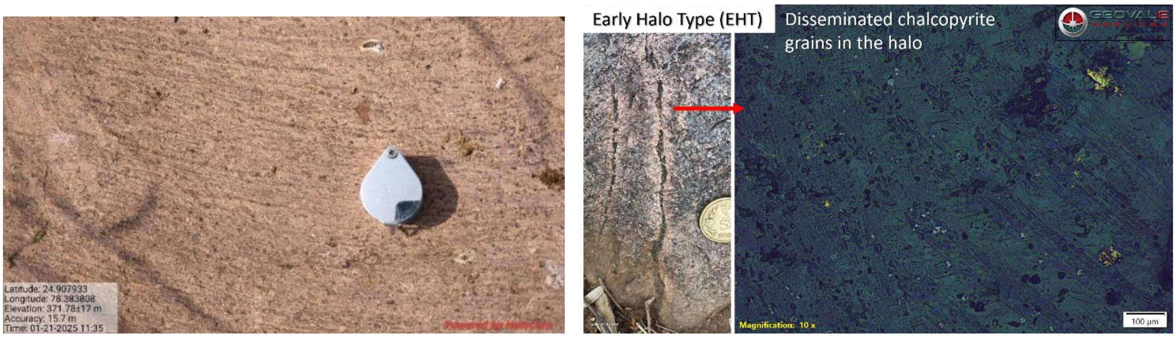


Fig 9.3.1: An example of very high alteration halo intensity (nearly 100%) with dissiminated Chalcopyrite making the felsic volcanic rock look like medum grained granite

Figure 9.3.1 presents an outcrop where the alteration halo intensity approaches 100%. Here, the rock surface is so thoroughly altered that the original volcanic textures are obscured, giving the felsic volcanic rock the appearance of a medium-grained granite. This represents one of the highest degrees of potassic alteration observed in the block. In the right side of the Fig 9.3.1, Alteration halo in volcanics shows the presence of disseminated chalcopyrite along the halo under microscope

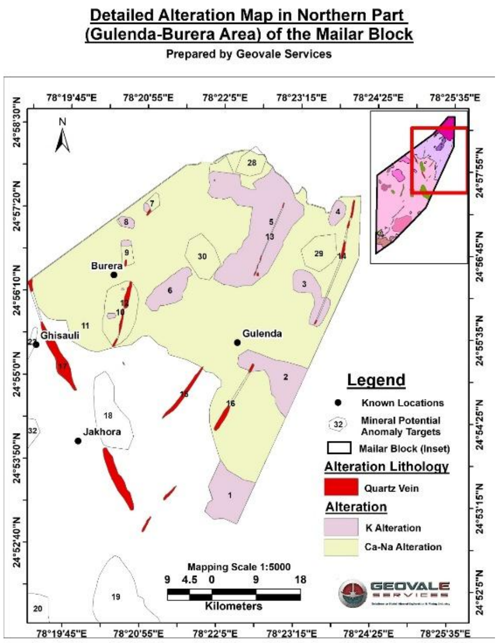


Fig 9.3.2: Map showing Alteration in the Northern Part of Mailar Block.

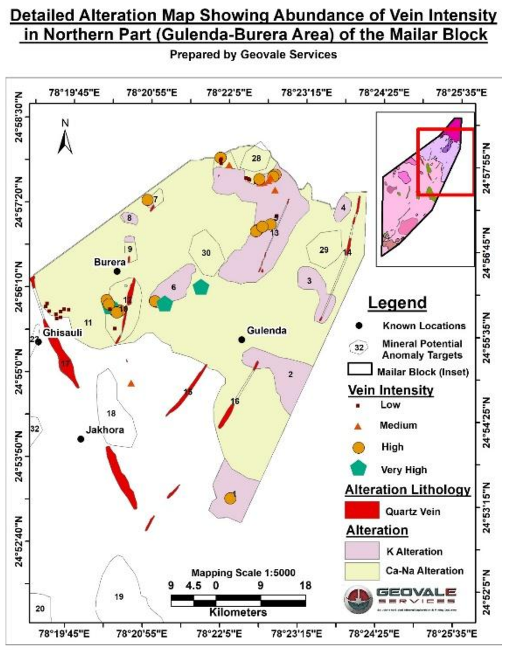


Fig 9.3.3 : Alteration map showing the vein intensity.

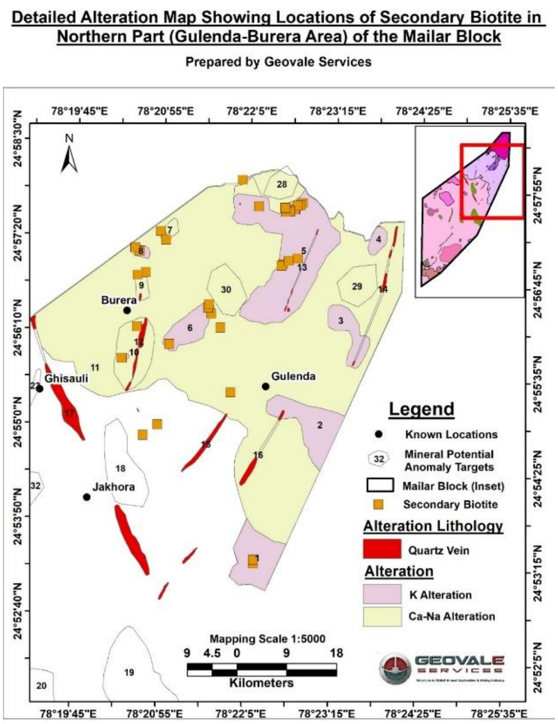


Fig 9.3.4 : Alteration map showing the presence of secondary biotite in Mailar Block.

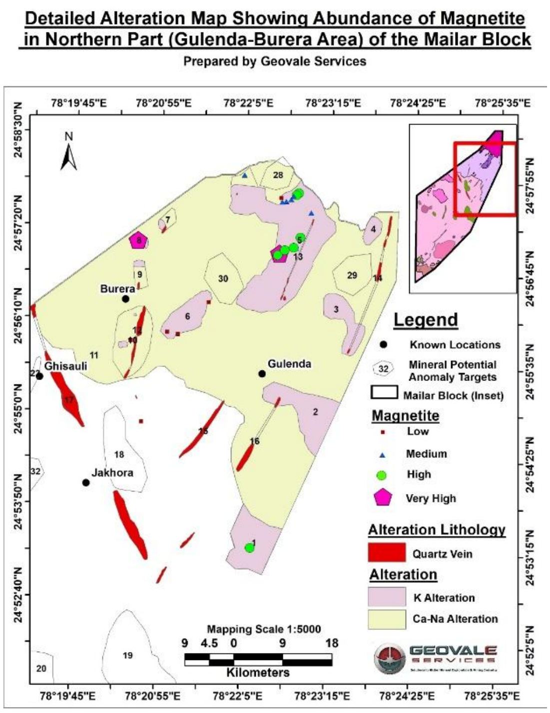


Fig 9.3.5 : Alteration map showing the presence of magnetite in Mailar Block.

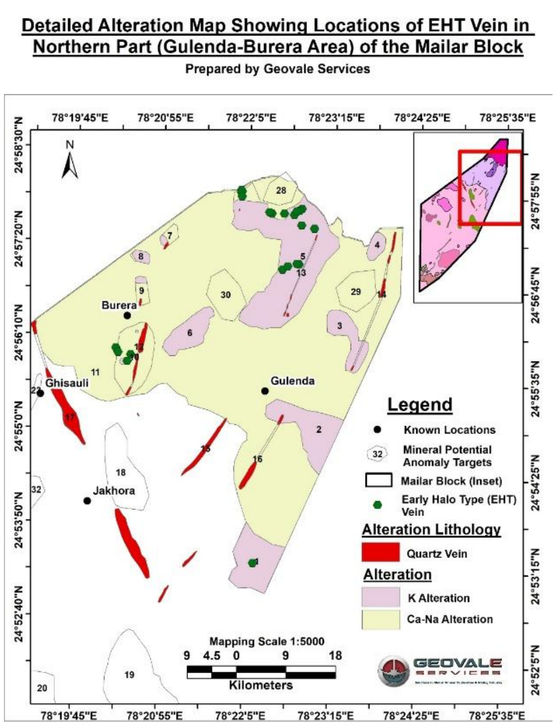


Fig 9.3.6 : Alteration map showing the presence of Early Halo Type (EHT) veins.

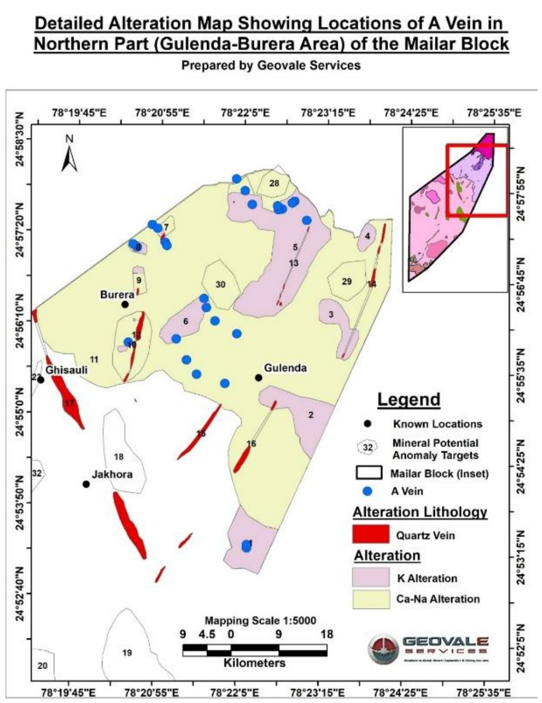


Fig 9.3.7 : Alteration map showing the presence of A-veins.

Figure 9.3.2 highlights the distribution of Alteration across the Gulenda area. Importantly, zones showing high AHI coincide with high copper assays in surface bedrock samples, reinforcing the direct relationship between hydrothermal alteration strength and mineral enrichment.

Figure 9.3.3 illustrates the distribution of Vein Channel Density (VCD) or Vein Intensity (VI) values. Areas with the densest networks of micro-veins correspond closely with the highest AHI zones, demonstrating that fracture permeability strongly controlled fluid flow and consequent copper deposition.

Figure 9.3.4 captures the distribution of secondary biotite, a hallmark mineral of potassic alteration. Areas with abundant biotite align with high halo intensities and strong vein density, confirming that these are core potassic alteration zones of the porphyry system.

The figure 9.3.5 shows the presence of magnetite, mapped here, further validates the potassic nature of the alteration. Magnetite-rich zones reflect high-temperature hydrothermal conditions, consistent with deeper-level porphyry environments.

Figure 9.3.6 delineates the spread of Early Halo Type (EHT) veins—thin, discontinuous, sulphide-bearing microstructures. The concentration of these veins marks the inner zones of the Gulenda hydrothermal system, where early-stage fluid flow was most intense.

In figure 9.3.7, A-veins (quartz-magnetite veins typically associated with porphyry cores) are mapped here. Their occurrence, though limited, is significant because A-veins are among the earliest vein types formed in porphyry systems and often precede more well-defined stockworks. Their spatial clustering, together with biotite and magnetite alteration, signals areas closest to the porphyry intrusive center.

The combined interpretation of field photographs (Figs 9.3.1) and alteration maps (Figs. 9.3.2–9.2.7) demonstrates that:

- The **most intensely altered parts** of the Gulenda area—characterized by AHI > 70%, VCD > 60 cm/m², strong biotite–magnetite alteration, and the presence of EHT/A-veins—represent **high-confidence porphyry targets**.
- These high-intensity zones correlate strongly with geochemical anomalies, confirming that **hydrothermal alteration mapping is a reliable predictor of mineralized centers**.
- The spatial overlap of potassic alteration, magnetite–biotite distribution, and early porphyry vein types suggests the presence of a **fertile porphyry Cu system** at depth.

These findings directly guided the infill sampling, geophysical surveys, and eventual drilling strategy discussed in later sections.

9.4 Geochemical Sampling

Geochemical sampling formed a critical pillar of the surface exploration program and served as a direct test of the mineral system indicators identified through alteration mapping and geological observations. Sampling was conducted across multiple lithological domains—including felsic volcanics, epigenetic quartz veins, diorite intrusives, high-Mg dykes, granites, and pyrophyllite-bearing advanced argillic zones—covering both the northern Gulenda–Burera area and the southern Mailar area. The geochemical program comprised three major components: (i) bedrock sampling, (ii) stream sediment sampling, and (iii) pitting and shallow subsurface sampling (Annexure XII and XIII). The combined dataset revealed distinct geochemical halos and multiple element enrichment zones, strongly supporting the presence of a fertile hydrothermal system. Stream sediment sampling is carried out to identify copper mineralization within a drainage area. Fine-grained sediments are collected from active stream channels based on drainage maps and ground verification. Samples are taken from multiple points across the channel and combined to obtain a representative sample. Wet sieving is then carried out using 80, 100, 120, and 200 mesh sieves. The -200-mesh fraction are dried and sent for laboratory analysis for basemetal as they are expected to be better represented in the clay rich fine fractions. Stream sediment sampling for gold starts with studying drainage patterns and field verification. Sampling is carried out in active stream channels, particularly at point bars and inner bends. Sediments from multiple points are collected and cleaned of gravel and organic matter. The material is gently panned to remove lighter fractions and concentrate heavy minerals. The final concentrate is dried, labeled, and examined or sent for laboratory analysis.

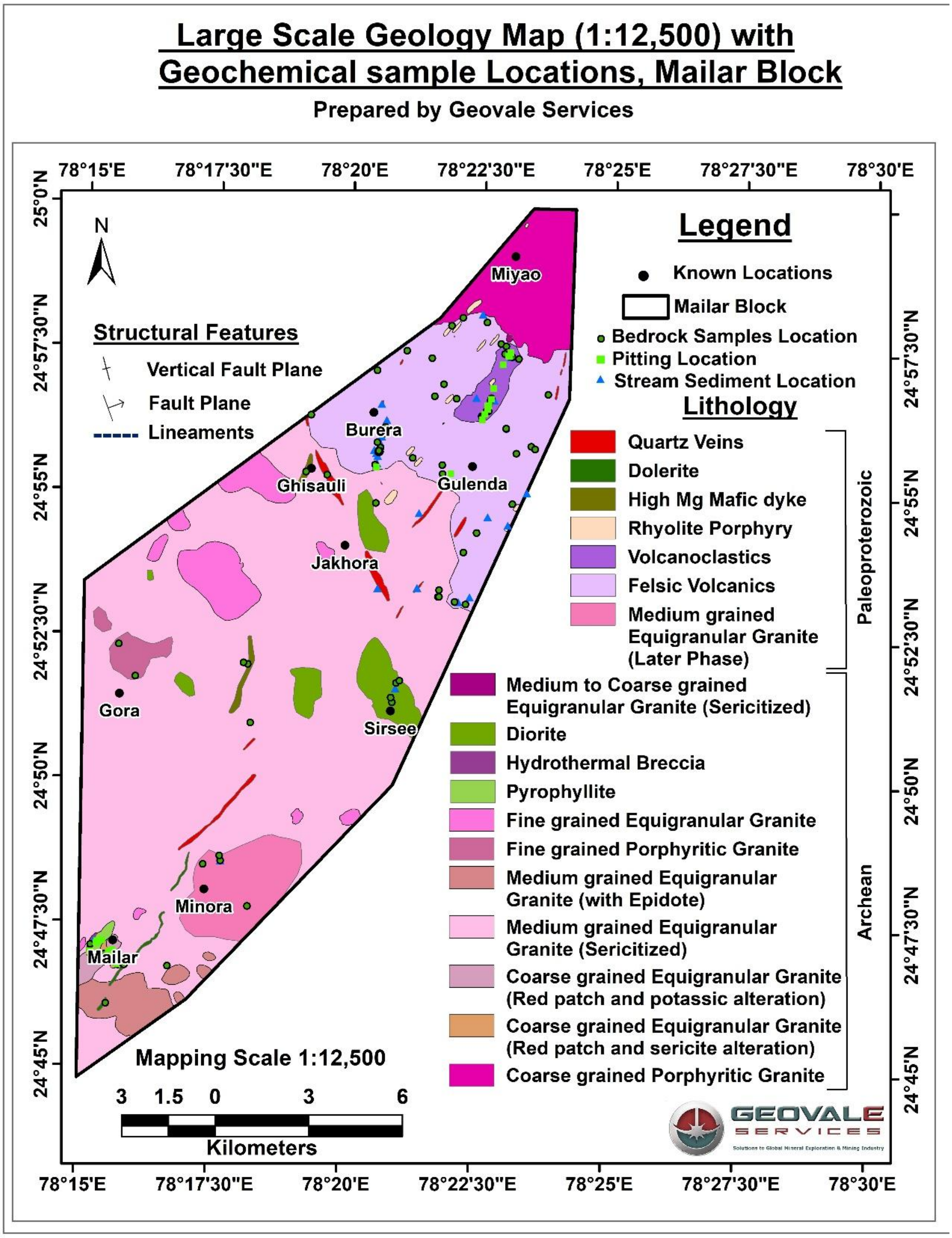


Fig 9.4.1: Geochemical Sample locations within the Block

Mineral anomaly in the Burea area, northern part of the Mailar Block

In the Burera area, epithermal quartz veins have been investigated through geochemical analyses of bedrock, stream sediments, and pitting samples. Copper concentrations within the epigenetic quartz veins display markedly elevated values, typically ranging from 400 to 7,000 ppm (Fig. 9.4.2). Molybdenite also shows significant anomalies, with molybdenum values between 2 and 22 ppm (Fig. 9.4.3). Zinc exhibits higher anomalies from 340 to 1,670 ppm (Fig. 9.4.4), while tin ranges from 8 to 18 ppm (Fig. 9.4.5). Tungsten values fall between 23 and 85 ppm (Fig. 9.4.6), and lead demonstrates strong enrichment, ranging from 78 to 14,000 ppm (Fig. 9.4.7).

Stream-sediment collected in the Burera area further confirm these metal anomalies. Sediments proximal to the quartz veins contain up to 7 ppm W, 63 ppm Sn, 133 ppm Cr, and 2 ppm Mo (Fig. 9.4.8).

The Burera area presents a highly prospective mineralization zone, hosting a polymetallic epithermal system enriched in Cu, Pb, Zn, Sn, W, and Mo. The combination of strong geochemical anomalies in both bedrock and stream sediments highlights substantial potential for economic mineral deposits and makes the area a promising target for further exploration.

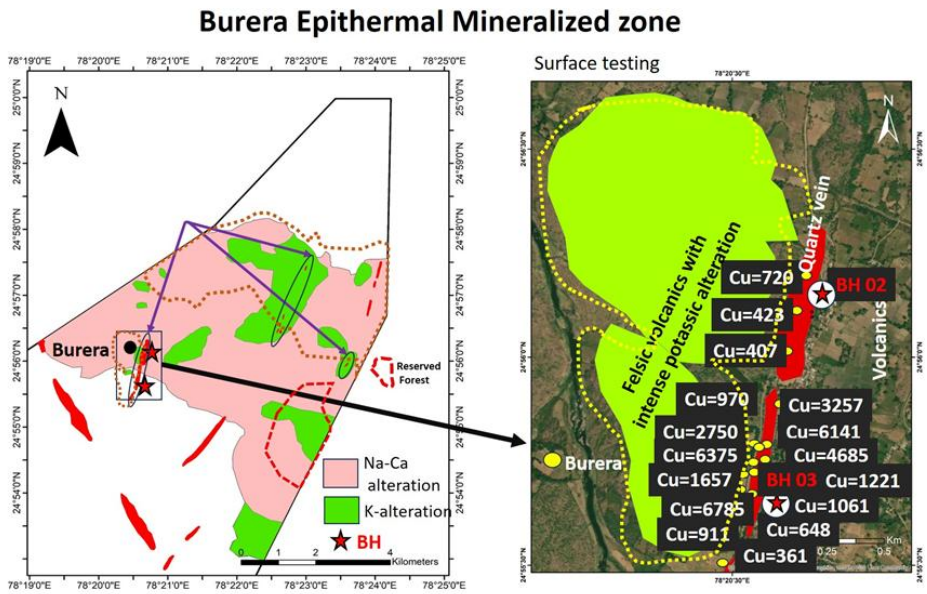


Fig 9.4.2a Detailed map of northern zone shows higher copper concentration within the quartz vein

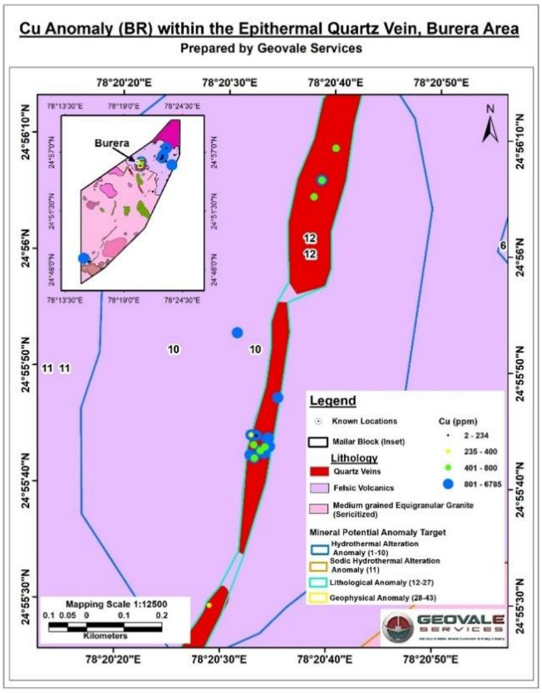


Fig 9.4.2b Copper distribution in epithermal quartz vein bedrock samples, near Burea

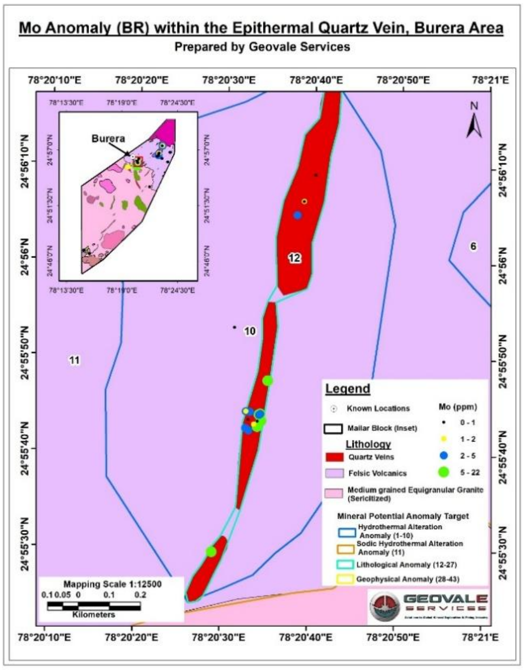


Fig 9.4.3 Mo distribution in epithermal quartz vein bedrock samples, near Burea.

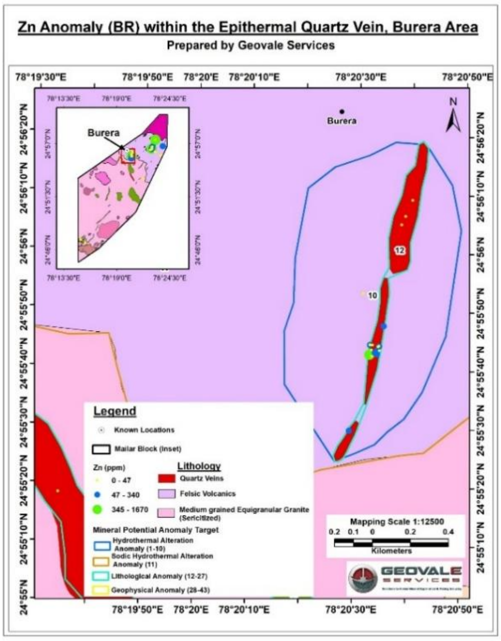


Fig 9.4.4 Zn distribution in epithermal quartz vein bedrock samples, near Burea.

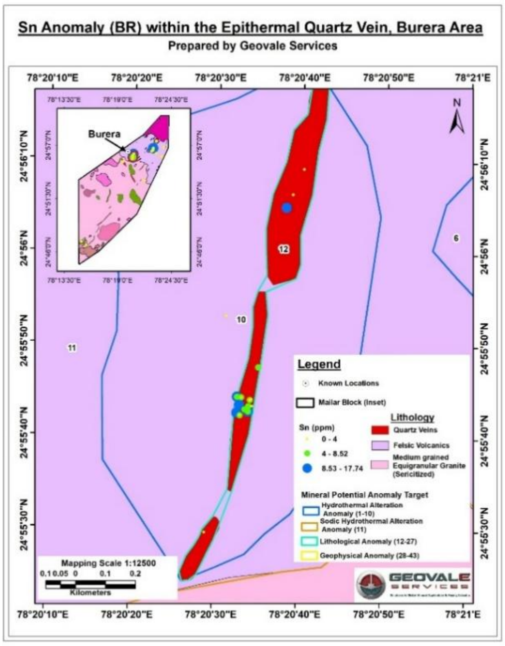


Fig 9.4.5 Tin distribution in epithermal quartz vein bedrock samples, near Burea.

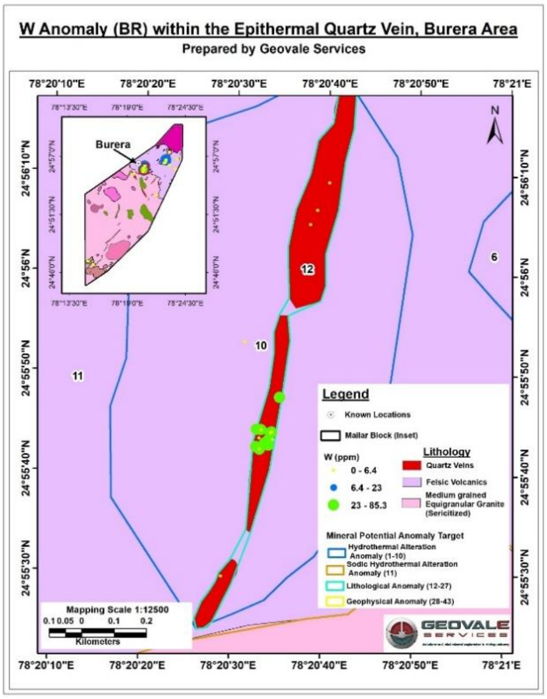


Fig 9.4.6 W distribution in epithermal quartz vein bedrock samples, near Burea

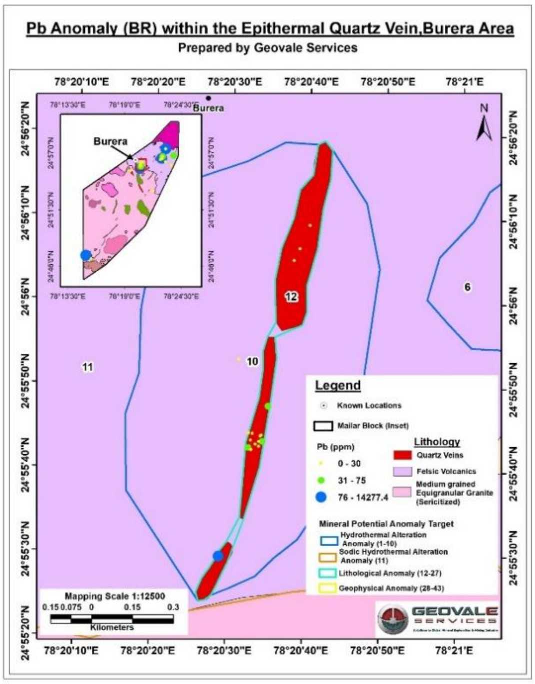


Fig 9.4.7 Pb distribution in eithermal quartz vein bedrock samples, near Burea

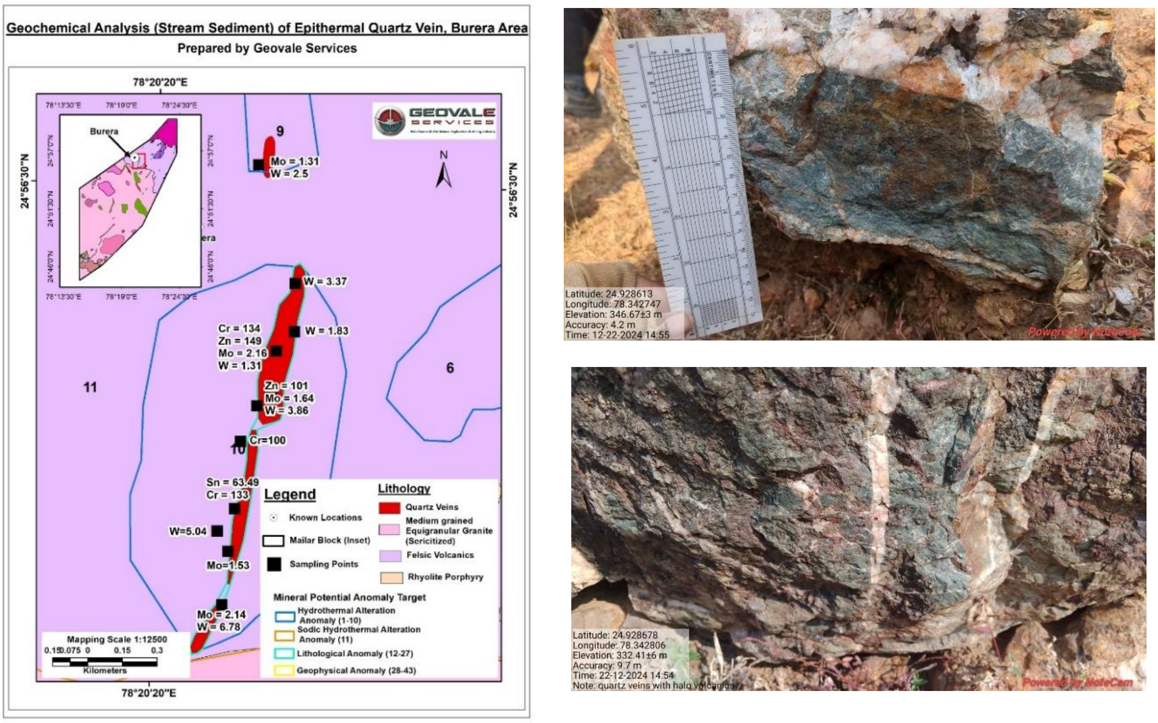


Fig 9.4.8: Stream Sediment Geochemistry near epithermal quartz vein, near Burera

Mineral anomaly in the Lalaon area, northern part of the Mailar Block

Geochemical analyses of epithermal quartz veins and stream sediments near volcanic units in the Lalaon area, located in the western part of the northern zone of the Mailar block, have been conducted. Bedrock samples from this region display notably elevated metal concentrations, including tungsten (up to 85 ppm) (Fig. 9.4.9), zinc (up to 1,670 ppm) (Fig. 9.4.10), tin (8–17 ppm) (9.4.11), and lead (up to 14,000 ppm) (9.4.12). Stream-sediment samples collected downstream of the volcanic rocks also show significant anomalies, with tungsten reaching 10 ppm and tin ranging between 15 and 43 ppm (9.4.13).

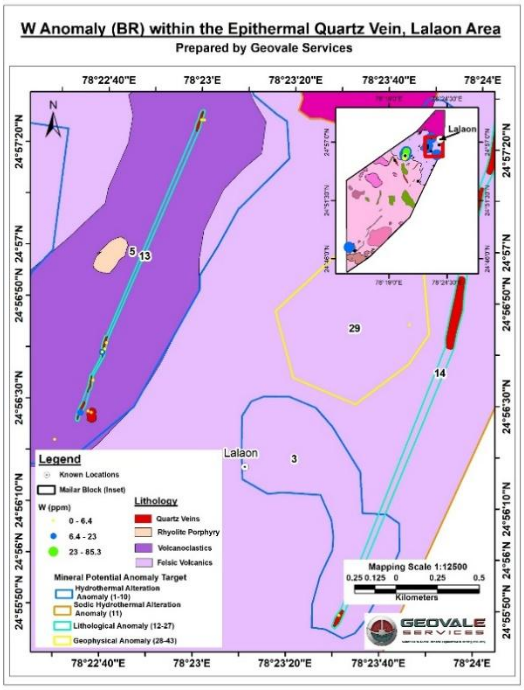


Fig 9.4.9 W distribution in epithermal quartz vein bedrock samples, near Lalaon.

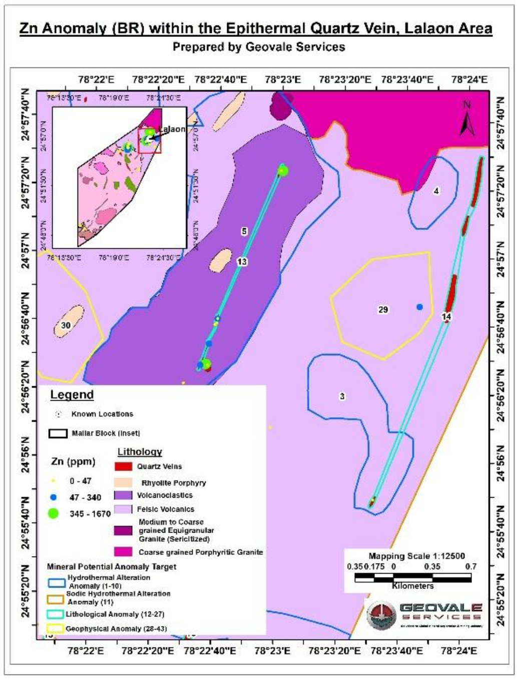


Fig 9.4.10 Zn distribution in epithermal quartz vein bedrock samples, near Lalaon

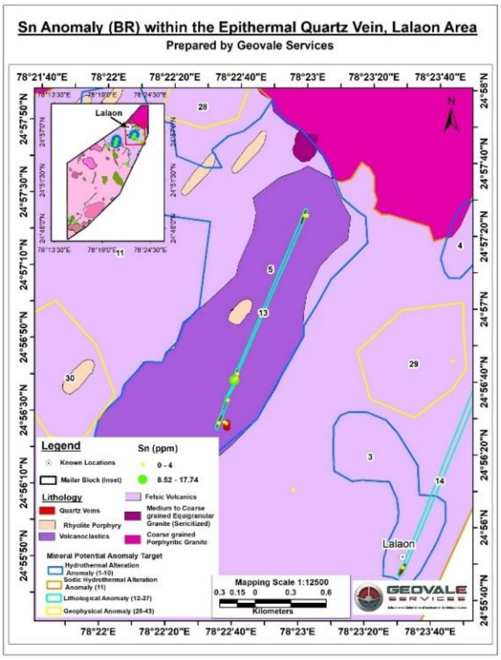


Fig 9.4.11 Sn distribution in epithermal quartz vein bedrock samples, near Lalaon

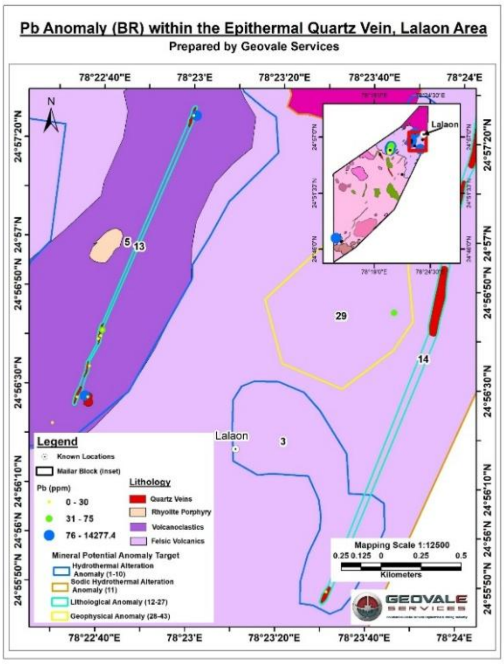


Fig 9.4.12 Pb distribution in epithermal quartz vein bedrock samples, near Lalaon

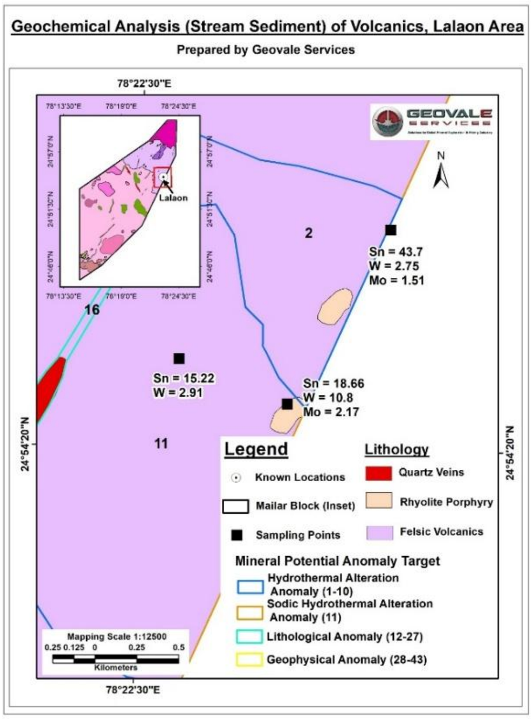


Fig 9.4.13 Stream Sediment Geochemistry, near Lalaon .

Mineral anomaly in the Gulenda area, northern part of the Mailar Block

Geochemical investigations carried out on epithermal quartz veins in the Gulenda area, situated in the central portion of the northern zone of the Mailar block, reveal notable metal enrichment. Bedrock samples show elevated molybdenum concentrations reaching up to 22 ppm (Fig. 9.4.14). Stream-sediment samples collected near the quartz veins also indicate significant anomalies, with tungsten values up to 67 ppm (Fig. 9.4.15). Additionally, pitting samples collected adjacent to the quartz veins contain zinc concentrations of 483 ppm (Fig. 9.4.16).

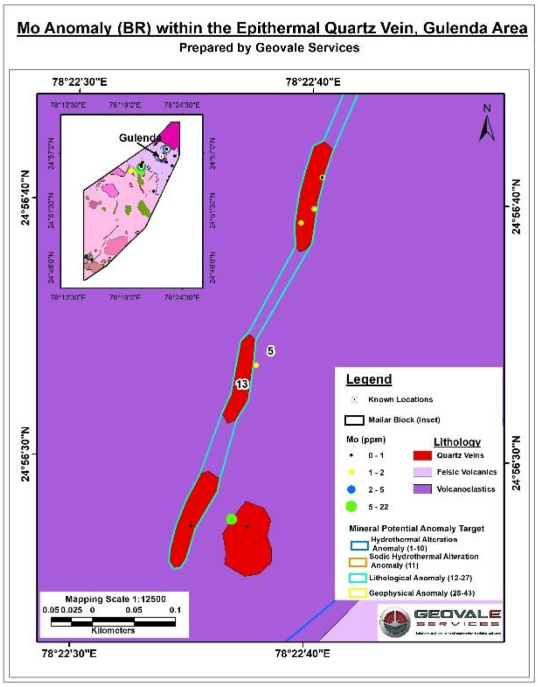
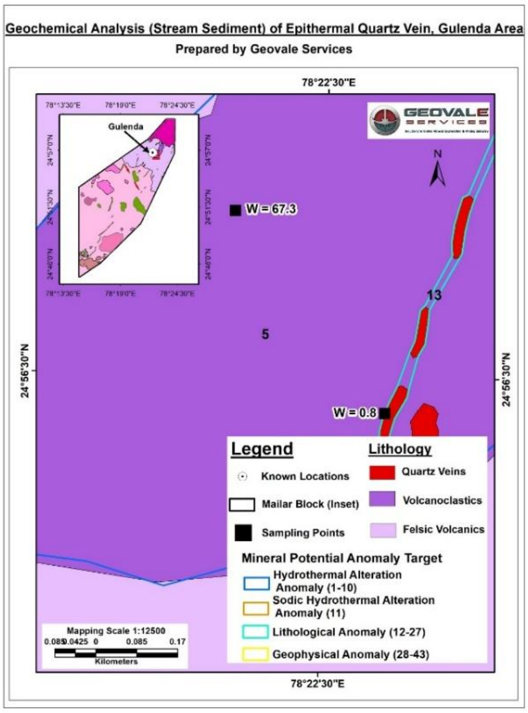
	

Fig 9.4.14 Mo distribution in epithermal quartz vein bedrock samples, near Gulenda	*Fig 9.4.15 Stream Sediment Geochemistry near Gulenda*

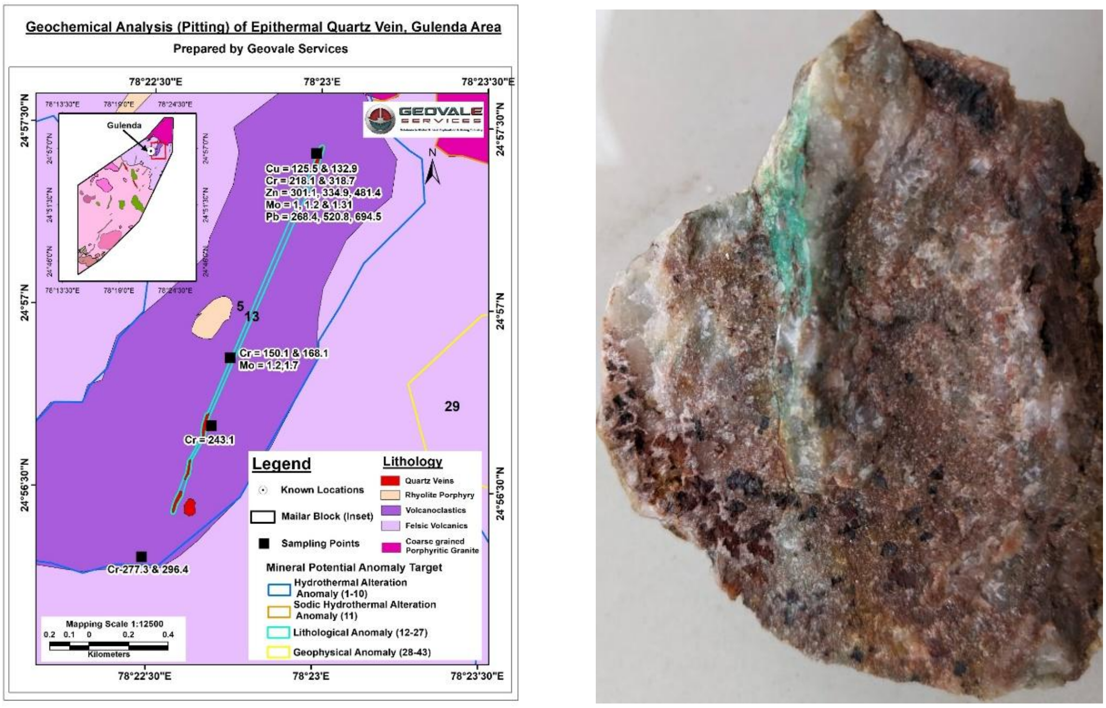


Fig 9.4.16: Pitting Geochemistry near Gulenda

Mineral anomaly in the Volcanics in the northern part of the Mailar Block

A total of 31 bedrock samples were collected from altered volcanic zones in the northern part of the block, and their geochemical analysis indicates notable multi-element anomalies (Fig. 9.4.13–9.4.19). Copper is enriched in five samples, with concentrations ranging from 108.4 to 1484.24 ppm, while zinc appears in four samples with values between 103.7 and 151.9 ppm. Nickel is detected in four samples, ranging from 142.1 to 421.1 ppm, and chromium is present in seven samples with concentrations of 202.9 to 428 ppm-indicate active hydrothermal processes and metal mobility within the volcanic host rocks. Molybdenum, occurring as molybdenite, is recorded in eight samples at 2 to 4.7 ppm. Tin anomalies appear in four samples ranging 9 to 22.56 ppm, with an additional three samples showing 3.7 to 9 ppm. Tungsten is identified in six samples, with values between 5.7 and 21.86 ppm, reaching up to much higher than its average crustal abundance (Clarke value)- further strengthens the evidence for a polymetallic hydrothermal system. The combination of base metals, critical metals, and strategic elements suggests that the northern volcanic zone has substantial mineralization potential, warranting detailed follow-up exploration to evaluate possible economically viable deposits (9.4.17-23).

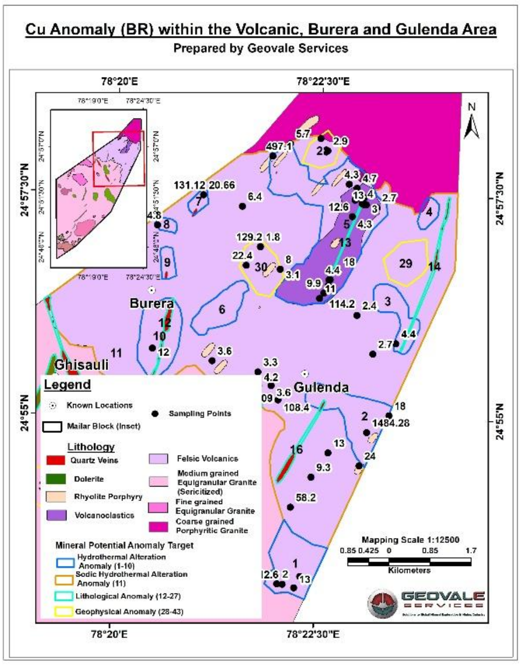


Fig 9.4.17 Cu distribution in Volcanics, Burera and Gulenda.

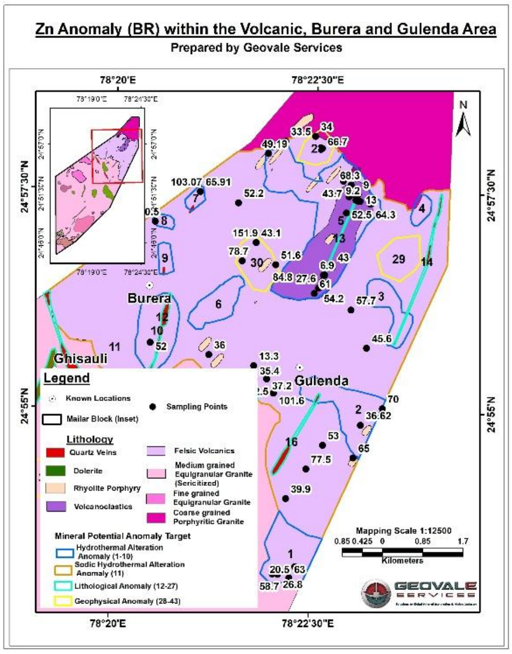


Fig 9.4.18 Zn distribution in Volcanics, Burera and Gulenda.

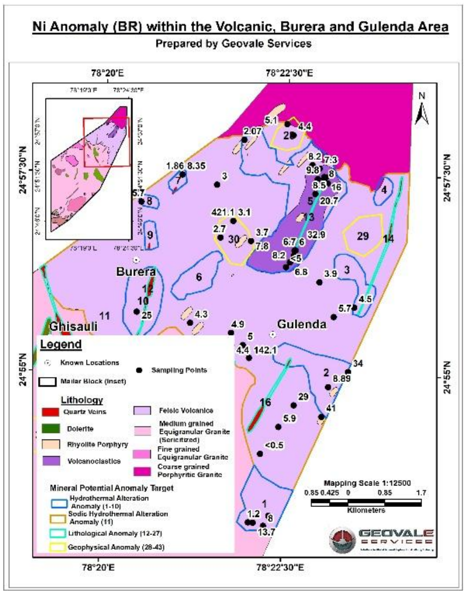


Fig 9.4.19 Ni distribution in Volcanics, Burera and Gulenda.

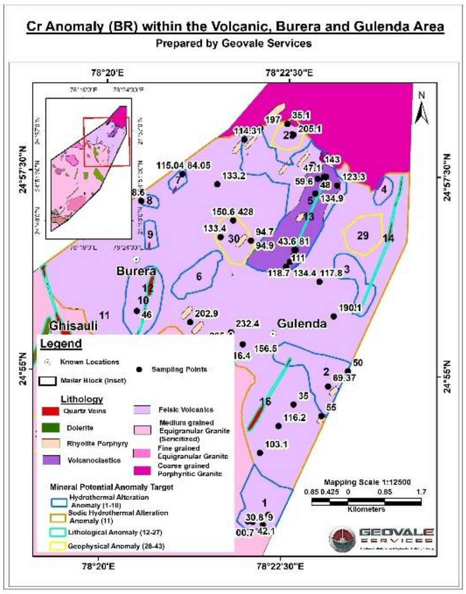
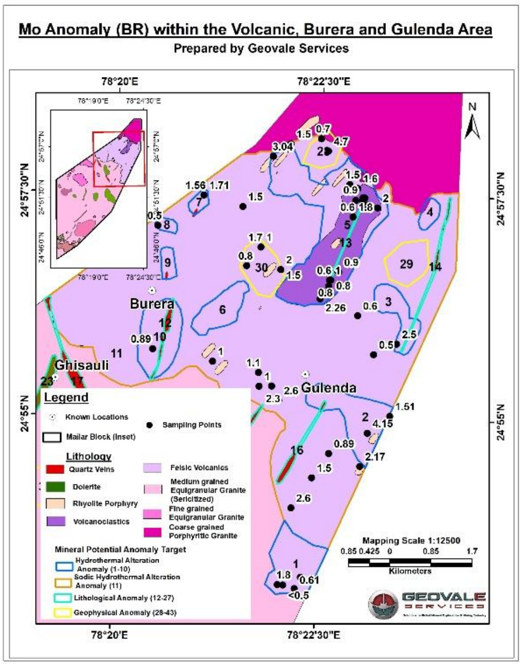


Fig 9.4.20 Cr distribution in Volcanics, Burera and Gulenda.



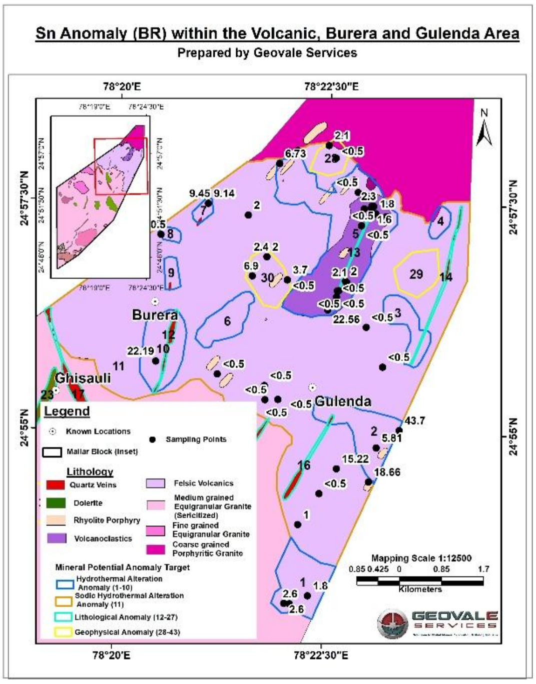
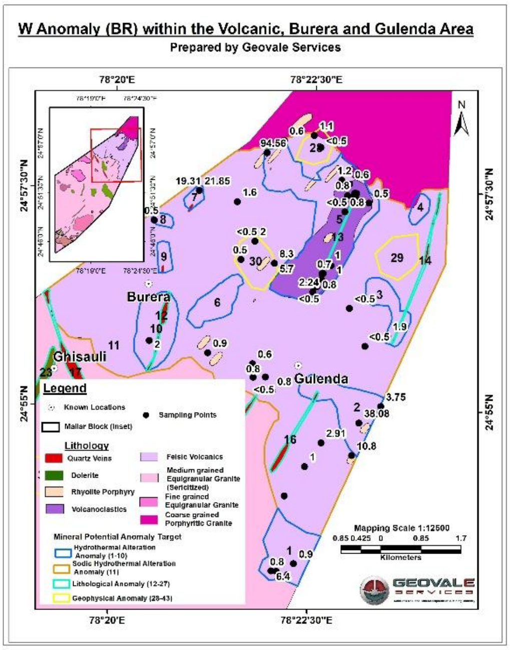


Fig 9.4.21 Mo distribution in Volcanics, Burera and Gulenda.	*Fig 9.4.22 Sn distribution in Volcanics, Burera and Gulenda.*



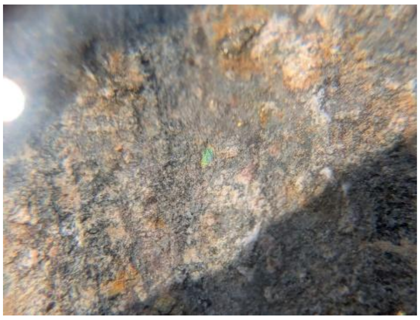


Fig 9.4.23 W distribution in Volcanics, Burera and Gulenda.

Mineral anomaly in the Diorites in Mailar Block

Four diorite samples from Sirsee area, record mineral-hosted metal contents of Ni (max 182 ppm), Cr (102–318 ppm), V (149–260 ppm), Zn (max 143 ppm), and Mo (max 3.1 ppm) (Fig. 9.4.24). The resulting metal-and-mineral enrichment patterns indicate that these dioritic bodies constitute fertile intrusive phases, with their mineral chemistry suggesting that they may represent feeder intrusions linked to the porphyry system. A single sample of stream sediment near Sirsee (Fig. 9.4.25) Cr: 119 ppm, V: 141 ppm, W: 6.7 ppm. This reinforces the fertility of diorite intrusions in the area.

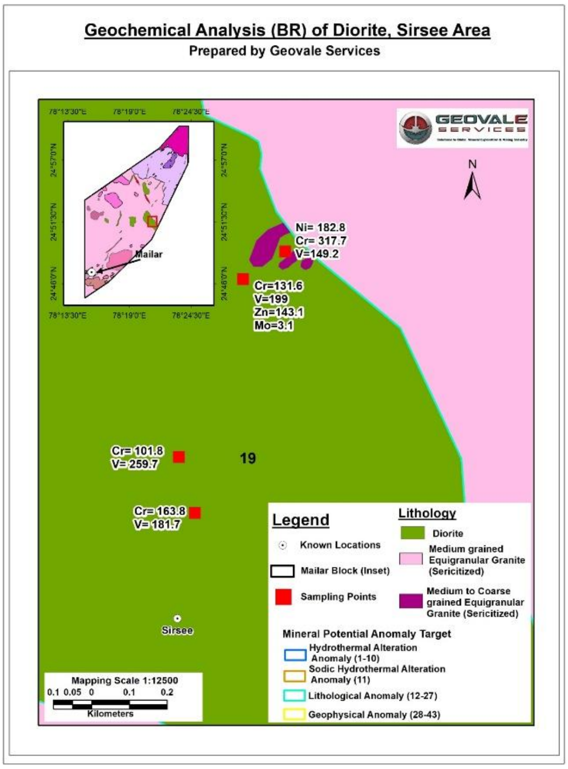


Fig 9.4.24 Geochemistry of Diorite, near Sirsee

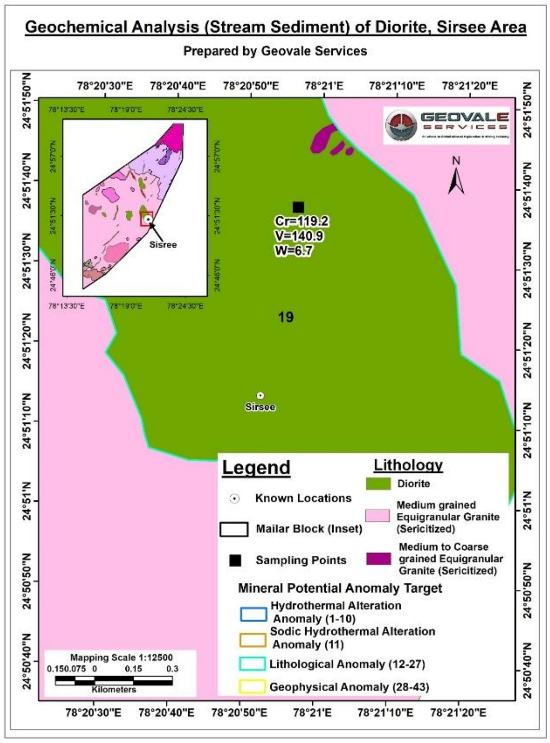


Fig 9.4.25 Stream Sediment Geochemistry near Sirsee

Six High Mg mafic dyke samples yielded: 196 ppm Cu, 1.38 ppm Mo, 152 ppm Zn, 155 ppm Cr, V: 316–321 ppm, Sn: 13–31 ppm, Bi: 7 ppm (Fig. 9.4.26). These values point to metal mobility along dyke margins, emphasizing their role as fluid conduits.

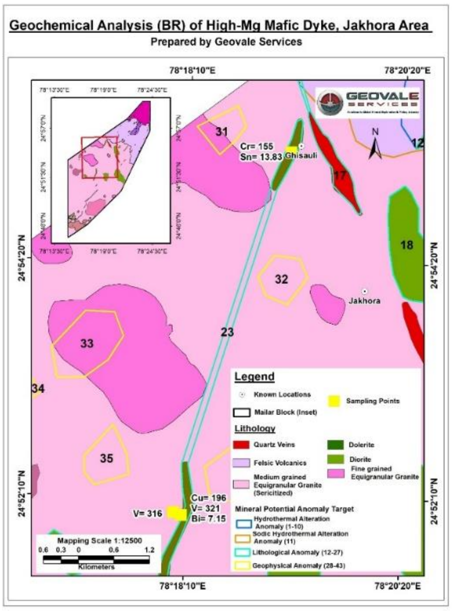


Fig 9.4.26 High Mg mafic Dyke Geochemistry

Mineral anomaly in the Mailar area, southern part of the Mailar Block

In the southern part of the block (Mailar Village) Cu value shows 4990 ppm. Stream Sediment analysis shows V value 454 ppm. (Fig 9.4.27 and Fig 9.4.28)

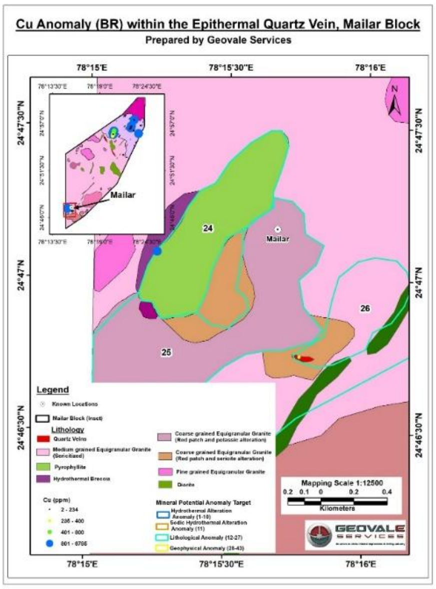


Fig 9.4.27: Southern part Quartz geochemistry

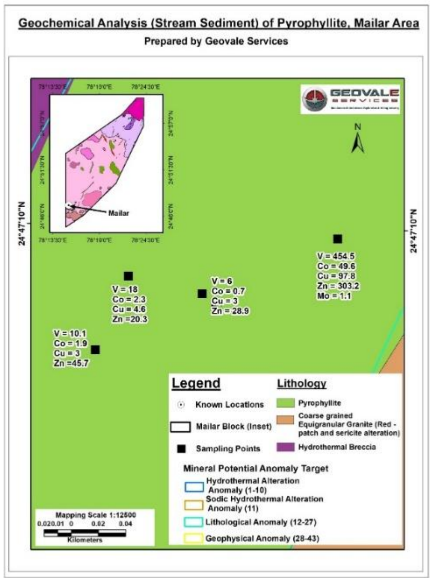


Fig 9.4.28: Geochemistry within pyrophyllite

Summary of Ground Geochemical Investigations in the Mailar Block

Geochemical investigations formed a critical component of the surface validation programme designed to test the 43 Mineral Potential Anomalous Targets identified in Chapter 8. Because porphyry–epithermal systems generate large, zoned geochemical halos through fluid–rock interaction, multi-tier sampling—comprising bedrock sampling, targeted vein sampling, pitting, trench sampling, and stream sediment analysis—was undertaken across the northern, central, and southern mineralised corridors of the Mailar Block. The objective was to verify metal associations, detect litho-structural controls, and assess the coherence of geochemical responses relative to the alteration and geophysical models presented earlier.

The geochemical signatures observed across the block and as described above strongly support the presence of a fertile magmatic–hydrothermal system. In the northern Gulenda–Burera volcanic area, where alteration-based targets (1–11) dominate, assays reveal robust **Cu–Mo–W–Sn–Bi** anomalism, with several sites returning elevated copper (100–1500 ppm), molybdenum up to 4 ppm, and tungsten and tin levels characteristic of proximal porphyry environments. These anomalies closely correlate with zones of high AHI and VCD values documented in Section 9.2, strengthening the interpretation that this corridor represents a shallow, structurally prepared environment above one or more porphyry cupolas. High Cu–Bi vein assays and sulphide-bearing samples validate the presence of epithermal overprinting, consistent with telescoping processes mapped during alteration studies.

Geochemical responses in the **central block** reflect a more lithology-controlled and structurally confined mineral system. Diorite bodies and high-Mg mafic dykes (Targets 18–23) exhibit distributed but coherent multi-element anomalies, including **Cu, Mo, W, Zn, and V**, often occurring along intrusive contacts or dyke margins. These results, although lower in tenor than the northern block, are significant because they lie within zones identified through aeromagnetic anomalies and structural mapping. The central block geochemistry thus provides an important link between the exposed northern porphyry–epithermal system and the concealed intrusive centres inferred from aeromagnetic signatures (Targets 31–43).

In the southern Mailar area, geochemical results highlight strong epithermal and advanced argillic associations. Sampling in and around Targets 24–27 reveals anomalous **Cu, Bi, As, and**

Mo, coupled with Fe–Mn oxide coatings and sulphide-bearing veinlets. These geochemical responses are consistent with the advanced argillic alteration (pyrophyllite–alunite ± anhydrite) documented in Section 9.2, confirming the likelihood that this area represents a lithocap environment developed above deeper porphyry roots. Stream sediment anomalies downstream from southern targets also show Cu–Pb–Zn enrichment, suggesting concealed mineralised zones beneath altered caps and shallow colluvium.

Together, the geochemical dataset provides strong, coherent support for the integrated targeting model developed in Chapter 8. The metal associations mirror the expected mineral zonation patterns of porphyry Cu–Mo–Au systems with epithermal overprinting, while their spatial distribution aligns closely with both alteration intensity and geophysical signatures. These results enable a refined interpretation of each target's mineralisation potential and form a critical input to the integrated target ranking and prioritisation presented in Chapter 10.

Key Surface Discoveries from Geochemical Sampling

Across the Mailar Block, geochemical sampling reveals several critical surface discoveries:

- Extensive Cu–Mo–W–Sn–Pb–Bi enrichment across multiple lithologies.
- High-grade epigenetic quartz veins (up to 7000 ppm Cu and 85 ppm W).
- Molybdenum-rich porphyry signatures in northern volcanic and quartz vein systems.
- Polymetallic enrichment in southern Mailar, including Bi-rich Cu veins.
- Stream sediments confirming distal dispersion halos, especially for Sn–W–Mo.
- Pitting data validating subsurface continuity of mineralized zones.
- Geochemical fingerprints consistent with a large, fertile porphyry system with epithermal overprinting.

9.5 Aeromagnetic Derivatives

In order to move from a broad mineral systems understanding of the Mailar Block to a focused, target-scale exploration strategy, the aerogeophysical data acquired under GSI's NAGMP (2018) have been reprocessed into a suite of derivative products and interpreted in conjunction with the mapping, alteration and geochemical datasets presented earlier in this chapter. These derivatives – including Analytic Signal, horizontal gradients, Residual Magnetic Intensity (RMI) and its regional-removed and vertical-derivative forms, Reduced-to-Pole magnetics and spectrometric dose-rate maps – allow the intrusive framework, structural corridors and magnetite-destructive alteration halos associated with the hydrothermal porphyry Cu–Mo–Au system to be imaged more clearly than from the raw magnetic field alone. Used together, they help to distinguish magnetite-rich intrusive centres from magnetite-poor altered cores, to locate cupola-style apophyses and dyke intersections, and to identify radiometrically fertile felsic and potassic domains. The following sections therefore summarise, derivative by derivative, how each product constrains the geometry and depth of the main magmatic and hydrothermal features in the Mailar Block and how this information has been used to prioritise and refine the 43 anomalous targets defined in Chapter 8 for further surface exploration and eventual drilling.

Interpretation of each aeromagnetic derivative

Here each derivative product of GSI's National Aerogeophysical Mapping Program (NAGMP) data (available in National Geoscience Data Repository only as Tiff files of derivatives) have been interpreted in terms of hydrothermal porphyry Cu–Mo–Au potential in the Mailar Block.

9.5.1 ANS (Analytic Signal) Derivative

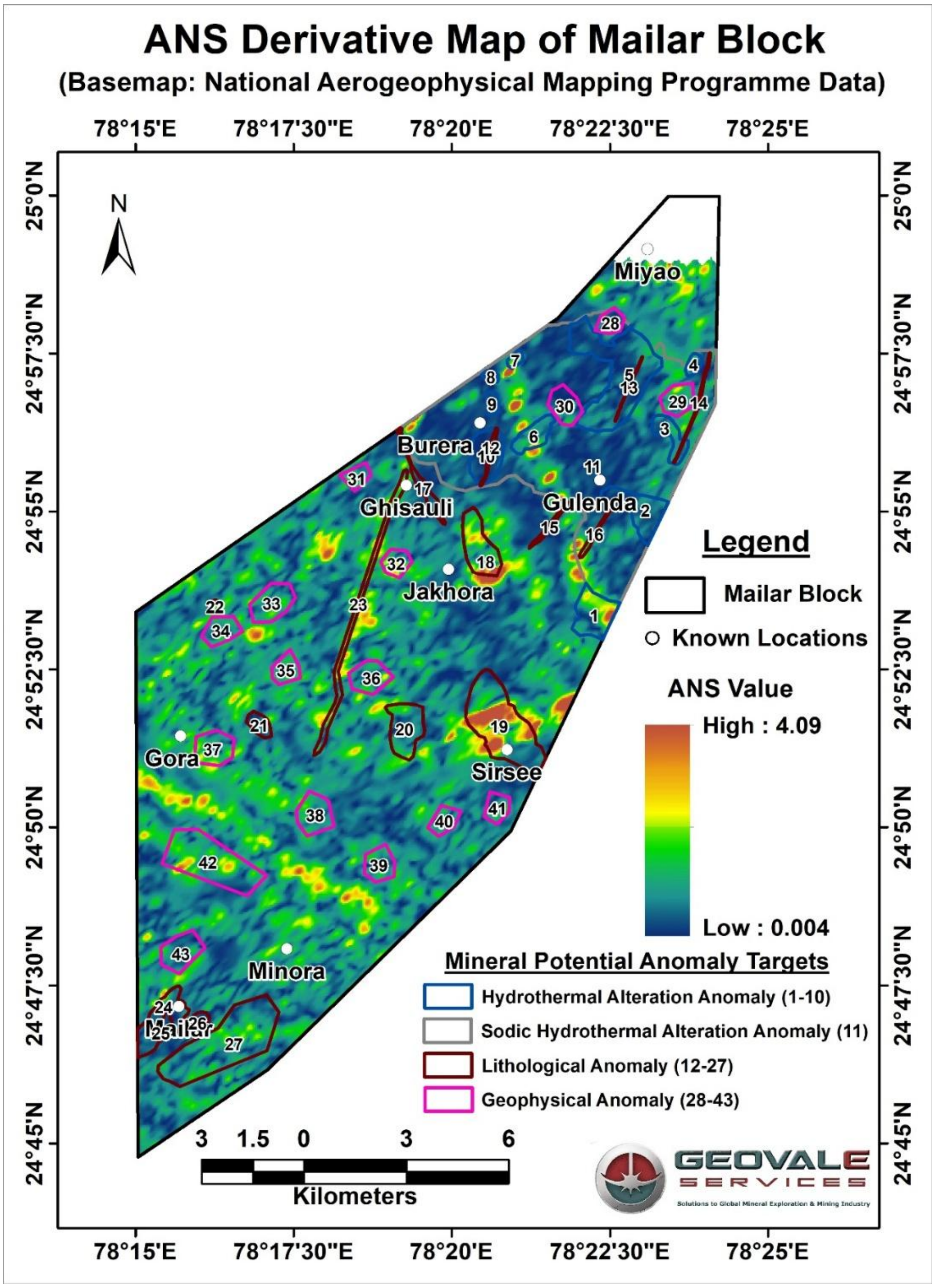


Fig 9.5.1: Mailar_ANS_with_MPAT

On the ANS map **(Figure 9.5.1)** the Mailar Block shows:

- A **strong NNE–SSW anomaly** of high ANS values in the central part of the block, corresponding to the high-Mg dyke and diorite corridor.

- Several **closed or semi-closed ANS highs** associated with mineral targets 18, 20, 28–30, 36, 38 and 42.
- Subtle but persistent ANS highs along the **eastern structural margin** where targets 1–5, 14, 15 and 16.

In a porphyry system context, ANS is mapping **contacts and structural boundaries**:

- The **central high-ANS** is the main **magmatic and structural backbone** of the system – a natural locus for porphyry intrusions and dyke swarms.
- The **closed ANS highs** (e.g., 30, 36, 38, 42) are likely **cupolas or intrusive apophyses**, where magnetic bodies terminate against altered or less magnetic host rocks.
- These ANS patterns, combined with alteration and geochemistry, support the interpretation of multiple intrusive centres and fluid pathways, reinforcing the idea that Mailar hosts a large magmatic-hydrothermal system rather than a single small prospect.

9.5.2 HGLAT and HGLONG (Horizontal Gradient – lateral and longitudinal)

The HGLAT and HGLONG maps (Figure 9.5.2a and 9.5.2b) emphasise the steepest lateral changes in magnetisation and show:

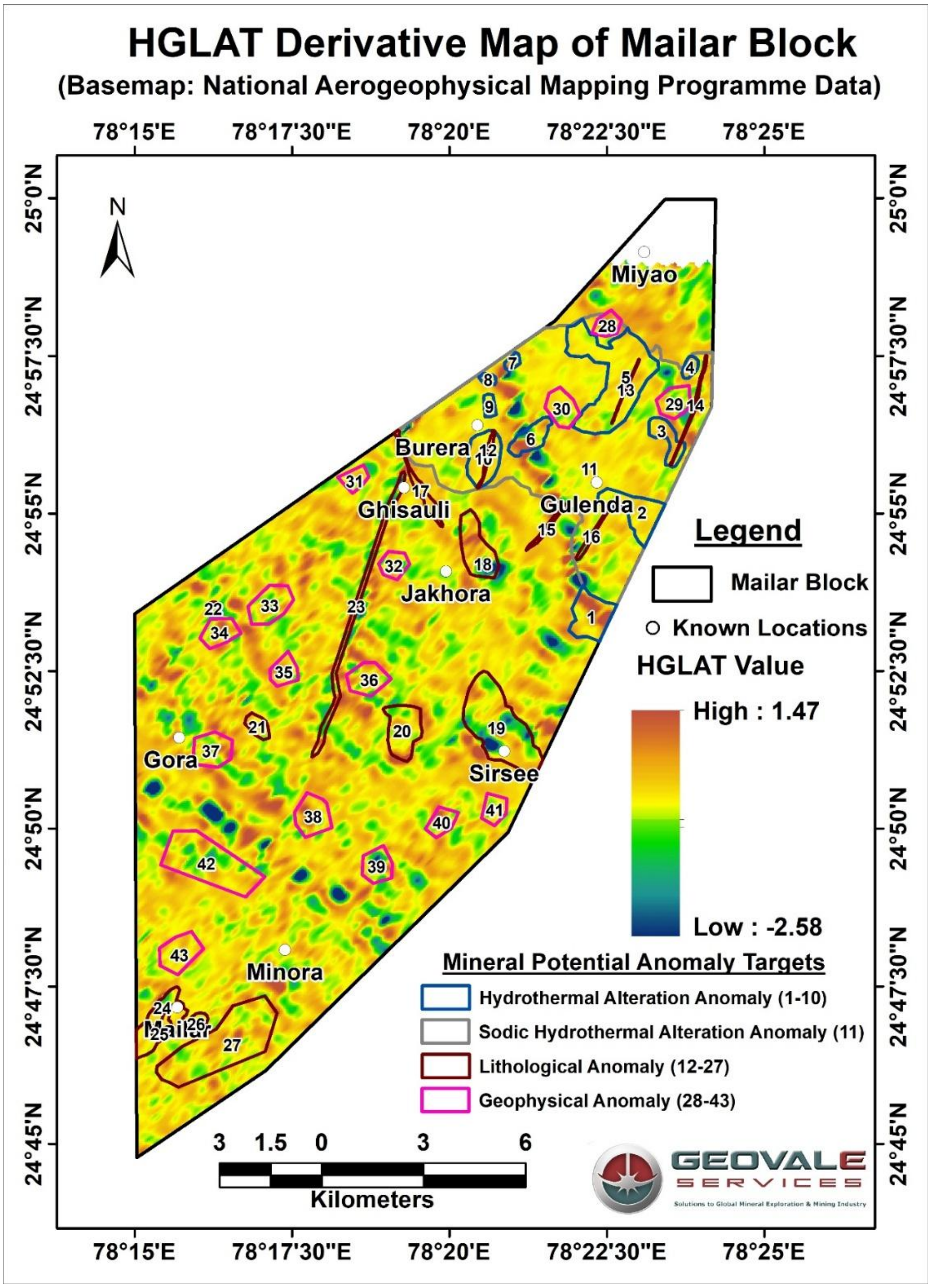


Fig 9.5.2a: Mailar_HGLAT_with_MPAT

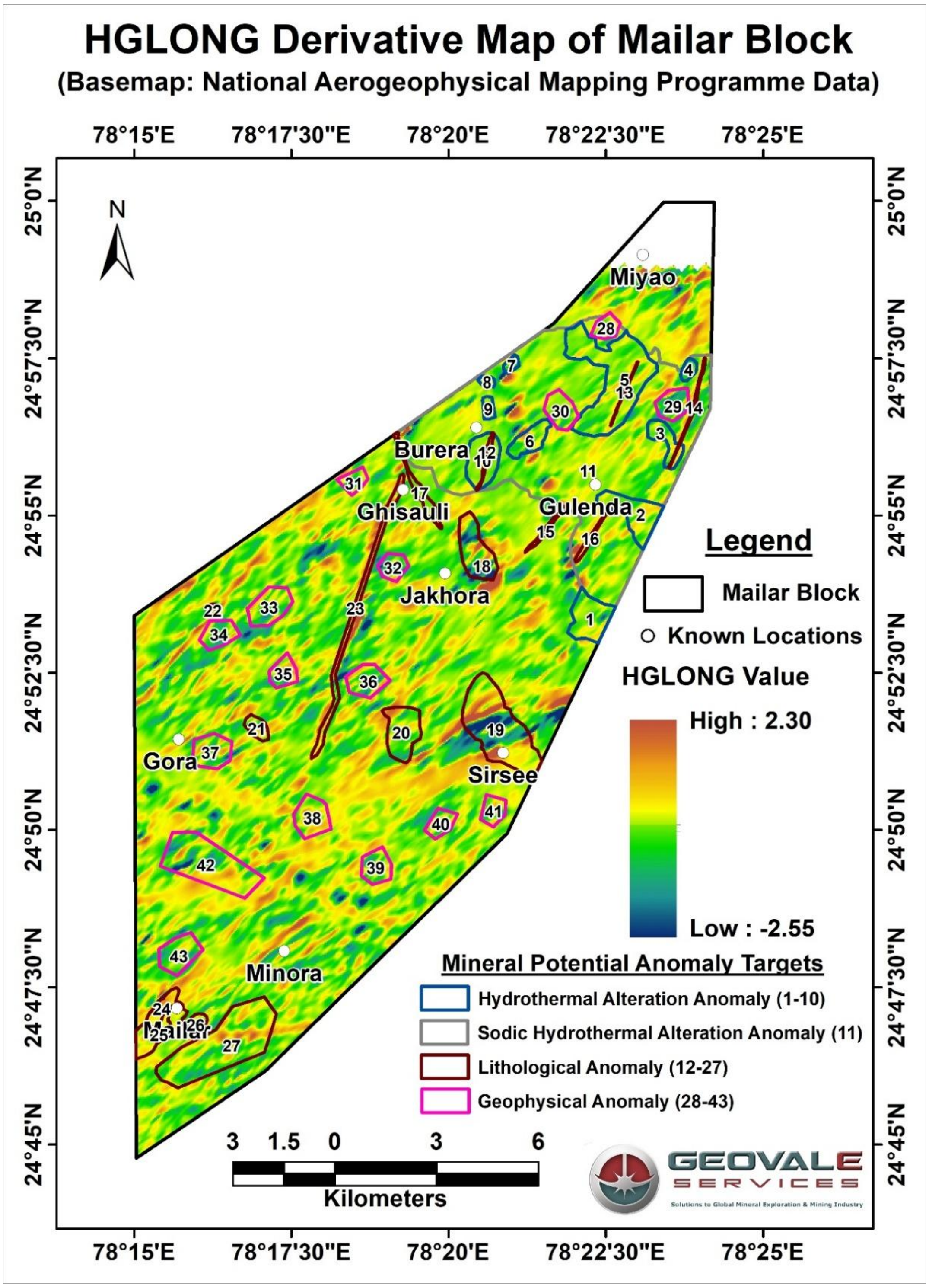


Fig 9.5.2b: Mailar_HGLONG_with_MPAT

- Strong gradient belts coinciding with the NNE central dyke, the eastern block margin, and NW–SE cross-structures.
- Intersections of gradient belts near targets 20, 23, 30, 36 and 38, indicating structural nodes.

In porphyry terms, these gradients outline:

- Major fault and shear zones that could focus magmas and hydrothermal fluids (e.g., the same structures picked up by your ground mapping).
- Edges of magnetite-rich intrusions versus magnetite-destroyed halos, valuable for positioning porphyry cores relative to alteration mapping.
- Structural intersections that are prime locations for breccia pipes, feeder veins and intrusive cupolas.

Thus, HGLAT/HGLONG corroborate that the Mailar Block has a strongly structured magmatic plumbing system, favourable for large hydrothermal Cu–Mo–Au systems.

9.5.3 RMI and RMI-GE (Residual Magnetic Intensity and regional-removed RMI)

The RMI and RMI-GE maps (Figure 9.5.3a and 9.5.3b) are the most diagnostic in terms of porphyry potential. They show:

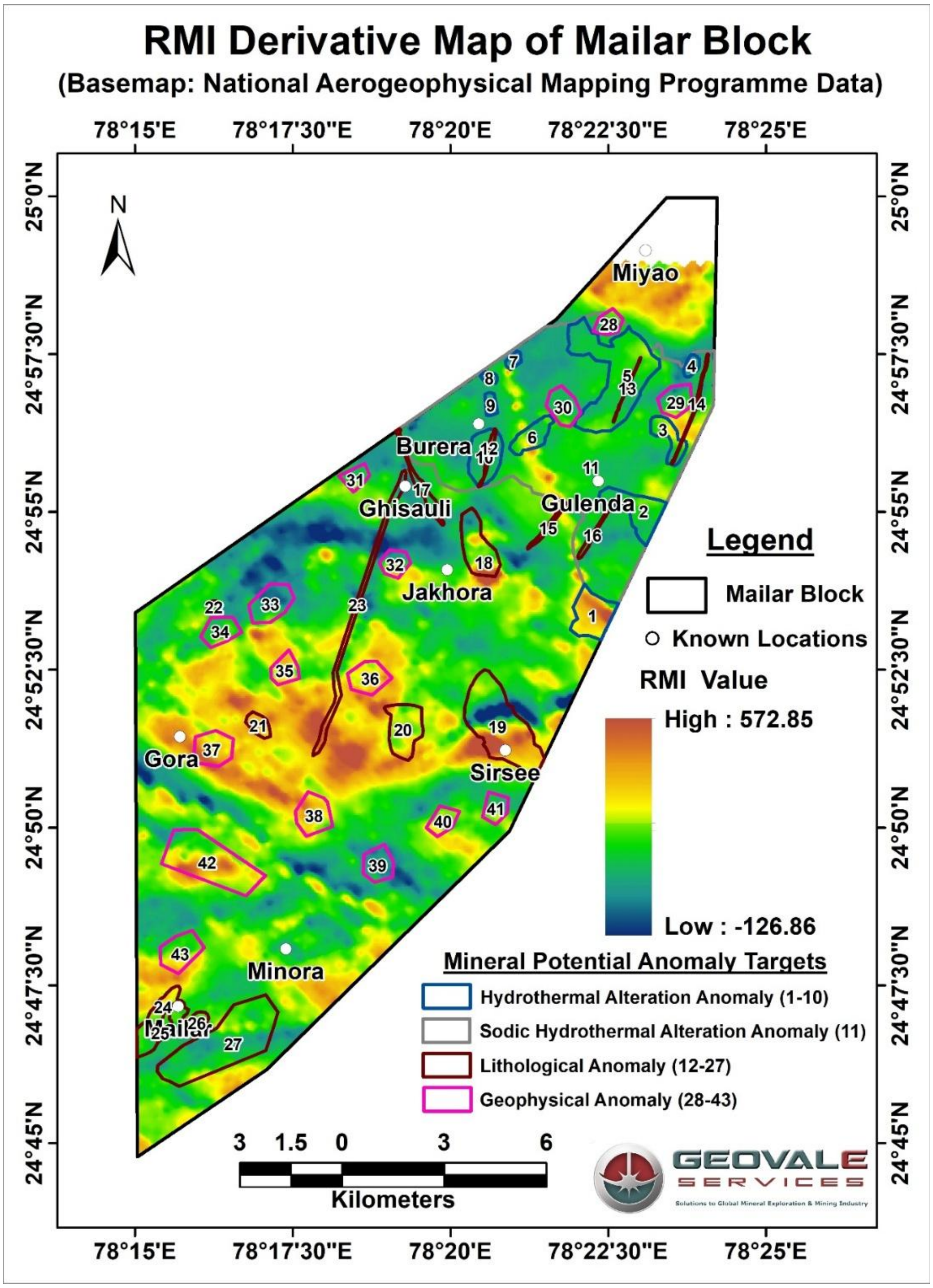


Fig 9.5.3a:Mailar_RMI_with_MPAT

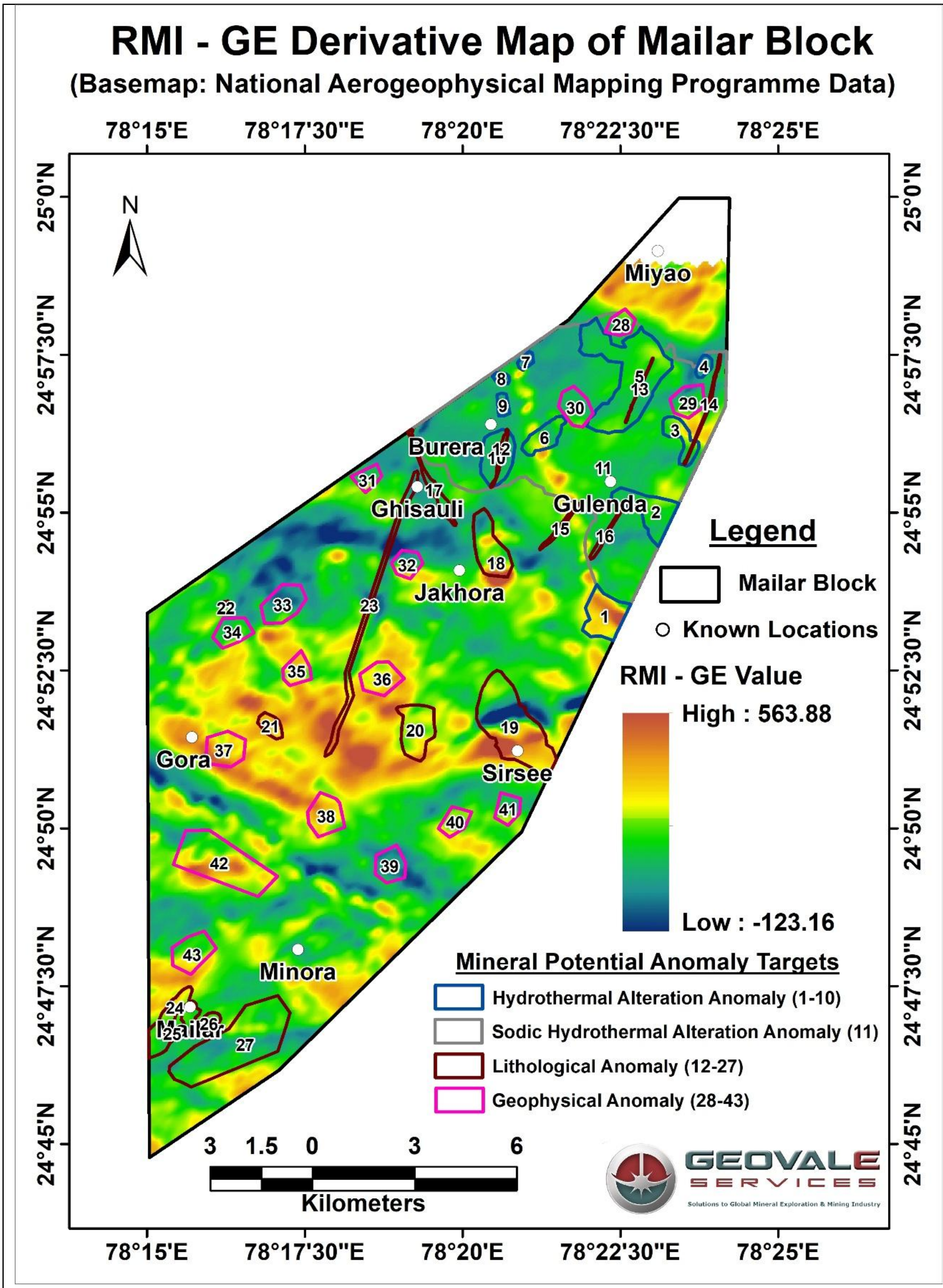


Fig 9.5.3b:Mailar_RMI_GE_with_MPAT

- A dominant central RMI high belt corresponding to the high-Mg dyke and diorite corridor, with superimposed lobes and donuts (targets 18, 20, 23, 36, 38, 42, 43).
- A NE high domain with local donuts (targets 28–30), associated with the NE intrusive / felsic volcanic complex.
- A southern high domain wrapping around the Mailar lithocap (targets 24–27, 38, 42–43), with a more subdued interior over the advanced-argillic zones.
- Superimposed local lows and low “puddles” within these highs, particularly near Gulenda and within the lithocap, suggesting magnetite destruction by hydrothermal alteration.

In porphyry Cu–Mo–Au systems, such patterns are typical of:

- **Magnetite-rich intrusive cores** represented by RMI highs.
- **Magnetite-destructive potassic / phyllic / advanced-argillic alteration** at the tops or flanks of these intrusions, represented by local RMI lows and donuts.
- **Cupolas and apophyses** where intrusions push up into the upper crust and interact with permeable host rocks.

The presence of multiple donut-like features, especially in the central and southern parts of the block, strongly supports the interpretation of several porphyry centres or cluster of centres within the Mailar Block.

9.5.4 RMI GE (1VD and 2VD)

The 1VD (Figure 9.5.4a) and 2VD (Figure 9.5.4b) derivatives sharpen the shallow components of the RMI GE field. They highlight:

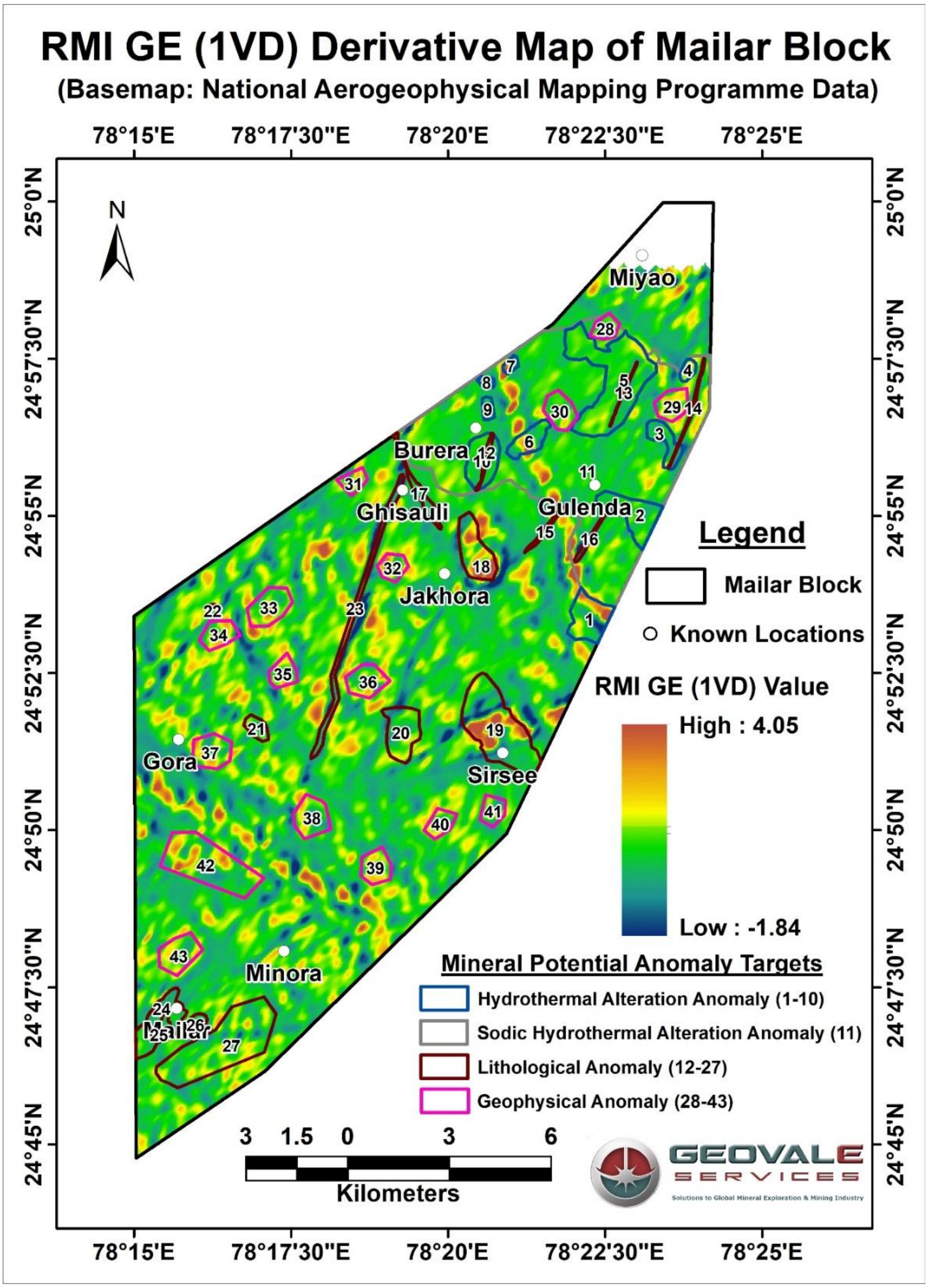


Fig 9.5.4a: Mailar_RMI_GE_1VD_with_MPAT

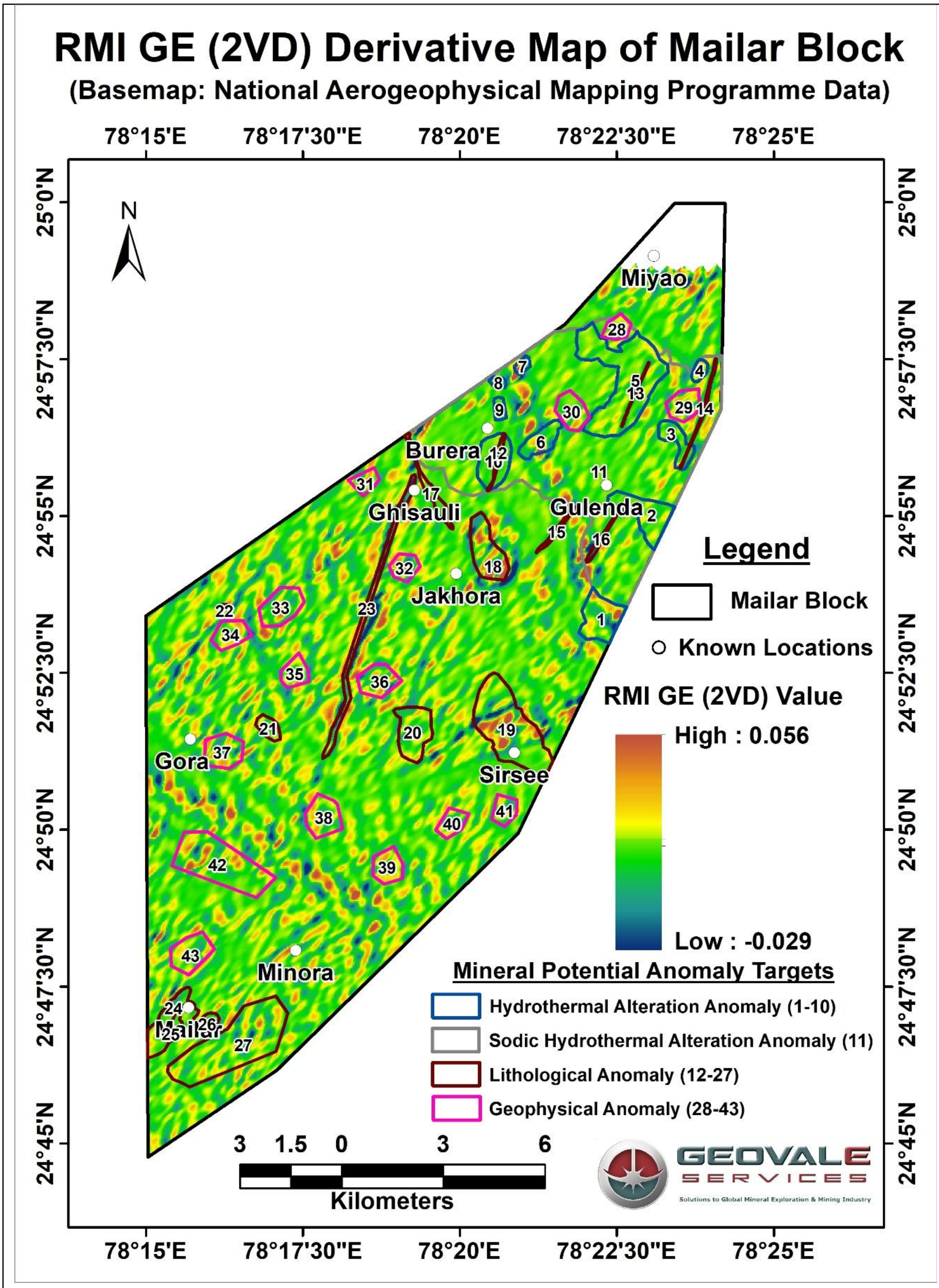


Fig 9.5.4b: Mailar_RMI_GE_2VD_with_MPAT

- The near-surface expression of the intrusive bodies, including small cupolas and dyke terminations.
- Sharp rims and edges around targets 30, 36, 38, 42 and 43, indicating that these magnetic bodies have a relatively shallow top.
- A number of subtle shallow features around the Gulenda corridor that are not obvious on the raw RMI, suggesting shallow magnetite additions or destructions associated with Ca–Na or potassic alteration.

From a porphyry perspective, 1VD and 2VD help separate:

- Targets where the magnetic body is very shallow (better for G3-style drilling in the next phase), e.g. 36, 38, 42.
- Targets where the magnetic anomaly is deeper but still significant (e.g., parts of the NE high), implying deep-seated, larger intrusions that may require longer holes.

9.5.5 RTP (Reduced-to-Pole)

The RTP map (Figure 9.5.5) largely confirms the RMI pattern but removes dipole asymmetry, making the geometry of magnetic bodies clearer. It shows:

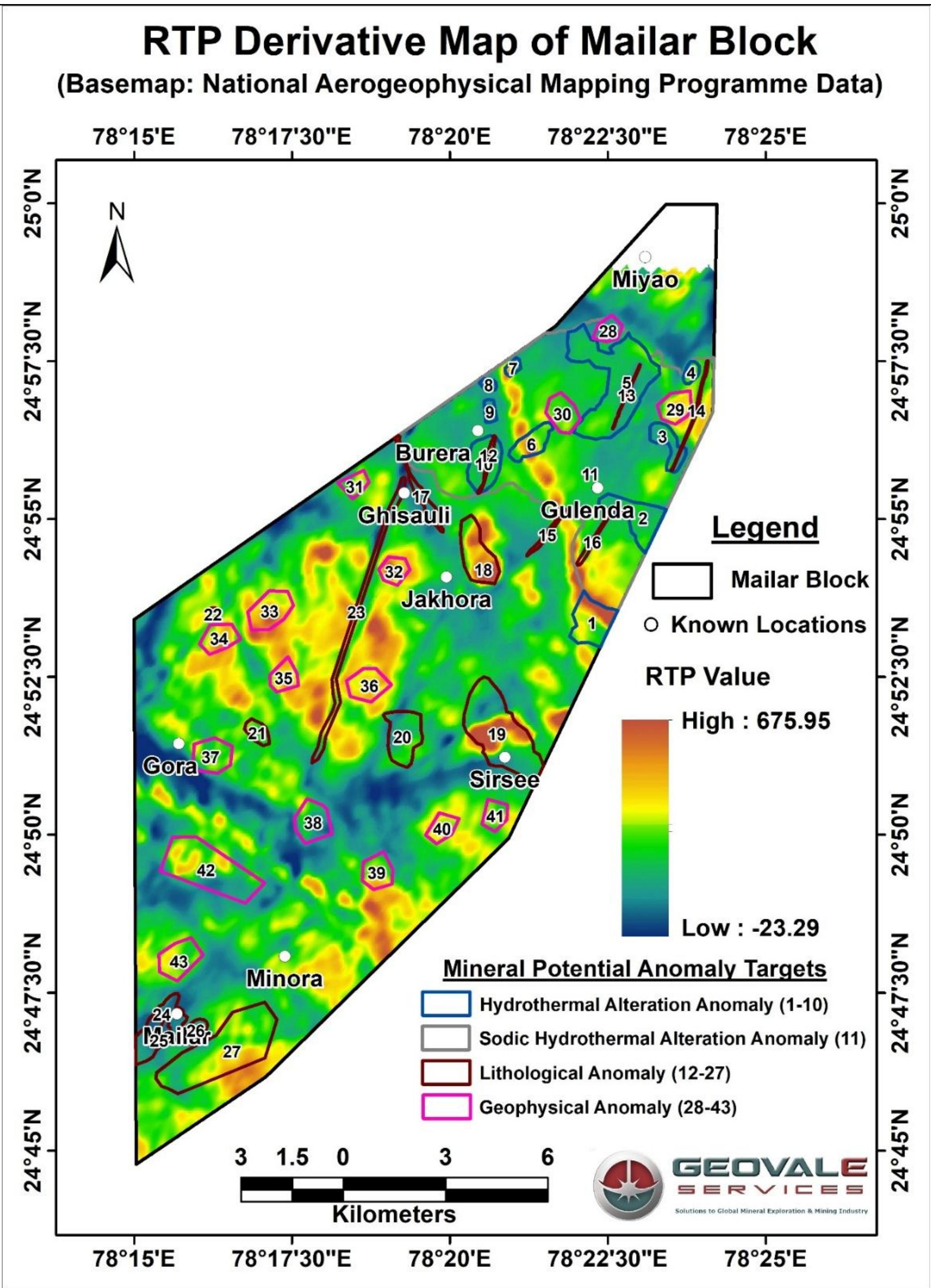


Fig 9.5.5:Mailar_RTP_with_MPAT

- Compact, coherent high-RTP lobes in the NE and central–southern parts, and
- More diffuse responses in the Gulenda corridor.

RTP clarifies that the main intrusive centres are:

- The NE high (including targets 28–30, 4–5, 14),
- The central dyke–diorite belt (17, 20, 23, 36, 38), and
- The southern intrusive complex around Mailar and further south (24–27, 38, 42–43).

These are the primary magmatic centres underpinning the hydrothermal system.

9.5.6 Spectrometric Dose Rate and Dose Rate (TC)

Radiometric derivatives (Figure 9.5.6a and 9.5.6b) show the spatial distribution of K, U and Th and thus help distinguish **felsic / potassic rocks** from more mafic or altered rocks.

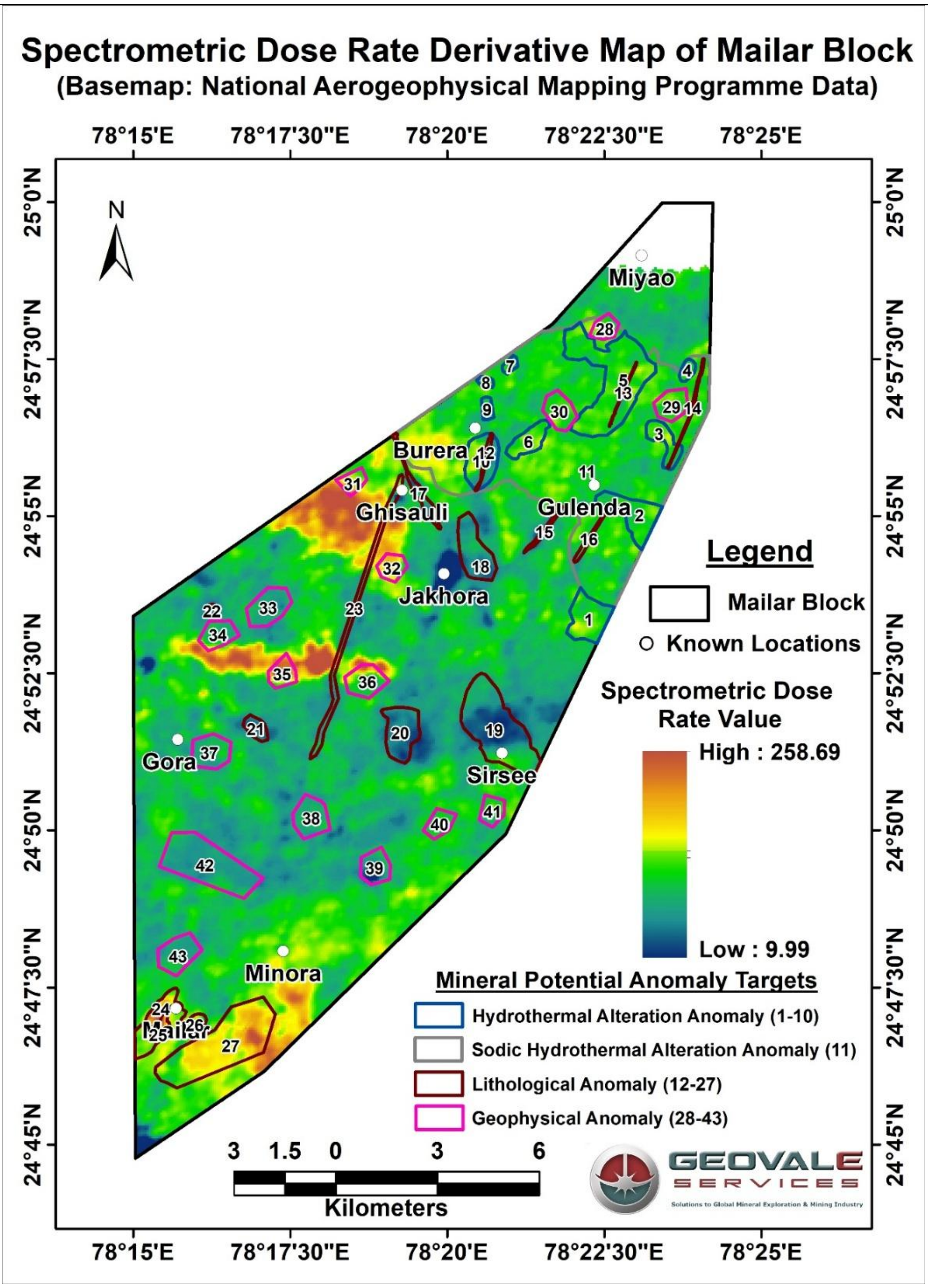


Fig 9.5.6a:Mailar_Spectrometric_Dose_Rate_with_MPAT

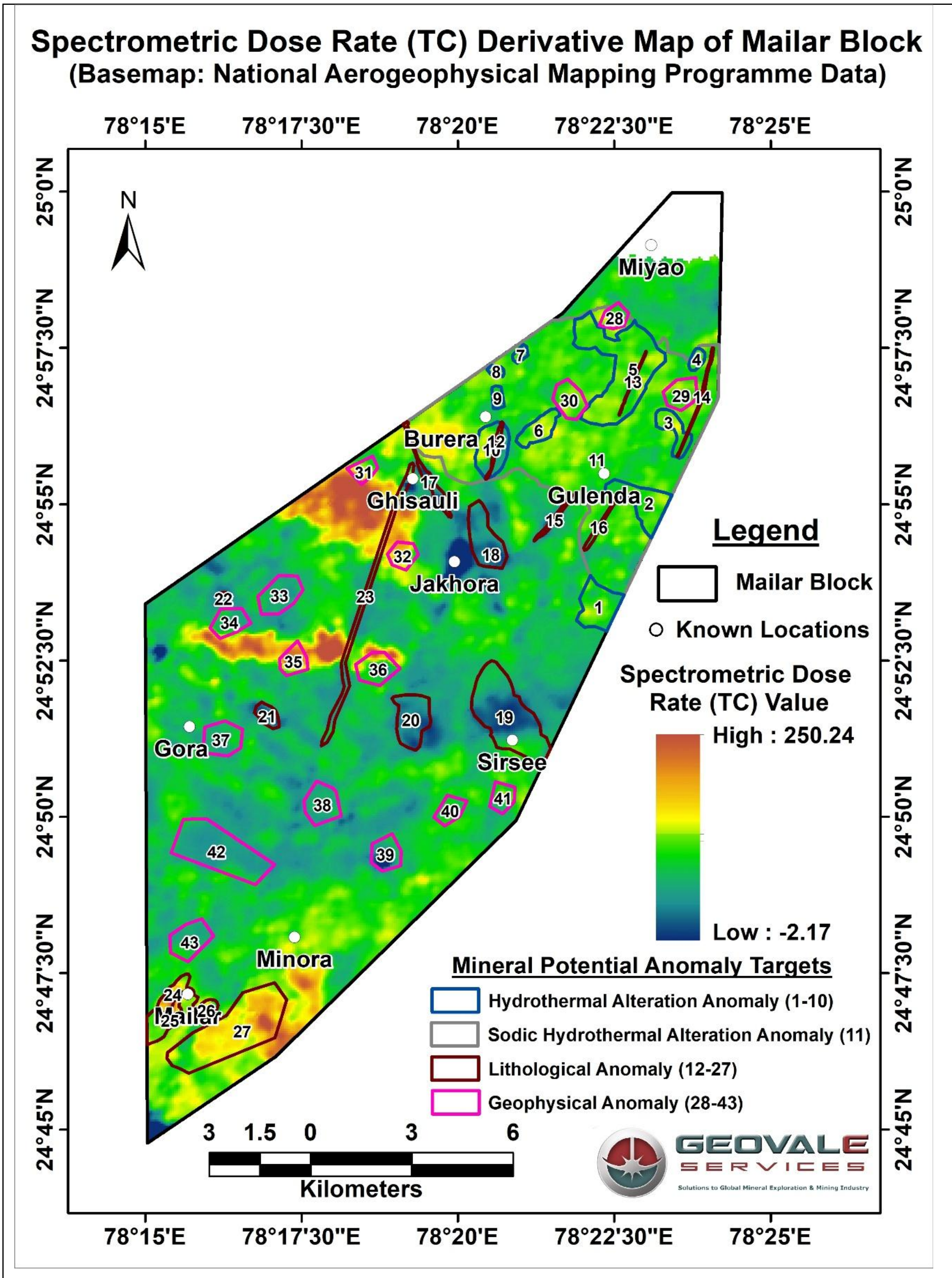


Fig 9.5.6b: Mailar_Spectrometric_Dose_Rate_TC_with_MPAT

On these maps:

- Elevated spectrometric dose rate occurs over the felsic volcanic–granite domains in the north and central-west and along parts of the southern belt.
- Some RMI donuts, especially 36 and 38, correspond to modest radiometric highs, indicating potassic and felsic intrusive components.
- The Mailar lithocap interior tends to be radiometrically subdued, reflecting intense leaching and alteration.
- No surface indication for E-W trend lineament was there. The geophysical anomaly near no. 34,35,36 with E-W linear trend is possibly due to presence of the subsurface lithology with alteration.

In porphyry systems this pattern supports:

- Potassic cores and felsic intrusions being radiometrically "bright".
- The lithocap and strongly leached zones being relatively low in K, U, Th.
- The idea that the central and NE intrusive centres are chemically fertile and comparable to magmatic suites known to host porphyry Cu–Au systems elsewhere.

9.5.7 Overall assessment of hydrothermal Cu–Mo–Au potential (from aeromagnetics)

Putting the derivatives together, the Mailar aeromagnetic data suggest:

- The block hosts a robust volcano–plutonic intrusive framework with multiple high-RMI / high-RTP bodies and a strong NNE dyke–diorite corridor, typical of porphyry-fertile continental arcs.
- Multiple magnetite-destructive zones, ring-shaped or lobate and aligned with mapped alteration and geochemistry, indicate widespread hydrothermal alteration consistent with porphyry Cu–Mo–Au systems.

- At least three major intrusive centres (NE cluster, central corridor cluster, southern cluster) and several secondary cupolas (30, 36, 38, 42–43) are evident purely from the magnetic field, providing multiple candidates for concealed porphyry cores.
- The pattern of gradients and lineaments defined by ANS, HGLAT and HGLONG is fully compatible with the structural architecture mapped on the ground and implies efficient fluid focusing along the main dyke corridor and cross-structures.

In short, the aeromagnetic derivatives, when viewed in light of the ground data and drilling, strongly reinforce the conclusion that the Mailar Block is not just locally anomalous but represents a multi-centre hydrothermal porphyry Cu–Mo–Au system within the western Bundelkhand craton, with several untested magnetic cupolas and donuts that are prime candidates for the next phase of G3-level deep drilling.

1. Aeromagnetic character of the 43 targets (porphyry-system view)

43 mineral potential Anomalous Targets have been identified in the Mailar Block (as discussed in Chapter 8), based on the following criterion:

- **Targets 1–10**: Hydrothermal alteration anomalies
- **Target 11**: Sodic hydrothermal alteration anomaly
- **Targets 12–27**: Lithological anomalies (veins, diorite, high-Mg dyke etc.)
- **Targets 28–43**: Purely geophysical anomalies (mainly RMI "donuts" and lobes)

Below is a compact target-by-target summary of the **dominant aeromagnetic behaviour** and **how it fits within a porphyry Cu–Mo–Au system**. "Low" = magnetite-destructive, "high" = magnetite-rich; "edge / gradient / donut rim" = alteration boundary or intrusive contact; "structural trend" = lineament picked by ANS / HGLAT / HGLONG.

An Anomalous Target by Anomalous Target – aerogeophysical feature summary is given in Annexure XIV.

1.1 Targets 1–11 – Hydrothermal alteration / sodic alteration

Mineral Potential Anomalous Target **-1 –**

- **Aeromag:** Moderate RMI / RTP low on the eastern flank of a broader high; clear gradient in ANS / HGLAT; subdued radiometrics.
- **Porphyry meaning:** Magnetite-destructive alteration on the **eastern limb of a deeper magnetic high**, consistent with a propylitic–phyllic halo on the flank of a concealed intrusion.

Mineral Potential Anomalous Target 2–3 of Felsic Volcanics

- **Aeromag:** Both sit on the nose of a NE–SW RMI-GE high with crisp ANS edges; HGLONG highlights the same trend; radiometrics moderately elevated.
- **Meaning:** Likely potassic / magnetite-bearing intrusive spine with alteration flares; these are good “inner shell” targets where porphyry stockworks or feeder veins can sit.

Mineral Potential Anomalous Target 4–5 of Felsic Volcanics

- **Aeromag:** On or adjacent to a strong RMI and RTP high; ANS shows sharp lineaments controlling their northern boundary. Spectrometric dose rate is high (felsic, K-rich host).
- **Meaning:** Proximal to a magnetite-rich intrusive lobe; alteration mapped at surface suggests these are proximal potassic / inner propylitic parts of a porphyry centre near the NE block margin.

Mineral Potential Anomalous Target 6–7–8–9–10 of Felsic Volcanics

Aeromag: Cluster of moderate RMI lows and low-to-neutral RTP within a broader magnetic background; ANS / HGLAT pick up a set of N–S and NW–SE lineaments intersecting here. No single strong donut, but a zone of irregular lows, small lobes and edges.

- **Meaning:** Classic magnetite-destructive Ca–Na / phyllic halo around deeper intrusions – consistent with the deeper-level porphyry position of Gulenda (EHT style). This is a hydrothermal corridor rather than a single core.

Mineral Potential Anomalous Target 11 – Sodic alteration anomaly

Aeromag: Slight RMI low with gentle gradients; sits inside the same structural corridor as T6–10.

- **Meaning: Ca–Na alteration in magnetite-poor rocks**; likely part of the distal or deeper halo of the Gulenda porphyry system.

1.2 Mineral Potential Anomalous Target 12–27 – Lithological anomalies (veins, diorite, high-Mg dyke etc.)

Mineral Potential Anomalous Target 12–13 – Epithermal Quartz vein / felsic volcanic zone

- **Aeromag:** Small-scale RMI / RTP irregularities along NE–SW structure; ANS high at vein intersections. No strong absolute high or low.
- **Meaning:** Structurally localised epithermal / vein targets within the broader Gulenda corridor, overprinted on subdued magnetisation.

Mineral Potential Anomalous Target 14 – Epithermal Quartz Vein

- **Aeromag:** On the steep nose of high RMI and RTP; ANS and HGLONG show a contact-parallel gradient.
- **Meaning: Magnetic intrusive margin**; good place for contact-hosted veins and stockworks, potentially part of the NE porphyry centre.

Mineral Potential Anomalous Target 15–16 – East-central vein / structural nodes

- **Aeromag:** Weak to moderate RMI, but sitting on **clear gradient zones** between low and moderate magnetisation; ANS picks out lineament breaks.
- **Meaning: Structural intersection targets** on the flanks of a deeper magnetic body – classic positions for porphyry-related quartz veins and breccias.

Mineral Potential Anomalous Target 17–23 – diorite

- **Aeromag:** Strong, elongated RMI and RTP highs trending NNE–SSW, especially at T23 and T36; ANS is high along the dyke corridor; 1VD/2VD highlight near-surface continuity.

- **Meaning:** This is the diorite–high-Mg dyke corridor, interpreted as the magmatic backbone of the system. Targets along this belt (17, 21, 23, 32, 36) are intrusive-related and represent possible deeper porphyry centres or feeders.

Mineral Potential Anomalous Target 23 – Mafic dyke axis intersection

- **Aeromag:** Sits on the most intense NNE trending RMI / RTP high, with strong ANS and HGLONG; radiometrics moderate.
- **Meaning: Key structural–magmatic node** tying the dyke corridor to deeper intrusive centres; this is a high-priority "plumbing" target.

Mineral Potential Anomalous Target 24–27 – Southern Mailar lithocap margin

- **Aeromag:** Located along an arcuate RMI and RTP high that wraps around a more subdued interior; ANS emphasises the arcuate boundary; radiometrics moderately high (felsic / potassic).
- **Meaning:** This belt outlines the potassic to propylitic shell around the Mailar lithocap – an important outer halo to the deeper porphyry core.

1.3 Mineral Potential Anomalous Target 28–43

Geophysical (RMI donut / lobe) anomalies

These are your "pure" geophysical prospects. They are important because they may host concealed porphyry centres under poor outcrop.

T28 – NE corner donut

- **Aeromag:** Strong RMI and RTP high with a suggestion of an outer ring and inner **variations**; high ANS gradients at the rim.
- **Meaning:** Possible shallow, magnetite-rich porphyry cupola at the NE block edge.

T29–30 – NE–central donuts

- **Aeromag:** Both show **quasi-circular RMI highs with internal lower zones**, strongest in T30; ANS and 1VD delimit the edges; radiometrics fairly elevated.

- **Meaning:** Classic porphyry "doughnut" signatures – could be cupolas or clusters of magnetite-bearing intrusions, with magnetite destruction in their cores.

T31–33–34–35 – Western mid-block cluster

- **Aeromag:** Cluster of moderate-to-strong RMI highs and lobes, bounded by gradients and minor lows; alignment with NNE structural trend in HGLONG; some radiometric enrichment.
- **Meaning:** A **concealed intrusive belt** on the western flank, possible parallel magmatic centre to the main dyke corridor; attractive for blind porphyry Cu-Mo.

T36 – Central donut on dyke axis

- **Aeromag:** Pronounced **RMI high "island" within a broader high**, strong gradients all around, coherent in RMI-GE, RTP and 1VD; radiometrics moderate.
- **Meaning:** One of the **best geophysical porphyry candidates**: intrusive core sitting directly on the main dyke corridor.

T37–38–39–40–41 – South-central and SW lobes

- **Aeromag:** 38 in particular is a **large, intense RMI high** with a subtle donut pattern; 37, 39, 40, 41 sit on its shoulders or nearby lobes. RTP and 1VD highlight these as shallow magnetic bodies; radiometrics moderate to low.
- **Meaning:** This complex likely represents a **cluster of intrusive stocks** south of the main corridor, with potential for additional porphyry centres or related skarn/vein systems.

T42–43 – Southernmost donuts

- **Aeromag:** Both lie over **strong southern RMI highs**, with fairly circular outlines in RMI-GE and well-defined gradients in 1VD/2VD; spectrometric dose rate is moderate to high at 42, lower at 43.
- **Meaning:** These are **concealed intrusive cupolas** beneath the southern part of the block, potentially representing **new porphyry centres** beyond the currently mapped Mailar lithocap.

Areogeophysical characteristic outside of the Block.

Outside the Mailar block, similar donut-shaped structures were also identified on the alteration map, indicating that potassic alteration is not confined to the Mailar Block alone. The presence of these concentric cupolate and donut-shaped features beyond the block suggests that the potassic alteration system is more extensive and regionally developed.

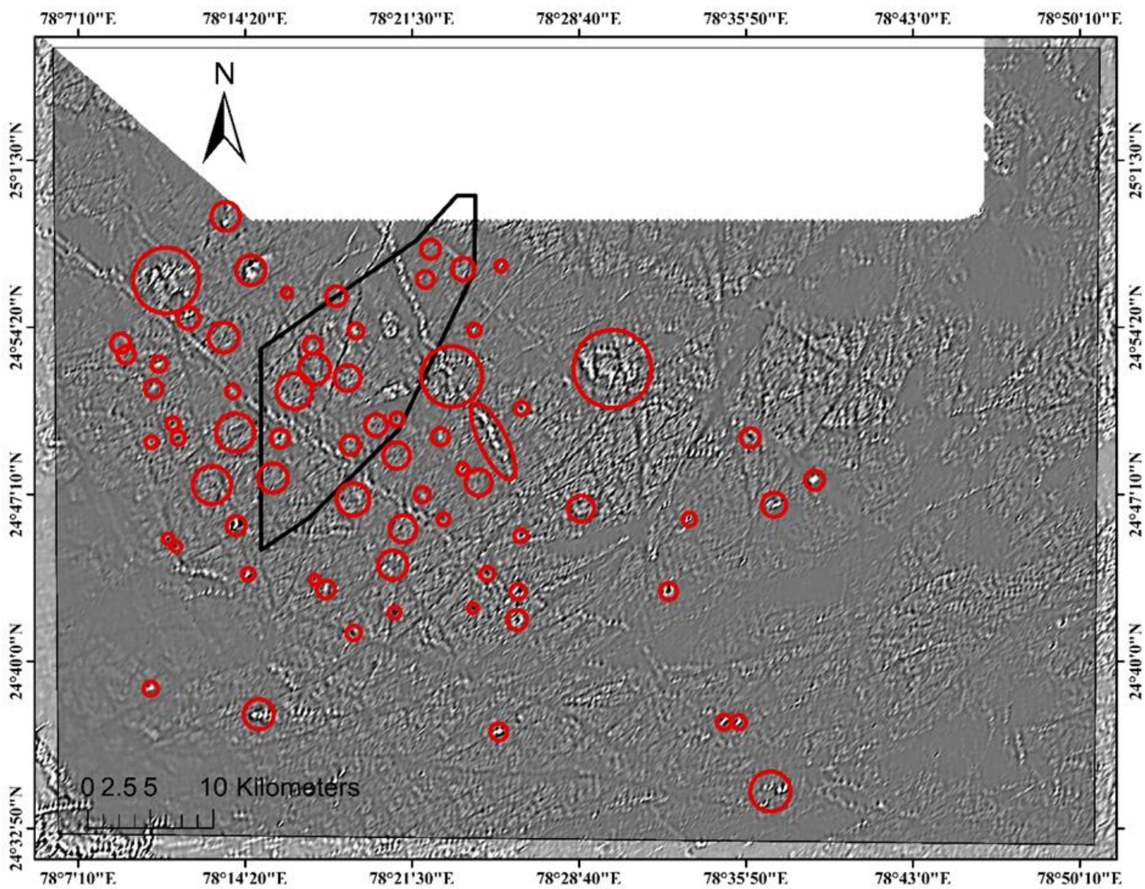


Fig 9.5.7. RMI map shows cupolate and donut-shaped features in and outside of the Mailar Block.

9.6 Ground Geophysical Methods

The ground magnetic survey was conducted to evaluate subsurface continuity of structures, lithologies, and alteration domains associated with the mineral system identified in the Mailar Block. The survey also aimed to refine and validate the 26 exploration targets defined in

Chapter 8. A total of 312 line-km of magnetic data were collected over 71.52 sq km, and the interpretation integrates Total Magnetic Intensity (TMI), First Vertical Derivative (1VD), Analytical Signal (AS), Reduced-to-Pole (RTP), and 3D inversion depth slices.

9.6.1 Magnetic Survey

Following the identification of 43 anomalous targets in Chapter 8, the ground magnetic survey was designed to (i) map subsurface lithological architecture and intrusive bodies, (ii) define structural corridors that focus hydrothermal fluids, and (iii) identify magnetite-destructive alteration consistent with potassic/phyllic cores and advanced argillic lithocaps. The results directly validate and characterise targets of all three types—alteration-driven (1–11), lithology/vein/diorite–dyke (12–30), and aeromagnetic (31–43)—and feed into integrated ranking in Chapter 10.

9.6.2 Survey Design, Acquisition and Data Quality

A total of 312 line km of ground magnetic data were collected over 71.52 km² during 26 Nov 2024–24 Jan 2025, covering four sub blocks (6,240 stations) with 100 m (locally 200 m) N–S line spacing. Acquisition used an ATOMS V5 proton magnetometer (rover) and Beijing Dadi Hualong PM2 magnetometer (base). Cultural noise from power lines/fences/highways and occasional geological noise from high susceptibility float were mitigated through careful station placement and QC. The survey exceeded the planned footprint to ensure seamless integration across geological domains (felsic volcanics, diorites, granites, mafic dykes, quartz vein networks).

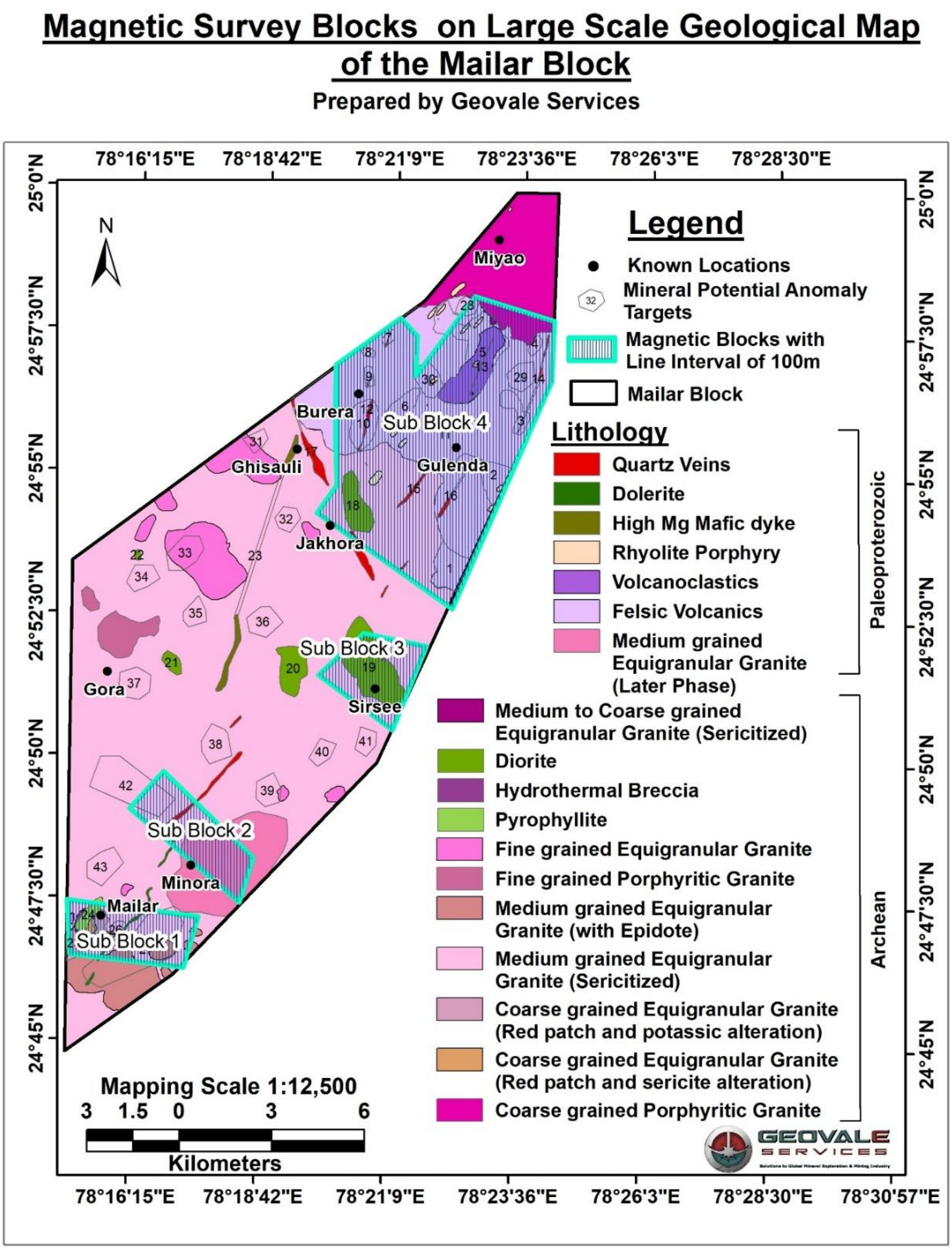


Fig 9.6.2.1: Survey design over block boundary of the project

This figure (Fig 9.6.1) orients the reader to the Mailar ground magnetics footprint, outlining the four sub-blocks that together cover 71.52 km² across key geological domains (felsic volcanics, diorites/granites, dyke corridors) and structural trends (E–W shear, NW–SE dykes, NE–SW cross-faults). It sets the spatial frame for interpreting magnetic responses against the three target types (alteration, lithology/veins/diorite–dyke, aeromagnetics).

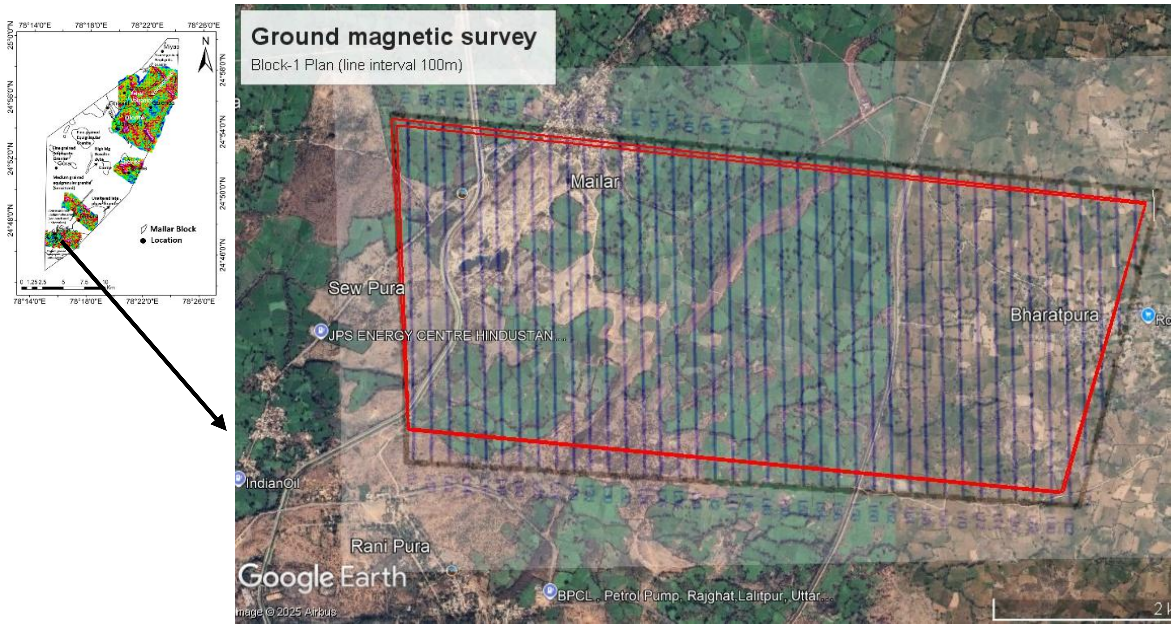


Fig 9.6.2.2: Survey design over sub block-1 boundary of the project

A planning map (Fig 9.6.2.2) of N–S survey lines (nominal 100 m spacing) draped on Sub-block 1, ensuring uniform coverage across the Gulenda–Burera alteration corridor where targets 1–11 concentrate; the layout is optimized to capture E–W shear and N–S dyke trends.

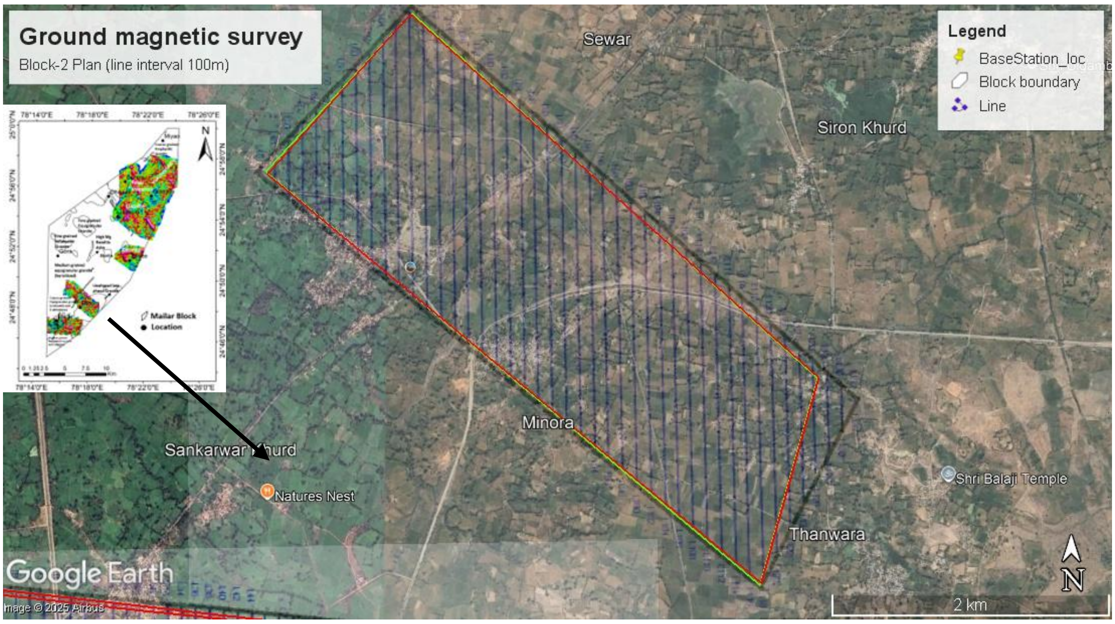


Fig: 9.6.2.3: Survey design over sub block-2 boundary of the project

Fig 9.6.2.3 Shows the same acquisition geometry in Sub-block 2, centred on the central intrusive–veinlet corridor; line density is set to resolve a broad central magnetic low and multiple cross-cutting structures required for target appraisal (8–14).

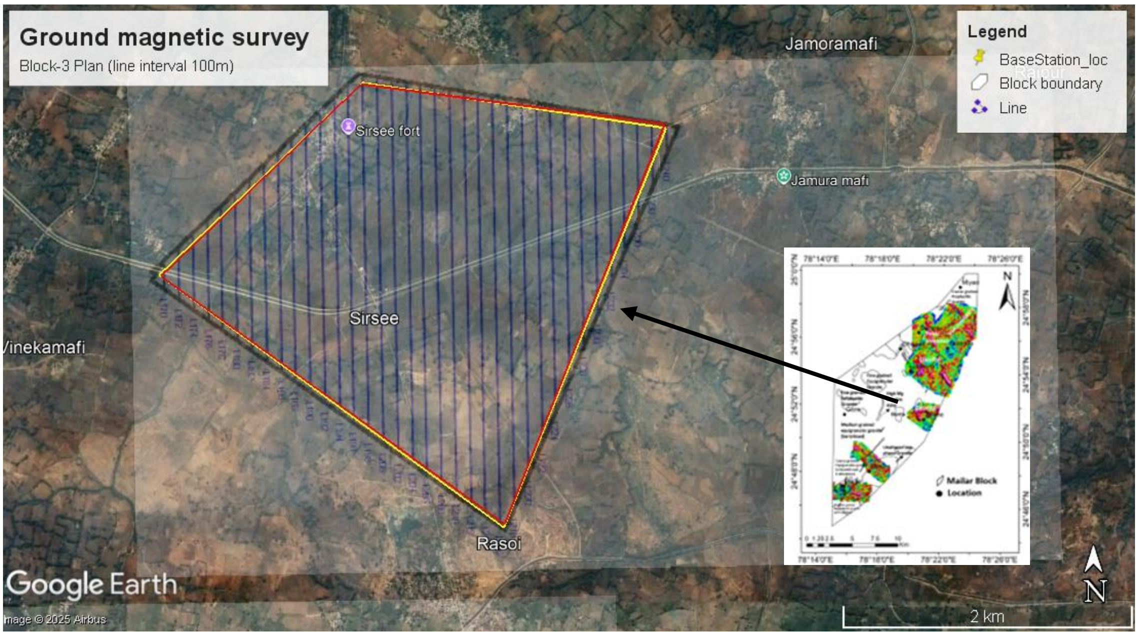


Fig 9.6.2.4 Survey design over sub block-3 boundary of the project

Fig 9.6.2.4 Displays N–S lines across the Sirsee volcanic–intrusive zone to constrain a coherent NW–SE magnetic high interpreted as a deep intrusive root, and to resolve E–W/NE–SW fault offsets that localize fluid flow.

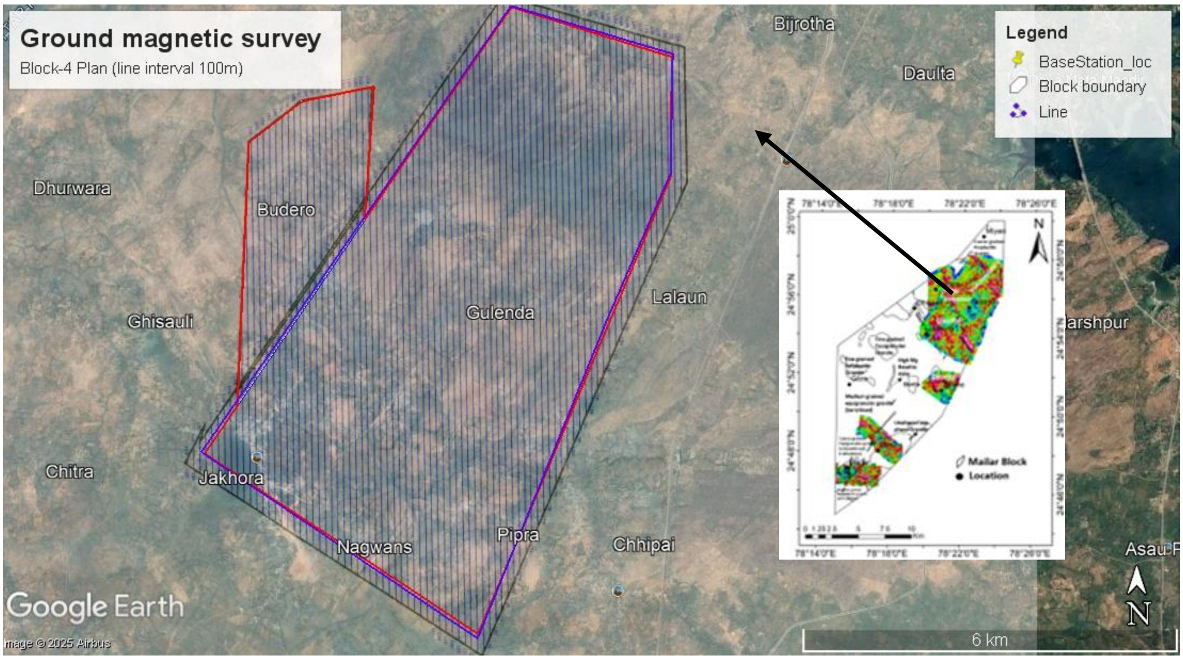


Fig 9.6.2.5: Survey design over sub block-4 boundary of the project

Fig 9.6.2.5 Covers the Mailar advanced-argillic & diorite extension zone; the grid is arranged to image two NW–SE magnetic linear highs (dyke belt) and an expansive low-mag lithocap, plus NE–SW faults that control telescoping epithermal overprints.

Field Photographs

Fig 9.6.2.6: Rover magnetometer

Fig 9.6.2.7: Setup of base station Magnetometer

Field photograph of the ATOMS V5 proton-precession rover used for station measurements; illustrates the portable setup adopted to minimize cultural noise and maintain line productivity.

Base station (Beijing Dadi Hualong PM2) installation used for diurnal and drift corrections; the stable configuration underpins the high data quality reported across all four sub-blocks.

Coverage: Sub block 1 (7.2 km²; 35.5 line km; 710 stations), Sub block 2 (7.09 km²; 35.45 line km; 709 stations), Sub block 3 (6.40 km²; 32 line km; 640 stations), Sub block 4 + extension (45 + 5.83 km²; 177.05 + 32 line km; 4,181 stations). Boundary coordinates are provided in the acquisition log (Section “Data coverage”).

Table 9.6.2: Groundmagnetics Coverage in Various Mailar Groundmagnetics Sub-blocks

Zone Name	Area in sq km	Line-Km	Station
Magnetic sub-block 1	7.2	35.5	710
Magnetic sub-block 2	7.09	35.45	709
Magnetic sub-block 3	6.4	32	640
Magnetic sub-block 4 & extension	45 &5.83	177.05 &32	4181
Total	71.52	312	6240

Magnetic Data acquisition boundary coordinates

A1	24.772960	78.251450
B1	24.790608	78.250287
C1	24.786613	78.293376
D1	24.770771	78.288786

Sub block 1 Boundary coordinates

Point	Latitude	Longitude
A2	24.817493	78.269121
B2	24.828492	78.280218
C2	24.802630	78.312511
D2	24.790761	78.305529

Sub block 2 Boundary coordinates

Point	Latitude	Longitude
A3	24.857660	78.329131
B3	24.870351	78.343290
C3	24.867021	78.365093
D3	24.842196	78.353318

Sub block 3 Boundary coordinates

Point	Latitude	Longitude
A4	24.903065	78.325750
B4	24.970638	78.376105
C4	24.963253	78.404971
D4	24.943657	78.405444
E4	24.875709	78.373010

Sub block 4 Boundary Coordinates

Point	Latitude	Longitude
A4	24.913963	78.333986
B4	24.949358	78.335272
C4	24.955366	78.343755
D4	24.957420	78.355184
E4	24.941695	78.354347

Block 4 Extension coordinates

9.6.3 Processing and Derived Magnetic Products

The following products were generated and used in interpretation: Total Magnetic Intensity (TMI), Reduced-to-Pole (RTP), First Vertical Derivative (1VD), Analytical Signal (AS), and 1VD of RTP for structural texture; plus 3-D inversion depth slices (Z = 10–150 m) to constrain geometry/continuity with depth. In combination, these reveal magnetite-rich intrusions (highs), magnetite-destructive alteration (smooth lows), dyke swarms (linear highs), and faults/shears (steep gradients, AS edges).

9.6.4 Interpretation by Sub-Block (with Image-by-Image Descriptions)

A. Sub-Block 1 – Gulenda–Burera Northern Hydrothermal Centre

TMI varies **~46,500–47,400 nT**. The area hosts felsic volcanics with potassic/phyllic alteration (Targets **1–11**), numerous quartz-sulphide veins, and N–S–trending mafic dykes. Magnetics resolve an **E–W master shear**, cross-cut dyke geometry, and a broad **magnetic low** caused by **magnetite destruction** in altered cores—hallmarks of a porphyry feeder corridor.

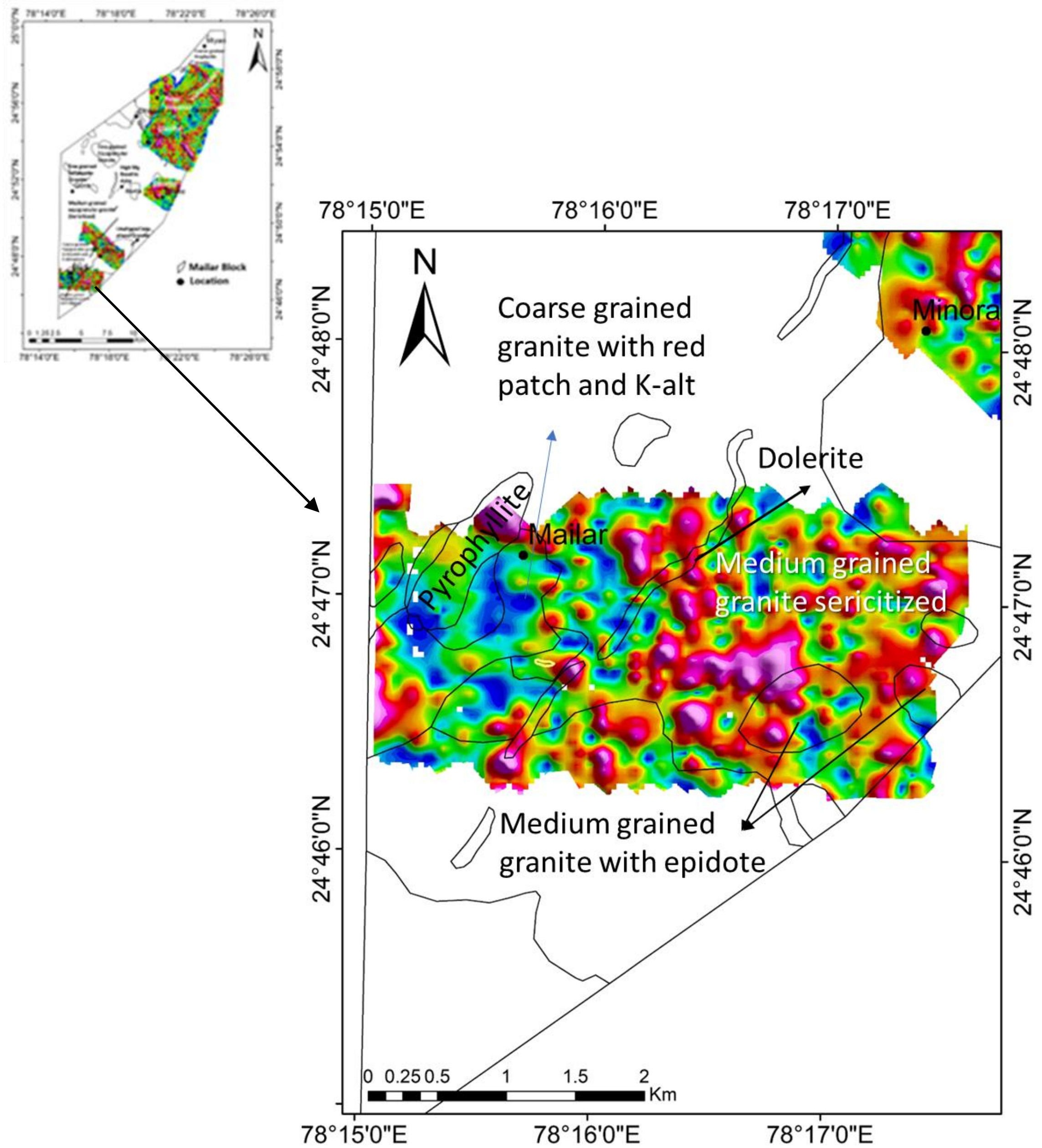


Fig 9.6.4.1: AS Data near Mailar

Fig 9.6.4.1 Demonstration of how the AS filter centres anomalies over their sources and crisply defines edges independent of magnetization direction—an approach applied consistently in all sub-blocks to delineate intrusive contacts, dyke edges and fault traces.

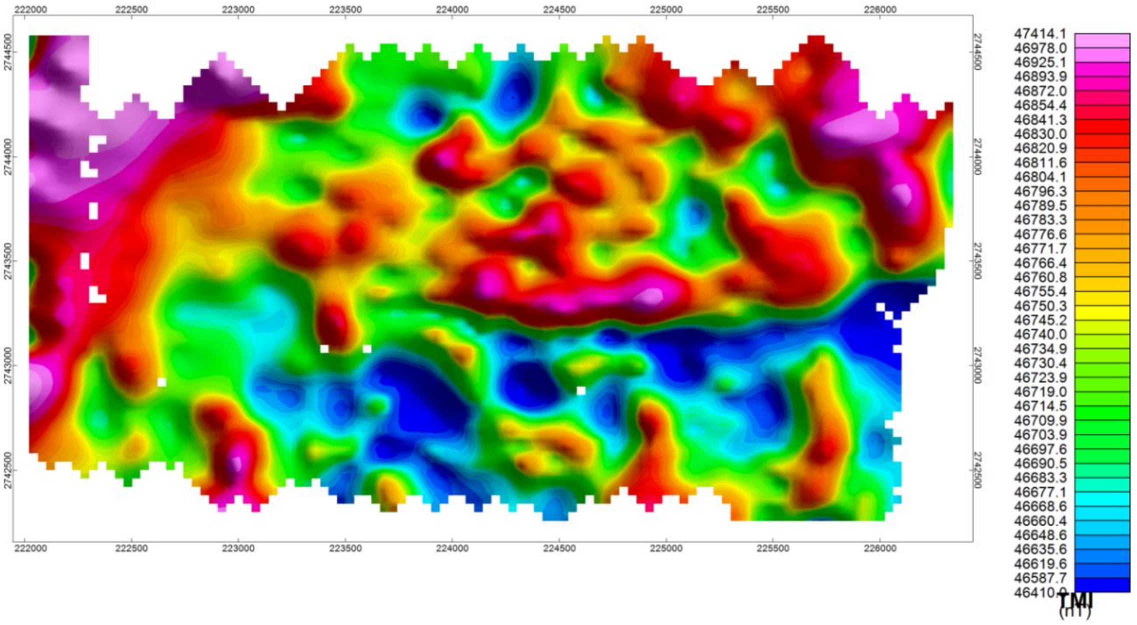


Fig 9.6.4.2 TMI map of Block-1

Fig 9.6.4.2 shows Total Magnetic Intensity in the Gulenda–Burera corridor highlighting a broad western low (magnetite-destructive alteration in potassic/phyllic cores) and N–S linear highs to the east (mafic dykes), with a subtle E–W shear expressed as a gradient.

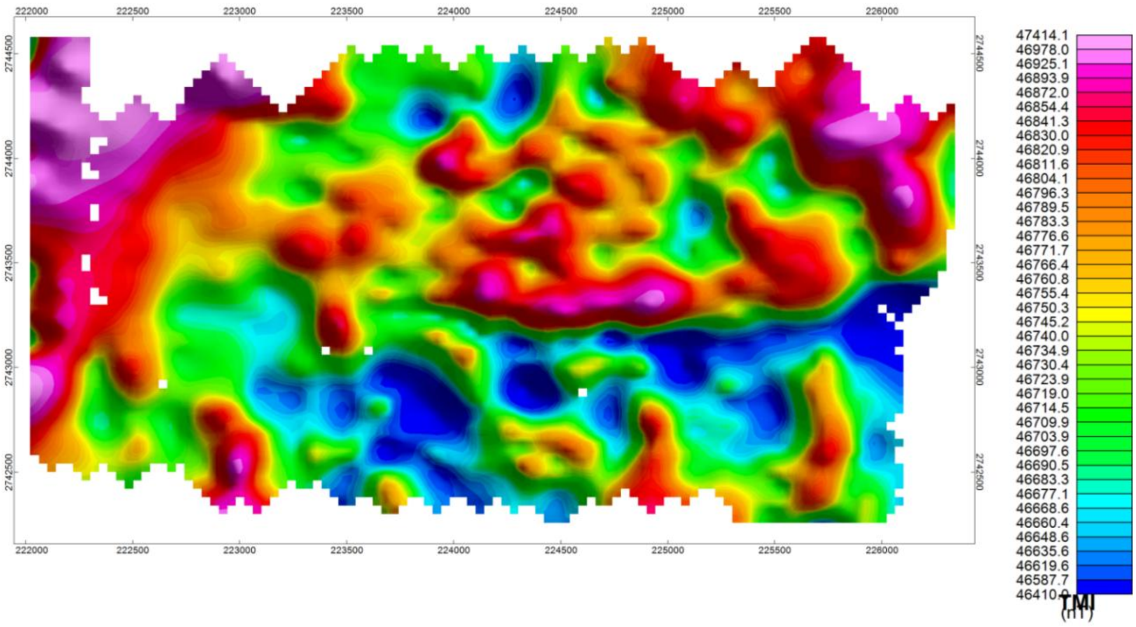


Fig 9.6.4.3: TMI map of Block-1

Fig 9.6.4.3 shows Complementary TMI rendering emphasizing the contrast between low-susceptibility altered domains and higher-susceptibility dyke/intrusive strands; reinforces the lateral continuity of the E–W shear corridor.

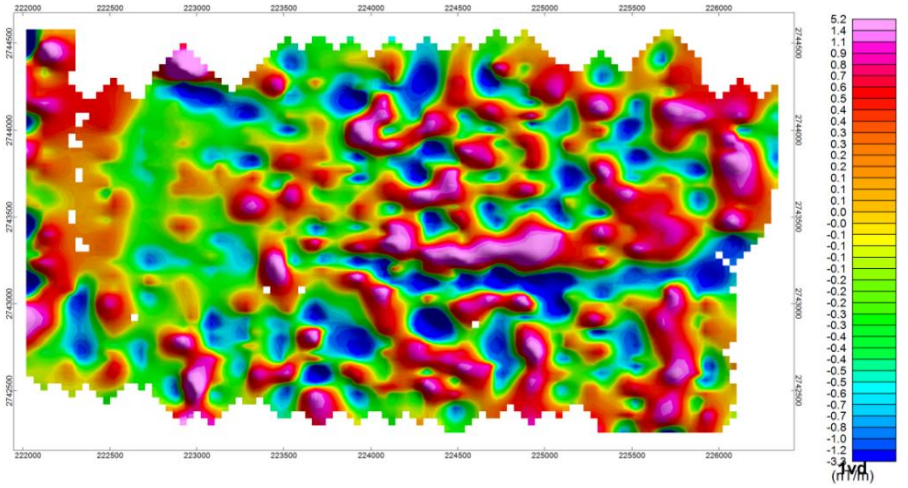


Fig 9.6.4.4: 1st vertical derivative map

FVD enhances (Fig 9.6.4.4) shallow, subtle anomalies and reveals near-surface discontinuities along the E–W shear and subsidiary fractures; these structures coincide with vein swarms and alteration-based targets (1–11).

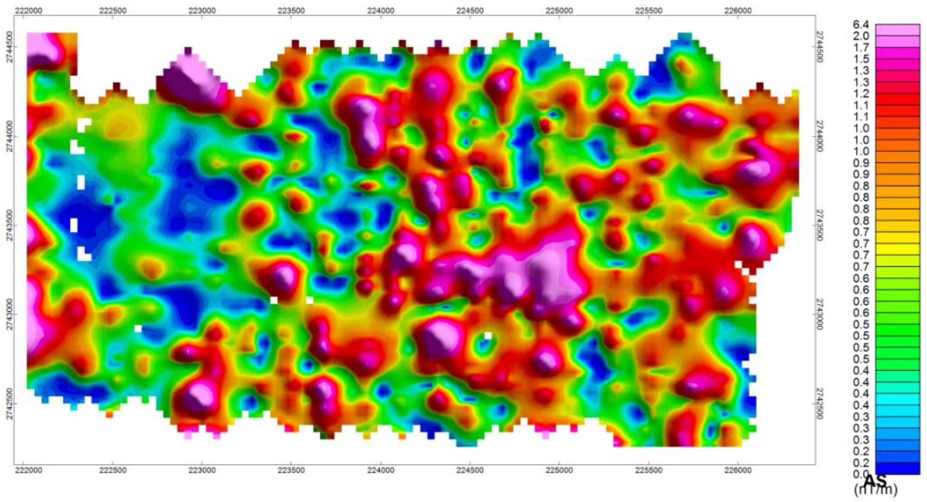


Fig 9.6.4.5: Analytical signal map

AS (Fig 9.6.4.5) sharpens edges of magnetic sources and traces NNW–SSE to N–S discontinuous linears that mark dyke margins, vein corridors and shear splays—key permeability pathways for mineralising fluids.

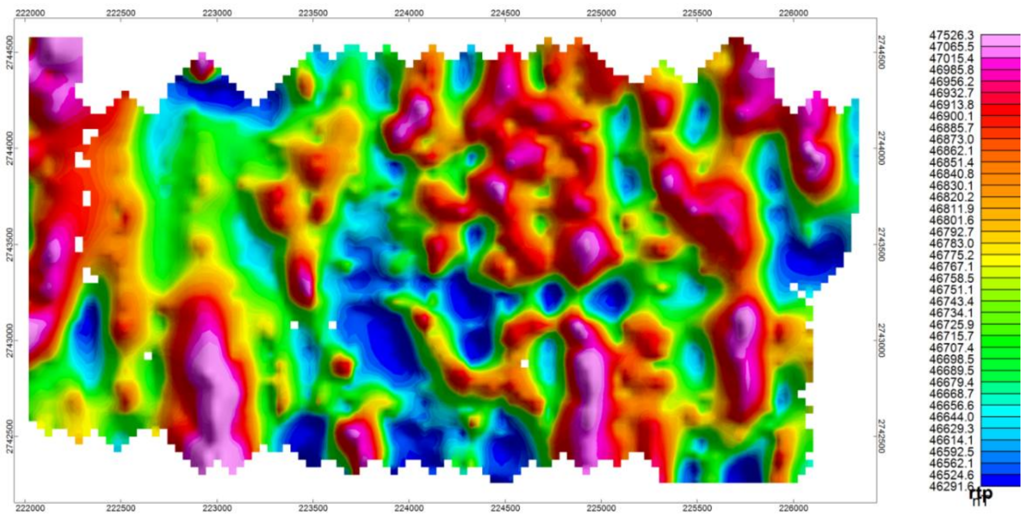


Fig 9.6.4.6: RTP (Reduced to Pole) map

Reduced-to-Pole recentres (Fig 9.6.4.6) anomalies over sources and clarifies that eastern magnetic bodies trend N–S (dykes), while the western low aligns with altered cores consistent with porphyry footprints.

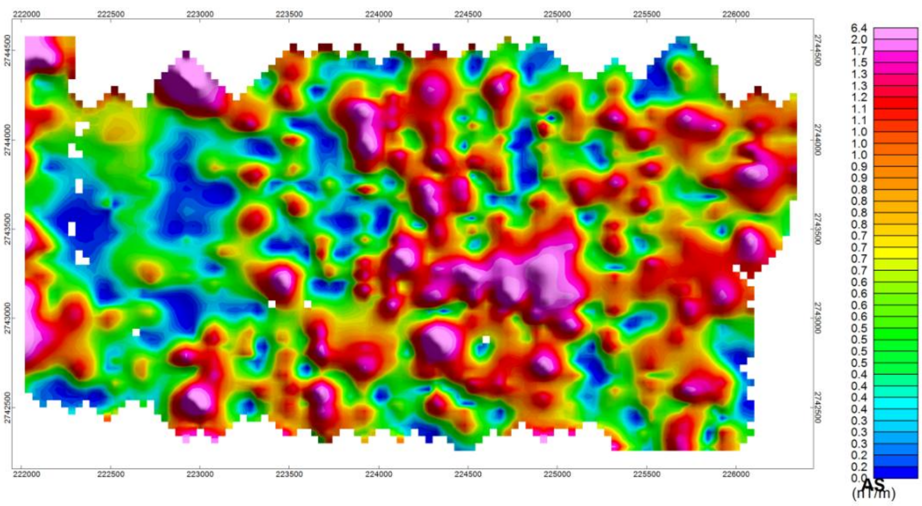


Fig 9.6.4.7: Analytical signal map

A composite structural map: derivative-picked lineaments projected on AS (Fig 9.6.4.7), revealing the E–W master shear intersecting N–S dyke corridors—prime nodes for fluid focusing and sulphide trapping.

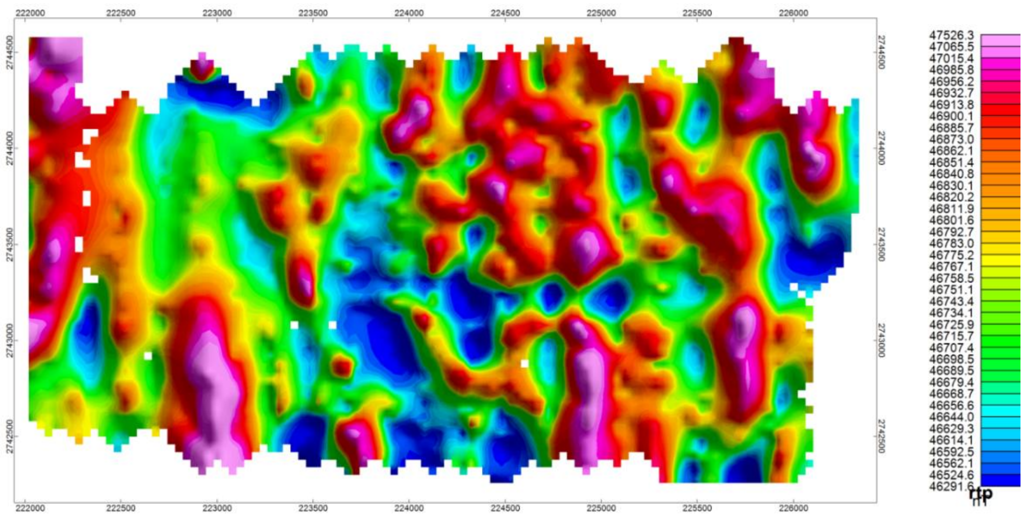


Fig 9.6.4.8: RTP (Reduced to Pole) map

Combines RTP (Fig 9.6.4.8-10) positioning with derivative sharpening to highlight shallow N–S fabrics and subtle disruptions that correlate with mapped vein density highs.

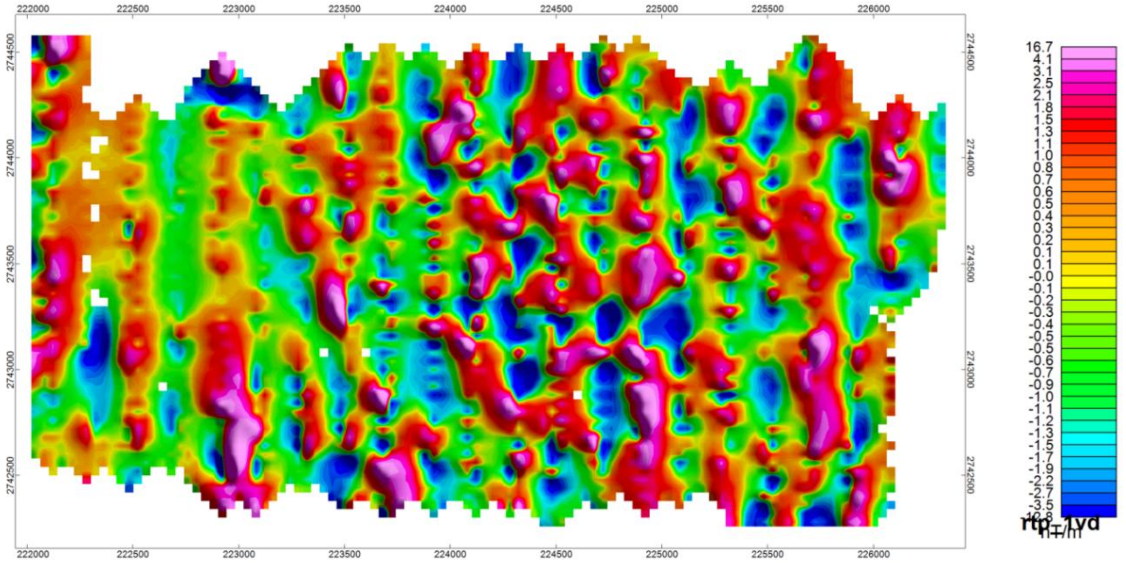


Fig 9.6.4.9 1st vertical derivative of RTP

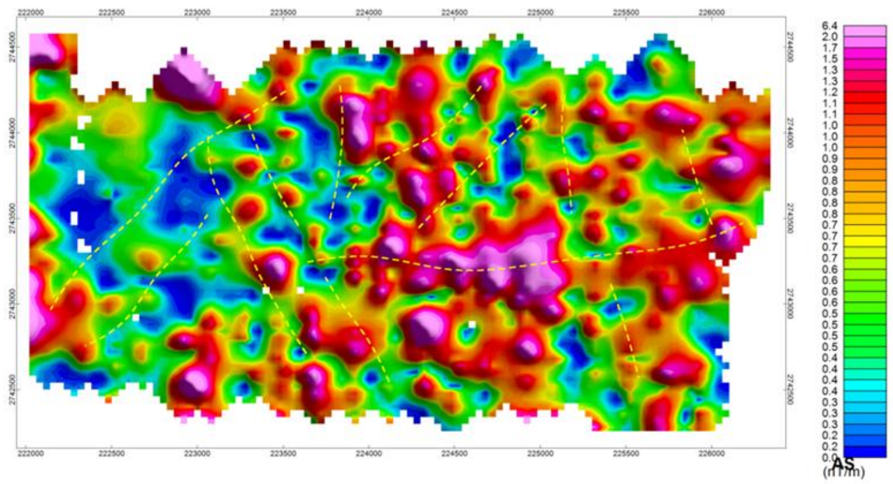


Fig 9.6.4.10 Lineaments drawn from 1st vertical derivative projected on AS map

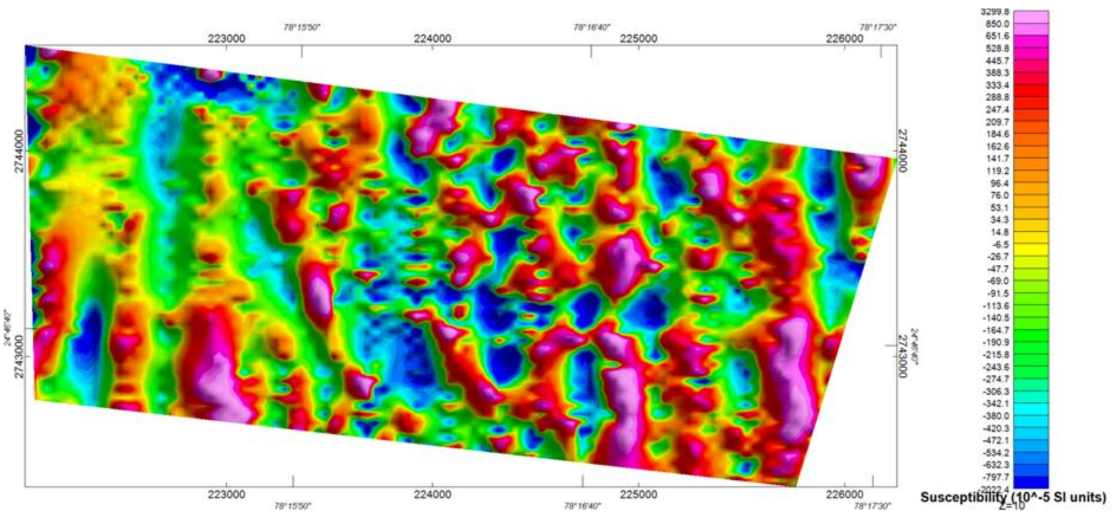


Fig 9.6.4.11: Depth slice Z=10m

Near-surface inversion slice showing short-wavelength linears consistent with veins/faults and shallow dyke apices; useful for locating trench/pit sites. Fig 9.6.4.11

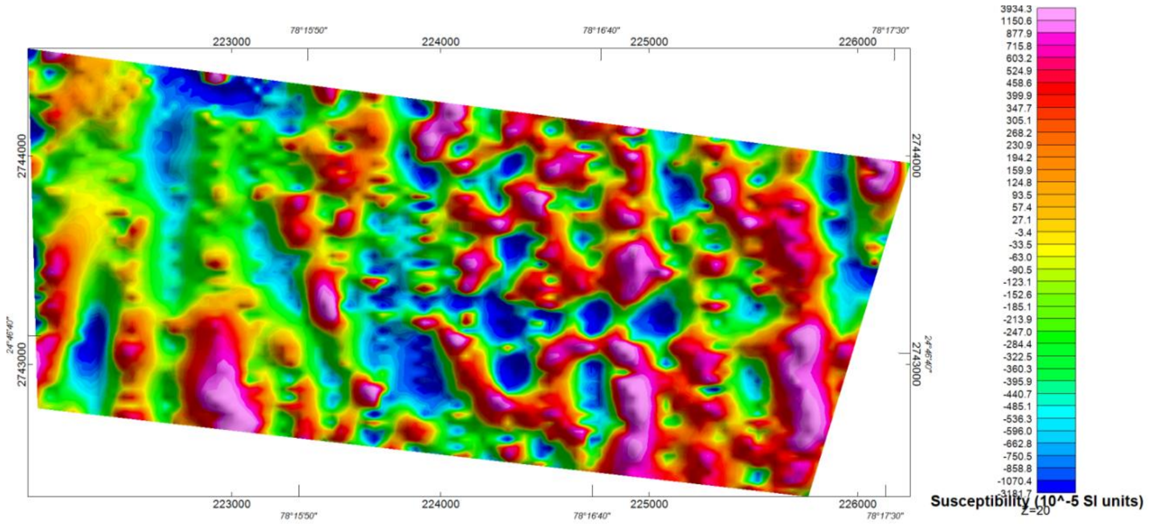


Fig 9.6.4.12: Depth slice Z=20m

Shallow slice mapping persistence of E–W/NS fabrics and beginning of body coalescence; continuity supports feeder-style architecture beneath alteration targets. Fig 9.6.4.12

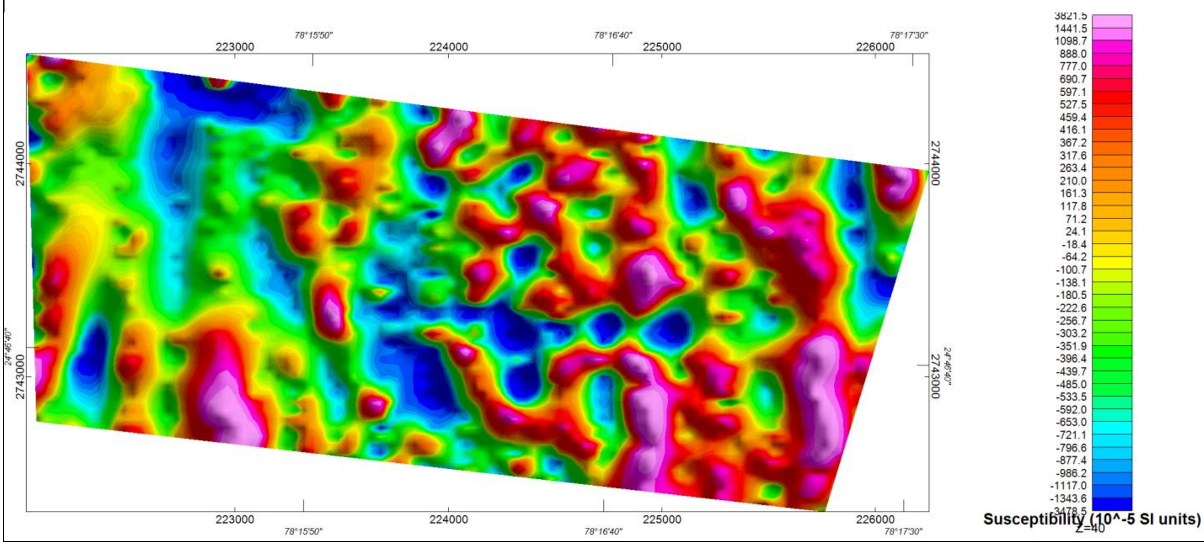


Fig 9.6.4.13 Depth slice Z=40m

Shows better-defined dyke strands and shear offsets; anomaly smoothing in the west remains consistent with magnetite destruction in core alteration zones. Fig 9.6.4.13

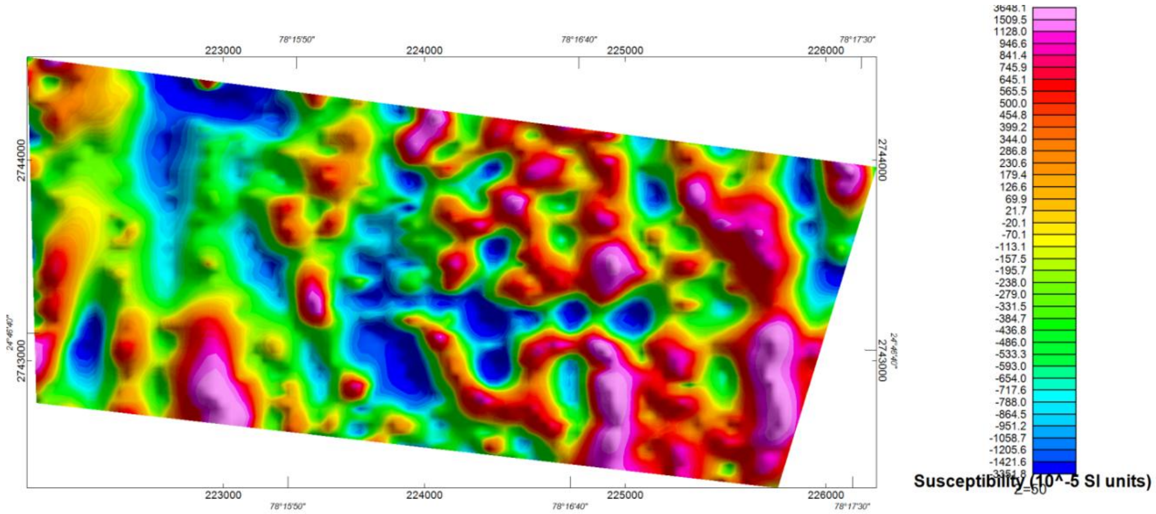


Fig 9.6.4.14: Depth slice Z=50

Mid-depth continuity of the E–W shear cross-cutting two N–S mafic dykes; supports a long-lived structural corridor linked to fluid ingress. Fig 9.6.4.14

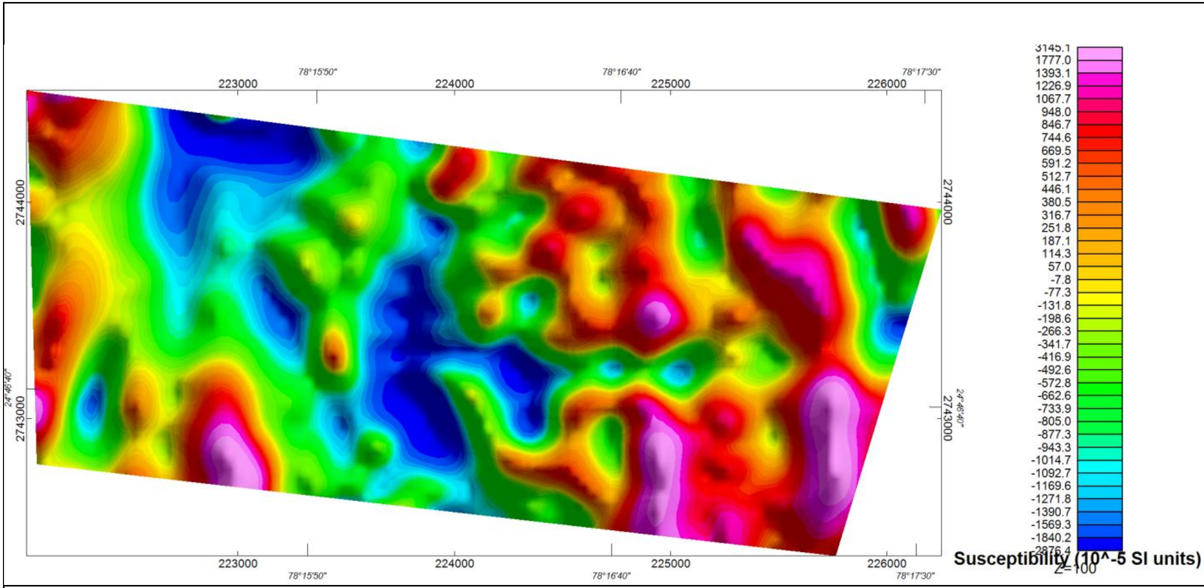


Fig 9.6.4.15: Depth slice Z=100m

Deeper slice confirming persistent dyke roots and shear continuity; the altered low remains broad, indicating a sizeable porphyry-style core. Fig 9.6.4.15

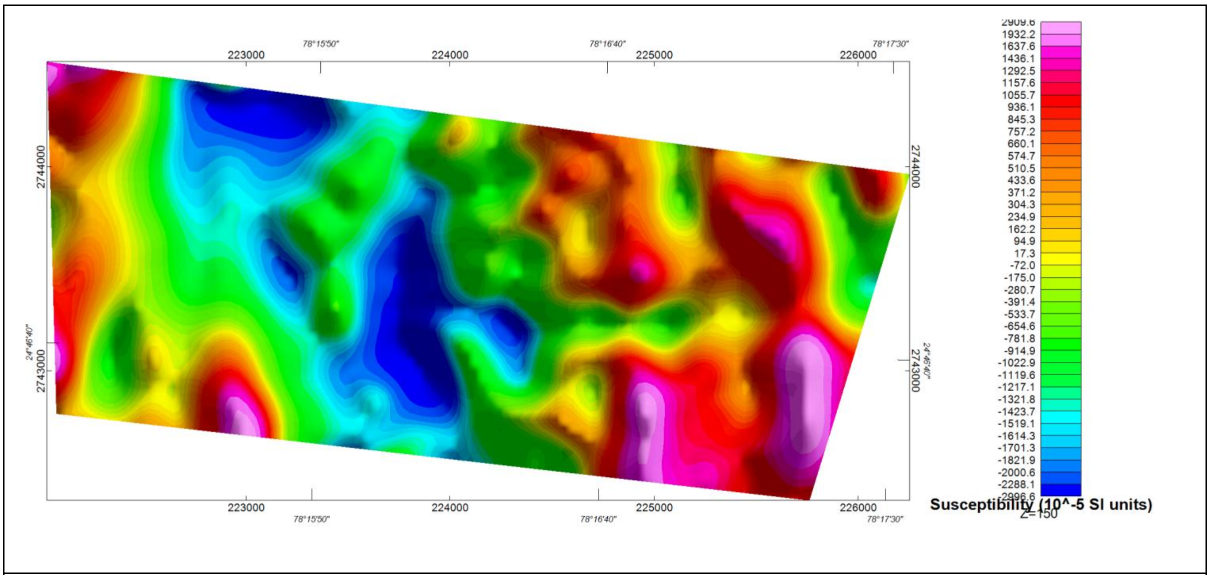


Fig 9.6.4.16 Depth slice Z=150

Deepest slice showing a robust E–W corridor intersecting N–S bodies—an architecture consistent with feeder systems beneath targets 1–11. Fig 9.6.4.16

B. Sub-Block 2 – Central Intrusive–Veinlet Corridor

Context & ranges: TMI **~46,200–47,300 nT**. The block exhibits **discontinuous N–S bodies** in the **NW and SE**, and a significant **central low** (alteration or felsic intrusive cupola). E–W and NW–SE structures are abundant and control vein corridors and dyke emplacement.

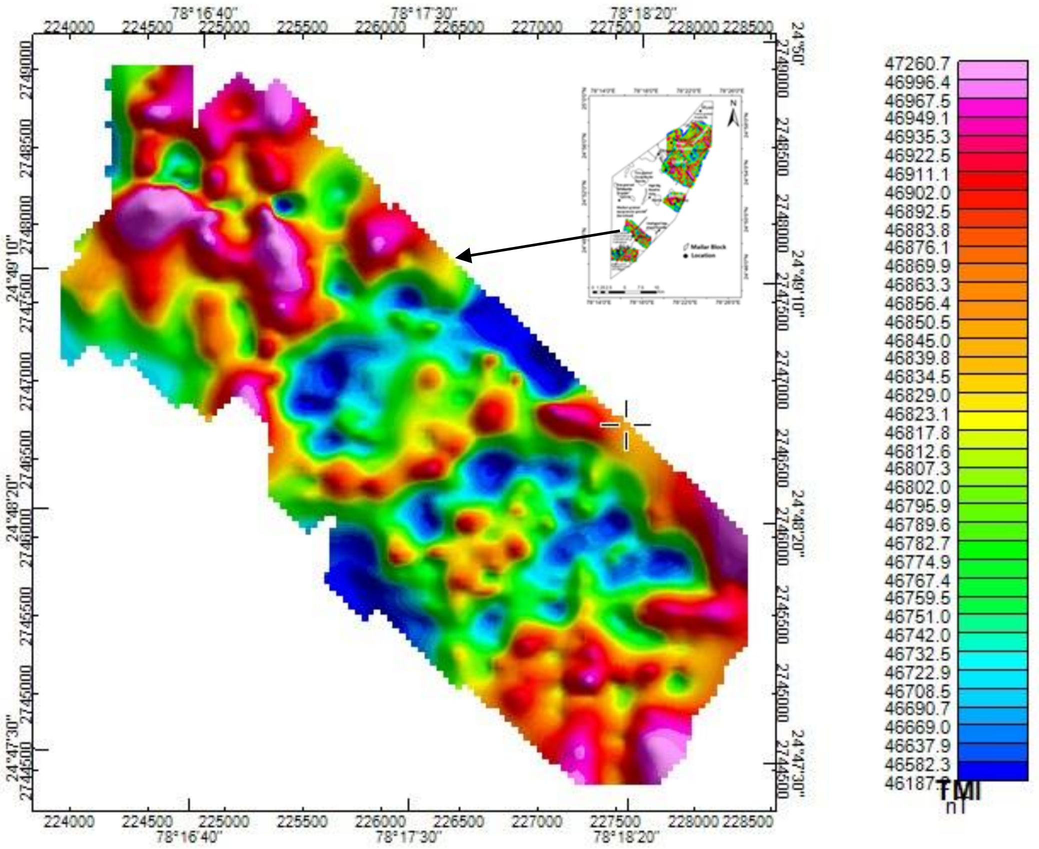


Fig 9.6.4.17: Total Magnetic Intensity (TMI) map of magnetic sub block 2

Reveals a broad central magnetic low (alteration/felsic centre) with N–S discontinuous bodies in the NW and SE; establishes the intrusive–veinlet framework of the central corridor. Fig 9.6.4.17.

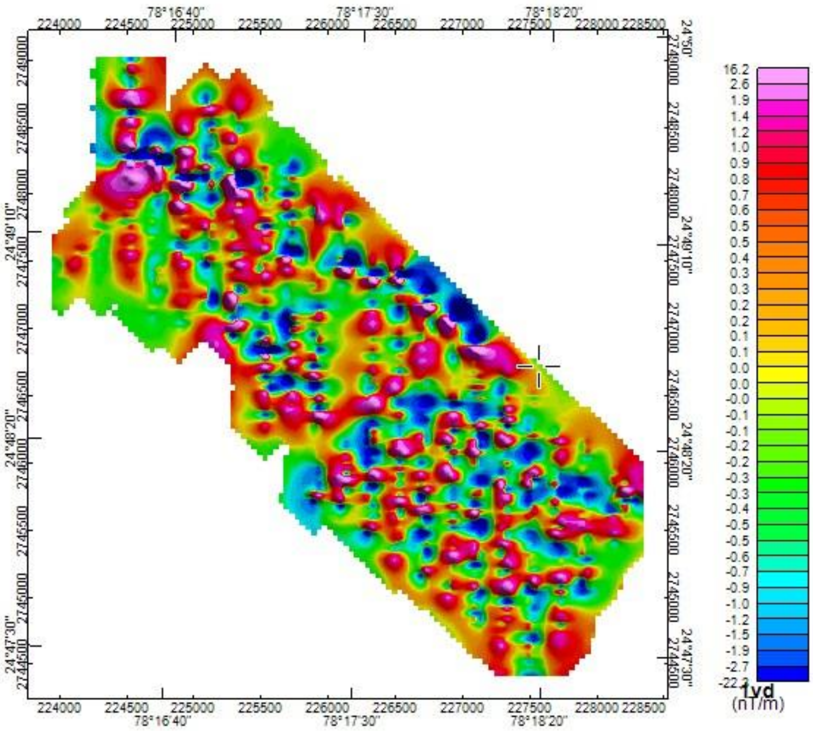


Fig 9.6.4.18: 1st Vertical derivative map

Highlights short-wavelength, near-surface E–W linears—fractures and step-faults that localise vein corridors; key to understanding targets 8–14. Fig 9.6.4.18

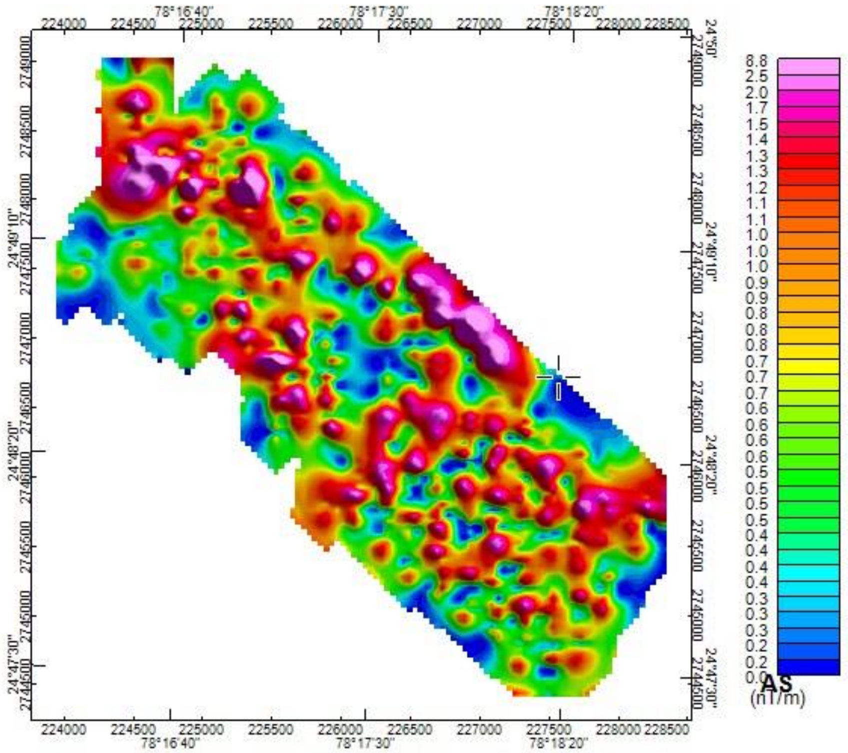


Fig 9.6.4.19: Analytical signal map

Edge-maps NW–SE, E–W and NE–SW discontinuities, defining intrusive contacts, dyke margins and fault intersections that form high-value structural nodes. Fig 9.6.4.19

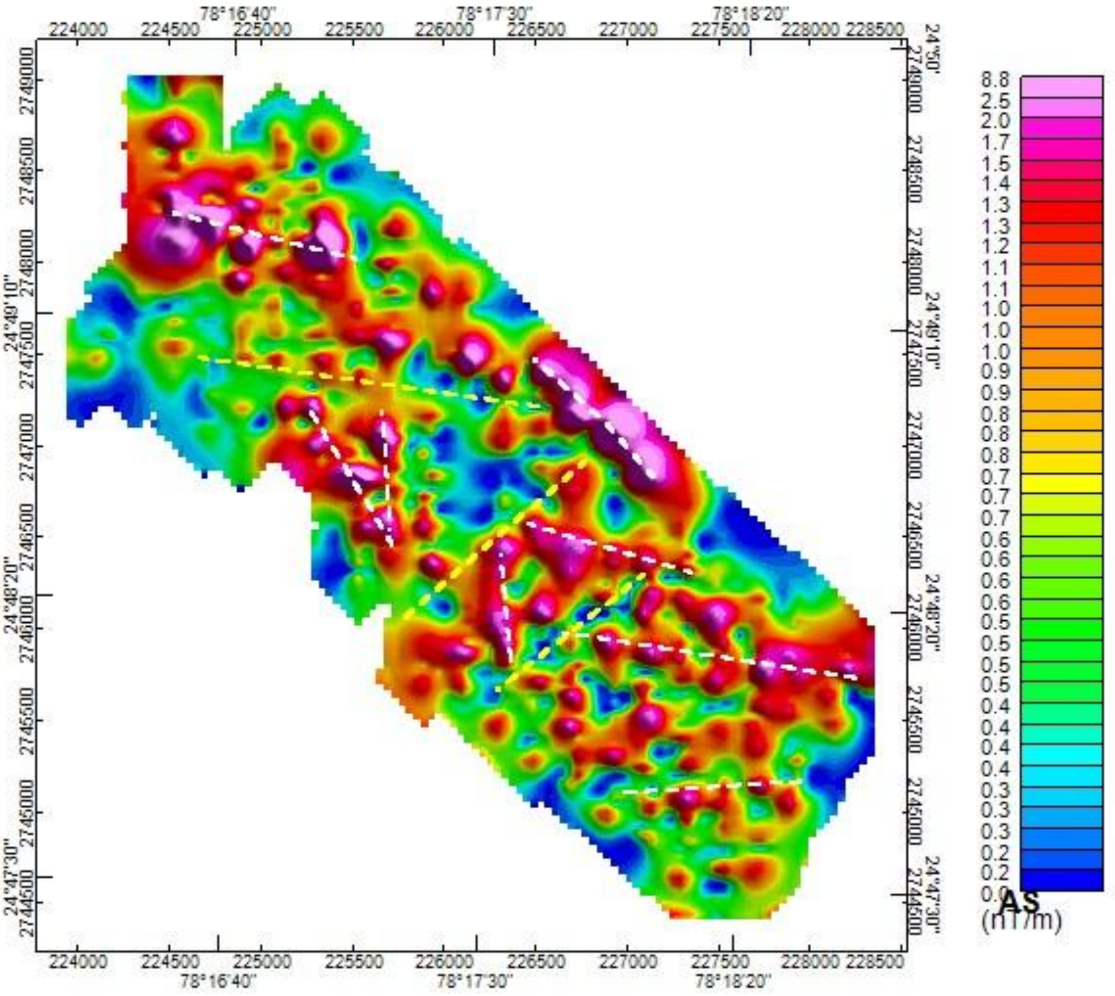


Fig 9.6.4.20: Lineaments projected on Analytical signal map.

Composite structural interpretation from derivative/AS—pinpoints the cross-cutting lineament mesh and the dilational sites likely to host stockworks. Fig 9.6.4.20

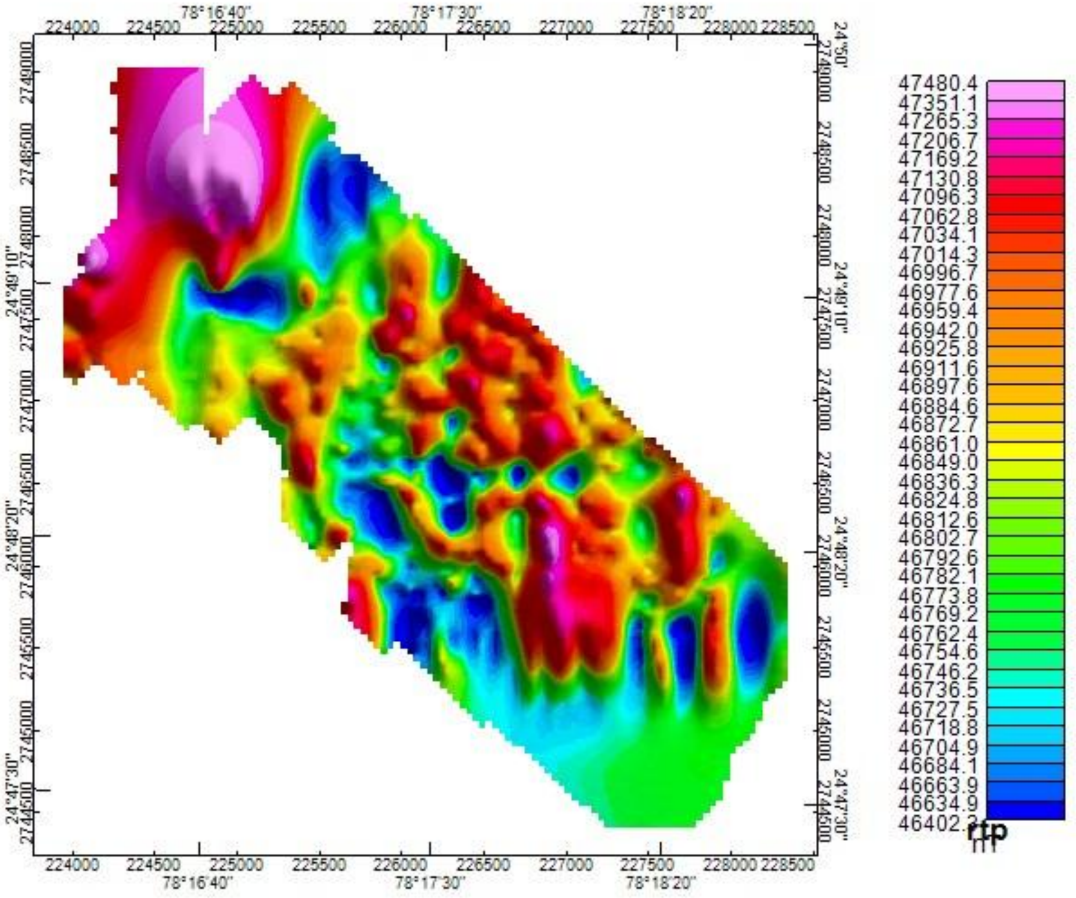


Fig 9.6.4.21: RTP (Reduced to Pole) map

Centres anomalies and shows a predominately NW trend; a prominent E–W linear low marks a shear or alteration front; minor elongations at edges reflect partial coverage. Fig 9.6.4.21

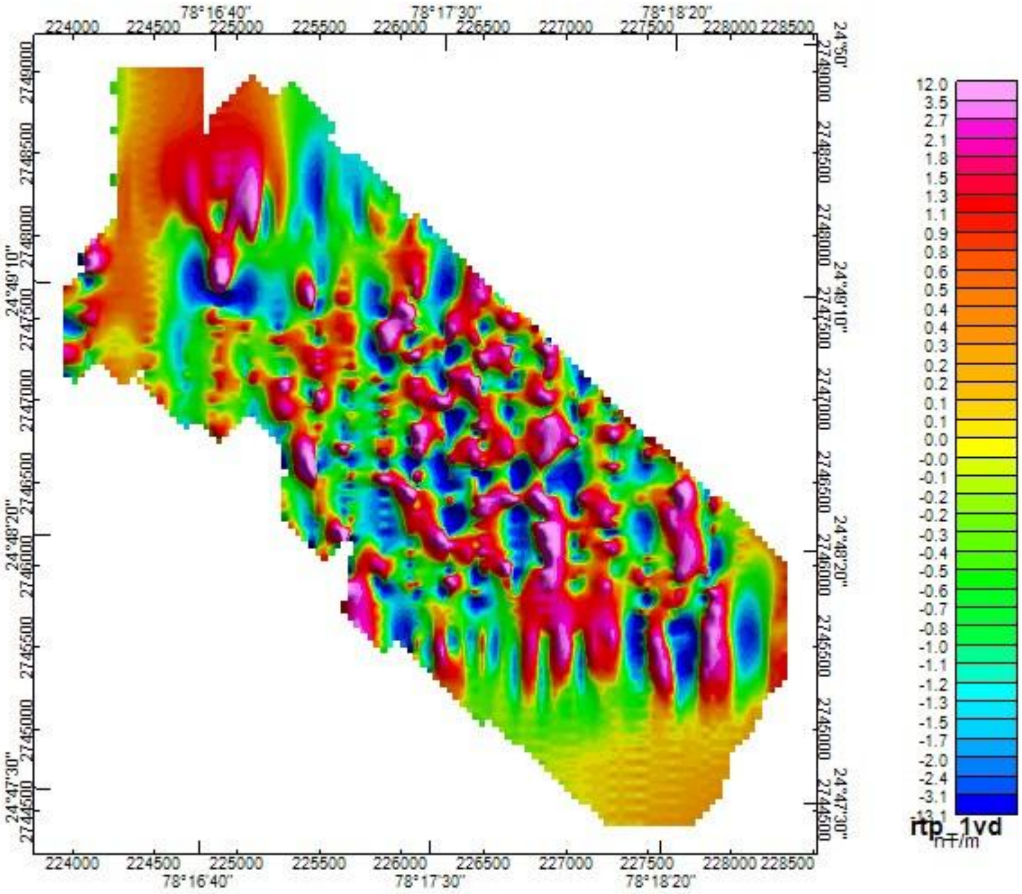


Fig 9.6.4.22: 1st vertical derivative of RTP

Accentuates shallow discontinuities over the central low and along NW–SE strands, refining locations for near-surface sampling/trenching. Fig 9.6.4.22

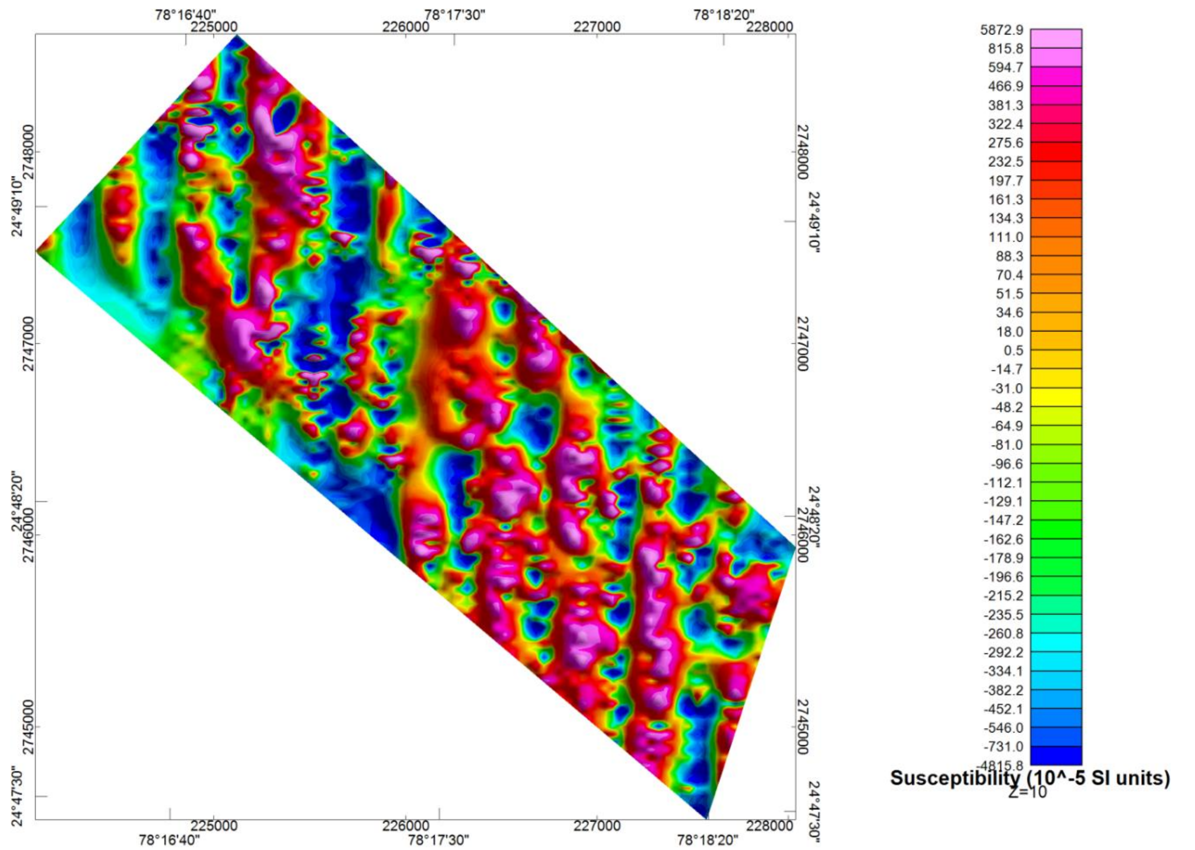


Fig 9.6.4.23: Depth slice Z=10 m

Very shallow slice imaging vein-scale fabrics and fractures; useful to correlate with high VCD/AHI patches from alteration mapping. Fig 9.6.4.23

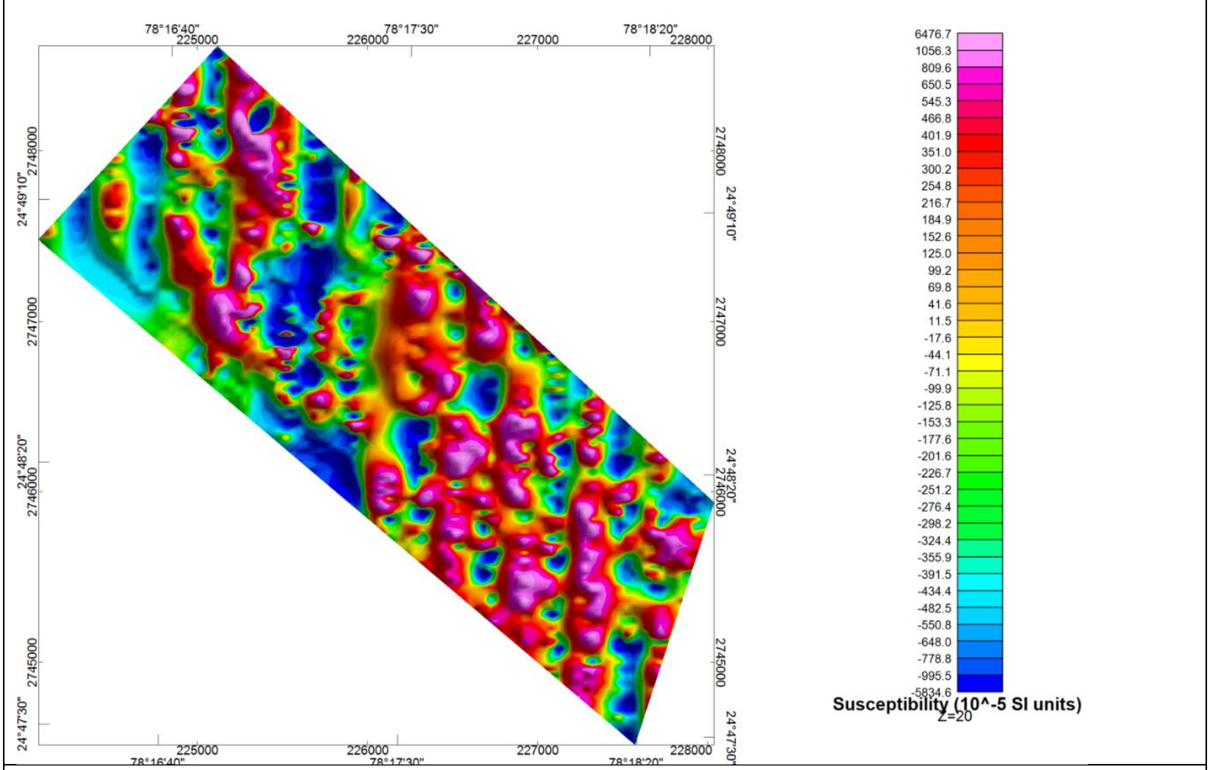


Fig 9.6.4.24: Depth slice Z=20 m

Shows persistence of shallow linears and the emergence of the central low as a cohesive feature, suggestive of an altered cupola at depth. Fig 9.6.4.24

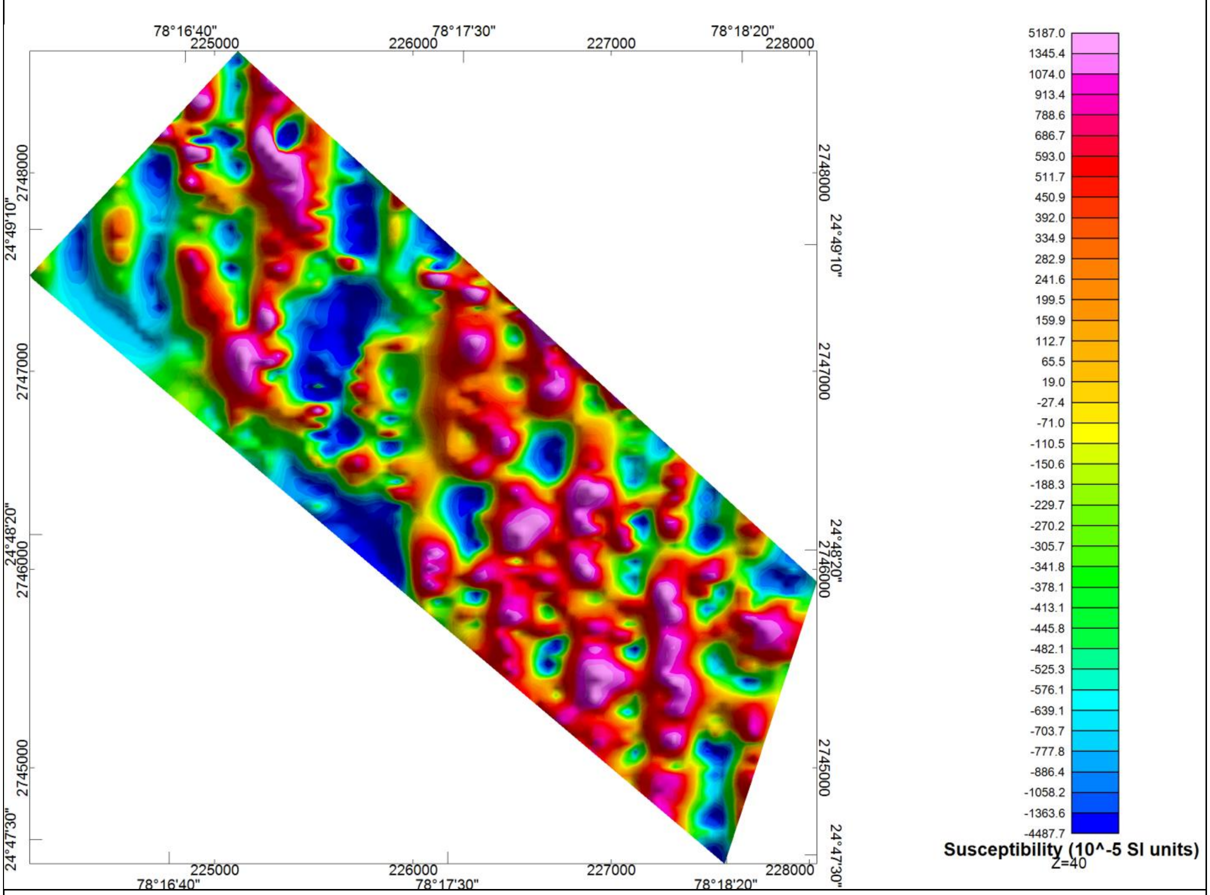


Fig 9.6.4.25: Depth slice Z=40 m

Mid-shallow slice where intrusive edges and step-faults begin to cohere; ideal for aligning trench lines with mapped edges. Fig 9.6.4.25

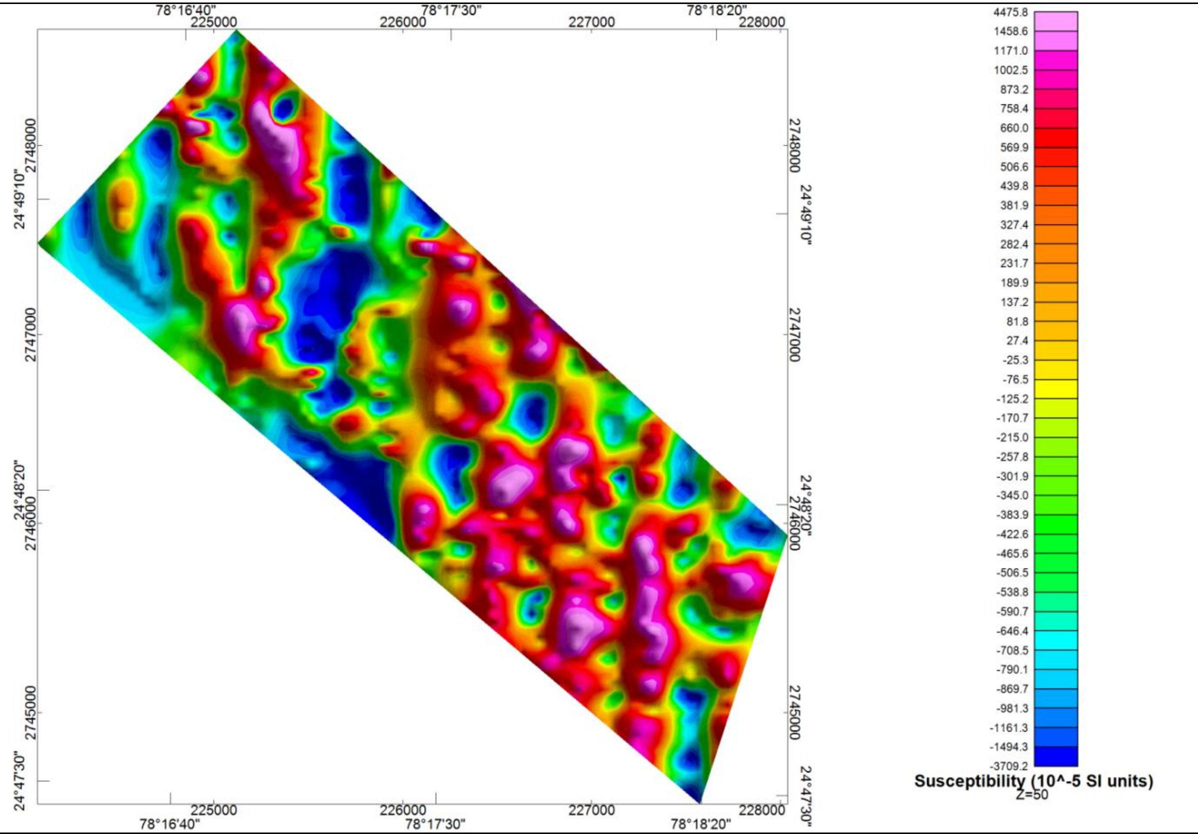


Fig 9.6.4.26: Depth slice Z=50 m

Transitional depth emphasising structural segmentation around the central low, guiding resistivity/IP line planning. Fig 9.6.4.26

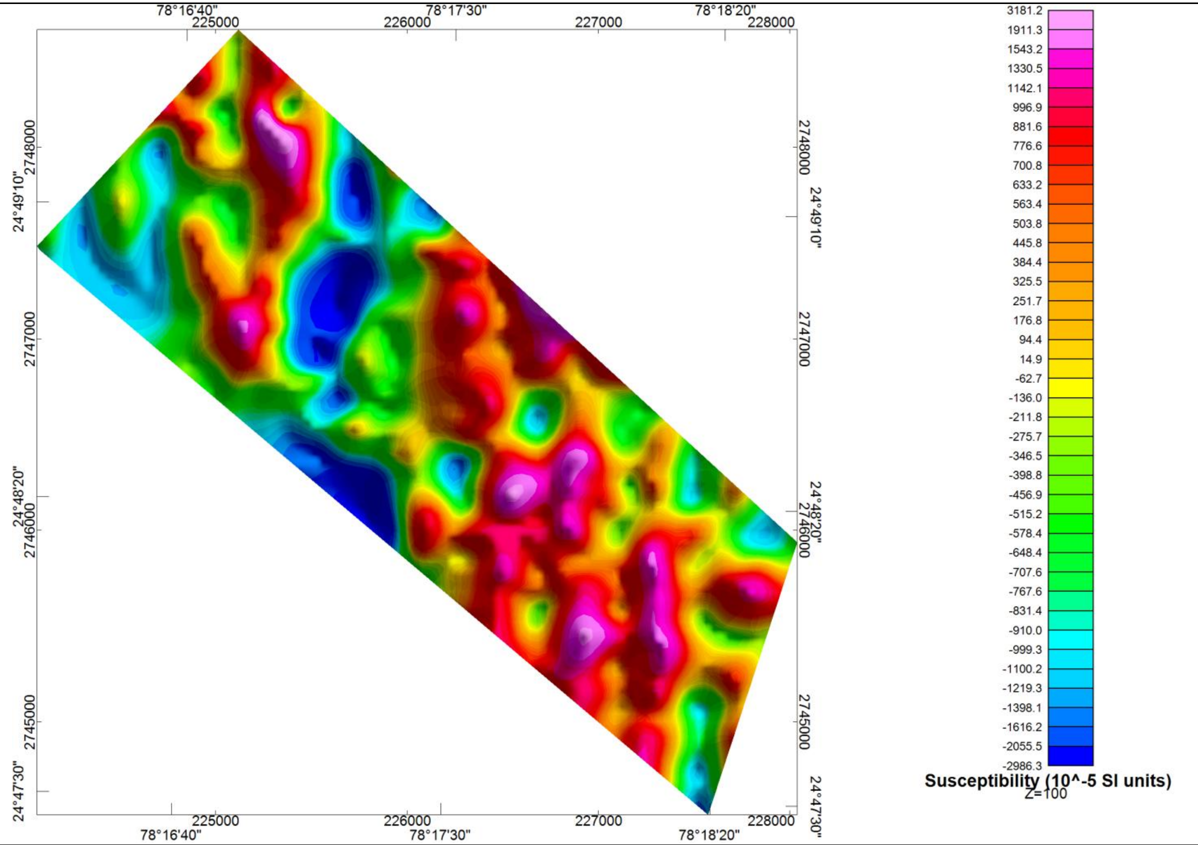


Fig 9.6.4.27: Depth slice Z=100 m

Deepening view with the central low persistently expressed, consistent with an alteration core or porphyry shell below. Fig 9.6.4.27

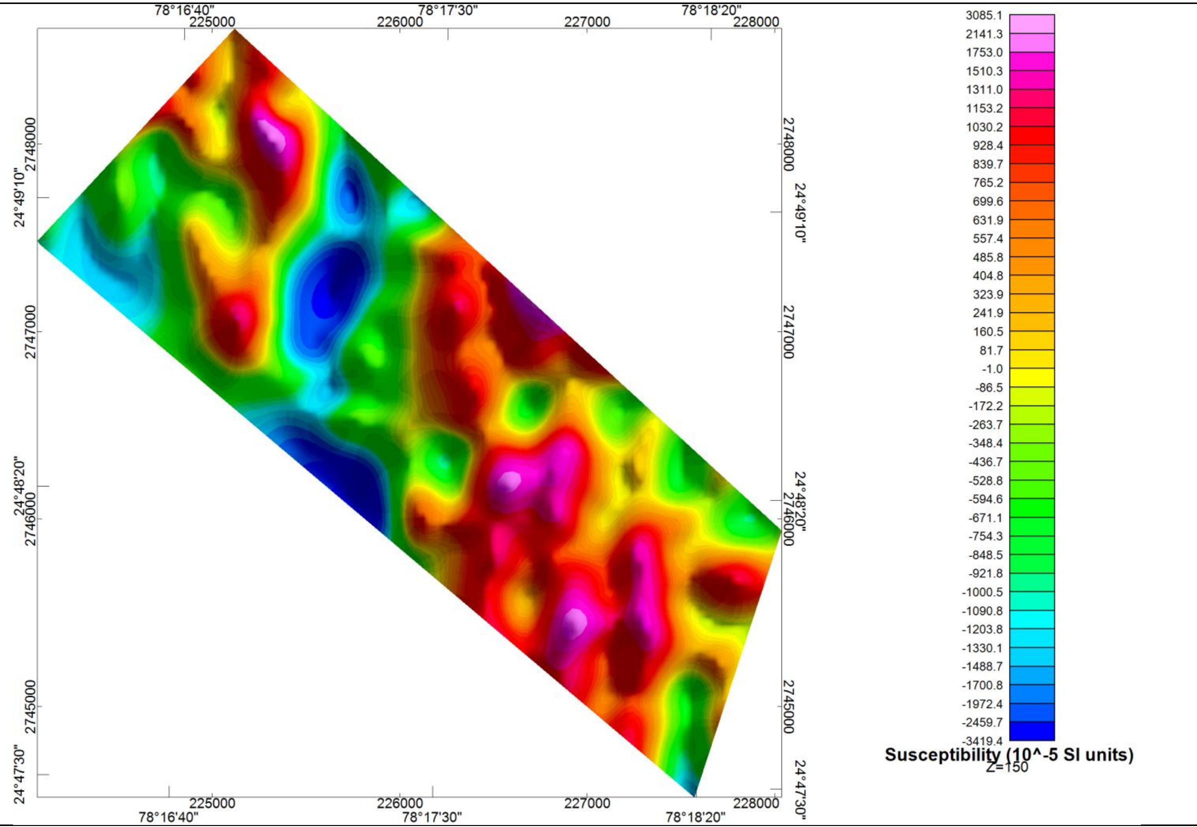


Fig 9.6.4.28: Depth slice Z=150 m

Deepest slice confirming a durable, broad low and flanking higher-susceptibility bodies—geometry typical of intrusive-centred systems. Fig 9.6.4.28

C. Sub-Block 3 – Sirsee Volcanic–Intrusive Zone

TMI ~46,200–47,700 nT. A coherent NW–SE magnetic high in the central block persists to depth—interpreted as a magnetite-bearing intrusive root—transected by E–W and NE–SW faults. Small oscillatory anomalies are largely absent, suggesting coherent lithology.

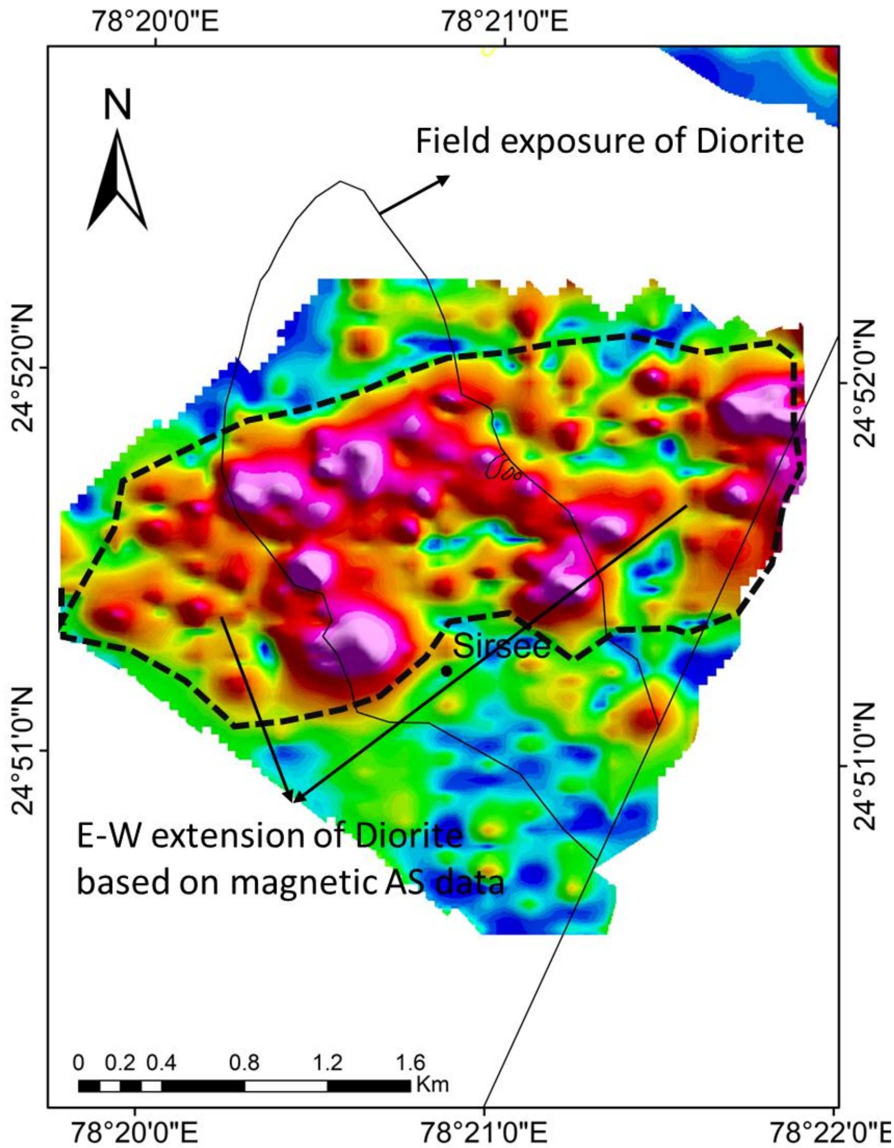


Fig 9.6.4.29: AS analysis near Sirsee

An explanatory AS example illustrating clean edge-finding on coherent bodies—here used to map intrusive margins and faults bisecting the Sirsee intrusive high. Fig 9.6.4.29

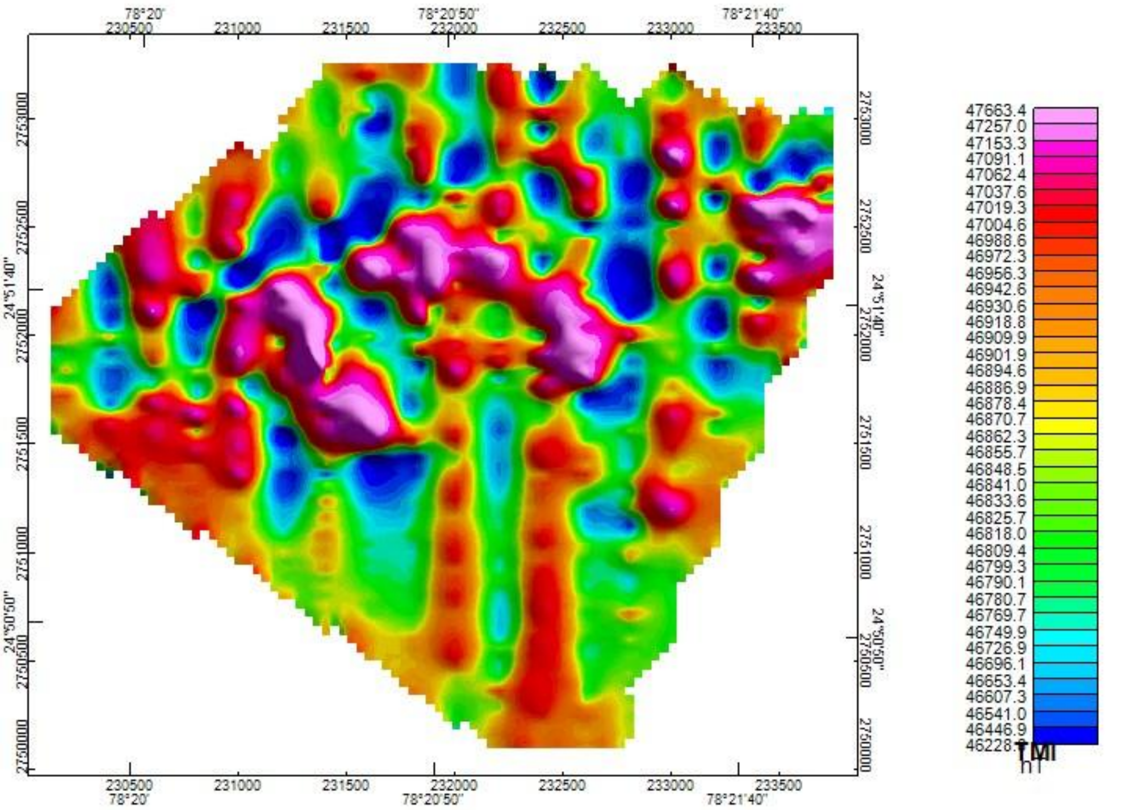


Fig 9.6.4.30: Total magnetic intensity (TMI) map

Displays a large NW–SE high-amplitude anomaly interpreted as a magnetite-rich intrusive core; surrounding lower TMI corresponds to altered volcanic wall-rocks. Fig 9.6.4.30

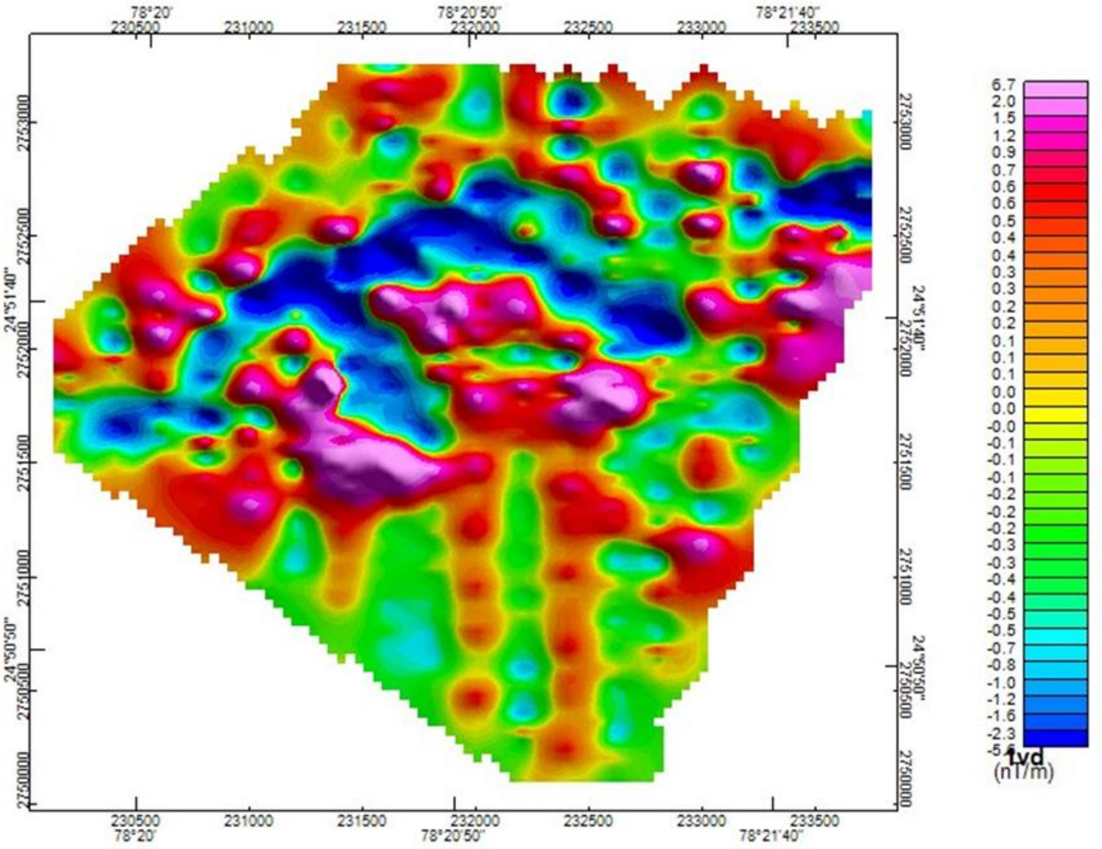


Fig 9.6.4.31: 1st Vertical derivative of TMI map

Sharpens E–W and NE–SW breaks that offset the intrusive high—these faults are favoured as fluid pathways and potential vein hosts. Fig 9.6.4.31

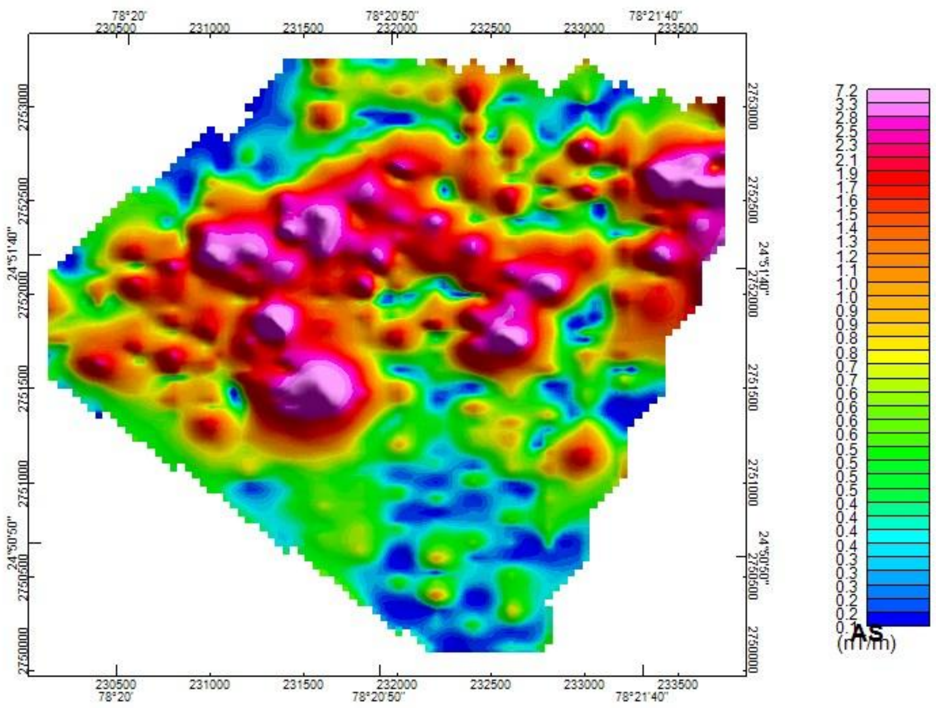


Fig 9.6.4.32: Analytical signal map

Centres anomalies over source bodies and defines crisp contacts around the intrusive; a principal E–W lineament is evident across the block. Fig 9.6.4.32

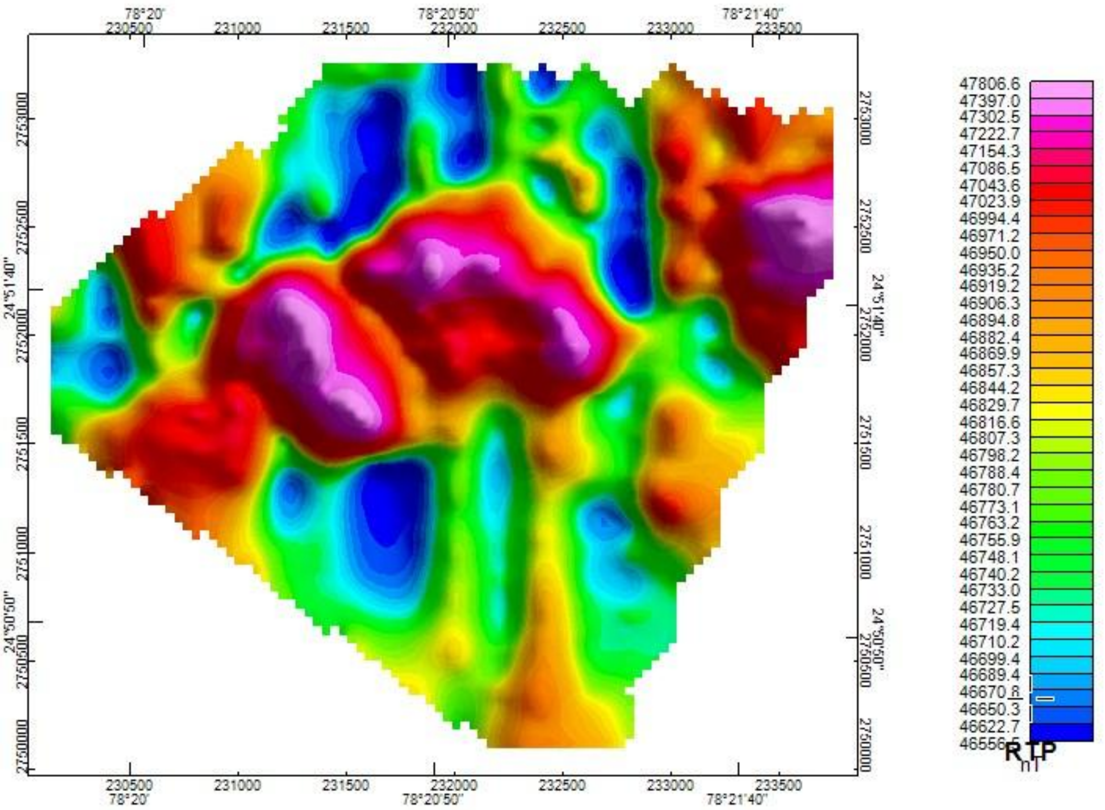


Fig 9.6.4.33: RTP map

Clarifies the NW–SE geometry of the central body and simplifies interpretation by removing inclination effects; supports a coherent, deep-seated intrusive. Fig 9.6.4.33

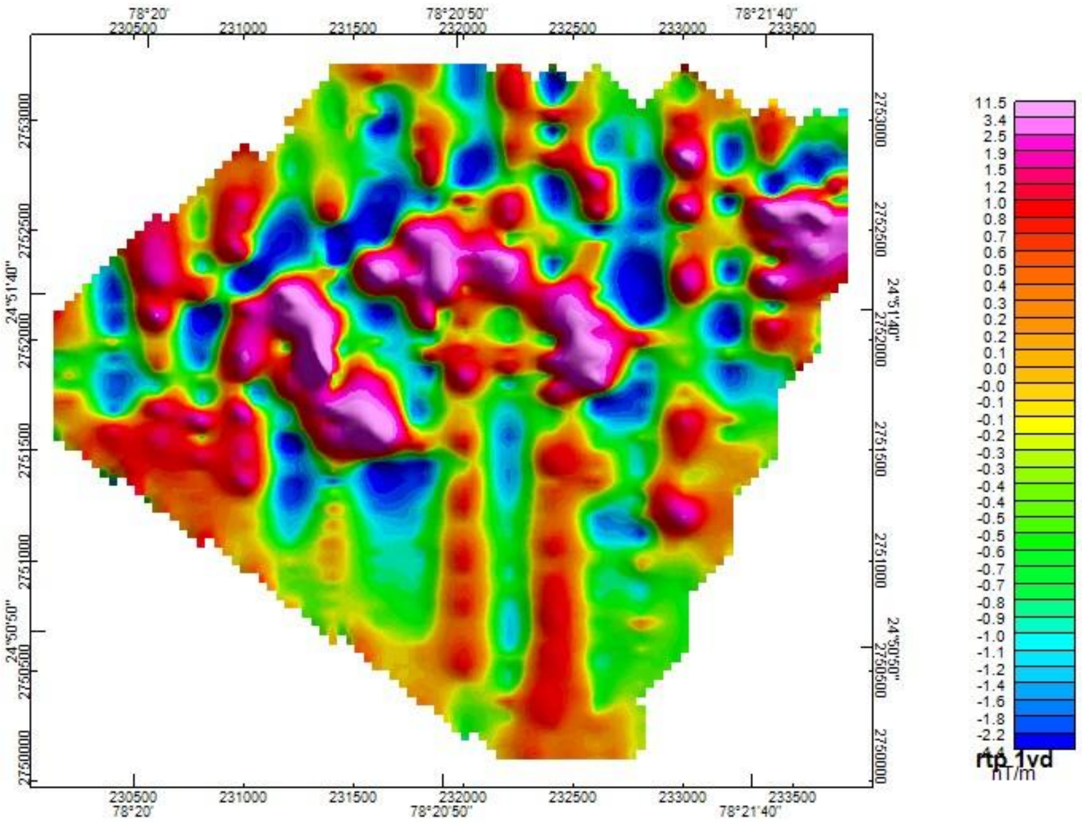


Fig 9.6.4.34: 1st vertical derivative of RTP map

Emphasises near-surface discontinuities at intrusive margins, guiding placement of surface geochemical and trench follow-ups. Fig 9.6.4.34:

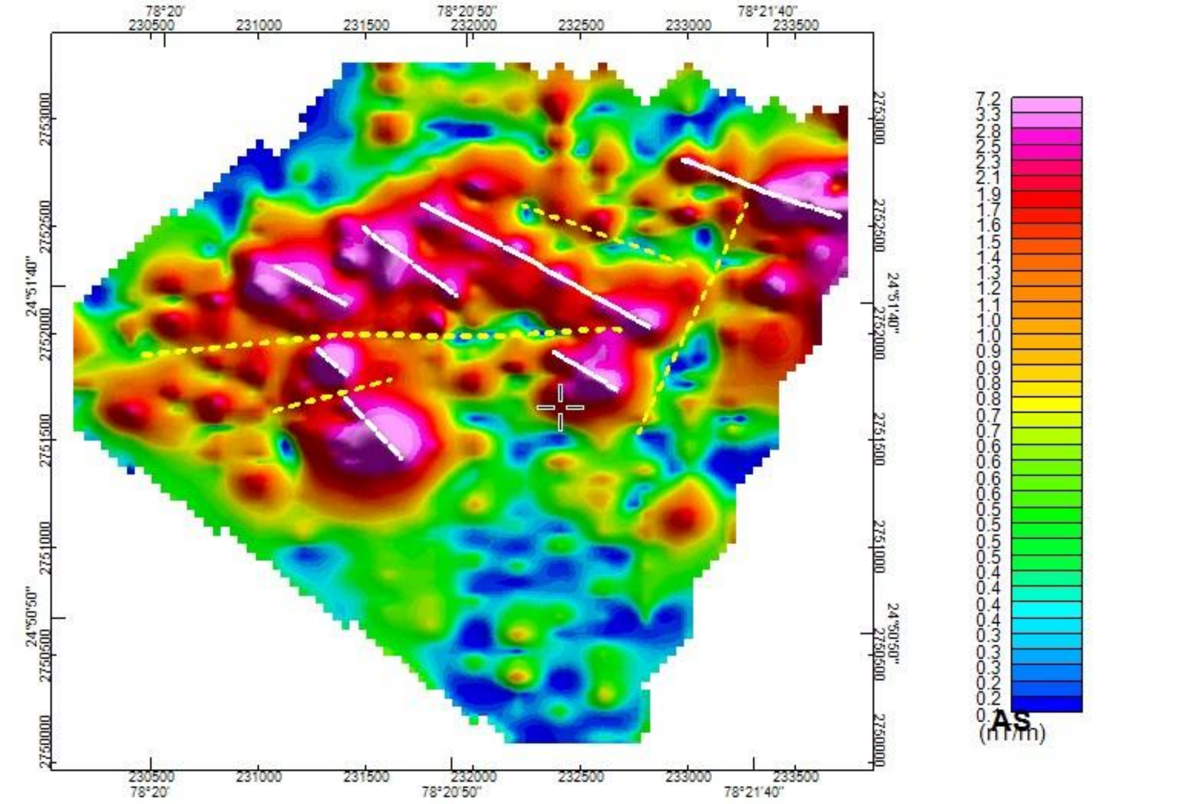


Fig 9.6.4.35: Lineaments projected on Analytical signal map.

Composite structural interpretation revealing an E–W lineament bisecting the intrusive body; intersection nodes are prioritised for fluid mixing and sulphide deposition. Fig 9.6.4.35

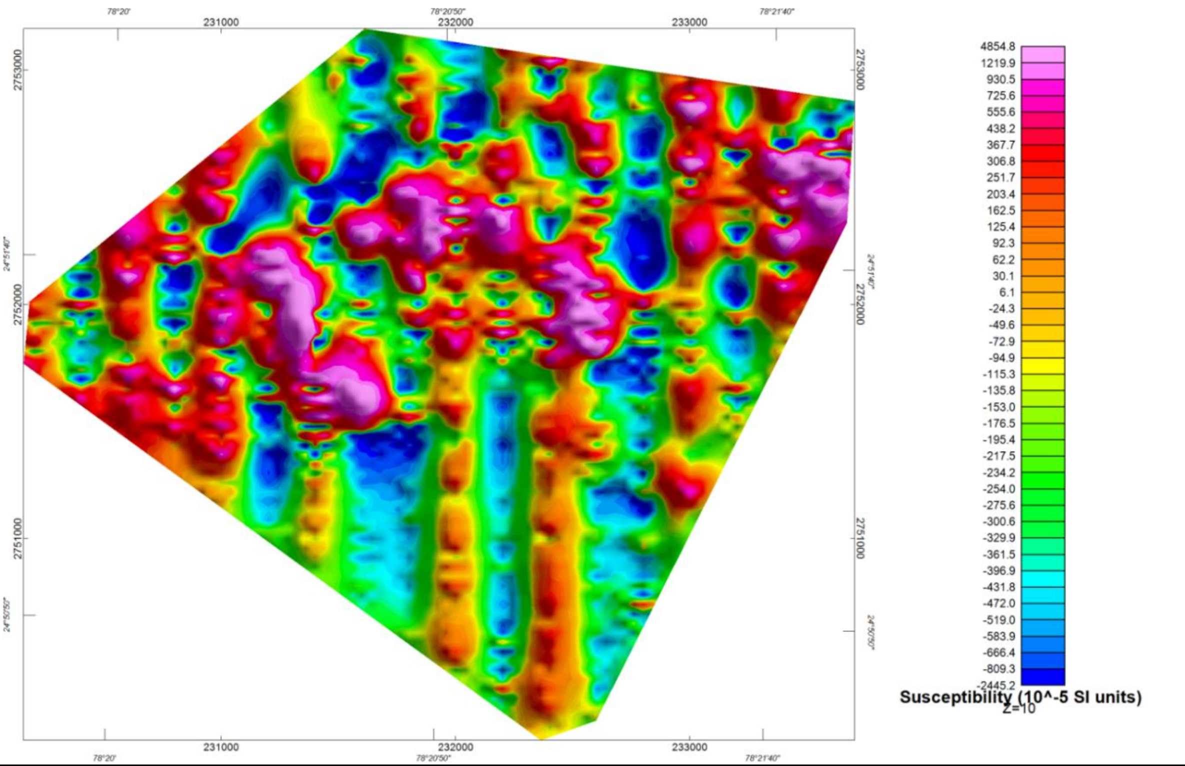


Fig 9.6.4.36: Depth slice Z=10 m

Shallow expression of the intrusive apex and adjacent fractures; limited small-scale segmentation suggests coherent lithology near surface. Fig 9.6.4.36

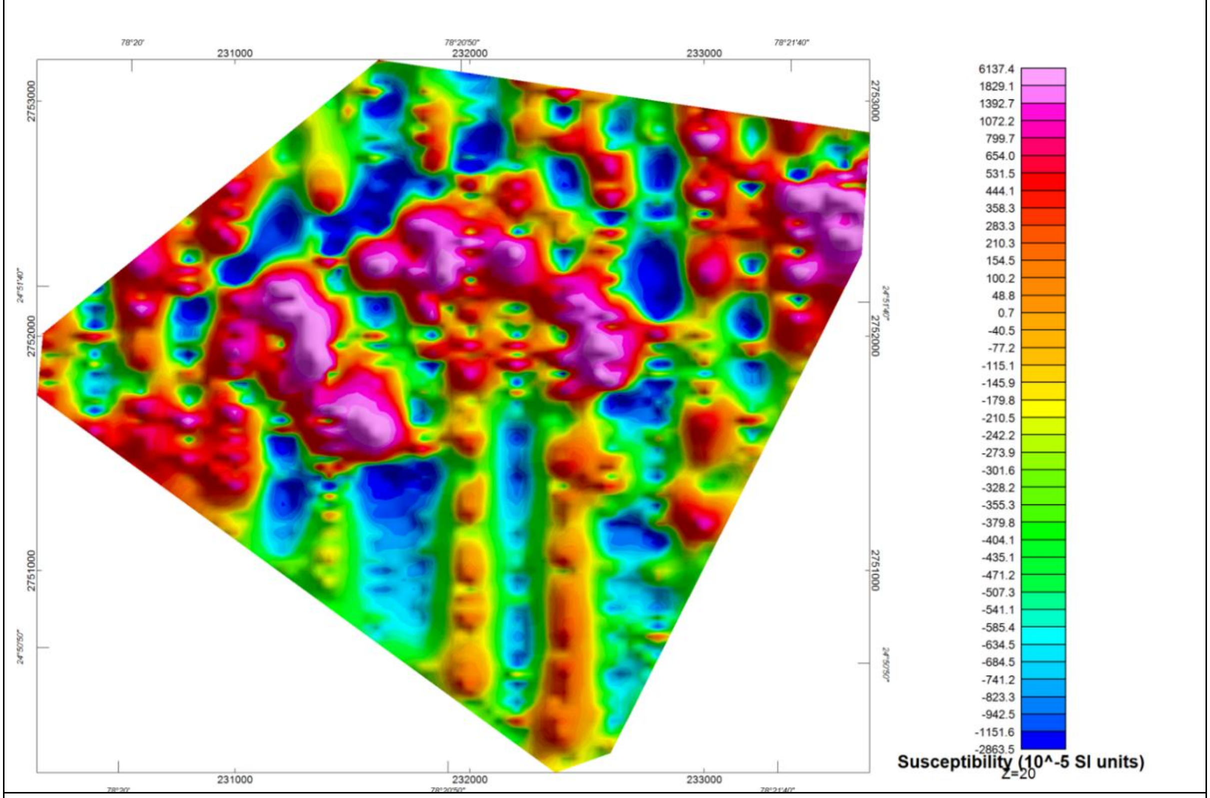


Fig 9.6.4.37: Depth slice Z=20m

Shows continuity of the central high and incipient development of fault-bounded margins; useful for mapping near-surface offsets. Fig 9.6.4.37

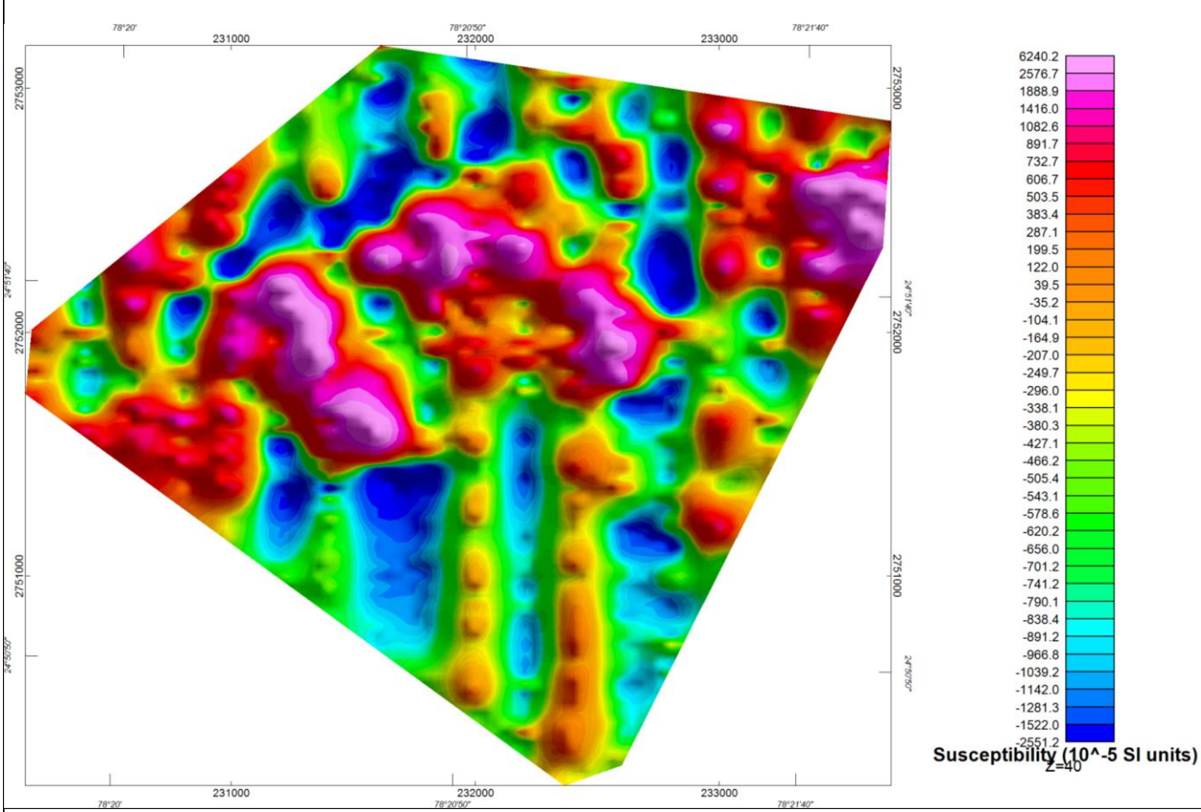


Fig 9.6.4.38: Depth slice Z=40 m

Deeper shallow slice where the intrusive plume thickens; margins remain structurally disrupted along E–W/NE–SW breaks. Fig 9.6.4.38

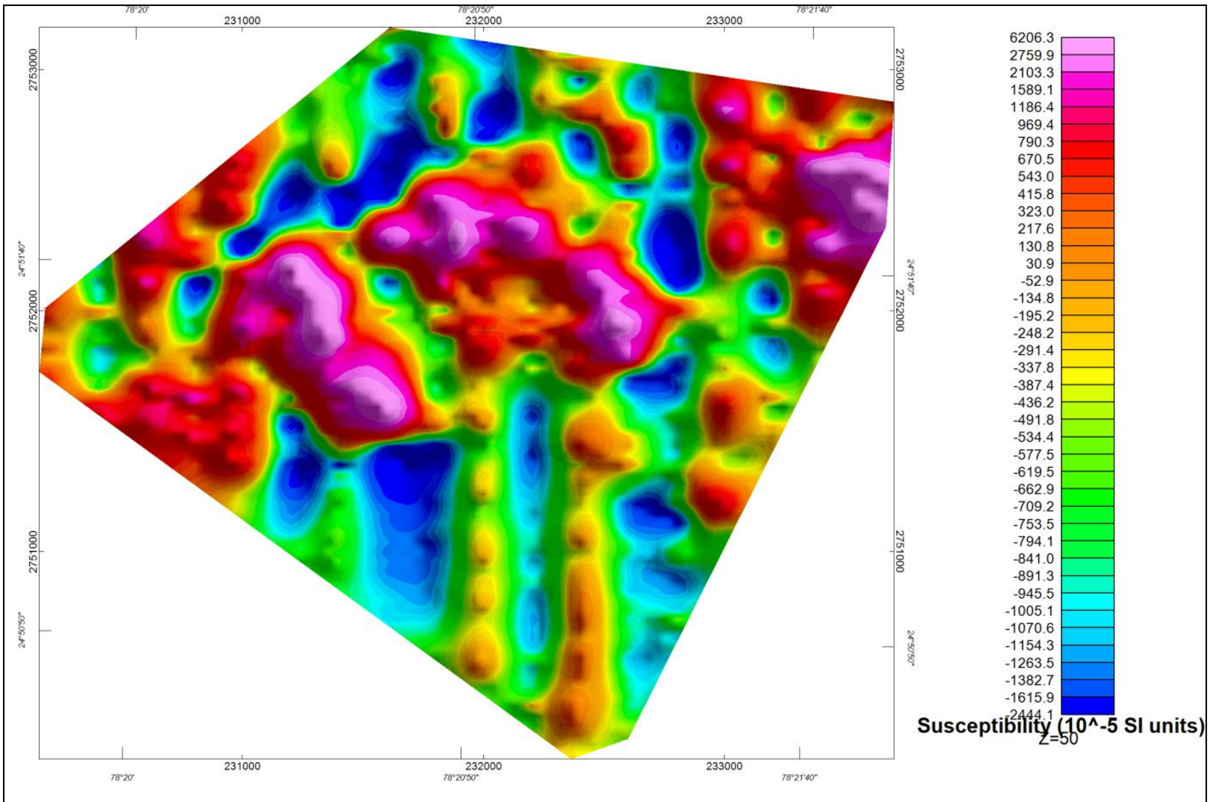


Fig 9.6.4.39: Depth slice Z=50 m

Mid-depth view confirming the continuity of the intrusive root and outlining clean contacts—favourable loci for contact-related mineralisation. Fig 9.6.4.39

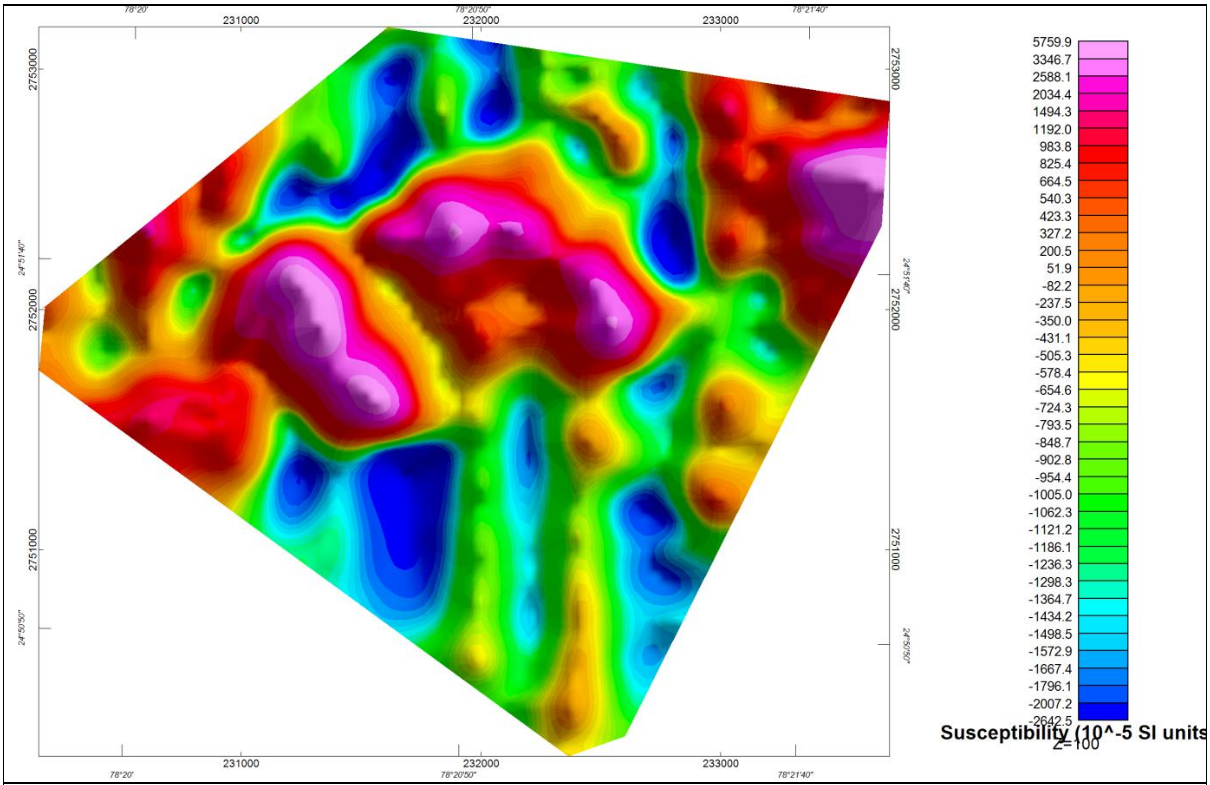


Fig 9.6.4.40: Depth slice Z=100 m

Deep slice with a coherent high and limited internal complexity, consistent with a robust intrusive phase. Fig 9.6.4.40

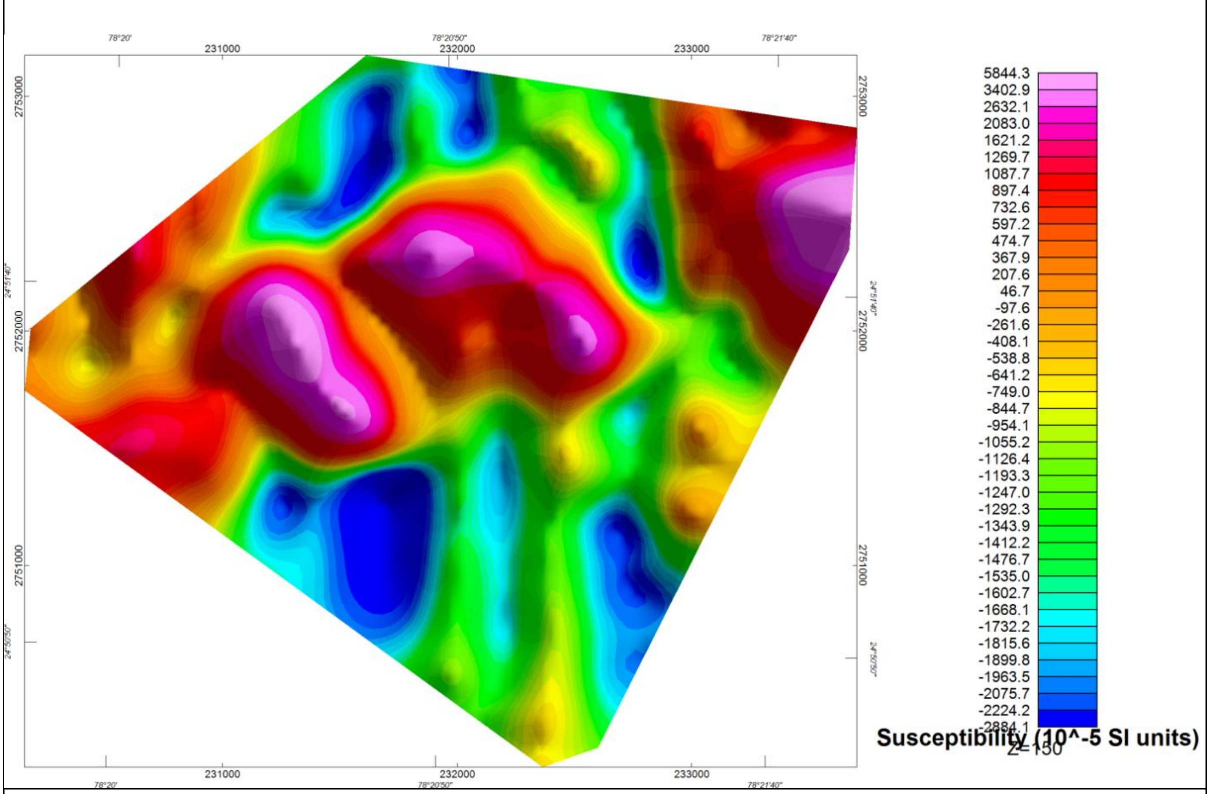


Fig 9.6.4.41: Depth slice Z=150 m

Deepest slice illustrating a persistent intrusive plume; surrounding lower susceptibilities imply altered wall-rock halos at depth. Fig 9.6.4.41

D. Sub-Block 4 – Mailar Advanced Argillic & Diorite Extension Zone

TMI **~46,300–48,800 nT**, with **1,000–3,000 nT** contrasts. Two strong **NW–SE linear highs** (mafic/ultramafic dykes or BIF) dominate; a broad **low-mag window** corresponds to **advanced argillic lithocap (pyrophyllite–alunite ± anhydrite)**; **NE–SW faults** cut NW–SE intrusives. Field mapping confirms **diorite** at surface; AS traces its **subsurface extension**.

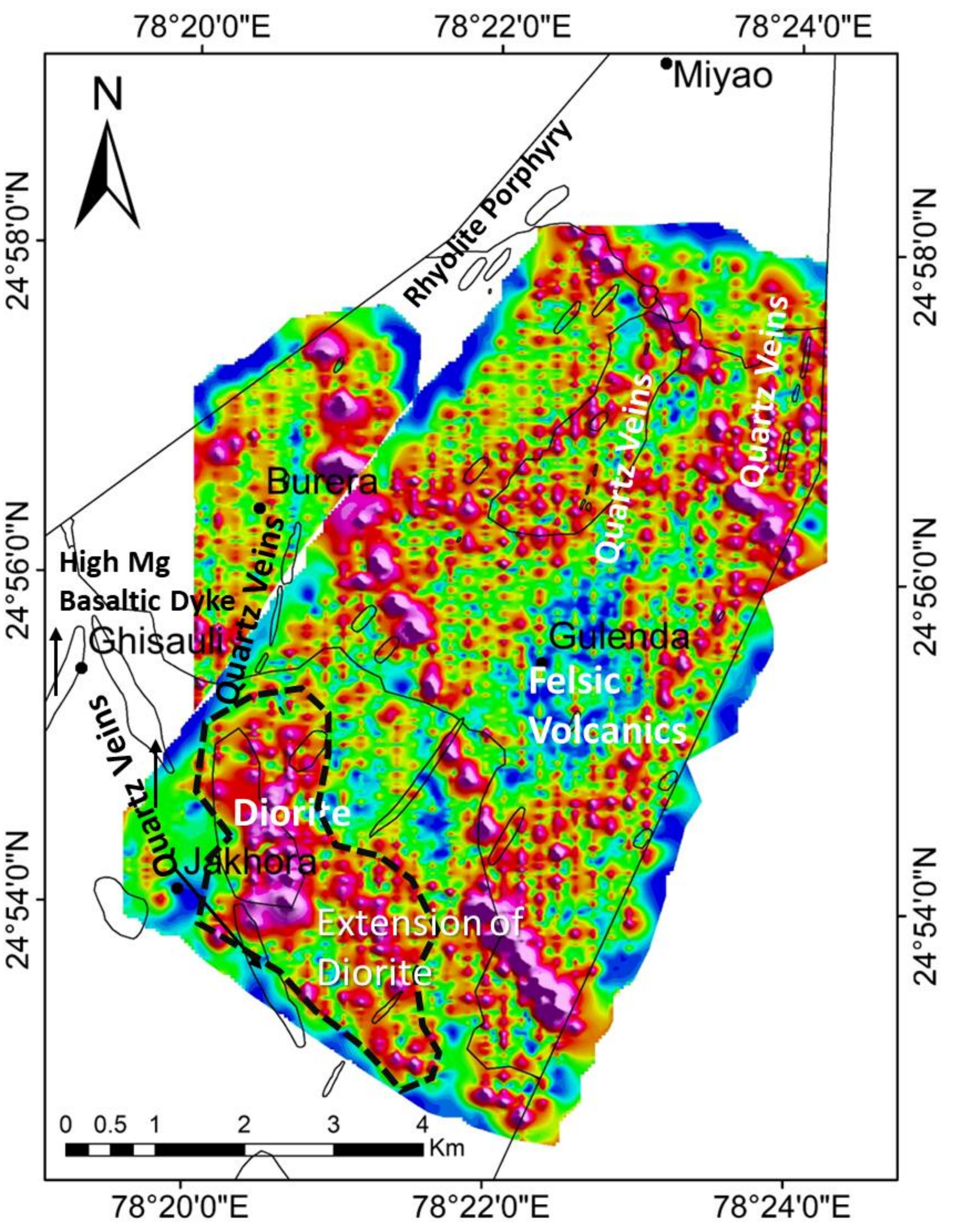


Fig 9.6.4.42: AS analysis in Volcanics

Method example showing AS edge-picking in volcanic/altered domains; used to trace diorite extension and define lithocap boundaries in Sub-block 4. Fig 9.6.4.42:

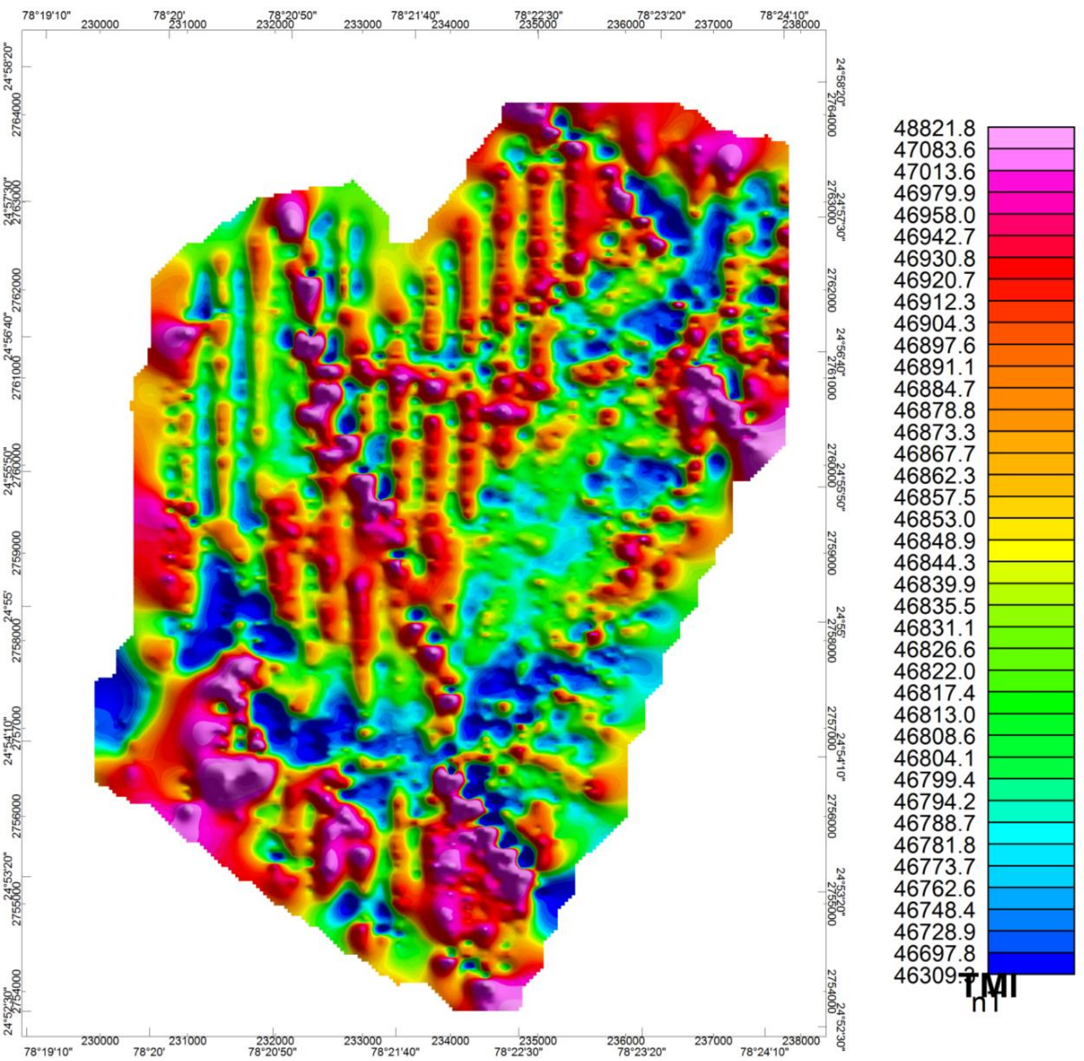


Fig 9.6.4.43: Total magnetic intensity (TMI) map

Two strong NW–SE linear highs (mafic/ultramafic dyke belt) dominate; an expansive low corresponds to an advanced-argillic lithocap (pyrophyllite–alunite ± anhydrite). Fig 9.6.4.43

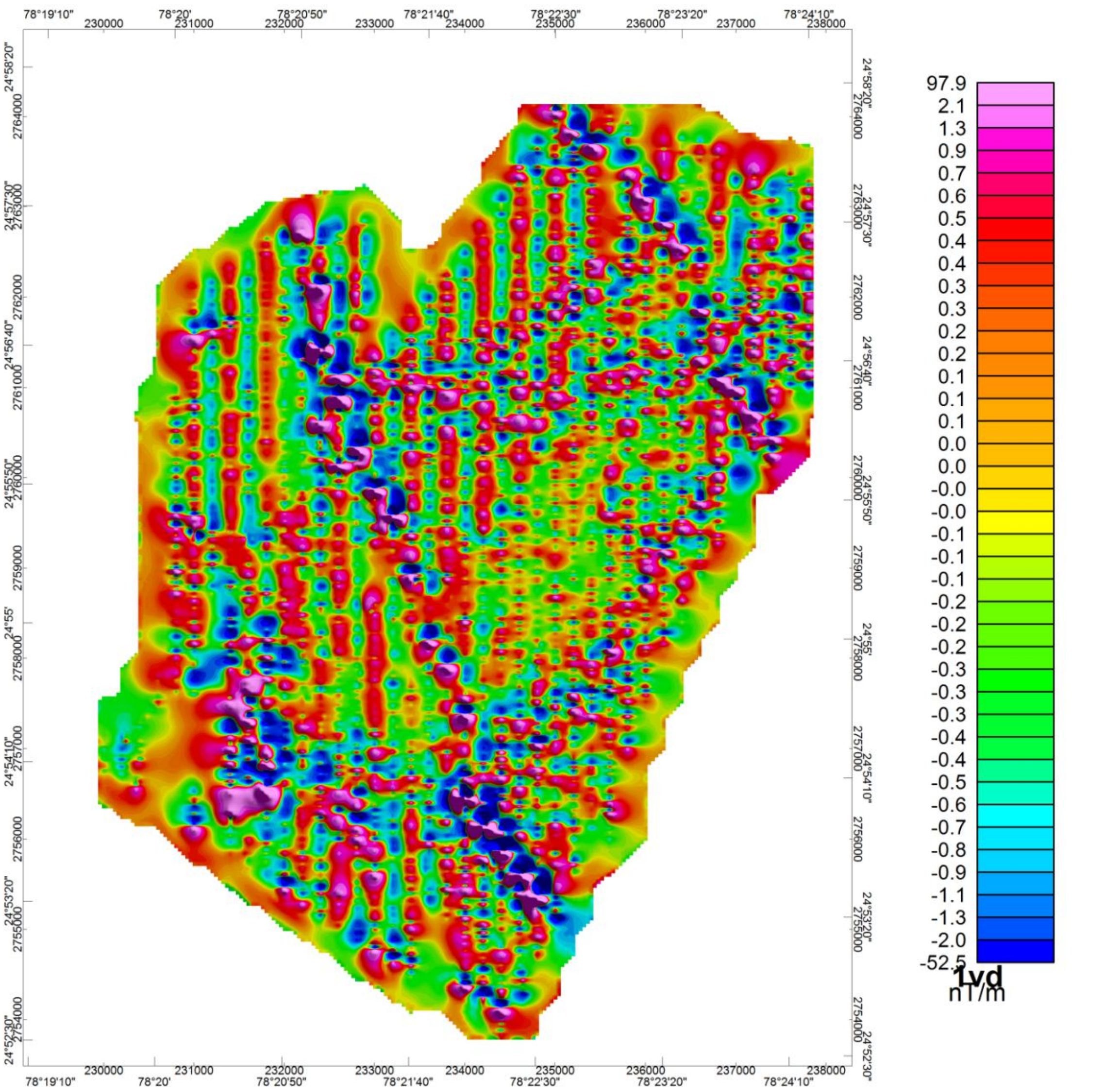


Fig 9.6.4.44: 1st Vertical derivative map

Sharpens the dyke belt and reveals NE–SW breaks that dislocate the NW–SE trend—structural controls for telescoped epithermal overprints. Fig 9.6.4.44

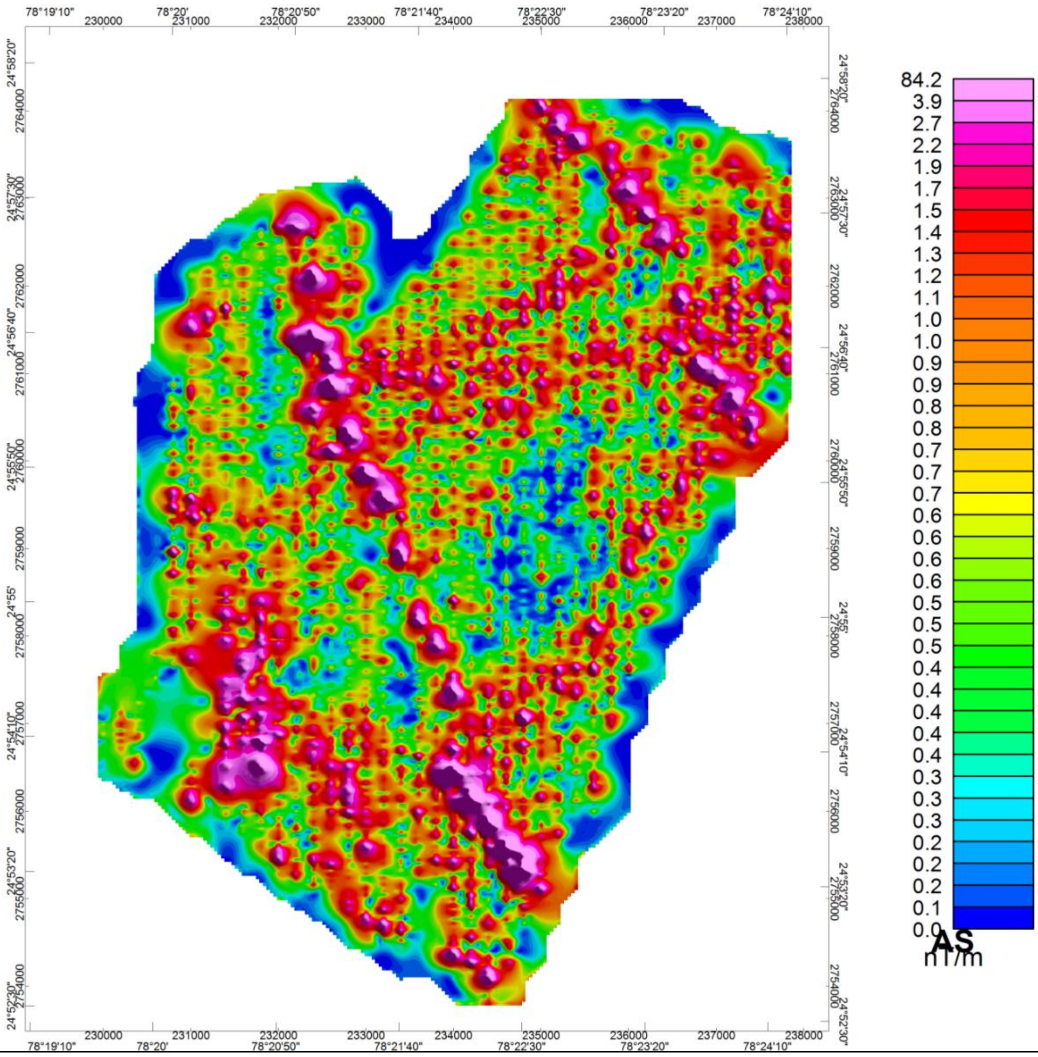


Fig 9.6.4.45: Analytical signal map

Defines magnetic boundaries crisply; dislocations from the NW–SE trend mark NE–SW faulting, and AS ridges trace the subsurface extension of mapped diorite. Fig 9.6.4.45

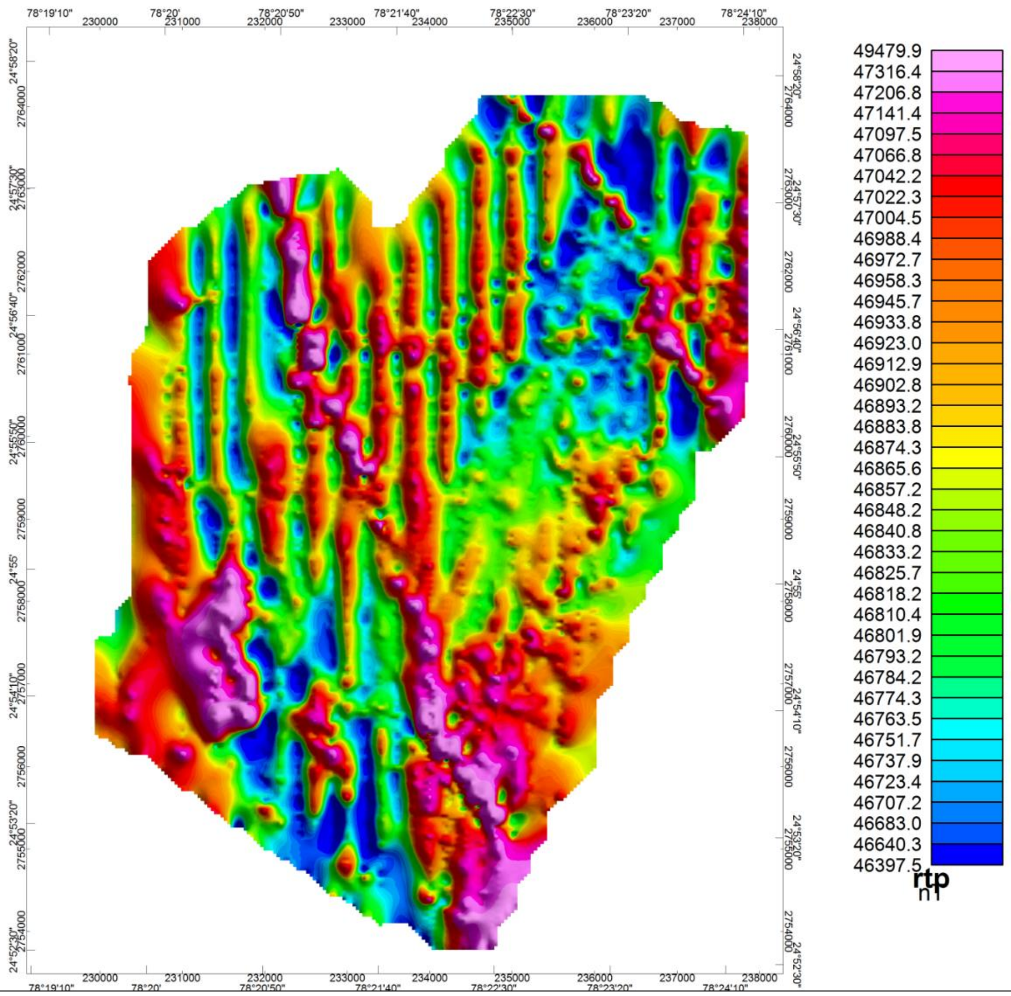


Fig 9.6.4.46: RTP map

Recentres linear highs and clarifies where near-surface discontinuities flip with depth; comparison with AS separates true contacts from shallow segmentation. Fig 9.6.4.46

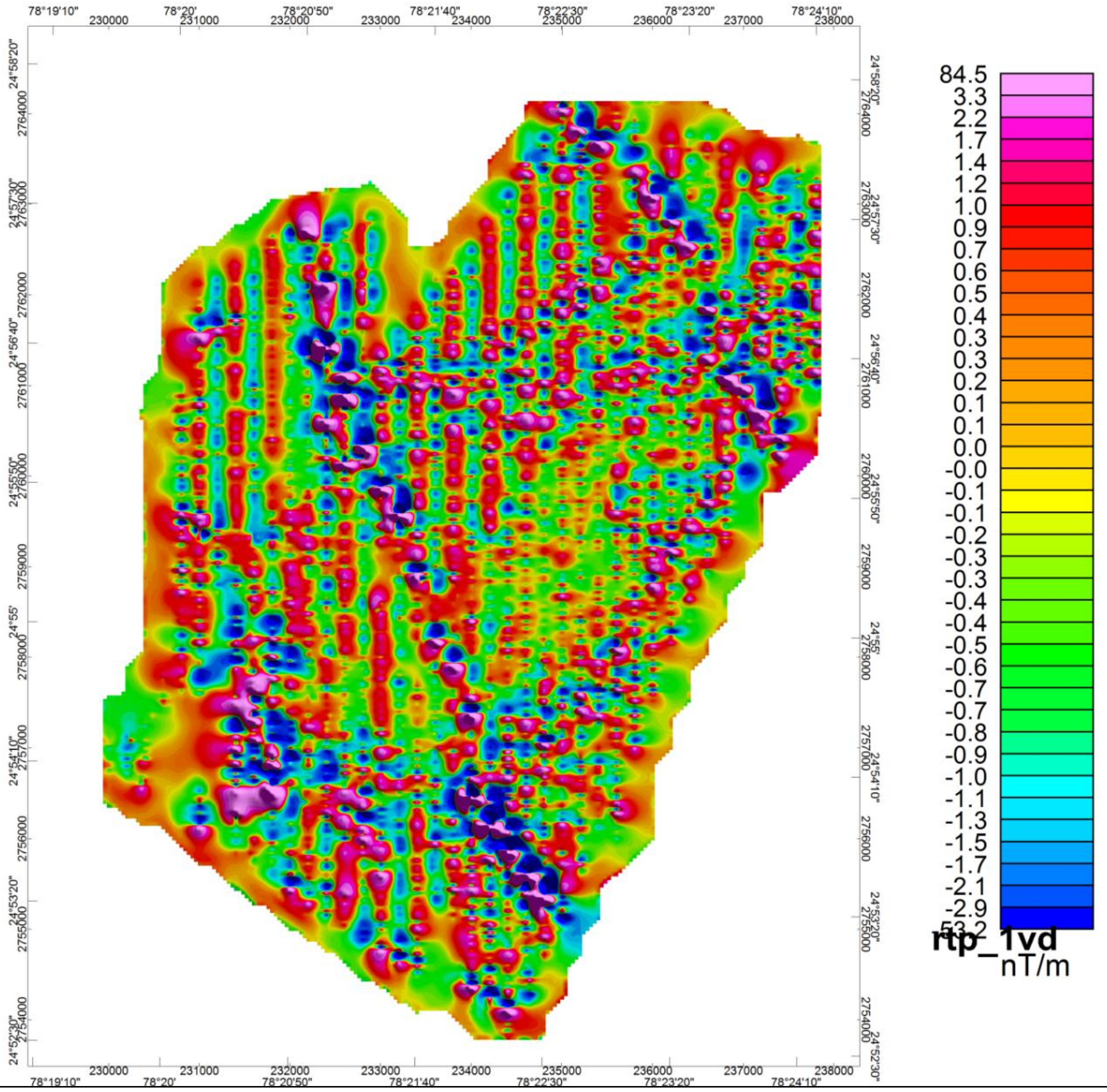


Fig 9.6.4.47: 1st vertical derivative of RTP map

Enhances shallow anomalies showing both NW–SE linear highs and NE–SW features; ideal for siting resistivity/IP lines across the lithocap. Fig 9.6.4.47

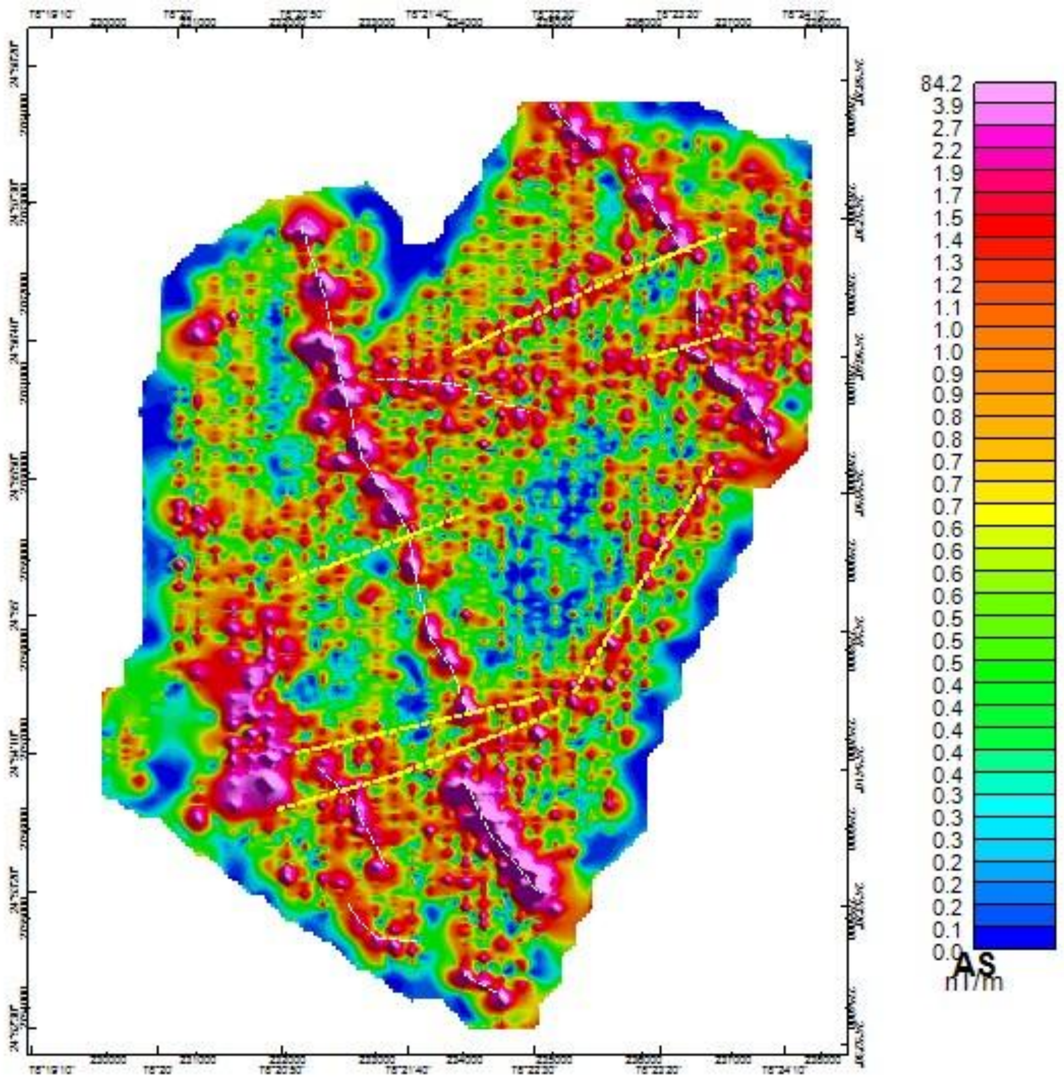


Fig 9.6.4.48: Lineaments projected on Analytical signal map

Composite structural map depicting dense lineament intersections where NE–SW faults cross the NW–SE dyke belt—priority nodes for fluid mixing and sulphide deposition. Fig 9.6.4.48

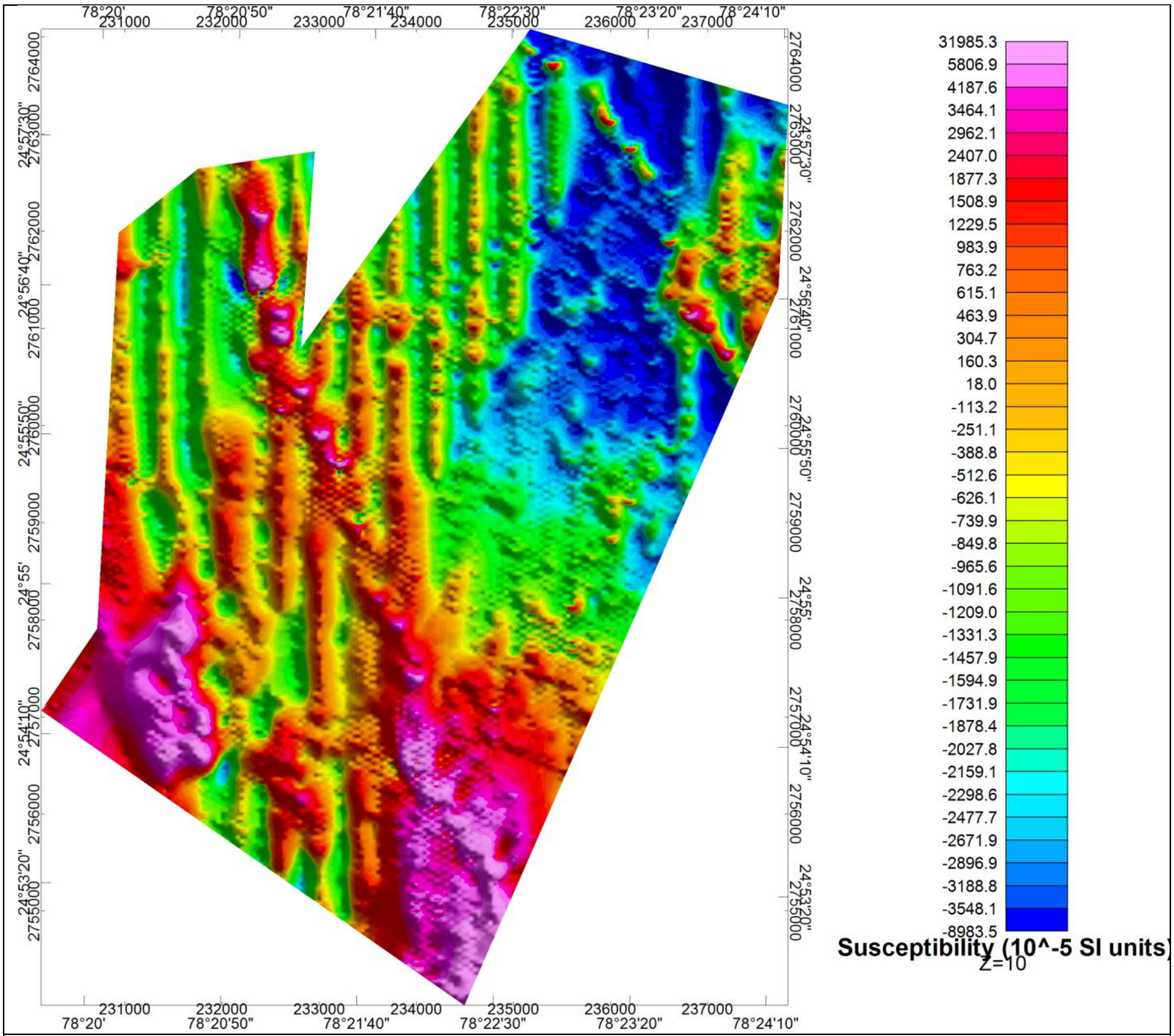


Fig 9.6.4.49: Depth slice Z = 10 m

Very shallow slice showing lithocap-related lows and the shallow expression of dyke strands; guides trench planning on epithermal veins. Fig 9.6.4.49

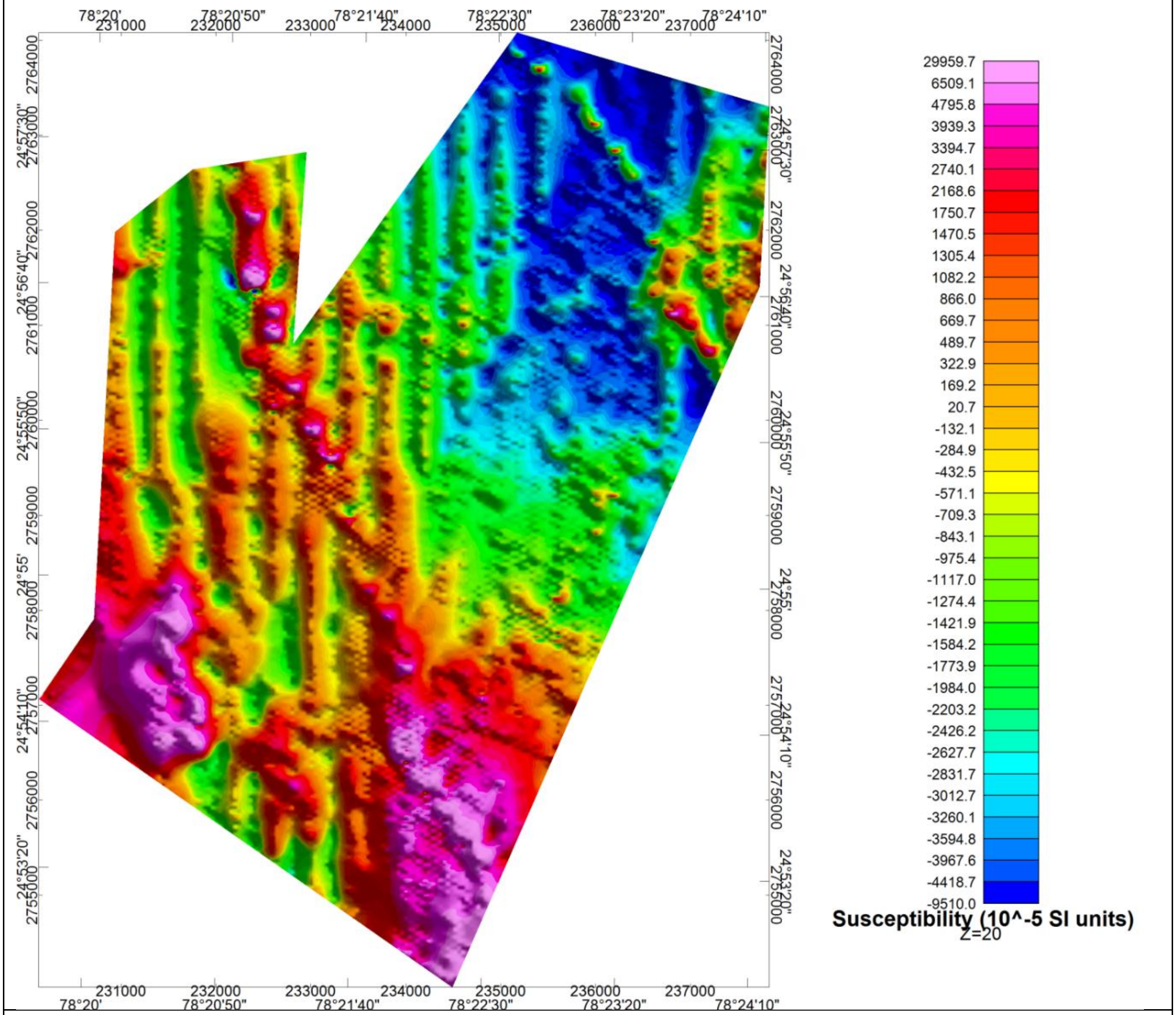


Fig 9.6.4.50: Depth slice Z = 10 m

Companion shallow slice reinforcing lateral continuity of low-susceptibility caps and delineating dyke apices; helps resolve near-surface structural breaks. Fig 9.6.4.50

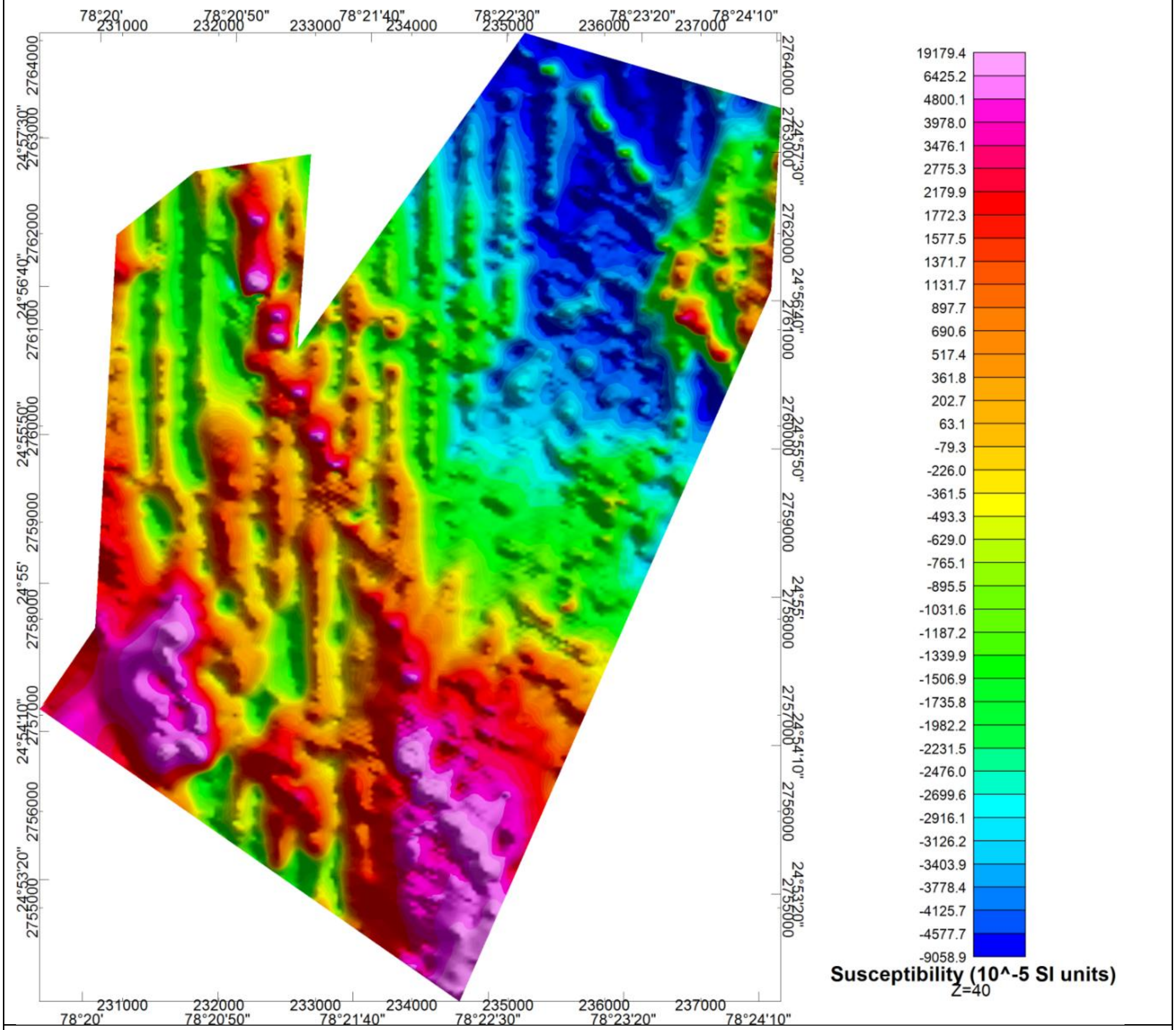


Fig 9.6.4.51: Depth slice Z = 40 m

Mid-shallow slice with clearer differentiation of the lithocap and dyke roots; ideal to pair with VES/SP profiles. Fig 9.6.4.51

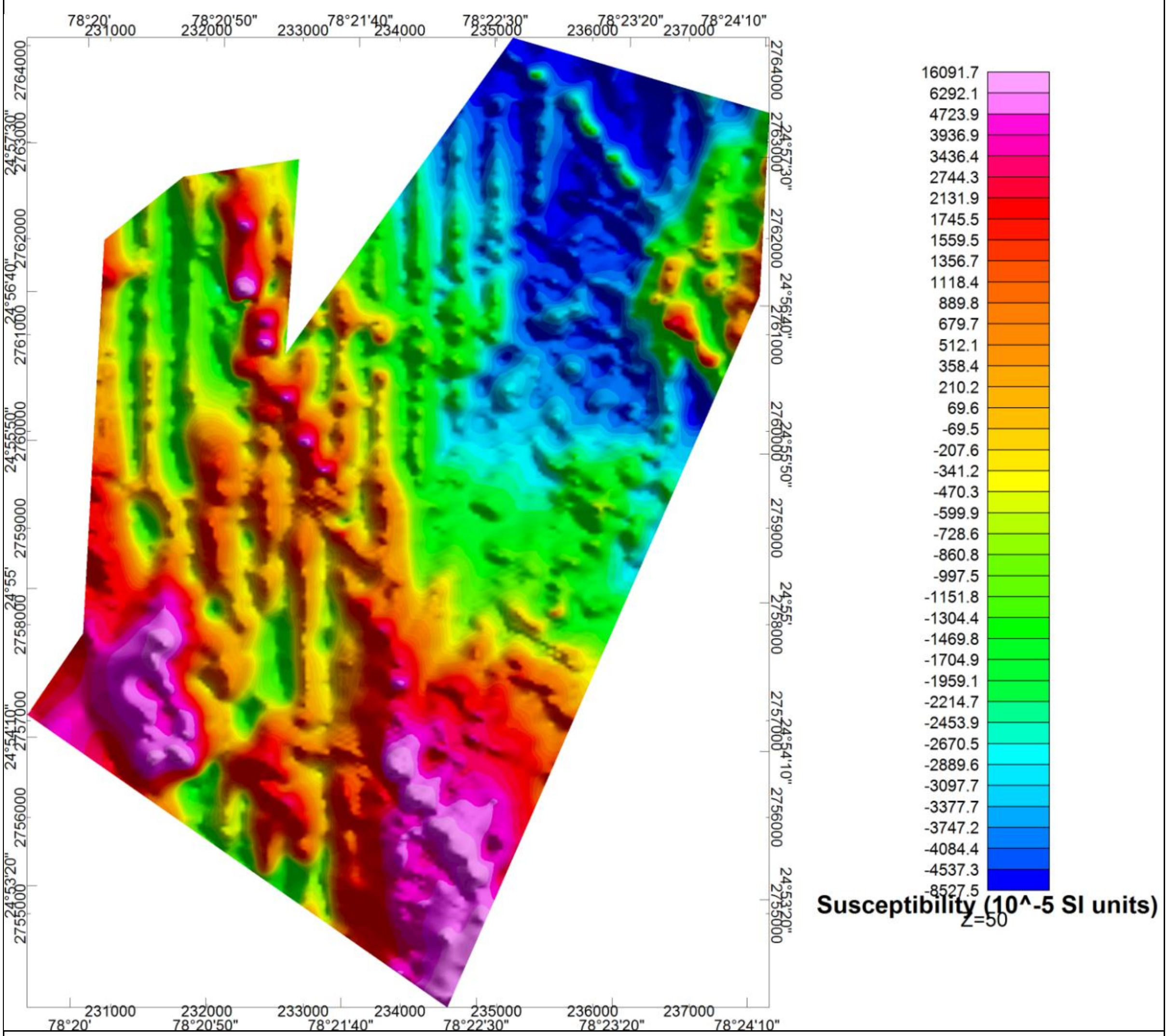


Fig 9.6.4.52: Depth slice Z = 50 m

Transitional depth confirming NE–SW offsets within the dyke belt and continuity of the low-mag cap. Fig 9.6.4.52

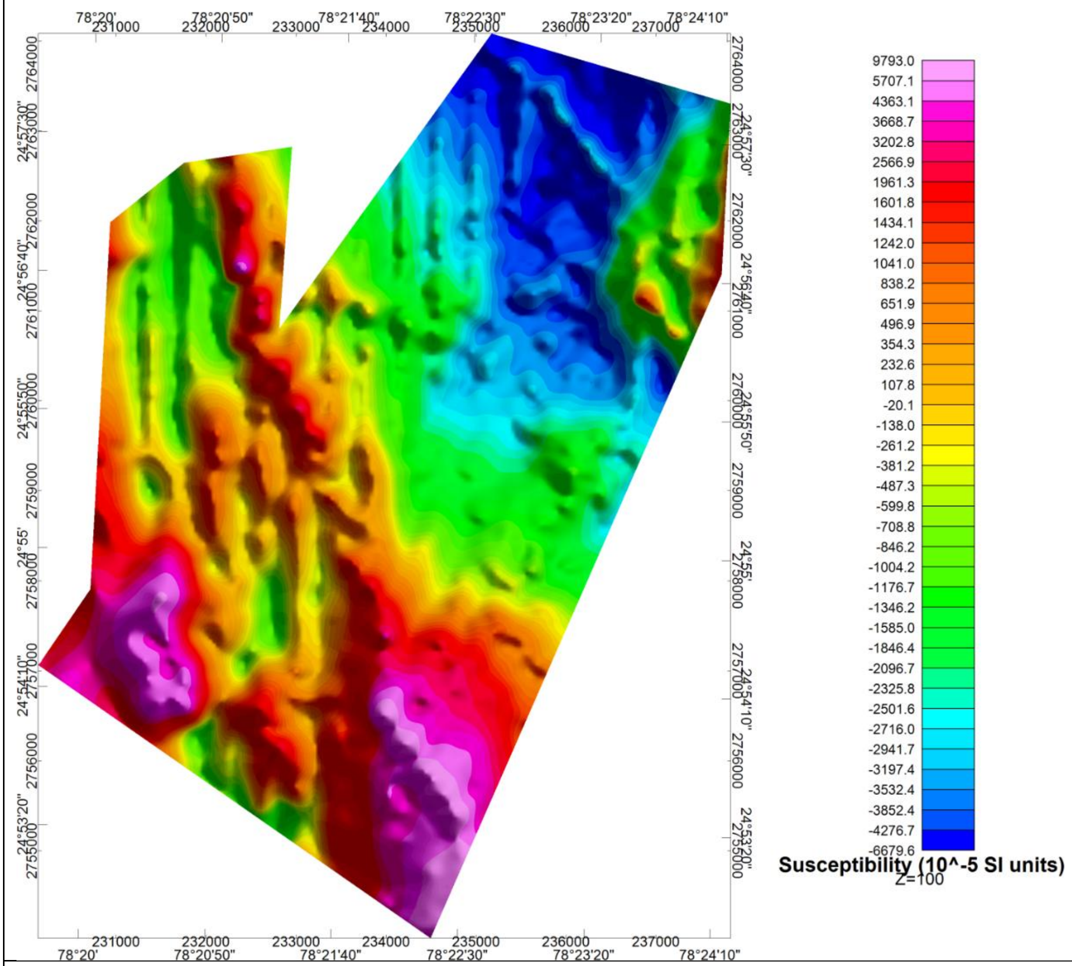


Fig 9.6.4.53: Depth slice Z = 100 m

Deeper slice where dyke roots remain high-susceptibility and the lithocap low persists—consistent with advanced argillic alteration at scale. Fig 9.6.4.53 and 54.

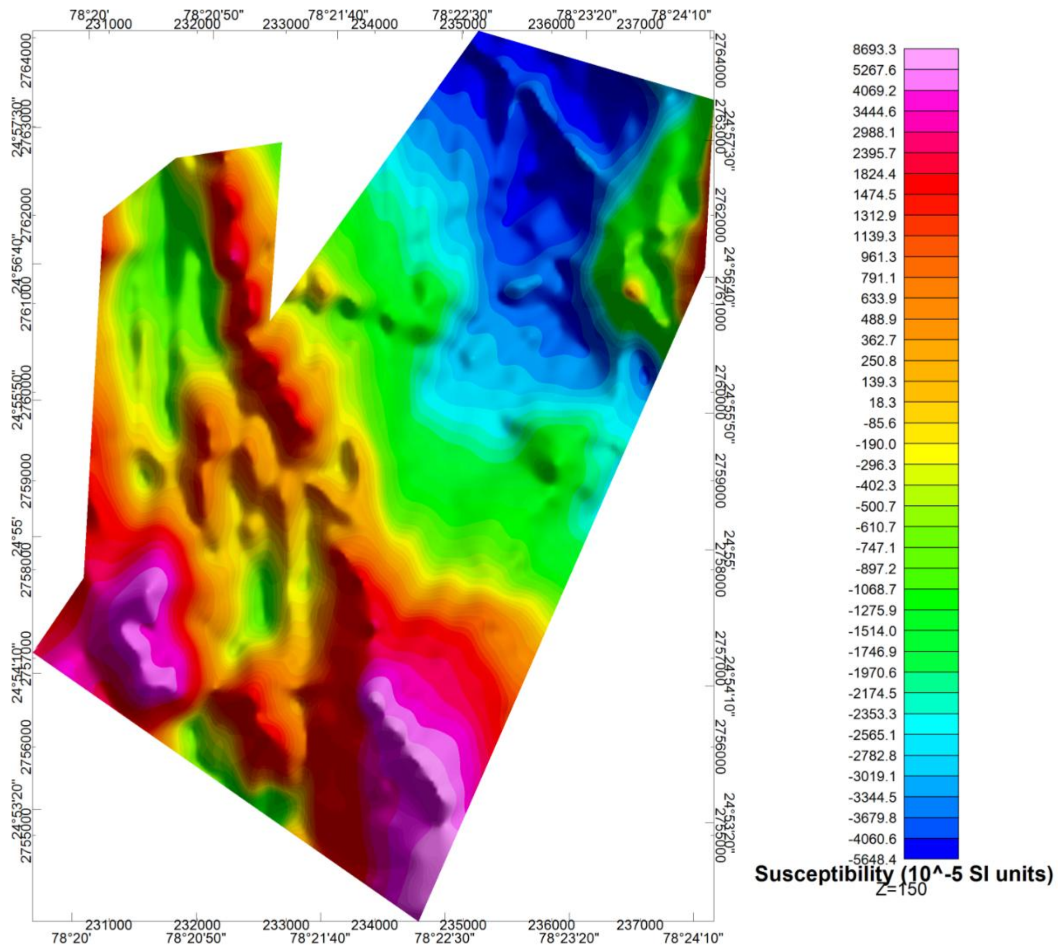


Fig 9.6.4.54 Depth slice Z = 150 m

9.6.5 3-D Inversion, Susceptibility and Lithological Inference

Blockwise 3-D inversion indicates typical bulk susceptibilities of ~2,000 × 10^{-5} SI in Sub-blocks 1–2, ~5,000 × 10^{-5} SI in Sub-block 3, and up to ~8,000 × 10^{-5} SI in Sub-block 4. Values of >2,000 × 10^{-5} SI are consistent with mafic/ultramafic or magnetite-rich lithologies (and serpentinites where present), while smooth, persistent lows mark felsic/altered and lithocap domains. Depth slices at Z = 150 m resolve intrusive roots, dyke belts, and the footprint of magnetite-destructive alteration.

9.6.5.1 Geological interpretation of the Magnetic Sub block 1

Magnetic data for Sub-block 1 indicate a demagnetized zone in the western part of the block. Field verification confirms the presence of pyrophyllite in this area. In contrast, the eastern part exhibits high magnetic anomalies. These high anomalies are interrupted by the demagnetized zones in the southern part, suggesting the possible presence of a fault along which a later phase of intrusion may have occurred. The area hosts medium-grained granite with sericitic alteration and minor sulphide mineralization. 9.6.5.1a-1d.

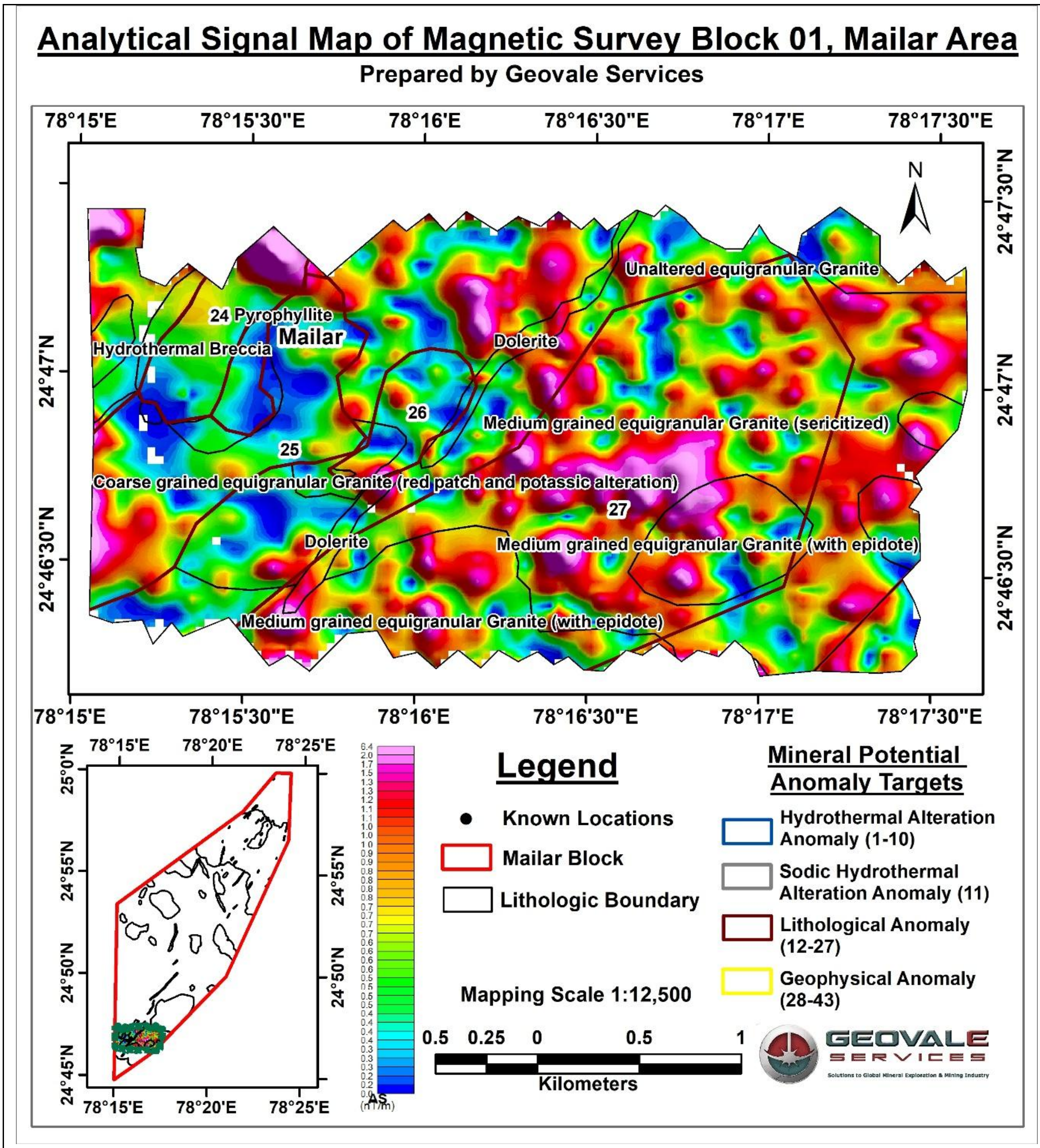


Fig 9.6.5.1a: Mailar_Zone01_AS

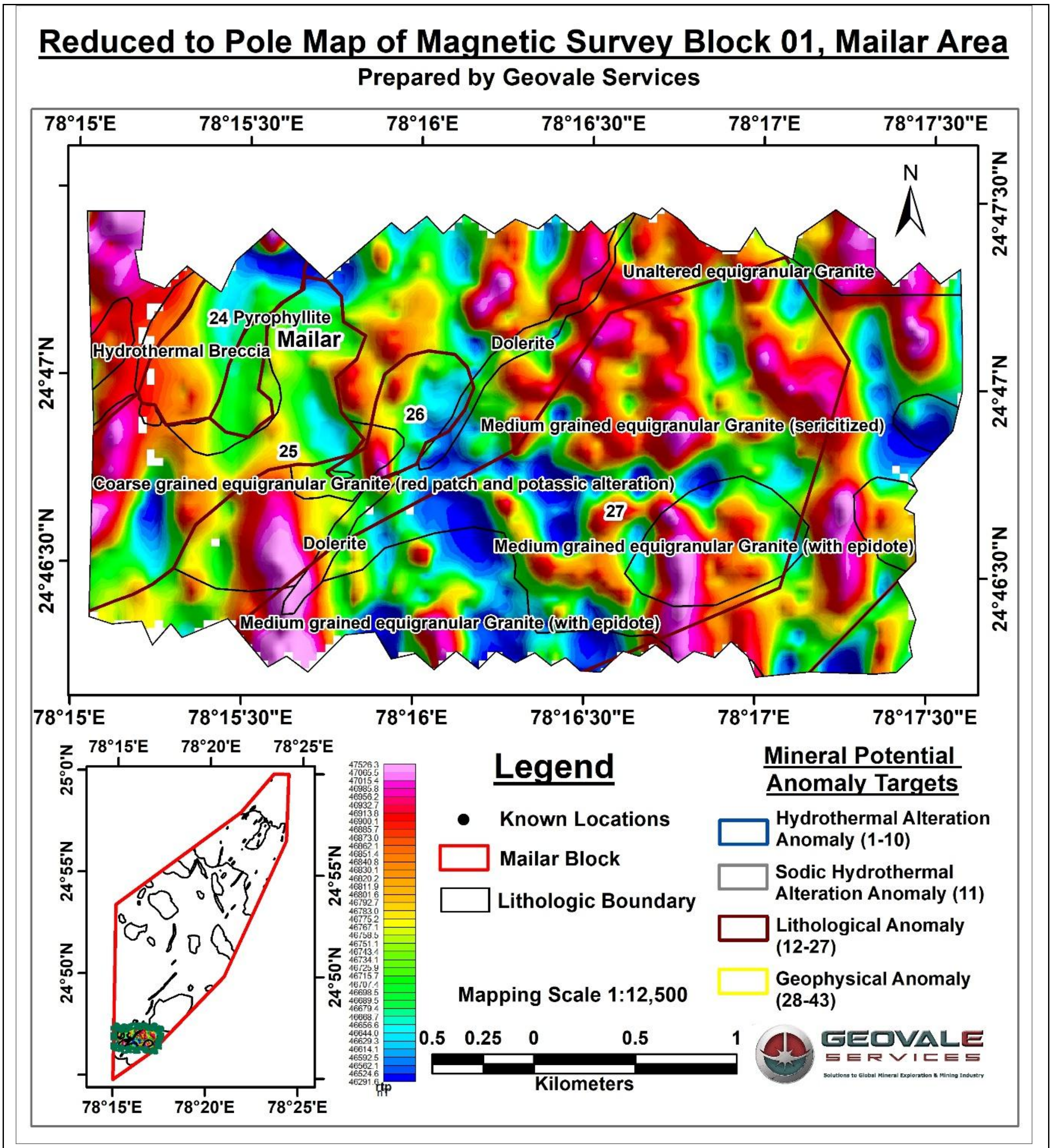


Fig 9.6.5.1b: Mailar_Zone01_RTP

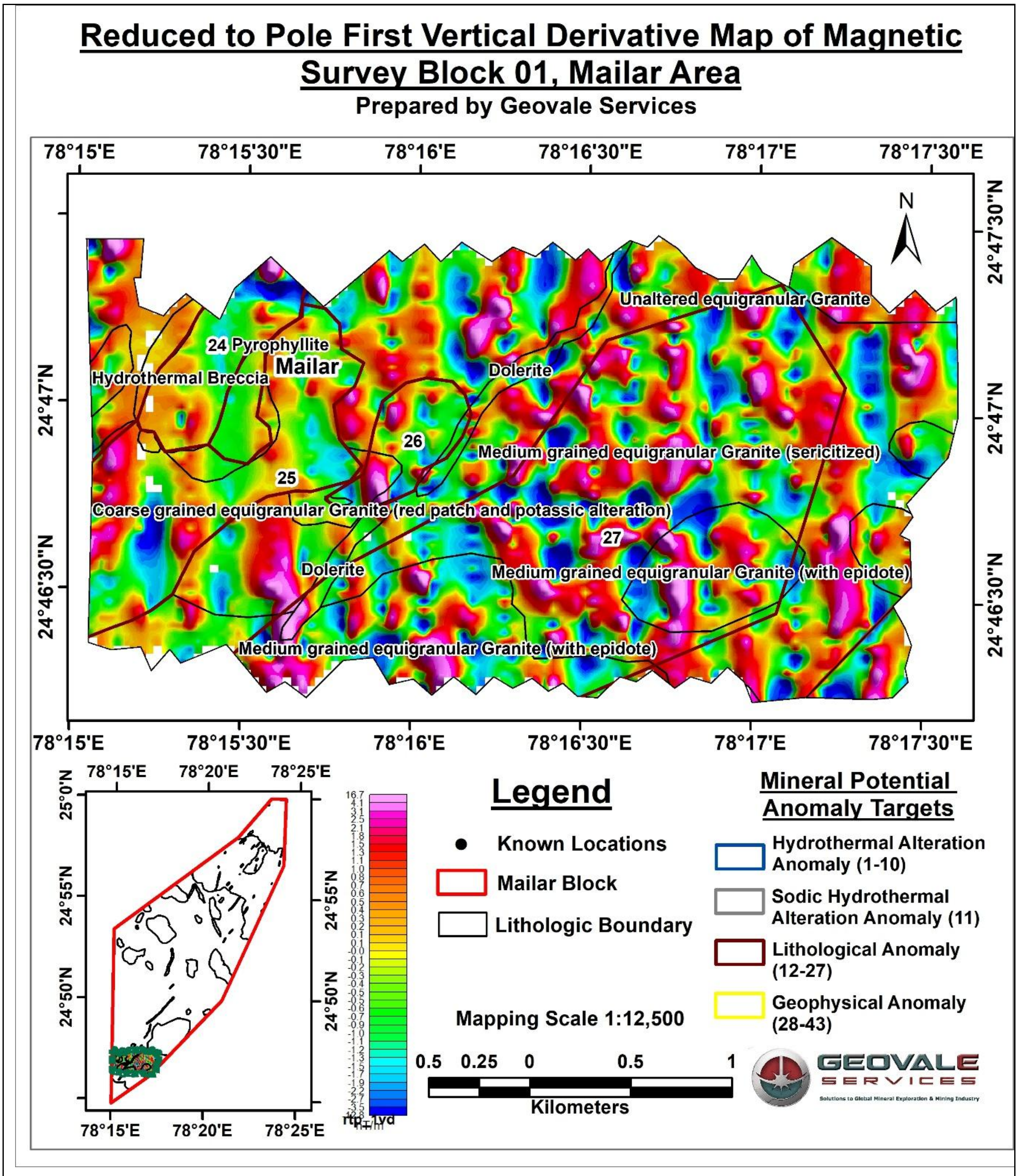


Fig 9.6.5.1c: Mailar_Zone01_RTP_1VD

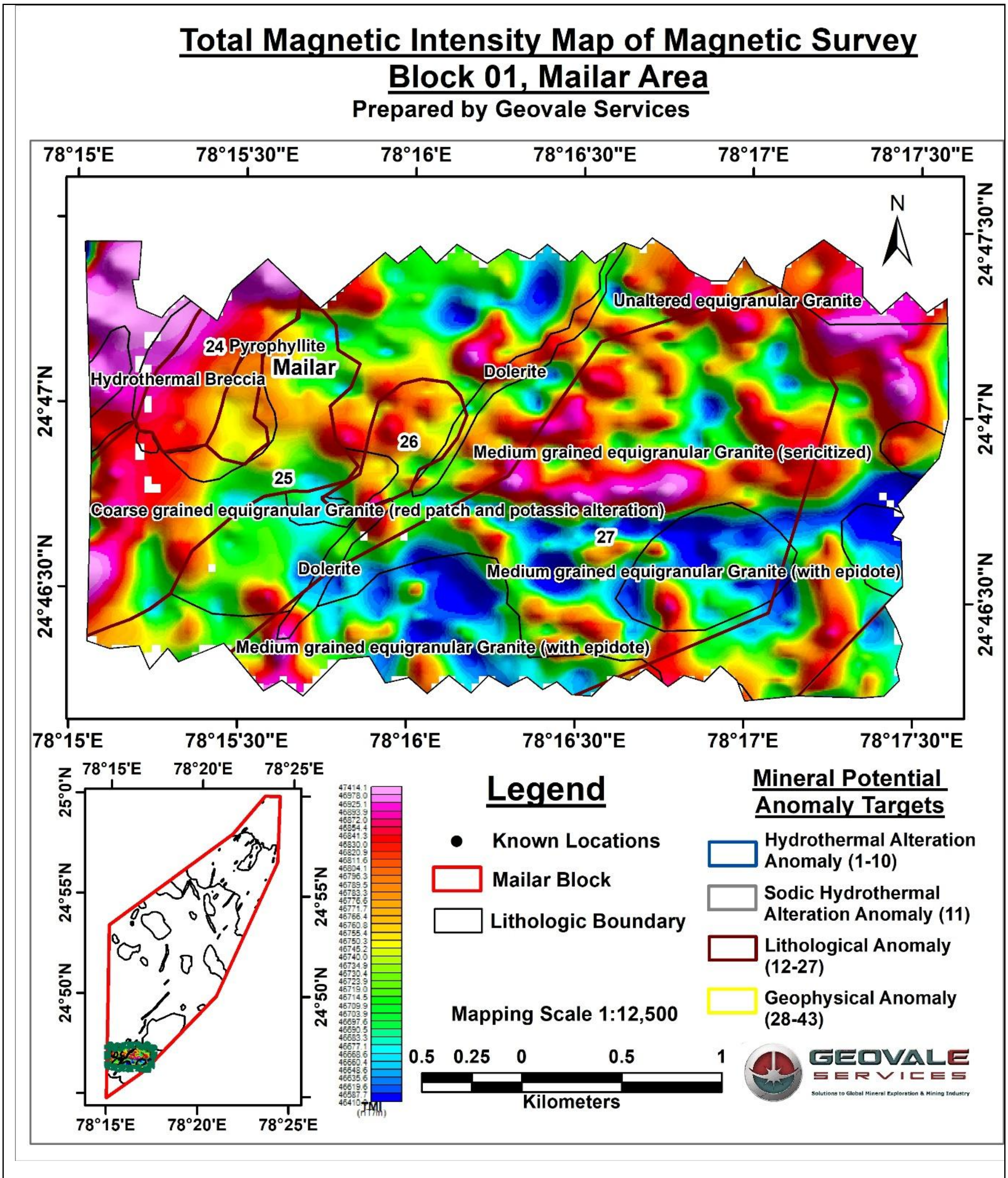
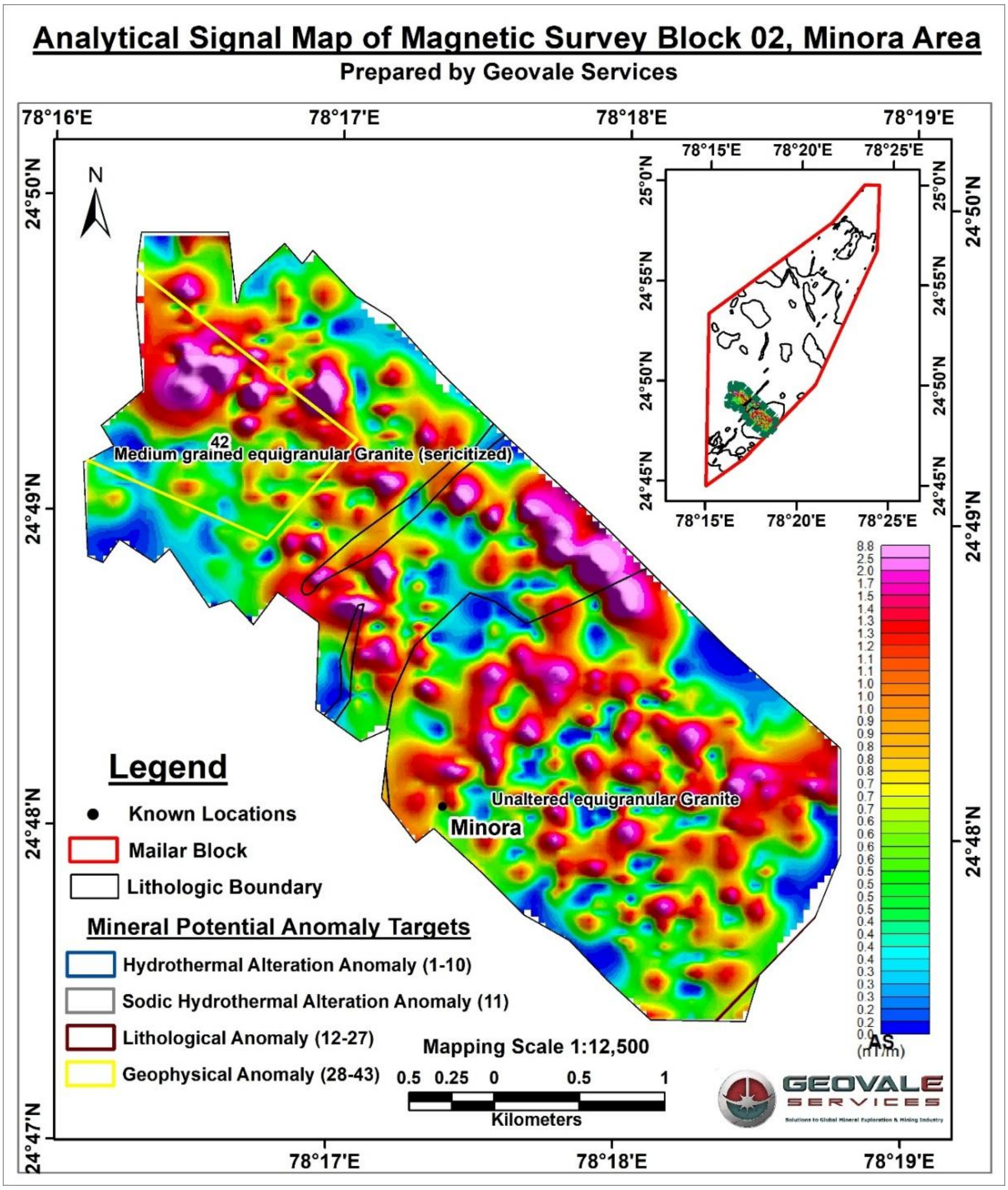


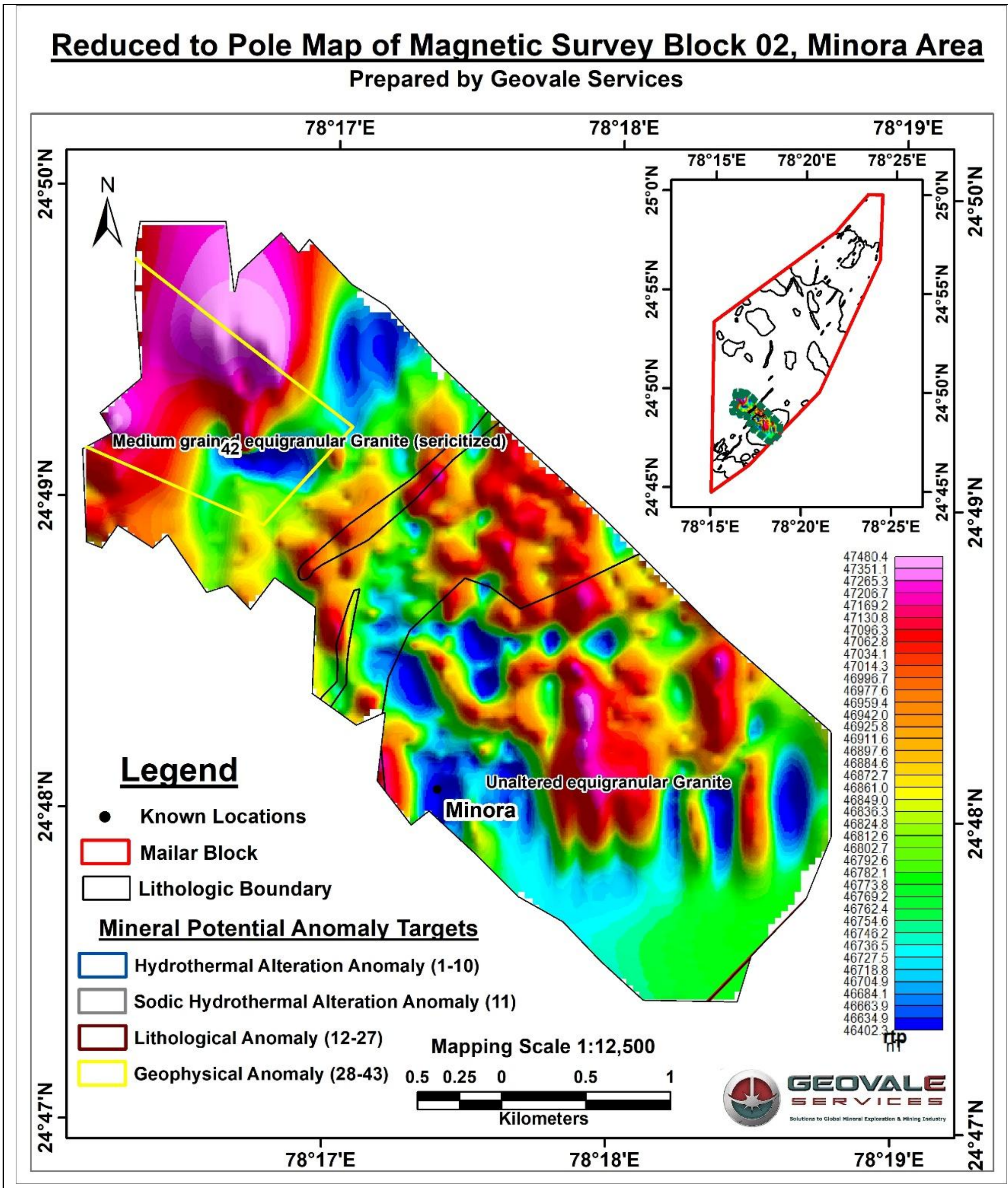
Fig 9.6.5.1d: Mailar_Zone01_TMI

9.6.5.2 Geological interpretation of the Magnetic Sub block 2

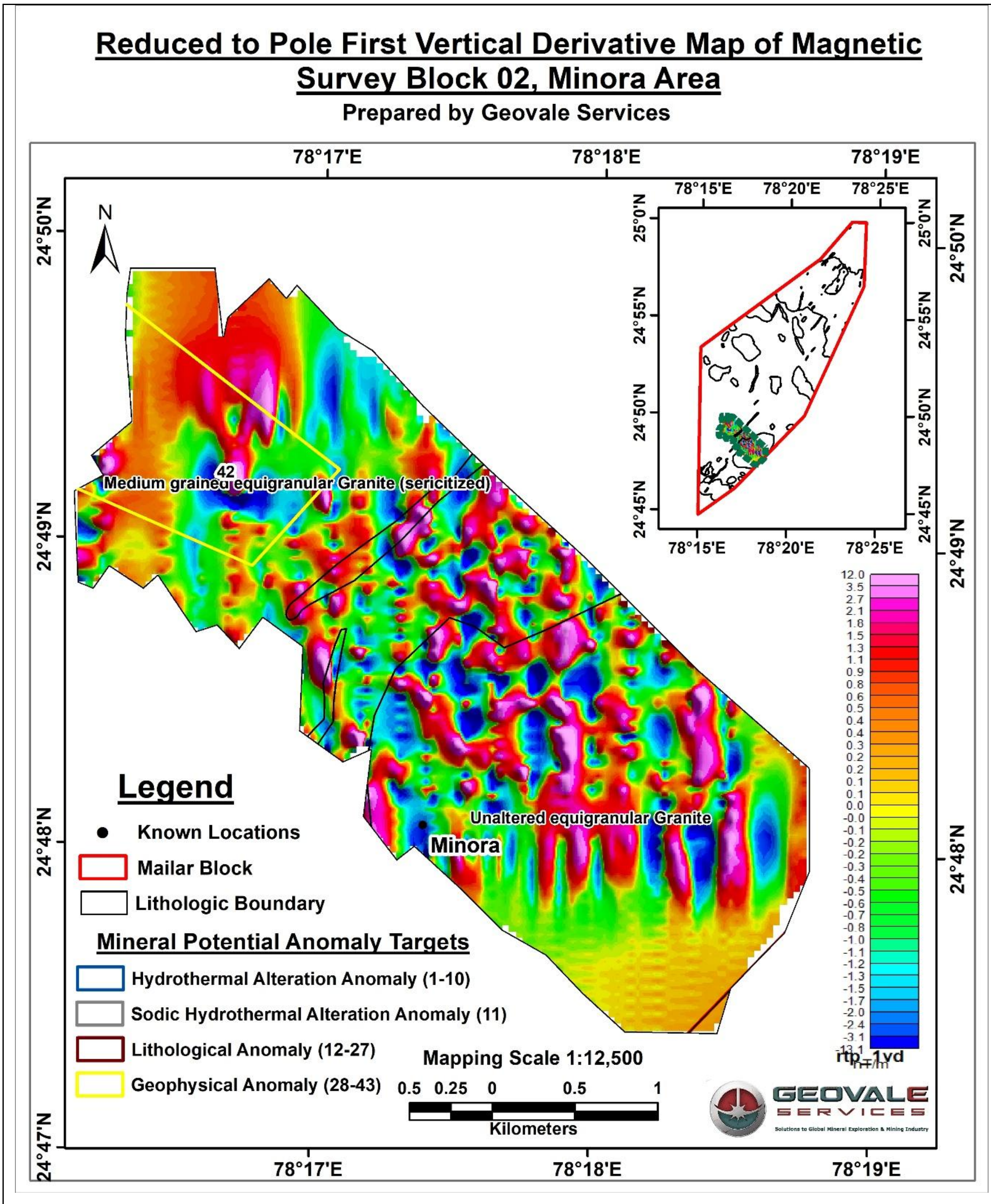
Sub-block 2 exhibits a high magnetic anomaly zone and a demagnetized area in the central part. The high magnetic anomaly is likely associated with sulphide mineral traces within medium-grained, equigranular granite showing sericitic to minor alteration (Fig. 9.6.5.2a-2d).



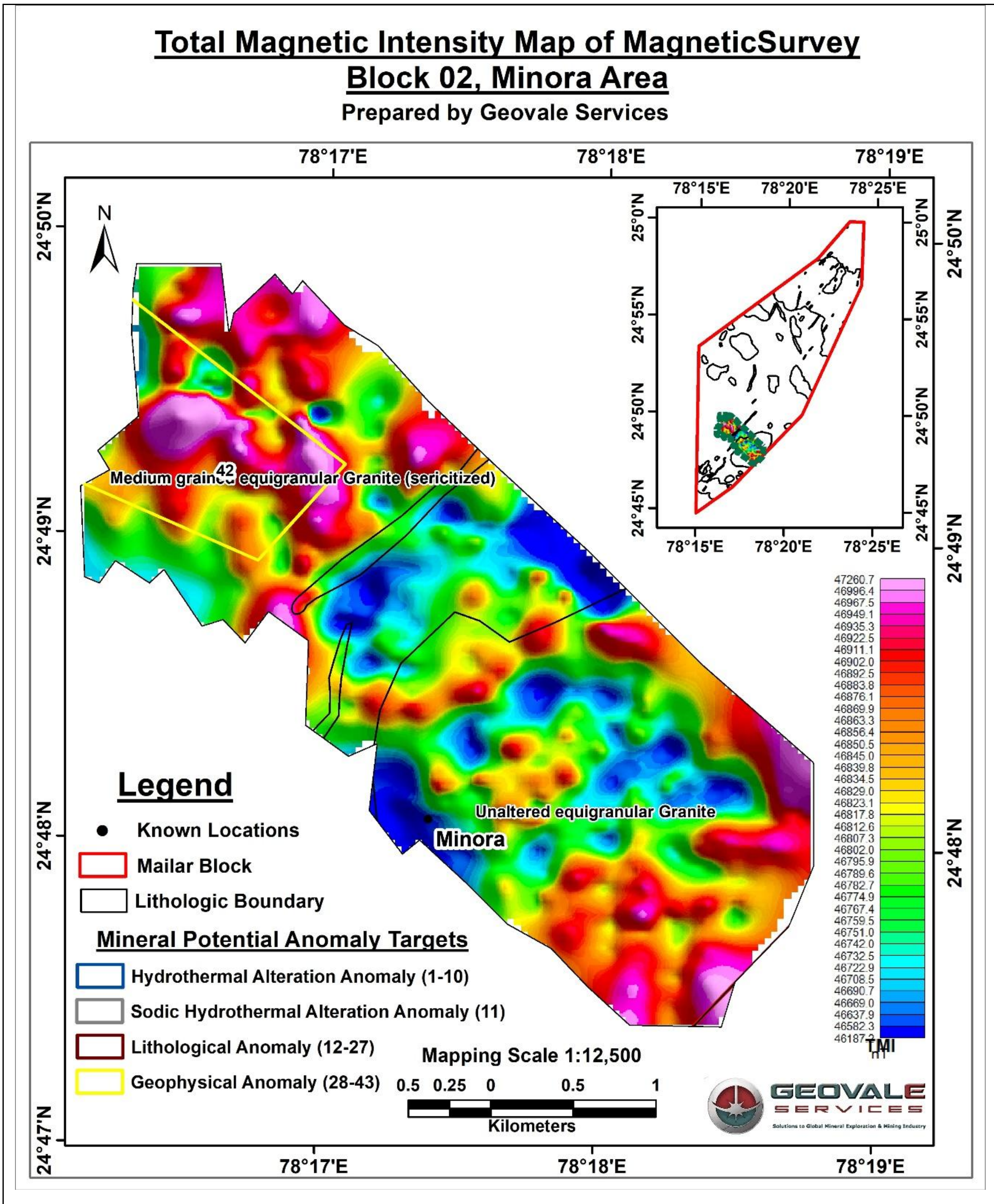
9.6.5.2a:Mailar_Zone02_AS



9.6.5.2b: Mailar_Zone02_RTP



9.6.5.2c: Mailar_Zone02_RTP_1VD



9.6.5.2d: Mailar_Zone02_TMI

9.6.5.3 Geological interpretation of the Magnetic Sub block 3

The sub block 3 implying the presence of the elliptical circular zones. Field verification confirms the occurrence of diorite in this area; however, the magnetic data suggest that the diorite extends further into the subsurface, as illustrated in the accompanying (Fig 9.6.5.3a-3d).

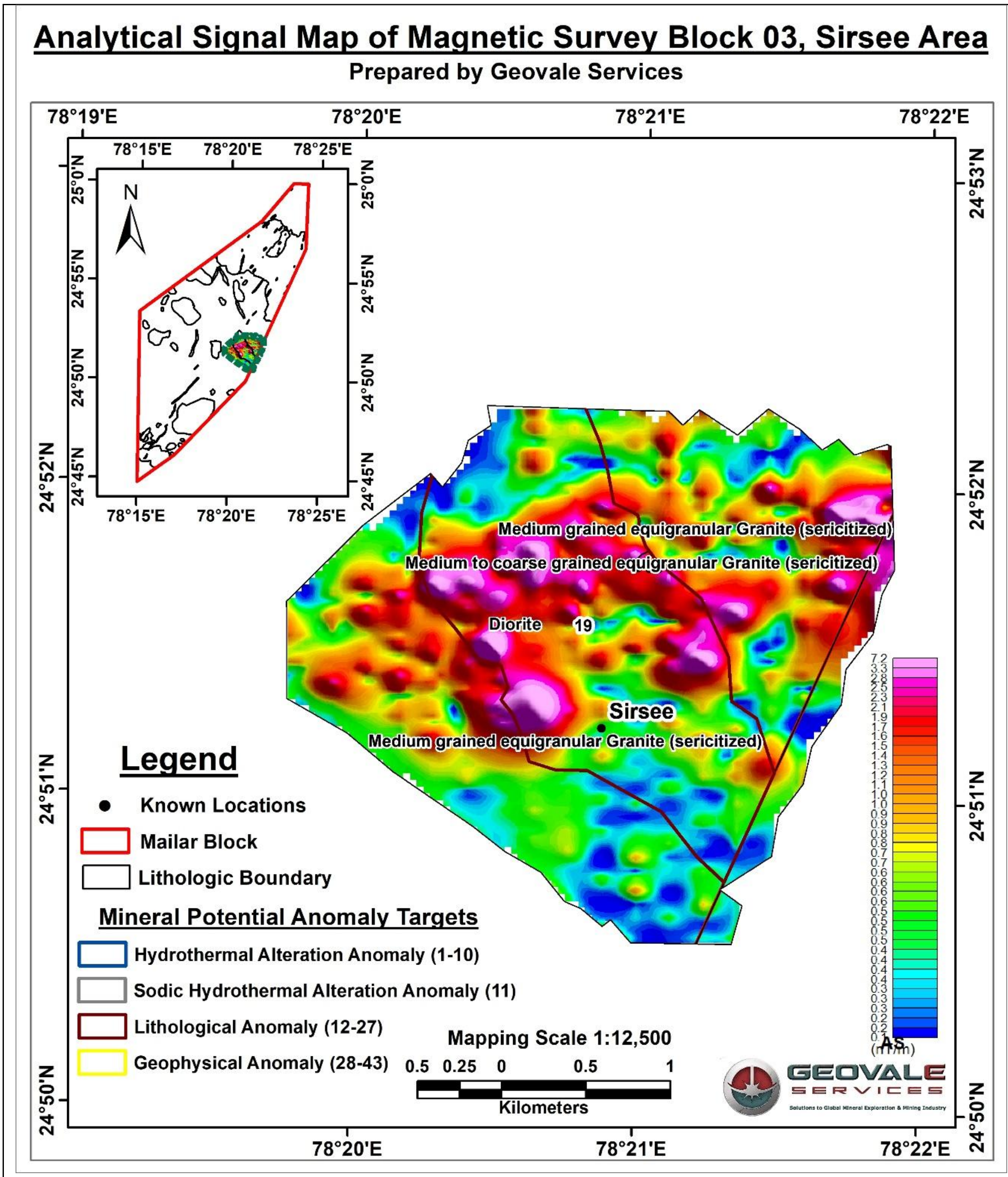


Fig 9.6.5.3a: Mailar_Zone03_AS

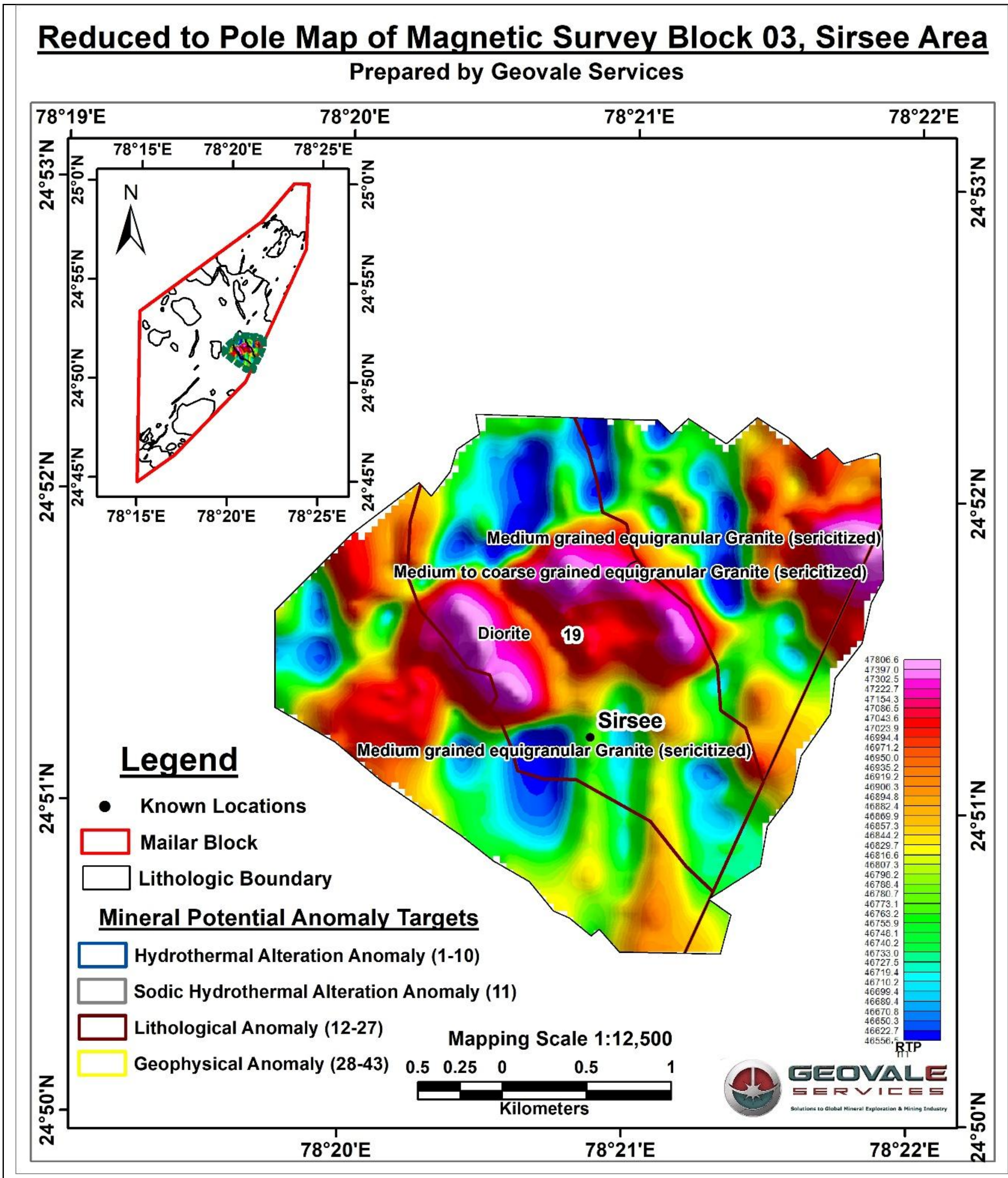
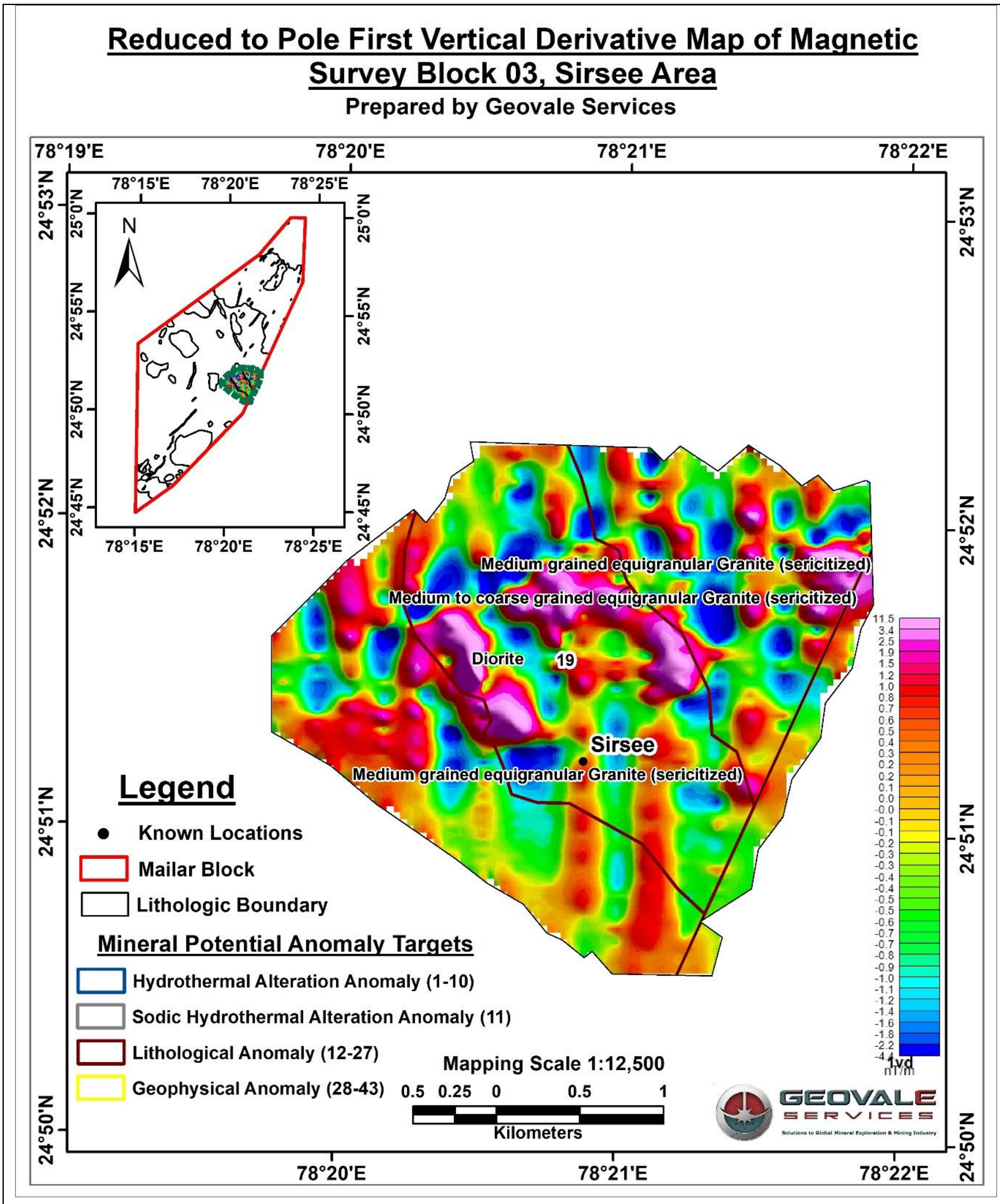


Fig 9.6.5.3b: Mailar_Zone03_RTP



9.6.5.3c: Mailar_Zone03_RTP_1VD

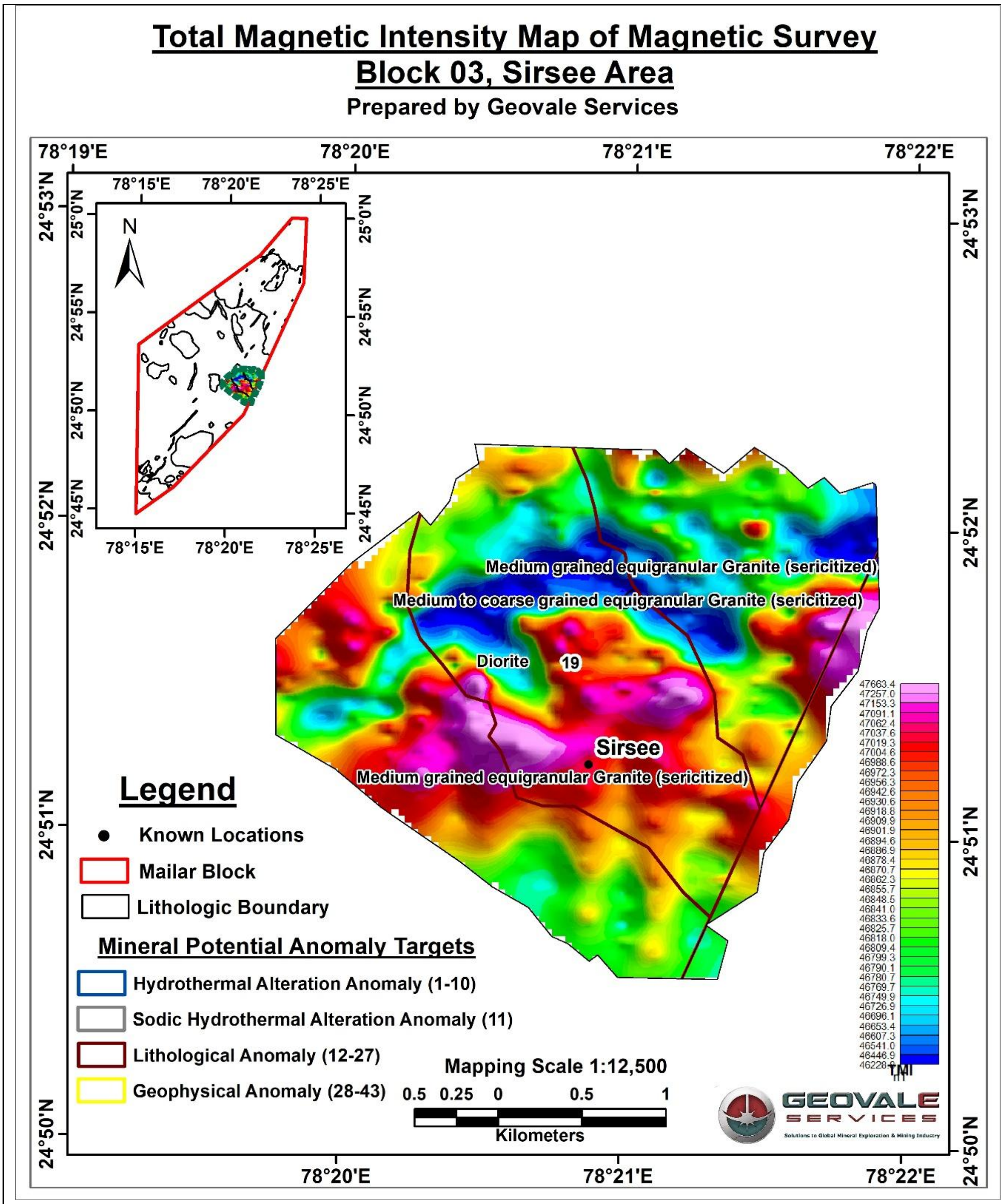


Fig 9.6.5.3d Mailar_Zone03_TMI

9.6.5.4 Geological interpretation of the Magnetic Sub block 4

The ground magnetic data of Sub-block 4 reveal the presence of two NW–SE trending zones of strong magnetic anomalies, which likely correspond to subsurface mafic bodies, although no surface expressions of these lineaments have been reported. The south-eastern side, these two lineaments are displacing sinistrally, implying the presence of a fault. Additionally, two NNE–SSW trending lineaments with high magnetic anomalies are observed within Sub-block 4. These high magnetic anomaly zones are interpreted to represent epithermal quartz veins, primarily associated with potassic-altered felsic volcanics.

In the southern part of Sub-block 4, another high magnetic anomaly zone is present. Field verification confirms the occurrence of diorite in this area; however, the magnetic data suggest that the diorite extends further into the subsurface.

A circular demagnetized area is reported in the eastern part of the Sub block 4, possibly associated with the felsic rock with sodic alteration. (Fig 9.6.5.4a-4d)

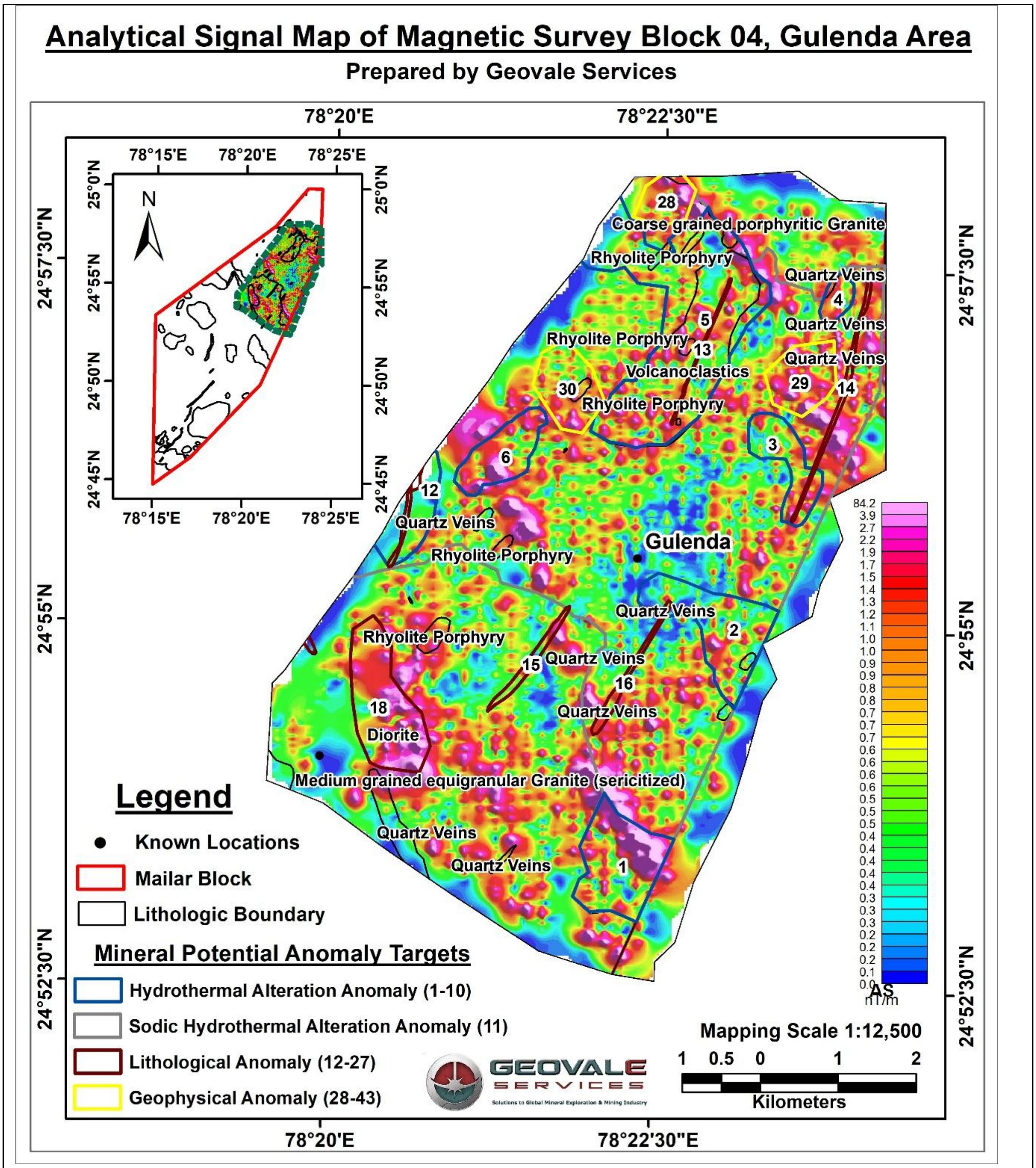


Fig 9.6.5.4a:Mailar_Zone04_AS

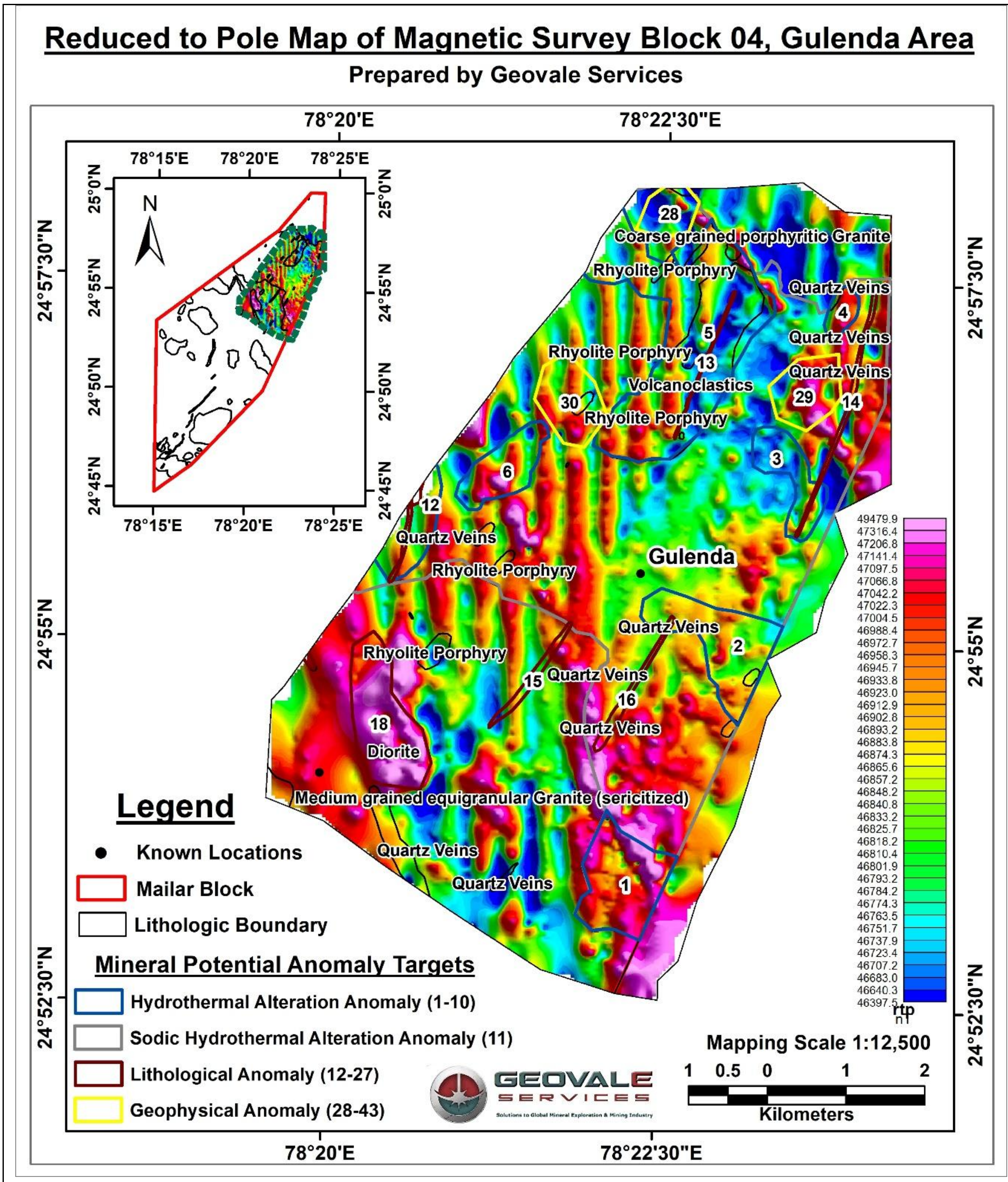


Fig 9.6.5.4b: Mailar_Zone04_RTP

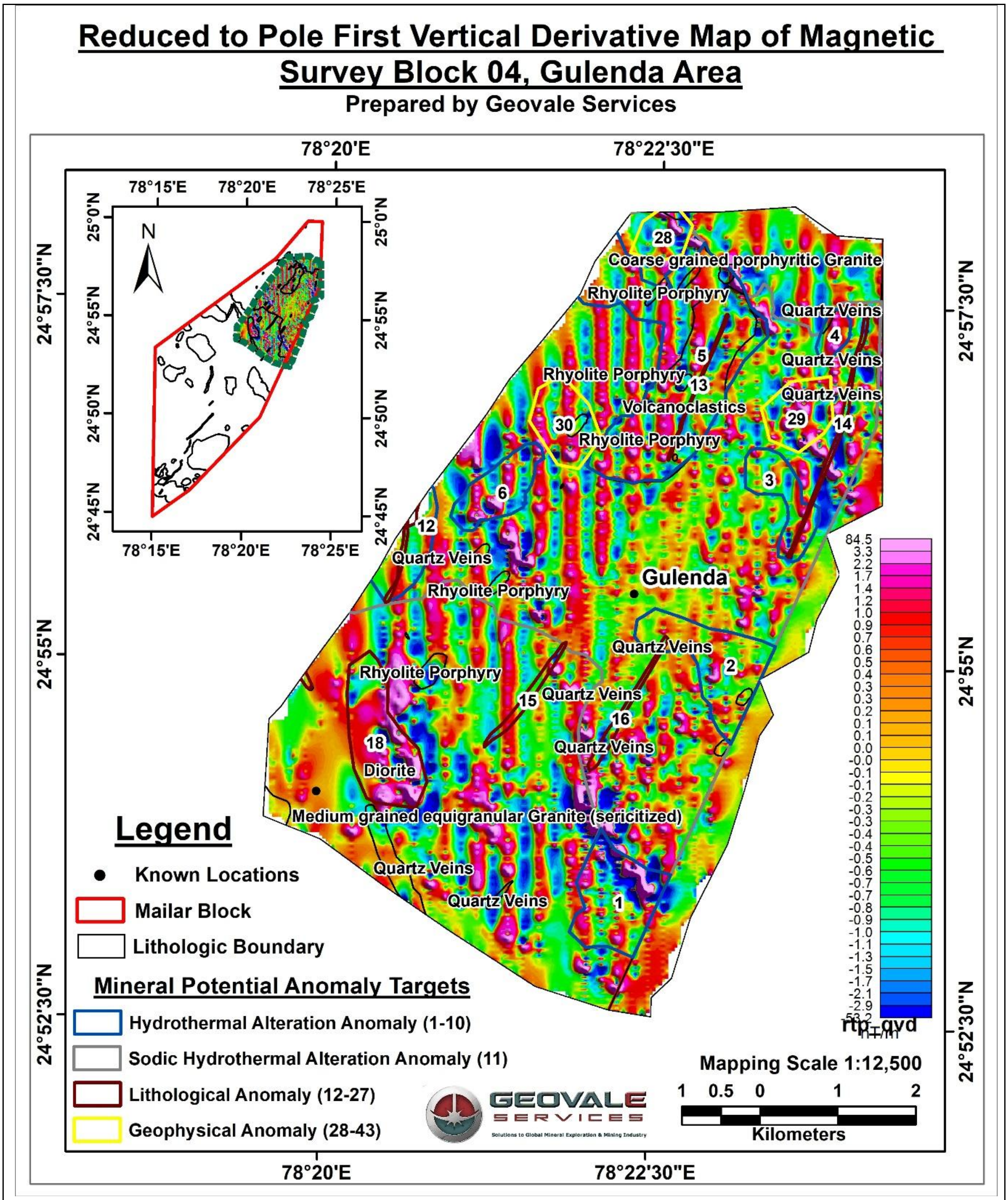


Fig 9.6.5.4c: Mailar_Zone04_RTP_1VD

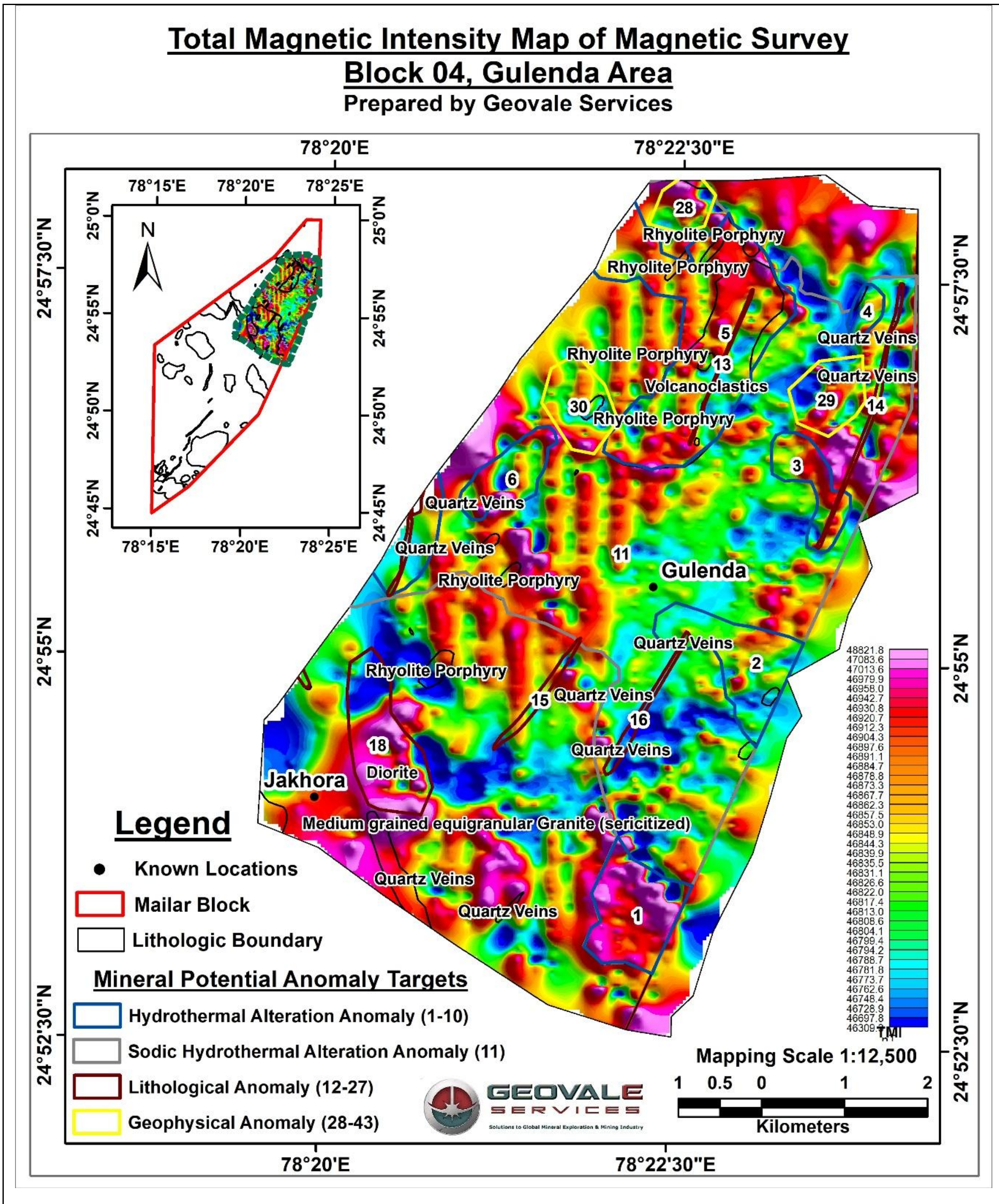


Fig 9.6.5.4d: Mailar_Zone04_TMI

NW-SE trending 2 ground magnetic anomalies are very pronounced. Our detailed mapping could not find any lithological verification to justify the magnetic is due to variation in the lithology. However, an overlap of the intensity of the potassic alteration map with the ground magnetic anomaly map reveals good spatial correlation between high intensity potassic alteration and positive magnetic anomaly (Fig. 9.6.5.4e).

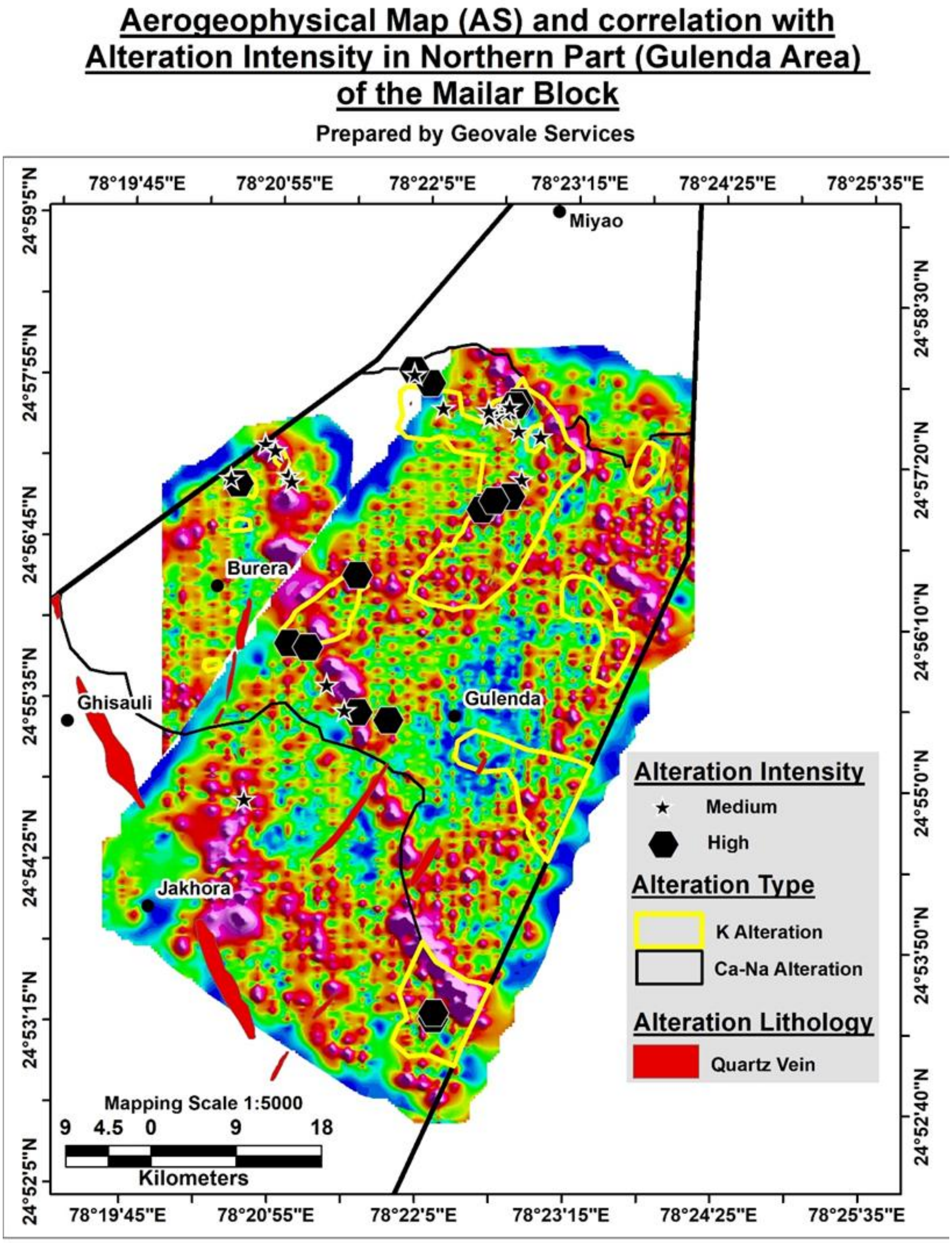


Fig 9.6.5.4e: The As map reveals two prominent NW–SE–trending high magnetic lineaments, and the close alignment of elevated alteration intensity along these features suggests that they controlled the movement of potassic alteration fluids.

9.7 Synthesis—Confirmation of the Mineral System and Link to Targets (1-11)

Mineral Potential Anomalous Target 1–11): mapped by alteration-related lows and shear-controlled vein corridors (Sub-block 1; parts of 2).

Mineral Potential Anomalous Target 12–27): dyke and diorite contacts/edges, shear-bounded contrasts, and vein corridors (all Sub-blocks).

Mineral Potential Anomalous Target 28–43): donut-style RMI analogues, ring-like lows, structural nodes, and concealed cupolas (Sub-blocks 2–4). Collectively, ground magnetics confirms the architecture of the hydrothermal system and provides geophysical character for each target domain to support ranking in Chapter 10.

9.8 Vertical Electrical Sounding (VES) – Survey, Modelling and Interpretation

9.8.1 Objectives and Context

The VES programme was undertaken to (i) delineate conductive alteration horizons and fracture-controlled fluid pathways associated with the Mailar porphyry–epithermal Cu–Mo–Au system, (ii) map the depth to regolith, weathered bedrock and fresh basement, and (iii) test the subsurface continuity of alteration-driven (Targets 1–11), lithology/vein/diorite–dyke (Targets 12–27) and aeromagnetic (Targets 27–43) anomalies identified in Chapter 8 and displayed on the Large-Scale Geology Map (LSM Mailar). The VES layout prioritised high-intensity potassic/epithermal footprints in the northern Gulenda–Burera area, with reconnaissance coverage across central diorite–dyke trends and the Mailar advanced-argillic zone to the south.

9.8.2 Survey Design and Acquisition

A total of ~22.3 line-km of VES were completed at ~132 stations with a nominal ~200 m station interval, designed to achieve ~100 m effective depth of investigation. Measurements employed a Schlumberger array using an Aquameter CRM-500 system. Site selection followed the alteration/geology framework of the LSM Mailar map and the ground magnetic fabrics (E–W shear; NW–SE dyke belts; NE–SW cross-faults). Acquisition quality control included current stacking, reciprocal checks where feasible, and avoidance of cultural noise corridors. (Fig 9.8.2.1-6)

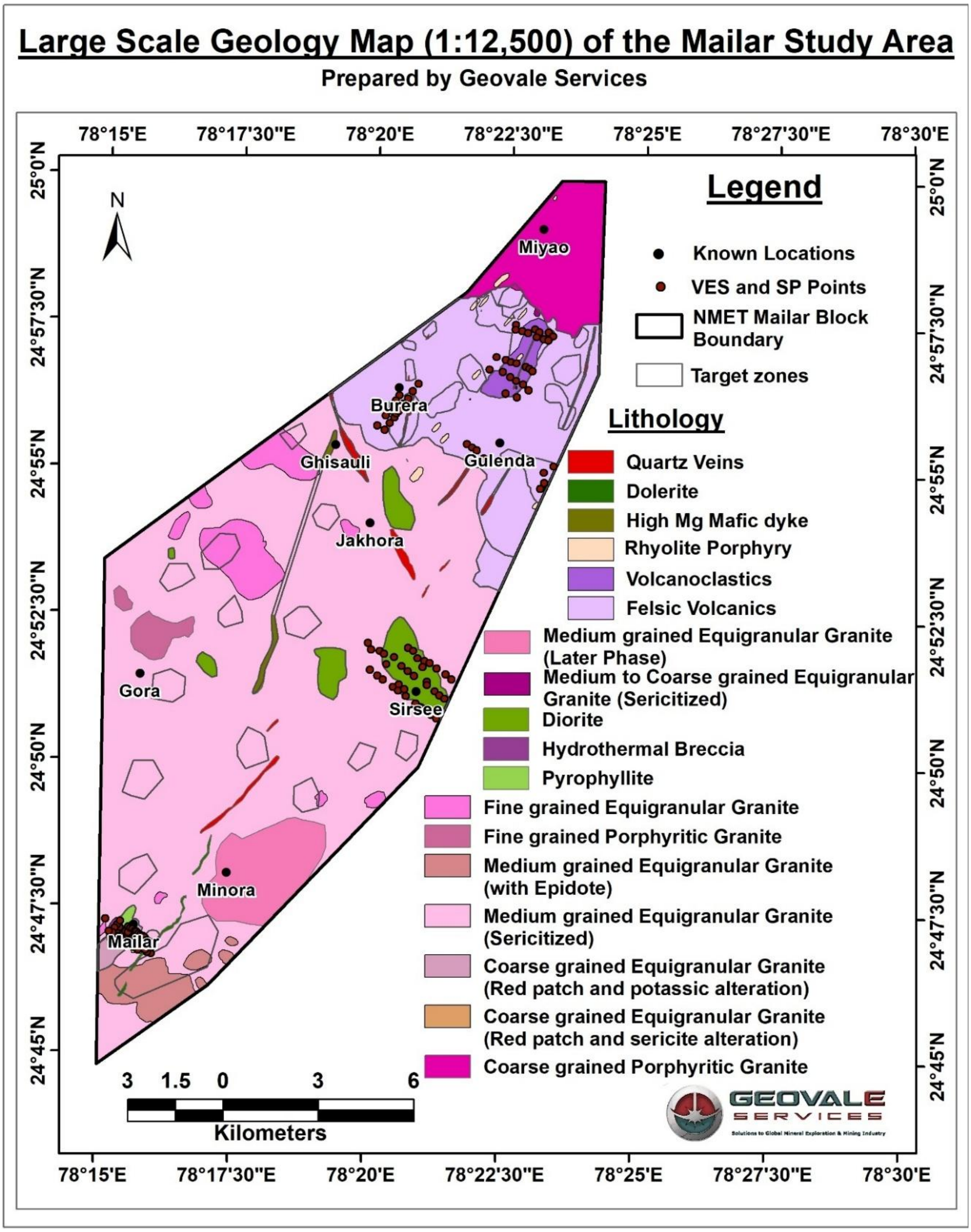


Fig 9.8.2.1: VES station index on LSM Mailar (on anomalous targets).

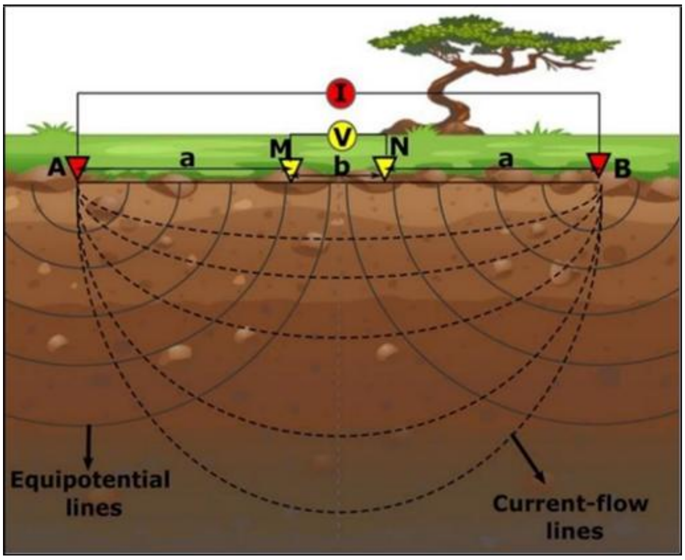


Fig 9.8.2.2: Typical Schlumberger layout and field set-up (Aquameter CRM-500)

Fig 9.8.2.3: Collected VES data from Aquameter, Gulenda.

Fig 9.8.2.4: Collected VES data from Aquameter, Gulenda.

Fig 9.8.2.5: Collected VES data from Aquameter, Gulenda.

Fig 9.8.2.6: Collected VES data from Aquameter, Gulenda.

9.8.3 Processing and Inversion

Field apparent-resistivity data (ρ_a) were inverted using IPI2Win to obtain layered geo-electric models constrained by known weathering profiles and local hydrostratigraphy. The inversion workflow comprised: (i) spike removal and curve smoothing, (ii) forward modelling with progressive fit improvement, (iii) selection of the lowest misfit models with geologically plausible layering, and (iv) correlation with depth-to-bedrock, weathered thickness, and mapped alteration belts/vein corridors. The final models for each VES site are compiled in Annexure XV – VES Models and are referenced herein for interpretation at the target-domain scale.

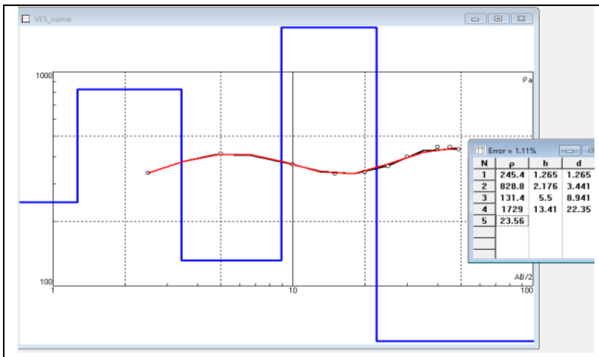


Fig 9.8.3.1: IPI2WIN Model of ML_VES_01

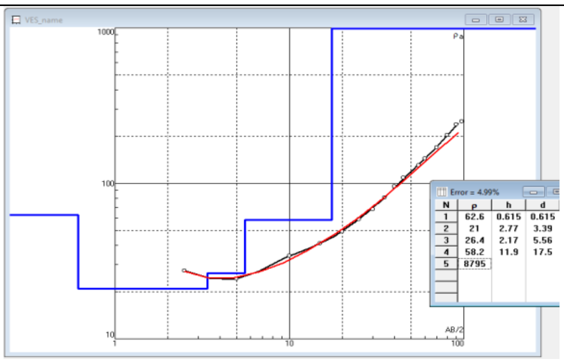


Fig 9.8.3.2: IPI2WIN Model of ML_VES_02

Across Mailar, inverted models consistently resolve a 3–5 layer sequence:

1. Layer-1: Topsoil/Colluvium (low–moderate ρ, thin) – typically a few metres thick; higher moisture/clay content near streams and argillic caps.
2. Layer-2: Weathered Bedrock (low–moderate ρ; variable thickness) – clay-rich, locally conductive where phyllic/argillic alteration is present; thickness commonly 10–35 m in the north and 15–50 m in southern lithocaps.
3. Layer-3: Fractured/Fissile Bedrock (moderate $\rho$with local lows) – transitional horizon; fracturing and clay infill cause resistivity drops and often coincide with vein corridors and feeder structures.

4. Layer-4(+): Fresh Basement (high ρ, locally heterogeneous) – competent felsic volcanics, diorite/granite or massive quartz veins; locally shows resistive spikes corresponding to vein reefs or fresh intrusive margins.

Where sulphide-bearing, clay-altered, or fluid-saturated zones are present, conductive troughs (pronounced ρminima) develop within Layer-2/3, often aligning with E–W shear, NW–SE dyke belts, or NE–SW cross-faults that focus mineralising fluids—precisely the corridors mapped in magnetics.

9.8.4 Results by Target Domain

(A) Alteration-Driven Targets 1–11: Gulenda–Burera area (Northern Block)

- **Observation:** VES curves commonly show low to very-low resistivity in Layer-2/3 beneath thin regolith, indicating clay-rich phyllic/argillic alteration and enhanced permeability along mapped vein corridors. In several sites, a conductive trough is underlain by a moderately resistive fractured base, suggesting sulphide-bearing, altered horizons above competent felsic volcanic basement.
- **Correlation:** Conductive zones spatially coincide with high AHI/VCD patches, Cu–Mo–W–Sn–Bi geochemical clusters, and magnetic lows/gradients along the E–W shear and N–S dykes.
- **Implication:** Supports porphyry-style core and shell positions at shallow depths, with epithermal overprints along fracture/permeability corridors.

(B) Lithology/Vein/Diorite–Dyke Targets 12–30: Central (Diorite & High-Mg Dyke Trends)

- **Observation:** VES typically captures layered resistive behaviour over diorite/granite margins (resistive basement) with local conductive inflections where fracturing, alteration selvedges or vein swarms occur. Along high-Mg dykes, resistivity contrasts are sharp: the dyke margin is often more resistive, while adjacent altered wall-rock shows relatively lower resistivity.
- **Correlation:** These contrasts align with RTP/AS-defined intrusive edges and structural intersections, and with Sn–W–Mo geochemical halos.

- **Implication:** Confirms dyke/intrusive feeders with adjacent alteration envelopes, refining the geometry of Type-B targets for trenching/IP lines.

(C) Aeromagnetic Targets 31–43: Concealed Cupolas & Lithocaps (Central–Southern Blocks)

- **Observation:** Over donut-style RMI anomalies and mapped advanced-argillic zones (Mailar–Sirsee), VES shows thicker conductive caps (argillic clay + sulphidic zones) overlying resistive basement, with local deep conductors at structural nodes.
- **Correlation:** Conductive caps coincide with broad magnetic lows and NE–SW faults cross-cutting NW–SE dyke belts; stream-sediment Cu–Pb–Zn anomalies downstream reproduce this pattern.
- **Implication:** Confirms lithocap geometry and feeder intersection nodes below cover—high-priority for IP/Resistivity + scout drilling.

9.8.5 Synthesis: What VES Confirms About the Mineral System

- **Alteration cores & shells:** VES consistently detects conductive phyllic/argillic horizons beneath thin regolith in the northern corridor, corroborating porphyry core–shell zoning inferred from magnetics and alteration mapping.
- **Feeder architecture:** Resistivity contrasts along dyke margins and E–W/NE–SW faults validate fluid focusing and vein corridor development, especially across targets.
- **Lithocaps & concealed centres:** Thick conductive caps above resistive basement in Mailar–Sirsee confirm high-sulphidation lithocap settings and concealed cupolas—fully consistent with aeromagnetic “donut” signatures. Together, the VES results provide a geo-electric framework that is coherent with the geological/alteration/geophysical model and directly actionable for target ranking.

9.9 Self-Potential (SP) Survey — Acquisition, Modelling, and Interpretation

9.9.1 Objectives and Context

The SP survey was executed to detect natural electrical potentials generated by electrochemical and streaming-potential processes associated with sulphide mineralisation, alteration fronts, and fluid flow along fractures and shear zones. Within the Mailar mineral system, SP provides a sensitive, low-cost tool to (i) verify alteration-driven targets in the Gulenda–Burera corridor (Targets 1–11), (ii) test lithology/vein/diorite–dyke targets in the central block (Targets 12–27), and (iii) look for near-surface expressions and feeder pathways above aeromagnetic targets (Targets 27–43). The survey focused primarily on the northern Gulenda area (with reconnaissance lines elsewhere) to map SP lows over potential sulphidic/argillic zones and SP gradients along permeable structures that coincide with mapped veins, dykes, and the E–W master shear.

9.9.2 Survey Design and Field Procedure

A total of ~20.05 line-km of SP profiling were completed, predominantly across the northern Gulenda area, with stations at 50 m spacing. Standard copper–copper sulphate ($Cu/CuSO_4$) non-polarising electrodes were used; the $CuSO_4$ solution ensured stable ground contact and minimised electrode drift. Measurements were acquired with one fixed reference electrode and a roving potential electrode along each line. Lines were planned to cross the principal structural fabrics (E–W shear, NW–SE dykes, NE–SW cross-faults) and to intersect mapped quartz-sulphide veins and alteration patches highlighted on the Large-Scale Geology Map (LSM Mailar). (Line IDs and point counts are maintained in the survey log; field photos and site maps are referenced below.) Fig 9.9.2.1-3

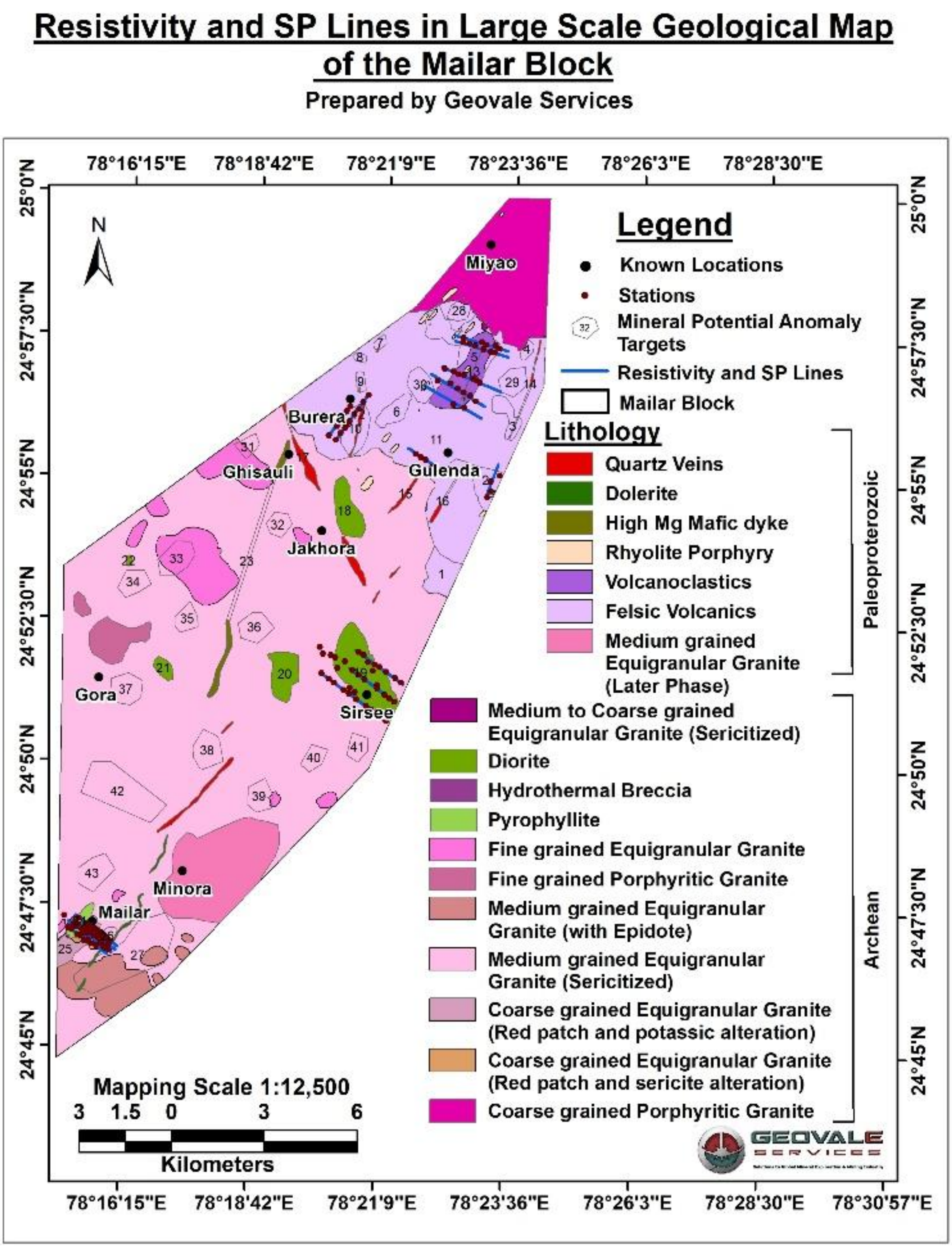


Fig 9.9.2.1: Geological map shows the VES and SP urvey lines.

	
Fig 9.9.2.2: Recording SP Data Reading near Gulenda.	*Fig 9.9.2.3: Recording SP Data Reading near Mailar.*

9.9.3 Processing and Profile Modelling

Raw potentials were levelled line-by-line to a common reference and visually checked for spikes or cultural pickups (fences, buried utilities). Where available, elevation was paired with SP along each line to assess and separate topographic effects. Profiles were compiled and plotted for interpretation; for representative lines, SP–Elevation pairs were prepared as Annexure XVI models (Lines 1–10, 3.1–3.3, 4.1–4.2, 5.1). These model plots are used here to identify anomaly styles—point-source lows, broad conductive troughs, and gradient pairs—consistent with sulphide bodies, alteration caps, or fluid-flow along structures.

9.9.4 Results — Map-Scale SP Contours and Domains

SP values were gridded to produce contour maps over the principal survey blocks. In the northern Gulenda, contiguous negative SP belts and steep SP gradients align with the mapped E–W shear, cross-cut by N–S/NW–SE dyke trends; these belts coincide with alteration highs (AHI), vein/channel density highs (VCD), and magnetic lows/gradients, confirming a sulphide-bearing, structurally prepared environment. Over diorite near Sirsee, SP gradients concentrate along intrusive contacts and fault splays, consistent with fracture-controlled fluid pathways. The Mailar Mines area shows mixed responses: local negative SP pockets near Fe–Mn-stained veins (indicative of sulphide/argillic effects) and subdued responses over resistive granite.

9.9.5 Integration with Targets and Other Datasets

- Mineral Potential Anomalous Target 1–11: SP troughs and steep gradients track the E–W master shear and N–S dyke splays, co-locating with magnetic lows, AHI/VCD highs, and Cu–Mo–W–Sn–Bi geochemistry; these are priority alteration cores/shells.
- Mineral Potential Anomalous Target 12–30: SP gradient pairs and local lows pinpoint diorite contacts, dyke margins, and vein corridors, complementing RTP/AS edges and Sn–W–Mo halos from geochemistry.
- Mineral Potential Anomalous Target 31–43: Over aeromagnetic “donut” signatures, SP shows broad negative plateaus (conductive caps) with localized minima at cross-structures, reinforcing the lithocap + feeder model.

9.9.6 Conclusions and Recommendations

The SP survey confirms sulphide-bearing alteration corridors in the north, structural fluid pathways along intrusive/vein contacts in the central block, and lithocap conductors above concealed centres in the south. We recommend:

1. IP/Resistivity lines across SP troughs that coincide with RTP lows and AHI/VCD highs (Targets 1–11, 24–27),
2. Trenching/pitting at SP minima located on AS/1VD lineament intersections, and

Scout drilling at lithocap plateaus with embedded SP minima over aeromagnetic ring features (Targets 31–43). These actions dovetail with the ranking and drill planning presented in Chapter 10.

CHAPTER-10

INTEGRATION OF SURFACE EXPLORATION DATA (STAGE-3)

10.1 Purpose and Headline

The Mailar Block has been the focus of a comprehensive mineral exploration program, integrating geospatial, geological, geochemical, geophysical, alteration and structural datasets. The objective of this integration is to delineate zones of mineralization with high accuracy and confidence. By synthesizing multiple datasets, the study provides a holistic view of the geological processes controlling mineralization and the spatial distribution of ore-related features. The integration approach has proven crucial in identifying copper-gold mineralization zones associated with high-sulfidation hydrothermal systems.

This chapter converts the surface evidence assembled in Chapters 8 and 9 into a single, decision-grade narrative. It explains why five targets were selected for scout drilling—to deliberately test two distinct mineralisation styles within the Mailar hydrothermal system - while making clear that many more targets show significantly positive surface indications

10.1 Evidence Stack and Integration Method

All datasets were co-registered at 1:12,500 on the Chapter-8 base: lithology and structure; alteration intensity (AHI) and vein/channel density (VCD); multi-tier geochemistry; and ground geophysics (magnetics, VES, SP). Interpretation followed the mineral-systems pathway: intrusion → feeder/structure → fluid focusing → alteration halos → sulphide ± precious/base-metal deposition. Mineral Potential Anomalous Targets (01–43) were re-evaluated against this logic to understand system position (porphyry cores/shells vs epithermal caps/lithocaps vs intrusive/vein corridors).

- **Alteration-based Mineral Potential Anomalous Targets (1-11):** Alteration-dominated, magnetite-destructive lows + high AHI/VCD, SP troughs, VES Layer-2/3 conductors; Cu–Mo–W–Sn–Bi support.

- **Alteration-based Mineral Potential Anomalous Targets: (12-27):** Lithology/vein/diorite–dyke controlled; magnetic edges/AS lineaments; SP gradient pairs; VES contrasts; vein-hosted Cu–Bi ± Pb–Zn.

• **Alteration-based Mineral Potential Anomalous Targets: (28-43):** Geophysical centres (ring/“donut” aeromag); broad magnetic/VES lows (caps); SP plateaus with embedded minima at cross-structures.

10.2 System Architecture Recap (Context from Chs. 8–9)

From north to south the Mailar Block expresses a coherent porphyry–epithermal system:

• North Part of the Block (Gulenda–Burera area): Porphyry shells overprinted by epithermal veins.

• Central part of the Block (Diorite–Dyke): Intrusive cores and dyke belts with contact-controlled alteration/veining.

• Southern part of the Mailar block (Mailar): Advanced-argillic lithocap with concealed cupolas indicated by geophysics and VES/SP.

10.3 Portfolio Outcome: What the Surface Work Proved

- The geology of the Mailar Block is characterized by a diverse assemblage of volcanic, plutonic, and sedimentary rocks that have undergone multiple phases of magmatic intrusion and hydrothermal alteration, creating favourable conditions for mineralization. Extensive felsic volcanics dominate the northern region, accompanied by dioritic intrusions in the northwest and basaltic dykes trending NNE–SSW in the west. These varied lithologies are intersected by structurally controlled quartz veins and reefs, which often host copper-bearing sulphide minerals. Structural features such as regional fracture systems and fault networks act as conduits for hydrothermal fluids, localizing ore deposition along major vein sets, especially quartz reefs trending NW–SE and NNE–SSW. Hydrothermal alteration zones, including advanced argillic, potassic, and propylitic assemblages, further define the mineralization environment.

For instance, the presence of pyrophyllite and diaspore in advanced argillic zones indicates intense acidic fluid alteration, often associated with high-sulfidation epithermal deposits. Meanwhile, potassic alteration characterized by biotite and magnetite points to deeper, high-temperature fluid interaction. These alteration halos spatially correlate with mineralized veins, serving as important vectors for exploration. Collectively, the complex interplay of lithology, structural controls, and hydrothermal processes governs the spatial distribution of mineralization, making the Mailar Block a significant target for copper and related base metal exploration.

- **Geological/Structural/Alteration** mapping confirmed fertile architecture and produced AHI/VCD highs that consistently align with fluid pathways.
- Structural and alteration data from the Mailar Block together reveal a tightly interconnected system of mineralization, where tectonic structures and hydrothermal processes have worked in concert to localize ore. Mineralization is predominantly controlled by regional fracture systems and fault networks, with quartz veins trending NNE–SSW and NW–SE intruding volcanic and granitic host rocks. These veins often display vuggy silica textures and host copper-bearing sulphide minerals such as chalcopyrite, enargite, and chalcocite, indicating their formation under high-sulfidation conditions. The orientation and continuity of these veins, particularly where they intersect vertical and cross-cutting quartz reefs in the northern part of the block, strongly suggest that structurally controlled fluid flow played a critical role in ore localization. Superimposed on this structural architecture is a well-developed pattern of hydrothermal alteration zoning. In the southern part of the block, an advanced argillic alteration zone, characterized by pyrophyllite, alunite, and gusano textures, marks the uppermost expression of the mineralizing system, formed through intense acid-sulphate leaching. This is surrounded by a broader propylitic halo rich in chlorite and epidote, indicating distal, lower-temperature alteration. Toward the centre of the block, a potassic alteration zone—comprising biotite, magnetite, and early high-temperature quartz veins—coincides spatially with structural intersections and mineralized zones, pointing to deeper magmatic-hydrothermal activity. The spatial alignment of these alteration zones with structurally emplaced quartz veins not

only delineates fluid pathways but also provides robust exploration vectors, confirming that mineralization in the Mailar Block is the result of a structurally focused, zoned hydrothermal system consistent with high-sulfidation epithermal to porphyry copper-gold environments. Geochemistry returned Cu–Mo–W–Sn–Bi associations (north and central corridors) and Cu–Pb–Zn downstream of southern lithocaps—zoned exactly as predicted for porphyry–epithermal systems. Geochemical analyses of 110 samples (including bedrock and stream sediments) using XRF and ICPMS techniques reveal significant enrichment in copper (1.3 – 6785 ppm), lead (1.3 – 14,277 ppm), molybdenum (0.5 – 21.6 ppm), zinc (5.6 – 1669 ppm), and traces of gold (0.001–0.01 ppb). These anomalies are strongly correlated with alteration zones and structurally controlled quartz veins. XRD analysis confirms the presence of alteration and ore-related minerals such as albite, chlorite, biotite, hematite, malachite, chalcopyrite, beryl, and fluorite. In the northern part of the block, secondary copper minerals like malachite and cuprite, along with primary sulphides and native gold, are associated with vuggy quartz veins, further supporting the presence of a high-sulfidation epithermal system.

- The comprehensive geophysical investigation in the Mailar gold and base metal project block integrates data from self-potential (SP) surveys, vertical electrical sounding (VES), and ground magnetic surveys to delineate subsurface structures and identify potential zones of mineralization. The SP survey, conducted over multiple months primarily in the northern part of the block near Gulenda and Burera villages, measured voltage differences that highlight fluid movement and zones of increased conductivity, often associated with hydrothermal activity and mineralized fluid pathways. Complementing this, VES surveys provided layered geo-electric models of the subsurface by converting apparent resistivity measurements into true resistivity values using inversion software (IPI2WIN). These resistivity profiles helped estimate layer thickness and correlated well with geological features such as weathered bedrock depth and zones of intense potassium alteration, which are common indicators of mineralized hydrothermal systems. The ground magnetic survey, covering an increasing area from November through December 2024, detected magnetic anomalies caused by variations in rock lithology and structural features, particularly associated with volcanic, intrusive, and basement rocks that often host mineral deposits. The spatial correlation of high SP anomalies, low resistivity zones from VES (indicating alteration and fluid pathways), and distinct magnetic signatures forms a robust geophysical signature that strongly suggests the presence of structurally controlled mineralization zones within the block.

- **Ground Magnetics** separated intrusive/dyke frameworks from magnetite-destructive alteration, and defined structural nodes with high target value.
- **VES** identified **conductive caps and phyllic/argillic shells** above resistive basement/intrusive margins—precise depth control for collars.
- **SP** mapped **troughs/gradients** over sulphidic/argillic zones and focused nodes at structure intersections.

Conclusion: Many targets across all three corridors now exhibit **multi-dataset convergence**. Several are technically "drill-ready" on evidence; others require modest pre-drill profiling.

10.4 Genesis of Mineralisation

The mineralization in the Mailar Block is interpreted as being genetically linked to a high-sulfidation hydrothermal system associated with intrusive magmatic activity. Initially, intense magmatic fluids infiltrated fractured host rocks, depositing quartz veins and causing potassic and sodic alteration. As the system evolved, acidic sulphate-rich fluids led to the development of advanced argillic alteration zones and intense leaching, forming vuggy silica and gusano textures. Metal deposition occurred during subsequent fluid evolution stages, where changes in temperature, pressure, and chemistry led to the precipitation of copper sulphides and gold. The spatial association of alteration types, structural features, and ore minerals reflects a classic high-sulphidation epithermal to porphyry copper-gold model.

10.5 Why Only Five Scout Holes Now—and What They Test

This phase intentionally prioritised **strategic learning** over limited available drilling meterage (1000 m). **Five drill targets** were chosen to **test two different mineralisation styles** that frame the system:

1. Epithermal Quartz-Vein (Northern part of the Milar Block; three targets)
2. Lithocap/Concealed Cupola Style (Southern part of the Mailar Block; two drill targets)

These five drill holes were illustrative tests across the mineral system's vertical profile - epithermal cap/vein domain and lithocap-over-porphyry domain - so that next-phase drilling can scale with confidence.

10.6 Access and Operating Constraints in This Phase

Not all high-priority sites were accessible for invasive work. Constraints included forest permissions, local land-use sensitivities, and seasonal logistics that limited pitting, trenching, and drilling. Consequently:

- Outcropping targets were tested non-invasively (mapping, geochem, magnetics, VES, SP) or with limited trench/pit exposure.
- Concealed targets were profiled geophysically and geochemically but not cored unless access was secured. These constraints do not reduce prospectivity; they simply defer invasive validation to the next phase.

10.7 High-Priority Anomalies Identified (Beyond the five Scout Holes)

Multiple anomalies within the fertile corridors now stand out for follow-up, especially where three or more lines of evidence agree:

- Northern part of the Mailar block: Alteration-led nodes where magnetic lows coincide with AHI/VCD highs, SP minima, and VES Layer-2/3 conductors; bedrock/vein geochemistry confirms Cu–Mo–W–Sn–Bi.
- Central part of the Mailar Block: Intrusive/vein edges and dyke margins pinpointed by RTP/AS edges, SP gradients, and VES contrasts; trenching where permissible has validated vein continuity and sulphide presence.
- Southern part of the Mailar block: Lithocap extents and ring-style geophysical centres, with SP plateaus + embedded minima at cross-structures and VES conductors; soil/auger geochem and detailed SP/VES infill will advance them.

10.8 Prioritisation Framework Applied

Mineral Potential Anomalous Targets zone was ranked on five axes—alteration, geochemistry, magnetics, VES, SP—and assigned a convergence class:

- Class I (drill-ready): strong, multi-dataset agreement and clear system position.
- Class II (pre-drill profiling): coherent targets requiring short IP/Res lines and/or selective trenching before collars.
- Class III (recon): promising but exposure-limited - advance with soils/auger, focused VES/SP, and magnetics infill. Selection of the three scout holes came from the Class I set but purposely spanned two mineralisation styles to maximise learning.

Table 10.1 Summarise the priority ranking (Colour Code) of the anomalous targets

Target ID	Group	Primary Basis	Priority Class	Rank Score 0_100	Outcropping	Exposure /Access	Geophys Support	Geochem Evidence	Testing Status	Ranking Rationale Short
T1	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	94	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T2	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	94	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered),	High Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	Extremely High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T3	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	90	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T4	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	90	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T5	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	93	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Very High Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; several pits/trenches, stream sediment	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T6	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	90	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T7	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	90	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; pits/trenches, stream sediments	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T8	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	91	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; several pits/trenches, stream sediments	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T9	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	91	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; several pits/trenches, stream sediments	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T10	Alteration (Potassic alteration in felsic volcanics)	Hydrothermal alteration	A	90	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; pits/trenches, several stream sediments.	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T11	Alteration (Sodic alteration in felsic volcanics)	Hydrothermal alteration	B+	83	Yes	Forest constraint (northern corridor)	Local analytic signal highs / subtle RTP support (where covered)	Sn, W with Cu±Mo±Zn in bedrock/veins (where sampled)	Mapped + Bedrock/vein assays; several pits/trenches, stream sediments	High AHI/VCD in potassic domain; coincident Cu±Mo bedrock anomalies; mapped EHT/AVT textures
T12	Lithology (Epithermal Quartz vein)	Lithological/Vein	A	98	Yes	Standard access	Often along lineaments; variable RTP/AS support	Very high Cu±Mo±Zn with silver in bedrock/veins ;	Mapped + Bedrock/vein assays;	Epithermal quartz veinswith sulphide indicators

Target ID	Group	Primary Basis	Priority Class	Rank Score 0_100	Outcropping	Exposure /Access	Geophys Support	Geochem Evidence	Testing Status	Ranking Rationale Short
								pathfinders Bi, Sn, W (where sampled- surface and drilling)	localized pitting/trenching	
T13	Lithology (Epithermal Quartz vein)	Lithological/Vein	A	95	Yes	Standard access	Often along lineaments; variable RTP/AS support	High Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assay	Epithermal quartz veins with sulphide indicators
T14	Lithology (Epithermal Quartz vein)	Lithological/Vein	A	96	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn and Ag in bedrock/veins; pathfinders Bi, Sn, W (where sampled in surface and drill core)	Mapped + Bedrock/vein assays	Epithermal quartz veinswith sulphide indicators
T15	Lithology (Epithermal Quartz vein)	Lithological/Vein	B+	85	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	Epithermal quartz veinswith sulphide indicators
T16	Lithology (Epithermal Quartz vein)	Lithological/Vein	B+	81	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	Epithermal quartz veinswith sulphide indicators
T17	Lithology (Epithermal Quartz vein)	Lithological/Vein	B+	85	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	Epithermal quartz veinswith sulphide indicators
T30	Geophysics	Lithological/Vein	B	74	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in grab sample	Covered area	Sulphide indicators in grab sample
T29	Geophysics	Lithological/Vein	B	74	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in grab sample	Covered area	Sulphide indicators in grab sample
T28	Geophysics	Lithological/Vein	B	74	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in grab sample	Covered area	Sulphide indicators in grab sample
T27	Lithology (Granite)	Lithological/Vein	A	90	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	Granite with Cu-rich assays and sulphide indicators
T25	Lithology (Granite)	Lithological/Vein	A	90	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	Granite with Cu-rich assays and sulphide indicators
T26	Lithology (Granite)	Lithological/Vein	A	95	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn and Tin in bedrock/veins; pathfinders Bi, W (where sampled surface and drilling)	Mapped + Bedrock/vein assays; localized pitting/trenching	Granite with Cu-rich assays and sulphide indicators
T22	Lithology (Diorite)	Lithological/Vein	B+	85	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	diorite with Cu-rich assays and sulphide indicators
T24	Lithology (Pyrophyllite)	Lithological/Vein	A	90	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized	Pyrophylite with Cu-rich assays and sulphide indicators

Target ID	Group	Primary Basis	Priority Class	Rank Score 0_100	Outcropping	Exposure /Access	Geophys Support	Geochem Evidence	Testing Status	Ranking Rationale Short
									pitting/trenching	
T23	Lithology (High Mg dyke)	Lithological/Vein	A	90	Yes	Standard access	Often along lineaments; variable RTP/AS support	REE in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	High-Mg dyke with REE-rich assays and sulphide indicators
T21	Lithology (Diorite)	Lithological/Vein	B+	86	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	diorite with Cu-rich assays and sulphide indicators
T20	Lithology (Diorite)	Lithological/Vein	B+	86	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays; localized pitting/trenching	diorite with Cu-rich assays and sulphide indicators
T19	Lithology (Diorite)	Lithological/Vein	B+	85	Yes	Standard access	Often along lineaments; variable RTP/AS support	Cu±Mo±Zn in bedrock/veins; pathfinders Bi, Sn, W (where sampled)	Mapped + Bedrock/vein assays	diorite with Cu-rich assays and sulphide indicators
T18	Lithology (Diorite)	Lithological/Vein	B+	86	Yes	Standard access	variable RTP/AS support	Cu±Mo in bedrock/veins (where sampled)	Mapped + Bedrock/vein assays	diorite with Cu-rich assays and sulphide indicators
T31	Geophysics	Aeromagnetic (RMI/RTP)	B	69	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T32	Geophysics	Aeromagnetic (RMI/RTP)	B	68	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T33	Geophysics	Aeromagnetic (RMI/RTP)	B	67	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T34	Geophysics	Aeromagnetic (RMI/RTP)	B	66	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T35	Geophysics	Aeromagnetic (RMI/RTP)	B	65	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T36	Geophysics	Aeromagnetic (RMI/RTP)	B	64	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T37	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T38	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T39	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T40	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal;	Not yet sampled	Awaiting ground truthing;	Annular/donut RMI anomalies suggesting

Target ID	Group	Primary Basis	Priority Class	Rank Score 0_100	Outcropping	Exposure /Access	Geophys Support	Geochem Evidence	Testing Status	Ranking Rationale Short
							conjugate highs around central low		prioritize scouting	magnetite-bearing potassic alteration under cover
T41	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T42	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover
T43	Geophysics	Aeromagnetic (RMI/RTP)	B	63	No	Standard access	Strong RMI donut / analytic signal; conjugate highs around central low	Not yet sampled	Awaiting ground truthing; prioritize scouting	Annular/donut RMI anomalies suggesting magnetite-bearing potassic alteration under cover

10.9 What This Means for Chapter 11

Chapter 11 documents the three scout holes - collars, azimuths, depths and first-pass results/insights—explicitly as tests of model end-members (epithermal vein vs lithocap/concealed porphyry). Those outcomes will be used to recalibrate the ranking, refine vectors (e.g., pyrite-marcasite, magnetite destruction, clay zonation), and finalise follow-up collaring.

10.10 Forward Work (Next Phase)

The next phase addresses access and scaling:

- Secure permissions and access for invasive work.
- Deploy short IP/EM/ Resistivity lines and selective trenching to lift central part of the Milar block targets to deeper drill-ready status, especially along diorite/dyke contacts and vein corridors.
- For concealed Southern part of the Mailar Block, complete soil/auger grids, focused IP / EM / SP/VES, and magnetics infill to resolve cap geometry and feeder nodes.

- Re-rank T **Mineral Potential Anomalous Targets zone (**01–43) with the same five-axis framework (add EM and IP axis) after each activity gate; expand drilling and deeper drilling beyond the initial five holes in a phased, evidence-led manner.

10.11 Conclusions About Ground Exploration

Mailar hosts a coherent, fertile porphyry–epithermal system expressed as northern porphyry shells with epithermal overprint, central intrusive/vein corridors, and southern lithocaps above concealed centres. Five targets were selected for scout drilling to test two contrasting styles - epithermal quartz-vein mineralisation and lithocap/concealed cupola mineralisation - while many additional targets already display strong surface convergence from mapping, geochemistry, and geophysics. The only substantive limitation this phase has been access for invasive work, which will be addressed immediately in the next phase. With permissions in place, the program is positioned to convert Mailar’s high-priority anomalies into tested prospects consistent with the hydrothermal porphyry model.

CHAPTER-11

EXPLORATION BY SCOUT DRILLING - TARGET TESTING (STAGE-4)

Three conceptual targets (Quartz epithermal veins, pyrophyllite, granite with potassic-sericitic alteration and red patches), representing two distinct mineralisation styles in the Mailar hydrothermal system, were tested by five scout boreholes in this G4 phase. The work was designed to prove system fertility rather than to fully delineate ore bodies, and its implications must be read together with Chapters 8, 9 and 10.

11.1 Objectives and Rationale for Scout Drilling

Following the identification and ranking of 43 mineral potential anomalous targets in Chapter 8 and their detailed surface evaluation in Chapter 9, Chapter 10 concluded that the Mailar Block hosts a fertile porphyry–epithermal Cu–Mo–Au system with multiple high-priority anomalies. However, access and permitting constraints, especially in forested and sensitive areas, restricted the extent of invasive exploration (trenching, pitting and drilling) that could be implemented in this first phase.

Within these constraints, scout drilling was planned with *two clear objectives*:

1. To test the two key mineralisation styles predicted by the hydrothermal porphyry model in Mailar Block:
    - Epithermal quartz–sulphide veins hosted in potassic-altered felsic volcanics (Gulenda, northern part of Mailar block).
    - Advanced-argillic lithocap and underlying argillic/potassic assemblages above a concealed porphyry centre (Near Mailar, southern part of Mailar block).
2. To establish the fertility of the Mailar Block and demonstrate the existence of a hydrothermal porphyry Cu–Mo system, even if the main ore zones were not fully intersected in this phase.

Accordingly, **three conceptual targets** were chosen and tested by **five scout boreholes**:

- Near Mailar, southern part of Mailar block – tested by BH-01 and BH-05.
- Northern part of Mailar block – tested by BH-02, BH-03 and BH-04.

These three targets together sample the vertical architecture of the system—from epithermal quartz veins and pyrophyllite area—directly linking drilling to the mineral systems framework established in Chapters 4–10.

11.2 Overview of the Drilling Programme

As part of the G4 investigation, five scout boreholes totalling 962.5 m were drilled: three in the northern part of Mailar block (near Burera- BH-02 and BH-03 and Lalaon area- BH-04) and two in the near Mailar (BH-01 and BH-05), southern part of Mailar block.

- **BH-01** – vertical, **343.5 m**, (haematitic leach cap over potassic granite).
- **BH-05** – vertical, **242.5 m**, (pyrophyllite quarry at base of advanced-argillic lithocap).
- **BH-02** – inclined (45° → 290°), **191.5 m (**epithermal quartz veins)
- **BH-03** – inclined (45°→ 290°), **146 m (**epithermal quartz veins)
- **BH-04** – vertical, **39 m**, (epithermal quartz veins).

The borehole locations relative to lithology along with mineral potential anomaly targets are shown on the **lithological map of the Mailar Block** (Fig. 11.2).

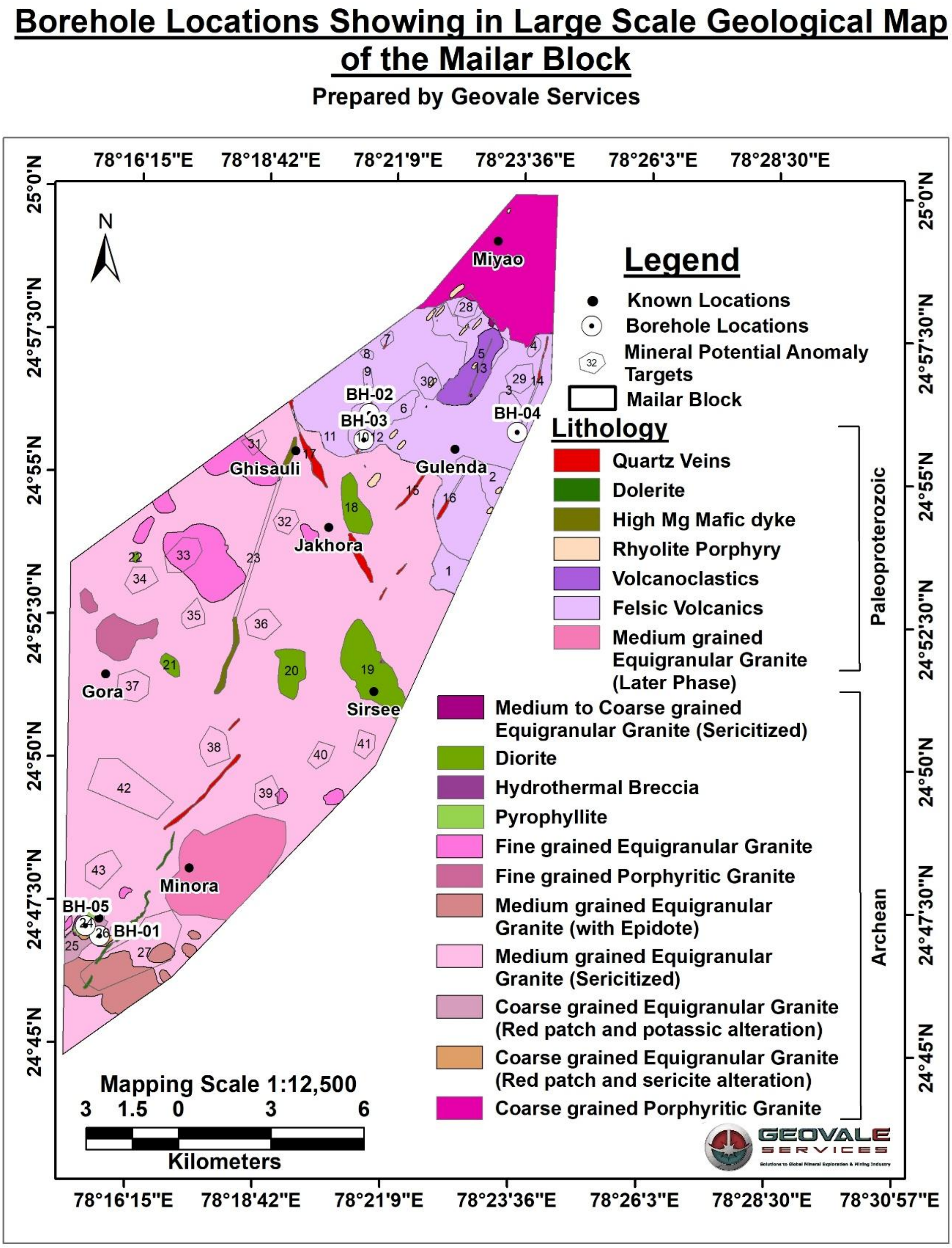


Fig 11.2: Borehole Locations on Lithological map of Mailar Block

Detailed borehole coordinates, collar RL and depths are summarised in **Table 11.2**.

Table 11.2 Borehole Location and Depth

SN No	Borehole No	Latitude	Longitude	Collar Height (in m)	Type	Drill Depth (in m)
1	GSPL/Mailar/BH-01	24.780964	78.261776	362	Vertical	343.5
2	GSPL/Mailar/BH-02	24.934878	78.344794	341	Inclined 45°→ 290°	191.50
3	GSPL/Mailar/BH-03	24.927181	78.343241	328	Inclined 45°→ 290°	146
4	GSPL/Mailar/BH-04	24.930179	78.392208	364	Vertical	39
5	GSPL/Mailar/BH-05	24.783934	78.257186	360	Vertical	242.5
						Total = 962.5 m

11.3 Drilling and Sampling Methodology

All holes were drilled using **diamond core drilling** with standard wireline techniques. HQ core (63.5 mm) was used in the upper sections, reducing to NQ (47.6 mm) at depth where appropriate. Water circulation was maintained for bit cooling and cuttings removal.

Core handling and sampling followed a consistent protocol:

- Cores were recovered in 3 m runs, oriented where possible, and stored in core boxes with depth marking.
- Core recovery was monitored routinely and was generally good throughout; local reductions correlate with brecciated and strongly fractured zones.
- Cores were quarter-cut along their axis:
    - One half preserved as reference in core boxes.
    - One quarter retained for petrographic and mineralogical thin-section study.
    - One quarter is used for geochemical sampling, at nominal 1–1.5 m intervals, with additional shorter intervals over visually mineralised zones.

- Select intervals were chosen for XRF (Annexure XVII and XVIII), ICPMS (Annexure XIX), Gold analysis (Annexure XX and XXI), XRD (Annexure XXII) EPMA (Annexure XXIII) to characterise sulphides and metal associations.

No downhole geophysical logging or formal deviation surveys were carried out in this phase as it was not sanctioned, reflecting the scout nature of the programme. Boreholes were designed to be vertical or modestly inclined, and collar positions and orientations are accurate enough for G4-level geological interpretation.

11.4: Near Mailar, southern part of Mailar block– Porphyry Target

11.4.1 Target Concept and Surface Selection Criteria

Near Mailar, southern part of Mailar block hosts a prominent advanced-argillic the lithocap (pyrophyllite–alunite ± diaspore) mapped in Chapter 9 and supported by ground magnetics, VES and SP. This lithocap lies above a potassic-altered granitic body and is interpreted as the uppermost part of a high-sulphidation environment overlying a deeper porphyry Cu system.

The target concept, developed in Chapters 8–10, was to test:

- Whether the haematitic leach cap over potassic granite (BH-01) preserves evidence of hypogene Cu–Mo sulphides at depth; and
- Whether the basal part of the advanced-argillic lithocap exposed in the pyrophyllite quarry (BH-05) transitions down into argillic + potassic alteration that could host sulphides.

Surface evidence used in site selection included:

- Strong iron staining and hematitic leach cap on granite (Fig 11.4.1.1 and 11.4.1.2), locally hosting Cu anomalies (up to 4,990 ppm Cu) in pits and float.
- VES signatures indicating conductive zones at 60–80 m depth beneath the leach cap (Fig. 11.4.1.3).

- Advanced-argillic assemblages and gussano textures at the pyrophyllite quarry, structurally positioned above deeper geophysical anomalies (Fig. 11.4.1.4).

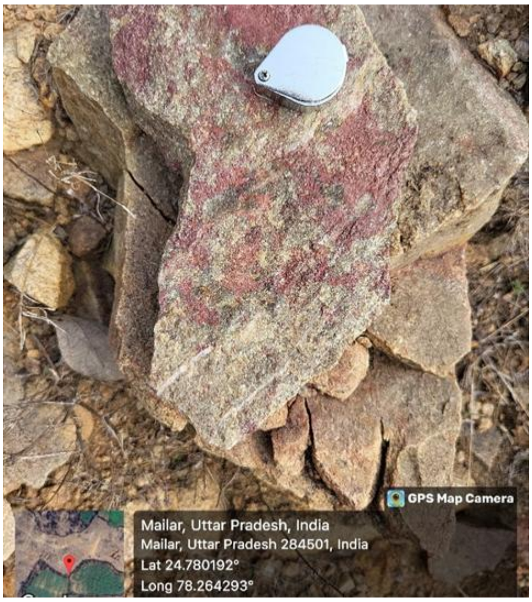


Fig 11.4.1.1: Hematitic Leached Cap, near Mailar

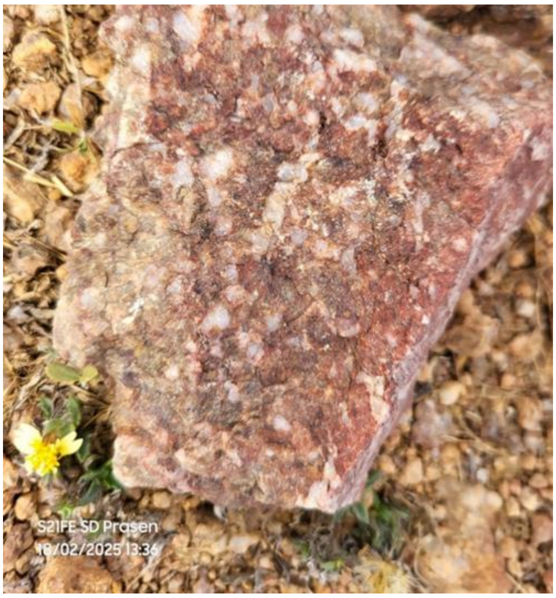


Fig 11.4.1.2: Iron Staining, near Mailar

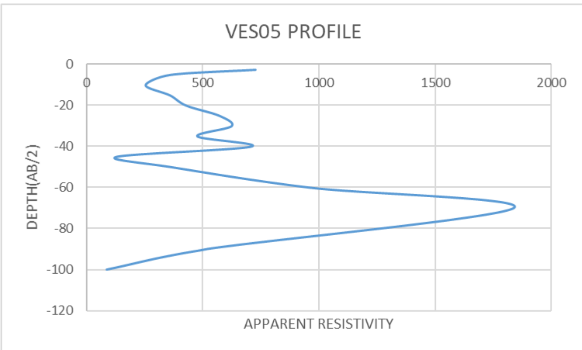
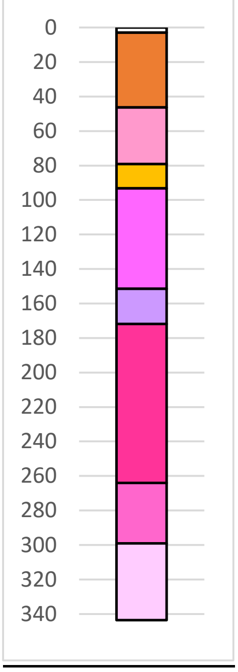


Fig 11.4.1.3: VES-05 profiling in Mailar

Fig 11.4.1.4: Gussano Texture, near BH-05, near mailar

11.4.2 BH-01 – Stratigraphy, Alteration and Mineralisation

BH-01 was collared on the haematitic leach cap and drilled vertically to 343.5 m. The logged succession is given in Fig. 11.4.2.1. Alteration of Borehole 1 is shown in Fig 11.4.2.2.



Colour Index	Depth from (in m)	Depth to (in m)	Lithology
	0	3	Soil
	3	46.33	Medium-grained equigranular granite
	46.33	79.2	Altered medium-grained equigranular granite
	79.2	93.2	Cherty Quartz
	93.2	151.51	Medium-grained equigranular granite (with Kaolinite)
	151.5	171.85	Medium-grained equigranular granite (with Pyrite, Chalcopyrite)
	171.9	264	Medium-grained equigranular granite (with Iron Oxide)
	264	299	Fine-grained porphyritic granite
	299	343.5	Medium-grained equigranular granite (with amphibole)

Fig 11.4.2.1: Litholog of Borehole 1, near Mailar

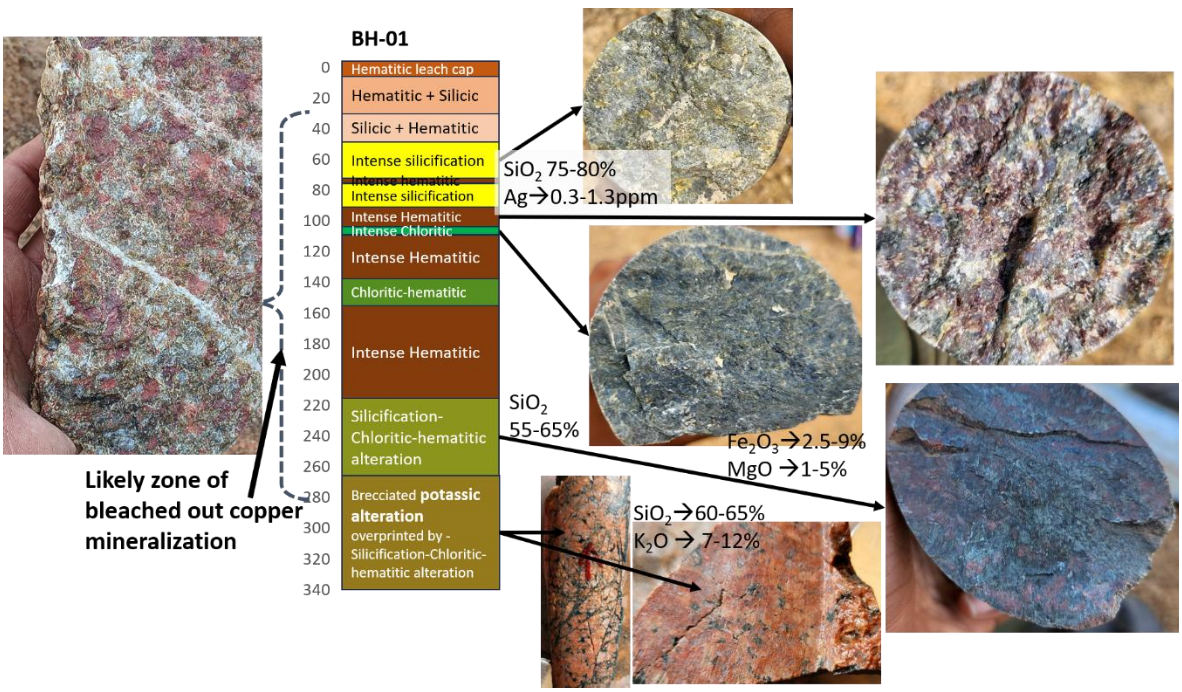


Fig 11.4.2.2: Alteration of Borehole 1, near Mailar

Assay highlights include modest but systematic anomalies: (Annexure- XVII)

- **Ag**: 0.27–1.28 ppm (67–74 m).
- **Cu**: ~40 ppm (110–111 m).
- **Zn**: ~113 ppm (147–149 m).
- **Mo**: ~0.47 ppm (283.5–284.5 m).
- **Sn**: ~2- 5.89 ppm (147-342 m).
- **Au**: up to 0.033 ppm (31–42 m).

Petrographic work (Fig. 11.4.2.3–11.4.2.6) reveals:

- Chloritic alteration and microcrystalline quartz overprinting earlier granitic textures.
- Relict pyrite–covellite intergrowths and specks of chalcopyrite at multiple depths (approx. 90–120 m), indicating hypogene copper sulphides partially replaced or overprinted by late supergene processes.
- Strong silicification and ferruginisation consistent with an advanced-argillic overprint on a pre-existing potassic system.

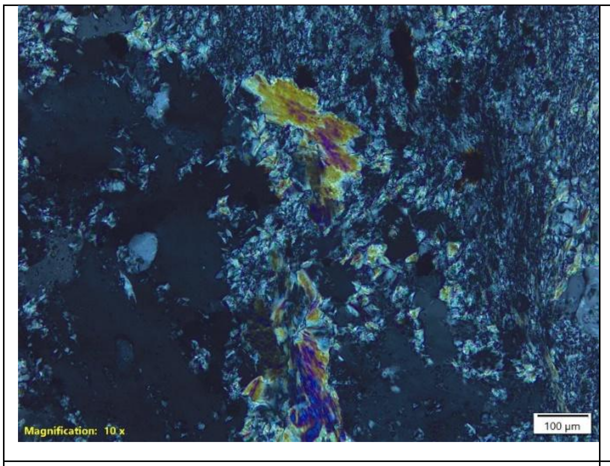


Fig 11.4.2.3: Cholitic alteration in granite (near 100 m depth drill core)

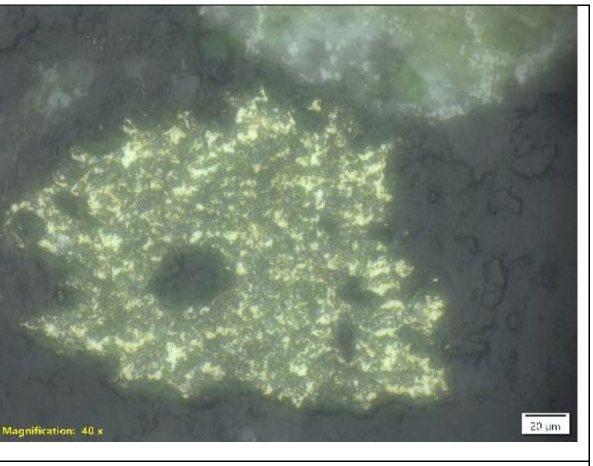
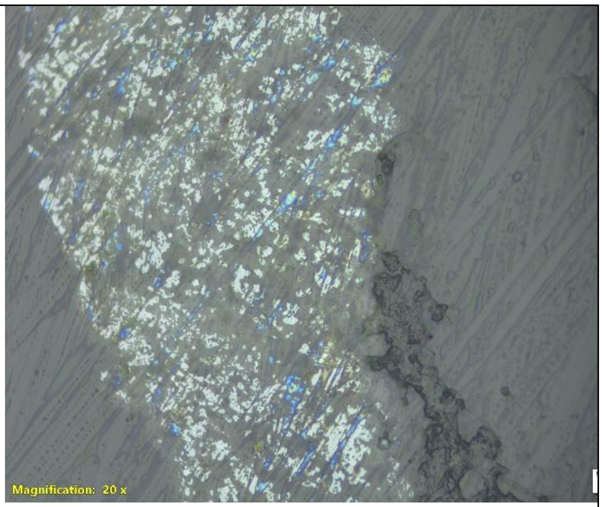


Fig 11.4.2.4: The presence of chalcopyrite at 90 m depth

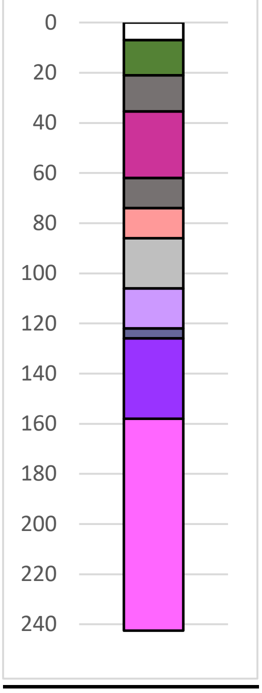
	
Fig 11.4.2.5: Specks of chalcopyrite at 120m depth	*Fig 11.4.2.6: The presence of covellite (blue patches) at 180 m depth*

Collectively, BH-01 did not intersect a well-developed, strongly mineralised ore zone. However, it confirmed:

- A thick leached and silicified cap overlying potassic-altered granite.
- The presence of primary sulphides (chalcopyrite, pyrite, covellite) at depth within the granitic host.
- A vector from the leach cap toward a deeper hypogene Cu-enriched zone, likely between BH-01 and the pyrophyllite area mapped at surface.

11.4.3 BH-05 – Stratigraphy, Alteration and Mineralisation

BH-05 was drilled vertically to 242.5 m within the pyrophyllite quarry, positioned at the interpreted base of the advanced-argillic lithocap. The litholog (Fig. 11.4.3.1) shows a classic vertical alteration profile. (Fig 11.4.3.2)



Colour Index	Depth from (in m)	Depth to (in m)	Lithology
	0	7	Soil
	7	21	Pyrophyllite
	21	35.5	Gussano
	35.5	62	Coarse-grained granite with pyrites
	62	74	Gussano
	74	86	Medium-grained mafic rock with white mica, sericite
	86	106	Fine to medium grained black rock with white mica, sericite
	106	122	Medium-grained equigranular granite (with Pyrite, Chalcopyrite)
	122	126	Fine-grained granite rock (potasic)
	126	158	Medium-grained granite rock (sericite)
	158	242.5	Medium-grained equigranular granite (with Kaolinite)

Fig. 11.4.3.1: Litholog of Borehole 5, near mailar mine

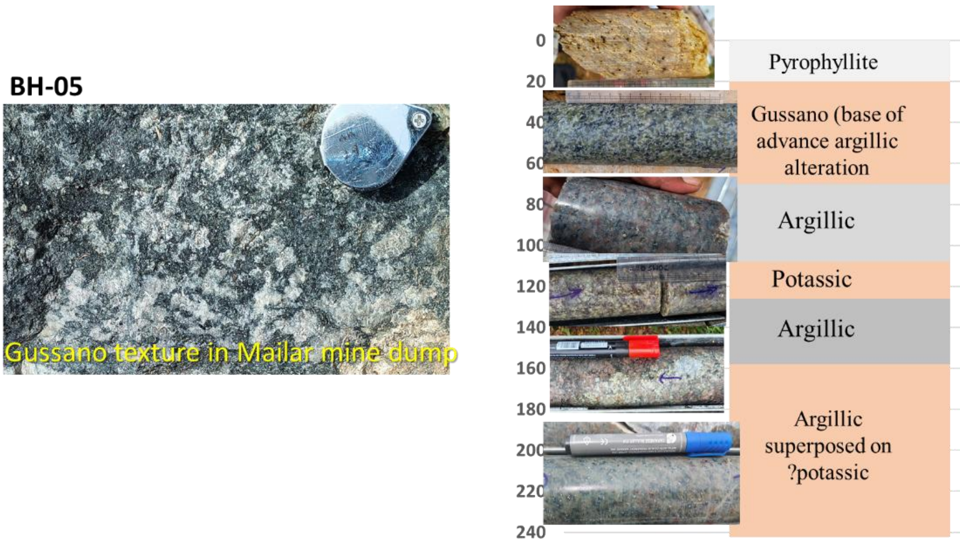


Fig. 11.4.3.2: Alteration of Borehole 5, near mailar mine

Geochemical highlights (selected intervals): (Annexure- XIX)

Most important matter is all the samples selected for geochemical analysis (0-242.5 m) from BH-05 contains very high value of **Sn** (25-41 ppm)

- **Mo**: up to ~28.9 ppm (25–26 m).
- **Ag**: ~0.62–8.29 ppm (25–124 m) and ~1.54 ppm (241–242.5 m).
- **Gold**: ~0.021–0.03 ppm (105–200 m).

Petrography (Fig. 11.4.3.3–11.4.3.4) confirms:

- Strong sericitisation of feldspar in the middle portion of the hole.
- Visible chalcopyrite within altered granitic and mafic rocks below the lithocap.

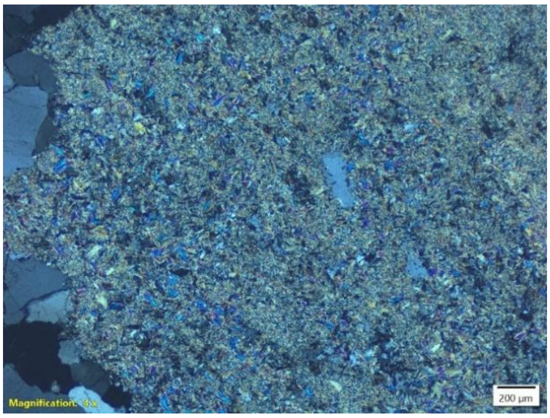
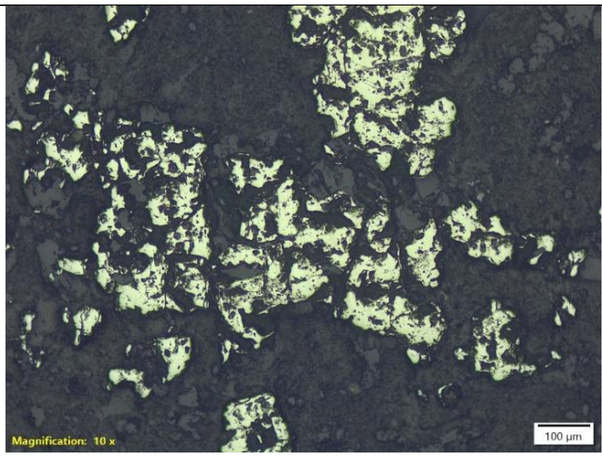
	

Fig 11.4.3.3: Sericitized feldpar at the depth of 101m in the borehole 05.	*Fig 11.4.3.4: The presence of the Chalcopyrite in the borehole 05.*

Together, BH-05 demonstrates:

- Presence of very high anomalus Sn with Cu–Mo–Ag–Au and chalcopyrite beneath the lithocap, consistent with a mineralised porphyry-style system at depth.

11.5: Northern part of Mailar block: Burera Epithermal Quartz Vein (BH-02 and BH-03)

11.5.1 Target Concept and Surface Expression

In the epithermal quartz veins (Gulenda and Lalaon), mapping and geochemistry (Chapters 8–9) delineated a prominent **N–S-trending quartz vein** (~20 m wide, ~800 m long) hosted in **felsic volcanics** with strong potassic alteration. At surface near Burera village, the vein shows:

- Abundant chalcocite, malachite and cuprite in fractures and vugs.
- Molybdenite, silver and visible gold flecks.
- Surface samples across the vein width and along ~500 m strike returning 1,000–6,785 ppm Cu.

This vein represents a late-stage quartz–sulphide hydrothermal pulse within the broader porphyry system, likely associated with a potassic core and structurally focused fluid flow. To test continuity and grade at depth, two 45° inclined boreholes were planned: BH-02 and BH-03, about 500 m apart along strike.

Surface malachite, cuprite, molybdenite and silver in the quartz vein from Burera and lalaon are shown in the following figures (Figure- 11.5.1.1 – 11.5.1.4)

Fig 11.5.1.1: Cuprite associated with Vuggy silica, near Burera.

Fig 11.5.1.2: Malachite associated with quartz vein, near lalaon.

Fig 11.5.1.3: Molybdenite associated with quartz vein, near Burera..

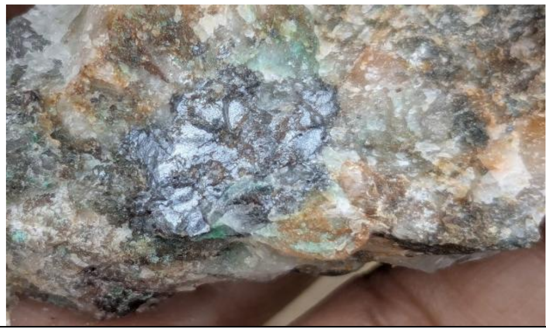
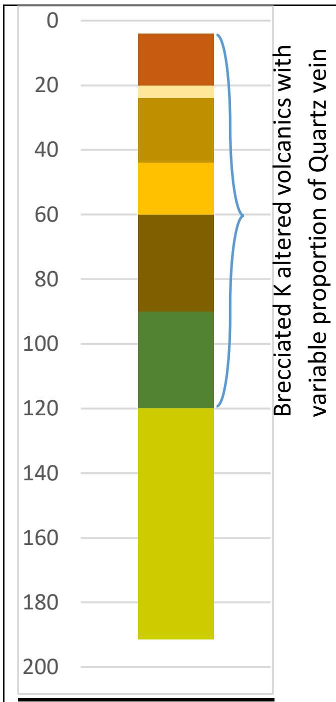


Fig 11.5.1.4: The presence of silver in quartz vein, near Burera.

11.5.2 BH-02 – Lithology, Assays and Interpretation

BH-02 (191.5 m, 45° inclination) intersected a sequence (Fig. 11.5.2.1a and 11.5.2.1b):



Colour Index	Depth from (in m)	Depth to (in m)	Lithology
	0	4	Soil
	4	20	Weathered Rock
	20	24	Felsic Volcanic with quartz veins
	24	44	Felsic volcanic with quartz vein and dissiminated pyrite, chalcopyrite
	44	60	Brecciated and Smoky quartz
	60	90	Felsic volcanic rock with quartz vein and dissiminated pyrite, chalcopyrite, malachite
	90	120	Chlorite biotite rich alteration zone with pyrite and chalcopyrite
	120	191.5	Felsic Volcanic with crystalline quatz and disseminated pyrite

Fig. 11.5.2.1a: Litholog of Borehole 2

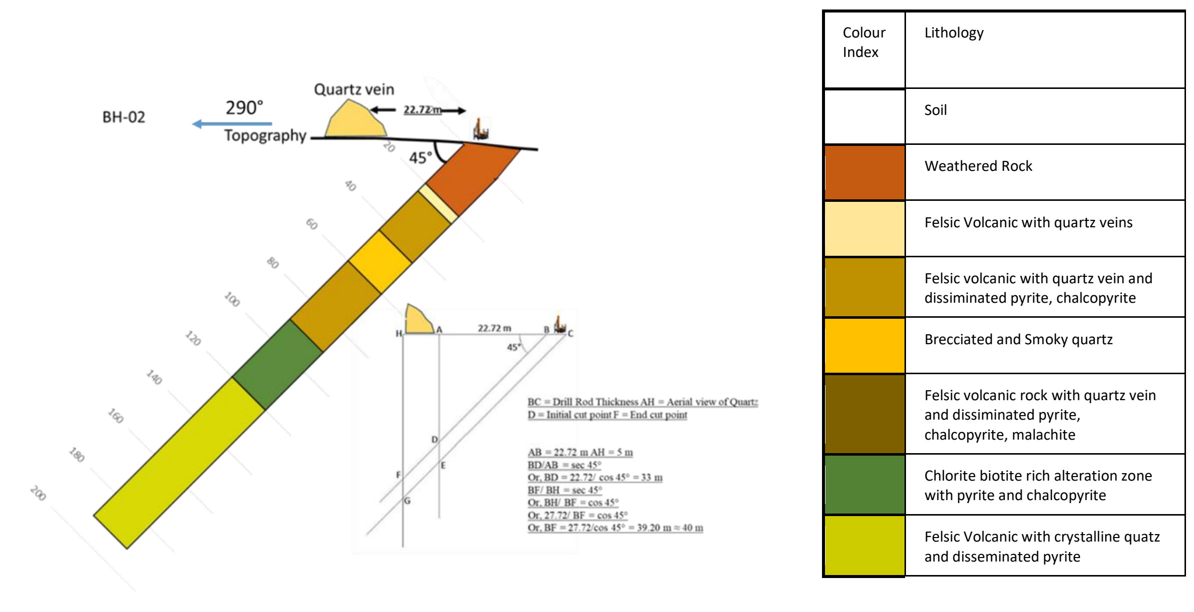


Fig 11.5.2.1b: Cross section of Borehole 2

Geochemical results: (Annexure- XIX)

- **Cu**: 283–949 ppm (60–100 m).
- **Zn**: ~324 ppm (around 19–20 m).
- **Mo**: ~3 ppm in discrete intervals (39–44 m, 60–61 m).
- **Ag**: 0.71–5.87 ppm (38–66 m) and up to ~51.6 ppm (74–135 m).
- **Au**: 0.002–0.058 ppm (38–66 m) and 0.025–0.088 ppm (74–135 m).

Visible malachite (Fig 11.5.2.2), chalcopyrite (Fig 11.5.2.3) and sphalerite are recorded in hand specimen and petrography (Figs. 11.5.2.4–11.5.2.5). BH-02 thus confirms that the Burera vein system carries multi-element sulphide mineralisation at depth, with Cu–Zn–Ag–Au enrichment, albeit mainly at anomalous to low-grade levels typical of epithermal fringes of a porphyry system.

Fig 11.5.2.2: Borehole Sample shows malachite

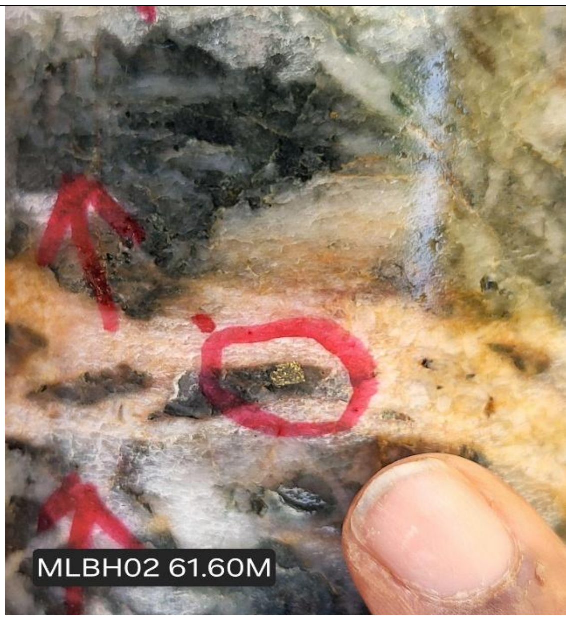


Fig 11.5.2.3: Borehole Sample shows chalcopyrite

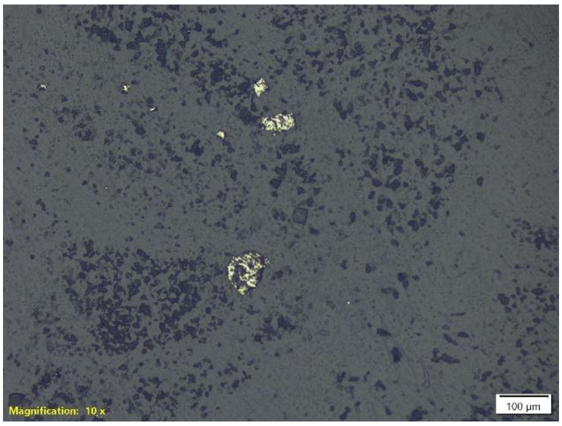


Fig 11.5.2.4: Chalcopyrite in Borehole sample

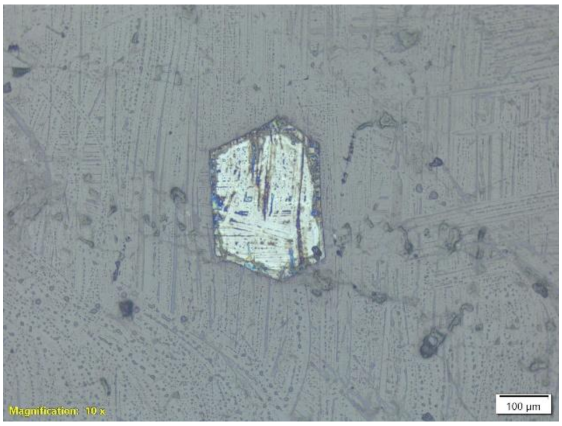
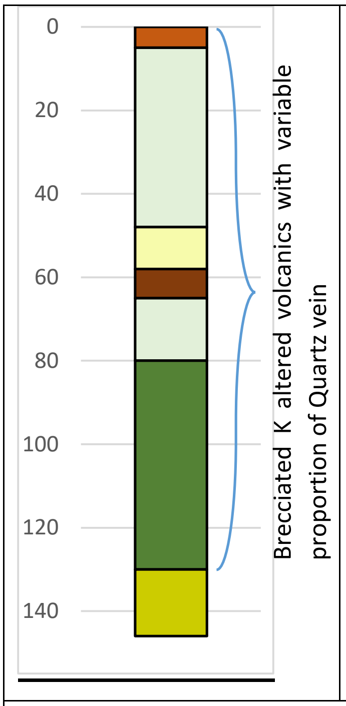


Fig 11.5.2.5: Sphalerite in Borehole petrography

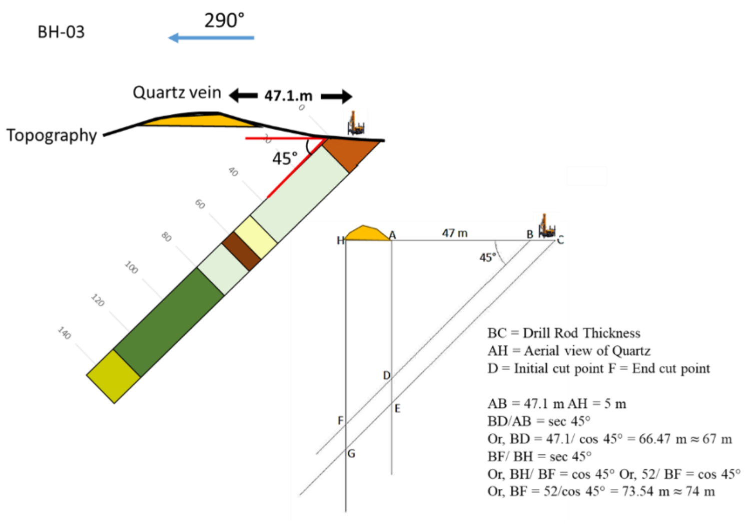
11.5.3 BH-03 – Lithology, Assays and Interpretation

BH-03 (146 m, 45° inclination towards 290°) intersected a broadly similar but more strongly mineralised sequence (Fig. 11.9.2.1–11.9.2.2):



Colour Index	Depth from (in m)	Depth to (in m)	Lithology
	0	5	Weathered Rock
	5	48	Felsic volcanic with crystalline quartz with pyrite, Chalcopyrite
	48	58	Brecciated Quartz with chalcopyrite, and other sulphide
	58	65	Brecciated Quartz with chalcopyrite, and other sulphide
	65	80	Felsic volcanic with crystalline quartz with pyrite, Chalcopyrite
	80	130	Brecciated volcanics associated with quartz vein, with pyrite and chalcopyrite
	130	146	Felsic Volcanic with crystalline quatz and disseminated pyrite

Fig. 11.5.2.1a: Litholog of Borehole 3, near Burera



Colour Index	Lithology
	Weathered Rock
	Felsic volcanic with crystalline quartz with pyrite, Chalcopyrite
	Brecciated Quartz with chalcopyrite, and other sulphide
	Brecciated Quartz with chalcopyrite, and other sulphide
	Felsic volcanic with crystalline quartz with pyrite, Chalcopyrite
	Brecciated volcanics associated with quartz vein, with pyrite and chalcopyrite
	Felsic Volcanic with crystalline quartz and disseminated pyrite

Fig. 11.5.2.1b: Litholog of Borehole 3, near Burera

Hand specimen core samples (Fig 11.5.2.8 and 11.5.2.9) also shows evidences of Chalcopyrite and pyrite.

Key geochemical intervals: (Annexure- XIX)

- **Zn**: 389–423 ppm (10–51 m) and 661–818 ppm (77–87 m).
- **Cu**: 2,927–3,716 ppm (66–71 m) and 483–31,211 ppm (84–103 m), i.e., up to ~3.1% Cu in one-metre composites.
- **Mo**: 4–61 ppm (85–103 m).
- **Au**: 0.061–0.068 ppm (63–68 m) and 0.033–0.093 ppm (96–103 m).
- **Ag**: 1.07–4.69 ppm (42–129 m).
- **Sn**: 25- 92 ppm (41-110 m) (60 out of 85 samples)
- **W** have also very high value between 13-25 m.

Petrographic (Figs. 11.5.2.2–11.5.2.7) and EPMA (11.5.2.10-11.5.2.13) evidence and show:

- **Chalcopyrite, bornite and pyrite** in textural association, sometimes zoned.
- Covellite and chalcocite overprinting chalcopyrite, indicating supergene modification of hypogene sulphides.
- Sulphides in brecciated quartz and volcanic host, consistent with structurally focused, late hydrothermal fluid pulses within a porphyry system.

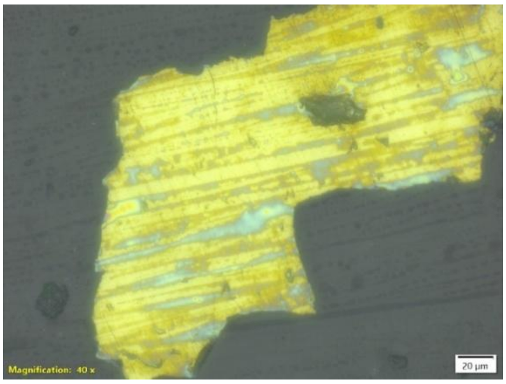
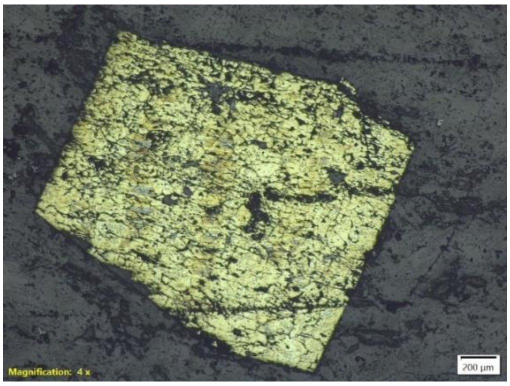
	

Fig 11.5.2.2: The presence of Chalopyrite and associated covellite in Borehole 03.	*Fig 11.5.2.3: The precence of pyrite cube in BH03*

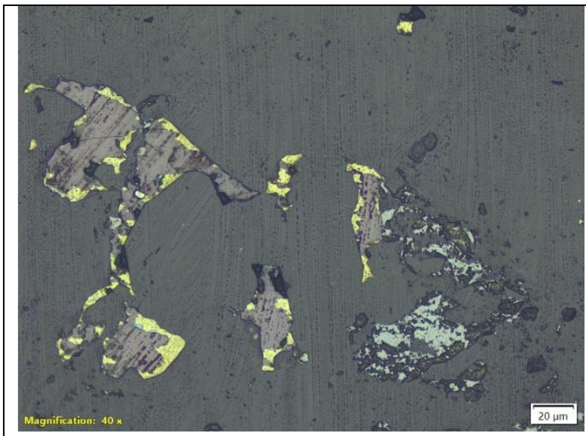


Fig 11.5.2.4: The presence of zoned chalcopyrite and bornite in BH03.

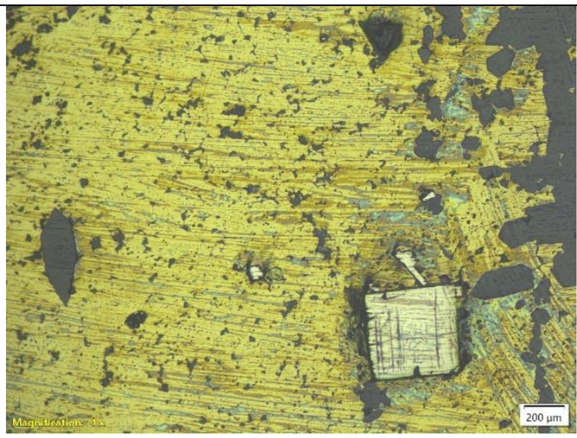


Fig 11.5.2.5: The Presence of chalcopyrite with pyrite cube in BH03

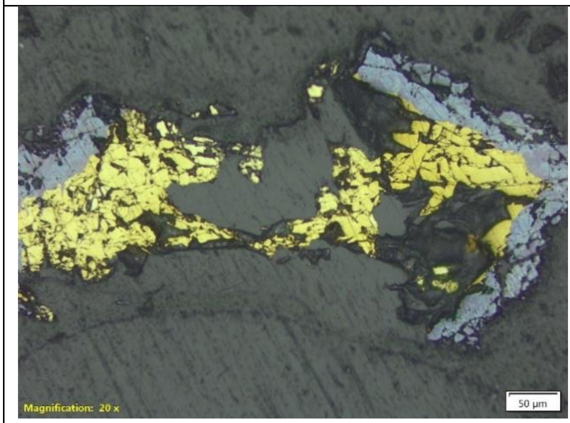


Fig 11.5.2.6: The presence of zoned chalcopyrite and covellite in BH03

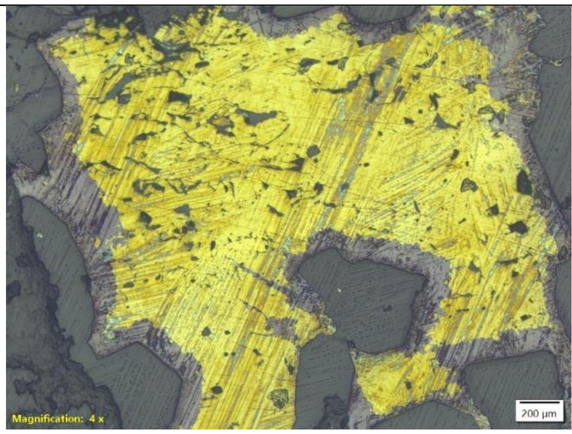


Fig 11.5.2.7: The presence of zoned chalcopyrite with chalcosite.

Fig 11.5.2.8: The presence of chalcopyrite within the Drill Core Sample (one meter composite sample gives 3% Copper).

Fig 11.5.2.9: The presence of chalcopyrite associated with Quartz vein within Drill Core Sample.

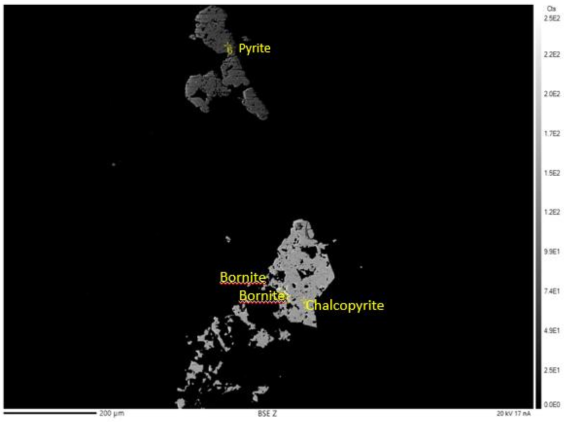


Fig 11.5.2.10: 112507 (BH-03 Sample Contain Bornite, Chalcopyrite,Pyrite)

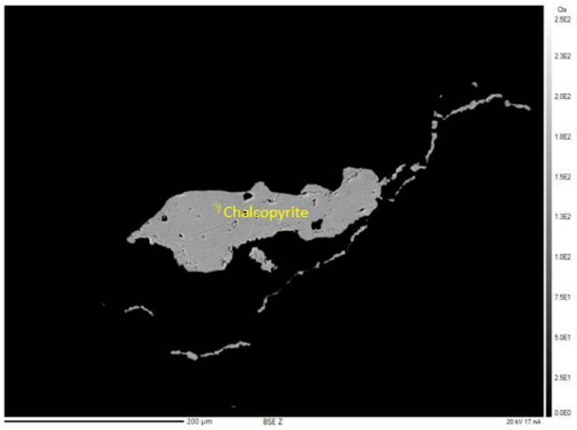


Fig 11.5.2.11: 112507 (BH-03 Sample Contain Chalcopyrite)

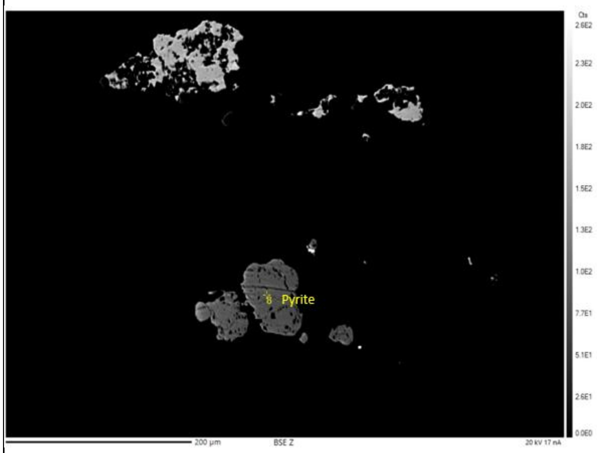


Fig 11.5.2.12: 112507 (BH-03 Sample Contain Pyrite)

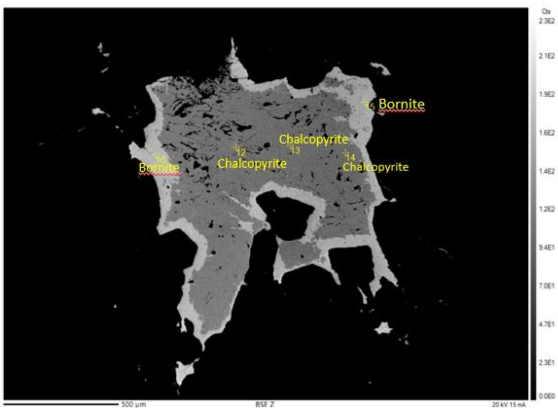


Fig 11.5.2.13: 112509 (BH-03 Sample Contain Chalcopyrite, Bornite)

BH-03 therefore provides robust evidence of high-grade Cu–Zn–Ag–Au mineralisation in the Burera epithermal quartz vein—fully coherent with an epithermal vein style overprint in a porphyry-related hydrothermal system.

11.5.4 Integrated Interpretation for BH-02 and BH-03

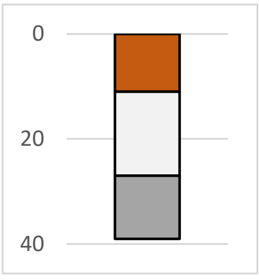
Taken together, BH-02 and BH-03 demonstrate that:

- The Burera quartz vein is mineralised, with multiple intervals grading up to 3% Cu, upto 92 ppm Sn, 61 ppm Mo, 50 ppm Ag with elevated Zn, W and Au.

These results, when integrated with Chapter 9 mapping and Chapter 10 ranking, confirm that the Northern part of Mailar block (near Burera) is a high-priority epithermal vein target within the porphyry system, meriting further step-out and depth-extension drilling.

11.6 Northern part of Mailar block: Lalaon Epithermal Quartz Vein (BH-04)

BH-04 (39 m, vertical) was drilled on a quartz vein hosted within potassic-altered felsic volcanic rocks near Lalaon village, to test **depth extent and orientation** of the vein and its mineral potential. The lithological sequence is as follows (Fig. 11.6.1) and surface sample indications (Fig 11.6.2) are given below:



Colour Index	Depth from (in m)	Depth to (in m)	Lithology
	0	11	Weathered Rock
	11	27	Crystalline Quartz
	27	39	Crystalline Quartz with oxidation

Fig 11.6.1: Litholog of Borehole 4, near lalaon

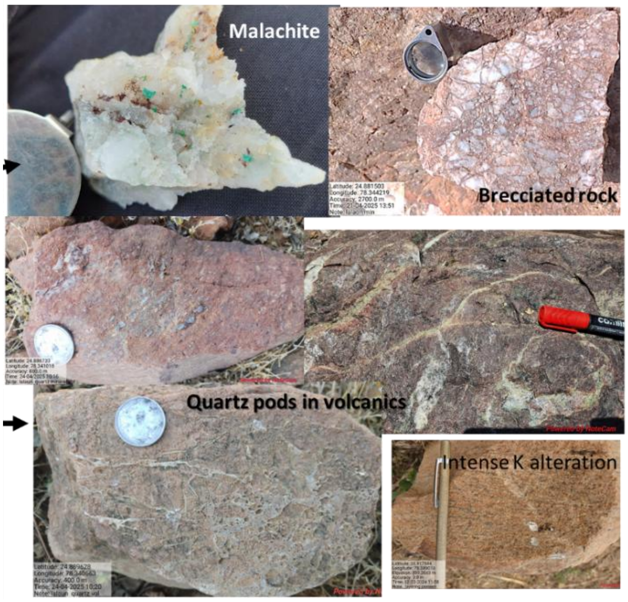


Fig 11.6.2: Litholog of Borehole 4, near lalaon

Assays highlight **silver enrichment**, with: (Annexure- XIX)

- **Ag**: ~3.63 ppm (29.5–30.5 m) and **13.8 ppm** (37.5–38.5 m).

While the hole is short and does not provide the same depth insights as BH-02/03, it confirms that:

- The Lalaon quartz vein is a narrow but silver-rich epithermal feature within the potassic-altered volcanic sequence.
- This vein likely represents also a epithermal quartz vein in the northern system, with mineral potential.

11.7 Implications for the Hydrothermal Porphyry Cu–Mo System with epithermal quartz vein and block Fertility

When viewed together with the surface data (Chapter. 9) and the integration/ranking (Chapter. 10), the drilling outcomes support the following key conclusions

i. BH-02 and BH-03, near Burara, Northern part of the Mailar block intersect high-grade Cu ± Zn ± Ag ± Au± Sn± W mineralisation in epithermal quartz veins, with a sulphide mineralization like chalcopyrite–bornite–pyrite ± covellite/chalcocite.

ii. BH-04 confirms additional epithermal silver-rich veining in the northern part of the Mailar Block, near Lalaoun area.

iii. BH-01 and BH-05, near Mailar, southern part of the Mailar block define a coherent vertical alteration profile from advanced-argillic lithocap to sericite and potassic zones, including chalcopyrite and molybdenite beneath a pyrophyllite cap. The presence of potential Tin mineralization is confirmed in Borehole 05.

Although boreholes 01 and 05 do not show significant copper mineralization, they provide important insights into hydrothermal fluid pathways. For example, Borehole 01 is located at the boundary between the potassic and sericitic alteration zones, where surface exposures exhibits extensive development of leach cap suggesting former presence of sulphide minerals. VES data indicated possible conductor zone at 60-80 m depth. As it turn out from drill samples below the leach cap horizon that extend for about 50-60 m there is extensive silicification and original granitic minerals feldspar biotite are absent. The silification is associated with common occurrence of hematitic patches. This feature suggest that extensive silicification moved away nearly all cations (including even aluminum in feldspar) save minor iron oxides. A likely scenario had been that the area was affected by highly acidic solution (pH ~2) that has even mobilized aluminum cation. It is possible that pyrophyllite mine represent a zone where aluminum got precipitated. It is thud likely that there would be some hypogene enriched copper horizon in the vicinity.

Similarly, Borehole 05 was drilled upto 243 m reveal a systematic porphyry related alteration zones with advanced argillic alteration underlying by argillic alteration zone with some evidences of the potassic alteration near the bottom of the drillhole, such systematic presence of alteration zones suggests that copper bearing potassic alteration zone likely recite at certain depth below about 250 m.

Thus, both borehole 01 and 05 can be considered for positive boreholes providing important vector for mineralization even though mineralized zones are not intersected.

Porphyry Architecture Substantiated

The epithermal quartz vein in the northern part of the Mailar Block and the Pyrophyllite-Advance Argillic and Potassic alteration in the southern part of the Mailar Block (Target S–1) together match the porphyry Cu–Mo–Au model inferred from Chapters 4–9.

Consistency with Targets and Rankings

The drilling results are fully consistent with the target classifications and confidence levels developed in Chapter 10:

Borehole 2 and 3, near Burera northern part of the Mailar Block behaves as a ranking 1 epithermal quartz vein target with demonstrable high-grade intercepts.

Borehole 04 near Lalau, Northern part of the Mailar block is a narrow but significant silver-rich vein, likely ranking 2.

Borehole 05, near Mailar, southern part of the Mailar block, have consistent Tin value implying ranking 3 potential mineral targets.

Borehole 01, near Mailar, southern part of the Mailar block is a priority porphyry centre now strengthened by vertical alteration control and sulphide evidence, but still in need of deeper testing.

11.8 Recommendations for Future Deep-Seated Drilling

In light of India's emerging emphasis on deep-seated target drilling within its mineral policy framework, the Mailar results strongly support a Phase-II programme with:

- Deeper, directional holes beneath and lateral to BH-01 and BH-05, near Mailar, southern part of the Block to intersect the potassic core and main sulphide zones indicated by the current vectors.
- Step-out and depth-extension holes along the Burera epithermal quartz vein, northern part of the Mailar block to confirm continuity, thickness and structural controls of the high-grade Cu–Zn–Ag–Au zones intersected in BH-03 and BH-02.
- Follow-up testing of the BH-04, near Lalaou, northern part of the Mailar Block and adjacent area where surface and near-surface data suggest additional epithermal quartz veins associated with potassic-altered felsic volcanics.

11.9 Summary of the Boreholes

This G4 scout drilling programme has achieved its main objectives:

- It has tested three conceptual targets representing two key mineralisation styles in the Mailar hydrothermal system.
- It has demonstrated the fertility of the Mailar Block, confirming a working porphyry Cu–Mo–Au system.
- It has generated strong vectors for deeper drilling in the Southern part of the Mailar block and validated high-priority epithermal quartz vein targets in the northern part of the Mailar block.

The next logical step, fully aligned with the discussion in Chapters 9 and 10, is a deep-seated, phased drilling strategy that systematically follows these vectors into the core of the system while expanding along the most promising vein corridors.

CHAPTER-12

DISCUSSION, CONCLUSION AND RECOMMENDATION (STAGE-5)

12.1 Discussion

The Mailar project has been a real revelation. What was taken up as a pilot scale project covering only about 200sq. km. to assess potential presence of a hydrothermal system based on sparse and isolated reports of incidences of copper, molybdenum, and gold in the surrounding areas (Pati et al., 2007) as well as few test drillings carried out on an assumption of presence of a porphyry system in an area ~50 km north of the present block that only yielded ~500ppm copper at a depth of ~400m in a few samples (Absar et al., 1999) has now turned out to be one of the finest greenfield discovery in decades. It is a robust example of a large alkali/shoshonitic porphyry copper-molybdenum-(gold) district.

At the project inception it would have been unimaginable to even hope that the project would generate as many as 26 credible exploration targets for porphyry copper-molybdenum-gold system only in exposed parts of the project area (much of the central part of the project is soil covered) and as many as 16 doughnut shaped discrete or twinned Residual Magnetic Intensity (RMI) that are so characteristic of any fertile potassic alteration system in any large porphyry system. All beauties of a porphyry system are in bloom or just peeping through.

The application of a modern Mineral System Analysis (MSA) framework from the project's inception is commendable and has directly led to a conceptual breakthrough for the region.

The recognition of this coherent volcano-plutonic assemblage—comprising coeval extrusive volcanics, sub-volcanic porphyries, and intrusive stocks of dioritic to granitic composition—is profoundly important. This is the classic geological architecture of the eroded roots of a volcanic arc, the precise environment where porphyry systems form. This transforms the Mailar block from a generic segment of the craton into a discrete, preserved Neoarchean volcano-plutonic center, analogous to the highly prospective granite-greenstone terranes of other Archean cratons, such as the Abitibi Subprovince in the Superior Craton of Canada and portions of the Yilgarn Craton in Western Australia, both of which host world-class porphyry-style deposits.

Three different types of porphyry system related mineralization styles commonly found in discrete porphyry districts are all teething out within the project area. These styles include (i)

A-Vein Type (AVT) found within granitic (and rhyolite porphyry) country the Mailar area, (iii) the Early Halo Type (EHT) found in the felsic volcanic terrain in the Gulenda area in the northern part of the Block, and (iii) Epithermal lode type hypogene enriched copper-silver-(gold) mineralization mainly occurring associated with the felsic volcanic terrain in the northern part. Interestingly, the AVT type signifies a depth of mineralization of ~1.5 to ~3km while the EHT type signifies a depth of mineralization of ~3 to 5 km clearly indicating a difference of ~2km in the depth of mineralization. The epithermal lode type hypogene-enriched mineralization indicates a very high level of mineralization likely to be related to a late stage of uplift of the volcanic terrain to a depth where silica could be exsolved as quartz veins scavenging metals through its passageway.

The main strength of this pilot scale prospecting work lies in the very detailed and intensive study on alteration mineralogy, alteration geochemistry that is backed by exhausting fieldwork supported by equally extensive geochemistry and petrography. The attempts to semi-quantitatively identify intense fluid channel ways within identified potassic alteration zone has proved to be quite successful in target area reduction in the Gulenda alteration area. In the Mailar alteration area, the now abandoned pyrophyllite mine dumps provided important clues for presence of high-sulphidation porphyry related advanced argillic alteration in the area. Presence of alunite and anhydrite in the mine dump samples as well as ~5000 ppm copper assay in one mine dump sample left no doubt that the pyrophyllite mine represents advanced argillic alteration related to high-sulphidation porphyry copper system. Once this is done, the challenge had been to map out systematic alteration zones as advanced argillic alteration indicated a temperature of alteration of ~250°C while copper mineralization occurs at ~500-550°C in the potassic alteration zone. A very systematic alteration zones ranging from regional low temperature propylitic alteration, advanced argillic alteration, argillic alteration and potassic alteration. However, much of the potassic alteration with visible chalcopyrite lies outside the present Block boundary and is avoided. The part of potassic alteration within the block area forms intensive leach cap with common patchy iron oxide alteration. This part also showed low electrical conductivity at a depth of ~60-80m, purportedly due to presence of ions that reduce electrical resistance. Two drilling targets: one over the leach cap and other down the pyrophyllite deposit was carried out.

Comparative Analysis of the Mailar and Gulenda Alteration-Mineralization Systems		
Attribute	Gulenda Alteration Area (North)	Mailar Alteration Area (South)
Host Rock	Neoarchean Felsic Volcanic Complex (Rhyolite, Rhyodacite)	Neoarchean Granitoids (Granite, Granodiorite)
Dominant Alteration	Sodic-Calcic and Potassic (insignificant argillic and propylitic)	Advanced Argillic, Argillic, Phyllic, and Potassic
Key Alteration Minerals	Actinolite, Albite, Titanite (Sodic-Calcic); Biotite, Magnetite (Potassic)	Pyrophyllite, Alunite, Diaspore (Adv. Argillic); K-feldspar, Biotite (Potassic)
Primary Mineralization Style	Early Halo Type (EHT) - Disseminated sulphides in alteration halos	A-Vein Type (AVT) - Disseminated sulphides in early quartz veinlets
Secondary Mineralization	Epithermal Lode Quartz veins with hypogene enrichment	Leach Cap / Supergene Zone
Key Ore & Pathfinder Minerals	Chalcopyrite, Molybdenite, Pyrite; Vein-hosted Chalcocite, Enargite, Cuprite, Silver	Chalcopyrite, Pyrite; High Cu and Bi in leach cap samples
Inferred Depth of Formation	Deeper Level: ~3 to 5 km	Shallower Level: ~1.5 to 3 km
Global Analogue Style	Deeper levels of porphyry systems (e.g., Ann Mason, Nevada; Butte, Montana)	Classic, shallower porphyry model (e.g., Yerington, Nevada; Lowell & Guilbert model)
Expectation of economic potential	(Very) High tenor, low tonnage ore	Low tenor, high tonnage ore

Volcanic facies mapping of the felsic volcanics indicated essentially subaerial felsic volcanism over large tract (covering >30 sq. km within the Block area). Detailed mapping of the alteration zones both in the Mailar alteration area and the Gulenda alteration area indicated that mineralizing event was restricted to a particular phase of felsic magmatism and that systematic alteration zones are truncated by a later phase of granite in both the alteration areas. Disposition of different phases of felsic magmatism and large number of whole rock and trace element data spanning nearly hundred bedrock samples of volcanic rocks, many granitoid samples and few diorite samples indicated that the Block area represented part of a continental arc, and that the magma was generated in the mantle, received lot of crustal rocks as contaminants and then suffered large scale crystal fractionation. All these features are typical of continental arcs and that such continental arc setup hosts bulk of World's porphyry copper deposits.

However, once such generalities are worked out, we must be conscious of the fact that each deposit is unique and will tend to defy simple categorization. Imagination is ultimately the most powerful exploration tool. An example to illustrate the necessity of conceptual alertness for adaptability to specifics of exploration beyond model-predicted generalization for porphyry copper system in the context of the work done in the present project may be given as follows.

A hydrous and oxidizing condition during mantle melting is a necessary condition for scavenging large amounts of copper released due to mantle mantling attached with sulphates rather than sulphide. Sulphate solubility is one order more than sulphide solubility. A hydrous and oxidizing condition in the mantle would crystallize the amphibole before plagioclase. Crystallizing amphibole would scavenge good amounts of Y and Yb leaving the magma progressively richer in Sr/Y and $(La/Yb)_{CN.}$ Accordingly, a typical model prescription for exploration for fertile porphyry system includes high Sr (say >500ppm), low Y (say <5ppm), high Sr/Y (>70 is good) and high $(La/Yb)_{CN}$ (say >20). These values for the Mailar area are just in opposite pole. In general, Mailar samples have low Sr (137 samples out of 150 samples have Sr<150ppm), high Y (145 samples out of 150 samples have Y>20ppm), low Sr/Y (all samples are <20) and low $(La/Yb)_{CN}$ (127 samples out of 145 samples have values <20). A generalist approach to follow model-prescribed parameters without considering specifics of an area would tend to put the Mailar area as infertile. However, on scrutiny we find that Mailar samples in general have high alkali (~10%) with $K_2O/Na_2O>1$. In such a high alkali environment, biotite would tend to get crystallized before amphiboles and scavenge much of the Fe, Mg necessary for formation of amphiboles. In absence of amphibole crystallization, the magma won't get depleted in Y and Yb. But, even with such low Sr/Y and $(La/Yb)_{CN}$ values these may still be used as fertility vectors. It is found that higher values of Sr/Y and $(La/Yb)_{CN}$ coincide with exploration targets identified by detailed alteration studies. Thus, it is not the absolute values of Sr/Y and $(La/Yb)_{CN}$ that is important, rather direction of increasing values of Sr/Y and $(La/Yb)_{CN}$ def the exploration vectors.

Characterization of Mailar Alkalic/Shosonitic Porphyry System:

Even with robustly established porphyry copper system in the Mailar Block, it must be said that Mailar area does not belong to conventional porphyry copper system that is usually hosted in andesitic-granodioritic rocks (viz., those in the Andes or in the Rocky Mountains). Instead, the Mailar area represents an Alkalic Au-Cu porphyry system that is characteristics of deposits formed in post-subduction magmatic settings. Magmas formed in post-subduction settings tend to be small volume, spatially isolated, and mild alkaline (high-K ± Na calc-alkaline) to strongly alkaline in composition. although some of the world's largest porphyry copper (gold) deposits are interpreted to have formed in this tectonic setting (for example, Grasberg, Indonesia). They also represent some of the world's highest-grade porphyry gold resources (e.g., Cadia, Australia).

Mailar-type alkalic Au-Cu porphyry systems are difficult exploration targets, however, since high-grade deposits are associated with small volume pipe-like intrusions that may have aerial extents of only a few hundred square meters (e.g., Holliday et al., 2002). Such alkalic porphyry systems generally do not have associated advanced argillic alteration assemblages, and phyllic alteration is typically restricted to deep-penetrating fault zones. Supergene enrichment zones will therefore be poorly developed at best due to the low sulfide contents of the alteration assemblages (Cooke and Hollings, 2005). The lack of extensive peripheral hypogene alteration assemblages make identifying the focus for fluid flow difficult when more than several hundred meters away from the mineralized porphyry center. Effective exploration therefore requires the means to recognize subtle alteration zones or geochemical halos that highlight proximity to an alkaline intrusive center. Systematic vertical and lateral sulphur-isotopic zonation may occur around several mineralized porphyry complexes. Sulphur isotope study may prove to be an effective exploration tool.

12.2 Recommendation

On the basis of the G4 work completed, the 43 anomalous targets have been consolidated into eight operational exploration blocks for the next phase of work (Fig. 12.2; Table 12.2). Each block groups targets that share a common geological and geophysical context and, in several cases, existing scout drilling. The drilled targets provide critical subsurface control and have been used to strengthen and rank the blocks. Together, these blocks capture all known expressions of the Mailar hydrothermal system – from exposed epithermal veins and lithocaps to covered magnetic donuts – and provide a practical framework for advancing selected areas to G3 while continuing conceptual testing of deeper, concealed centres.

A. Burera Block (Block 1): The Burera Block (~9 km²) covers the core of the Burera epithermal corridor in the north-central part of the study area. Geologically it is characterised by epithermal quartz–sulphide veins and strong hydrothermal alteration developed within felsic volcanics. Potassic alteration is well developed, both along the main veins and in their footwall. Surface geochemistry is outstanding: copper values reach about 7,000 ppm, molybdenite up to 21 ppm, zinc around 1,670 ppm, with associated Sn (17 ppm) and W (65 ppm). Ground magnetics show NW–SE structures with high magnetic responses that coincide with the main vein set. Two boreholes (BH-02 and BH-03) drilled in this block intersected polymetallic mineralisation, including copper up to about 3% and silver up to ~50 ppm at depths around 90–120 m, with metal grades generally improving down-hole relative to surface samples. This block is therefore a prime candidate for immediate G3 follow-up. The recommended strategy is step-out and deeper drilling along the principal epithermal vein system and its splays, coupled with high-resolution IP/RES to map sulphide shoots and stockwork zones, with the dual aim of tracing ore-grade shoots and probing downwards into the underlying porphyry environment.

B. Gulenda Block (Block 2): The Gulenda Block (~16 km²) encompasses the main Gulenda epithermal system and adjacent felsic volcanic terrane. Like Burera, it is defined by epithermal quartz veins and hydrothermal alteration in felsic volcanics, with well-developed potassic alteration. Surface sampling has returned copper values up to ~1,480 ppm and molybdenum around 4 ppm, confirming a fertile epithermal system. Aeromagnetic and ground magnetic data show intersecting NW–SE and N–S lineaments with high magnetic anomalies and at least one donut-style feature, suggesting a structurally controlled intrusive centre at depth. One shallow borehole (BH-04, 39 m) has been drilled here, intersecting silver-bearing quartz (Ag up to ~13 ppm at 37 m). This block already meets the criteria for advancement to G3, but still requires systematic down-plunge drilling. The recommended work programme includes detailed structural mapping and channel sampling along the vein system, extension of ground magnetics and IP over the donut anomaly, and a series of deeper inclined holes designed to intersect the veins at depth and to test the underlying porphyry source.

C. Mailar Block (Block 3): The Mailar Block (~16 km²) covers the Mailar pyrophyllite mine and the surrounding lithocap in the southern part of the licence. Its defining geological feature is a large pyrophyllite body developed within an advanced-argillic alteration zone that overlies and overprints potassic alteration in granite. Surface geochemistry is strongly anomalous, with copper up to ~4,990 ppm, zinc around 135 ppm and molybdenum ~4.3 ppm, confirming a metal-rich lithocap environment. Aeromagnetic data show a strong magnetic anomaly in the eastern part of the block and a donut-style feature interpreted as a magnetite-destructive porphyry core. Two deep boreholes (BH-01 to 343.5 m and BH-05 to 242.5 m) intersected a thick vertical stack of advanced-argillic, argillic–phyllic and potassic alteration, with down-hole geochemistry indicating increasing tin (to ~41 ppm around 71 m) and molybdenite (to ~28 ppm around 25 m) at depth. Although the main mineralised stockwork has not yet been intersected, the alteration and metal vectors clearly point towards a deeper porphyry centre. Mailar Block is therefore a top-priority deep-drilling block. The recommended G3 strategy is to undertake targeted 3D IP/RES and refined ground magnetics, followed by one or more deep, inclined boreholes (800–1,200 m) beneath the existing holes to test the predicted quartz–sulphide stockwork zone and to quantify the size of the concealed porphyry body.

D. Rajpur Block (Block 4): The Rajpur Block (~12 km²) lies immediately south of the Gulenda–Burera area and captures a continuation of the felsic volcanic–subvolcanic package. It is characterised by epithermal quartz veins and hydrothermal alteration in felsic volcanics with strong potassic signatures. Surface sampling has returned copper values up to ~3,830 ppm, zinc ~1,170 ppm and molybdenum ~12 ppm, confirming a high level of fertility even in the absence of drilling. Aeromagnetics show NW–SE and N–S lineaments with high magnetic anomalies and at least two donut-style features, suggesting intrusive centres comparable to those in the Gulenda and Mailar blocks. No boreholes have yet been drilled in Rajpur, so the block remains a surface-constrained but compelling target. The recommended strategy is to elevate Rajpur to near-term drill readiness through 1:5,000-scale mapping, trenching across the most anomalous veins, systematic channel and soil/saprolite sampling, and focused

IP/RES over the magnetic donuts. Depending on results, a first set of 300–500 m holes could then test both the epithermal lodes and their underlying porphyry source.

E. Jakhora Block (Block 5): The Jakhora Block (~26 km²) occupies part of the central corridor and is geologically defined by diorite intrusions and associated quartz veins. Field observations indicate traces of sulphides within the diorite and along vein contacts. A strong ground and airborne magnetic anomaly coincides with the mapped diorite, indicating a sizeable magnetite-bearing intrusive body that may represent a deeper level of the porphyry system. Surface geochemistry is still limited, but sulphide traces confirm that metal-bearing fluids have interacted with these intrusions. Jakhora is an important structural and magmatic link between the Mailar lithocap and the northern epithermal corridors and is therefore treated as a medium-priority but high-impact block. The recommended work includes detailed mapping of diorite bodies and vein systems, systematic rock-chip and channel sampling to quantify metal endowment, and high-resolution ground magnetics and IP to delineate the intrusive geometry and any associated chargeability highs. Scout drilling should then target the most coherent intersections of diorite contacts, structures and geophysical anomalies.

F. Ghisauli Block (Block 6): The Ghisauli Block (~27 km²) covers another segment of the central intrusive corridor where diorite and high-Mg mafic rocks are the principal geological signatures. Sulphide traces have been observed in the field, and aeromagnetic derivatives show at least three donut-style anomalies, suggesting multiple intrusive cupolas or plugs at shallow to moderate depth. Although no drilling has been carried out and geochemical data are sparse, the combination of fertile intrusive types and favourable geophysical patterns makes Ghisauli a strong conceptual target. It is recommended that this block be advanced through systematic mapping, reconnaissance geochemistry (stream sediment, soil and rock chips) and tight-spaced ground magnetics and IP/RES over the donut anomalies. These datasets will enable prioritisation of specific cupolas for future deep drilling as part of the broader deep-seated target strategy.

G. Gora Block (Block 7): The Gora Block (~34 km²) occupies much of the western part of the study area. Outcrop is limited and only traces of diorite are presently mapped; large portions of the block are covered. Geochemical information is therefore minimal at this stage. However, the aerogeophysical dataset is particularly compelling: six distinct donut-style anomalies have been identified within Gora, implying a cluster of intrusive centres at depth. In the context of the Mailar system, such a cluster may represent an additional porphyry field under cover, comparable in scale to the Gulenda–Burera or Mailar corridors. Gora is thus a high-potential but data-poor block. The recommended next steps are reconnaissance geological traverses to clarify lithological and structural patterns, broad-scale stream-sediment and soil sampling, and focused ground magnetics and IP over each donut anomaly. Depending on the degree of convergence between these datasets, one or more deep reconnaissance holes could then be justified to test the most promising cupolas.

H. Satgata Block (Block 8): The Satgata Block (~9 km²) lies in the south-western part of the licence and is currently defined almost entirely by geophysical information. Outcrop is very limited; no systematic alteration or geochemical data are available. Aeromagnetic derivatives, however, delineate three clear donut-style anomalies indicative of concealed magnetite-bearing intrusions and associated magnetite-destructive cores. Satgata therefore represents a purely geophysics-led, deep-seated conceptual target and a logical testing ground for India's emerging strategy for drilling blind porphyry systems. Future work should begin with basic geological reconnaissance and soil/saprolite sampling to establish background chemistry and any subtle leakage anomalies, complemented by targeted VES/SP to estimate depth to bedrock and detect conductive sulphide zones. If these results are encouraging, one deep "proof-of-concept" borehole could be considered to intersect the core of the strongest donut anomaly.

In summary, the eight recommended exploration blocks translate the mineral-system understanding and target inventory of the Mailar G4 project into practical, spatial units for G3 implementation. Blocks containing drilled and strongly mineralised targets (Burera, Gulenda, Mailar and, by extension, Rajpur) can be advanced immediately to resource-oriented deep drilling, while the intrusion-dominated and covered blocks (Jakhora, Ghisauli, Gora and Satgata) form a pipeline of conceptual yet compelling opportunities for deep-seated porphyry exploration in the next phase.

The recommended exploration blocks in the Mailar area represent the natural culmination of the G4 programme in Bundelkhand: a conceptual, mineral-systems–driven exercise that has moved successfully from prediction ("a porphyry Cu–Mo–Au system should exist here") to demonstration (identification and testing of 43 anomalous targets) and finally to definition of concrete G3-scale investment opportunities. By clustering these targets into coherent blocks that integrate drilled mineralisation, mapped alteration, fertile intrusive centres and diagnostic aeromagnetic "donut" anomalies, the project now offers a portfolio of prospects that are directly comparable in architecture and scale to globally significant continental-arc porphyry camps. At the same time, the outcome is highly aligned with India's strategic need to secure domestic copper, molybdenum, gold and other critical metals required for power, infrastructure and the green-energy transition, reducing dependence on long and vulnerable import chains. Pursuing these blocks through systematic G3 exploration and deep-seated target drilling will therefore not only test high-quality analogues of world-class porphyry systems within the Bundelkhand craton, but also advance India's broader resource-security and AtmaNirbhar Bharat objectives in the copper and critical-minerals space. Recommendated 8 block (Block-1 to Block-8) within the mailar G4 Exploration Block. The G4 programme at Mailar has progressed from conceptual prediction to demonstrated mineral system, and finally to a concrete set of G3-scale investment opportunities

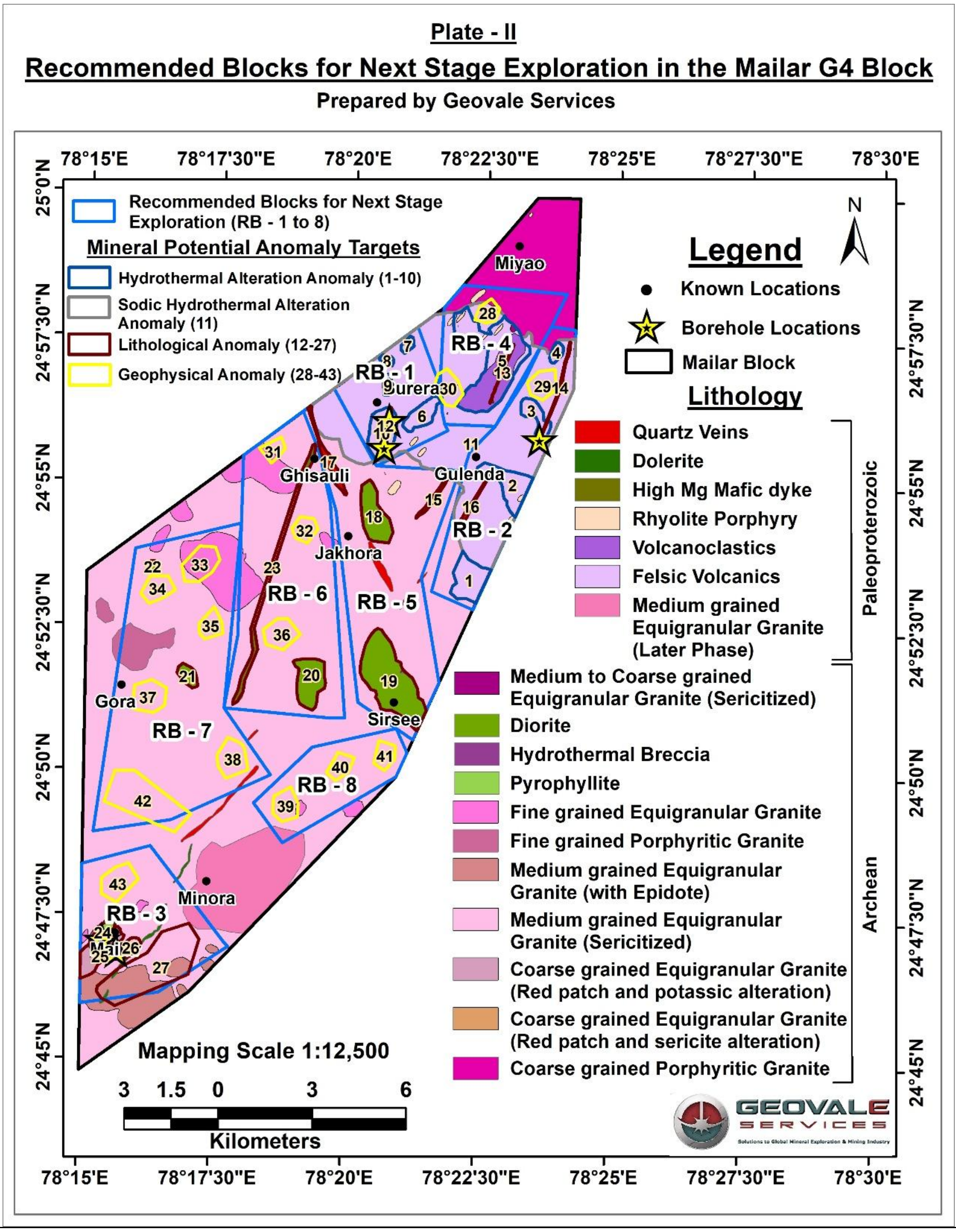


Fig 12.2 (plate II): Eight recommended blocks (RB 1-8) for next level mineral exploration (G3 and above)

Table 12.2 eight operational exploration blocks for the next phase

Block_No	Block_Name	Area_Sq_km	Geological Signature	Alteration signature	Geochemical (Surface)	Geophysical	No. of BH drilled	Max depth Drilled	Geochemical value along depth
1	Burera Block	9	Epithermal quartz vein, Hydrothermal alteration in felsic volcanics	Hydrothermal alteration (Potassic) in felsic volcanics	Cu (max 7000ppm), Molybdenite (max 21 ppm), Zn=1669 ppm, Sn=17 ppm; W=65 ppm	NW-SE lineaments with high ground magnetic anomaly	2	BH-02 (191.5 m), BH-03 (146 m).	Copper (Max 3% around 90 m), Silver (Max 50 ppm around 119m), Tin (55. 56 ppm around 63m), Molybdenite (max 61 ppm around 9 m), Gold (0.09 ppm around 34 m) value increases in depth than bedrock samples
2	Gulenda Block	16	Epithermal quartz vein, Hydrothermal alteration in felsic volcanics	Hydrothermal alteration (Potassic) in felsic volcanics	Cu=max 1484 ppm, Mo=4.1 ppm.	NW-SE lineament and a N-S trending lineaments with high magnetic anonaly, , one donut shape anomaly in aerogeophysical data	1	BH-04 (39 m)	Silver increases in 13 ppm around 37 m
3	Mailar Block	16	Pyrophyllite	Advance argillic alteration with Potassic alteration zone	Cu=4990ppm, Zn=135 ppm, Mo=4.3	High magnetic anomaly in the eastern part of the block, , donut shape anomaly in aerogeophysical data	2	BH-01 (343.5 m) BH-5 (242.5m)	Tin incearses simulteniouly (41 ppm around 71 m), Molybdenite (28 ppm around 25 m depth)
4	Rajpur Block	12	Epithermal quartz vein, Hydrothermal alteration in felsic volcanics	Hydrothermal alteration (Potassic) in felsic volcanics	Cu=3830 ppm; Zn=1171ppm; Mo=12 ppm	NW-SE lineament and a N-S trending lineaments with high magnetic anonaly, , two donut shape anomaly in aerogeophysical data	0	NA	NA
5	Jakhora Block	27	Diorite and Quartz vein	NA	Have sulphide traces	High magnetic anomaly indicating presence of the diorite with sulphide	0	NA	NA

Block_No	Block_Name	Area_Sq_km	Geological Signature	Alteration signature	Geochemical (Surface)	Geophysical	No. of BH drilled	Max depth Drilled	Geochemical value along depth
6	Ghisauli	27	Diorite/High Mg Mafic	NA	Have sulphide traces	Three donut shape anomaly in aerogeophysical data	0	NA	NA
7	Gora Block	34	Diorite traces	NA	NA (Covered area)	Six donut shape anomaly in aerogeophysical data	0	NA	NA
8	Satgata Block	9	Geophysical signature	NA	NA (Covered area)	Three donut shape anomaly in aerogeophysical data	0	NA	NA

CHAPTER-13

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CHAPTER-14

EXPENDITURE

14. Expenditure

Project Initiation Date	Sanctioned Amount	Total Expenditure till October, 2025
1st April, 2024	Rs. 3,63,78,491.82 (including GST)	Rs. 3,63,78,491.82

CHAPTER-15

LOCALITY INDEX

15. Locality Index

(Toposheet no. 54L/5)

Sl No.	Locality	Latitude	Longitude
1	Bansi	24.2615	78.4793
2	Baroda Swami	24.8856	78.2861
3	Benakatoran	24.8718	78.319
4	Bhadra	24.8645	78.2753
5	Bharatpura	24.781	78.2899
6	Bhawar Kali	24.9074	78.3711
7	Bijortha	24.9665	78.424
8	Burera	24.94	78.3408
9	Chaursil	24.7584	78.267
10	Chhipai	24.8913	78.3977
11	Chitra	24. 9013	78.3093
12	Dhurwara	24.9424	78.3065
13	Ghisauli	24.9235	78.3214
14	Gora	24.8574	78.2619
15	Gullenda	24.9249	78.3724
16	Jakhora	24.9014	78.3325
17	Lagaon	24.8138	78.2646
18	Lalaun	24.9259	78.403
19	Mailar	24.7861	78.2614
20	Minora	24.8013	78.2899
21	Miyao	24.9858	78.3849
22	Nagwans	24.8909	78.3563
23	Natrai	24.8819	78.3169
24	Nauhar Kalan	24.8406	78.2899
25	Pipra	24.8931	78.3777

Sl No.	Locality	Latitude	Longitude
26	Rajpur	24.9735	78.3665
27	Rani Pura	24.7687	78.25
28	Rasoi	24.8398	78.3557
29	Sankarwar Khurd	24.7995	78.2673
30	Satgata	24.8282	78.3336
31	Seeron Kalan	24.8387	78.3124
32	Sew Pura	24.7815	78.2503
33	Siron Khurd	24.8206	78.3126
34	Sirsee	24.8538	78.3479
35	Talbehat	25.0438	78.4321
36	Thanwara	24.7937	78.3105
37	Tihari	24.875	78.2585
38	Vinekamafi	24.8541	78.3199

Annexure I_ Field Observation Points

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
1	ML 2	78.274285	24.76315	Discrete Chatan like exposure	Massive, pink coloured, fine to medium-grained granite with quartz (25%), feldspar (70%), mafic (5%).Distinct grain boundary. Mafic clots randomly oriented randomly scattered. Epidote veins present with no metals observed.Veins are present, green in colour.	Medium-grained Equigranular Granite (with Epidote)	Propylitic
2	ML 3	78.272504	24.763402	Discrete Chatan like exposure	Enclaves are observed and sheared (elliptical)	Medium-grained Equigranular Granite (with Epidote)	Propylitic
3	ML 4	78.274529	24.764227	Discrete Chatan like exposure	Massive, coarse grained granite with quartz (15-20%), feldspar (75%), biotite (5%).Distinct grain boundary. Epidote veins in contact with no metals observed.Enclave increases in size found in contact with the granite.	Medium-grained Equigranular Granite (with Epidote)	Propylitic
4	ML 5	78.275662	24.764619	Discrete Chatan like exposure	Veins crosscut the pegmatite veins.	Medium-grained Equigranular Granite (with Epidote)	Propylitic
5	ML 6	78.277121	24.765189	Discrete Chatan like exposure	Feldspar vein part. i. Orientattion of pegmatite veins is 157. ii. Trend of aplitic veins is 50 iii. Boundary of the veins is sharp (variation in thickness).	Medium-grained Equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
6	ML 7	78.268084	24.763667	Discrete Chatan like exposure	Medium grained pink coloured granite.	Medium-grained Equigranular Granite (with Epidote)	Propylitic
7	ML 8	78.261183	24.764664	Discrete Chatan like exposure	Medium-grained Equigranular Granite (with Epidote)	Medium-grained Equigranular Granite (with Epidote)	Propylitic
8	ML 9	78.261682	24.763855	Discrete Chatan like exposure	Massive, light pink colour, fine grained porphyritic granite. At places, some euhedral phenocrysts of feldspar present in the fine grained matrix of quartz and feldspar.Otherwise equigranular with quartz (40%),feldspar(55%),biotite(5%).Distinct grain bo	Medium-grained Equigranular Granite (Sericitized)	Propylitic
9	ML 10	78.261815	24.764476	Discrete Chatan like exposure	Massive, coarse grained, greyish coloured equigranular granite with quartz(25%), feldspar(65%),mafic (5%). Distinct grain boundary. Mafic veins and no metals observed. i. 2 set fractures - 158, 269. ii. Deep violet patches randomly scattered.	Medium-grained equigranular Granite (with Epidote)	Propylitic
10	ML 11	78.259403	24.767902	Discrete Chatan like exposure	Massive, fine grained, dark grey coloured doleritehaving quartz, feldspar and pyroxene. Grain boundary not prominent.No veinsobserved.Metals? i. Greenish black in colour, medium grained, massive quartz , pyroxene , arsenopyrite , chalcopyrite. ii. Trend	Medium-grained equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
11	ML 12	78.255533	24.771147	Discrete Chatan like exposure	Epidote , chlorite rich , medium grained massive pink granite.	Medium-grained equigranular Granite (with Epidote)	Propylitic
12	ML 13	78.253167	24.772142	Discrete Chatan like exposure	Volcanic or plutonic? - Massive, dark brown, medium grained with euhedral to subhedral phenocrysts of feldspar and few rounded phenocrysts of glass? in the fuzzy grain boundary matrix of more feldspathic and mafic. No veins present with no metals observ	Medium-grained equigranular Granite (with Epidote)	Propylitic
13	ML 14	78.280497	24.772053	Discrete Chatan like exposure	Massive pink coloured medium grained granite. Rock contains quartz , feldspar, and patches of chlorite.	Medium-grained equigranular Granite (Sericitized)	Propylitic
14	ML 15	78.251397	24.774523	Undulatory	Volcanic or plutonic? Massive,fine to medium grained , dark pink rock..Quartz(15-20%),Feldspar (80%),biotite(5%).Few rounded grains of glass?Grain boundary not prominent.Quartz veins present with no observation of metals. i. Pink granite more massive , e	Medium-grained equigranular Granite (Sericitized)	Propylitic
15	ML 16	78.25427	24.781056	Undulatory	Pyrophyllite	Pyrophyllite	Argillic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
16	ML 17	78.254214	24.784781	Hilly	Ferruginous chert. Hydrothermal breccia. i.Small, different sized, very fine-grained (almost glassy) material is embedded within the finer matrix. ii. Same type pink granite (massive blackish red coloured .)	Hydrothermal Breccia	Argillic
17	ML 23	78.251409	24.786076	Discrete Chatan like exposure	Medium grained pink coloured massive granite with equal sized quartz and plagioclase. Chloritic veins are also present.	Medium-grained Equigranular Granite (Sericitized)	Propylitic
18	ML 24	78.251635	24.785988	Discrete Chatan like exposure	Massive,medium grained , brownish pink coloured granite. Subhedral to anhedral phenocrysts of quartz and feldspar in the fuzzy grained matrix of feldspar and biotite(7%).Mafic veins present with no presence of metals. Some places having fine grained gra	Fine-grained Equigranular Granite	Sericitic
19	ML 25	78.252001	24.786536	Hilly	Smoky quartz. Massive, dark brown,fine grained porphyritic granite with euhedral to subhedral phenocrysts of quartz and feldspar in fine grained matrix of feldspathic.Grain boundary not prominent.No veins and no metals present. Black coloured, fine grain	Fine-grained Equigranular Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
20	ML 26	78.284655	24.807241	Undulatory	Andesite porphyry - Massive, dark brown, medium grained with euhedral to subhedral phenocrysts of feldspar and few rounded phenocrysts of glass in the fuzzy grain boundary matrix. Epidote veins present with no metals observed. Massive,light pink coloure	Medium-grained Equigranular Granite (Sericitized)	Propylitic
21	ML 27	78.284424	24.807908	Hilly	Dolerite dyke trending 165 present in the contact loc ML	Dolerite	Unaltered
22	ML 28	78.284208	24.809402	Hilly	030 trend curved dolerite dyke.	Dolerite	unaltered
23	ML 29	78.284424	24.8110311	Discrete Chatan like exposure	Granite same as ML 26.	Dolerite	Propylitic
24	ML 30	78.287335	24.808663	Discrete Chatan like exposure	Medium-grained Equigranular Granite (Sericitized)	Medium-grained Equigranular Granite (Sericitized)	Unaltered
25	ML 31	78.289363	24.808567	Discrete Chatan like exposure	Massive,pink coloured,medium to coarse grained equgranular granite with quartz(30-35%) , feldspar(55%),biotite(10%).No fuzzy grain boundary but metal present like pyrite and chalcopyrite. Coarse grained with felspar with mafic and pyrite mineralized (st	Unaltered Equigranular Granite	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
26	ML 32	78.291591	24.809442	Discrete Chatan like exposure	Massive, greyish white coloured granite with 30% quartz, feldspar 30%, biotite 35%.. Biotite clots ramdom , rounded. Biotite clusters at a particular orientation . Fuzzy grain boundary feldspar , no veins present.	Unaltered Equigranular Granite	Unaltered
27	ML 33	78.287357	24.807735	Discrete Chatan like exposure	A very small amount of metal is present??	Unaltered Equigranular Granite	Unaltered
28	ML 34	78.280111	24.81298	Discrete Chatan like exposure	Massive, medium grained, light pink coloured granite. Feldspar - 80%, quartz - 15%, Bt - 5% At places primary biotite present, secondary biotite. Feldspar vein (altered) ,thin quartz and biotite vein with no observation of metals. i. Massive, fine grained,	Medium-grained Equigranular Granite (Sericitized)	Sericitic
29	ML 35	78.284236	24.799578	Hilly	Granite with no metals present. i. Massive, deep grey brown coloured rock, ii. Quartz - 75% , feldspar- 25%. Iii. Random orientation and branching of quartz	Medium-grained Equigranular Granite (Sericitized)	Sericitic
30	ML 36	78.318416	24.854914	Discrete Outcrop	Massive , coarse grained, Diorite rock ,Mafic (pyroxene) - 60% , feldspar - 40%, Mafic percentage high with few grains of feldspar ; no metal present. Distinct grain boundary. Dolerite dyke is present. Trend is 085.	Diorite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
31	ML 37	78.323989	24.862972	Discrete Chatan like exposure	Massive, fine to medium grained pink coloured granite with feldspar - 70%, quartz - 20%, biotite 10%. Biotite clots aligned, secondary. Fuzzy grain boundary and no metal present. Massive ,medium grained light grey coloured rock(diorite).Quartz - 20 % ,	Diorite	Sericitic
32	ML 38	78.342876	24.873505	Hilly	Diorite -Massive ,medium grained light grey coloured rock(diorite).Quartz - 20 % , feldspar - 40%, mafic(biotite grain boundary maybe chloritized) - 40%.Biotite as clots and patches.Distinct grain boundary with quartz veins and no metals present. i. Coar	Diorite	Sericitic
33	ML 39	78.351266	24.910625	Discrete Chatan like exposure	Massive, light pink coloured rock,fine grained pink porphyritic granite. Subhedral to euhedral phenocrysts of feldspar and quartz in the fuzzy grained matrix of quartzofeldspathic composition. Feldspar - 75% , quartz - 20%, biotite - 5% Massive,light pink	Medium-grained Equigranular Granite (Sericitized)	Sericitic
34	ML 40	78.341818	24.868323	Discrete Chatan like exposure	Massive, light pink coloured , medium grained granite and diorite contact Quartz - 15%, feldspar - 80%, biotite- 5% Secondary biotite. Fuzzy grain boundary of feldspar. No vein, no metal.	Diorite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
35	ML 45	78.256138	24.791091	Discrete Chatan like exposure	Massive, medium grained grey coloured granite, with quartz- 30 feldspar- 55, pimary biotite -15, chlorite/epidote veins. Biotite grains are oriented. Distinct feldspar grain boundary. Massive, medium grained, pink coloured granite, with quartz- 30%.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
36	ML 46	78.256007	24.790597	Discrete Chatan like exposure	Massive, medium grained containing pink coloured volcanics ? rock with quartz - 25 , feldspar- 70, biotite - 2 with glass - 3. feldspar grain boundary distinct no veins, no metals	Medium-grained Equigranular Granite (Sericitized)	Sericitic
37	ML 49	78.264486	24.814773	Discrete Chatan like exposure	Massive, coarse grained,greyish white colour granite quartz - 40 feldspar- 57, red coloured materials on quartz,biotite 3% Fuzzy grain boundary. No veins, no metals present.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
38	ML 50	78.263995	24.814812	Discrete Chatan like exposure	Grey colour diaspore	Medium-grained Equigranular Granite (Sericitized)	Sericitic
39	ML 51	78.272311	24.815483	Discrete Chatan like exposure	Massive, medium grained pink coloured granite wiith quartz(15-20%), feldspar (75%),biotite(5%).Biotite grains are oriented .Grain boundary distinct.No veins and no observation of metals.	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
40	ML 52	78.286006	24.817243	Discrete Chatan like exposure	Pink to dark pink medium-grained massive rock with quartz, feldspar and biotite. Present vein of quartz and chlorite associated. Massive, brown,fine grained porphyritic rock with subhedral phenocrysts of quartz in feldspathic matrix.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
41	ML 53	78.293102	24.821967	Discrete Chatan like exposure	Reddish black coloured microcrystalline chert (reddish spot maybe leaching of sulphide). Chert is cut by few cm of quartz vein (Trend NNE 30,Chert with several differently oriented veins, fracture trending 347)	Quartz vein	Unaltered
42	ML 54	78.32678	24.825635	Discrete Chatan like exposure	massive,fine-grained pink granite Quartz -20 , feldspar - 70 with biotite rich almost 10 Grain boundary distinct. Primary biotite, chloritized in some parts. No vein, no metal.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
43	ML 55	78.32678	24.825635	Discrete Chatan like exposure	Massive,fine-grained pink porphyritic granite having subhedral phenocrysts of quartz and also euhedral feldspar in the quartzofeldspathic matrix Quartz -20 , feldspar - 70 with biotite rich almost 10 Grain boundary distinct. Primary biotite, chloritized	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
44	ML 56	78.290367	24.818918	Discrete Chatan like exposure	Chert shows a reddish-brown colour within which a randomly oriented quartz vein is present. Small cystals seen.	Quartz vein	Unaltered
45	ML 57	78.3022245	24.831368	Discrete Chatan like exposure	Chert	Quartz vein	Unaltered
46	ML 59	78.305194	24.843833	Discrete Chatan like exposure	Massive, fine to coarse grained, reddish coloured porphyritic granite. Quartz - 15%, feldspar-80 , mafic -5%. Phenocrysts of feldspar , grain boundary distict , some show alteration within the grain.	Fine-granied Porphyritic Granite	Sericitic
47	ML 60	78.303573	24.849687	Discrete Chatan like exposure	Massive, medium grained, pink coloured rock. Quartz - 10%, feldspar -80, biotite- 10%. Fuzzy grain boundary. Granite altered to whitish material , somewhere altered to reddish and yellowish part. Shearing zone present. Pyrite , arsenopyrite present.	Fine-granied Porphyritic Granite	Sericitic
48	ML 61	78.303159	24.849909	Discrete Chatan like exposure	Calcite.	Fine-granied Porphyritic Granite	Sericitic
49	ML 62	78.357275	24.918689	Discrete Chatan like exposure	Massive, fine grained,pink coloured porphyritic granite.Phenocrysts of quartz in the quartzofeldspathic matrix.Small patches of biotite , chloitized.Fine grained massive pink granite containing veins of quartz. 3 sets of fractures	Fine-granied Porphyritic Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
50	ML 63	78.300672	24.917873	Discrete Chatan like exposure	Massive, fine grained , pink coloured porphyritic granite. Euhedral phenocrysts of feldsapr in the matrix, subhedral phenocrysts of quartz.Quartzo-feldspathic vein. Fine grained pink granite along with quartz and feldspar vein.	Fine-granied Porphyritic Granite	Sericitic
51	ML 64	78.372306	24.932305	Discrete Chatan like exposure	i.Fine grained to extremely fine grained with phenocrysts of quartz and feldspar. ii . Phenocrysts of quartz are anhedral and of feldspar are euhedral. iii . 2 sets of orthogonal fractures tranding 120 and 210. Iv . Presence of hornlende and biotite pat	Fine-granied Porphyritic Granite	Sericitic
52	ML 65	78.375024	24.939433	Discrete Chatan like exposure	Fine grained blackish coloured with euhedral phenocrysts. 3 sets of prominent fractures - 152/90, 240/90 and 115/90. Steel grey 2 set cleavage , bornite found.	Fine-granied Porphyritic Granite	Sericitic
53	ML 66	78.377466	24.944347	Discrete Chatan like exposure	Fine grained blackish coloured rock containing quartz vein with spider net like structure striking along 026. Comb like and moss texure. Amphibolite ?	Fine-granied Porphyritic Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
54	ML 67	78.384343	24.956699	Discrete Chatan like exposure	Massive, chocolate coloured Euhedral to subhedral phenocrysts of feldspar randomly oriented in fine grained matrix. Small glass phenocrysts ovserved. Black patches present, also banding present Fine grained volcanoclastic rock with banding present. Vol	Fine-granied Porphyritic Granite	Sericitic
55	ML 68	78.342838	24.855436	Discrete Outcrop	Massive coarse grained containing feldspar, amphibole and quartz. Dioritic rock. No fuzzy grain boundary , no metal.	Diorite	Sericitic
56	ML 69	78.324378	24.858799	Discrete Outcrop	Massive coarse grained containing feldspar, amphibole and quartz.Some alteration of chlorite and biotite present.Silvery coloured mineral present.Massive coarse grained containing feldspar, amphibole and quartz.(diorite).	Diorite	Sericitic
57	ML 70	78.319865	24.861713	Discrete Outcrop	Massive dark pinkish with higher amount of amphibole and feldpsar along with epidote vein.Lots of epidote veins maybe propyllitic zone.Massive, coarse grained, dark pinkish granite with quartz(15%) higher amount of mafic(15-20%) and feldpsar and contact diorite	Diorite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
58	ML 71	78.282047	24.861656	Discrete Outcrop	Massive medium grained diorite rock of feldspar,amphibole and chlorite , diorite.Exposure within cropland.Massive medium grained rock of feldspar, amphibole and chlorite , Hornblende chloritised diorite.	Diorite	Sericitic
59	ML 72	78.250706	24.861299	Discrete Chatan like exposure	Medium grained pink granite with phenocrysts of hornblende and quartz .2 sets of fractures - 170/90 and 100/90.Massive ,fine grained pink granite.Quartz - 35%,feldspar - 60%,biotite-5%.Pegmatitic vein and epidote veinpresent.No fuzzy grained boundaries.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
60	ML 73	78.312852	24.868614	Discrete Chatan like exposure	Massive, fine grained , pink granite. Quartz(25%) , feldspar (60%),biotite(10%) Distinct grained boundary.Quartz veins and no metal observed. Fine grained pink granite with quartz , feldspar, biotite , chlorite and quartz veins.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
61	ML 74	78.312711	24.873161	Discrete Chatan like exposure	Grey coloured fine grained granite with chlorite , biotite and quartz feldspar. Massive, grey coloured,fine grained granite with quartz (60%)feldspar(30%) and primary biotite(10%) No fuzzy grained boundary.Mafic veins with no metal observed.	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
62	ML 75	78.318951	24.879144	Discrete Chatan like exposure	Massive greyish pink coloured rock with quartz, feldspar and amphibole patches. 1 set of fracture trending 124. Massive greyish pink coloured rock with quartz, feldspar, mafic patches. Phenocrysts of feldspar embedded in fine grained quartzofeldspat	Medium-grained Equigranular Granite (Sericitized)	Sericitic
63	ML 76	78.2542262	24.784784	Undulatory	Hydrothermal breccia observed in rock fragments at Mailar mines.	Hydrothermal Breccia	Argillic
64	ML 80	78.383585	24.956892	Hilly	Linear outcrop, mafic in composition, darker in colour. Foliated but developed no schistosity layers. The amphibole grains are elongated due to presence of cleavage planes.The grain boundaries marked by a greenish tinge.	Quartz vein	Potassic
65	ML DT 1	78.38782	24.962589	Discrete Chatan like exposure	Massive, pink coloured, medium to coarse grained porphyritic granite. Euhedral phenocrysts of feldspar in quartzofeldspathic matrix Feldspar grain boundary distinct.Epidote mineral present throughout the rock. At some places biotite altered to chlorite. No vein a	Coarse-grained Porphyritic Granite	Potassic
66	ML DT 2	78.387367	24.962795	Discrete Chatan like exposure	Coarse grained granite, with quartz content more than feldspar. At some places , feldspar grains are altered, fuzzy textured at their boundaries.	Coarse-grained Porphyritic Granite	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
67	ML DT 3	78.386817	24.962802	Discrete Chatan like exposure	Coarse grained porphyritic granite.	Coarse-grained Porphyritic Granite	Potassic
68	ML DT 4	78.385801	24.962747	Discrete Chatan like exposure	Massive coarse grained pink coloured rock Biotite present, at times altered to chlorite.(yellow coloured flaky grain).	Coarse-grained Porphyritic Granite	Potassic
69	ML DT 5	78.383555	24.966542	Discrete Chatan like exposure	Massive, medium to coarse grained, greyish pink coloured porphyritic granite , phenocrysts of feldspar within fuzzy matrix. Feldspar grain boundary fuzzy altered. Mafic patches present. Chlorite veins present Alteration increased, fuzzy grain boundarieds.	Coarse-grained Porphyritic Granite	Potassic
70	ML DT 6	78.385651	24.961891	Discrete Chatan like exposure	Massive, medium to coarse grained porphyritic granite with euhedral phenocrysts of feldspar in quartzofeldspathic matrix with biotite grains. Fuzzy grain boundary of the matrix. No veins and no signatures of metals.	Coarse-grained Porphyritic Granite	Potassic
71	ML DT 7	78.378226	24.96769	Undulatory	Massive, fine grained, pink coloured granite with quartz (15%),feldspar (75%) ,biotite (10%).Grain boundary fuzzy. Quartzo-feldspathic and mafic vein present.No metals observed.	Felsic Volcanics	Sodic
72	ML DT 8	78.376674	24.966622	Undulatory	Massive, fine grained rock, feldspar grains have fuzzy boundary, secondary biotite.Doubtful silvery mineral present.	Felsic Volcanics	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
73	ML DT 9	78.375908	24.9665599	Undulatory	No B-vein, no alteration, no signature of potassic alteration. Quartz vein present.	Felsic Volcanics	Sodic
74	ML TP 1	78.383204	24.964354	Discrete Chatan like exposure	Coarse grained biotite pophyritic granite with few phenocrysts feldspar in coarse to fine grained of quartzofeldspathic and biotite rich matrix, biotite primary and secondary . Some silvery white point like grains are present. Fuzzy grain boundaries.	Coarse-grained Porphyritic Granite	Potassic
75	ML TP 4	78.378227	24.967671	Undulatory	Medium grained rock with Fuzzy grain boundary of feldspar. B-vein Potassic alteration present in the veinlets.	Felsic Volcanics	Sodic
76	ML TP 5	78.377611	24.967136	Undulatory	Massive, pinkish-medium grained, K-feldspar present, coarse grained and dispersed.	Felsic Volcanics	Potassic
77	ML TP 6	78.376811	24.966691	Undulatory	Massive, pink coloured fine grained porphyritic granite with quartz and feldspar. Small phenocrysts of feldspar in fine grained matrix. Grain boundaries fuzzy due to alteration. Dispersed veinlets, leaf like containing K-feldspar, cross-cutting quartz	Felsic Volcanics	Sodic
78	ML TM 1	78.382053	24.956033	Undulatory	Signature of banding due to volcanic flow?	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
79	ML TM 2	78.37625	24.966628	Undulatory	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Small mm scale mafic enclave with haloe and quartz vein within the roc	Volcanoclastic	Potassic
80	ML TM 4	78.380881	24.955315	Undulatory	Volcaniclastic outer surface having layers with embedded crystals, mafic in composition rock with euhedral phenocrysts of feldspar and quartz.	Volcanoclastic	Potassic
81	ML TM 5	78.380452	24.955325	Undulatory	Tuff with B-vein present in rock fragment of andesite. volcaniclastic outer surface having layers with embedded crystals, mafic in composition rock with euhedral phenocrysts of feldspar and quartz.	Volcanoclastic	Potassic
82	ML TM 6	78.380452	24.955325	Undulatory	Massive,very fine grained,dark brown rock with haloe aound veins. Zonation B vein	Volcanoclastic	Potassic
83	ML TM 7	78.380453	24.955326	Undulatory	Volcaniclastic.	Volcanoclastic	Potassic
84	ML DS 1	78.3819735	24.955339	Undulatory	Massive, medium grained dark brown andesite rock .Euhedral to subhedral phenocrysts of feldspar and few quartz in the fuzzy grain boundary matrix of feldspar , hence altered. No veins and no metal observed.	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
85	ML DS 2	78.381371	24.955466	Undulatory	Massive, fine grained dark brown andesite rock .Euhedral to subhedral phenocrysts of feldspar and glass in the fuzzy grain boundary matrix of feldspar, hence altered. No veins and no metal observed.	Volcanoclastic	Potassic
86	ML DS 3	78.381177	24.955805	Undulatory	Massive, fine grained ,pink coloured minerals present.Veins composed of mafic mineral (biotite).	Volcanoclastic	Potassic
87	ML DS 4	78.381118	24.955975	Undulatory	Massive, fine grained, dark reddish brown rock. Feldspar grain boundary prominent. B- vein present. Vein mineralisation present. Same as above. Fine grained feldspar present at places. Steel grey and pyrite like mineralisa	Volcanoclastic	Potassic
88	ML DS 5	78.3793745	24.956118	Undulatory	Massive, Fine grained, potassic alteration present, fuzzy grain boundary, glass present.	Volcanoclastic	Potassic
89	ML DS 6	78.379163	24.95633	Undulatory	Massive, fine to medium grained, darkred rock. Biotite vein present. Alteration along the veins , potassic alteration.	Volcanoclastic	Potassic
90	ML PS 1	78.382101	24.95572	Undulatory	Massive, no foliation developed, brownish colored. A prominent green coloured vein present. Another rock sample, enargite present. Bulbous outline present probably volcaniclastic.	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
91	ML PS 2	78.38176	24.955573	Undulatory	Traces of volcaniclastic rocks increases here. A black coloured vein within the rock present, white when scratched. Medium grained phenocrysts of feldspar present, glass present. Very little shine grains are present.	Volcanoclastic	Potassic
92	ML PS 3	78.380927	24.956316	Undulatory	Same as above but some whitish amd dispersed. as patches present.	Volcanoclastic	Potassic
93	ML PS 4	78.386477	24.956212	Undulatory	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Euhedral phenocrysts of feldspar and of rounded glass in fine grained matrix of feldspar(maximum) and mafic. No veins within the rock present, no metals present.	Volcanoclastic	Potassic
94	ML PS 5	78.380123	24.956393	Undulatory	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Euhedral phenocrysts of feldspar and of rounded glass in fine grained matrix of feldspar(maximum) and mafic. B-veins within the rock present, no metals present.	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
95	ML PS 6	78.379317	24.957067	Undulatory	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. B-veins and quartz vein within the rock present, no metals present.	Volcanoclastic	Potassic
96	ML TD 1	78.381816	24.954931	Undulatory	Massive , chocolate coloured with fine grained matrix with phenocrysts of feldspar and glass and mafic patch. Ii. Fuzzyness of the grain is not prominent as the matrix is fine grained, some grains fuzzy. ii.Metal- Chalcopyrite small. Silver coloured met	Volcanoclastic	Potassic
97	ML TD 2	78.381816	24.954931	Undulatory	Massive very fine grained brown coloured rock with feldspar phenocrysts with glass No such alterations. Metallic mineralisation less here. Mafic clots present.No veins present.	Volcanoclastic	Potassic
98	ML TD 3	78.38055	24.955348	Undulatory	Massive, very fine grained with feldspar and glass like phenocrysts. B- veins present. Small traces of mineralisation present.	Volcanoclastic	Potassic
99	ML TD 4	78.379994	24.955883	Undulatory	Mafic dark brown coloured rock with feldspar phenocrysts of feldspar. Small micro- metal are present. A few B-vein. No such alteration.	Volcanoclastic	Potassic
100	ML TD 5	78.37906	24.955576	Undulatory	Profused veination present in andesite.	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
101	ML TD 6	78.378262	24.955392	Undulatory	Massive, dark brown , fine grained. Few euhedral to subhedral phenocrysts of feldspar in the feldspathic matrix. Biotite vein with alteration haloe around it. Outer surface striated. Metal?	Felsic Volcanics	Potassic
102	ML TD 7	78.377687	24.955021	Undulatory	Same andesite like before , floated lapillae is there.	Felsic Volcanics	Potassic
103	ML TD 8	78.37601	24.955346	Undulatory	Andesite with B-vein.	Felsic Volcanics	Potassic
104	ML TD 9	78.37601	24.95807	Undulatory	Massive, dark brown , fine grained. Few euhedral to subhedral phenocrysts of feldspar and rounded glass in the feldspathic matrix. B- vein with alteration haloe around it.(Small) Outer surface striated.	Felsic Volcanics	Potassic
105	ML TD 11	78.381603	24.958959	Undulatory	Massive, dark brown , fine to medium grained Few euhedral to subhedral phenocrysts of feldspar and rounded glass in the feldspathic matrix. Spme feldspar grains with fuzzy boundary. Quartz vein present.	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
106	ML TD 13	78.382393	24.959792	Undulatory	Andesite - Massive, very fine grained , dark brown coloured rock. Few euhedral to subhedral phenocrysts of feldspar and rounded glass in the feldspathic matrix. Alteration present.	Volcanoclastic	Potassic
107	ML TP 8	78.268865	24.765167	Discrete Chatan like exposure	Massive, medium grained, pinkish porphyritic granite, prominent grain boundaries ,phenocrysts of feldspar in the quartzo-feldspathic matrix (distinct grain boundary). A green vein like patch that does not stay on hand after scriber	Medium-grained Equigranular Granite (with Epidote)	Propylitic
108	ML TP 9	78.268358	24.767753	Discrete Chatan like exposure	Massive, medium grained granite, brownish pink , with quartz (25%) , feldspar(70%) and biotite(5%) few grains fuzzy vein absent. No metal deposied.	Medium-grained Equigranular Granite (with Epidote)	Propylitic
109	ML TP 10	78.26776	24.7712	Discrete Chatan like exposure	Massive pink coloured medium grained equigranular granite with feldspar (75%) quartz (20%) mafic 5%. Distinct grain boundary. Epidote vein having thin line quartofeldspathic line within Boundary of shear zone mineralized.	Medium-grained Equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
110	ML TP 11	78.268563	24.774249	Discrete Chatan like exposure	Massive, fine grained with medium grained patches, with quartz (15%), feldspar (75%), biotite (10%). Fuzzy grain boundary , distinct in medium grained portion. Epidote rich granite	Medium-grained Equigranular Granite (with Epidote)	Unaltered
111	168	78.267273	24.772872	Discrete Chatan like exposure	Massive , coarse grained feldspar 75% quartz 20% bt 5% Potassic altered	Medium-grained Equigranular Granite (with Epidote)	Unaltered
112	ML DT 12	78.270244	24.765433	Discrete Chatan like exposure	Massive, coarse grained pink rock, no fuzzy grain boundary, so no alteration. quartz% high 50 ; feldspar - 50%, clot of biotite Fine grained black coloured vein of 12 cm thickness no quartz vein. Black coloured vein containing arsenopyr	Medium-grained Equigranular Granite (with Epidote)	Propylitic
113	ML DT 13	78.271812	24.770171	Discrete Chatan like exposure	Medium grained pink granite with quartz (25%),feldspar(65%) and biotite (10%) , black patches of biotite at places changed to chlorite,Distinct grain boundary . Epidote vein present with no metals.	Medium-grained Equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
114	ML DT 14	78.275022	24.770201	Discrete Chatan like exposure	Massive, medium to coarse grained, grey granite. quartz - 40% , feldspar -55%, bt ; feldspar phenocrysts.No fuzzy grain boundary. No veins observed. Small amount of metal present, steel coloured metal beside some feldspar grains.	Medium-grained Equigranular Granite (with Epidote)	Unaltered
115	ML ALL 12	78.261486	24.782548	Discrete Chatan like exposure	Hematite rich , potassic altered granite .	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
116	ML ALL 13-14	78.260353	24.78807	Undulatory	Leached out zone , hematite vein, gossan like feature.	Pyrophyllite	Advance Argillic
117	ML ALL 15	78.263099	24.781006	Discrete Chatan like exposure	Potassic - argillic superpositioned observed in granite.	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
118	ML DT 15	78.262482	24.781002	Discrete Chatan like exposure	Red coloured tint present in granite.	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
119	ML DT 16	78.261147	24.780621	Discrete Chatan like exposure	Recrystallized quartz, Smoky qtz with silvery metal on surface.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
120	ML DT 17	78.258791	24.780878	Discrete Chatan like exposure	Recrystallized quartz, Smoky qtz with silvery metal on surface.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
121	ML DT 18	78.258689	24.781094	Discrete Chatan like exposure	Sericitized.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
122	ML DT19	78.258966	24.781277	Discrete Chatan like exposure	Diaspore radiating.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
123	ML TP 12	78.259894	24.787804	Undulatory	Hematitic nodules.	Pyrophyllite	Advance Argillic
124	ML TP 13	78.264321	24.780149	Discrete Chatan like exposure	Granite Intense veination, coarse grained- fine grained boundary(aplitic) contact, red hematite patch, sericitized imprint on potassic alteration	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
125	ML TP SH 1	78.264321	24.780149	Discrete Chatan like exposure	Fe-shale (argillic alt maybe).	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
126	ML TP 14	78.263223	24.779127	Discrete Chatan like exposure	smoky quartz (maybe lithocap)	Quartz Vein	Unaltered
127	ML DT 20	78.259504	24.782437	Discrete Chatan like exposure	Massive, medium grained, pink granite with quartz (30%), feldspar (60%), biotite (10%). Distinct grain boundary.No veins and no metals present.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
128	ML DT 21	78.259613	24.781966	Discrete Chatan like exposure	Fined grained blackishrock near prev location. Greyish cl contains black patches soiling hand pyrophyllite	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
129	ML DT 22	78.259627	24.78165	Discrete Chatan like exposure	Banded Chert Reddish coloured fine grained material Pyrophyllite Yellowish rock black coloured mineral	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
130	ML DT 23	78.258922	24.7821308	Discrete Chatan like exposure	Pyrophyllite	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
131	ML DT 24	78.258875	24.782126	Discrete Chatan like exposure	Mailar mine sample.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Sericitic
132	ML TP 15	78.264739	24.780769	Discrete Chatan like exposure	Massive,medium grained ,light grey colour granite.	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
133	ML TP 16	78.264931	24.778922	Hilly	Dolerite with no sign of mineralization	Dolerite	Sericitic
134		78.263338	24.780076	Discrete Chatan like exposure	Boundary of potassic zone towards SW.	Medium-grained Equigranular Granite (Red patches and Sericitized)	Potassic
135	ML TP 17	78.256687	24.785547	Undulatory	Pyrophyllite and diaspore	Pyrophyllite	Advance Argillic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
136	ML TP 18	78.256831	24.785391	Undulatory	Pyrophyllite and diaspore (white coarse ellipse?) micro black dot?	Pyrophyllite	Advance Argillic
137	ML TP 19	78.256831	24.785391	Undulatory	Pyrophyllite and diaspore	Pyrophyllite	Advance Argillic
138	ML TP 20	78.256681	24.784985	Undulatory	Pyrophyllite and diaspore	Pyrophyllite	Advance Argillic
139	ML TP 21	78.255209	24.784174	Undulatory	Red Pyrophyllite? and diaspore	Pyrophyllite	Advance Argillic
140	ML DT 25	78.259637	24.782402	Undulatory	Diaspore	Pyrophyllite	Advance Argillic
141	ML DT 26	78.25406	24.782753	Undulatory		Pyrophyllite	Advance Argillic
142	ML ALL 16	78.262831	24.779135	Hilly	Smally hilly outcrop of smoky quartz reef trending 095. Near Mailar mine	Quartz Vein	Unaltered
143	ML ALL 17	78.263203	24.778401	Undulatory	Pyrophyllite and diaspore	Pyrophyllite	Advance Argillic
144	ML ALL 18	78.264137	24.778288	Undulatory	Pyrophyllite and diaspore (white coarse ellipse?) micro black dot?	Pyrophyllite	Advance Argillic
145	ML DT 27	78.370877	24.88544	Undulatory	Massive, medium grained,pink coloured granite. Quartz - 25%, feldspar - 65% , biotite -10% Biotite clots present, at places grain are secondary, stints of biotite. Fuzzy grain boundary of feldspar. Quartz vein present.	Felsic Volcanics	Potassic
146	ML DT 28	78.370577	24.888606	Hilly	Massive, highly altered , no grain boundary found quartz , fedlspar and biotite patch potassic alteration band , exposure trending 050.	Felsic Volcanics	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
147	ML DT 29	78.371595	24.888632	Undulatory	Massive, fine grained , grey with pink tint coloured granite with quartz (20%),feldspar(65%),biotite(15%). Highly altered rock with fuzzy grain boundary. Quartzo-feldspathic vein present.	Felsic Volcanics	Potassic
148	ML ALL 19	78.362565	24.88898	Undulatory	Laminated chert within granite and granite within chert.	Volcanoclastic	Potassic
149	ML DT 30	78.362225	24.88703	Undulatory	Massive, pink coloured rock. Vein of chert and mafic present, glass present Metals- Pyrite,Chalcopyrite, arsenopyrite, bornite,light green coloured metal- covellite. Near Bansi	Medium-grained Equigranular Granite (Sericitized)	Sericitic
150	ML TP 22	78.371745	24.885599	Undulatory	Massive , pink coloured containing feldspar phenocrysts in matrix containing fuzzy grain boundary. Mafic part shows flow pattern. It seems granite but mafic flow? Biotite veins.	Felsic Volcanics	Potassic
151	ML ALL 19	78.362565	24.88898	Undulatory	Banded chert Cherty vein within granite . Trend - 152	Volcanoclastic	Potassic
152	ML TP 23	78.37336	24.888255	Undulatory	Massive, andesite	Felsic Volcanics	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
153	ML TP 24	78.362938	24.887595	Discrete Chatan like exposure	Granitic rock containing crystalline quartz and cherty veins.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
154	ML TP 25	78.361315	24.887063	Hilly	Quartz vein having greyish pink metallic tinge; soils hand with same colour. Smoky quartz with metals (pyrite, chalcopyrite)	Medium-grained Equigranular Granite (Sericitized)	Sericitic
155	ML TP 26	78.355622	24.889397	Hilly	Dark brown, reddish patches due to fe leaching maybe. Dogtooth observed.	Quartz Vein	Unaltered
156	660	78.349986	24.911363	Undulatory	Medium-grained Equigranular Granite (Sericitized)	Medium-grained Equigranular Granite (Sericitized)	Sericitic
157	ML TP 27	78.349986	24.911363	Undulatory	Manganese oxide solution on jointed surface of fine grained granite.quartz, feldspar , chloritized biotite 660	Medium-grained Equigranular Granite (Sericitized)	Sericitic
158	ML TP 28	78.351562	24.911608	Undulatory	Massive, medium grained pink porphyritic granite.Round quartz , few feldspar phenocrysts present in the matrix. Distinct grain boundaries some grains fuzzy showing less alteration intensity.No veins and no metals.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
159	ML DT 31	78.35541	24.889012	Hilly	Quartz reef trending 045 Recrystallised medium grained with hematite patches in quartz reef.	Quartz Vein	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
160	ML DT 32	78.356449	24.890041	Hilly	Same as before , hydrothermal alteration within hematite, hemaite veins within quartz.538	Quartz Vein	Unaltered
161	ML DT 33	78.349468	24.911718	Discrete Chatan like exposure	Massive, pink coloured rock, matrix containing small rounded quartz prsent as phenocrysts, biotite prresent. Quartz vein mm to 1cm trending 085 cutting the granite. 660	Medium-grained Equigranular Granite (Sericitized)	Sericitic
162	ML DT 34	78.348771	24.910168	Discrete Chatan like exposure	Same as above (637).	Medium-grained Equigranular Granite (Sericitized)	Sericitic
163	ML DT 35	78.349488	24.905923	Discrete Chatan like exposure	Same as above(613).	Medium-grained Equigranular Granite (Sericitized)	Sericitic
164	457	78.34236111	24.87502778	Discrete Outcrop	Massive, pink coloured granite with quartz and feldspar and clots of biotite. Epidote veins present	Diorite	Sericitic
165	384	78.350539	24.862614	Discrete Outcrop	Massive,fine grained ,round shaped clots of amphiboles - 30% , matrix is of fine grained of feldspar and chloritised biotite Metals - Chalcopyrite , arsenopyrite present (near a well)	Diorite	Sericitic
166	384	78.349449	24.861935	Discrete Outcrop	Massive, coarse grained , mafic minerals like amphibole and biotite containing chalcopyrite, pyrite,arsenopyrite.	Diorite	Sericitic
167	360	78.350707	24.859955	Discrete Outcrop	Massive, coarse grained diorite containing pyrite and chalcopyrite.	Diorite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
168	360	78.35062	24.859595	Discrete Outcrop	Massive,coarse grained diorite with light greenish vein which soils on hand and soapy.may be epidote	Diorite	Sericitic
169	270	78.348798	24.841697	Discrete Chatan like exposure	Massive, fine to medum grained, pink coloured porphyriticto equigranular granite with euhedral to subhedral phenocryts of feldspar in the quartzofeldspathic biotite rich matrix . Grain boundary fuzzy. Mafic veins chloritised.Less amount of metals present like arsenopyrite.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
170	292	78.348228	24.843816	Discrete Chatan like exposure	Massive, fine grained, pink coloured porphyritic granite with euhedral to subhedral phenocryts of feldspar in the quartzofeldspathic biotite rich matrix . Grain boundary fuzzy. Mafic grains are oriented as bands.Less amount of metals present like arsenopy	Medium-grained Equigranular Granite (Sericitized)	Sericitic
171	313	78.346497	24.850386	Discrete Chatan like exposure	Massive, pink coloured , medium grained , fuzzy grain boundary at places , potassic alteration intensity less , biotite present both as clots and veins , veins are chloritised , arsenopyrite present (metals low)	Medium-grained Equigranular Granite (Sericitized)	Sericitic
172	314	78.346457	24.856386	Discrete Outcrop	Diorite	Diorite	Sericitic
173	359	78.343834	24.859002	Discrete Outcrop	Coarse grained diorite with prominent feldspar boundary , less alteration , less mineralization	Diorite	Sericitic
174	618 (ALL and grid)	78.374094	24.905705	Discrete Outcrop	Mafic rock trending 284 , no metals present .	Felsic Volcanics	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
175	643	78.376795	24.907609	Undulatory	Volcanic tuff	Felsic Volcanics	Sodic
176	662	78.358804	24.912612	Hilly	Quartz reef trending NE-SW , red chlorite chunks present on the quartz vein.	Quartz Vein	Unaltered
177	663	78.364813	24.914577	Discrete Chatan like exposure	Massive, pink coloured , medium grained ,fuzzy grain boundary , clots of biotite randomly oriented , no veins , no metals present.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
178	642 (All and grid)	78.374008	24.906756	Undulatory	Massive,fine grained brownish pink coloured quartz-20%, fuzzy grain boundary , potassic alteration intensity medium , biotite as clots , phenocrysts of of quartz and feldspar.	Felsic Volcanics	Sodic
179	ML DT 36	78.368371	24.94842	Undulatory	massive,chocolate brown coloured rock, few B-vein and A-vein also with quartz vein	Felsic Volcanics	Sodic
180	ML DT 37	78.366981	24.94438	Undulatory	rhyolite	Felsic Volcanics	Sodic
181	ML DT 38	78.364488	24.9444139	Undulatory	rhyolite	Rhyolite Porphyry	Sodic
182	ML DT 39	78.365162	24.944458	Undulatory	contact of rhyolite and andesite	Rhyolite Porphyry	Sodic
183	ML DT 40	78.363379	24.947501	Undulatory	massive,chocolate brown coloured rock(andesite), few B-vein and A-vein also with quartz vein	Felsic Volcanics	Sodic
184	ML DT 41	78.365438	24.947619	Undulatory	massive, dark colored rock with phenocrysts of quartz	Felsic Volcanics	Sodic
185	ML DT 42	78.374705	24.970816	Hilly	Massive, coarse grained granite with primary biotite	Coarse-grained Porphyritic Granite	Sodic
186	ML DT 43	78.373347	24.972915	Undulatory	contact of rhyolite and andesite, trend- 240	Rhyolite Porphyry	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
187	ML DT 44	78.372333	24.977094	Undulatory	Massive, coarse grained light pink coloured granite with quartz(15%), feldspar (75%), biotite(10%). Distinct grain boundary. No vein and no metals observed.	Coarse-grained Porphyritic Granite	Sodic
188	ML TP 29	78.368132	24.940062	Hilly	Volcanic rock,B-vein	Volcanoclastic	Potassic
189	ML TP 30	78.368132	24.940062	Hilly	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Mafic patch present. B- vein within the rock present, no metals pres	Volcanoclastic	Potassic
190	ML TP 31	78.369142	24.940877	Hilly	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Mafic patch present. B- vein with patches of chlorite.	Volcanoclastic	Potassic
191	ML TP 32	78.368223	24.942768	Hilly	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Mafic patch present. B- vein with patches of chlorite within the roc	Volcanoclastic	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
192	ML TP 33	78.369063	24.943803	Hilly	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Mafic patch present. B- vein with patches of chlorite within the roc	Volcanoclastic	Potassic
193	801	78.374183	24.963924	Hilly	Volcanic - Massive, brown coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass in fine grained matrix of feldspar(maximum) and mafic. Quartz vein within the rock present, no metals present.	Felsic Volcanics	Sodic
194	801C	78.37196	24.946295	Hilly	Massive, fine grained, pink coloured porphyritic granite with euhedral to subhedral phenocrysts of feldspar and quartz in the quartzofeldspathic fuzzy boundaried matrix containing biotite clots. No veins and no metals observed.	Volcanoclastic	Potassic
195	863	78.368574	24.967865	Hilly	Volcanic - Massive, brownish pink coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass also quartz in fine grained matrix of feldspar(maximum) and mafic. No veins within the rock present, no metals presen	Felsic Volcanics	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
196	864	78.37101	24.967904	Hilly	Volcanic - Massive, brownish pink coloured, fine grained porpyritic rock. Few euhedral phenocrysts of feldspar and more of rounded glass also quartz in fine grained matrix of feldspar(maximum) and mafic. No veins within the rock present, no metals present.	Felsic Volcanics	Sodic
197	872	78.369102	24.970081	Discrete Chatan like exposure	Massive, coarse grained, light coloured equigranular granite containing quartz (35%), feldspar (55%), mafic (10%).Distinct grain boundary. Mafic vein with no metals observed.	Coarse-grained Porphyritic Granite	Sodic
198	873	78.370951	24.970174	Undulatory	Massive, fine grained ,dark colour rock with 7-8cm large phenocrysts of feldspar, quartz present in the microcrystalline matrix of feldspathic . No veins and no metals observed.	Rhyolite Porphyry	Sodic
199	800C	78.365848	24.945444	Undulatory		Felsic Volcanics	Sodic
200	ML ALL 20	78.39869	24.988653	Undulatory	Massive,coarse grained granite Quartz - 35% , feldspar , biotite Phenocrysts of feldspar present Biotite chloritised ; patches also present Epidote veins present	Coarse-grained Porphyritic Granite	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
201	ML ALL 21	78.388168	24.995207	Undulatory	Orange pink coloured,coarse grained porphyritic , Volcanic- Rhyolite Phenocrysts of bluish quartz and feldspar in fine grained matrix. Feldspar grains sericitized at places. Trending 024	Rhyolite Porphyry	Propylitic
202	878	78.397833	24.971967	Discrete Chatan like exposure	Coarsed grain pink granite Quartz -40%, feldspar - 60% Biotite patches present maybe chloritized Aplitic veins trending 065	Coarse-grained Porphyritic Granite	Sodic
203	ML ALL 22	78.397162	24.9721	Discrete Chatan like exposure	Same as above.	Coarse-grained Porphyritic Granite	Potassic
204	ML ALL 23	78.4005	24.9746	Discrete Chatan like exposure	Massive , medium grained to coarse grained pink coloured granite with quartz -40% and feldspar , No alteration as no fuzzy grain boundary, veins of chlorite and quartzofeldspathic , aplitic veins.	Coarse-grained Porphyritic Granite	Sodic
205	ML ALL 24	78.344465	24.873378	Discrete Outcrop	Massive, fine grained ,pink coloured granite Quartz - 25%, feldspar - 70% and biotite as patches . No fuzzy grain boundary , no metals present. Epidote veins present.	Diorite	Sericitic
206	ML ALL 25	78.348305	24.85633	Discrete Outcrop	Diorite with metals present. Pyrite	Diorite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
207		78.343786	24.857767	Discrete Chatan like exposure	Grantic intrusion in diorite.	Younger Granite	Unaltered
208	ML ALL 26	78.34786	24.85766	Discrete Outcrop	Diorite with metals present. Diorite containing metal (pyrite, arsenopyrite). Granitic intrusion in diorite.	Diorite	Sericitic
209	ML TP 34	78.342406	24.913404	Discrete Outcrop	Diorite with metals present. Diorite containing metal (pyrite, chalcopyrite,bornite)	Medium-grained Equigranular Granite (Sericitized)	Sericitic
210	ML TP 34	78.341985	24.913843	Discrete Chatan like exposure	Granitic body trending 352 through diorite .	Medium-grained Equigranular Granite (Sericitized)	Sericitic
211	ML DT 45	78.343786	24.915396	Hilly	Diorite with very little amount of metal. Granitic intrusion trending 285 of 1m width within diorite. Epidote vein present.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
212	ML ALL 27	78.341483	24.924873	Hilly	Smoky quartz containing pyrite , arsenopyrite, chalcopyrite. Trending 195	Quartz Vein	Unaltered
213	ML ALL 28	78.341237	24.924185	Hilly	Quartz vein having greyish pink metallic tinge; soils hand with same colour. Smoky quartz with metals (pyrite, chalcopyrite)	Quartz Vein	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
214	ML ALL 30	78.34173	24.952197	Undulatory	Shear zone signature in granite (quartz - 20%)showing S-C fabric , quartz grain rotated. Trend 341.	Felsic Volcanics	Potassic
215		78.344523	24.936479	Hilly	Leached zone , quartz vein trending N-S. Reddish coloured crystalline quartz (Fe left out from pyrite maybe)	Quartz vein	Unaltered
216	ML ALL 31	78.342177	24.887681	Discrete Chatan like exposure	Small quartz reef trending ,145 Reddish colour, crystalline quartz reef , recrystallized quartz.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
217	ML ALL 32	78.343409	24.888965	Discrete Chatan like exposure	Contact of quartz vein. Banding in quartz vein. Quartz breccia, metal?	Medium-grained Equigranular Granite (Sericitized)	Sericitic
218		78.344307	24.890657	Hilly	Coarse quartz vein.	Quartz vein	Unaltered
219	ML DT 46	78.345802	24.8875	Discrete Chatan like exposure	Reddish, microcrystaline quartz, cherty material with a lot of veination of quartz.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
220	ML ALL 34	78.317274	24.933605	Discrete Chatan like exposure	Fine grained , light pink coloured granite. Few phenocrysts of transparent quartz and feldspar Quartz - 25-30% A-vein and quartz vein present Few biotite clots chloritized. Joints trending 233 and 133	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
221	ML DT 47	78.314954	24.933099	Discrete Chatan like exposure	Massive, medium grained, reddish pink coloured granite with quartz(20%), feldspar(70%),biotite(~6-8%). Fuzzy grain boundary. No observtion of veins and metals as well.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
222	ML ALL 35	78.31993	24.928817	Discrete Chatan like exposure	Massive, light pink coloured, medium grained granite containing quartz(20%),feldspar(70%),biotite(10%). Fuzzy grain boundary observed with no veins and no signatures of metals.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
223	ML ALL 36	78.323373	24.923512	Discrete Chatan like exposure	Quartz reef trending 160. Quartz vein with reddish coloured material containing no metal.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
224	ML ALL 37	78.322707	24.926873	Discrete Chatan like exposure	Same as before, brecciated , leached out.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
225	ML ALL 38	78.319806	24.922547	Discrete Outcrop	Mafic rock , xenolith , clasts surro -nded by fiery texture.	Diorite	Sericitic
226	ML TP 36	78.366895	24.8859	Undulatory	Reddish pink coloured granite , very few phenocrysts of feldspar present. Fuzzy grain boundary. Biotite grains are oriented due to presence of shear zone.	Felsic Volcanics	Potassic
227	ML ALL 39	78.367658	24.887398	Undulatory	A shear band sample carrying chert, also granite highly altered containing metal , chalcopyrite (low)	Felsic Volcanics	Potassic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
228	ML ALL 39	78.366526	24.885833	Undulatory	Massive, dark pink coloured , fine grained rock , mafic banding at places, volcanic? Arsenopyrite , bornite? Highly potassic altered zone , smoky quartz banding trending 110 Shear zone trending 143	Felsic Volcanics	Potassic
229	ML ALL 40	78.366895	24.88593	Undulatory	Medium grained granite with phenocrysts of feldspar B-vein and A-vein.	Felsic Volcanics	Potassic
230	ML ALL 41	78.362571	24.887056	Discrete Chatan like exposure	Massive, pink coloured, medium grained, equigranular granite containing thin vein black coloured containing metals like pyrite,chalcopyrite. Quartz veins with vugs containing Hg presence and the vein surrounded by biotite.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
231	ML ALL 43	78.367528	24.885653	Undulatory	Andesite - Massive, medium grained, dark brown euhedral to subhedral phenocrysts of feldspar(high) and quartz with fuzzy grain bounda -ry , pyrite Volcanics containing metal(chalcopyrite, arsenopyrite)	Felsic Volcanics	Potassic
232	ML ALL 44	78.300078	24.791577	Discrete Chatan like exposure	Massive, medium grained , pink coloured rock ,quartz-35-40%, feldspar , biotite A few phenocrysts of quartz and feldspar present. Epidote veins present.	Unaltered Equigranular Granite	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
233	ML ALL 45	78.298373	24.797656	Discrete Chatan like exposure	Massive, medium grained , pink coloured porpphyritic granite ,quartz-35-40%, feldspar , biotite A few phenocrysts of quartz and feldspar present in the quartzfeldspathic matrix containing biotite. The grain boundary is distinct. Epidote veins present.	Unaltered Equigranular Granite	Unaltered
234	ML ALL 46	78.294904	24.809676	Discrete Chatan like exposure	Massive , medium grained , meat coloured granite. Q -25-30% , F -65-70% Fuzziness not all edges prominent. Mafic patches. Metal - Pyrite. Quartz reef, smoky	Unaltered Equigranular Granite	Unaltered
235	ML ALL 47	78.294536	24.811072	Discrete Chatan like exposure	Massive , medium grained , pink coloured granite. Fuzziness increased Metal - Pyrite, arsenopyrite.	Unaltered Equigranular Granite	Unaltered
236	MLALL48	78.29111	24.816069	Discrete Chatan like exposure	Massive, medium grained , pink coloured rock ,quartz-35-40%, feldspar , biotite A phenocrysts of feldspar present. No veins present.,nometalpresent	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
237	MLALL49	78.302105	24.796651	Discrete Chatan like exposure	Massive, medium grained greyish pink coloured granite , with quartz - 35%, feldspar , biotite patches Grain boundary distinct Epidote vein cut by A vein.	Unaltered Equigranular Granite	Unaltered
238	ML ALL 50	78.30369	24.796635	Discrete Chatan like exposure	Massive , pink coloured , medium grained, mafic patch and intrusion , Metal content - pyrite, arsenopyrite , chalcopyrite Yellow with greenish tinge	Unaltered Equigranular Granite	Unaltered
239	ML ALL 53	78.317787	24.802369	Discrete Chatan like exposure	Massive, greyish pink coloured granite, with quartz - 40%, feldspar , bt Contact between medium grained to coarse grained pegmtitic . Also with chert bands cut by glass veins in medium grained rock showing signs of pseudotachylite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
240	ML ALL 56	78.2829	24.851443	Discrete Chatan like exposure	Massive,fine grained grey coloured granite,containing quartz-35-40% , feldspar and a few biotite chloritised. A few grain boundary are fuzzy . Epidote veins present. Less alteration , no metal.	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
241	ML ALL 57	78.284286	24.854225	Discrete Chatan like exposure	Massive, medium grained, pink coloured granite containing quartz 20% , feldspar- 70%, biotite - 10%. A few biotite chloritised . Medium alteration from grain boundary perspective. No metal present.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
242	ML ALL 58	78.279112	24.873935	Discrete Chatan like exposure	Medium grained, greyish coloured rock. Quartz - 30%, feldspar - 40%, mafic -30%. May be TTG ? Trend of exposure - 170, Banding in the rock 340. GSI - Violet.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
243	ML ALL 59	78.275124	24.871665	Discrete Chatan like exposure	Massive,medium grained, dark coloured(due to high mafic)porphyritic granite. Feldspar phenocrysts of different size are euhedral in the quartzofeldspathic biotite matrix. Biotite patches and biotite veins in feldspar phenocrysts.	Fine-granied Porphyritic Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
244	ML ALL 60	78.266994	24.873392	Discrete Chatan like exposure	Massive,medium grained, porphyritic granite. Feldspar and quartz phenocrysts of different size are euhedral in the quartzofeldspathic biotite matrix. Rounded phenocrysts of feldspar increased as compared to previous embedded in theblackish quartzo feldspathic	Fine-granied Porphyritic Granite	Sericitic
245	ML ALL 61	78.262123	24.874059	Discrete Chatan like exposure	Massive, medium grained, pink coloured rock with quartz 25%, feldspar, biotite - 10%. Fuzzy to fresh grain boundary. Black coloured portion. Metal maybe present. Epidote vein present	Fine-granied Porphyritic Granite	Sericitic
246	ML ALL 62	78.257635	24.878789	Discrete Chatan like exposure	Massive, fine grained,pink granite with quartz - 25% , feldspar , biotite-5-7%, chlorite. Distinct grain boundary, no alteration , no metal.	Fine-granied Porphyritic Granite	Sericitic
247	ML ALL 63	78.256184	24.875015	Discrete Chatan like exposure	Massive, fine to medium , pink coloured granite. Quartz - 25-30%, feldspar- 60%, biotite - 10%. Shear plane contains recrystallized quartz.Cherty vein associated with few metals like chalcopyrite.	Fine-granied Porphyritic Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
248	ML ALL 64	78.253091	24.880867	Discrete Chatan like exposure	Massive, medium to fine grained granite. Quartz - 30%.Small amount of biotite patches.Fuzzy grain boundary of feldspar No vein and no observation of metal	Fine-granied Porphyritic Granite	Sericitic
249	ML ALL 65	78.261432	24.871773	Discrete Chatan like exposure	Massive, fine grained , pink granite. Quartz - 35-40%, feldspar , biotite patch. No phenocryst. No fuzzyness , no metal.	Fine-granied Porphyritic Granite	Sericitic
250	ML ALL 66	78.276015	24.869496	Discrete Chatan like exposure	Massive, fine grained, grey coloured . Phenocrysts of quartz and feldspar in the fuzzy boundary of fine grained matrix of quartzofeldspathic . Biotite vein in feldpsar phenocrysts. Volcanic or plutonic ? Golden coloured material?	Fine-granied Porphyritic Granite	Sericitic
251	ML ALL 67	78.263642	24.865238	Discrete Chatan like exposure	Massive, medium grained, greyish pink coloured rock. Phenocrysts of feldspar and quartz embedded in the quartzofeldspathic biotite(high) matrix . Some glass like material also present. Less alteration , no metal. Volcanic or plutonic ?	Fine-granied Porphyritic Granite	Sericitic
252	ML ALL 68	78.266882	24.862579	Discrete Outcrop	Diorite . Metallic coloured chlorite in the mafic part. Metals present like arsenopyrite , chalcopyrite. 340 - Trend of the exposure.	Fine-granied Porphyritic Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
253	ML ALL 69	78.278616	24.776315	Discrete Chatan like exposure	Massive, pink coloured medium to coarse grained porphyritic granite with quartz (20%) , feldspar(70%), biotite(10%) . Having an aplitic vein 7cm. Phenocryts of feldspar present, coarse grained matrix equigranular, distinct grain boundary of feldspar . Ep	Medium-grained Equigranular Granite (with Epidote)	Propylitic
254	ML ALL 70 ML TP 37	78.278717	24.778971	Discrete Chatan like exposure	Massive, pink colourd, medium grained equigranular granite with quartz(25%), feldspar(60%), mafic (10%). At places a very few phenocrysts of feldspar and quartz are present .Distinct grain boundary .Epidote and chlorite veins present. Metals maybe presen	Medium-grained Equigranular Granite (Sericitized)	Sericitic
255	ML DT 48	78.279919	24.779798	Discrete Chatan like exposure	Massive , pink coloured , medium grained ,porphyrtic granite with quartz (15%), feldspar(80%), mafic(5%). Phenocryst of 5mm of feldspar present within the medium grained feldspathic matrix having less fuzzyness. A fine grained variety shows more fuzzynes	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
256	ML TP 38	78.27968	24.781404	Discrete Chatan like exposure	Massive, greyish coloured , medium grained ,porphyrtic granite with quartz (15%), feldspar(80%), mafic(5%). Phenocryst of 5mm of feldspar present within the medium grained mafic feldspathic matrix having less fuzzyness? Amafic intrusion contributing to	Medium-grained Equigranular Granite (Sericitized)	Sericitic
257	ML ALL 71	78.282189	24.780148	Discrete Chatan like exposure	Massive, greyish pink coloured, medium grained equigranular granite with quartz (35%), feldspar (60%), mafic (5%) . At places patch of phenocrysts of few feldspar and at places quartzofeldspathic patches of fine grains present. Distinct grain boundary	Medium-grained Equigranular Granite (Sericitized)	Sericitic
258	ML ALL 72	78.282706	24.781556	Discrete Chatan like exposure	Massive, blackish pink coloured , poprphyritic granite with feldspar phenocrysts of 1cm embedded within medium grained quartzofeldspathic and biotite matrix (quartz 30%, feldspar 20%,biotite 50%). Biotites are partly chloritised. Distinct grain boundary	Medium-grained Equigranular Granite (Sericitized)	Sericitic
259	ML ALL 73	78.286852	24.78158	Discrete Chatan like exposure	Massive, pink coloured ,medium grained , equigranular granite with quartz (35-40%), feldspar(55%), mafic(5%),. Distinct grain boundary. Epidote veins present with obervation of few metals in the mafic clots (chalcopyrite , arsenopyrite, copper coloured	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
260	ML ALL 74	78.287726	24.780384	Discrete Chatan like exposure	Massive, pink coloured ,medium grained , equigranular granite with quartz (20%), feldspar(70%), mafic(10%),. Fuzzy grain boundary. Cherty veins with epidote and biotite veins present with moderate alteration and no metals observed.	Medium-grained Equigranular Granite (Sericitized)	Propylitic
261	ML ALL 75	78.279574	24.78766	Discrete Chatan like exposure	Massive, pink coloured ,medium grained , equigranular granite with quartz (20-25%), feldspar(65%), mafic(10%),. Mafic enclaves present. Distinct grain boundary. No veins with no alteration and no metals observed.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
262	ML ALL 76	78.27647	24.791354	Hilly	Massive , medium grained equigranular with . Dolerite with trend 340.	Dolerite	Sericitic
263	ML ALL 77	78.270788	24.795704	Discrete Chatan like exposure	Massive, light pink coloured, medium grained, equigranular granite with quartz (20%), feldspar(75%), mafic(5%).Distinct grain boundary. Epidote veins with no metals observed.	Medium-grained Equigranular Granite (Sericitized)	Sericitic
264	ML ALL 78	78.377319	24.894529	Discrete Chatan like exposure	Massive, dark grey coloured porphyritic rock with euhedral phenocrysts of feldspar embedded in quartzofeldspathic biotite matrix(not fuzzy grain boundary). No veins observed with no metals.	Felsic Volcanics	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
265	ML ALL 79	78.373825	24.896711	Discrete Chatan like exposure	Massive, pink coloured, fine grained granite with quartz (30)feldspar (50) and few patches of biotite (20). Quartz veins with no metals. Black coloured patch on surface.	Felsic Volcanics	Sodic
266	ML PPT 1	78.2654343	24.780175	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
267	ML PPT 2	78.263642	24.780923	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
268	ML EX 1	78.261466	24.781836	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
269	ML PPT 3	78.260607	24.782756	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranilar Granite (Red Patch and Potassic alteration)	Potassic
270	EML 1	78.269008	24.763017	Discrete Chatan like exposure	Medium grained equigranular granite with epidote	Medium-grained Equigranular Granite (with Epidote)	Propylitic
271	EML 2	78.255379	24.771416	Discrete Chatan like exposure	Medium grained equigranular granite with epidote	Medium-grained Equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
272	EML 3	78.269886	24.817463	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
273	EML 4	78.268487	24.823882	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
274	EML 5	78.269566	24.831178	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
275	EML 6	78.293028	24.822205	Hilly	Quartz	Quartz Vein	Unaltered
276	EML 7	78.308992	24.849565	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Propylitic
277	EML 8	78.337291	24.884688	Discrete Chatan like exposure	Medium Grained Equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
278	EML 9	78.343646	24.911557	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
279	EML 10	78.359963	24.918204	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
280	EML 11	78.368202	24.929183	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
281	ML V1	78.367025	24.919977	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
282	ML V2	78.362985	24.922548	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
283	ML V3	78.363448	24.924186	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
284	ML V4	78.362835	24.925153	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
285	ML V5	78.3608109	24.925321	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
286	ML V6	78.36739	24.939256	Undulatory	Volcanic Rock	Volcanoclastic	Potassic
287	ML V7	78.367711	24.935124	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
288	ML V8 EML 13	78.353429	24.92706	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
289	ML V9	78.355428	24.924473	Undulatory	Volcanic Rock	Felsic Volcanics	Sodic
290	ML V10 EX14	78.342693	24.929989	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
291	ML V11	78.343964	24.934431	Hilly	Quartz	Quartz Vein	Unaltered
292	ML V12	78.344585	24.933121	Undulatory	Volcanic	Felsic Volcanics	Sodic
293	ML V13	78.382862	24.936056	Undulatory	Volcanic	Felsic Volcanics	Sodic
294	ML V14	78.390895	24.930895	Undulatory	Volcanic	Felsic Volcanics	Potassic
295	ML F1	78.29174967	24.89211135	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
296	ML F2	78.29311955	24.88635839	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
297	ML F3	78.29871129	24.89064142	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
298	ML F4	78.3358152	24.82223324	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
299	ML F5	78.33779016	24.82315528	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
300	ML F6	78.33345954	24.82272698	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
301	ML F7	78.33850399	24.82762867	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
302	ML F11	78.31817588	24.82154029	Discrete Chatan like exposure	Fine-grained Equigranular Granite	Fine-grained Equigranular Granite	Sericitic
303	ML F10	78.31960356	24.82368181	Discrete Chatan like exposure	Fine-grained Equigranular Granite	Fine-grained Equigranular Granite	Sericitic
304	ML F9	78.31960356	24.82219464	Discrete Chatan like exposure	Fine-grained Equigranular Granite	Fine-grained Equigranular Granite	Sericitic
305	ML F8	78.31823537	24.82320591	Discrete Chatan like exposure	Fine-grained Equigranular Granite	Fine-grained Equigranular Granite	Sericitic
306	ML F12	78.39206451	24.93017227	Hilly	Quartz	Quartz Vein	Unaltered
307	ML F13	78.39199669	24.92989863	Hilly	Quartz	Quartz Vein	Unaltered
308	ML F14	78.39189913	24.9297868	Hilly	Quartz	Quartz Vein	Unaltered
309	ML F15	78.39181109	24.92967496	Hilly	Quartz	Quartz Vein	Unaltered
310	ML F16	78.39887476	24.94821559	Hilly	Quartz	Quartz Vein	Unaltered
311	ML F17	78.39875579	24.94765641	Hilly	Quartz	Quartz Vein	Unaltered
312	ML F18	78.39864871	24.94713293	Hilly	Quartz	Quartz Vein	Unaltered
313	ML F19	78.39856047	24.94681071	Hilly	Quartz	Quartz Vein	Unaltered
314	ML F20	78.39837012	24.94605523	Hilly	Quartz	Quartz Vein	Unaltered
315	ML F21	78.39821545	24.9453057	Hilly	Quartz	Quartz Vein	Unaltered
316	ML F22	78.39980469	24.95251499	Hilly	Quartz	Quartz Vein	Unaltered
317	ML F23	78.39992605	24.95301468	Hilly	Quartz	Quartz Vein	Unaltered
318	ML F24	78.40132279	24.95809007	Hilly	Quartz	Quartz Vein	Unaltered
319	ML F25	78.40124427	24.95754042	Hilly	Quartz	Quartz Vein	Unaltered
320	ML F26	78.40109436	24.95705501	Hilly	Quartz	Quartz Vein	Unaltered
321	ML F27	78.40088735	24.95637686	Hilly	Quartz	Quartz Vein	Unaltered
322	ML F28	78.40077551	24.95579865	Hilly	Quartz	Quartz Vein	Unaltered
323	ML F29	78.40062561	24.95502771	Hilly	Quartz	Quartz Vein	Unaltered
324	ML F30	78.40050425	24.95461368	Hilly	Quartz	Quartz Vein	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
325	ML F31	78.38648606	24.97682754	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Sodic
326	ML F32	78.39057874	24.98034914	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
327	ML F33	78.3902932	24.9708313	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Potassic
328	ML F34	78.38886553	24.9694988	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Potassic
329	ML F35	78.37968081	24.97942115	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
330	ML F36	78.37960942	24.98313311	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
331	ML F37	78.38877986	24.98242118	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
332	ML F38	78.38787567	24.98104109	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
333	ML F39	78.37635908	24.97913752	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
334	ML F40	78.39902344	24.98351771	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
335	ML F41	78.40152188	24.98462416	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
336	ML F42	78.39859514	24.98162604	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
337	ML F43	78.39256321	24.98772936	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
338	ML F44	78.38875845	24.99140562	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
339	ML F45	78.38957817	24.99021589	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
340	ML F46	78.40208472	24.99676189	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
341	ML F47	78.39537464	24.99861787	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
342	ML F48	78.40027157	24.99673334	Discrete Chatan like exposure	Coarse Grained Porphyritic Granite	Coarse-grained Porphyritic Granite	Propylitic
343	ML F49	78.33808454	24.90255185	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
344	ML F50	78.33913151	24.91187933	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
345	ML F51	78.33932186	24.91482987	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
346	ML F52	78.343129	24.90835773	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
347	ML F53	78.34227239	24.9040747	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
348	ML F54	78.33922668	24.90788184	Discrete Chatan like exposure	Diorite	Diorite	Sericitic
349	ML F55	78.29977897	24.92229753	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
350	ML F56	78.30792862	24.9189068	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
351	ML F57	78.30810708	24.92128626	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
352	ML F58	78.30941579	24.91694374	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
353	ML F59	78.3093563	24.91498069	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
354	ML F60	78.31149781	24.91599196	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
355	ML F61	78.30471635	24.92681851	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
356	ML F62	78.30215843	24.92527186	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
357	ML F63	78.31239011	24.91902577	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
358	ML F64	78.31233063	24.91736015	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
359	ML F65	78.28068981	24.90771778	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
360	ML F66	78.27212375	24.89772404	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
361	ML F67	78.2736704	24.89998453	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
362	ML F68	78.30008242	24.89974658	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
363	ML F69	78.30174804	24.88606468	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
364	ML F70	78.30210496	24.87856938	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
365	ML F71	78.29805988	24.87785554	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
366	ML F72	78.29627528	24.89629637	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
367	ML F73	78.28493328	24.89520657	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
368	ML F74	78.29934721	24.88918485	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
369	ML F75	78.29179242	24.9004278	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
370	ML F76	78.28941296	24.89120739	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
371	ML F77	78.29066218	24.88936331	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
372	ML F78	78.34800154	24.91911349	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
373	ML F79	78.35006305	24.91991626	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
374	ML F80	78.34924927	24.91881695	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
375	ML F81	78.34776449	24.91746066	Discrete Chatan like exposure	Fine to Medium grained granite	Rhyolite Porphyry	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
376	ML F82	78.34934921	24.91673254	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
377	ML F83	78.34749323	24.91987343	Discrete Chatan like exposure	Fine to Medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Potassic
378	ML F84	78.35061151	24.91858971	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
379	ML F85	78.32480626	24.89990499	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
380	ML F86	78.32694777	24.89938151	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
381	ML F87	78.3277092	24.89785866	Discrete Chatan like exposure	Fine to Medium grained granite	Fine-grained Equigranular Granite	Sericitic
382	ML F88	78.32374337	24.92609481	Hilly	Quartz	Quartz Vein	Unaltered
383	ML F89	78.32508182	24.92377483	Hilly	Quartz	Quartz Vein	Unaltered
384	ML F90	78.32686641	24.92118717	Hilly	Quartz	Quartz Vein	Unaltered
385	ML F91	78.32879972	24.91794515	Hilly	Quartz	Quartz Vein	Unaltered
386	ML F92	78.3299498	24.9155409	Hilly	Quartz	Quartz Vein	Unaltered
387	ML F94	78.30238407	24.86466592	Undulatory	Basalt	Basalt	Sericitic
388	ML F95	78.30128952	24.86223887	Undulatory	Basalt	Basalt	Sericitic
389	ML F96	78.29989753	24.85826993	Undulatory	Basalt	Basalt	Sericitic
390	ML F97	78.29875539	24.85520042	Undulatory	Basalt	Basalt	Sericitic
391	ML F93	78.30305032	24.87285127	Undulatory	Basalt	Basalt	Sericitic
392	ML F98	78.25589883	24.77796554	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
393	ML F99	78.25572751	24.77925997	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic
394	ML F100	78.25251048	24.77891733	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic
395	ML F101	78.25532776	24.77674726	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic
396	ML F103	78.25241494	24.77523522	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic
397	ML F102	78.25176772	24.77534943	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Propylitic
398	ML F106	78.26862564	24.79427443	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
399	ML F107	78.2696155	24.79433154	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
400	ML F108	78.27071957	24.7945219	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
401	ML F109	78.26900635	24.79324651	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
402	ML F110	78.26839721	24.79267544	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
403	ML F111	78.26925382	24.7926564	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
404	ML F112	78.26919671	24.79516911	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
405	ML F113	78.26748784	24.77998281	Hilly	Dolerite	Dolerite	Unaltered
406	ML F114	78.26835397	24.7810964	Hilly	Dolerite	Dolerite	Unaltered
407	ML F115	78.26896311	24.78190541	Hilly	Dolerite	Dolerite	Unaltered
408	ML F117	78.27186367	24.78507486	Hilly	Dolerite	Dolerite	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
409	ML F118	78.2731581	24.78581725	Hilly	Dolerite	Dolerite	Unaltered
410	ML F119	78.27450963	24.78682614	Hilly	Dolerite	Dolerite	Unaltered
411	ML F120	78.2753472	24.78777792	Hilly	Dolerite	Dolerite	Unaltered
412	ML F121	78.26177	24.77452433	Hilly	Dolerite	Dolerite	Unaltered
413	ML F122	78.26331665	24.77673723	Hilly	Dolerite	Dolerite	Unaltered
414	ML F116	78.27037889	24.78391368	Hilly	Dolerite	Dolerite	Unaltered
415	ML F123	78.35081368	24.88349002	Hilly	Quartz	Quartz Vein	Unaltered
416	ML F124	78.34996897	24.88206235	Hilly	Quartz	Quartz Vein	Unaltered
417	ML F125	78.34940979	24.88109866	Hilly	Quartz	Quartz Vein	Unaltered
418	ML F126	78.27080912	24.8917136	Hilly	Diorite	Diorite	Sericitic
419	ML F127	78.27115081	24.89080988	Discrete Outcrop	Diorite	Diorite	Sericitic
420	ML F128	78.2710366	24.8928467	Discrete Outcrop	Diorite	Diorite	Sericitic
421	ML F129	78.31732085	24.91814776	Undulatory	Basalt	Basalt	Sericitic
422	ML F130	78.25098292	24.78339836	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
423	ML F131	78.25179194	24.78437394	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
424	ML F 132	78.2524106	24.78561126	Discrete Chatan like exposure	Fine to medium grained granite	Fine-grained Equigranular Granite	Sericitic
425	ML F133	78.29076037	24.77686816	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
426	ML F134	78.29206908	24.777582	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
427	ML F135	78.28183739	24.77020567	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
428	ML F136	78.28402157	24.77039256	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
429	ML F137	78.28189688	24.77514305	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
430	ML F138	78.2840384	24.77740354	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
431	ML F138	78.28278918	24.76937286	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
432	ML F139	78.2604451	24.75733481	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
433	ML F140	78.26135881	24.75539317	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
434	ML F141	78.25781817	24.75413682	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
435	ML F142	78.25216457	24.76001885	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
436	MLF143	78.26341467	24.75762035	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
437	ML F144	78.29119249	24.78229893	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
438	ML F145	78.29257258	24.78210857	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
439	ML F146	78.2933816	24.78144232	Discrete Chatan like exposure	Medium Grained equigranular granite	Medium-grained Equigranular Granite (with Epidote)	Propylitic
440	ML F147	78.31966903	24.93752182	Hilly	Quartz	Quartz vein	Unaltered
441	ML F148	78.2519667	24.84326709	Discrete Chatan like exposure	Medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericitic
442	ML F149	78.383204	24.9618	Discrete Chatan like exposure	Younger granite medium to coarse grained	Medium to Coarse-grained Equigranular Granite (Sericitized)	Sericitic
443	ML F150	78.383204	24.961891	Discrete Chatan like exposure	Younger granite medium to coarse grained	Medium to Coarse-grained Equigranular Granite (Sericitized)	Sericitic
444	ML/ALT/1	78.364493	24.923565	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite may be present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
445	ML/ALT/2	78.363656	24.924273	Undulatory	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic	Felsic Volcanics	Sericitic
446	ML/ALT/3	78.359583	24.925126	Undulatory	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic	Felsic Volcanics	Sericitic
447	ML/ALT/4	78.357818	24.925408	Undulatory	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic	Felsic Volcanics	Sericitic
448	ML/ALT/5	78.356268	24.926966	Undulatory	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic; Dolerite dyke - 110-290 trend; Rhyolite porphyry - 045-235; contact of two - 110-290.	Rhyolite Porphyry	Sericitic
449	ML/ALT/6	78.355423	24.92843	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
450	ML/ALT/7	78.350411	24.933309	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass. Upper surface: layer like. Immense quartz vein. Veins of mafic (amphibole + biotite?) + quartz Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic
451	ML/ALT/8	78.352879	24.932874	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz, amphibole may be present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic
452	ML/ALT/9	78.353656	24.92976	Undulatory	Leucocratic, medium grained, porphyritic rock with phenocrysts of feldspar and quartz, amphibole may be present. Distinct grain boundary. Porphyritic granite. The rock is parallel to the rhyolite porphyry	Rhyolite Porphyry	Sericitic
453	ML/ALT/10	78.343384	24.952377	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole + biotite? present. Volcanic. At depth the rock is more dark and the planes are black in colour	Felsic Volcanics	Sericitic
454	ML/ALT/11	78.342339	24.953015	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole + biotite? present. Volcanic. Samples from well, the rock is more dark, fault planes are black in colour, pyrite present	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
455	ML/ALT/12	78.344861	24.947972	Undulatory	Leucocratic, medium grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary.Lots of quartz vein present Porphyritic granite.	Felsic Volcanics	Sericitic
456	ML/ALT/13	78.342959	24.947462	Undulatory	Mesocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary. Porphyritic granite.	Felsic Volcanics	Sericitic
457	ML/ALT/14	78.343078	24.936778	Undulatory	Mesocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary, fuzzy at places. Porphyritic granite. Volcanic rock is also associated with the granite, may be it's the boundary	Felsic Volcanics	Sericitic
458	ML/ALT/15	78.370321	24.888467	Undulatory	Looks like granite, but due to the fuzzy grain boundary it seems to be volcanic though chances are less	Felsic Volcanics	K-alteration
459	ML/ALT/16	78.370314	24.889184	Undulatory	Looks like granite, but due to the fuzzy grain boundary it seems to be volcanic though chances are less	Felsic Volcanics	K-alteration
460	ML/ALT/17	78.341728	24.931967	Undulatory	Mesocratic, Fine grained, porphyritic rock with phenocrysts of feldspar and quartz, grains are fuzzy and low alteration observed at places, A vein and EHT present	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
461	ML/ALT/18	78.363489	24.93746	Undulatory	Melanocratic, porphyritic rock with phenocrysts of feldspar and glass with distinct grain boundary and fuzzy at places. Clots and veinlets of amphibole. Upper surface of the rock is layer like	Felsic Volcanics	Sericitic
462	ML/ALT/19	78.362859	24.93731	Undulatory	Contact of rhyolite and volcanics	Felsic Volcanics	Sericitic
463	ML/ALT/20	78.361897	24.936858	Undulatory	Melanocratic, porphyritic rock with phenocrysts of feldspar, quartz and glass with distinct grain boundary and groundmass is fuzzy. Clots and veinlets of amphibole, biotite? Upper surface of the rock is layer like, defined by quartz and feldspar	Felsic Volcanics	Sericitic
464	ML/ALT/21	78.359835	24.939674	Undulatory	Melanocratic, porphyritic rock with phenocrysts of feldspar, quartz and glass with distinct grain boundary and groundmass is fuzzy. Clots and veinlets of amphibole, biotite? Upper surface of the rock is layer like, defined by quartz and feldspar	Felsic Volcanics	Sericitic
465	ML/ALT/22	78.35911	24.940889	Undulatory	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	K-alteration
466	ML/ALT/23	78.359229	24.941642	Undulatory	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
467	ML/ALT/24	78.36711	24.934205	Undulatory	Mesocratic, fine grained porphyritic rock quartz and feldspar phenocrysts. B veins hardly present at lower altitude. At a higher altitude, A vein is present with moderate intensity	Felsic Volcanics	Sericitic
468	ML/ALT/25	78.346771	24.957246	Undulatory	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz having distinct grain boundary. Fuzzy groundmass. Volcanics - Rhyolite/Rhyodacite. At contact, a N-S trending quartz vein containing greenish chalcedony, white coarse grained quartz present and cut across the previous vein	Felsic Volcanics	Sericitic
469	ML/ALT/26	78.348086	24.956492	Undulatory	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite.Newly formed feldspar grains present and a flaky mineral present within the feldspar.	Felsic Volcanics	Sericitic
470	ML/ALT/27	78.349887	24.953538	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic
471	ML/ALT/28	78.350322	24.952795	Undulatory	Looks like granite, the grains are fuzzy, veins are greenish black in colour. End of the volcanics, chatan like hilly exposure	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
472	ML/ALT/29	78.349295	24.954752	Hilly	Smoky dark quartz, fine chert like NNE-SSW trending. Brecciated quartz filled by mafic (amphibole+biotite)	Quartz vein	Unaltered
473	ML/ALT/30	78.35	24.958	Hilly	Samples from well, full of pyrite, chalcopyrite and arsenopyrite? The rock is volcanic	Quartz vein	Unaltered
474	ML/ALT/31	78.351	24.95928	Undulatory	well samples, Fe solution present along fault plane	Felsic Volcanics	Unaltered
475	ML/ALT/32	78.351654	24.96071	Undulatory	Dark red colour volcanic rock, less amount of pyrite	Felsic Volcanics	Unaltered
476	ML/ALT/33	78.366315	24.967325	Undulatory	Melanocratic, reddish coloured, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, groundmass is fuzzy, A-vein present but the central line is discrete; width of vein is 1-2cm; halo is 0.2cm. Halo is of less width compared to the vein width. Black coloured vein (biotite/amphibole) and quartz vein is present, granite vein within the volcanic rock	Felsic Volcanics	Sericitic
477	ML/ALT/34	78.367496	24.966402	Undulatory	Melanocratic, reddish coloured, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, groundmass is fuzzy, fuzziness is more. Dark green big patches present, quartz, feldspar within the patch, may be the mingling effect. Contact of Rhyolite porphyry and rhyolite/rhyodacite. NE-SW (050)	Rhyolite Porphyry	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
478	ML/ALT/35	78.368412	24.964879	Undulatory	Melanocratic , dark reddish black cl, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, on the surafce, layer like? present defined by quartz feldspar	Felsic Volcanics	Sericitic
479	ML/ALT/36	78.370097	24.961951	Undulatory	Melanocratic , dark reddish cl, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, in fuzzy groundmass, on the surafce, layer? present defined by quartz feldspar. Biotite present.	Felsic Volcanics	Sericitic
480	ML/ALT/37	78.382974	24.958728	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass having distinct grain boundary, groundmass is too fine to check the grain boundary, A-vein, EHT present. Flow structure present. Magnetite content is high, alteration intensity is also medium. Rhyolite	Felsic Volcanics	Sericitic
481	ML/ALT/38	78.38325	24.957034	Hilly	Quartz vein	Quartz vein	Unaltered
482	ML/ALT/39	78.383215	24.956972	Hilly	Quartz vein	Quartz vein	Unaltered
483	ML/ALT/40	78.383224	24.956974	Hilly	Quartz vein	Quartz vein	Unaltered
484	ML/ALT/41	78.383157	24.956892	Hilly	Quartz vein	Quartz vein	Unaltered
485	ML/ALT/42	78.380583	24.953562	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, bomb present Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
486	ML/ALT/43	78.380044	24.9593699	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, lapilli present Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic
487	ML/ALT/44	78.380579	24.953414	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, lapilli present Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic
488	ML/ALT/45	78.379597	24.951279	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, bomb present Volcanics - Rhyolite/Rhyodacite	Felsic Volcanics	Sericitic

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
489	ML/ALT/46	78.379097	24.951403	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (High) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock, having lapilli and bomb at places.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
490	ML/ALT/47	78.37583	24.95012	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Contact of coarse grained granite porphyry trending NNW-SSE Volcanoclastic rock, having lapilli and bomb at places.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
491	ML/ALT/48	78.375443	24.949799	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (High) present within the rock, alteration intensity is high. Patches of amphibole is present. Intense veination; veins having center line composed of quartz and mafic (Biotite).Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock, having lapilli and bomb at places.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
492	ML/ALT/49	78.377034	24.95086	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite clots present and small clots of biotite within feldspar grain, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Contact of coarse grained granite porphyry trending NW-SE Volcanoclastic rock, having lapilli and bomb at places.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
493	ML/ALT/50	78.3800512	24.962822	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT and A-vein. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration
494	ML/ALT/51	78.37963	24.963718	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is medium. Vein intensity decreases; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT and A-vein. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
495	ML/ALT/52	78.3795	24.962374	Undulatory	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT and A-vein. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration
496	ML/ALT/53	78.37834	24.96149	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Biotite present, Magnetite present within the rock, alteration intensity and vein intensity less, EHT present. Volcanics - Rhyolite/Rhyodacite. Rhyolite porphyry present trending NE-SW.	Rhyolite Porphyry	K-alteration
497	ML/ALT/54	78.378833	24.962246	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Biotite present, Magnetite present within the rock, alteration intensity and vein intensity less, EHT present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
498	ML/ALT/55	78.377158	24.961049	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-vein present. Volcanics - Rhyolite/Rhyodacite. Diorite body present trending NE-SW	Felsic Volcanics	K-alteration
499	ML/ALT/56	78.376273	24.960897	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-vein present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration
500	ML/ALT/57	78.352427	24.955096	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-vein present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
501	ML/ALT/58	78.375753	24.960904	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, D-vein present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
502	ML/ALT/59	78.375115	24.960962	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, D-vein present. Volcanics - Rhyolite/Rhyodacite. Contact of Rhyolite and Rhyolite porphyry	Rhyolite Porphyry	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
503	ML/ALT/60	78.373605	24.96152	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, B-vein present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
504	ML/ALT/61	78.37324	24.961752	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, B-vein and EHT present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
505	ML/ALT/62	78.372685	24.961977	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, EHT present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
506	ML/ALT/63	78.375073	24.961935	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, EHT present. Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock, vesicles present	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
507	ML/ALT/64	78.376061	24.961749	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity medium and vein intensity high, EHT present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	K-alteration
508	ML/ALT/65	78.366193	24.966471	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present, Magnetite and biotite absent within the rock, alteration intensity high and vein intensity high, EHT and B-vein present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
509	ML/ALT/66	78.366219	24.965963	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present, Magnetite and biotite absent within the rock, alteration intensity medium and vein intensity low, EHT present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
510	ML/ALT/67	78.366375	24.966178	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present with voids in it, Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low, EHT may be present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
511	ML/ALT/68	78.366363	24.965167	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present with voids in it, Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low, EHT may be present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
512	ML/ALT/69	78.3481	24.916712	Undulatory	Leucocratic, medium grained, porphyritic rock with phenocrysts of quartz- 25%, feldspar- 60% within fuzzy groundmass and mafic clots are present. Secondary biotite is present. Rhyolite porphyry trending NE-SW is present. Contact attitude - 030/75 NW	Rhyolite Porphyry	Unaltered
513	ML/ALT/70	78.344843	24.914487	Discrete exposure	Diorite, high magnetite, biotite (low) present. Many epidote veins are present all over the rock. Sericitised rock. Contact of rhyolite porphyry and diorite - 055/60 SE	Diorite	Propylitic Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
514	ML/ALT/71	78.342065	24.93144	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite is low and biotite absent within the rock, alteration intensity low and vein intensity low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite. Sericitised	Felsic Volcanics	Ca-Na Alteration
515	ML/ALT/72	78.376112	24.968297	Undulatory	Contact of rhyolite and coarse grained granite - 110/85 SW	Felsic Volcanics	Unaltered
516	ML/ALT/73	78.375	24.982042	Undulatory	Contact of rhyolite porphyry and coarse grained granite - 050/82 NW	Felsic Volcanics	Unaltered
517	ML/ALT/74	78.341636	24.931992	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
518	ML/ALT/75	78.341104	24.93189	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
519	ML/ALT/76	78.340642	24.932456	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
520	ML/ALT/77	78.339832	24.932626	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
521	ML/ALT/78	78.340013	24.932236	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Veins and veinlets of mafic + quartz present as a center line (darker halo is present); may be B-vein. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
522	ML/ALT/79	78.340519	24.9318	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
523	ML/ALT/80	78.339802	24.931025	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. comparitively coarser, quartz % - 30; feldspar - 60%; mafic - 10%. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
524	ML/ALT/81	78.339772	24.930273	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Granite	Felsic Volcanics	Ca-Na Alteration
525	ML/ALT/82	78.343267	24.93096	Undulatory	Quartz vein; smoky greenish, reddish coloured quartz reef	Felsic Volcanics	Unaltered
526	ML/ALT/83	78.343333	24.93074	Undulatory	Quartz vein; smoky greenish, reddish coloured quartz reef	Felsic Volcanics	Unaltered
527	ML/ALT/84	78.340492	24.932048	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	Felsic Volcanics	Ca-Na Alteration
528	ML/ALT/85	78.341714	24.93101	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite (low) and biotite negligible within the rock, alteration intensity low and vein intensity high, D-vein is present. Volcanics - Andesite	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
529	ML/ALT/86	78.33961	24.931584	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass and its distinct at some places. Amphibole veins present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein is present. Granite	Felsic Volcanics	Ca-Na Alteration
530	ML/ALT/87	78.339195	24.932065	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass . Amphibole veins present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very high, D-vein (Quartz) is present. Granite	Felsic Volcanics	Ca-Na Alteration
531	ML/ALT/88	78.338309	24.9333466	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite (very low) and biotite absent within the rock, alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
532	ML/ALT/89	78.338854	24.932435	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite (very low) and biotite absent within the rock, alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite	Felsic Volcanics	Ca-Na Alteration
533	ML/ALT/90	78.339136	24.931279	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass and its distinct at some places. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein is present. Granite	Felsic Volcanics	Ca-Na Alteration
534	ML/ALT/91	78.340925	24.930586	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line), D-vein is present. Volcanics - Andesite	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
535	ML/ALT/92	78.323943	24.930592	Undulatory	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite	Felsic Volcanics	Ca-Na Alteration
536	ML/ALT/93	78.32302	24.931651	Undulatory	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite	Felsic Volcanics	Ca-Na Alteration
537	ML/ALT/94	78.3233535	24.932333	Undulatory	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite	Felsic Volcanics	Ca-Na Alteration
538	ML/ALT/95	78.341587	24.924911	Hilly	Chert (smoky) with chalcopyrite; pyrite are leached out at places	Quartz Veins	Unaltered
539	ML/ALT/96	78.342323	24.926399	Hilly	Chert (smoky) with chalcopyrite; pyrite are leached out at places	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
540	ML/ALT/97	78.342129	24.926798	Hilly	Chert (smoky) with chalcopyrite; pyrite are leached out at places	Quartz Veins	Unaltered
541	ML/ALT/98	78.342344	24.927403	Hilly	Chert (smoky) with chalcopyrite; pyrite are leached out at places	Quartz Veins	Unaltered
542	ML/ALT/99	78.340464	24.92684	Undulatory	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite	Felsic Volcanics	Ca-Na Alteration
543	ML/ALT/100	78.325838	24.928936	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	Felsic Volcanics	Ca-Na Alteration
544	ML/ALT/101	78.32681	24.929214	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
545	ML/ALT/102	78.326783	24.93052	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Magnetite (very less) and biotite absent within the rock, alteration intensity low and vein intensity low. The grain boundary is fuzzier and at places the groundmass is too finer to be identified; seems like volcanic and glass prsent (?). Granite	Felsic Volcanics	Ca-Na Alteration
546	ML/ALT/103	78.327669	24.931084	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	Felsic Volcanics	Ca-Na Alteration
547	ML/ALT/104	78.328816	24.931011	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
548	ML/ALT/105	78.325593	24.929868	Undulatory	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	Felsic Volcanics	Ca-Na Alteration
549	ML/ALT/106	78.375121	24.93908	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite	Felsic Volcanics	K-alteration
550	ML/ALT/107	78.37467	24.939208	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein intensity high, A-vein, EHT-vein is present; EHT veins form checkerboard pattern. Volcanics - Andesite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
551	ML/ALT/108	78.374343	24.941093	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, A-vein, EHT-vein is present. Volcanics - Andesite	Felsic Volcanics	K-alteration
552	ML/ALT/109	78.373686	24.922443	Undulatory	Mesocratic (blackish brown), fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz(10%) having distinct grain boundary and have fuzzy groundmass. Mafic clots present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. At places alteration halo is green and rest are either lighter coloured (pinkish) or dark colored (reddish), green part contains amphibole. the rock surface is layered at places; volcanoclastic? Volcanics - Andesite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
553	ML/ALT/110	78.373342	24.944103	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches present. Magnetite (high) and biotite present within the rock, alteration intensity moderate and vein intensity moderate. The outer surface is vesicular Volcanics - Andesite	Felsic Volcanics	K-alteration
554	ML/ALT/111	78.372574	24.941164	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, A-vein, EHT-vein is present. Volcanics - Andesite	Felsic Volcanics	K-alteration
555	ML/ALT/112	78.374597	24.938859	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein intensity moderate, A-vein is present. Volcanics - Andesite	Felsic Volcanics	K-alteration
556	ML/ALT/113	78.37614	24.968237	Undulatory	Contact between volcanic and coarse grained granite	Felsic Volcanics	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
557	ML/ALT/114	78.366461	24.964829	Undulatory	Rhyolite porphyry trending 040 (NE-SW). Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite negligible.	Rhyolite Porphyry	Ca-Na Alteration
558	ML/ALT/115	78.36622	24.961884	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. Alteration intensity and vein intensity is low	Felsic Volcanics	K-alteration
559	ML/ALT/116	78.377472	24.944609	Undulatory	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high,EHT-vein is present and metal is present within the halo. Mafic clots surrounded by halo is present. Volcanics - Andesite TD	Felsic Volcanics	K-alteration
560	ML/ALT/117	78.377045	24.943543	Undulatory	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. Mafic clots surrounded by halo is present. Volcanics - Andesite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
561	ML/ALT/118	78.378749	24.950167	Undulatory	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. Mafic clots surrounded by halo is present. A plane contains shiny grains, may be metals. Volcanics - Andesite. Rhyolite porphyry attitude changes from 030/70 SE to 050/70 SE	Rhyolite Porphyry	K alteration
562	ML/ALT/119	78.342483	24.928488	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered
563	ML/ALT/120	78.365027	24.965458	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Volcanics - Andesite. Rhyolite porphyry trend ranges from 045 to 055	Rhyolite Porphyry	Ca-Na Alteration
564	ML/ALT/121	78.365122	24.964839	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Lots of greenish patches of amphibole present. Magnetite (very less) and biotite absent within the rock, alteration intensity low and vein intensity low. EHT and D-vein (Quartz - centre) present. Layering present but not volcanoclatic. Volcanics - Andesite.	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
565	ML/ALT/122	78.363387	24.965326	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. EHT present. Tilted volcanic marked by lapili layer- 245/60 NNW. Volcanics - Andesite.	Felsic Volcanics	Ca-Na Alteration
566	ML/ALT/123	78.364235	24.961424	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. EHT present. Volcanics - Andesite.	Felsic Volcanics	Ca-Na Alteration
567	ML/ALT/124	78.366135	24.962101	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. Volcanoclastic but no agglomerate present. Volcanics - Andesite.	Felsic Volcanics	Ca-Na Alteration
568	ML/ALT/125	78.365806	24.962433	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered
569	ML/ALT/126	78.342802	24.928652	Hilly	Quartz vein containing green material	Quartz Veins	Unaltered
570	ML/ALT/127	78.342748	24.928601	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered
571	ML/ALT/128	78.342872	24.928692	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered
572	ML/ALT/129	78.342869	24.928528	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
573	ML/ALT/130	78.366075	24.959625	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present.Vein of mafic+quartz+alt halo. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration
574	ML/ALT/131	78.364426	24.95956	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT preesnt. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration
575	ML/ALT/132	78.364646	24.96209	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT preesnt. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration
576	ML/ALT/133	78.364627	24.963693	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
577	ML/ALT/134	78.363	24.944	Undulatory	Rhyolite porphyry trend changes from 050 to 035 (NE-SW). Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present	Rhyolite Porphyry	K-alteration
578	ML/ALT/135	78.342683	24.928655	Hilly	Quartz vein containing malachite	Quartz Veins	Unaltered
579	ML/ALT/136	78.367472	24.910622	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
580	ML/ALT/137	78.36806	24.913122	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
581	ML/ALT/138	78.369614	24.914495	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
582	ML/ALT/139	78.369475	24.917259	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
583	ML/ALT/140	78.366606	24.910727	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. Mafic veins present without any halo. The planes along the veins are greenish blue in colour. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
584	ML/ALT/141	78.386172	24.912643	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar within fuzzy groundmass. EHT and D-vein (Dog tooth) present. Mafic clots with alteration present. Alteration intensity is low and vein intensity is very high. High magnetite and biotite	Felsic Volcanics	K-alteration
585	ML/ALT/142	78.384668	24.91373	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar within fuzzy groundmass. EHT present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
586	ML/ALT/143	78.385286	24.914192	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration
587	ML/ALT/144	78.385985	24.914295	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration
588	ML/ALT/145	78.386594	24.913939	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration
589	ML/ALT/146	78.38659	24.9139	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration
590	ML/ALT/147	78.381563	24.9263839	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
591	ML/ALT/148	78.387725	24.911766	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	Felsic Volcanics	K-alteration
592	ML/ALT/149	78.387925	24.918806	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	K-alteration
593	ML/ALT/150	78.386022	24.91796	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration
594	ML/ALT/151	78.388966	24.917556	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. A-vein and D-vein present. Alteration intensity is high and vein intensity is medium. The whole rock seems to layered because of halo all over the rock	Felsic Volcanics	K-alteration
595	ML/ALT/152	78.387345	24.918455	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
596	ML/ALT/153	78.385873	24.918396	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is high and vein intensity is low	Felsic Volcanics	K-alteration
597	ML/ALT/154	78.342633	24.929226	Hilly	Exsitu. Vugs filled up with brownish black coloured mineral; streak-brownish black. Reddish brown coloured mineral in vugs; streak-brown	Quartz Veins	Unaltered
598	ML/ALT/155	78.34278	24.929266	Hilly	Exsitu. Vugs filled up with brown coloured mineral in vugs; streak- brown	Quartz Veins	Unaltered
599	ML/ALT/156	78.342975	24.929134	Hilly	Insitu; white coloured mineral, platy. Vugs filled up with black coloured mineral; streak- black. Yellow coloured mineral in vugs. Ridge trending 005-185	Quartz Veins	Unaltered
600	ML/ALT/157	78.342949	24.929334	Hilly	Insitu. Vugs filled up with black coloured mineral; streak- black.	Quartz Veins	Unaltered
601	ML/ALT/158	78.343193	24.929961	Hilly	Malachite	Quartz Veins	Unaltered
602	ML/ALT/159	78.343052	24.929867	Hilly	Malachite	Quartz Veins	Unaltered
603	ML/ALT/160	78.343278	24.929867	Hilly	Malachite	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
604	ML/ALT/161	78.342492	24.928973	Hilly	Quartz with vuggy, vug sometimes filled up with malachite, brownish fine powdered materials. Chalcopyrite present. Quartz with very fine chert like, deep green coloured along with malachite. At places red spot (vermilion powder cl) is present. Fine layer of chert containing pyrite. Quartz (white cl) veins cross cutting all through out	Quartz Veins	Unaltered
605	ML/ALT/162	78.342492	24.928973	Hilly	Glittery material, greyish in colour present in vugs. Yellow with tinge of black cl (covellite) in vugs. Red cl in planes. Malchite crystals in vugs	Quartz Veins	Unaltered
606	ML/ALT/163	78.342594	24.928423	Hilly	Miarolitic cavity in quartz, malachite increases	Quartz Veins	Unaltered
607	ML/ALT/164	78.341576	24.928615	Hilly	Malachite in bladed quartz	Quartz Veins	Unaltered
608	ML/ALT/165	78.342864	24.929133	Hilly	Red, yellow, black part with later formed white quartz, malchite present.	Quartz Veins	Unaltered
609	ML/ALT/166	78.385286	24.914192	Hilly	The whole rock is greenish in colour. Looks like, its due to the presence of malachite	Quartz Veins	Unaltered
610	ML/ALT/167	78.342959	24.928904	Hilly	Abundance of malachite with green cl material and orpiment	Quartz Veins	Unaltered
611	ML/ALT/168	78.343352	24.930698	Hilly	Covellite, bladed quartz, malchite	Quartz Veins	Unaltered
612	ML/ALT/169	78.387765	24.936696	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT and D-vein present. Alteration intensity is medium and vein intensity is low	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
613	ML/ALT/170	78.387868	24.937211	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. The halos of each veins mixes with each other, changing the origial colour of the rock Alteration intensity is high and vein intensity is high	Felsic Volcanics	K-alteration
614	ML/ALT/171	78.387269	24.938046	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is high	Felsic Volcanics	K-alteration
615	ML/ALT/172	78.387192	24.938046	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock) and A-vein present. Alteration intensity is high and vein intensity is high	Felsic Volcanics	K-alteration
616	ML/ALT/173	78.387678	24.940886	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is high	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
617	ML/ALT/174	78.387733	24.941229	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock) and A-vein present. Alteration intensity is high and vein intensity is medium	Felsic Volcanics	K-alteration
618	ML/ALT/175	78.387264	24.940932	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock) and A-vein present. Alteration intensity is high and vein intensity is medium	Felsic Volcanics	K-alteration
619	ML/ALT/176	78.387828	24.935761	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. EHT and A-vein present. Volcanoclastic type layer of surface trending 065/64 NW	Felsic Volcanics	Ca-Na Alteration
620	ML/ALT/177	78.38902	24.936417	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is and vein intensity is .	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
621	ML/ALT/178	78.389088	24.937557	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite, biotite absent. Alteration intensity is medium and vein intensity is medium. Volcanoclastic is present	Felsic Volcanics	Ca-Na Alteration
622	ML/ALT/179	78.387408	24.940149	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	Felsic Volcanics	Ca-Na Alteration
623	ML/ALT/180	78.391147	24.930336	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, and glass. Mafic veins present. Chlorite patch. Magnetite present, biotite present. EHT present. Alteration intensity is high and vein intensity is medium	Felsic Volcanics	K-alteration
624	ML/ALT/181	78.394712	24.935028	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, and glass. Mafic patch (biotite like) present.biotite present with amphibole. Magnetite present, biotite present. EHT present. Alteration intensity is high and vein intensity is medium	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
625	ML/ALT/182	78.393972	24.9362	Undulatory	Granite containing lots of amphibole patches, containing white plagioclase formation. Biotite and magnetite present	Felsic Volcanics	Ca-Na Alteration
626	ML/ALT/183	78.3989	24.958815	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Contains green coloured veins; later phase (chlorite) with halo. Magnetite, biotite present within black patches. EHT and A-vein (smoky quartz) present. Feldspar phenocrysts present in huge amount at places. Alteration intensity is and vein intensity is . Volcanoclastic; small lapilli present, the area is covered by rocks containing lapilli tuff	Felsic Volcanics	K-alteration
627	ML/ALT/184	78.401139	24.957467	Hilly	Quartz vein trending 020 in the volcanics, quartz vein is white with grey patch	Quartz Veins	Unaltered
628	ML/ALT/185	78.398329	24.957102	Undulatory	Volcanic with A-vein and chlorite vein with halo?	Felsic Volcanics	Ca-Na Alteration
629	ML/ALT/186	78.40098	24.955575	Undulatory	Volcanic with A-vein and chlorite vein with halo?	Felsic Volcanics	Ca-Na Alteration
630	ML/ALT/187	78.400452	24.953707	Undulatory	Volcanic with EHT	Felsic Volcanics	Ca-Na Alteration
631	ML/ALT/188	78.400188	24.956793	Undulatory	Volcanic with EHT	Felsic Volcanics	Ca-Na Alteration
632	ML/ALT/189	78.399307	24.95803	Undulatory	Volcanic with EHT	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
633	ML/ALT/190	78.398495	24.956959	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
634	ML/ALT/191	78.397643	24.958892	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite absent, biotite present but negligible. A-vein present, very less. Alteration intensity is low and vein intensity is low. Rhyolite porphyry trending NW	Rhyolite Porphyry	Ca-Na Alteration
635	ML/ALT/192	78.397431	24.957366	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
636	ML/ALT/193	78.396965	24.956153	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
637	ML/ALT/194	78.395613	24.953781	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
638	ML/ALT/195	78.396257	24.954409	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
639	ML/ALT/196	78.397707	24.955643	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
640	ML/ALT/197	78.398408	24.956933	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	Felsic Volcanics	K-alteration
641	ML/ALT/198 A	78.343182	24.92987	Hilly	Greenish smoky coloured quartz	Quartz Veins	Unaltered
642	ML/ALT/198 B	78.343182	24.92987	Hilly	Smoky quartz with malachite, Au and covellite	Quartz Veins	Unaltered
643	ML/ALT/199	78.342633	24.928957	Hilly	Bluish green coloured smoky quartz with no malachite	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
644	ML/ALT/200	78.342918	24.928876	Hilly	Greenish coloured chert brecciated with crysocola and orpiment present	Quartz Veins	Unaltered
645	ML/ALT/201	78.342324	24.927408	Hilly	Smoky greenish black quartz with small Au flakes, chalcopyrite present	Quartz Veins	Unaltered
646	ML/ALT/202	78.342181	24.926593	Hilly	Smoky greenish black quartz with pyrite, chalcopyrite present small Au flakes may be present	Quartz Veins	Unaltered
647	ML/ALT/203	78.343437	24.931221	Hilly	Red, yellow tinge present in quartz and green coloured chert.	Quartz Veins	Unaltered
648	ML/ALT/204	78.361336	24.916149	Hilly	Tilted bladed quartz	Quartz Veins	Unaltered
649	ML/ALT/205	78.362171	24.916999	Hilly	Bladed quartz	Quartz Veins	Unaltered
650	ML/ALT/206	78.360014	24.91399	Hilly	Fault gouge and greenish part may be alunite	Quartz Veins	Unaltered
651	ML/ALT/207	78.344197	24.935087	Hilly	Vuggy quartz with chalcopyrite, malachite, bornite	Quartz Veins	Unaltered
652	ML/ALT/208	78.344608	24.935539	Hilly	Smoky chert	Quartz Veins	Unaltered
653	ML/ALT/209	78.344348	24.93536	Hilly	Malachite rich silicified quartz	Quartz Veins	Unaltered
654	ML/ALT/210	78.344586	24.935866	Hilly	Malachite in brecciated chert	Quartz Veins	Unaltered
655	ML/ALT/211	78.345142	24.938154	Hilly	Smoky chert	Quartz Veins	Unaltered
656	ML/ALT/212	78.345384	24.937552	Hilly	Smoky brecciated chert	Quartz Veins	Unaltered
657	ML/ALT/213	78.343561	24.943301	Hilly	Contact of quartz and granite	Quartz Veins	Unaltered
658	ML/ALT/214	78.343537	24.943164	Hilly	Malachite, chalcopyrite and pyrite present in quartz	Quartz Veins	Unaltered
659	ML/ALT/215	78.345991	24.939852	Hilly	Quartz D-vein in granite	Quartz Veins	Unaltered
660	ML/ALT/216	78.343535	24.919594	Hilly	Extension of qtz vein, no green chert, less vuggy	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
661	ML/ALT/217	78.3421	24.910332	Discrete Chatan like exposure	Mesocratic medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Sericite
662	ML/ALT/218	78.342259	24.909962	Discrete Outcrop	Diorite	Diorite	Sericite
663	ML/ALT/219	78.340752	24.910243	Discrete exposure	Diorite	Diorite	Propylitic
664	ML/ALT/220	78.338901	24.908071	Discrete exposure	Diorite	Diorite	Propylitic
665	ML/ALT/221	78.345301	24.90037	Discrete exposure	Diorite, propylitic alteration	Diorite	Propylitic
666	ML/ALT/222	78.366295	24.923758	Undulatory	Volcanic, potassic alteration, D-vein (quartz) present	Felsic Volcanics	K-alteration
667	ML/ALT/223	78.31877	24.856375	Discrete exposure	Diorite with metals	Diorite	Unaltered
668	ML/ALT/224	78.318	24.863375	Hilly	Quartz reef trending NE SW (024-204). No vugs, no metals	Quartz Veins	Unaltered
669	ML/ALT/225	78.316269	24.864755	Discrete exposure	Diorite NW-SE trending, Quartz cross cutting trending almost N-S	Diorite	Unaltered
670	ML/ALT/226	78.322	24.939	Hilly	Black cl fine grained rock with qtz amygdules	Quartz Veins	Unaltered
671	ML/ALT/227	78.319719	24.922527	Undulatory	Lahar near Ganesh temple	Basalt	Unaltered
672	ML/ALT/228	78.326866	24.920688	Hilly	Quartz reef NW-SE trending with malachite, enargite, bornite, arseno?	Quartz Veins	Unaltered
673	ML/ALT/229	78.326225	24.922119	Hilly	Pyrite, sulphur solution in qtz reef	Quartz Veins	Unaltered
674	ML/ALT/230	78.326389	24.921751	Hilly	Greenish all over the qtz pyrite	Quartz Veins	Unaltered
675	ML/ALT/231	78.342087	24.931402	Hilly	Quartz with Cuprite, malachite and something silver (East)	Quartz Veins	Unaltered
676	ML/ALT/232	78.34403	24.934696	Hilly	Smoky greenish quartz, chalcopyrite (West)	Quartz Veins	Unaltered
677	ML/ALT/233	78.344232	24.935093	Hilly	cuprite malachite covellite chalcopyrite chalcocite (Central)	Quartz Veins	Unaltered
678	ML/ALT/234	78.344669	24.935929	Hilly	Exsolved qtz	Quartz Veins	Unaltered
679	ML/ALT/235	78.342792	24.935372	Hilly	Exsolved qtz	Quartz Veins	Unaltered

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
680	ML/ALT/236	78.342792	24.935372	Hilly	Exsolved qtz	Quartz Veins	Unaltered
681	ML/ALT/237	78.342572	24.928733	Hilly	Deep green colour chert, crysocola?	Quartz Veins	Unaltered
682	ML/ALT/238	78.342991	24.928702	Hilly	Malachite in blackish chert	Quartz Veins	Unaltered
683	ML/ALT/239	78.342439	24.929348	Discrete Chatan like exposure	Mesocratic medium grained equigranular granite	Medium-grained Equigranular Granite (Sericitized)	Unaltered
684	ML/ALT/240	78.326729	24.920662	Hilly	greenish chert, crysocola?	Quartz Veins	Unaltered
685	ML/ALT/241	78.327208	24.920955	Hilly	Cuprite, chalcopyrite in quartz	Quartz Veins	Unaltered
686	ML/ALT/242	78.319847	24.938684	Undulatory	Basalt coarse	Basalt	Unaltered
687	ML/ALT/243	78.295036	24.821968	Discrete Chatan like exposure	Red linear patch in the converging zone of 1VD. Fresh granite	Unaltered Equigranular Granite	Unaltered
688	ML/ALT/244	78.310754	24.814296	Discrete Chatan like exposure	Granite fresh medium grained	Unaltered Equigranular Granite	Unaltered
689	ML/ALT/245	78.310896	24.807249	Discrete Chatan like exposure	Granite fresh medium grained	Unaltered Equigranular Granite	Unaltered
690	ML/ALT/246	78.302366	24.866606	Discrete Chatan like exposure	Green lineament from 1VD. May be Basalt. Pods of calcite present along with epidote	Medium-grained Equigranular Granite (Sericitized)	Sericite
691	ML/ALT/247	78.301067	24.867038	Discrete Chatan like exposure	Granite and basalt side by side. Granite contains biotite amphibole and it's sericitised. Biotite granite. Basalt here is relatively coarser, also have calcite and epidote as veins	Medium-grained Equigranular Granite (Sericitized)	Sericite
692	ML/ALT/248	78.307068	24.888801	Undulatory	Biotite amphibole granite	Medium-grained Equigranular Granite (Sericitized)	Sericite
693	ML/ALT/249	78.309286	24.892616	Undulatory	Granite VOL, potassic alteration superimposed by sericitic	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
694	ML/ALT/250	78.339246	24.929871	Undulatory	Granite VOL, potassic altered	Felsic Volcanics	K-alteration
695	ML/ALT/251	78.338127	24.929467	Undulatory	Granite VOLCANIC, potassic, magnetite low biotite present	Felsic Volcanics	Ca-Na Alteration
696	ML/ALT/252	78.337128	24.929058	Undulatory	Medium grained granite containing primary biotite, feldspar grains are fuzzy, sericitic alteration, no metal	Felsic Volcanics	Ca-Na Alteration
697	ML/ALT/253	78.336573	24.928339	Undulatory	Altered granite may be, tends to be volcanic, grain boundary is fuzzy, biotite veins present and magnetite present, hence potassic alteration	Felsic Volcanics	K-alteration
698	ML/ALT/254	78.338556	24.929663	Hilly	Quartz vein within the granite (tending to be rhyolite) trending NNE-SSW 155. Granite clasts within the quartz. Quartz is white in clr (later formed) reddish chert contains crysocola, malachite might be present	Quartz Veins	Unaltered
699	ML/ALT/255	78.392146	24.930176	Hilly	Quartz vein trending N-S contains malachite, pyrite. Quartz vein within potassic zone, intense. But less intense than the intense zone	Quartz Veins	K-alteration
700	ML/ALT/256	78.386589	24.913254	Undulatory	Rhyolite porphyry trending 032	Rhyolite Porphyry	Unaltered
701	ML/ALT/257	78.383916	24.907369	Undulatory	Rhyolite porphyry trending 035	Rhyolite Porphyry	Unaltered
702	ML/ALT/258	78.377486	24.910357	Undulatory	Volcanic rock, Potassic altered zone, high magnetite, pyrite present	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
703	ML/ALT/259	78.377137	24.912907	Hilly	Quartz vein trending 040. Greenish and reddish chert at places. Brecciated chert present. Epidote chlorite veins present in the volcanic rock, no biotite, no magnetite. Arsenopyrite may be present. Pyrite not observed	Quartz Veins	Propyllitic
704	ML/ALT/260	78.376301	24.919881	Hilly	Quartz vein trending NE-SW, 038. Greenish and reddish chert, at places brecciated	Quartz Veins	Unaltered
705	ML/ALT/261	78.389778	24.917428	Undulatory	Intense potassic altered zone, samples of A-veins and eht for chemical and thin section	Felsic Volcanics	K-alteration
706	ML/ALT/262	78.383878	24.907959	Undulatory	Intense potassic alteration, mainly A-vein present, halo all over. Rhyolite porphyry trending 035. Rhyolite porphyry contains epidote vein	Rhyolite Porphyry	K-alteration
707	ML/ALT/263	78.377451	24.910286	Undulatory	Volcanic rock, HIGH MAGNETITE, EHT, Potassic alteration	Felsic Volcanics	K-alteration
708	ML/ALT/264	78.369069	24.908605	Hilly	Quartz reef trending 030, Black chert, no metal found	Quartz Veins	Unaltered
709	ML/ALT/265	78.342	24.943145	Hilly	Quartz vein trending 014, smoky chert, at places greenish reddish and greyish	Quartz Veins	Unaltered
710	ML/ALT/266	78.340106	24.936078	Undulatory	Volcanic rock, sodic alteration		Ca-Na Alteration
711	ML/ALT/267	78.341969	24.935853	Undulatory	Volcanic	Felsic Volcanics	Ca-Na Alteration
712	ML/ALT/268	78.343592	24.935152	Undulatory	A-vein, halo all over, rock seems to be granite	Felsic Volcanics	Ca-Na Alteration
713	ML/ALT/269	78.363971	24.968279	Undulatory	Granite potassic altered	Felsic Volcanics	Ca-Na Alteration
714	ML/ALT/270	78.374591	24.968876	Undulatory	Potassic altered volcanic	Felsic Volcanics	K-alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
715	ML/ALT/271	78.401425	24.957719	Undulatory	Potassic alteration in volcanic, eht and a-vein, qtz vein trending 018 is present, no metal	Felsic Volcanics	K-alteration
716	ML/ALT/272	78.400521	24.958689	Undulatory	Lapilli, volcanic	Felsic Volcanics	Unaltered
717	ML/ALT/273	78.399187	24.959036	Undulatory	Potassic altered volcanic	Felsic Volcanics	K-alteration
718	ML/ALT/274	78.266379	24.862346	Discrete exposure	Diorite containing less amount of pyrite	Diorite	Unaltered
719	ML/ALT/275	78.269575	24.86534	Discrete Chatan like exposure	Granite porphyry, fine grained porphyritic granite	Fine-granied Porphyritic Granite	Sericite
720	ML/ALT/276	78.27734	24.870739	Discrete Chatan like exposure	Granite	Medium-grained Equigranular Granite (Sericitized)	Sericite
721	ML/ALT/277	78.279095	24.87414	Discrete Chatan like exposure	GRANITE	Medium-grained Equigranular Granite (Sericitized)	Sericite
722	ML/ALT/278	78.300925	24.880661	Discrete Chatan like exposure	Fresh medium grained granite	Medium-grained Equigranular Granite (Sericitized)	Sericite
723	ML/ALT/279	78.328296	24.91496	Undulatory	Medium grained pink granite	Felsic Volcanics	Unaltered
724	ML/ALT/280	78.38456	24.956705	Undulatory	Tuff, fresh volcanics	Felsic Volcanics	
725	ML/ALT/281	78.371272	24.889314	Undulatory	Potassic alteration, nagwans	Felsic Volcanics	
726	ML/ALT/282	78.371979	24.887149	Undulatory	Rhyolite porphyry trending 035 (In the NW-SE RED LINEAMENT IN THE 1VD map). Basalt (may be) also present.	Rhyolite Porphyry	
727	ML/ALT/283	78.262986	24.779244	Hilly	Mailar quartz vein	Quartz Veins	Unaltered
728	ML/ALT/284	78.305	24.804	Undulatory	Granite VOLACNICS, something silvery, red cl in 1VD map	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
729	ML/ALT/285	78.355232	24.959674	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
730	ML/ALT/286	78.36346	24.95782	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
731	ML/ALT/287	78.33895	24.944783	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
732	ML/ALT/288	78.33804	24.95	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
733	ML/ALT/289	78.384738	24.946829	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
734	ML/ALT/290	78.3584676	24.933628	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. EHT and A-vein present. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
735	ML/ALT/291	78.364899	24.929648	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
736	ML/ALT/292	78.361748	24.923859	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
737	ML/ALT/293	78.383679	24.923758	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
738	ML/ALT/294	78.391748	24.92379	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
739	ML/ALT/295	78.389638	24.935744	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
740	ML/ALT/296	78.3857389	24.9343678	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
741	ML/ALT/297	78.3784268	24.939678	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
742	ML/ALT/298	78.386839	24.949728	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
743	ML/ALT/299	78.388457	24.962549	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins present. Magnetite, biotite absent. Alteration intensity medium and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
744	ML/ALT/300	78.396748	24.952749	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins present. Magnetite, biotite absent. Alteration intensity and vein intensity is low	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
745	ML/ALT/301	78.3957377	24.948839	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. Alteration intensity is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
746	ML/ALT/302	78.396837	24.951833	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
747	ML/ALT/303	78.372	24.932	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
748	ML/ALT/304	78.394777	24.94729	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
749	ML/ALT/305	78.333	24.941	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	Felsic Volcanics	Ca-Na Alteration
750	ML/ALT/306	78.34	24.939	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
751	ML/ALT/307	78.339	24.948	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	Felsic Volcanics	Ca-Na Alteration
752	ML/ALT/308	78.326	24.942	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
753	ML/ALT/309	78.333	24.933	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
754	ML/ALT/310	78.329	24.934	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
755	ML/ALT/311	78.358	24.96	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
756	ML/ALT/312	78.359	24.96	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. Alteration low is medium and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
757	ML/ALT/313	78.37	24.953	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
758	ML/ALT/314	78.362	24.948	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
759	ML/ALT/315	78.372	24.953	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
760	ML/ALT/316	78.371	24.966	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
761	ML/ALT/317	78.375	24.965	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
762	ML/ALT/318	78.386	24.948	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
763	ML/ALT/319	78.389	24.951	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
764	ML/ALT/320	78.382	24.943	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
765	ML/ALT/321	78.394	24.943	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
766	ML/ALT/322	78.385	24.93	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
767	ML/ALT/323	78.37	24.902	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
768	ML/ALT/325	78.39	24.956	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
769	ML/ALT/326	78.375	24.901	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
770	ML/ALT/327	78.377	24.897	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
771	ML/ALT/328	78.374	24.908	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
772	ML/ALT/329	78.371	24.902	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
773	ML/ALT/330	78.377	24.916	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
774	ML/ALT/331	78.371	24.927	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
775	ML/ALT/332	78.371	24.928	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
776	ML/ALT/333	78.383	24.923	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite, biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
777	ML/ALT/334	78.388	24.921	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
778	ML/ALT/335	78.385	24.928	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
779	ML/ALT/336	78.387	24.96	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration
780	ML/ALT/337	78.387	24.959	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Magnetite , biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration
781	ML/ALT/338	78.39	24.956	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
782	ML/ALT/339	78.39	24.952	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
783	ML/ALT/340	78.389	24.947	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Magnetite , biotite absent. Alteration intensity and vein intensity is medium	Felsic Volcanics	Ca-Na Alteration

Sl No	Field_ID	Longitude	Latitude	Outcrop_Pattern	Sample_Description	Rock type	Alteration
784	ML/ALT/341	78.394	24.943	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	Felsic Volcanics	Ca-Na Alteration
785	ML/ALT/342	78.395	24.943	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	Felsic Volcanics	Ca-Na Alteration
786	ML/ALT/343	78.397	24.938	Undulatory	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity low	Felsic Volcanics	Ca-Na Alteration
787	ML/ALT/344	78.4	24.951	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
788	ML/ALT/345	78.381	24.939	Undulatory	Volcanic rock, sodic alteration	Felsic Volcanics	Ca-Na Alteration
789	ML/ALT/346	78.357	24.951	Undulatory	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	Felsic Volcanics	Ca-Na Alteration

Annexure II_ Details of Bedrock Petrography

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
1	107014	24.782548	78.261486	Mailar	Medium-grained equigranular granite	Quartz (40% by volume), feldspar (about 55% by volume) and opaque (5%) Sericitization of feldspar. A few pyrite grains and magnetite-ilmenite grains are also present.
2	107022	24.887030	78.362225	Nagwans	Medium-grained equigranular granite	quartz (25% by volume), feldspar (60% by volume), amphibole, chlorite and epidote (~10%), opaques (~5%) Propylitic alteration. The opaques are mainly cubic pyrite and chalcopyrite.
3	111007	24.873392	78.266994	Tilhari	medium grained porphyritic granite	Plagioclase phenocrysts (35%), quartz (50%) and amphibole grains (10%) with opaque minerals (5%). Propylitic alteration The opaque minerals are deduced to be pyrite and ilmenite formed from the surrounding mineral sphene.
4	111008	24.885833	78.366526	Pipra, Nagwans	fine to medium grain granite granite	quartz (35% by volume), felspar (60% by volume), and opaques (~5%). Potassic alteration. Opaques minerals pyrite, chalcopyrite which are aligned parallel to the deformation.
5	111009	24.76315	78.274285	Charusil.	medium grained granite	quartz (50%), feldspar (35%), epidote and chlorite. propylitic alteration Opaque mineral grains observed.
6	111010	24.888606	78.370577	Pipra	medium to coarse grained granite	quartz (45% by volume), feldspar (50% by volume), epidote minerals and opaque minerals (5%). Propylitic Alteration. Specs of chalcopyrite and pyrite also observed.
7	107008	24.956892	78.383585	North of Burera and Gulenda	fine-grained cherty to coarse-grained quartz	interlocking recrystallized quartz (95% by volume). The quartzite is fine-grained cherty to coarse-grained varieties. Chalcopyrite, pyrite, iron oxide as opaques and rare apatite.
8	107011	24.944723	78.377998	North of Gulenda	Chert	Grain boundaries may appear irregular or serrated due to recrystallization. Quartz vein with pyrite or chalcopyrite and iron oxide minerals
9	111011	24.888626	78.370600	Pipra,Chipai	Chert	The quartzite is fine-grained cherty to coarse-grained varieties.

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						Grains of chalcopyrite and arsenopyrite observed under reflected light.
10	111012	24.861656	78.282047	Bhadra	Diorite	amphibole (30% by volume), feldspar (65% by volume), opaque minerals (5% by vol.). Sericitic alteration Specs of pyrite and chalcopyrite in the sample
11	107018	24.857660	78.347860	Sirsee	Diorite	Amphibole (35% by volume), feldspar (60% by volume), opaque minerals (5% by vol.) Sericitic alteration Chalcopyrite, pyrite and ilmenite randomly occurring within the mineral grains in the sample.
12	107035	24.862579	78.266882	North of Gora and west of Bhadra	Diorite	Amphibole (40% by volume), feldspar (55% by volume), opaque minerals (5% by vol.). Sericitic alteration Specs of ilmenite, pyrite and chalcopyrite in the sample
13	107024	24.862614	78.350539	Sirsee	Diorite	Amphibole (30% by volume), feldspar (65% by volume), opaque minerals (5% by vol.). Sericitic alteration. Chalcopyrite and pyrite observed in the sample.
14	107003	24.767902	78.259403	North of Charusil.	Rhyodacite	The phenocrysts are of subhedral grains of quartz and some elongated laths of plagioclase feldspar. Propylitic alteration
15	107029	24.885653	78.367528	South of Pipra	Rhyolite	In some feldspar phenocrysts, inclusions of epidote grains are present which shows a sign of propylitic alteration. specs of chalcopyrite and pyrite along with rutile or ilmenite which is surrounded by sphene
16	107015	24.888616	78.370590	Pipra, Chipai	Rhyolite	Phenocrysts of microcline feldspar in very fine grained quartzo-feldspathic matrix. Propylitic alteration. Specs of chalcopyrite observed in the sample along with presence of other opaque minerals.
17	107019	24.888626	78.370600	Pipra,Chipai	Andesite	phenocrysts of plagioclase feldspar in very fine grained quartzo-feldspathic matrix. Potassic, Sericite alteration.

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						Specs of chalcopyrite observed in the sample along with presence of other opaque minerals.
18	111013	24.905705	78.374094	Bhawar Kali	Andesite	Fine grained matrix of quartz and phenocrysts of plagioclase feldspar and microcline. Potassic, Sericite alteration. Opaque minerals
19	107013	24.956699	78.384343	South of Miyao	Andesitic Tuff	The boundaries of the phenocrysts are broken which indicates volcano-sedimentary rock. Potassic alteration
20	107007	24.956892	78.383585	North of Burera and Gulenda	Foliated tremolite rock	Propylitic alteration. Specs of pyrite, enargite and chalcopyrite maybe present.
21	111014	24.963924	78.374183	South of Miyao	Andesite	Extremely fine grained quartzo-feldspathic phase with phenocrysts of plagioclase feldspar. Propylitic alteration. Specs of chalcopyrite and pyrite minerals observed.
22	107005	24.784784	78.2542262	Mailar	Tremolite rich rock	Tremolite, chlorite (5-8%) and opaque minerals. Patches of chloritization Grains of pyrite and chalcopyrite also present.
23	111015	24.785391	78.256831	South of Mailar	Pyrophyllite	Pyrophyllite exhibit equigranular fibrous texture. Advanced argillic alteration. Patch of magnetite also present as opaques
24	111016	24.782126	78.258875	South of Mailar	Litho-cap rock	Completely opaque occupied by brown coloured mineral, probably an iron rich mineral. Maybe of any litho-cap unit or signature of gossan.
25	107025	24.94438	78.366981	North of Burera and Gulenda	Rhyolite	Rhyolite consists of very fine-grained matrix of quartzo-feldspathic phase with euhedral to subhedral phenocrysts of quartz and microcline. Feldspar are altered to sericite.Specs of chalcopyrite and pyrite observed in the sample
26	107009	78.38202	24.82464	North of Burera and Gulenda	Volcaniclastic	In thin section, the rock displays angular to subangular fragments of volcanic glass, crystals, and lithic clasts set within a fine-grained matrix. The fragments vary in size and often show sharp, broken edges indicative of explosive fragmentation. The matrix is typically composed of fine ash and altered volcanic

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						material. Texturally, the rock reflects rapid deposition from pyroclastic flows or fall deposits.
27	107011	78.378	24.94472	North of Burera and Gulenda	Quartz veins	In thin section, quartz vein displays a microcrystalline quartz matrix with abundant open-space vugs. Malachite appears as bright green, fibrous to botryoidal coatings within fractures and vugs, while chalcopyrite occurs as disseminated subhedral grains with brassy reflectance under reflected light. The assemblage indicates a high-silica, hydrothermal system with supergene enrichment features.
28	107036	78.41116	24.98409	Ghisauli	Smoky Quartz	smoky quartz appears as semi-transparent, anhedral grains with characteristic brown to grey internal shading due to natural irradiation. The quartz shows undulose extinction and may contain fluid inclusions or microfractures. A few gold flakes occurs as small, bright, isotropic grains along fractures or grain boundaries within the quartz. This association suggests late-stage hydrothermal mineralization in a silica-rich environment.
30	107038	78.44729	25.07989	Burera	Quartz veins	Quartz vein displays a microcrystalline quartz matrix with abundant open-space vugs. Dosseminated chalcopyrite, pyrite are found in the reflected light.
31	107038	78.44729	25.07989	North of Burera and Gulenda	Quartz veins	In thin section, quartz vein displays a microcrystalline quartz matrix with abundant open-space vugs. Malachite appears as bright green, fibrous to botryoidal coatings within fractures and vugs, while chalcopyrite occurs as disseminated subhedral grains with brassy reflectance under reflected light. The assemblage indicates a high-silica, hydrothermal system with supergene enrichment features.
32	107040	78.4697	24.32517	North of Burera and Gulenda	Rhyolite	The rock exhibits a fine-grained groundmass with sparse of quartz and strongly altered feldspar. Quartz phenocrysts appear embayed and undulose, surviving alteration, while original plagioclase is almost entirely replaced by secondary K-feldspar (albite/microcline) and fine sericite. The potassic alteration is pervasive, characterized by cloudy, low-birefringence K-feldspar filling former feldspar sites and fine veinlets cutting the matrix. Disseminated hematite or dusty oxides impart a reddish tint, reflecting oxidizing hydrothermal fluids. Some feldspar dissolution textures and secondary quartz infillings suggest late-stage fluid activity.

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
33	107043	78.26859	24.99132	North of Burera and Gulenda	Andesite	Fine grained matrix of quartz and phenocrysts of plagioclase feldspar and microcline. Potassic, Sericite alteration. Opaque minerals
34	107044	78.25463	24.98036	North of Burera and Gulenda	Rhyolite	The rock exhibits a fine-grained groundmass with sparse of quartz and strongly altered feldspar. Quartz phenocrysts appear embayed and undulose, surviving alteration, while original plagioclase is almost entirely replaced by secondary K-feldspar (albite/microcline) and fine sericite. Disseminated magnetite or dusty oxides impart a reddish tint, reflecting oxidizing hydrothermal fluids. Some feldspar dissolution textures and secondary quartz infillings suggest late-stage fluid activity.
35	107023	78.34945	24.86194		Granite with mafic minerals	The granite exhibits a coarse-grained, equigranular texture dominated by quartz, K-feldspar, and plagioclase. Mafic minerals such as biotite and hornblende are present but show signs of partial melting, including irregular, embayed grain boundaries and locally altered rims. Some mafic grains appear partially dissolved and replaced by fine-grained granitic melt or secondary phases, indicating incipient melting. This texture reflects a dynamic environment of partial melting within the crust, where mafic minerals are destabilized while felsic minerals remain stable
36	107026	78.38359	24.95689		Mafic rock	In thin section, the rock is dominated by coarse-grained, aligned amphibole (hornblende) crystals with subordinate plagioclase. Hornblende shows strong pleochroism from green to brown and displays elongated, prismatic habits. Plagioclase is commonly twinned and interstitial between amphiboles. The texture is typically foliated, reflecting metamorphic recrystallization under medium- to high-grade conditions.
37	111017	78.28205	24.86166	Near Ghisauli	Mafic rock	In thin section, mafic rock is characterized by abundant green to brown hornblende crystals displaying strong pleochroism and elongated prismatic shapes. Plagioclase occurs as subhedral grains, often intergrown with amphibole. The rock exhibits a foliated texture due to the preferred alignment of amphibole. This texture indicates metamorphism at amphibolite facies conditions.
38	108878	78.30237	24.86661	Near Ghisauli	Basalt	The basalt displays a fine-grained to intergranular texture with plagioclase laths and subhedral pyroxene crystals forming the primary framework. Plagioclase

SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						shows polysynthetic twinning, while pyroxene appears as high-relief, pale brown to green grains. Opaque minerals, likely magnetite or ilmenite, are scattered throughout the groundmass. The overall texture indicates rapid cooling typical of a volcanic origin.
39	108874	78.33885	24.9684	Near Ghisauli	Basalt	In thin section, basalt exhibits a fine-grained groundmass with interlocking plagioclase laths and granular pyroxene. Plagioclase displays clear twinning, while pyroxene is high-relief and often shows pale brown to green pleochroism. Opaque minerals are common, appearing as small, black, isotropic grains. The texture reflects rapid crystallization from a mafic lava flow.
40	109321	78.37467	24.93921	North of Gulenda	Andesite	Fine grained matrix of quartz and phenocrysts of plagioclase feldspar and microcline. Potassic, Sericite alteration. Opaque minerals
41	109319	78.38005	24.96282	North of Gulenda	Rhyolite/Rhyodacite.	Fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occurred and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock.
42	109342	78.38978	24.91743	North of Gulenda	Rhyolite/Rhyodacite.	Fine grained, porphyritic rock with phenocrysts of feldspar and quartz (glass like). Mafic veins present. Magnetite (medium) present, biotite present.
43	109333	78.38897	24.91756	North of Gulenda	Rhyolite/Rhyodacite.	Fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occurred and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock.
44	109336	78.39471	24.93503	North of Gulenda	Volcanic	Fine- grained, porphyritic rock with phenocrysts of feldspar, and glass. Mafic patch (biotite like) present. Biotite present with amphibole. Magnetite present, biotite present.
45	109324	78.37257	24.94116	North of Gulenda	Volcanic	Fine- grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein of quartz and mafic are found.
46	108870	78.38456	24.95671	North of Gulenda	Volcanics	The rock displays a porphyritic texture with a fine-grained, devitrified groundmass and ~5–10% phenocrysts of quartz and altered feldspar. Quartz

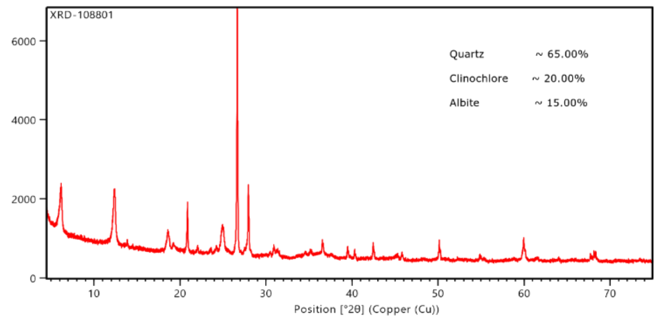
SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						phenocrysts are anhedral to subhedral, commonly embayed, and exhibit undulose extinction. Feldspar phenocrysts, likely originally plagioclase and sanidine, are extensively altered. Sodic alteration is evidenced by the replacement of plagioclase with fine-grained albite, recognized by its low birefringence and simple twinning. Sericitic alteration is pervasive, with abundant fine-grained muscovite (sericite) replacing feldspars and concentrated along cleavage planes and fractures, producing a silky sheen under crossed polars. Potassic alteration is expressed by secondary K-feldspar (adularia or microcline) overprinting albite and sericite, often filling voids and replacing groundmass feldspars, with weak grid twinning and cloudy interference colours.
47	109331	78.38659	24.91394	North of Gulenda	Volcanics	Fine- grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. Alteration intensity is medium and vein intensity is high. High magnetite and biotite
48	109317	78.3791	24.9514	North of Gulenda	Rhyolite	Fine- grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy. Clots of biotite present and small clots of biotite within feldspar grain, magnetite (High) present within the rock, alteration intensity is high. Intense venation; veins having centre line composed of mafic (Biotite), halo on the sides of the veins.
49	108853	78.40143	24.95772	North of Gulenda	Altered Volcanics	In thin section, the rhyolite displays a porphyritic texture with a fine-grained, fine quartzofeldpathic groundmass and ~5–10% phenocrysts of quartz and altered feldspar. Quartz phenocrysts are anhedral to subhedral, commonly embayed, and exhibit undulose extinction. Feldspar phenocrysts, likely originally plagioclase, are extensively altered. Sodic alteration is evidenced by the replacement of plagioclase with albite. Sericitic alteration is pervasive, with abundant fine-grained muscovite (sericite) replacing feldspars. Potassic alteration is expressed by secondary K-feldspar (microcline) overprinting albite and sericite, often filling voids and replacing groundmass feldspars, with weak grid twinning and cloudy interference colors.
50	108883	78.34423	24.93509	Near Burera	Chert/Quartz vein	In thin section, the vuggy silica chert displays a microcrystalline quartz matrix with abundant open-space vugs lined by drusy quartz. Malachite appears as bright green, fibrous to botryoidal coatings within fractures and vugs, while

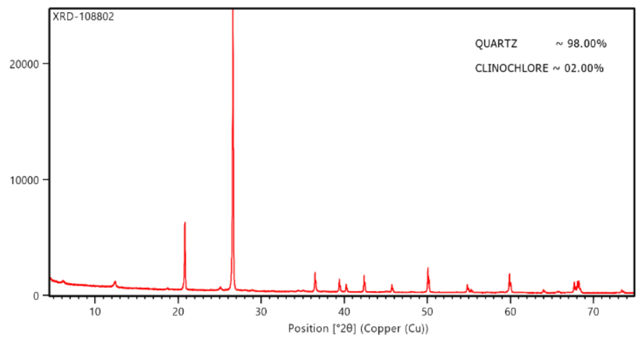
SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						chalcopyrite occurs as disseminated subhedral grains with brassy reflectance under reflected light. The assemblage indicates a high-silica, hydrothermal system with supergene enrichment features.
51	108875	78.33885	24.9684	Near Ghisauli	Basalt	In thin section, basalt exhibits a fine-grained groundmass with interlocking plagioclase laths and granular pyroxene. Plagioclase displays clear twinning, while pyroxene is high-relief and often shows pale brown to green pleochroism. Opaque minerals are common, appearing as small, black, isotropic grains. The texture reflects rapid crystallization from a mafic lava flow.
52	108892	78.34296	24.9289	Near Burera	Chert	In thin section, the vuggy silica chert is composed predominantly of microcrystalline quartz with abundant vugs and dissolution textures, often rimmed by fine drusy quartz. Malachite occurs as green, fibrous to botryoidal coatings along fractures and cavity walls, indicating secondary copper enrichment. Chalcopyrite is present as scattered, subhedral metallic grains, commonly associated with quartz and occasionally rimmed by malachite. Native gold appears as small, bright, isotropic inclusions near chalcopyrite, suggesting a late-stage hydrothermal overprint within an oxidized, high-silica system.
53	108888	78.34292	24.92888	Near Burera	Chert	In thin section, the vuggy silica chert shows a dense groundmass of cryptocrystalline quartz with prominent voids and dissolution textures typical of advanced silica alteration. Malachite appears as vivid green, fibrous to earthy coatings along fractures and vug margins, indicating secondary copper mobility. Chalcopyrite occurs as fine, subhedral to anhedral metallic grains, locally clustered near quartz-lined cavities. Cuprite and chalcosite are also observed under the reflected light.
54	108884	78.34423	24.93509	Near Burera	Vuggy Silica	In thin section, the vuggy silica chert displays a microcrystalline quartz matrix with abundant open-space vugs lined by drusy quartz. Native gold is rare but present as small, high-relief, isotropic grains closely associated with chalcopyrite and quartz veinlets, suggesting late-stage mineralization.
55	108864	78.30107	24.86704		Granite	In thin section, the granite displays a typical coarse-grained texture with quartz, K-feldspar, and plagioclase phenocrysts in an interlocking granular matrix. Sodic alteration is evident by the extensive replacement of original plagioclase by fine-grained albite, characterized by its low birefringence and simple twinning. Some feldspar grains show patchy sericitization associated with sodic alteration, while K-feldspar remains relatively fresh. This alteration suggests interaction with

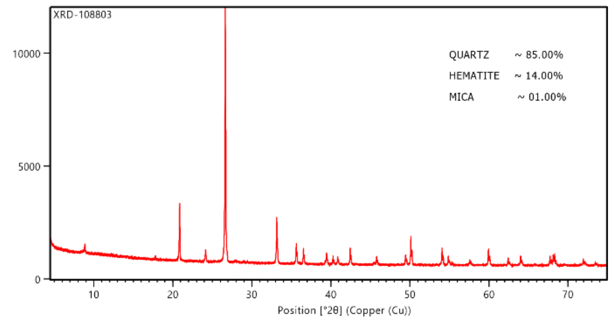
SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						sodium-rich hydrothermal fluids, modifying the original mineralogy without destroying the overall granite texture.
56	108895	78.34459	24.93587	Near Burera	Chert	In thin section, the vuggy silica chert displays a microcrystalline quartz matrix with abundant open-space vugs lined by drusy quartz. Malachite appears as bright green, fibrous to botryoidal coatings within fractures and vugs, while chalcopyrite, pyrite occurs as disseminated minerals.
57	108865	78.26958	24.86534		Granite porphyry	The granite porphyry displays a distinctly porphyritic texture, with large phenocrysts of quartz, K-feldspar (typically microcline), and plagioclase embedded in a finer-grained, equigranular to micrographic groundmass. Quartz phenocrysts are anhedral to subhedral, commonly exhibiting undulose extinction and interstitial relationships with surrounding feldspar. K-feldspar phenocrysts are subhedral to euhedral, often showing characteristic tartan (cross-hatched) twinning, while plagioclase displays polysynthetic twinning and is frequently altered to fine sericite along cleavage planes. The groundmass consists of fine intergrowths of quartz and feldspar. Accessory minerals include biotite, often partially chloritized, and minor zircon and opaque oxides.
58	108852	78.37745	24.91029		Volcanic rock	In thin section, the rhyolite displays a porphyritic texture with a fine-grained, fine quartzofeldpathic groundmass and ~5–10% phenocrysts of quartz and altered feldspar. Quartz phenocrysts are anhedral to subhedral, commonly embayed, and exhibit undulose extinction. Feldspar phenocrysts, likely originally plagioclase, are extensively altered. Sodic alteration is evidenced by the replacement of plagioclase with albite. Sericitic alteration is pervasive, with abundant fine-grained muscovite (sericite) replacing feldspars. Potassic alteration is expressed by secondary K-feldspar (microcline) overprinting albite and sericite, often filling voids and replacing groundmass feldspars, with weak grid twinning and cloudy interference colors.
59	108858	78.37279	24.98354	North of Gulenda	Rhyolite porphyry	The rhyolite porphyry exhibits a porphyritic texture with large, well-formed phenocrysts of quartz and feldspar (up to ~30%) set in a fine-grained quartzofeldpathic groundmass. Quartz phenocrysts are subhedral to anhedral, often embayed, and display undulose extinction. Feldspar phenocrysts—likely a mix of plagioclase and sanidine—show varying degrees of alteration, with some retaining Carlsbad or albite twinning, while others are replaced by sericite or clay minerals. The groundmass is composed of fine-grained quartz and feldspar.

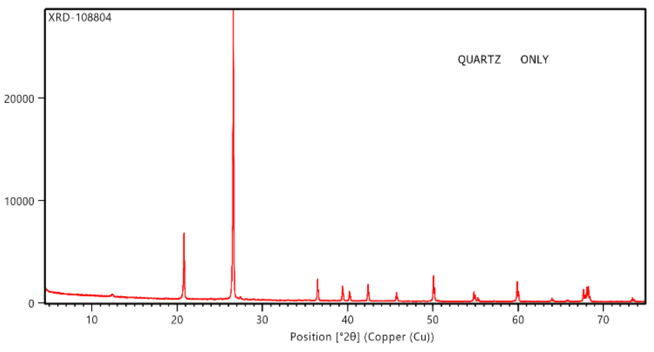
SL NO.	Sample ID	Latitude	Longitude	Village	Rock Type	Petrology Description
						Minor biotite and accessory opaques are present, though biotite is commonly altered to chlorite or opaque oxides.
60	108788	78.34745	24.96032	North of Gulenda	Volcanics	In thin section, the rhyolite displays a porphyritic texture with a fine-grained, fine quartzo-feldpathic groundmass and ~5–10% phenocrysts of quartz and altered feldspar. Quartz phenocrysts are anhedral to subhedral, commonly embayed, and exhibit undulose extinction. Feldspar phenocrysts, likely originally plagioclase, are extensively altered. Sodic alteration is evidenced by the replacement of plagioclase with albite. Sericitic alteration is pervasive, with abundant fine-grained muscovite (sericite) replacing feldspars. Potassic alteration is expressed by secondary K-feldspar (microcline) overprinting albite and sericite, often filling voids and replacing groundmass feldspars, with weak grid twinning and cloudy interference colours.

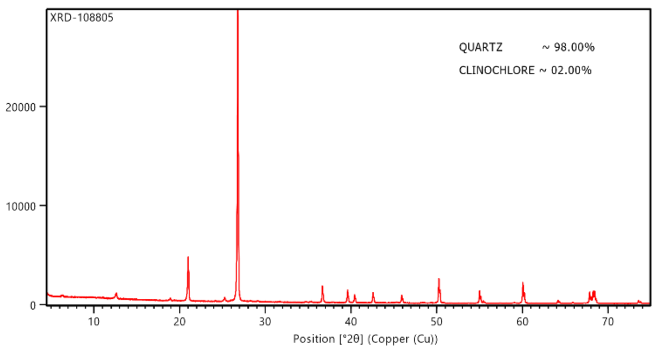
Annexure III_ XRD Graphs of Surface Samples

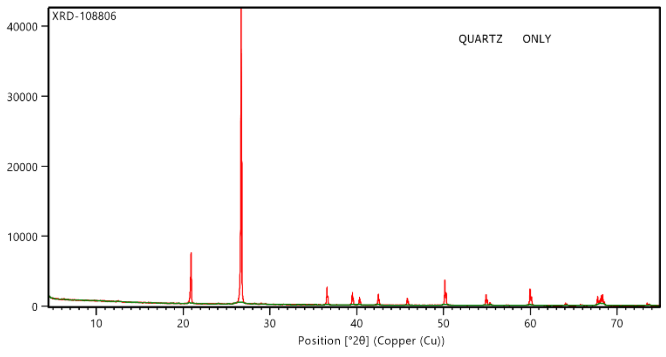


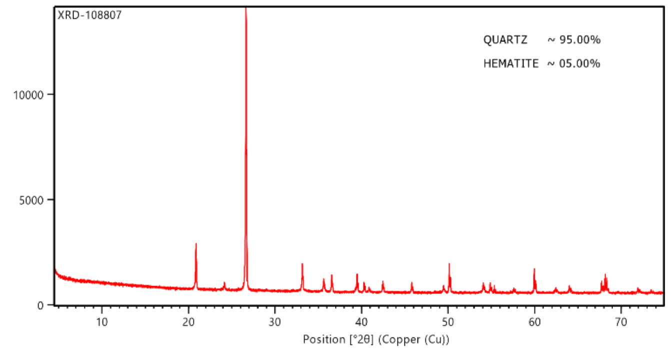


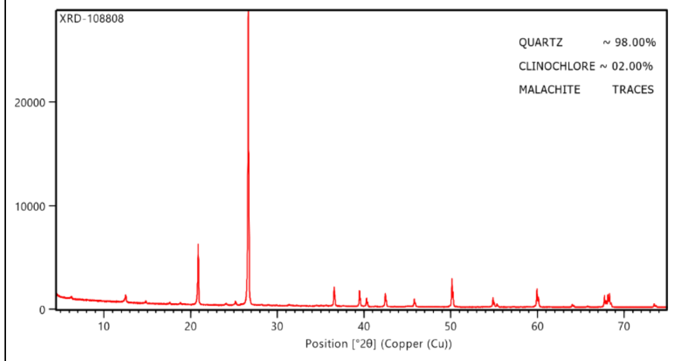


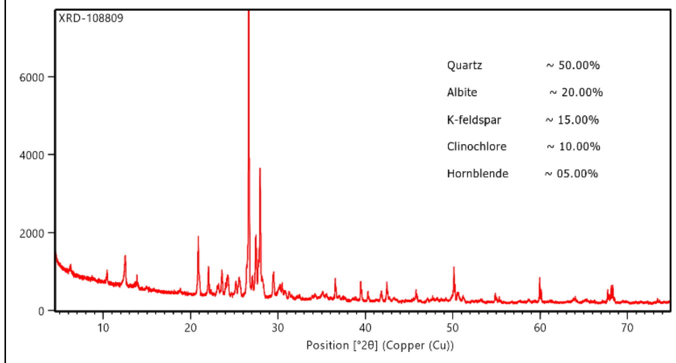


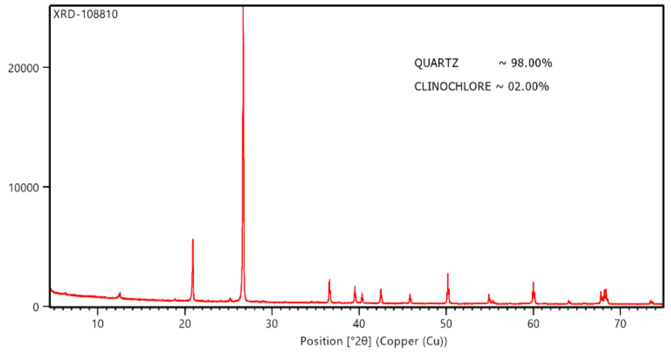


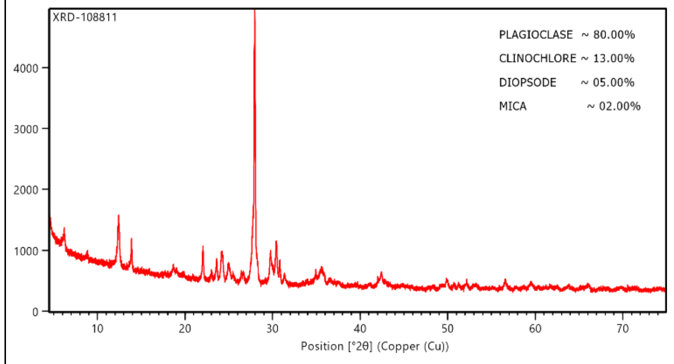


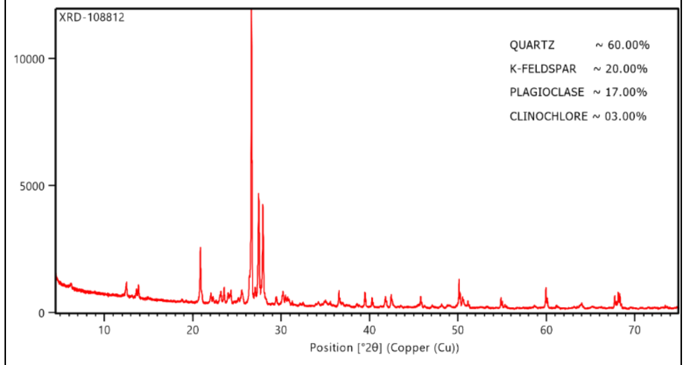

XRD-108807
QUARTZ ~ 95.00%
HEMATITE ~ 05.00%
Position [°2θ] (Copper (Cu))

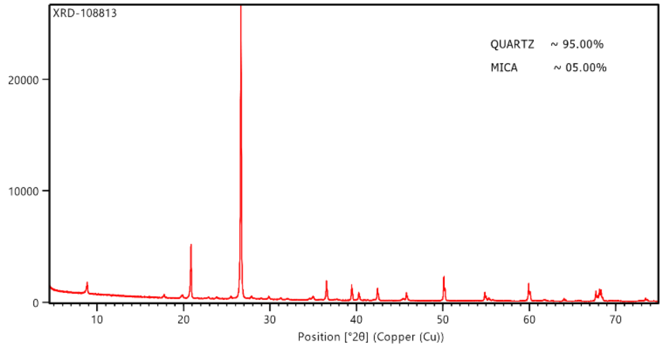

XRD-108808
QUARTZ ~ 98.00%
CLINOCHLORE ~ 02.00%
MALACHITE TRACES
Position [°2θ] (Copper (Cu))

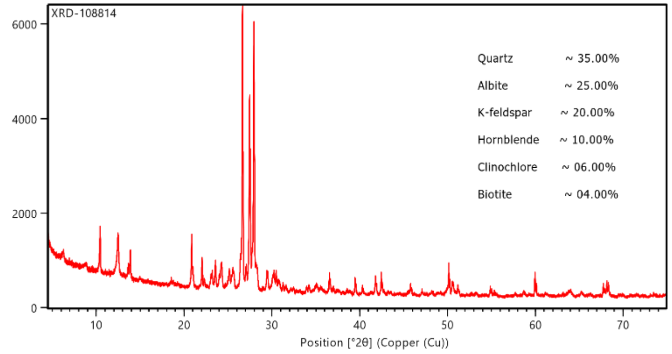

XRD-108809
Quartz ~ 50.00%
Albite ~ 20.00%
K-feldspar ~ 15.00%
Clinochlore ~ 10.00%
Hornblende ~ 05.00%
Position [°2θ] (Copper (Cu))

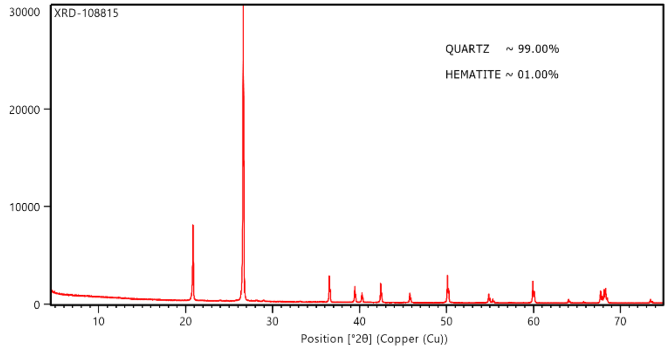

XRD-108810
QUARTZ ~ 98.00%
CLINOCHLORE ~ 02.00%
Position [°2θ] (Copper (Cu))

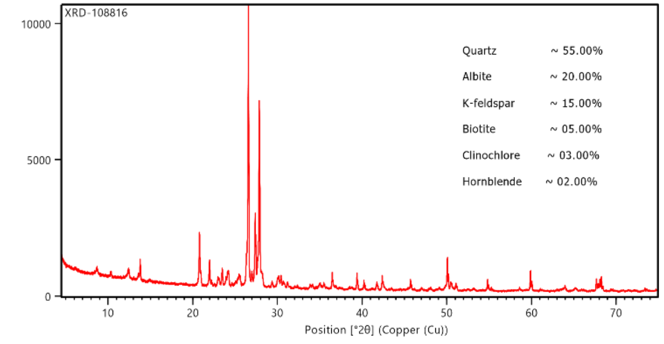

XRD-108811
PLAGIOCLASE ~ 80.00%
CLINOCHLORE ~ 13.00%
DIOPSODE ~ 05.00%
MICA ~ 02.00%
Position [°2θ] (Copper (Cu))

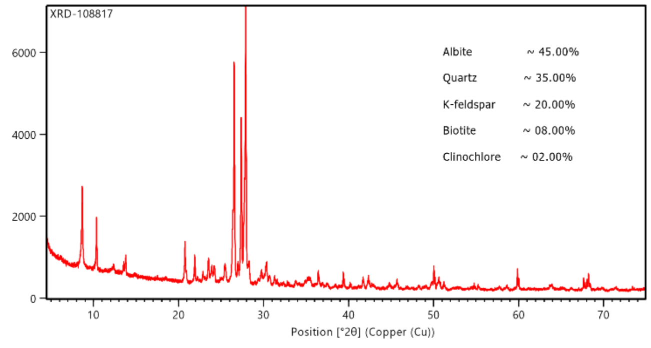

XRD-108812
QUARTZ ~ 60.00%
K-FELDSPAR ~ 20.00%
PLAGIOCLASE ~ 17.00%
CLINOCHLORE ~ 03.00%
Position [°2θ] (Copper (Cu))

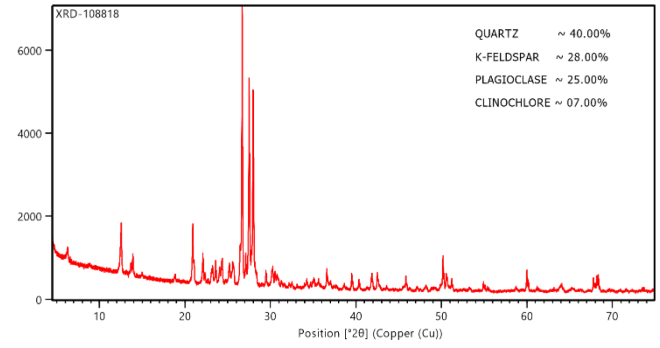

XRD-108813
QUARTZ ~ 95.00%
MICA ~ 05.00%
Position [°2θ] (Copper (Cu))

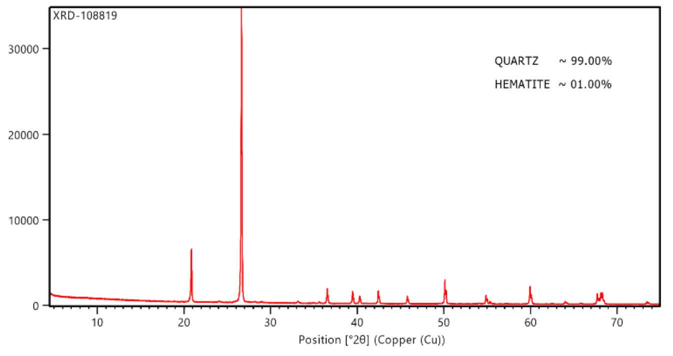

XRD-108814
Quartz ~ 35.00%
Albite ~ 25.00%
K-feldspar ~ 20.00%
Hornblende ~ 10.00%
Clinochlore ~ 06.00%
Biotite ~ 04.00%
Position [°2θ] (Copper (Cu))

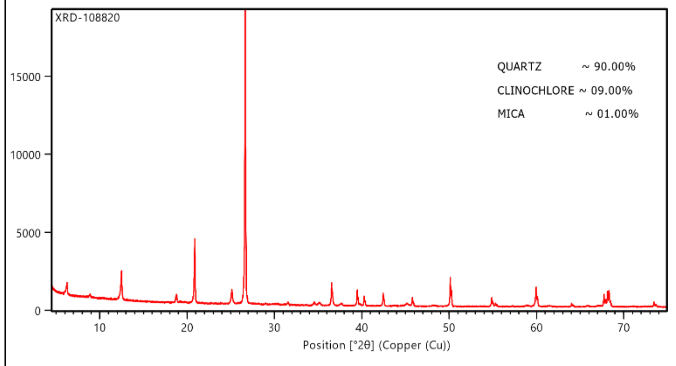

XRD-108815
QUARTZ ~ 99.00%
HEMATITE ~ 01.00%
Position [°2θ] (Copper (Cu))

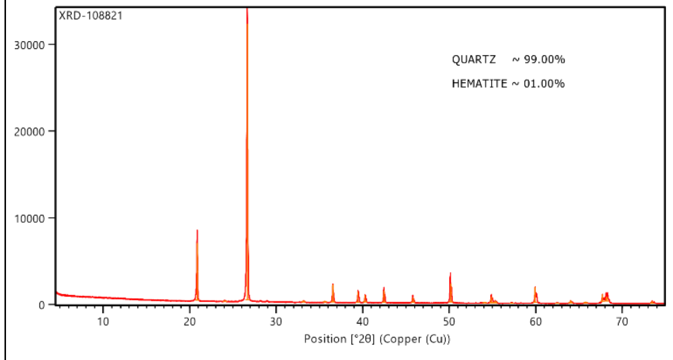

XRD-108816
Quartz ~ 55.00%
Albite ~ 20.00%
K-feldspar ~ 15.00%
Biotite ~ 05.00%
Clinochlore ~ 03.00%
Hornblende ~ 02.00%
Position [°2θ] (Copper (Cu))

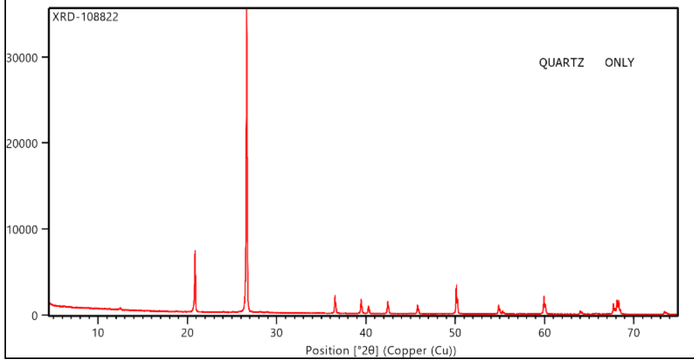

XRD-108817
Albite ~ 45.00%
Quartz ~ 35.00%
K-feldspar ~ 20.00%
Biotite ~ 08.00%
Clinochlore ~ 02.00%
Position [°2θ] (Copper (Cu))


XRD-108818
QUARTZ ~ 40.00%
K-FELDSPAR ~ 28.00%
PLAGIOCLASE ~ 25.00%
CLINOCHLORE ~ 07.00%
Position [°2θ] (Copper (Cu))


XRD-108819
QUARTZ ~ 99.00%
HEMATITE ~ 01.00%
Position [°2θ] (Copper (Cu))


XRD-108820
QUARTZ ~ 90.00%
CLINOCHLORE ~ 09.00%
MICA ~ 01.00%
Position [°2θ] (Copper (Cu))


XRD-108821
QUARTZ ~ 99.00%
HEMATITE ~ 01.00%
Position [°2θ] (Copper (Cu))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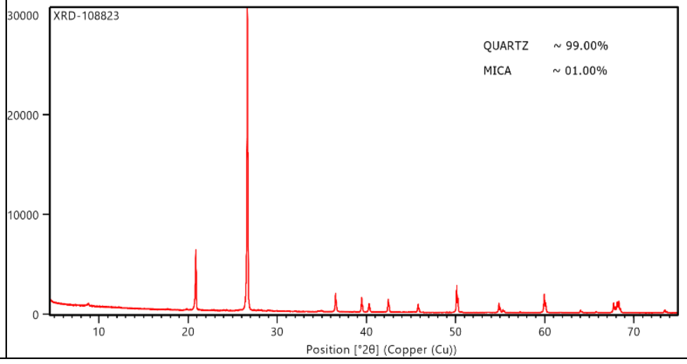
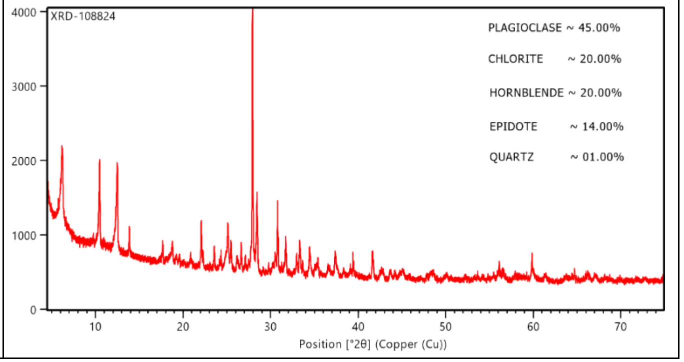
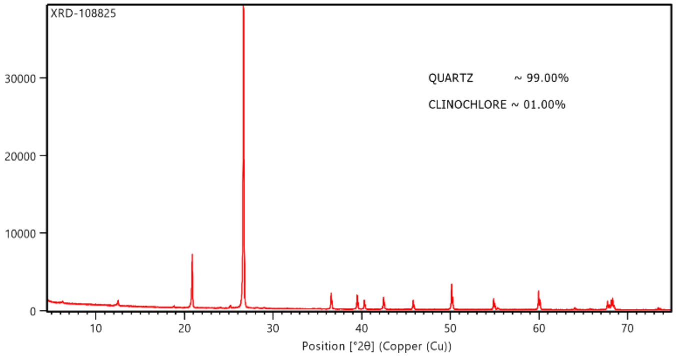
QUARTZ ONLY
Position [°2θ] (Copper (Cu))


XRD-108823
QUARTZ ~ 99.00%
MICA ~ 01.00%
Position [°2θ] (Copper (Cu))


XRD-108824
PLAGIOCLASE ~ 45.00%
CHLORITE ~ 20.00%
HORNBLENDE ~ 20.00%
EPIDOTE ~ 14.00%
QUARTZ ~ 01.00%
Position [°2θ] (Copper (Cu))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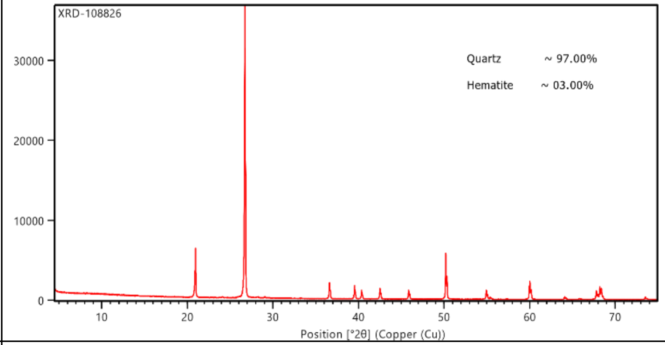
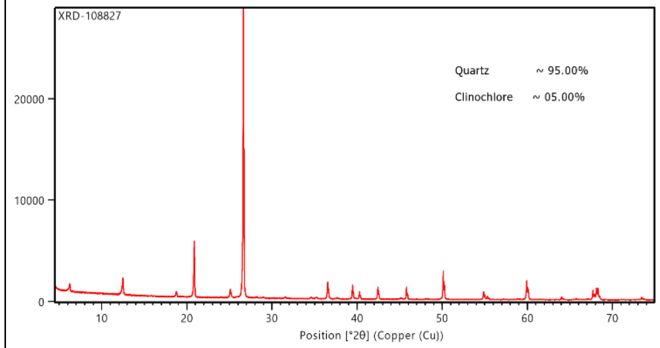
QUARTZ ~ 99.00%
CLINOCHLORE ~ 01.00%
Position [°2θ] (Copper (Cu))


XRD-108826
Quartz ~ 97.00%
Hematite ~ 03.00%
Position [°2θ] (Copper (Cu))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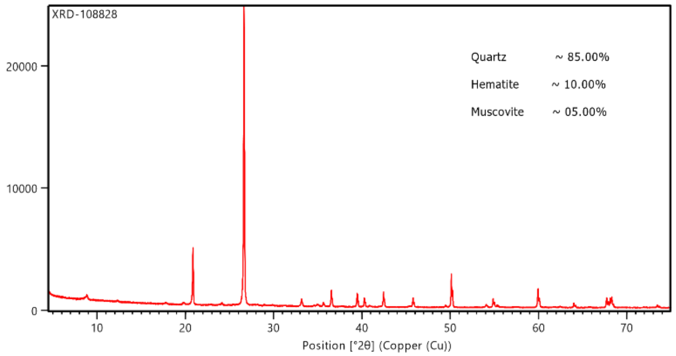
Quartz ~ 95.00%
Clinochlore ~ 05.00%
Position [°2θ] (Copper (Cu))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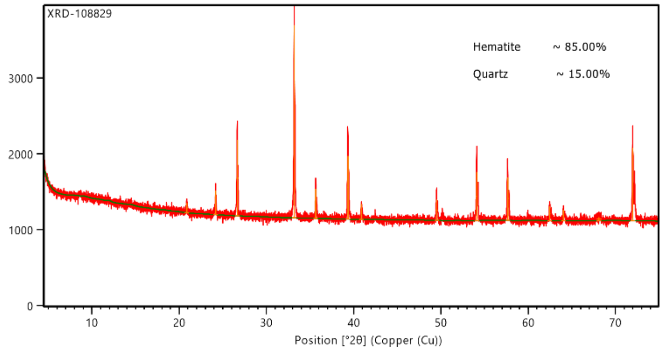
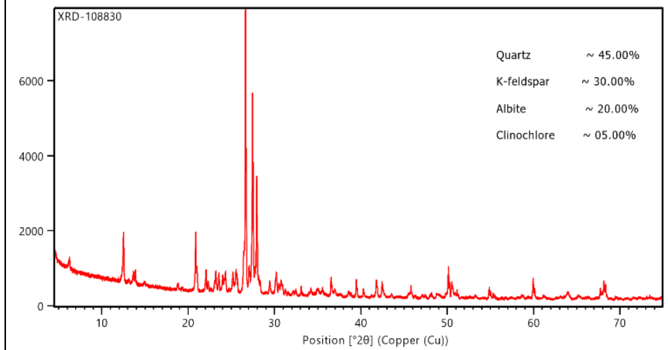
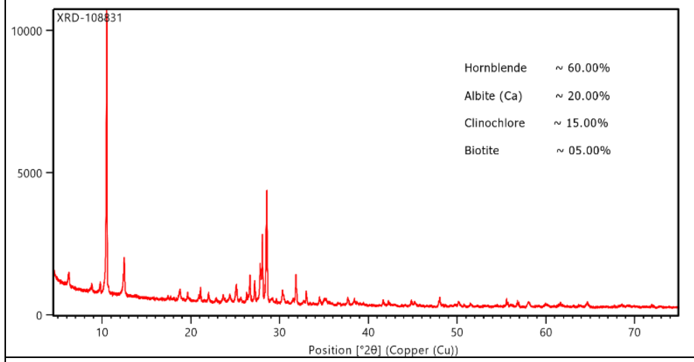
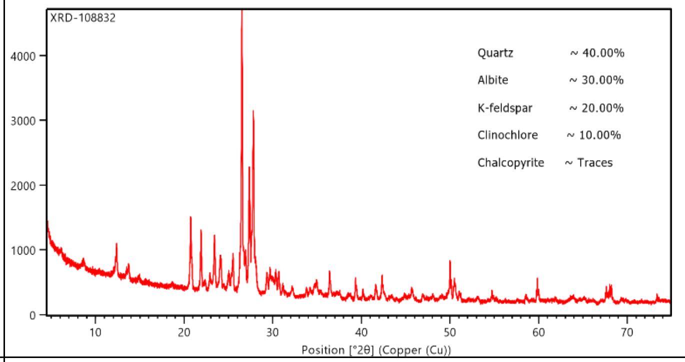
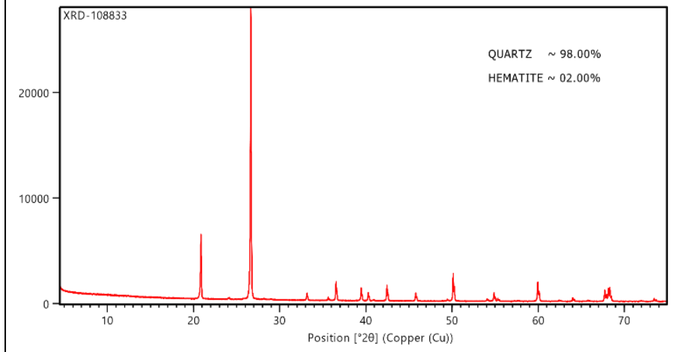
Quartz ~ 85.00%
Hematite ~ 10.00%
Muscovite ~ 05.00%
Position [°2θ] (Copper (Cu))

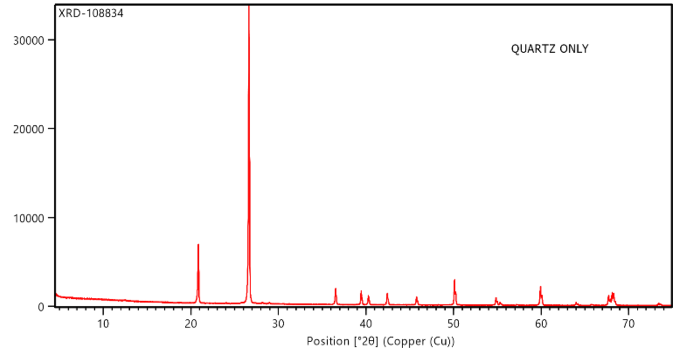

XRD-108829
Hematite ~ 85.00%
Quartz ~ 15.00%
Position [°2θ] (Copper (Cu))

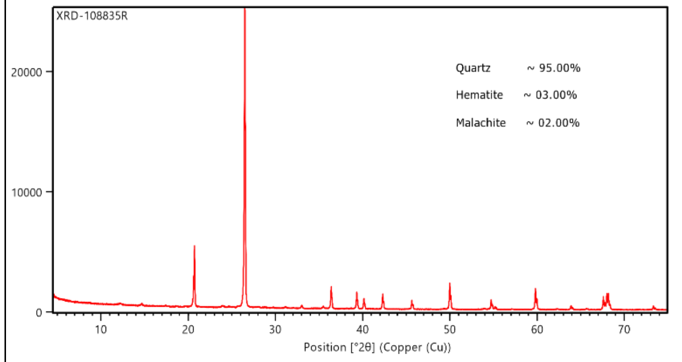

XRD-108830
Quartz ~ 45.00%
K-feldspar ~ 30.00%
Albite ~ 20.00%
Clinochlore ~ 05.00%
Position [°2θ] (Copper (Cu))

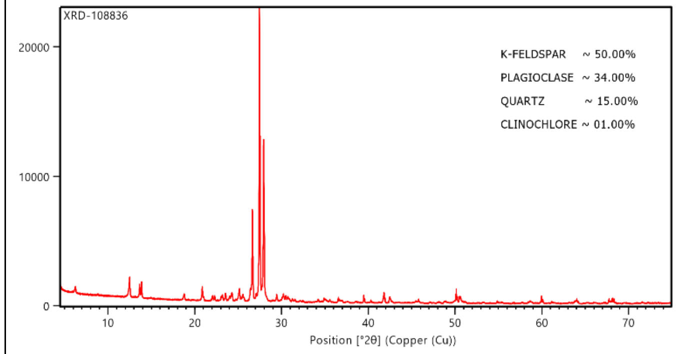

XRD-108831
Hornblende ~ 60.00%
Albite (Ca) ~ 20.00%
Clinochlore ~ 15.00%
Biotite ~ 05.00%
Position [°2θ] (Copper (Cu))

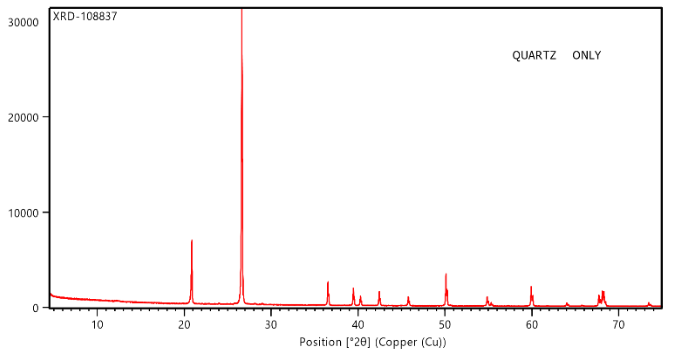

XRD-108832
Quartz ~ 40.00%
Albite ~ 30.00%
K-feldspar ~ 20.00%
Clinochlore ~ 10.00%
Chalcopyrite ~ Traces
Position [°2θ] (Copper (Cu))

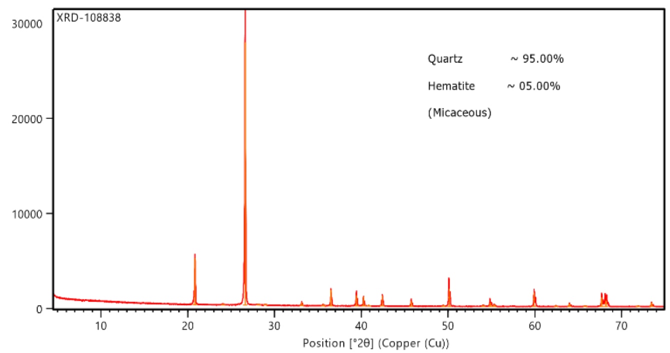

XRD-108833
QUARTZ ~ 98.00%
HEMATITE ~ 02.00%
Position [°2θ] (Copper (Cu))

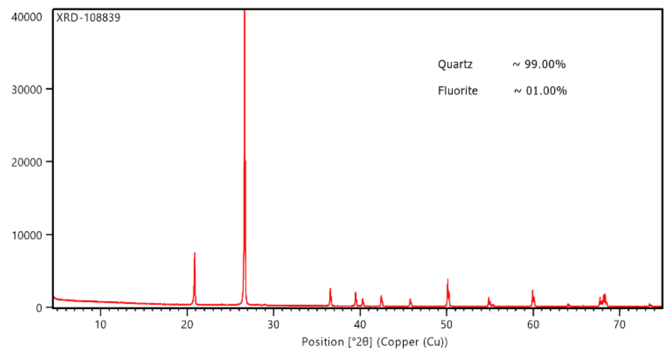

XRD-108834
QUARTZ ONLY
Position [°2θ] (Copper (Cu))

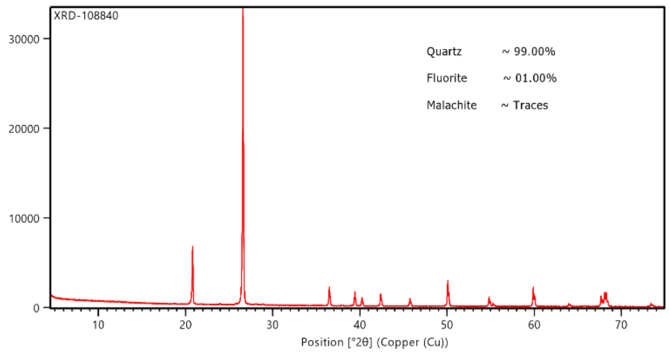

XRD-108835R
Quartz ~ 95.00%
Hematite ~ 03.00%
Malachite ~ 02.00%
Position [°2θ] (Copper (Cu))

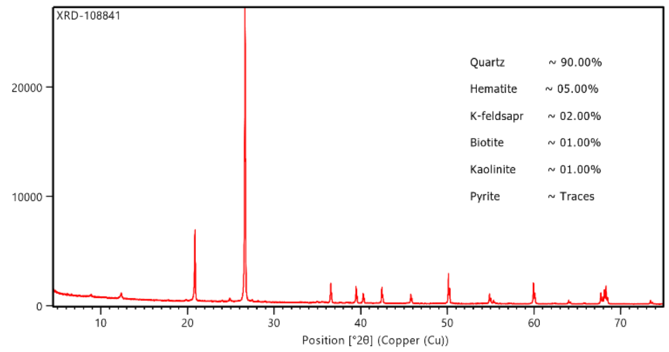

XRD-108836
K-FELDSPAR ~ 50.00%
PLAGIOCLASE ~ 34.00%
QUARTZ ~ 15.00%
CLINOCHLORE ~ 01.00%
Position [°2θ] (Copper (Cu))

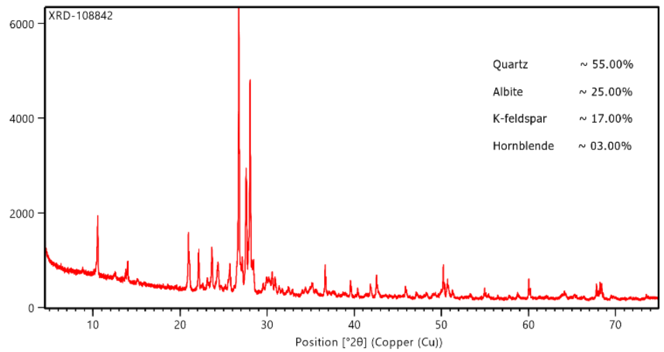

XRD-108837
QUARTZ ONLY
30000
20000
10000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

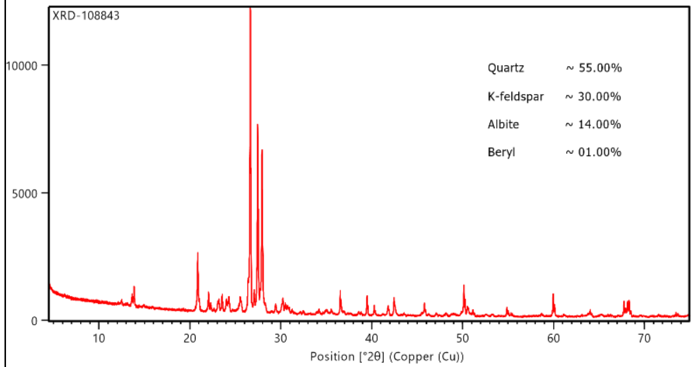

XRD-108838
Quartz ~ 95.00%
Hematite ~ 05.00%
(Micaceous)
30000
20000
10000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

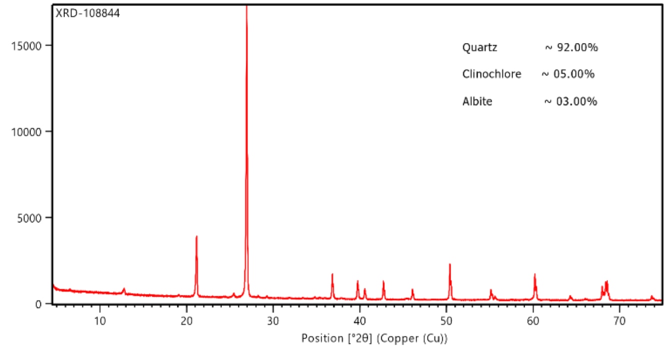

XRD-108839
Quartz ~ 99.00%
Fluorite ~ 01.00%
40000
30000
20000
10000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

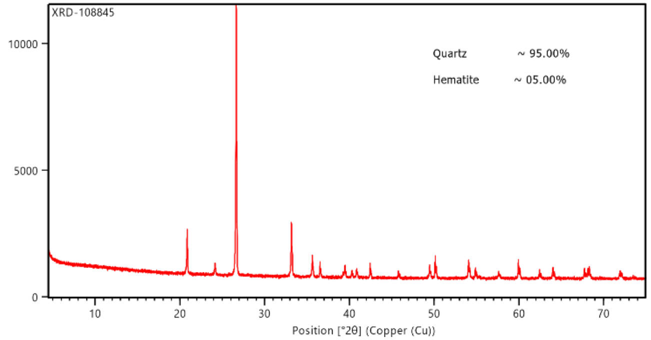

XRD-108840
Quartz ~ 99.00%
Fluorite ~ 01.00%
Malachite ~ Traces
30000
20000
10000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

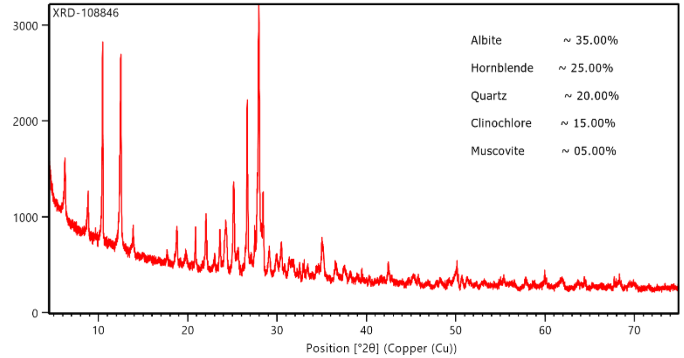

XRD-108841
Quartz ~ 90.00%
Hematite ~ 05.00%
K-feldsapr ~ 02.00%
Biotite ~ 01.00%
Kaolinite ~ 01.00%
Pyrite ~ Traces
20000
10000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

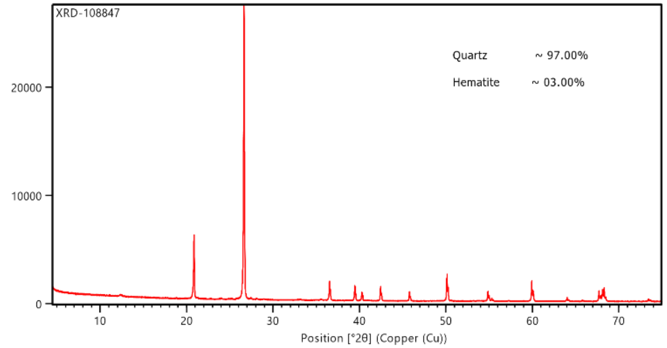

XRD-108842
Quartz ~ 55.00%
Albite ~ 25.00%
K-feldspar ~ 17.00%
Hornblende ~ 03.00%
6000
4000
2000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))

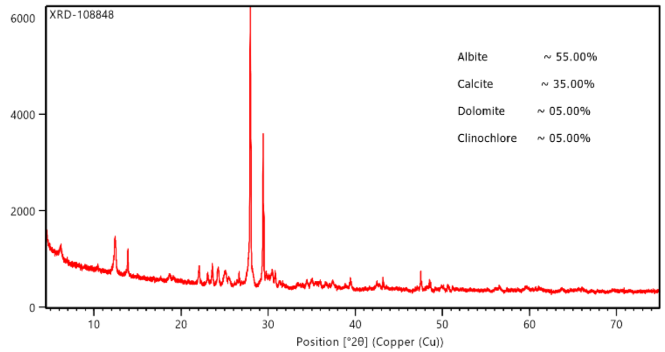

XRD-108843
Quartz ~ 55.00%
K-feldspar ~ 30.00%
Albite ~ 14.00%
Beryl ~ 01.00%
Position [°2θ] (Copper (Cu))

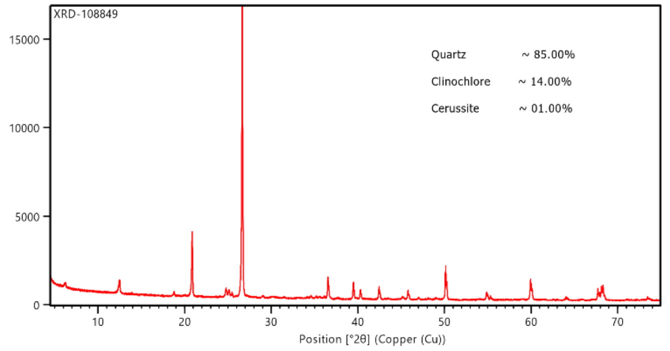

XRD-108844
Quartz ~ 92.00%
Clinochlore ~ 05.00%
Albite ~ 03.00%
Position [°2θ] (Copper (Cu))

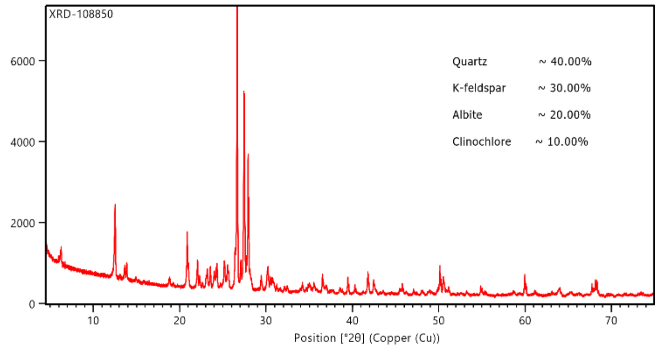

XRD-108845
Quartz ~ 95.00%
Hematite ~ 05.00%
Position [°2θ] (Copper (Cu))


XRD-108846
Albite ~ 35.00%
Hornblende ~ 25.00%
Quartz ~ 20.00%
Clinochlore ~ 15.00%
Muscovite ~ 05.00%
Position [°2θ] (Copper (Cu))


XRD-108847
Quartz ~ 97.00%
Hematite ~ 03.00%
Position [°2θ] (Copper (Cu))


XRD-108848
Albite ~ 55.00%
Calcite ~ 35.00%
Dolomite ~ 05.00%
Clinochlore ~ 05.00%
Position [°2θ] (Copper (Cu))


XRD-108849
15000
10000
5000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))
Quartz ~ 85.00%
Clinochlore ~ 14.00%
Cerussite ~ 01.00%


XRD-108850
6000
4000
2000
0
10
20
30
40
50
60
70
Position [°2θ] (Copper (Cu))
Quartz ~ 40.00%
K-feldspar ~ 30.00%
Albite ~ 20.00%
Clinochlore ~ 10.00%

Annexure IV_ EPMA Data of Surface samples

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Total
108040	Goethite	0	6.72	0	0.03	0	0	0.06	0	58.44	65.25
108040	Goethite	0	6.01	0.88	0.04	0.23	0	0.05	0	59.47	66.78
108040	Goethite	0.04	5.74	0.32	0.07	0.09	0.06	0.08	0	64.39	70.86
108040	Goethite	0.04	8.43	0.08	0.04	0	0.04	0.09	0	53.92	62.7
108040	Goethite	0.02	5.57	1.09	0.03	0.15	0	0.05	0	62.41	69.43

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	Total
108040	Albite	10.78	65.97	19.13	0.03	0	0.35	1.83	0	0.37	0	0	98.63
108040	Orthoclase /Albite	0.27	64.54	17.77	0	0.02	16.16	0	0	0	0	0	98.8
108040	Amphibole	1.43	40.38	8.69	2.77	0.03	1.41	10.93	0.77	30.22	0.02	1.36	98.1
108040	Altered Biotite	0.06	30.03	14.93	5.29	0	3.93	0.05	1.29	35.98	0.01	0.48	92.06
ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	Total
108040	Allanite	0.21	30.14	13.21	0.03	0.08	0.04	11.97	0.28	15.18	0	0.29	71.42
108040	Magnetite	0.09	0.09	0	0	0.01	0	0.2	0.32	92.77	0.66	0.01	94.15
108040	Plagioclase	11.65	68.3	19.14	0.05	0.01	0.06	0.85	0.01	0	0.04	0	100.08
108040	Microcline	0.27	64.7	17.61	0	0	16.81	0	0	0.07	0	0.05	99.57
108040	Chlorite	0.06	25.81	15.41	4.49	0	0.39	0.06	0.17	42.41	0	0.67	89.83
108040	Magnetite	0	0.39	0.06	0	0	0.01	0	0	93.96	0	0.09	94.52

Annexure V_ICPMS Data of Surface Samples

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
1	107001	24.808567	78.289363	BR	CPGRAN	11.8	2.2	7.6	15.8	45.2	61.4	1.8	7.2	37.7	23.6	0.8	2.2
2	107002	24.808567	78.289363	BR	CPGRAN	12.4	1.9	8.4	16.3	69	19.7	< 0.5	1.3	29.5	24.8	0.9	3.6
3	107003	24.767902	78.259403	BR	Dolerite	42.8	5	61.7	365	172.6	73.2	74.9	105.3	137	16.4	<0.5	1.8
4	107004	24.849687	78.303573	BR	Granite	15.8	2.5	10.6	21	32.9	32	< 0.5	8.9	80.6	20.7	<0.5	1.2
5	107005	24.784784	78.2542262	BR	Pyrophyllite	22.1	2.9	3.7	9.1	123.2	13.6	19	2.7	102.5	21.8	0.8	3.4
6	107006	24.784784	78.2542262	BR	Quartz	11.8	6.8	5.3	13.3	50.1	5.5	< 0.5	4990.1	33.4	21.3	0.5	14.5
7	107007	24.956892	78.383585	BR	Quartz	39.9	1.1	7	38.2	193.5	37.6	75.6	811.2	1669.5	8.1	< 0.5	2.5
8	107008	24.956892	78.383578	BR	Quartz	38.3	1	5.5	24.7	199.5	46.5	86.5	3829.8	1170.5	6.4	<0.5	0.9
9	107009	24.957541	78.382017	BR	Volcanic	13	2.3	13.4	23.2	59.6	23.7	< 0.5	26.6	127.7	19.3	< 0.5	1.5
10	107010	24.944723	78.377998	BR	Quartz	9.4	2	9.9	7.5	71.1	34.7	<0.5	8.2	68.7	18.1	0.7	3.3
11	107011	24.944723	78.377998	BR	Quartz	43	1.1	1.3	9.7	124.4	109	11.6	884.7	19.1	2.2	<0.5	0.5
12	107012	24.941	78.377	BR	Quartz	42.2	1	3.3	15.6	154.5	78.1	36.3	3194.8	680.9	4.5	<0.5	1.2
13	107013	24.956699	78.384343	BR	Andesite	8.1	2.7	5.5	12.2	60	20.4	<0.5	3	13	19.2	<0.5	1.3
14	107014	24.782548	78.261486	BR	Pyrophyllite	<0.5	1.5	3.5	1.5	52.9	25.5	<0.5	3.7	8.1	18.4	<0.5	<0.5
15	107015	24.9	78.37	BR	Volcanic	3.3	3.3	7.5	3.3	103.1	30.9	<0.5	58.2	39.9	20.4	<0.5	2.5
16	107016	24.913843	78.341985	BR	Granite	11.1	1.1	15.5	182.6	64.7	23.8	16.6	26.2	75.9	19.8	2.7	<0.5
17	107017	24.85633	78.348305	BR	Diorite	20.9	0.9	28.2	181.7	163.8	47.4	70.3	47.4	94.4	15.3	3	<0.5
18	107018	24.85766	78.34786	BR	Diorite	20.6	0.8	23.2	259.7	101.7	42.9	39.8	44	87.8	18.2	3.1	0.6
19	107019	24.946	78.396	BR	Quartz	7.5	3.2	6.7	<0.5	99.4	3	2.9	1.8	117.9	17.4	0.6	0.5
20	107020	24.779135	78.262831	BR	Quartz	3.1	1.1	0.6	<0.5	100.5	0.8	2.3	2.1	8.8	7	<0.5	1.1
21	107021	24.924873	78.341483	BR	Quartz	14.9	0.8	1.9	<0.5	181.4	6.2	5.7	361	49.6	5.1	<0.5	0.6
22	107022	24.88703	78.362225	BR	Granite	8.5	1.5	5.5	<0.5	151.2	1.2	2.1	4.2	39.6	13.1	<0.5	0.7
23	107023	24.861935	78.349449	BR	Diorite	16.5	1.3	22.8	199	131.6	33.4	24	35.9	143.1	20.6	4.3	1.5
24	107024	24.862614	78.350539	BR	Diorite	24.3	1.3	20.8	149.2	317.7	42.5	182.8	72.8	75.7	17.5	2.9	1.2

CPGRAN = Coarse Grained Porphyritic Granite

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
1	107001	24.808567	78.289363	BR	CPGRAN	181	149.2	18.3	491.3	14	2.5	<0.5	<0.5	0.6	2.4	3.9	2
2	107002	24.808567	78.289363	BR	CPGRAN	184.1	120.7	30.4	535.9	19.8	1.3	<0.5	< 0.5	1.1	2.6	<0.5	1.8
3	107003	24.767902	78.259403	BR	Dolerite	55.2	177.2	21.2	56.4	2.9	1.7	<0.5	< 0.5	<0.5	2.2	<0.5	0.6
4	107004	24.849687	78.303573	BR	Granite	125.1	374.7	19.1	314.1	15.5	0.8	<0.5	< 0.5	<0.5	1.6	< 0.5	0.8
5	107005	24.784784	78.2542262	BR	Pyrophyllite	13.5	64.4	26.8	376.8	3.6	4.3	<0.5	<0.5	<0.5	1	<0.5	<0.5
6	107006	24.784784	78.2542262	BR	Quartz	11.6	60.8	16	288.3	7.7	<0.5	<0.5	<0.5	0.5	1	32	<0.5
7	107007	24.956892	78.383585	BR	Quartz	14.1	18.6	5.1	35.9	2.3	2	4.2	<0.5	<0.5	1.2	0.9	<0.5
8	107008	24.956892	78.383578	BR	Quartz	18.9	23.1	4.4	25.9	1.3	12.3	1	<0.5	<0.5	1.3	0.5	<0.5
9	107009	24.957541	78.382017	BR	Volcanic	149.1	197	24.2	455.8	12.3	1.6	<0.5	<0.5	<0.5	2.1	<0.5	2
10	107010	24.944723	78.377998	BR	Quartz	173.4	35.1	45.9	345.1	19.4	0.9	<0.5	<0.5	<0.5	0.9	<0.5	0.5
11	107011	24.944723	78.377998	BR	Quartz	3.3	8.7	4.7	5.2	0.8	1.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5
12	107012	24.941	78.377	BR	Quartz	18.7	19.8	3.4	23.1	1.7	10.5	0.8	<0.5	<0.5	1.2	0.7	<0.5
13	107013	24.956699	78.384343	BR	Andesite	176.5	300.5	22.6	236.4	13.1	3.1	<0.5	<0.5	<0.5	0.9	<0.5	1.3
14	107014	24.782548	78.261486	BR	Pyrophyllite	165.2	5	5.9	89.9	15.5	1	<0.5	<0.5	<0.5	1	<0.5	0.6
15	107015	24.9	78.37	BR	Volcanic	178.7	89.5	29.6	293.1	15.1	2.6	<0.5	<0.5	1	1.2	<0.5	1.1
16	107016	24.913843	78.341985	BR	Granite	58.6	####	14.6	37.3	4.4	0.7	<0.5	<0.5	2.5	1.5	<0.5	0.5
17	107017	24.85633	78.348305	BR	Diorite	70.3	####	14.8	34.2	3.6	0.6	<0.5	<0.5	2.1	1.6	<0.5	<0.5
18	107018	24.85766	78.34786	BR	Diorite	56.9	####	13.3	35.4	3.6	0.5	<0.5	<0.5	1.6	1.5	<0.5	0.8
19	107019	24.946	78.396	BR	Quartz	86.8	####	22.1	####	9.7	1.2	<0.5	<0.5	3.3	1.4	<0.5	0.5
20	107020	24.779135	78.262831	BR	Quartz	88.6	7.4	4.2	43.9	2.2	<0.5	2.6	<0.5	1.6	1.2	<0.5	<0.5
21	107021	24.924873	78.341483	BR	Quartz	52.6	10.8	19.3	51.4	2.7	21.6	<0.5	<0.5	1.5	1.8	<0.5	<0.5
22	107022	24.88703	78.362225	BR	Granite	####	94.4	23.3	####	9.8	0.7	<0.5	<0.5	6.5	1	<0.5	<0.5
23	107023	24.861935	78.349449	BR	Diorite	51.4	####	23.6	32.5	9.3	3.1	<0.5	<0.5	2.3	0.9	<0.5	0.5
24	107024	24.862614	78.350539	BR	Diorite	71.9	####	24.5	####	9.5	0.7	<0.5	<0.5	1.9	1.1	<0.5	0.6

CPGRAN = Coarse Grained Porphyritic Granite

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
1	107001	24.808567	78.289363	BR	CPGRAN	1394.6	112.9	234.8	24.5	86.4	12.9	2.4	8.5	0.9	4.3	0.7	1.9
2	107002	24.808567	78.289363	BR	CPGRAN	1262.1	98.9	246.1	25.4	96	17.5	3	12.3	1.6	7.5	1.3	3.2
3	107003	24.767902	78.259403	BR	Dolerite	330.8	2.4	6.8	1.1	5.9	2.1	0.6	2.8	0.5	3.7	0.8	2.2
4	107004	24.849687	78.303573	BR	Granite	1573.8	54.7	119.1	11.6	40.3	6.5	1.9	5.1	0.7	3.8	0.7	2.1
5	107005	24.784784	78.2542262	BR	Pyrophyllite	201.9	152.8	281	27.5	86.4	15.6	1.6	10.3	1.2	5.5	1	2.9
6	107006	24.784784	78.2542262	BR	Quartz	72.2	92.7	169.8	16.8	52.9	8.5	1	5.9	0.7	3.4	0.6	2.2
7	107007	24.956892	78.383585	BR	Quartz	91.2	8.8	18.8	2.1	8.1	1.5	<0.5	1.2	< 0.5	0.9	<0.5	<0.5
8	107008	24.956892	78.383578	BR	Quartz	86.5	8.6	18.7	2.2	9	1.6	<0.5	1.2	< 0.5	0.8	<0.5	<0.5
9	107009	24.957541	78.382017	BR	Volcanic	2703.5	54.7	108.5	11.3	39.9	6.9	2.5	5.6	0.8	4.3	0.8	2.3
10	107010	24.944723	78.377998	BR	Quartz	1385.2	117.7	223.2	22.4	75.7	12.4	1.5	9.9	1.4	7.3	1.4	3.6
11	107011	24.944723	78.377998	BR	Quartz	43.9	3.5	7.8	0.9	3.7	0.8	<0.5	0.9	<0.5	0.8	<0.5	0.5
12	107012	24.941	78.377	BR	Quartz	70.9	7.7	15.4	1.7	6.3	1.1	<0.5	0.9	<0.5	0.6	<0.5	<0.5
13	107013	24.956699	78.384343	BR	Andesite	1605	51.8	101.7	10.3	35.3	5.9	1.5	4.8	0.7	4	0.8	2.2
14	107014	24.782548	78.261486	BR	Pyrophyllite	508.8	11.5	31.1	1.4	3.4	0.6	<0.5	0.8	<0.5	1	<0.5	0.7
15	107015	24.9	78.37	BR	Volcanic	1151.9	74.2	142.1	14.7	50.5	8.4	1.2	6.7	0.9	5.1	1	2.8
16	107016	24.913843	78.341985	BR	Granite	559.2	23.1	46.1	5.6	21.8	4.3	1.8	4.1	0.5	2.7	0.5	1.4
17	107017	24.85633	78.348305	BR	Diorite	652	23	45.6	5.4	20.7	4.2	1.7	4	0.5	2.7	0.6	1.5
18	107018	24.85766	78.34786	BR	Diorite	455.8	22.5	43.7	5.1	19.5	3.8	1.6	3.7	<0.5	2.4	<0.5	1.3
19	107019	24.946	78.396	BR	Quartz	602.5	63.8	####	11.9	39.3	6.4	1.4	6.2	0.7	3.8	0.8	2.1
20	107020	24.779135	78.262831	BR	Quartz	254.6	11.8	23.7	2.5	7.6	1.2	<0.5	1.2	<0.5	0.7	<0.5	<0.5
21	107021	24.924873	78.341483	BR	Quartz	359.1	18.5	34.2	3.8	13.6	2.8	0.7	3.3	<0.5	2.9	0.6	1.6
22	107022	24.88703	78.362225	BR	Granite	<0.5	61.6	<0.5	12	40.7	6.7	1.9	6.6	0.8	4	0.8	2.2
23	107023	24.861935	78.349449	BR	Diorite	647.8	47.2	90.2	10.4	39.4	7.2	2.5	7.1	0.8	4.3	0.8	2.2
24	107024	24.862614	78.350539	BR	Diorite	934.4	50.6	<0.5	12.8	48.7	8.9	2.8	8.2	0.9	4.6	0.9	2.3
CPGRAN = Coarse Grained Porphyritic Granite																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
1	107001	24.808567	78.289363	BR	CPGRAN	<0.5	1.9	<0.5	11.1	0.8		1	26.8	5.2	17.3	3	
2	107002	24.808567	78.289363	BR	CPGRAN	<0.5	2.8	<0.5	12	1.3		1.2	26	<0.5	15.1	1.9	
3	107003	24.767902	78.259403	BR	Dolerite	<0.5	2.2	<0.5	1.7	<0.5		<0.5	42.6	<0.5	0.5	<0.5	
4	107004	24.849687	78.303573	BR	Granite	<0.5	2.1	<0.5	7.4	1		1	23.7	<0.5	16.3	3	
5	107005	24.784784	78.2542262	BR	Pyrophyllite	<0.5	3.1	<0.5	10	<0.5		0.5	9.8	<0.5	61.4	7.9	
6	107006	24.784784	78.2542262	BR	Quartz	<0.5	1.7	<0.5	8.2	<0.5		0.7	77.7	274.4	32.4	15.9	
7	107007	24.956892	78.383585	BR	Quartz	<0.5	<0.5	<0.5	0.9	<0.5		0.8	7678.7	2.9	1.9	1.8	
8	107008	24.956892	78.383578	BR	Quartz	<0.5	<0.5	<0.5	0.6	<0.5		0.9	14277.4	0.8	1	2.8	
9	107009	24.957541	78.382017	BR	Volcanic	<0.5	2.2	<0.5	8.9	0.7		1.5	131.2	<0.5	17.1	3.5	
10	107010	24.944723	78.377998	BR	Quartz	0.5	3.2	0.5	8.4	1		1.7	22.7	0.6	30.5	5.3	
11	107011	24.944723	78.377998	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5		1.1	46.2	<0.5	<0.5	<0.5	
12	107012	24.941	78.377	BR	Quartz	<0.5	<0.5	<0.5	0.6	<0.5		1.2	12539.8	4	2	2.2	
13	107013	24.956699	78.384343	BR	Andesite	<0.5	2.2	<0.5	6	0.8		1.7	24.3	<0.5	21.8	4.9	
14	107014	24.782548	78.261486	BR	Pyrophyllite	<0.5	0.9	<0.5	4.8	1.1		2	7.6	<0.5	26.1	3.3	
15	107015	24.9	78.37	BR	Volcanic	<0.5	2.7	<0.5	7.2	0.8		2	37.7	3.5	25.5	5.1	
16	107016	24.913843	78.341985	BR	Granite	<0.5	1.1	<0.5	1.6	<0.5	0.7	<0.5	11.1	<0.5	4.8	1.1	
17	107017	24.85633	78.348305	BR	Diorite	<0.5	1.3	<0.5	1.3	<0.5	0.5	0.6	11.1	<0.5	4.2	0.7	
18	107018	24.85766	78.34786	BR	Diorite	<0.5	1.1	<0.5	1.4	<0.5	0.6	<0.5	8.2	<0.5	3.9	0.7	
19	107019	24.946	78.396	BR	Quartz	<0.5	1.8	<0.5	4.9	<0.5	1	0.7	33.9	<0.5	17.1	2	
20	107020	24.779135	78.262831	BR	Quartz	<0.5	<0.5	<0.5	1.5	<0.5	0.7	0.6	21.3	<0.5	15.6	0.9	
21	107021	24.924873	78.341483	BR	Quartz	<0.5	1.3	<0.5	1.2	<0.5	0.9	<0.5	75.5	4	5.1	1.8	
22	107022	24.88703	78.362225	BR	Granite	<0.5	1.9	<0.5	5.3	2.3	0.6	1	21.1	<0.5	19.5	3.2	
23	107023	24.861935	78.349449	BR	Diorite	<0.5	1.8	<0.5	1.3	<0.5	1.2	<0.5	11	<0.5	6.6	1	
24	107024	24.862614	78.350539	BR	Diorite	<0.5	1.8	<0.5	3.3	<0.5	5.4	0.5	5.3	<0.5	7.1	1.2	
CPGRAN = Coarse Grained Porphyritic Granite																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
25	107025	24.94438	78.366981	BR	Volcanic	13.2	3.5	5.4	<0.5	94.9	5.6	7.8	8	84.8	19.4	1	0.9
26	107028	24.887056	78.362571	BR	Granite	7.9	1.4	6.3	<0.5	158.2	1.5	2.5	121.3	40.7	11.5	0.5	1.3
27	107029	24.885653	78.367528	BR	Volcanic	5.9	1.8	6.9	<0.5	100.7	2.6	1.2	2	58.7	16.7	<0.5	1.2
28	107030	24.88898	78.362565	BR	Quartz	3.2	0.7	2.1	<0.5	101.7	1.8	4.4	1.9	16.1	8.5	<0.5	0.9
29	107031	24.796635	78.30369	BR	Granite	20.8	2.7	8.7	65.2	121.9	14.9	17.6	11.6	56.9	22.9	0.5	3.1
30	107032	24.809676	78.294904	BR	Granite	5.7	0.9	5.8	9	178.3	3.4	3.8	9.1	48	20	0.5	2.6
31	107033	24.778971	78.278717	BR	Granite	7.5	1.3	1.9	20.4	176.2	4.5	5.7	7.6	31.2	23.8	0.8	4
32	107034	24.948529	78.362847	BR	Volcanic	27.2	0.9	25	231.5	428	62.6	421.1	129.2	151.9	22.2	<0.5	2.9
33	107035	24.862579	78.266882	BR	Diorite	19.6	2.7	20.7	184.8	98.7	27.1	17.2	43.4	79.2	25.4	<0.5	3
34	107036	24.939433	78.375024	BR	Quartz	9.6	<0.5	<0.5	6.3	127.3	1.7	9.6	6.8	5.8	1.3	<0.5	<0.5
35	107037	24.935946	78.382855	BR	Quartz	8.5	<0.5	<0.5	5.5	259.9	3.4	5.4	100.3	4	1.6	<0.5	<0.5
36	107038	24.944224	78.377758	BR	Quartz	7.8	<0.5	<0.5	7.9	287.5	41.4	6.3	4.6	1.5	0.8	<0.5	2.3
37	107039	24.9569	78.3834	BR	Quartz	8.5	<0.5	<0.5	5.2	241.6	1.6	10.1	4.3	4.2	1.3	<0.5	<0.5
38	107040	24.948529	78.362847	BR	Volcanic	2.4	1.9	5.7	1.9	150.6	1.2	3.1	1.8	43.1	19.5	<0.5	2.7
39	107041	24.944723	78.377998	BR	Quartz	21.6	0.7	0.8	9.1	105	2.5	16.1	1078.2	13.1	2.3	<0.5	0.5
40	107042	24.811072	78.294536	BR	Granite	5.4	1.6	7.1	4.9	126.7	2	6.1	15.1	23.7	20.3	<0.5	2.8
41	107043	24.956	78.359	BR	Volcanic	2.3	2.7	5	1.7	133.2	0.5	3	6.4	52.2	18.2	<0.5	1.9
42	107044	24.945	78.36	BR	Volcanic	3.9	1.2	15	9	133.4	3.3	2.7	22.4	78.7	18.9	<0.5	1.8
43	107045	24.944224	78.377758	BR	Quartz	7.3	<0.5	1.2	76.4	205.8	1.6	4.9	51.4	2.1	2.5	<0.5	0.9
44	107046	24.944224	78.377758	BR	Quartz	25.1	<0.5	2.3	26.6	272.3	15	10.8	5.9	6.5	4	<0.5	1.1
45	107047	24.940925	78.377183	BR	Quartz	11.2	0.8	<0.5	3	181.3	1.4	6.5	2.5	11.9	0.9	<0.5	<0.5
46	107048	24.940921	78.376515	BR	Quartz	12.4	1.1	7.1	9.8	208.3	2.8	6.2	27.2	62.3	9.8	<0.5	0.6
47	107049	24.942673	78.377253	BR	Quartz	7.3	1.1	9.5	4.8	116.8	1.9	5	12.1	59.7	12.3	<0.5	1.1
48	107050	24.944379	78.377907	BR	Quartz	10.5	1	1.7	6.2	344.1	2.4	9.8	6.6	36	3.6	<0.5	0.8
49	107151	24.9577	78.38341	SS	Volcanic	8.6	1.1	6.4	24.7	29.8	3.5	9.8	14.4	31.5	10.9	<0.5	1.2
50	107152	24.95806	78.3835	SS	Volcanic	13.9	1.5	10.7	31.9	47.1	7.2	20.4	17.2	59.4	13.4	<0.5	1.3

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
25	107025	24.94438	78.366981	BR	Volcanic	####	####	46.2	####	24.1	1.5	<0.5	<0.5	3.7	0.8	<0.5	1.1
26	107028	24.887056	78.362571	BR	Granite	####	69.4	24.4	####	12.4	0.8	<0.5	<0.5	3.7	0.9	<0.5	<0.5
27	107029	24.885653	78.367528	BR	Volcanic	####	####	25.8	####	12.7	1.8	<0.5	<0.5	2.6	0.6	<0.5	1
28	107030	24.88898	78.362565	BR	Quartz	45.1	31.4	6.7	####	3.8	<0.5	<0.5	<0.5	1.8	0.7	<0.5	<0.5
29	107031	24.796635	78.30369	BR	Granite	173.9	361	23.5	251.6	11.5	1.1	<0.5	<0.5	2	1.6	<0.5	3.6
30	107032	24.809676	78.294904	BR	Granite	162	96.3	17.6	266.7	8.9	3.3	<0.5	<0.5	1	0.8	<0.5	0.6
31	107033	24.778971	78.278717	BR	Granite	185	189.5	31.5	248	14.4	1.5	<0.5	<0.5	1.6	0.8	<0.5	<0.5
32	107034	24.948529	78.362847	BR	Volcanic	29.5	260.7	28	178.6	9.8	1	<0.5	<0.5	2.4	0.9	<0.5	2.9
33	107035	24.862579	78.266882	BR	Diorite	96.7	510	47.6	104.5	26.6	1.1	<0.5	<0.5	3.9	0.8	<0.5	1
34	107036	24.939433	78.375024	BR	Quartz	2.8	4.7	0.9	1.9	1.5	<0.5	<0.5	<0.5	0.8	0.7	<0.5	<0.5
35	107037	24.935946	78.382855	BR	Quartz	2.1	4.2	1.2	1.1	0.8	0.8	<0.5	<0.5	1	0.8	<0.5	<0.5
36	107038	24.944224	78.377758	BR	Quartz	0.9	5	0.8	0.9	<0.5	2	<0.5	<0.5	1	0.6	<0.5	<0.5
37	107039	24.9569	78.3834	BR	Quartz	4	5.4	1.3	1.6	1.3	<0.5	<0.5	<0.5	0.8	0.9	<0.5	<0.5
38	107040	24.948529	78.362847	BR	Volcanic	168.8	83.5	28.4	243.2	20	1.7	<0.5	<0.5	2	0.5	<0.5	<0.5
39	107041	24.944723	78.377998	BR	Quartz	3.2	7.4	4	1.8	1	0.6	<0.5	<0.5	<0.5	0.5	<0.5	<0.5
40	107042	24.811072	78.294536	BR	Granite	157.4	100.2	24.5	237.4	13.3	1.7	<0.5	<0.5	2	0.6	<0.5	0.5
41	107043	24.956	78.359	BR	Volcanic	163.2	11.2	29.5	190.8	24.6	1.5	<0.5	<0.5	2	<0.5	<0.5	0.7
42	107044	24.945	78.36	BR	Volcanic	105.1	198.8	19.2	345.6	10.9	0.8	<0.5	<0.5	6.9	<0.5	<0.5	0.9
43	107045	24.944224	78.377758	BR	Quartz	1.4	3.2	0.8	1.7	4.9	1.1	<0.5	<0.5	14.1	0.5	<0.5	<0.5
44	107046	24.944224	78.377758	BR	Quartz	0.9	4.8	3.7	3.4	2	1.5	<0.5	<0.5	0.8	0.5	<0.5	<0.5
45	107047	24.940925	78.377183	BR	Quartz	2.5	2.4	0.8	1.9	1.2	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5
46	107048	24.940921	78.376515	BR	Quartz	75.7	14.2	8.6	131.3	7.8	0.6	0.5	<0.5	1.5	<0.5	<0.5	<0.5
47	107049	24.942673	78.377253	BR	Quartz	112.8	12	13.4	225.6	10.9	1.4	0.6	<0.5	0.9	<0.5	<0.5	0.7
48	107050	24.944379	78.377907	BR	Quartz	17.8	8.8	6.3	31.3	4	1.1	<0.5	<0.5	1.2	0.7	<0.5	<0.5
49	107151	24.9577	78.38341	SS	Volcanic	118.8	76.4	14	167.4	10.7	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	1.4
50	107152	24.95806	78.3835	SS	Volcanic	123.6	55.2	19.4	279.6	13.3	0.9	<0.5	<0.5	2.3	<0.5	<0.5	2.4

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
25	107025	24.94438	78.366981	BR	Volcanic	838.3	<0.5	<0.5	23.1	76.8	12.9	2.1	12.3	1.5	7.7	1.5	4.3
26	107028	24.887056	78.362571	BR	Granite	<0.5	60	<0.5	12.2	40.6	7	1.9	6.5	0.8	4.1	0.8	2.4
27	107029	24.885653	78.367528	BR	Volcanic	<0.5	75.5	<0.5	14.7	49	8	2.2	7.6	0.9	4.5	0.9	2.4
28	107030	24.88898	78.362565	BR	Quartz	476.5	28.7	54	5.7	18.9	3.1	0.6	2.6	<0.5	1.2	<0.5	0.7
29	107031	24.796635	78.30369	BR	Granite	960.3	87.4	174.2	19.2	67.5	11.2	2.1	8.3	1	4.9	0.9	2.4
30	107032	24.809676	78.294904	BR	Granite	852.8	87.8	167.7	17.7	59.8	9.4	1.5	7.1	0.8	3.8	0.7	1.8
31	107033	24.778971	78.278717	BR	Granite	884.8	185.8	346	33.4	101.4	14.5	1.4	10.4	1.2	6	1.1	3.1
32	107034	24.948529	78.362847	BR	Volcanic	214.3	14.5	32.4	4.8	22.3	6.4	2.1	6.9	1	5.9	1.1	2.7
33	107035	24.862579	78.266882	BR	Diorite	403.7	33.3	78.6	10.7	43.4	10.2	1.6	9.8	1.5	8.5	1.7	4.7
34	107036	24.939433	78.375024	BR	Quartz	16	2.2	4.6	0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
35	107037	24.935946	78.382855	BR	Quartz	15.1	1.8	2.6	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
36	107038	24.944224	78.377758	BR	Quartz	51.5	2.8	2	0.6	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
37	107039	24.9569	78.3834	BR	Quartz	48.7	5.1	5.3	1.1	3.9	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
38	107040	24.948529	78.362847	BR	Volcanic	875.6	73.1	135.9	14.2	47.5	7.9	1.1	6.5	0.9	5	1	2.8
39	107041	24.944723	78.377998	BR	Quartz	29.1	7	14.1	1.7	6.2	1.2	<0.5	1.1	<0.5	0.7	<0.5	<0.5
40	107042	24.811072	78.294536	BR	Granite	848.9	75.1	141.1	14.8	49.7	8.1	1.2	6.6	0.9	4.7	0.9	2.5
41	107043	24.956	78.359	BR	Volcanic	99.5	65.7	125.3	13	43	7.4	<0.5	6.3	0.9	5	1	2.9
42	107044	24.945	78.36	BR	Volcanic	4531.6	41.4	77	8.8	32.2	5.7	3.8	4.9	0.6	3.5	0.7	1.9
43	107045	24.944224	78.377758	BR	Quartz	22.2	3.2	5.3	0.6	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
44	107046	24.944224	78.377758	BR	Quartz	15.2	13.7	24.4	2.5	7.8	1.2	<0.5	0.9	<0.5	0.6	<0.5	<0.5
45	107047	24.940925	78.377183	BR	Quartz	37.1	1.4	2.4	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
46	107048	24.940921	78.376515	BR	Quartz	480.3	25.1	45.5	4.9	16.6	2.7	0.5	2.2	<0.5	1.6	<0.5	0.9
47	107049	24.942673	78.377253	BR	Quartz	555.1	36.5	71	7.2	24.6	4	0.8	3.3	<0.5	2.5	0.5	1.5
48	107050	24.944379	78.377907	BR	Quartz	153.2	13.5	18.3	2.6	8.8	1.6	<0.5	1.4	<0.5	1.1	<0.5	0.6
49	107151	24.9577	78.38341	SS	Volcanic	1388	42.6	82.5	8.9	31.3	5.5	1.2	4.4	0.6	2.7	0.5	1.5
50	107152	24.95806	78.3835	SS	Volcanic	839	49.3	86.3	10	35.6	6.3	1.3	5.1	0.7	3.7	0.7	2

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
25	107025	24.94438	78.366981	BR	Volcanic	0.6	3.7	0.6	7.1	1.4	5.7	0.9	29.4	<0.5	33.2	5.6	
26	107028	24.887056	78.362571	BR	Granite	<0.5	2.2	<0.5	6.4	0.7	1	1.5	29	<0.5	21.2	3.2	
27	107029	24.885653	78.367528	BR	Volcanic	<0.5	2	<0.5	5.9	<0.5	6.4	0.8	27.5	<0.5	19.7	2.5	
28	107030	24.88898	78.362565	BR	Quartz	<0.5	0.7	<0.5	2.5	<0.5	8.6	<0.5	7	<0.5	9.9	1.3	
29	107031	24.796635	78.30369	BR	Granite	<0.5	2.1	<0.5	6	<0.5	2.4	1.2	55.1	<0.5	25.9	4.2	
30	107032	24.809676	78.294904	BR	Granite	<0.5	1.7	<0.5	6.6	<0.5	0.5	1.1	29.6	<0.5	25.7	3.2	
31	107033	24.778971	78.278717	BR	Granite	<0.5	2.7	<0.5	6.3	<0.5	<0.5	1.2	39.9	<0.5	103.7	6.3	
32	107034	24.948529	78.362847	BR	Volcanic	<0.5	2.2	<0.5	4.8	<0.5	<0.5	<0.5	9.9	<0.5	3	0.6	
33	107035	24.862579	78.266882	BR	Diorite	0.7	4.1	0.6	3.6	0.7	1	0.8	22.2	<0.5	25	2.8	
34	107036	24.939433	78.375024	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	4.8	<0.5	<0.5	<0.5	
35	107037	24.935946	78.382855	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8	<0.5	<0.5	<0.5	
36	107038	24.944224	78.377758	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	7.5	<0.5	0.8	1.2	
37	107039	24.9569	78.3834	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	4.9	<0.5	11.4	<0.5	<0.5	<0.5	
38	107040	24.948529	78.362847	BR	Volcanic	<0.5	2.8	<0.5	6.2	<0.5	2	1.2	27.3	<0.5	25.7	4.8	
39	107041	24.944723	78.377998	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	2.6	<0.5	<0.5	<0.5	
40	107042	24.811072	78.294536	BR	Granite	<0.5	2.2	<0.5	5.9	<0.5	1.1	1.2	16.9	<0.5	18.9	1.8	
41	107043	24.956	78.359	BR	Volcanic	<0.5	2.8	<0.5	5.3	<0.5	1.6	1.4	32.1	<0.5	25.7	6.1	
42	107044	24.945	78.36	BR	Volcanic	<0.5	1.8	<0.5	6.4	<0.5	0.5	1	14.3	<0.5	7	1.6	
43	107045	24.944224	78.377758	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	15.8	<0.5	5.3	<0.5	0.9	0.5	
44	107046	24.944224	78.377758	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	19.8	0.7	1.3	1.2	
45	107047	24.940925	78.377183	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	10.6	<0.5	<0.5	<0.5	
46	107048	24.940921	78.376515	BR	Quartz	<0.5	1	<0.5	2.6	<0.5	9.7	0.8	13.3	<0.5	6.3	1.2	
47	107049	24.942673	78.377253	BR	Quartz	<0.5	1.5	<0.5	4.4	<0.5	4.7	0.9	13.9	<0.5	10.5	1.8	
48	107050	24.944379	78.377907	BR	Quartz	<0.5	0.5	<0.5	0.7	<0.5	6.4	<0.5	4.9	<0.5	2.5	0.7	
49	107151	24.9577	78.38341	SS	Volcanic	<0.5	1.4	<0.5	4.1	<0.5	0.6	0.7	20.1	<0.5	15.1	2.2	
50	107152	24.95806	78.3835	SS	Volcanic	<0.5	1.9	<0.5	5.6	<0.5	0.8	0.7	22.7	<0.5	17.7	2.5	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
51	107153	24.94412	78.37885	SS	Volcanic	18.9	1.4	10.7	41.4	57.3	9.2	32.9	18	43	13.7	<0.5	1.6
52	107154	24.94099	78.37637	SS	Quartz	8.7	1.5	7.5	30.5	31.5	4.9	9.9	8.9	21.9	13.2	<0.5	1.5
53	107155	24.9689	78.3748	SS	Volcanic	14.3	1.6	9.3	48.9	35.1	8.5	16.4	12.4	34	14.8	<0.5	1.3
54	107156	24.95667	78.38399	SS	Volcanic	13	1.1	5.7	30.9	36.7	6.5	16	13	31.3	12	<0.5	1.8
55	107157	24.92925	78.34248	SS	MGRANS	6.1	1.6	9	21.3	24.4	3.4	7.9	20.8	22.9	17.2	0.5	1.9
56	107158	24.88921	78.343	SS	MGRANS	10.1	1.6	7.7	29.8	37.6	4.6	14.2	8.6	29.8	14.5	<0.5	1.5
57	107159	24.88561	78.36863	SS	Volcanic	12.6	1.3	7.3	36.4	42.1	6.3	13.7	12.6	26.8	13	<0.5	1.5
58	107160	24.88951	78.35547	SS	Quartz	17.9	2.6	7.5	46	46.8	11.4	22.9	17	34.6	17.4	<0.5	2
59	107161	24.91115	78.35572	SS	MGRANS	17	1.9	7.3	41.9	48	9.4	25.1	24.2	42.5	16.7	<0.5	1
60	107162	24.78032	78.26347	SS	MGRANS	15.3	2.2	12.2	62.3	44.8	9.6	21.1	16.9	39.5	18.5	0.5	2.5
61	107163	24.78603	78.25532	SS	MGRANS	8	2.3	10.8	30.4	26.8	6.6	12.7	16.9	37.9	19	0.5	2.3
62	107164	24.88709	78.3722	SS	Volcanic	9.2	1.3	7.4	24.8	30.8	3.7	10.9	7.9	20.5	14.3	<0.5	1.7
63	107165	24.94434	78.37854	SS	Volcanic	11.9	1.4	9.2	33.5	35.6	5.5	13.9	10.2	41.7	13	<0.5	1.8
64	107166	24.80966	78.29485	SS	MGRANS	22.5	2.2	14.5	49	38.6	8.9	20.8	36.1	99.8	24.1	0.8	2.6
65	107167	24.86036	78.34921	SS	Volcanic	28.3	1.7	24.7	140.9	119.2	33.3	54.2	38.9	75.1	17.7	<0.5	1.4
66	107168	24.944745	78.373222	SS	Quartz	6.1	0.9	5.6	17.9	29.7	22.1	10.7	8.8	27.1	10.9	<0.5	1.1
67	107169	24.92265	78.36557	Pitting	Volcanic	19.7	1.8	41.1	270	206.1	52.9	158.1	109	92.5	18.1	<0.5	1.3
68	107170	24.92265	78.36557	Pitting	Volcanic	2.9	3	3.9	2	216.4	0.8	5	3.6	37.2	19	<0.5	2.5
69	107171	24.938376	78.37525	Pitting	Quartz	14	1	2.2	7.2	296.4	2	9.7	49.7	27.1	4.1	<0.5	<0.5
70	107172	24.938376	78.37525	Pitting	Quartz	14	0.8	1.9	9	277.3	2.4	12.8	34.4	25.8	4.3	<0.5	0.8
71	107173	24.940083	78.37601	Pitting	Volcanic	6.4	1.6	17.8	3.4	118.7	1.5	8.2	9.9	54.2	20.8	<0.5	2.9
72	107174	24.940083	78.37601	Pitting	Volcanic	4.9	1.1	15.6	5.8	134.4	2	6.8	114.2	27.6	17.3	<0.5	2.6
73	107175	24.941475	78.37685	Pitting	Volcanic	6.1	1.5	15.2	3	70.8	1.1	4.6	4.9	57.9	20.1	<0.5	1.9
74	107176	24.941475	78.37685	Pitting	Volcanic	5.9	1.6	14.9	7.9	125.1	1.6	9.7	5.2	46.1	20.2	<0.5	2
75	107177	24.942596	78.37723	Pitting	Volcanic	12.5	0.9	2.1	6.5	354.5	1.3	9.8	11.3	6.9	3.1	<0.5	0.5
76	107178	24.942596	78.37723	Pitting	Volcanic	7.4	0.9	15.5	4.5	141.2	1.7	6.7	16.5	74.2	18.4	<0.5	2.5

MGRANS= Medium Grained Equigranular Granite (Sericitized)

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
51	107153	24.94412	78.37885	SS	Volcanic	126	48.6	16.5	251.4	13.4	0.9	<0.5	<0.5	2.1	<0.5	<0.5	3.1
52	107154	24.94099	78.37637	SS	Quartz	135.8	59.4	23.9	490.9	18.9	0.5	<0.5	<0.5	1.9	<0.5	<0.5	1.7
53	107155	24.9689	78.3748	SS	Volcanic	129.3	117.6	19.5	176.5	14.6	0.7	<0.5	<0.5	2.1	<0.5	<0.5	2.4
54	107156	24.95667	78.38399	SS	Volcanic	187.5	43.4	18.7	184	18.8	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	2.7
55	107157	24.92925	78.34248	SS	MGRANS	185.2	40.7	29.3	732.3	37.4	0.6	<0.5	<0.5	2.2	<0.5	<0.5	1.7
56	107158	24.88921	78.343	SS	MGRANS	160.7	73.5	22.4	490.3	20.6	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	2.1
57	107159	24.88561	78.36863	SS	Volcanic	137.3	66.3	21.2	382.8	19.7	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	2.3
58	107160	24.88951	78.35547	SS	Quartz	179.8	37.1	24.9	228.2	19.2	1.1	<0.5	<0.5	2.4	<0.5	<0.5	3.3
59	107161	24.91115	78.35572	SS	MGRANS	184	36.9	19.6	212.4	20.6	1	<0.5	<0.5	6.8	<0.5	<0.5	3.4
60	107162	24.78032	78.26347	SS	MGRANS	124.8	75.8	28.7	533.7	21.8	0.9	<0.5	<0.5	2.3	<0.5	<0.5	2.7
61	107163	24.78603	78.25532	SS	MGRANS	180.7	44.8	29.7	803.7	23.4	0.9	<0.5	<0.5	3	<0.5	<0.5	2.5
62	107164	24.88709	78.3722	SS	Volcanic	170.6	74.2	22	493.7	17.4	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	1.8
63	107165	24.94434	78.37854	SS	Volcanic	113.8	54.7	23.3	380.7	18.6	0.6	<0.5	<0.5	2	<0.5	<0.5	2.1
64	107166	24.80966	78.29485	SS	MGRANS	83.7	88	39.5	779.5	25.4	0.8	<0.5	<0.5	4.5	<0.5	<0.5	1.9
65	107167	24.86036	78.34921	SS	Volcanic	90.7	247.6	20	73.2	11.8	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	3.4
66	107168	24.944745	78.373222	SS	Quartz	151.1	35.8	12.8	292.8	11.8	0.7	<0.5	<0.5	1.4	<0.5	<0.5	1.4
67	107169	24.92265	78.36557	Pitting	Volcanic	102.8	152.9	27.3	91.2	5.9	1.5	<0.5	3.5	<0.5	1.1	<0.5	1
68	107170	24.92265	78.36557	Pitting	Volcanic	195.3	14	33.8	144.1	16.6	2.3	<0.5	3	<0.5	0.7	<0.5	1.9
69	107171	24.938376	78.37525	Pitting	Quartz	12.7	9.8	4.1	23.5	1.7	0.8	<0.5	3.1	<0.5	0.8	<0.5	<0.5
70	107172	24.938376	78.37525	Pitting	Quartz	5.4	11.1	4.5	14	1.2	0.6	<0.5	3.2	<0.5	0.9	<0.5	<0.5
71	107173	24.940083	78.37601	Pitting	Volcanic	159.5	29.3	23.3	313.7	11.6	1.3	0.6	3.2	<0.5	0.9	<0.5	1.5
72	107174	24.940083	78.37601	Pitting	Volcanic	145.1	29.4	20.2	462.4	13.4	1.1	0.7	3.2	<0.5	0.8	<0.5	1
73	107175	24.941475	78.37685	Pitting	Volcanic	122.7	37.7	22.3	447.9	12.8	1.4	0.6	3.3	<0.5	0.7	<0.5	0.6
74	107176	24.941475	78.37685	Pitting	Volcanic	151.2	24.6	21.1	432.9	12.8	1.3	0.7	3.3	<0.5	0.8	<0.5	0.6
75	107177	24.942596	78.37723	Pitting	Volcanic	31.1	12.5	3.2	23.1	1.6	0.8	<0.5	3.1	<0.5	0.7	<0.5	<0.5
76	107178	24.942596	78.37723	Pitting	Volcanic	146	29.7	26.2	390.3	11.7	0.8	0.6	2.9	<0.5	0.8	<0.5	0.9

MGRANS= Medium Grained Equigranular Granite (Sericitized)

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
51	107153	24.94412	78.37885	SS	Volcanic	522	42.8	74.5	8.8	31.3	5.5	1	4.5	0.6	3.2	0.6	1.7
52	107154	24.94099	78.37637	SS	Quartz	1065	43.6	89.7	9.4	33.3	6.4	1.1	5.5	0.8	4.4	0.9	2.6
53	107155	24.9689	78.3748	SS	Volcanic	1174	41.8	84.2	8.6	31	5.6	1.3	4.8	0.7	3.5	0.7	2
54	107156	24.95667	78.38399	SS	Volcanic	301	39.8	82.3	8.7	31	5.9	0.7	4.8	0.7	3.8	0.7	2.1
55	107157	24.92925	78.34248	SS	MGRANS	1183	100.7	194.2	18.5	62.4	10.4	1.4	8	1.1	5.6	1.1	3.2
56	107158	24.88921	78.343	SS	MGRANS	1072	45.5	90.7	9.7	34.5	6.6	1.1	5.5	0.8	4.1	0.8	2.3
57	107159	24.88561	78.36863	SS	Volcanic	703	65.3	130.9	13.3	46.2	8	1.2	6.3	0.8	4	0.8	2.2
58	107160	24.88951	78.35547	SS	Quartz	306	53.7	132.8	11.5	40.7	7.6	0.8	6.2	0.9	4.7	0.9	2.6
59	107161	24.91115	78.35572	SS	MGRANS	211	34.5	88.4	7.9	27.8	5.2	0.6	4.5	0.7	3.9	0.8	2.3
60	107162	24.78032	78.26347	SS	MGRANS	661	93.5	172.1	18.7	64.8	11	1.7	8.4	1.1	5.4	1	3
61	107163	24.78603	78.25532	SS	MGRANS	1220	82.8	189.9	17.1	59.6	10.4	1.9	8	1.1	5.7	1.1	3.3
62	107164	24.88709	78.3722	SS	Volcanic	1532	55.7	99.5	11.5	40.5	7.2	1.4	5.7	0.8	4	0.8	2.3
63	107165	24.94434	78.37854	SS	Volcanic	854	55.4	106.3	11.3	40.1	7.1	1.2	5.9	0.8	4.1	0.8	2.2
64	107166	24.80966	78.29485	SS	MGRANS	727	124.4	216.8	26.2	91.8	15.9	2.4	12	1.6	7.9	1.5	4.2
65	107167	24.86036	78.34921	SS	Volcanic	508	35.6	63.8	8	29.7	5.8	1.4	5.1	0.7	3.8	0.7	2
66	107168	24.944745	78.373222	SS	Quartz	1324	25.8	48.7	5.2	18.1	3.3	0.7	2.8	<0.5	2.3	<0.5	1.3
67	107169	24.92265	78.36557	Pitting	Volcanic	308.9	17.5	34.6	4	16.3	3.6	1.1	4.5	0.7	4.1	0.9	2.6
68	107170	24.92265	78.36557	Pitting	Volcanic	68.4	64.7	123.3	12.5	44.7	7.8	<0.5	8.8	1	5.7	1.1	3.3
69	107171	24.938376	78.37525	Pitting	Quartz	75	7.9	13.2	1.6	6	1	<0.5	1.1	<0.5	0.6	<0.5	<0.5
70	107172	24.938376	78.37525	Pitting	Quartz	63.8	4.3	6	0.9	3.5	0.7	<0.5	0.8	<0.5	0.7	<0.5	<0.5
71	107173	24.940083	78.37601	Pitting	Volcanic	544.7	71.1	131.9	13.8	51.1	8.4	1.4	8.5	0.9	4.2	0.8	2.3
72	107174	24.940083	78.37601	Pitting	Volcanic	513.1	72.4	132.2	13.8	50.2	7.8	1.3	8	0.8	3.7	0.7	2.1
73	107175	24.941475	78.37685	Pitting	Volcanic	996.4	68.9	113	12.9	47.6	7.6	1.9	7.8	0.8	4.1	0.8	2.2
74	107176	24.941475	78.37685	Pitting	Volcanic	657.4	60.8	106.2	11.5	42.3	6.5	1.2	7.1	0.7	3.8	0.7	2
75	107177	24.942596	78.37723	Pitting	Volcanic	107.3	8.9	17.1	1.7	6.6	1	<0.5	1.1	<0.5	0.6	<0.5	<0.5
76	107178	24.942596	78.37723	Pitting	Volcanic	#####	66.5	112.9	12.7	47	7.6	2.4	8	0.8	4.5	0.9	2.4
MGRANS= Medium Grained Equigranular Granite (Sericitized)																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
51	107153	24.94412	78.37885	SS	Volcanic	<0.5	1.6	<0.5	5.2	<0.5	1	0.7	20.2	<0.5	14.7	2	
52	107154	24.94099	78.37637	SS	Quartz	<0.5	2.6	<0.5	10.8	0.7	0.8	0.7	19	<0.5	33	4.3	
53	107155	24.9689	78.3748	SS	Volcanic	<0.5	1.8	<0.5	4.6	0.9	1.1	0.6	20.7	<0.5	17.7	2.8	
54	107156	24.95667	78.38399	SS	Volcanic	<0.5	2.1	<0.5	5.9	0.7	0.7	0.9	18.8	<0.5	22.3	2.7	
55	107157	24.92925	78.34248	SS	MGRANS	<0.5	3.4	0.5	17.8	2.2	0.6	1	15.6	<0.5	39.6	5.2	
56	107158	24.88921	78.343	SS	MGRANS	<0.5	2.4	<0.5	10.9	1	0.9	0.8	21.5	<0.5	34.1	4.4	
57	107159	24.88561	78.36863	SS	Volcanic	<0.5	2.2	<0.5	9.3	0.7	0.8	0.7	16.6	<0.5	25.6	3.7	
58	107160	24.88951	78.35547	SS	Quartz	<0.5	2.6	<0.5	6.5	0.6	1.1	1	33.2	<0.5	27.9	4.1	
59	107161	24.91115	78.35572	SS	MGRANS	<0.5	2.4	<0.5	6.7	1.2	1.4	1.6	31.9	<0.5	27.1	2.5	
60	107162	24.78032	78.26347	SS	MGRANS	<0.5	3	<0.5	12.7	0.7	1.7	0.7	18.2	<0.5	30.8	3.9	
61	107163	24.78603	78.25532	SS	MGRANS	0.5	3.5	0.5	19	1.1	0.9	1	21.5	<0.5	22.7	4.4	
62	107164	24.88709	78.3722	SS	Volcanic	<0.5	2.3	<0.5	10.9	1	0.9	0.9	16.5	<0.5	26	3.5	
63	107165	24.94434	78.37854	SS	Volcanic	<0.5	2.2	<0.5	7.9	1.1	1	0.6	30.6	<0.5	21.3	3.3	
64	107166	24.80966	78.29485	SS	MGRANS	0.6	4	0.6	17.6	1.4	1.7	0.6	23.1	<0.5	30.6	4	
65	107167	24.86036	78.34921	SS	Volcanic	<0.5	1.8	<0.5	2.2	0.7	6.7	0.5	20	<0.5	15.8	1.5	
66	107168	24.944745	78.373222	SS	Quartz	<0.5	1.4	<0.5	5.6	<0.5	67.3	0.7	17.4	<0.5	14	2.1	
67	107169	24.92265	78.36557	Pitting	Volcanic	<0.5	2.6	<0.5	3	1	0.8	0.8	25.7	<0.5	6.7	2.3	
68	107170	24.92265	78.36557	Pitting	Volcanic	<0.5	3.2	0.5	5	0.8	<0.5	1.6	28.4	<0.5	27.1	5.7	
69	107171	24.938376	78.37525	Pitting	Quartz	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	16.4	<0.5	1.4	<0.5	
70	107172	24.938376	78.37525	Pitting	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11.5	<0.5	0.9	<0.5	
71	107173	24.940083	78.37601	Pitting	Volcanic	<0.5	2.4	<0.5	7.2	0.8	<0.5	1.2	23.5	<0.5	20.4	2.7	
72	107174	24.940083	78.37601	Pitting	Volcanic	<0.5	2.2	<0.5	10.6	0.8	0.8	1.2	15	<0.5	19.3	2.1	
73	107175	24.941475	78.37685	Pitting	Volcanic	<0.5	2.1	<0.5	10.2	0.9	<0.5	1	22.6	<0.5	18.8	2.7	
74	107176	24.941475	78.37685	Pitting	Volcanic	<0.5	2	<0.5	9.8	0.8	<0.5	1.2	15.4	<0.5	18.5	2.6	
75	107177	24.942596	78.37723	Pitting	Volcanic	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	12.6	<0.5	1.4	0.9	
76	107178	24.942596	78.37723	Pitting	Volcanic	<0.5	2.4	<0.5	8.7	1	<0.5	1	22.7	<0.5	17.8	2.7	

MGRANS= Medium Grained Equigranular Granite (Sericitized)

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
77	107179	24.942562	78.37698	Pitting	Volcanic	10.5	2	17.8	12	81	1.9	6	12.2	69.8	23	0.5	2.7
78	107180	24.942562	78.37698	Pitting	Volcanic	45.9	1.1	8.6	52.3	304.1	18	215.9	3.7	121.5	12.1	<0.5	0.8
79	107181	24.942562	78.37698	Pitting	Volcanic	15.3	5.7	28.6	112	43.6	36.9	36.8	4.4	241.1	21.3	<0.5	1.6
80	107182	24.944427	78.37798	Pitting	Quartz	4.6	2.3	7.4	4.7	110.7	1.3	4.7	3.4	58	19.8	<0.5	2.1
81	107183	24.944427	78.37798	Pitting	Quartz	4	1.5	6.7	5	243.1	1.3	4.9	8.1	52.1	16.8	<0.5	2.7
82	107184	24.957031	78.38322	Pitting	Quartz	29.2	1.3	7.2	45.1	318.7	10.6	98.6	132.9	334.9	10.2	<0.5	0.9
83	107185	24.957031	78.38322	Pitting	Quartz	24.8	2.2	9.6	48.7	73.3	10.2	15.2	72	301.1	17.7	<0.5	2.3
84	107186	24.957031	78.38322	Pitting	Quartz	34	1	7.3	52.8	201.1	14.9	125.2	125.5	481.4	11.7	<0.5	1.3
85	107187	24.956919	78.38347	Pitting	Volcanic	2.2	<0.5	1.7	4.9	52.9	1.3	4.1	4	9.2	2.5	<0.5	1.1
86	107188	24.956919	78.38347	Pitting	Volcanic	11.8	1.2	9.2	40.3	63.5	9.9	8	12.4	79.4	17.6	<0.5	2.3
87	107189	24.958004	78.38389	Pitting	Volcanic	2.1	<0.5	1.6	5.7	11.2	1.3	3.5	2.6	9	2.4	<0.5	0.8
88	107190	24.958004	78.38389	Pitting	Volcanic	11.9	2.4	12	47.5	76.3	10.5	6.6	5.7	101.5	23.7	<0.5	2.6
89	107191	24.947608	78.37865	Pitting	Quartz	20.7	2.6	12.1	39.9	168.1	10	35.6	16.3	67.2	20.1	<0.5	1.5
90	107192	24.947608	78.37865	Pitting	Quartz	5.8	1.9	18.6	4.5	150.1	1.9	8.1	7.8	68.1	21.8	<0.5	3.5
91	107193	24.954471	78.38153	Pitting	Volcanic	24.6	3.2	12.6	69.4	48	10.6	20.7	12.6	58.1	22	<0.5	2.3
92	107194	24.954471	78.38153	Pitting	Volcanic	6.6	2.4	12.4	14.8	134.9	4.3	8.5	4.3	52.5	20.5	<0.5	2.2
93	107195	24.924161	78.34203	Pitting	Quartz	9	2.2	4.4	19.4	70.8	7	13.8	10.9	21.6	17.3	<0.5	1.9
94	107196	24.924161	78.34203	Pitting	Quartz	8.1	2.6	3.3	16.7	144.9	6	11.4	13.9	20.5	12.4	<0.5	1.6
95	107197	24.783262	78.26129	Pitting	MGRANS	4.3	1.9	4.2	14.4	153.1	1.9	7.7	4.6	20	15.8	<0.5	1.7
96	107198	24.783262	78.26129	Pitting	MGRANS	14	3.9	15	91.9	74.8	16.1	27.4	6	83.6	36.2	0.9	4.7
97	107199	24.783262	78.26129	Pitting	MGRANS	12.2	1.6	5.2	48.5	130.4	7	19.8	16.1	14.5	14.9	<0.5	1.2
98	107200	24.783262	78.26129	Pitting	MGRANS	7.7	2.3	1.5	23.5	261.6	3.4	10.6	32.9	18.2	17.4	<0.5	0.6
99	108001	24.782907	78.26057	Pitting	MGRANS	19	1.3	6.8	59.9	163.5	4.9	36.3	15.6	14.4	14.3	<0.5	1.2
100	108002	24.782907	78.26057	Pitting	MGRANS	19.7	3.6	11.4	63.1	83.4	8.3	32.2	18.3	39.2	25.4	0.7	3.4
101	108003	24.782907	78.26057	Pitting	MGRANS	1.5	1.6	1.8	14.2	125.9	1.1	4.8	3	7.8	17.8	<0.5	2.1
102	108004	24.782486	78.26003	Pitting	MGRANS	8.9	1.8	1.8	11.9	196.7	3.3	7.3	3.6	7.8	15.3	<0.5	1.1

MGRANS= Medium Grained Equigranular Granite (Sericitized)

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
77	107179	24.942562	78.37698	Pitting	Volcanic	201.2	35.2	31.3	546.6	15.4	1	0.9	3.4	<0.5	0.9	<0.5	0.9
78	107180	24.942562	78.37698	Pitting	Volcanic	8.6	15.1	5.1	26.3	2.1	<0.5	<0.5	2.7	<0.5	0.7	<0.5	<0.5
79	107181	24.942562	78.37698	Pitting	Volcanic	76.9	134.2	13.1	130.3	5.3	0.6	<0.5	3	<0.5	0.8	<0.5	0.9
80	107182	24.944427	78.37798	Pitting	Quartz	157.7	45	32.5	266.4	16.2	0.7	<0.5	3.1	<0.5	0.8	<0.5	0.7
81	107183	24.944427	78.37798	Pitting	Quartz	145.3	36	28.9	259.6	15	0.5	<0.5	3.2	<0.5	0.8	<0.5	0.6
82	107184	24.957031	78.38322	Pitting	Quartz	23.4	11.1	8.4	31.5	2.5	1.2	<0.5	2.8	<0.5	0.8	<0.5	<0.5
83	107185	24.957031	78.38322	Pitting	Quartz	97.6	90.7	27.9	207.2	9.6	1	<0.5	3.2	<0.5	0.9	<0.5	0.6
84	107186	24.957031	78.38322	Pitting	Quartz	14	12.4	8.8	40.3	2.7	1.3	<0.5	3.1	<0.5	0.7	<0.5	<0.5
85	107187	24.956919	78.38347	Pitting	Volcanic	9.5	303.9	7.4	15.1	1.7	<0.5	<0.5	3	<0.5	0.6	<0.5	<0.5
86	107188	24.956919	78.38347	Pitting	Volcanic	112.4	95.7	25.5	203.8	10.7	<0.5	<0.5	2.9	<0.5	0.7	<0.5	<0.5
87	107189	24.958004	78.38389	Pitting	Volcanic	14.5	316.9	9	14.3	1.3	<0.5	<0.5	2.9	<0.5	0.6	<0.5	<0.5
88	107190	24.958004	78.38389	Pitting	Volcanic	231.8	83.3	27	297.6	14.1	0.5	0.5	3.3	<0.5	1	<0.5	<0.5
89	107191	24.947608	78.37865	Pitting	Quartz	155.9	89.1	25.5	306.5	13.1	1.2	<0.5	3	<0.5	1.1	<0.5	2.2
90	107192	24.947608	78.37865	Pitting	Quartz	129.3	48.4	28.4	462.9	14.9	1.7	0.7	3.2	<0.5	0.9	<0.5	1
91	107193	24.954471	78.38153	Pitting	Volcanic	94.9	187.6	33.8	257.7	9.7	0.6	<0.5	3.2	<0.5	1.3	<0.5	3.4
92	107194	24.954471	78.38153	Pitting	Volcanic	126.3	147.6	26.2	379	14.2	1.8	0.6	3.4	<0.5	1	<0.5	1.4
93	107195	24.924161	78.34203	Pitting	Quartz	80.2	31.7	14.4	149.8	16.2	0.9	<0.5	3.2	<0.5	0.8	<0.5	1.2
94	107196	24.924161	78.34203	Pitting	Quartz	79.7	23.3	17.5	90.6	12.1	0.7	<0.5	3.1	<0.5	0.9	<0.5	1.3
95	107197	24.783262	78.26129	Pitting	MGRANS	172.4	15.6	17.9	127.5	10.4	0.7	<0.5	3.2	<0.5	1	<0.5	0.9
96	107198	24.783262	78.26129	Pitting	MGRANS	171.9	255.2	63.8	459.5	36.3	1	0.7	3.3	<0.5	1	<0.5	1.6
97	107199	24.783262	78.26129	Pitting	MGRANS	105.3	28.7	11.8	80.1	8.6	0.5	<0.5	2.9	<0.5	0.8	<0.5	1.5
98	107200	24.783262	78.26129	Pitting	MGRANS	144.5	16.1	9.1	185.4	1.5	0.5	<0.5	3.1	<0.5	0.7	<0.5	1.1
99	108001	24.782907	78.26057	Pitting	MGRANS	61	21.1	8	96.3	6.3	1	<0.5	3.1	<0.5	1.1	<0.5	3.2
100	108002	24.782907	78.26057	Pitting	MGRANS	121.1	90.3	38.1	228.2	12.2	0.8	<0.5	3.1	<0.5	0.9	<0.5	3.4
101	108003	24.782907	78.26057	Pitting	MGRANS	130.4	9.5	7.2	45.8	3.9	<0.5	<0.5	2.9	<0.5	0.8	<0.5	0.6
102	108004	24.782486	78.26003	Pitting	MGRANS	124.6	9.7	4.8	69	6.4	0.7	<0.5	2.9	<0.5	0.7	<0.5	0.7
MGRANS= Medium Grained Equigranular Granite (Sericitized)																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
77	107179	24.942562	78.37698	Pitting	Volcanic	#####	86	150.9	16.2	59.4	9.4	2.3	10.1	1.1	5.6	1.1	3.1
78	107180	24.942562	78.37698	Pitting	Volcanic	54.4	12.9	17.8	2.7	11	1.9	<0.5	1.6	<0.5	0.8	<0.5	<0.5
79	107181	24.942562	78.37698	Pitting	Volcanic	558.2	21.9	55.1	5.1	19.5	3.7	1.1	4	<0.5	2.6	<0.5	1.5
80	107182	24.944427	78.37798	Pitting	Quartz	#####	72.4	135.2	13.8	49	8.3	1.4	8.8	1	5.4	1	3
81	107183	24.944427	78.37798	Pitting	Quartz	#####	65.3	121.9	12.4	44.6	7.6	1.3	8	0.9	4.8	0.9	2.6
82	107184	24.957031	78.38322	Pitting	Quartz	72.3	11.4	19	2.4	9.7	1.8	<0.5	1.8	<0.5	1.3	<0.5	0.7
83	107185	24.957031	78.38322	Pitting	Quartz	#####	56.5	100.4	11.3	42.1	7.5	2.7	7.9	0.9	4.7	0.9	2.5
84	107186	24.957031	78.38322	Pitting	Quartz	66.3	18.8	33.9	3.9	15.4	2.8	0.7	2.7	<0.5	1.5	<0.5	0.8
85	107187	24.956919	78.38347	Pitting	Volcanic	150.2	21.1	12.9	3	11.1	1.6	<0.5	1.6	<0.5	0.9	<0.5	<0.5
86	107188	24.956919	78.38347	Pitting	Volcanic	#####	47.6	92.1	9.8	36.9	6.6	2.3	7.1	0.8	4.3	0.8	2.3
87	107189	24.958004	78.38389	Pitting	Volcanic	221.7	19.3	15	3.1	11.8	1.8	0.6	1.9	<0.5	1.1	<0.5	0.6
88	107190	24.958004	78.38389	Pitting	Volcanic	#####	66.3	124.3	13.1	48.9	8.4	3.3	8.9	1	4.8	0.9	2.3
89	107191	24.947608	78.37865	Pitting	Quartz	#####	45.4	98.9	9.1	33.7	5.9	1.9	6.6	0.8	4	0.8	2.3
90	107192	24.947608	78.37865	Pitting	Quartz	633.9	68.7	127.3	13	47.8	7.7	1.4	8.3	0.9	4.5	0.9	2.6
91	107193	24.954471	78.38153	Pitting	Volcanic	#####	55.1	77.7	11.2	42.9	7.8	2.6	7.9	1	5	1	2.8
92	107194	24.954471	78.38153	Pitting	Volcanic	#####	54.5	123.9	10.5	38.5	6.4	2.2	7.3	0.8	4.3	0.8	2.4
93	107195	24.924161	78.34203	Pitting	Quartz	226.7	25.2	75.6	5.3	19.4	3.5	<0.5	4.2	<0.5	2.7	0.5	1.5
94	107196	24.924161	78.34203	Pitting	Quartz	192.5	25.4	68.8	5.2	19.3	3.6	<0.5	4.3	0.5	2.9	0.6	1.7
95	107197	24.783262	78.26129	Pitting	MGRANS	733.4	36.8	66.5	7.9	27.7	4.6	1	4.6	0.5	2.7	0.5	1.5
96	107198	24.783262	78.26129	Pitting	MGRANS	951.3	92.8	258.6	24.7	93.5	17	2.9	17.3	1.9	9.9	1.9	5.7
97	107199	24.783262	78.26129	Pitting	MGRANS	371.8	34.6	78.2	6.6	22.9	3.7	0.7	4.1	<0.5	2	<0.5	1.1
98	107200	24.783262	78.26129	Pitting	MGRANS	648.7	5	20.6	1.3	5.4	1.3	0.8	1.6	<0.5	0.9	<0.5	0.6
99	108001	24.782907	78.26057	Pitting	MGRANS	217.8	15	45.2	3	10.6	1.9	<0.5	2.3	<0.5	1.3	<0.5	0.8
100	108002	24.782907	78.26057	Pitting	MGRANS	842.3	86.5	113.8	18.8	67	11.3	2.1	10.3	1.2	6.2	1.2	3.4
101	108003	24.782907	78.26057	Pitting	MGRANS	376.5	85.4	131.7	10.3	29	3.6	0.8	5.1	<0.5	1.3	<0.5	0.5
102	108004	24.782486	78.26003	Pitting	MGRANS	446.1	20.9	44.2	3.5	10.7	1.6	<0.5	2.1	<0.5	0.8	<0.5	<0.5

MGRANS= Medium Grained Equigranular Granite Sericitized

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
77	107179	24.942562	78.37698	Pitting	Volcanic	<0.5	3	0.5	12.2	1.3	<0.5	1.4	15.9	<0.5	20.5	3.4	
78	107180	24.942562	78.37698	Pitting	Volcanic	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	8.5	<0.5	1	0.5	
79	107181	24.942562	78.37698	Pitting	Volcanic	<0.5	1.4	<0.5	3.3	<0.5	0.7	0.6	7.3	<0.5	6	2	
80	107182	24.944427	78.37798	Pitting	Quartz	<0.5	3	<0.5	7.3	1.1	<0.5	0.7	22.2	<0.5	25.3	3.8	
81	107183	24.944427	78.37798	Pitting	Quartz	<0.5	2.5	<0.5	7.1	1.2	<0.5	0.7	13.5	<0.5	23.9	4	
82	107184	24.957031	78.38322	Pitting	Quartz	<0.5	0.6	<0.5	0.9	<0.5	<0.5	<0.5	520.8	1.1	1.6	0.8	
83	107185	24.957031	78.38322	Pitting	Quartz	<0.5	2.4	<0.5	5.5	1	<0.5	0.8	268.4	<0.5	17.6	3.5	
84	107186	24.957031	78.38322	Pitting	Quartz	<0.5	0.7	<0.5	1.2	<0.5	<0.5	<0.5	694.5	1.6	2.2	1.3	
85	107187	24.956919	78.38347	Pitting	Volcanic	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.6	<0.5	1.8	<0.5	
86	107188	24.956919	78.38347	Pitting	Volcanic	<0.5	2.2	<0.5	5.5	1.3	<0.5	0.8	22.8	<0.5	16.8	2.9	
87	107189	24.958004	78.38389	Pitting	Volcanic	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16.1	<0.5	1.8	0.5	
88	107190	24.958004	78.38389	Pitting	Volcanic	<0.5	2.1	<0.5	8.2	1.4	<0.5	1.6	32.6	<0.5	21.5	2.7	
89	107191	24.947608	78.37865	Pitting	Quartz	<0.5	2.3	<0.5	6.9	0.9	0.7	0.8	38.1	<0.5	18.7	2.9	
90	107192	24.947608	78.37865	Pitting	Quartz	<0.5	2.5	<0.5	9.8	1.1	<0.5	0.7	29	<0.5	18.1	2.8	
91	107193	24.954471	78.38153	Pitting	Volcanic	<0.5	2.5	<0.5	6.7	0.7	<0.5	1	35.2	<0.5	20.5	2.8	
92	107194	24.954471	78.38153	Pitting	Volcanic	<0.5	2.3	<0.5	8.5	1.2	0.8	2.8	36	<0.5	18.6	2.8	
93	107195	24.924161	78.34203	Pitting	Quartz	<0.5	1.6	<0.5	5	1.1	<0.5	0.6	12.8	<0.5	25.7	2.1	
94	107196	24.924161	78.34203	Pitting	Quartz	<0.5	1.6	<0.5	3.3	0.7	<0.5	0.6	13.7	<0.5	18.6	1.6	
95	107197	24.783262	78.26129	Pitting	MGRANS	<0.5	1.5	<0.5	4.4	0.8	<0.5	0.9	38.8	<0.5	37.8	2.6	
96	107198	24.783262	78.26129	Pitting	MGRANS	0.8	5.5	0.8	12.6	3.9	<0.5	1.1	28.5	0.6	24.7	4.1	
97	107199	24.783262	78.26129	Pitting	MGRANS	<0.5	1.1	<0.5	2.9	0.8	<0.5	0.7	4.9	<0.5	19.7	1.1	
98	107200	24.783262	78.26129	Pitting	MGRANS	<0.5	1	< 0.5	9.7	<0.5	<0.5	0.9	16.3	<0.5	32.6	3.5	
99	108001	24.782907	78.26057	Pitting	MGRANS	<0.5	1	< 0.5	3.7	0.6	0.7	0.5	8.4	<0.5	19.2	1.2	
100	108002	24.782907	78.26057	Pitting	MGRANS	<0.5	3.2	0.5	7.1	0.8	<0.5	0.9	21.5	<0.5	28.6	1.8	
101	108003	24.782907	78.26057	Pitting	MGRANS	<0.5	0.5	<0.5	1.7	<0.5	<0.5	0.9	2.6	<0.5	21.3	1	
102	108004	24.782486	78.26003	Pitting	MGRANS	<0.5	<0.5	<0.5	2.6	0.6	<0.5	0.9	6.6	<0.5	17.6	0.7	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
103	108005	24.782486	78.26003	Pitting	MGRANS	24.3	1.5	1.6	9	146.5	1.1	5.1	2.8	5.7	15.8	<0.5	1
104	108006	24.781875	78.26036	Pitting	MGRANS	1.6	1.7	1.9	11.9	185.2	1.7	5.2	2.5	6.4	16.6	<0.5	2
105	108007	24.781598	78.26194	Pitting	MGRANS	36.4	1.3	2.4	17	276.9	3.2	11.5	6.1	13.5	14.5	<0.5	1.3
106	108008	24.781598	78.26194	Pitting	MGRANS	2.3	1.6	1.5	8.5	239.9	1.9	5.7	12.9	12.7	18	<0.5	1.2
107	108009	24.781074	78.26261	Pitting	MGRANS	1.3	1.9	1.1	13.4	154.1	1.5	5.2	8.5	7.9	16	<0.5	2
108	108010	24.78079	78.26266	Pitting	MGRANS	1.6	2.6	1.2	7.7	159.9	2	5.2	2.4	12	14.8	<0.5	1.1
109	108011	24.78079	78.26266	Pitting	MGRANS	5.8	1.9	3	21	204.3	5.9	10.9	4.9	17.7	14.8	<0.5	1.8
110	108012	24.78049	78.26316	Pitting	MGRANS	3.1	2.8	0.9	17.1	153.8	2.3	8.3	16.2	17.7	17.1	<0.5	1.2
111	108013	24.78049	78.26316	Pitting	MGRANS	13.7	2.1	4.4	48.5	161.3	6	22.4	10.1	23.6	16.6	<0.5	1.4
112	108014	24.779144	78.26274	Pitting	MGRANS	11.2	0.8	3	31.4	117.8	3.5	19.5	16	11.6	7.7	<0.5	0.9
113	108015	24.779144	78.26274	Pitting	MGRANS	2.7	<0.5	<0.5	4.7	287.3	1.4	8.4	4.9	5.6	1.6	<0.5	0.8
114	108016	24.780551	78.26469	Pitting	MGRANS	20.8	1.6	11.3	62.5	211.8	22.6	145.4	5.1	167.1	19.9	<0.5	1.5
115	108017	24.780551	78.26469	Pitting	MGRANS	9.7	2.6	9.3	74.1	78.3	8.8	23.1	12.1	34.9	23.6	<0.5	2.5
116	108018	24.780926	78.26207	Pitting	MGRANS	14.6	1	4.9	39.9	135	6.5	24.8	12.3	18.2	11.4	<0.5	1.1
117	108019	24.780926	78.26207	Pitting	MGRANS	2.2	1.3	2	4.2	124.4	1.1	5	3.3	13.7	16.5	<0.5	1.2
118	108020	24.78062	78.26104	Pitting	MGRANS	1.1	1.4	2	11.3	131.4	1.3	4.4	2.8	8.9	15.9	<0.5	1.3
119	108021	24.786048	78.25789	Pitting	Pyrophyllite	44	2.1	50.2	454.5	55.7	49.6	88.5	97.8	303.2	20.4	<0.5	3
120	108022	24.786048	78.25789	Pitting	Pyrophyllite	32.3	1	3.8	16.8	33.7	0.8	4.5	5.4	6.3	22.7	<0.5	1.5
121	108023	24.785664	78.25691	Pitting	Pyrophyllite	2.6	2.1	1.6	6	123	0.7	4.2	3	28.9	16.4	<0.5	1.4
122	108024	24.785774	78.25637	Pitting	Pyrophyllite	3.8	1.3	6.5	18	93.4	2.3	6.6	4.6	20.3	22.1	0.6	3.1
123	108025	24.785278	78.25614	Pitting	Pyrophyllite	3.7	2.1	10.3	10.1	91.6	1.9	5.7	3	45.7	26.5	1.1	4.8
124	108026	24.785278	78.25614	Pitting	Pyrophyllite	4.6	1.4	8.5	9.3	57.5	1.3	4.4	3.2	26.7	21.7	0.7	3.6
125	108027	24.782777	78.25408	Pitting	Pyrophyllite	16	2.1	8.4	22.1	25.4	2.6	5.8	4.4	14.8	31	0.6	3.3
126	108028	24.782777	78.25408	Pitting	Pyrophyllite	8.7	2	3.9	17.7	52.3	5.4	7.2	13.9	30.6	22.9	<0.5	1.4
127	108029	24.922548	78.36299	BR	Volcanic	2.9	2.8	3.6	2.4	265.4	0.6	4.4	4.2	35.4	18.1	<0.5	3
128	108030	24.92706	78.35343	BR	Volcanic	2.7	2.9	3.6	1.3	202.9	0.6	4.3	3.6	36	19.1	<0.5	2.3
129	108031	24.925153	78.36284	BR	Volcanic	2.2	1.1	3.6	1.9	232.4	1.1	4.9	3.3	13.3	12.2	<0.5	2.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
103	108005	24.782486	78.26003	Pitting	MGRANS	127.5	9.4	5	69.9	7.7	<0.5	<0.5	3	<0.5	0.8	<0.5	<0.5
104	108006	24.781875	78.26036	Pitting	MGRANS	133.1	9.2	15.8	113.2	8.7	<0.5	<0.5	3	<0.5	0.7	<0.5	0.5
105	108007	24.781598	78.26194	Pitting	MGRANS	143.2	22.1	5.9	99	5.5	0.8	<0.5	3.3	<0.5	0.9	<0.5	1.6
106	108008	24.781598	78.26194	Pitting	MGRANS	207.6	13.8	4.3	96.3	6.2	0.6	<0.5	3.3	<0.5	0.9	<0.5	1.2
107	108009	24.781074	78.26261	Pitting	MGRANS	146.2	9.3	6.6	80.3	7.7	1.4	<0.5	2.9	<0.5	0.6	<0.5	<0.5
108	108010	24.78079	78.26266	Pitting	MGRANS	133.7	10.3	5.5	64.3	3.7	<0.5	<0.5	3	<0.5	0.7	<0.5	1.3
109	108011	24.78079	78.26266	Pitting	MGRANS	133.4	17.2	8.8	131.1	6.6	0.6	<0.5	3.1	<0.5	0.8	<0.5	1.3
110	108012	24.78049	78.26316	Pitting	MGRANS	220.2	60	4.9	87.1	4.9	0.6	<0.5	3.4	<0.5	0.8	<0.5	1.6
111	108013	24.78049	78.26316	Pitting	MGRANS	165.5	45	10.1	105.9	5.6	1	<0.5	3.2	<0.5	1.2	<0.5	2.4
112	108014	24.779144	78.26274	Pitting	MGRANS	38.3	15.2	5.7	33.6	3.4	0.6	<0.5	2.9	<0.5	0.9	<0.5	1.5
113	108015	24.779144	78.26274	Pitting	MGRANS	8.8	8.7	2.2	14.2	1.9	<0.5	<0.5	2.8	<0.5	0.6	<0.5	<0.5
114	108016	24.780551	78.26469	Pitting	MGRANS	108.9	18.9	11.2	149.7	7.5	<0.5	<0.5	3.2	<0.5	0.8	<0.5	<0.5
115	108017	24.780551	78.26469	Pitting	MGRANS	187	16	11.7	195.9	11.3	0.8	<0.5	2.9	<0.5	0.7	<0.5	1.6
116	108018	24.780926	78.26207	Pitting	MGRANS	72.8	21.1	11.7	81.7	5.8	0.7	<0.5	2.7	<0.5	1	<0.5	2.4
117	108019	24.780926	78.26207	Pitting	MGRANS	169.7	10.9	8.4	82	7.5	<0.5	<0.5	3	<0.5	0.8	<0.5	1.5
118	108020	24.78062	78.26104	Pitting	MGRANS	151.4	9.2	7.1	108.6	5.3	<0.5	<0.5	3.3	<0.5	0.9	<0.5	0.8
119	108021	24.786048	78.25789	Pitting	Pyrophyllite	7.3	35.7	54.8	73.7	2.9	0.7	<0.5	3	<0.5	0.7	<0.5	<0.5
120	108022	24.786048	78.25789	Pitting	Pyrophyllite	89.3	39.8	19.6	289.1	19.9	1.1	<0.5	3.1	<0.5	0.9	<0.5	<0.5
121	108023	24.785664	78.25691	Pitting	Pyrophyllite	165.4	16	9.1	54.4	6.2	<0.5	<0.5	2.9	<0.5	0.8	<0.5	1.3
122	108024	24.785774	78.25637	Pitting	Pyrophyllite	126.2	11	17	248.9	11.5	<0.5	<0.5	3.4	<0.5	0.7	<0.5	1.7
123	108025	24.785278	78.25614	Pitting	Pyrophyllite	211.2	26.9	25.9	379.2	14.1	< 0.5	0.5	3.4	< 0.5	0.7	< 0.5	1.2
124	108026	24.785278	78.25614	Pitting	Pyrophyllite	205.3	65.2	24	274.3	11.6	< 0.5	< 0.5	3.1	< 0.5	0.7	< 0.5	1.6
125	108027	24.782777	78.25408	Pitting	Pyrophyllite	178.3	93.8	15.9	413.1	15	0.6	0.6	2.8	<0.5	1.2	<0.5	0.6
126	108028	24.782777	78.25408	Pitting	Pyrophyllite	168.9	19.1	10.6	190.4	5.8	<0.5	<0.5	3	<0.5	0.8	<0.5	<0.5
127	108029	24.922548	78.36299	BR	Volcanic	200.6	11.6	35.1	165.1	19.4	1	<0.5	3	<0.5	0.7	<0.5	1.2
128	108030	24.92706	78.35343	BR	Volcanic	213.2	14.5	29.9	152.5	20.1	1	<0.5	3	<0.5	0.8	<0.5	1.1
129	108031	24.925153	78.36284	BR	Volcanic	106.5	16	22.3	105	12.3	1.1	<0.5	3.1	<0.5	0.8	<0.5	0.8
MGRANS= Medium Grained Equigranular Granite Sericitized																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
103	108005	24.782486	78.26003	Pitting	MGRANS	425.7	24.8	48.2	4	12.2	1.9	<0.5	2.3	<0.5	0.9	<0.5	<0.5
104	108006	24.781875	78.26036	Pitting	MGRANS	434.8	52.6	92.8	8.5	26.8	4.3	0.6	5	<0.5	2.4	<0.5	1.3
105	108007	24.781598	78.26194	Pitting	MGRANS	263.7	30	55	4.5	14.1	2	0.6	2.4	<0.5	0.9	<0.5	0.5
106	108008	24.781598	78.26194	Pitting	MGRANS	488.3	40.9	61.3	5.3	15.3	1.8	0.6	2.3	<0.5	0.6	<0.5	<0.5
107	108009	24.781074	78.26261	Pitting	MGRANS	495.6	52.3	88	7.9	24.6	3.4	0.8	3.8	<0.5	1.2	<0.5	0.6
108	108010	24.78079	78.26266	Pitting	MGRANS	568.7	42.8	66.7	6.3	19.9	2.6	0.8	3	<0.5	1	<0.5	<0.5
109	108011	24.78079	78.26266	Pitting	MGRANS	542.7	46.8	82.5	7.7	25.5	3.8	1	4.1	<0.5	1.5	<0.5	0.8
110	108012	24.78049	78.26316	Pitting	MGRANS	#####	28.1	53.8	4.9	16.2	2.4	1.4	2.5	<0.5	0.9	<0.5	<0.5
111	108013	24.78049	78.26316	Pitting	MGRANS	943.9	34.3	64.5	6.3	22.5	3.5	1.2	3.8	<0.5	1.7	<0.5	0.9
112	108014	24.779144	78.26274	Pitting	MGRANS	112.8	16.1	36.2	3.2	11.3	1.8	<0.5	2	<0.5	0.9	<0.5	0.5
113	108015	24.779144	78.26274	Pitting	MGRANS	59.1	5.7	8.1	1.3	4.4	0.7	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
114	108016	24.780551	78.26469	Pitting	MGRANS	348.6	35.8	61.4	7.8	31.2	5.3	1.1	4.8	<0.5	2.1	<0.5	0.9
115	108017	24.780551	78.26469	Pitting	MGRANS	526.2	84.7	161.9	14.5	50.2	7.4	1.5	7.7	0.6	2.3	<0.5	1.1
116	108018	24.780926	78.26207	Pitting	MGRANS	243.9	27.3	62.1	5.5	19.9	3.5	0.6	3.8	<0.5	2	<0.5	1.1
117	108019	24.780926	78.26207	Pitting	MGRANS	513.3	30.6	60.3	5.8	19.2	3.1	<0.5	3.3	<0.5	1.6	<0.5	0.9
118	108020	24.78062	78.26104	Pitting	MGRANS	423.4	35.1	59.5	5.6	17.5	2.6	0.7	2.9	<0.5	1.1	<0.5	0.6
119	108021	24.786048	78.25789	Pitting	Pyrophyllite	307.2	17.7	20.7	5.7	26.7	7.5	1.9	9	1.5	9.5	1.9	5.5
120	108022	24.786048	78.25789	Pitting	Pyrophyllite	106.3	44	90.2	10.2	36.8	6.8	0.7	6.2	0.7	3.7	0.7	2.1
121	108023	24.785664	78.25691	Pitting	Pyrophyllite	699.9	38.3	56.9	5.7	18.2	2.7	0.8	3.1	<0.5	1.5	<0.5	0.8
122	108024	24.785774	78.25637	Pitting	Pyrophyllite	476.5	100.3	191.8	19.6	71.2	11.7	1.7	11.3	1.1	4.2	0.6	1.6
123	108025	24.785278	78.25614	Pitting	Pyrophyllite	#####	195.9	334.5	33.3	117.2	15.4	3.5	15.5	1.3	5	0.9	2.4
124	108026	24.785278	78.25614	Pitting	Pyrophyllite	#####	134.8	264.9	24.4	85.8	11.7	2.9	12.2	1	4.4	0.8	2.3
125	108027	24.782777	78.25408	Pitting	Pyrophyllite	457.9	123.3	218.1	19.9	64.8	9.8	1.4	10.4	0.9	3.3	0.5	1.6
126	108028	24.782777	78.25408	Pitting	Pyrophyllite	603.4	56	104.8	8.9	28.1	3.7	0.9	4.7	<0.5	1.7	<0.5	0.9
127	108029	24.922548	78.36299	BR	Volcanic	70.3	62.2	121.1	12.1	44	8.1	<0.5	8.7	1	5.5	1.1	3.1
128	108030	24.92706	78.35343	BR	Volcanic	60.3	55	107.7	11.3	40.9	7.8	<0.5	8.3	1	5.2	1	2.8
129	108031	24.925153	78.36284	BR	Volcanic	103.8	47.6	85	9.4	34.2	6.2	<0.5	6.6	0.8	3.9	0.7	2
MGRANS= Medium Grained Equigranular Granite Sericitized																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
103	108005	24.782486	78.26003	Pitting	MGRANS	<0.5	<0.5	<0.5	2.7	0.6	<0.5	0.9	1.7	<0.5	16.8	0.7	
104	108006	24.781875	78.26036	Pitting	MGRANS	<0.5	1.3	<0.5	4.1	0.8	<0.5	0.9	<0.5	<0.5	41.6	1.6	
105	108007	24.781598	78.26194	Pitting	MGRANS	<0.5	0.7	<0.5	3.5	<0.5	<0.5	1	8.2	<0.5	20.4	1.1	
106	108008	24.781598	78.26194	Pitting	MGRANS	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	1.4	5.2	<0.5	20.8	0.9	
107	108009	24.781074	78.26261	Pitting	MGRANS	<0.5	0.7	<0.5	3	0.6	<0.5	0.9	<0.5	<0.5	32.5	2.7	
108	108010	24.78079	78.26266	Pitting	MGRANS	<0.5	0.5	<0.5	2.3	<0.5	<0.5	0.9	1.8	<0.5	17.7	0.9	
109	108011	24.78079	78.26266	Pitting	MGRANS	<0.5	0.8	<0.5	4.1	<0.5	<0.5	0.9	3.8	<0.5	23.5	1.6	
110	108012	24.78049	78.26316	Pitting	MGRANS	<0.5	0.6	<0.5	3.3	<0.5	<0.5	1.4	63.3	<0.5	22.8	1.8	
111	108013	24.78049	78.26316	Pitting	MGRANS	<0.5	0.9	<0.5	3.6	<0.5	<0.5	1.1	25.9	<0.5	26	2.1	
112	108014	24.779144	78.26274	Pitting	MGRANS	<0.5	0.6	<0.5	1.1	<0.5	<0.5	<0.5	9.8	<0.5	7.6	0.5	
113	108015	24.779144	78.26274	Pitting	MGRANS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	
114	108016	24.780551	78.26469	Pitting	MGRANS	<0.5	0.8	<0.5	4.8	0.9	0.8	0.8	<0.5	<0.5	9	1.5	
115	108017	24.780551	78.26469	Pitting	MGRANS	<0.5	1.1	<0.5	5.6	1.1	<0.5	1.1	<0.5	<0.5	24.5	1.8	
116	108018	24.780926	78.26207	Pitting	MGRANS	<0.5	1.1	<0.5	3.1	0.7	<0.5	0.6	5.2	<0.5	17.8	1.8	
117	108019	24.780926	78.26207	Pitting	MGRANS	<0.5	0.9	<0.5	3.1	0.8	<0.5	1.1	<0.5	<0.5	28.8	1.7	
118	108020	24.78062	78.26104	Pitting	MGRANS	<0.5	0.6	<0.5	3.9	<0.5	0.7	1	<0.5	<0.5	13.5	0.9	
119	108021	24.786048	78.25789	Pitting	Pyrophyllite	0.8	4.9	0.7	2.3	<0.5	<0.5	<0.5	39.6	<0.5	1.7	1.2	
120	108022	24.786048	78.25789	Pitting	Pyrophyllite	<0.5	2.2	<0.5	10.9	4	1.2	0.7	1.4	<0.5	73.8	5.8	
121	108023	24.785664	78.25691	Pitting	Pyrophyllite	<0.5	0.8	<0.5	2	0.6	<0.5	1.1	1.3	<0.5	31.5	2	
122	108024	24.785774	78.25637	Pitting	Pyrophyllite	<0.5	1.5	<0.5	7	0.9	<0.5	0.9	6.8	<0.5	20.2	2.2	
123	108025	24.785278	78.25614	Pitting	Pyrophyllite	<0.5	2.1	<0.5	9.6	1.2	<0.5	1.4	10.6	<0.5	23.2	2.1	
124	108026	24.785278	78.25614	Pitting	Pyrophyllite	<0.5	2.2	<0.5	6.9	1.2	<0.5	1.3	41.3	<0.5	17.7	1.5	
125	108027	24.782777	78.25408	Pitting	Pyrophyllite	<0.5	1.7	<0.5	12.2	1.6	0.8	1.1	14.8	<0.5	54.7	4.8	
126	108028	24.782777	78.25408	Pitting	Pyrophyllite	<0.5	1	<0.5	5.9	0.6	0.6	1.3	10.8	1.2	34.3	1.4	
127	108029	24.922548	78.36299	BR	Volcanic	<0.5	3	<0.5	5.7	1.5	<0.5	1.3	18.6	<0.5	26.5	5.3	
128	108030	24.92706	78.35343	BR	Volcanic	<0.5	2.7	<0.5	5.4	1.3	0.9	1.3	18.3	<0.5	26.8	4	
129	108031	24.925153	78.36284	BR	Volcanic	<0.5	2	<0.5	3.8	0.9	0.6	0.7	<0.5	<0.5	19.4	3.5	
MGRANS= Medium Grained Equigranular Granite Sericitized																	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
130	108032	24.919977	78.36703	BR	Volcanic	17.6	2.6	41.5	267.7	156.5	52.9	142.1	108.4	101.6	18.3	<0.5	1.4
131	108033	24.905705	78.37409	BR	Volcanic	27.9	2.3	10	43.3	116.2	8.2	5.9	9.3	77.5	19.4	<0.5	2.4
132	108034	24.952197	78.34173	BR	Volcanic	8.3	0.9	3	2.6	128.6	1.7	5.7	4.8	30.5	14.4	<0.5	1.5
133	108035	24.94438	78.36698	BR	Volcanic	5.4	1.4	13.2	7.1	94.7	3.1	3.7	3.1	51.6	18.5	<0.5	2.1
134	108036	24.871773	78.26143	BR	Granite	2.5	1.5	16.1	1.3	106.7	0.8	4	4.8	82.5	20.2	<0.5	2
135	108037	24.936056	78.38286	BR	Volcanic	3	1.7	14.7	1.4	117.8	1	3.9	2.4	57.7	18.8	<0.5	2.1
136	108038	24.930895	78.3909	BR	Volcanic	3.7	1.9	14.1	2.4	127.9	1.3	4.5	4.4	63.6	19.5	<0.5	2.3
137	108039	24.928874	78.386262	BR	Volcanic	3	2.4	6.4	3.4	190.1	1.5	5.7	2.7	45.6	19.4	<0.5	2.5
138	108040	24.960473	78.380776	BR	Volcanic	4.7	2	6	2	184.1	0.8	8.2	4.3	43.7	20.9	<0.5	2.8
139	108041	24.967865	78.36857	BR	Volcanic	3.6	2.4	6.5	2.8	197	1.1	5.1	5.7	33.5	20.6	<0.5	2.7
140	108042	24.966628	78.37625	BR	Volcanic	3.7	1.5	13.9	4.7	205.1	2	4.4	2.9	66.7	19	<0.5	2.8
141	108043	24.959792	78.38239	BR	Volcanic	11.5	2.2	12.2	4.5	143	2.2	7.3	4.7	68.3	18.1	<0.5	1.8
142	108044	24.956212	78.38648	BR	Volcanic	5	2	9.9	3.8	123.3	1.5	3.7	2.7	64.3	17.8	<0.5	2.2
143	108045	24.780175	78.26543	BR	Pyrophyllite	5.3	0.7	0.9	8	147.8	1.1	5.3	3.7	6.8	6.3	<0.5	0.6
144	108046	24.782131	78.25892	BR	Volcanic	9.6	0.7	2.4	12.5	13.8	0.7	5.3	4.8	9.8	21.5	<0.5	2.4
145	108764	24.92853	78.342869	BR	Quartz	42.08	<0.5	3.31	18.23	140.57	36.53	29.05	1061.51	47.67	<0.5	<0.5	0.6
146	108765	24.92853	78.342869	BR	Quartz	21.24	<0.5	1.71	17.98	175.29	31.1	11.34	4245.52	50.58	12.76	<0.5	4.02
147	108766	24.92842	78.342594	BR	Quartz	15.99	0.61	<0.5	3.33	52.64	26.12	12.73	648.46	18.8	<0.5	<0.5	<0.5
148	108767	24.92869	78.342872	BR	Quartz	17.01	<0.5	0.84	14.06	142.14	37.62	5.67	641.29	90.55	4.88	<0.5	0.86
149	108768	24.9286	78.342748	BR	Quartz	23.73	0.87	3.29	28.23	180.26	23.85	47.45	1657.48	99.06	17.15	<0.5	<0.5
150	108773	24.92897	78.342492	BR	Quartz	23.89	<0.5	1.64	5.96	90.9	43.03	48.66	388.84	22.66	2.44	<0.5	<0.5
151	108774	24.91419	78.385286	BR	Volcanic	13.45	0.56	1.67	14.54	69.37	30.34	8.89	1484.28	36.62	12.47	<0.5	0.6
152	108775	24.92897	78.342492	BR	Quartz	24.99	<0.5	4.97	13.47	161.64	37.85	24.9	6785.26	66.11	2.47	<0.5	<0.5
153	108776	24.92849	78.342483	BR	Quartz	27.21	<0.5	2.09	7.2	278.04	79.31	10.33	911.8	352.51	2.44	<0.5	<0.5
154	108777	24.96546	78.365027	BR	Volcanic	13.88	<0.5	4.21	7.32	114.31	73.25	2.07	497.1	49.19	<0.5	<0.5	<0.5
155	108778	24.9286	78.342748	BR	Quartz	17.9	<0.5	2.19	7.42	170.87	51.63	18.79	469.61	50.66	2.49	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
130	108032	24.919977	78.36703	BR	Volcanic	56.3	144	31.6	116.1	6.3	2.6	<0.5	3.1	<0.5	1.2	<0.5	1.3
131	108033	24.905705	78.37409	BR	Volcanic	151.2	319.2	27.2	232.9	12.8	1.5	0.6	3.2	<0.5	1	<0.5	2.5
132	108034	24.952197	78.34173	BR	Volcanic	156.5	14.9	12.1	162.8	13.8	0.5	<0.5	3	<0.5	0.8	<0.5	0.6
133	108035	24.94438	78.36698	BR	Volcanic	124.2	153.8	21	116.2	10.4	2	<0.5	3.1	<0.5	0.7	<0.5	1.7
134	108036	24.871773	78.26143	BR	Granite	129.6	47.8	27.5	414.2	13.7	2	0.6	3.1	<0.5	0.8	<0.5	1.5
135	108037	24.936056	78.38286	BR	Volcanic	136.9	51.5	25.2	340	12.6	0.6	<0.5	2.8	<0.5	0.7	<0.5	0.7
136	108038	24.930895	78.3909	BR	Volcanic	127.4	66.5	25.6	418.2	12.7	2.5	0.6	3	<0.5	0.9	<0.5	1.1
137	108039	24.928874	78.386262	BR	Volcanic	157.1	155.6	30.9	242.9	15.4	0.5	<0.5	3.2	<0.5	0.8	<0.5	0.7
138	108040	24.960473	78.380776	BR	Volcanic	188.6	16.6	26.4	313.1	18.6	1.5	<0.5	3.4	<0.5	0.8	<0.5	0.8
139	108041	24.967865	78.36857	BR	Volcanic	186.5	40.1	30.6	279.4	18	1.5	<0.5	3.2	<0.5	0.8	<0.5	0.7
140	108042	24.966628	78.37625	BR	Volcanic	115.8	135.5	26.4	537.7	11.7	4.7	0.8	3.3	<0.5	0.8	<0.5	1.9
141	108043	24.959792	78.38239	BR	Volcanic	116.4	112.5	24.1	497.8	13.7	1.6	0.7	3.3	<0.5	0.9	<0.5	0.7
142	108044	24.956212	78.38648	BR	Volcanic	135.6	114.1	25.7	385.4	12.3	2	0.5	3.1	<0.5	0.8	<0.5	1.4
143	108045	24.780175	78.26543	BR	Pyrophyllite	65.8	8.4	2.6	17.8	3.6	<0.5	<0.5	3	<0.5	0.8	<0.5	<0.5
144	108046	24.782131	78.25892	BR	Volcanic	4	42.2	45.7	225.5	14.7	<0.5	<0.5	3.1	<0.5	1	<0.5	<0.5
145	108764	24.92853	78.342869	BR	Quartz	8.63	18.68	3.04	27.42	0.53	12.57	<0.5	<0.5	8.62	27.26	<0.5	<0.5
146	108765	24.92853	78.342869	BR	Quartz	10.41	13.94	5.23	49.91	1.98	9.25	<0.5	0.84	5.94	66.06	<0.5	<0.5
147	108766	24.92842	78.342594	BR	Quartz	10.27	6.35	12.39	5.15	<0.5	2.64	<0.5	<0.5	4.1	27.6	<0.5	<0.5
148	108767	24.92869	78.342872	BR	Quartz	<0.5	6.16	7.73	14.41	0.66	0.97	<0.5	<0.5	4.26	45.39	<0.5	<0.5
149	108768	24.9286	78.342748	BR	Quartz	24.28	11.33	17.09	54.32	2.52	1.94	<0.5	<0.5	4.56	63.27	<0.5	<0.5
150	108773	24.92897	78.342492	BR	Quartz	<0.5	6.17	5.01	11.59	<0.5	1.16	<0.5	<0.5	7.96	38.21	<0.5	<0.5
151	108774	24.91419	78.385286	BR	Volcanic	21.81	9.44	7.31	66.09	2.13	4.15	<0.5	<0.5	5.81	32.4	<0.5	<0.5
152	108775	24.92897	78.342492	BR	Quartz	2.88	5.19	3.91	38.78	1.01	2.25	<0.5	<0.5	9.48	63.17	<0.5	<0.5
153	108776	24.92849	78.342483	BR	Quartz	<0.5	5.14	10.6	11.93	<0.5	2.18	0.95	<0.5	10.24	61.02	<0.5	<0.5
154	108777	24.96546	78.365027	BR	Volcanic	<0.5	3.17	12.52	14.83	<0.5	3.04	<0.5	<0.5	6.73	24.04	<0.5	<0.5
155	108778	24.9286	78.342748	BR	Quartz	5.8	13.61	4.96	19.44	<0.5	1.97	<0.5	<0.5	7.53	48.22	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
130	108032	24.919977	78.36703	BR	Volcanic	503.1	18.3	38.5	4.5	18.1	4	1.1	5	0.7	4.5	0.9	2.8
131	108033	24.905705	78.37409	BR	Volcanic	#####	57.2	108.1	11	41	7.1	2.6	7.6	0.9	4.4	0.9	2.4
132	108034	24.952197	78.34173	BR	Volcanic	156.2	33.1	88.3	7.1	24.3	4.1	<0.5	4.4	<0.5	2.3	<0.5	1.3
133	108035	24.94438	78.36698	BR	Volcanic	#####	44.6	82.7	8.6	32.5	5.6	4	6.1	0.7	3.5	0.7	1.8
134	108036	24.871773	78.26143	BR	Granite	721	68.8	128.9	12.7	46.9	7.6	1.5	8	0.9	4.5	0.9	2.5
135	108037	24.936056	78.38286	BR	Volcanic	#####	56.1	105.6	10.6	39.2	6.7	2.4	7	0.8	4.1	0.8	2.2
136	108038	24.930895	78.3909	BR	Volcanic	#####	57.8	108.3	10.9	40.6	6.9	2.2	7.2	0.8	4.2	0.8	2.3
137	108039	24.928874	78.386262	BR	Volcanic	#####	67.2	126	12.6	44.8	7.5	1.5	8	0.9	4.9	1	2.7
138	108040	24.960473	78.380776	BR	Volcanic	125.5	81.5	184.2	14.6	51.5	7.7	<0.5	8.8	0.9	4.5	0.9	2.5
139	108041	24.967865	78.36857	BR	Volcanic	636.9	68.3	131.9	12.9	46.3	8	1	8.6	1	4.9	0.9	2.7
140	108042	24.966628	78.37625	BR	Volcanic	#####	52.9	96.4	10.3	38.3	6.6	3.6	7.1	0.8	4.3	0.8	2.4
141	108043	24.959792	78.38239	BR	Volcanic	#####	45	88.5	8.6	31.5	5.4	2.8	6.1	0.7	3.9	0.8	2.3
142	108044	24.956212	78.38648	BR	Volcanic	#####	55.8	105.3	10.6	38.6	6.7	2.4	6.9	0.8	4.2	0.8	2.3
143	108045	24.780175	78.26543	BR	Pyrophyllite	174.8	13	20.7	1.8	5.7	0.8	<0.5	1	<0.5	<0.5	<0.5	<0.5
144	108046	24.782131	78.25892	BR	Volcanic	39	49.3	111.2	12.2	44.6	8.9	0.7	8.8	1.2	6.7	1.4	3.9
145	108764	24.92853	78.342869	BR	Quartz	47.17	7.28	9.38	1.15	4.27	<0.5	<0.5	0.65	<0.5	0.61	<0.5	<0.5
146	108765	24.92853	78.342869	BR	Quartz	64.4	10.72	14.74	1.77	6.61	0.64	<0.5	0.94	<0.5	0.56	<0.5	0.51
147	108766	24.92842	78.342594	BR	Quartz	41.04	3.13	4.52	0.68	2.45	0.63	<0.5	1.29	<0.5	1.43	<0.5	0.72
148	108767	24.92869	78.342872	BR	Quartz	17.98	5.7	7.49	1.26	5.67	0.92	<0.5	0.95	<0.5	0.82	<0.5	0.76
149	108768	24.9286	78.342748	BR	Quartz	83.35	28.08	32.76	4.15	18.39	3.38	0.61	2.93	<0.5	2.39	<0.5	1.46
150	108773	24.92897	78.342492	BR	Quartz	33.43	6.55	7.47	0.78	4.75	1.07	<0.5	0.92	<0.5	0.85	<0.5	<0.5
151	108774	24.91419	78.385286	BR	Volcanic	80.48	16.4	21.46	2.55	9.97	1.41	<0.5	1.7	<0.5	1.31	<0.5	0.71
152	108775	24.92897	78.342492	BR	Quartz	25.54	10	12.88	1.53	5.6	1.7	<0.5	0.83	<0.5	0.65	<0.5	<0.5
153	108776	24.92849	78.342483	BR	Quartz	19.71	4.79	6.74	<0.5	2.77	0.77	<0.5	1.33	<0.5	1.28	<0.5	0.66
154	108777	24.96546	78.365027	BR	Volcanic	16.85	7.31	9.16	1.19	5.84	1.54	<0.5	1.83	<0.5	1.79	<0.5	1.17
155	108778	24.9286	78.342748	BR	Quartz	43.22	3.48	5.02	0.59	2.42	<0.5	<0.5	0.76	<0.5	0.54	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
130	108032	24.919977	78.36703	BR	Volcanic	<0.5	2.5	<0.5	3.7	0.9	0.8	0.6	1.5	<0.5	7.2	2.6	
131	108033	24.905705	78.37409	BR	Volcanic	<0.5	2.2	<0.5	6.1	1.4	1	1	59.2	<0.5	19.2	3.2	
132	108034	24.952197	78.34173	BR	Volcanic	<0.5	1.4	<0.5	5.1	0.7	<0.5	1	<0.5	<0.5	20.2	3.2	
133	108035	24.94438	78.36698	BR	Volcanic	<0.5	1.7	<0.5	2.9	0.9	8.3	0.9	7.1	<0.5	12.3	1.7	
134	108036	24.871773	78.26143	BR	Granite	<0.5	2.4	<0.5	8.7	0.9	0.6	0.7	22.2	<0.5	17.4	2.9	
135	108037	24.936056	78.38286	BR	Volcanic	<0.5	2.1	<0.5	7.3	1	<0.5	0.8	16.5	<0.5	15.1	2.5	
136	108038	24.930895	78.3909	BR	Volcanic	<0.5	2.2	<0.5	8.7	1.1	1.9	0.7	21.2	<0.5	16.4	2.5	
137	108039	24.928874	78.386262	BR	Volcanic	<0.5	2.6	<0.5	6.8	1.1	<0.5	0.9	24.7	<0.5	26.3	3.7	
138	108040	24.960473	78.380776	BR	Volcanic	<0.5	2.5	<0.5	8.3	1.2	1.2	1	13.6	<0.5	27.2	4.1	
139	108041	24.967865	78.36857	BR	Volcanic	<0.5	2.6	<0.5	7.8	1.4	0.6	1.1	3.1	<0.5	25.6	4.3	
140	108042	24.966628	78.37625	BR	Volcanic	<0.5	2.3	<0.5	11.4	0.8	<0.5	0.5	12.7	<0.5	15.7	2.9	
141	108043	24.959792	78.38239	BR	Volcanic	<0.5	2.3	<0.5	11.1	1.5	0.6	0.7	25.7	<0.5	17	3.2	
142	108044	24.956212	78.38648	BR	Volcanic	<0.5	2.2	<0.5	8.3	0.9	0.5	0.5	20	<0.5	18.1	3.4	
143	108045	24.780175	78.26543	BR	Pyrophyllite	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	0.5	<0.5	<0.5	13.4	0.9	
144	108046	24.782131	78.25892	BR	Volcanic	0.5	3	<0.5	7.6	2.7	0.6	<0.5	<0.5	<0.5	49.4	5.4	
145	108764	24.92853	78.342869	BR	Quartz	<0.5	<0.5	<0.5	0.91	<0.5	32.85	<0.5	4.15	1.5	1.34	1.07	
146	108765	24.92853	78.342869	BR	Quartz	<0.5	<0.5	<0.5	1.12	<0.5	31.81	<0.5	4.34	1.46	2.69	0.9	
147	108766	24.92842	78.342594	BR	Quartz	<0.5	0.55	<0.5	<0.5	<0.5	23.12	<0.5	1.31	<0.5	<0.5	<0.5	
148	108767	24.92869	78.342872	BR	Quartz	<0.5	0.55	<0.5	<0.5	<0.5	37.33	<0.5	4.78	0.76	0.68	0.51	
149	108768	24.9286	78.342748	BR	Quartz	<0.5	0.99	<0.5	1.61	<0.5	24.37	<0.5	4.91	1.34	2.91	2.12	
150	108773	24.92897	78.342492	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	38.61	<0.5	2.77	0.58	0.67	0.61	
151	108774	24.91419	78.385286	BR	Volcanic	<0.5	<0.5	<0.5	1.53	<0.5	38.08	<0.5	2.92	1.42	3.6	1.08	
152	108775	24.92897	78.342492	BR	Quartz	<0.5	<0.5	<0.5	1.17	<0.5	42.56	<0.5	3.24	0.56	1.4	1.37	
153	108776	24.92849	78.342483	BR	Quartz	<0.5	0.64	<0.5	<0.5	<0.5	85.3	0.66	51.93	0.59	0.68	0.64	
154	108777	24.96546	78.365027	BR	Volcanic	<0.5	1.1	<0.5	<0.5	<0.5	94.56	<0.5	10.29	3.75	0.99	0.91	
155	108778	24.9286	78.342748	BR	Quartz	<0.5	0.5	<0.5	<0.5	<0.5	65.35	<0.5	6.09	<0.5	1.3	0.54	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
156	108785	24.9289	78.342959	BR	Quartz	19.31	<0.5	3.36	11.79	123.98	27.5	7.64	4685.03	77.38	2.5	<0.5	<0.5
157	108788	24.958	78.351	BR	Volcanic	16.39	0.75	8.25	6.75	84.05	11.27	1.86	131.12	65.91	22.15	<0.5	<0.5
158	108793	24.958	78.351	BR	Volcanic	12.77	1.84	20.38	2.49	115.04	16.39	8.35	20.66	103.07	17.73	<0.5	0.65
159	108796	24.77907	78.265037	BR	Pyrophyllite	11.34	<0.5	33.36	855.63	336.07	21.64	72.42	13.28	135.18	64.69	<0.5	1.11
160	108797	24.92987	78.343182	BR	Quartz	23.17	0.82	6.51	32.3	1009.13	76.38	22.86	3257.06	79.32	4.85	<0.5	<0.5
161	108798	24.92896	78.342633	BR	Quartz	14.99	<0.5	1.69	8.52	143.82	42.31	<0.5	2750.57	24.61	5.03	<0.5	0.77
162	108799	24.92888	78.342918	BR	Quartz	19.11	<0.5	1.7	13.48	128.44	33.83	6.16	6141.69	36.55	5.07	<0.5	<0.5
163	108651	24.92534	78.34203	SS	Quartz	30.37	2.17	11.06	72	56	11.5	36	24	86	21.82	<0.5	0.58
164	108652	24.9282	78.34178	SS	Quartz	23.52	2.33	10.33	61	36	10.14	31	20	52	21.33	<0.5	1.23
165	108653	24.9331	78.34337	SS	Quartz	29.76	2.65	12.79	82	81	16.42	45	98	101	23.53	<0.5	1.59
166	108654	24.93788	78.3449	SS	Quartz	34.74	2.39	12.83	83	56	15.79	40	35	66	26.55	<0.5	1.32
167	108655	24.94247	78.34324	SS	Quartz	19.51	1.66	9.41	56	58	7.46	27	15	58	18.02	<0.5	0.86
168	108656	24.93601	78.34491	SS	Quartz	20.33	1.49	9.39	64	45	11.72	30	35	55	17.55	<0.5	0.93
169	108657	24.91741	78.38978	SS	Volcanic	24.08	1.96	11.05	65	50	13.2	34	18	70	21.24	<0.5	0.86
170	108658	24.90796	78.38388	SS	Volcanic	28.1	2.77	13.23	81	55	13.88	41	24	65	26.2	<0.5	1.93
171	108659	24.91029	78.37745	SS	Volcanic	20	1.31	11.27	59	35	9.95	29	13	53	16.86	<0.5	1.01
172	108660	24.92919	78.34114	SS	Volcanic	17.17	2.07	9.19	52	46	7.16	25	12	52	19.29	<0.5	0.63
173	108873	24.93908	78.375121	BR	Volcanic	7.79	1.34	14.31	12	111	3.09	<5	11	61	18.41	<0.5	<0.5
174	108874	24.939	78.321	BR	Basalt	11.71	0.98	23.07	141	96	33.12	51	24	93	18.53	<0.5	<0.5
175	108875	24.939	78.321	BR	Basalt	9.09	1.31	18.03	129	25	27.88	21	<5	152	19.42	<0.5	<0.5
176	108876	24.939	78.321	BR	Basalt	21.22	1.46	7.92	72	62	16.32	54	48	49	18.11	<0.5	<0.5
177	108877	24.922527	78.319719	BR	Basalt	9.08	1.39	11.29	82	155	14.62	59	59	44	16.42	<0.5	<0.5
178	108878	24.866606	78.302366	BR	Basalt	18.4	0.54	36.29	321	37	44.39	93	196	83	18.55	<0.5	1.42
179	108879	24.867038	78.301067	BR	Basalt	11.62	1.64	31.04	316	46	36.37	75	33	89	27.61	<0.5	<0.5
180	108880	24.885	78.371	BR	Volcanic	7.38	2.56	7.25	45	9	7.71	8	13	63	21.67	<0.5	1.26
181	108881	24.930176	78.392146	BR	Quartz	46.9	0.58	<0.5	14	65	2.6	11	834	10	1.75	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
156	108785	24.9289	78.342959	BR	Quartz	5.84	10.53	7.04	29.45	0.54	6.55	<0.5	<0.5	3.21	54.73	<0.5	<0.5
157	108788	24.958	78.351	BR	Volcanic	162.07	21.73	37.98	570.81	11.47	1.56	<0.5	<0.5	9.45	64.31	<0.5	<0.5
158	108793	24.958	78.351	BR	Volcanic	183.07	47.93	22.42	628.94	15.8	1.71	<0.5	<0.5	9.14	69.74	<0.5	0.89
159	108796	24.77907	78.265037	BR	Pyrophyllite	2.9	1669.83	43.16	145.03	8.75	<0.5	<0.5	<0.5	12.16	40.63	<0.5	<0.5
160	108797	24.92987	78.343182	BR	Quartz	<0.5	35.69	4.26	18.49	2.17	11.44	<0.5	0.86	7.9	36.6	<0.5	<0.5
161	108798	24.92896	78.342633	BR	Quartz	<0.5	7.4	3.24	21.97	<0.5	3.44	<0.5	<0.5	5.56	24.84	<0.5	<0.5
162	108799	24.92888	78.342918	BR	Quartz	2.25	11.72	4.75	19.56	<0.5	5.12	<0.5	<0.5	4.13	26.02	<0.5	0.89
163	108651	24.92534	78.34203	SS	Quartz	156.63	66	27.24	153	20.29	2.14	<0.5	<0.5	<0.5	1.91	0.87	5.11
164	108652	24.9282	78.34178	SS	Quartz	193.31	53	39.3	158	26.85	0.99	<0.5	<0.5	<0.5	1.27	<0.5	4.82
165	108653	24.9331	78.34337	SS	Quartz	153.14	57	41.41	196	17.97	1.64	<0.5	<0.5	<0.5	2.02	2.82	5.2
166	108654	24.93788	78.3449	SS	Quartz	181.29	49	36.68	170	24.27	0.95	<0.5	<0.5	<0.5	1.58	<0.5	5.56
167	108655	24.94247	78.34324	SS	Quartz	160.8	59	32.26	193	42.24	1.31	0.76	<0.5	<0.5	1.85	1.16	4.21
168	108656	24.93601	78.34491	SS	Quartz	192.93	70	30.08	169	23.83	<0.5	<0.5	<0.5	<0.5	2.69	3.75	4.49
169	108657	24.91741	78.38978	SS	Volcanic	170.03	54	33.92	188	20.28	1.51	<0.5	<0.5	43.7	6.35	3.97	4.68
170	108658	24.90796	78.38388	SS	Volcanic	182.33	52	47.6	227	26.74	2.17	<0.5	<0.5	18.66	1.41	2.81	5.88
171	108659	24.91029	78.37745	SS	Volcanic	135.55	77	25.57	291	16.79	0.89	<0.5	<0.5	15.22	15.83	2.39	4.63
172	108660	24.92919	78.34114	SS	Volcanic	208.76	65	38.51	245	21.42	0.89	<0.5	<0.5	22.19	<0.5	1.73	4.06
173	108873	24.93908	78.375121	BR	Volcanic	125.26	152	24.29	443	12.81	2.26	2.51	<0.5	22.56	1.75	2.3	2.12
174	108874	24.939	78.321	BR	Basalt	79.76	378	26.24	162	13	<0.5	<0.5	<0.5	<0.5	1.27	0.84	1.67
175	108875	24.939	78.321	BR	Basalt	197.07	337	23.27	146	14.48	<0.5	<0.5	<0.5	30.87	<0.5	<0.5	10.33
176	108876	24.939	78.321	BR	Basalt	106.37	62	20.34	139	21.52	1.38	<0.5	<0.5	<0.5	<0.5	0.84	0.68
177	108877	24.922527	78.319719	BR	Basalt	114.21	155	22.61	161	11.13	0.9	<0.5	<0.5	13.83	1.02	2.13	0.94
178	108878	24.866606	78.302366	BR	Basalt	48.08	175	27.36	90	8.69	1.07	<0.5	<0.5	<0.5	1.53	7.35	0.67
179	108879	24.867038	78.301067	BR	Basalt	7.31	109	26.52	91	2.45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
180	108880	24.885	78.371	BR	Volcanic	146.35	253	49.02	238	20.27	0.61	<0.5	<0.5	17.58	<0.5	3.62	0.76
181	108881	24.930176	78.392146	BR	Quartz	1.42	5	1.15	7	1.28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
156	108785	24.9289	78.342959	BR	Quartz	30.29	12.36	17.37	2.28	9.2	1.26	<0.5	1.08	<0.5	1.2	<0.5	0.74
157	108788	24.958	78.351	BR	Volcanic	1427.12	86.45	119.36	11.85	57.54	8.95	2.01	5.78	0.82	3.15	0.69	2.51
158	108793	24.958	78.351	BR	Volcanic	1448.44	100.96	129.49	14.77	58.14	10.16	2.67	6.88	1.02	4.65	0.77	2.7
159	108796	24.77907	78.265037	BR	Pyrophyllite	41.87	11.03	18.99	2.73	12.63	2.81	2.49	3.52	0.81	5.22	1.18	5.1
160	108797	24.92987	78.343182	BR	Quartz	19.56	4.72	6.11	0.7	3.41	0.61	<0.5	0.59	<0.5	0.53	<0.5	<0.5
161	108798	24.92896	78.342633	BR	Quartz	21.16	4.67	6.44	0.57	3.12	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<0.5
162	108799	24.92888	78.342918	BR	Quartz	20.23	6.17	8.36	1.03	5.46	0.89	<0.5	1.09	<0.5	1.03	<0.5	0.5
163	108651	24.92534	78.34203	SS	Quartz	509	101.51	235.18	22.09	73.2	14.93	2.19	13.46	1.47	5.91	1.37	3.97
164	108652	24.9282	78.34178	SS	Quartz	314	123.57	243.03	28.15	94.02	20.57	1.67	18.74	2.19	8.86	1.97	5.54
165	108653	24.9331	78.34337	SS	Quartz	380	182.13	369.03	37.96	124.68	24.87	3.02	22.38	2.28	8.66	1.87	5.61
166	108654	24.93788	78.3449	SS	Quartz	331	147.19	376.25	31.49	101.43	19.78	2.05	18.34	2	7.94	1.78	5.42
167	108655	24.94247	78.34324	SS	Quartz	294	115.37	219.67	24.3	77.55	15.83	1.54	14.27	1.66	7.23	1.53	4.53
168	108656	24.93601	78.34491	SS	Quartz	400	98.49	252.2	22.06	74.03	15.56	2.1	13.85	1.6	6.19	1.45	4.29
169	108657	24.91741	78.38978	SS	Volcanic	410	154.34	340.73	29.01	93.63	17.28	1.91	16.62	1.76	6.76	1.52	4.5
170	108658	24.90796	78.38388	SS	Volcanic	447	155.02	367.78	34.38	111.49	23.21	2.47	21.5	2.5	10.05	2.24	6.6
171	108659	24.91029	78.37745	SS	Volcanic	1356	86.04	189.55	17.65	59.51	11.73	3.51	11.36	1.3	5.08	1.17	3.63
172	108660	24.92919	78.34114	SS	Volcanic	317	92.7	218.97	20.63	69.7	14.87	1.58	14.39	2.01	8.13	1.96	5.56
173	108873	24.93908	78.375121	BR	Volcanic	3023	81.52	186.39	16.16	53.93	10.11	5.96	9.94	1.13	4.85	1.12	3.48
174	108874	24.939	78.321	BR	Basalt	797	64.99	156.15	14.18	50.16	10.55	2.94	10.39	1.25	5.38	1.25	3.68
175	108875	24.939	78.321	BR	Basalt	801	55.29	128.77	12.1	43.43	8.95	3.05	8.76	1.09	4.62	1.11	3.21
176	108876	24.939	78.321	BR	Basalt	633	85	173.69	13.74	43.29	8.1	1.69	8.41	0.93	3.85	0.93	2.84
177	108877	24.922527	78.319719	BR	Basalt	681	71.12	153.15	13.44	44.14	8.19	1.82	8.51	1.03	4.37	1.03	3.17
178	108878	24.866606	78.302366	BR	Basalt	186	15.73	39.05	4.35	19.26	5.86	2.19	7.04	1.1	5.55	1.33	3.92
179	108879	24.867038	78.301067	BR	Basalt	43	16.46	42.01	4.75	20.77	5.91	2.68	6.67	1.06	5.43	1.3	3.76
180	108880	24.885	78.371	BR	Volcanic	679	173.62	402	35.36	111.93	20.9	3.26	20.26	2.39	10.14	2.29	7.06
181	108881	24.930176	78.392146	BR	Quartz	25	1.6	<0.5	<0.5	1.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
156	108785	24.9289	78.342959	BR	Quartz	<0.5	<0.5	<0.5	1.18	<0.5	38.14	<0.5	6.3	1.65	1.96	1.19	
157	108788	24.958	78.351	BR	Volcanic	<0.5	1.82	<0.5	12.32	0.83	19.31	1.37	36.77	<0.5	15.72	2.89	
158	108793	24.958	78.351	BR	Volcanic	<0.5	2.62	<0.5	14.56	1.11	21.85	1.12	25.66	<0.5	20.09	3.29	
159	108796	24.77907	78.265037	BR	Pyrophyllite	0.72	4.7	0.67	5.34	4.11	14.21	0.62	27.03	<0.5	3.06	0.92	
160	108797	24.92987	78.343182	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	77.79	<0.5	39.59	1.52	1.18	0.97	
161	108798	24.92896	78.342633	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	50.92	<0.5	4.09	1.08	1.5	0.51	
162	108799	24.92888	78.342918	BR	Quartz	<0.5	0.58	<0.5	0.56	<0.5	42.71	<0.5	5.47	1.45	1.53	0.85	
163	108651	24.92534	78.34203	SS	Quartz	0.59	3.6	0.51	3.66	3.14	6.78	<0.5	29	<0.5	28.48	3.19	
164	108652	24.9282	78.34178	SS	Quartz	0.84	5.59	0.73	4.3	3.55	5.04	<0.5	32	<0.5	40.58	4.87	
165	108653	24.9331	78.34337	SS	Quartz	0.77	4.5	0.64	8.94	2.5	3.86	<0.5	42	<0.5	30.62	3.92	
166	108654	24.93788	78.3449	SS	Quartz	0.82	4.76	0.71	3.14	3.62	3.37	0.54	27	<0.5	40.62	4.31	
167	108655	24.94247	78.34324	SS	Quartz	0.66	3.99	0.59	10.23	4.79	2.5	<0.5	26	<0.5	33.28	4.04	
168	108656	24.93601	78.34491	SS	Quartz	0.7	3.96	0.61	7.35	3.64	1.83	<0.5	22	<0.5	31.92	3.55	
169	108657	24.91741	78.38978	SS	Volcanic	0.65	3.86	0.57	4.02	3.09	3.75	<0.5	42	3.83	27.9	3.1	
170	108658	24.90796	78.38388	SS	Volcanic	0.97	5.82	0.85	3.74	3.82	10.8	0.62	34	<0.5	43.32	4.74	
171	108659	24.91029	78.37745	SS	Volcanic	<0.5	3.13	<0.5	5.12	3.17	2.91	<0.5	27	<0.5	20.88	3.08	
172	108660	24.92919	78.34114	SS	Volcanic	0.95	5.6	0.83	3.34	2.37	2	0.56	31	<0.5	44.49	5.59	
173	108873	24.93908	78.375121	BR	Volcanic	0.5	3.07	<0.5	27.76	2.18	2.24	<0.5	22	<0.5	17.51	3.22	
174	108874	24.939	78.321	BR	Basalt	0.55	3.07	<0.5	5.81	2.98	0.88	<0.5	20	<0.5	10.77	1.49	
175	108875	24.939	78.321	BR	Basalt	0.51	2.94	<0.5	2.78	2.55	1.19	0.87	33	<0.5	9.37	1.66	
176	108876	24.939	78.321	BR	Basalt	<0.5	2.55	<0.5	3.68	5.59	5.54	<0.5	49	<0.5	25.44	5.52	
177	108877	24.922527	78.319719	BR	Basalt	<0.5	2.97	<0.5	4.09	2.29	<0.5	<0.5	16	<0.5	23.99	5.12	
178	108878	24.866606	78.302366	BR	Basalt	0.62	3.58	0.51	5.57	2.28	1.38	<0.5	7	7.15	4.72	<0.5	
179	108879	24.867038	78.301067	BR	Basalt	0.54	3.37	<0.5	2.31	0.64	<0.5	<0.5	25	<0.5	2.53	<0.5	
180	108880	24.885	78.371	BR	Volcanic	1.03	6.04	0.86	3.62	1.4	<0.5	<0.5	28	0.87	39.41	5.61	
181	108881	24.930176	78.392146	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Li (ppm)	Be (ppm)	Sc (ppm)	V (ppm)	Cr (ppm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Zn (ppm)	Ga (ppm)	Ge (ppm)	Se (ppm)
182	108882	24.931402	78.342087	BR	Quartz	11.41	<0.5	<0.5	17	53	1.11	<5	970	<5	1.3	<0.5	<0.5
183	108883	24.935093	78.344232	BR	Quartz	11.39	0.55	0.53	11	237	1.06	6	423	<5	1.23	<0.5	<0.5
184	108884	24.935093	78.344232	BR	Quartz	13.56	<0.5	1.5	17	291	4.36	12	4396	26	6.35	<0.5	<0.5
185	108885	24.934696	78.34403	BR	Quartz	19.43	<0.5	<0.5	8	138	5	9	407	10	2.77	<0.5	<0.5
186	108886	24.928702	78.342991	BR	Quartz	12.91	<0.5	1.05	10	258	3.7	10	1221	15	3.51	<0.5	<0.5
187	108887	24.921751	78.326389	BR	Quartz	16.13	<0.5	<0.5	8	130	6.27	6	37	10	2.34	<0.5	<0.5
188	108888	24.928876	78.342918	BR	Quartz	14.37	<0.5	1.6	19	319	4.94	13	3502	27	6.67	<0.5	<0.5
189	108889	24.928957	78.342633	BR	Quartz	12.4	<0.5	1.51	13	153	4.59	13	1882	32	7.16	<0.5	<0.5
190	108890	24.928423	78.342594	BR	Quartz	13.93	<0.5	<0.5	12	273	2.53	9	3150	14	3.17	<0.5	<0.5
191	108891	24.928733	78.342572	BR	Quartz	10.54	<0.5	0.79	13	221	4.8	15	490	26	5.79	<0.5	<0.5
192	108892	24.928904	78.342959	BR	Quartz	13.1	<0.5	1.49	15	246	3.77	11	4644	24	5.94	<0.5	<0.5
193	108893	24.928957	78.342633	BR	Quartz	10.84	0.6	3.54	14	227	1.26	6	234	<5	2.07	<0.5	<0.5
194	108894	24.935093	78.344232	BR	Quartz	12.98	<0.5	0.68	12	145	4.09	11	829	26	5.13	<0.5	<0.5
195	108895	24.935866	78.344586	BR	Quartz	13.6	<0.5	<0.5	6	115	1.64	7	712	7	1.55	<0.5	<0.5
196	108896	24.93524	78.34414	SS	Quartz	38.48	2.87	23.69	173	134	20.39	99	66	149	37.52	<0.5	<0.5
197	108897	24.93524	78.34414	SS	Quartz	26.28	2.24	13.12	98	84	16.65	53	43	88	20.92	<0.5	<0.5
198	108898	24.9317	78.34269	SS	Quartz	15.46	1.36	5.93	45	100	6.77	24	25	33	16.58	<0.5	<0.5
199	108899	24.92741	78.34225	SS	Quartz	16.83	1.19	6.63	60	77	8.94	33	36	56	13.2	<0.5	<0.5
200	108900	24.92908	78.3425	SS	Quartz	14.55	1.14	8.65	51	133	9.68	24	20	48	15.21	<0.5	<0.5

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Rb (ppm)	Sr (ppm)	Y (ppm)	Zr (ppm)	Nb (ppm)	Mo (ppm)	Cd (ppm)	In (ppm)	Sn (ppm)	Sb (ppm)	Te (ppm)	Cs (ppm)
182	108882	24.931402	78.342087	BR	Quartz	4.4	9	3.5	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
183	108883	24.935093	78.344232	BR	Quartz	1.04	<5	4.38	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.39	<0.5
184	108884	24.935093	78.344232	BR	Quartz	3.65	15	6.64	23	<0.5	1.3	<0.5	<0.5	2.31	<0.5	<0.5	<0.5
185	108885	24.934696	78.34403	BR	Quartz	2.15	<5	1.83	9	<0.5	2.88	<0.5	<0.5	17.13	<0.5	<0.5	<0.5
186	108886	24.928702	78.342991	BR	Quartz	4.61	8	3.11	10	<0.5	6.73	<0.5	<0.5	<0.5	<0.5	1.32	<0.5
187	108887	24.921751	78.326389	BR	Quartz	2.56	<5	2.42	14	17.7	3.06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
188	108888	24.928876	78.342918	BR	Quartz	3.8	10	7.05	26	<0.5	3.46	<0.5	<0.5	1.14	<0.5	<0.5	<0.5
189	108889	24.928957	78.342633	BR	Quartz	5.88	15	6.49	30	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
190	108890	24.928423	78.342594	BR	Quartz	2.52	6	3.78	10	<0.5	2.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
191	108891	24.928733	78.342572	BR	Quartz	1.18	<5	4.51	17	<0.5	0.85	<0.5	<0.5	17.74	<0.5	1.45	<0.5
192	108892	24.928904	78.342959	BR	Quartz	2.73	14	5.33	18	<0.5	3.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
193	108893	24.928957	78.342633	BR	Quartz	5.1	7	26.6	5	<0.5	2.12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
194	108894	24.935093	78.344232	BR	Quartz	4	<5	8.82	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.76	<0.5
195	108895	24.935866	78.344586	BR	Quartz	1.06	<5	4.9	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
196	108896	24.93524	78.34414	SS	Quartz	59.79	37	29.49	118	9.47	2.16	<0.5	<0.5	<0.5	4.17	<0.5	4.62
197	108897	24.93524	78.34414	SS	Quartz	132.8	65	29.33	106	10.55	0.76	<0.5	<0.5	6.14	<0.5	<0.5	5.32
198	108898	24.9317	78.34269	SS	Quartz	193.13	41	26.04	148	13.43	<0.5	<0.5	<0.5	<0.5	<0.5	0.95	3.44
199	108899	24.92741	78.34225	SS	Quartz	133.56	51	20.77	152	10.28	1.53	<0.5	<0.5	<0.5	<0.5	1.39	3.29
200	108900	24.92908	78.3425	SS	Quartz	212.12	59	33.34	188	13.07	0.83	1.08	<0.5	63.49	0.74	1.05	4.14

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Ba (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)
182	108882	24.931402	78.342087	BR	Quartz	28	4.59	4.57	0.64	3.62	0.77	<0.5	0.79	<0.5	0.66	<0.5	<0.5
183	108883	24.935093	78.344232	BR	Quartz	26	0.99	<0.5	<0.5	0.91	<0.5	<0.5	0.62	<0.5	0.53	<0.5	<0.5
184	108884	24.935093	78.344232	BR	Quartz	30	8.2	14.9	1.49	7.13	1.64	<0.5	1.61	<0.5	1.13	<0.5	0.81
185	108885	24.934696	78.34403	BR	Quartz	14	1.32	<0.5	<0.5	1.34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
186	108886	24.928702	78.342991	BR	Quartz	23	4.82	6.66	0.74	4.05	0.99	<0.5	0.77	<0.5	0.51	<0.5	<0.5
187	108887	24.921751	78.326389	BR	Quartz	52	17.37	42.25	3.7	12.61	1.91	<0.5	1.69	<0.5	0.55	<0.5	<0.5
188	108888	24.928876	78.342918	BR	Quartz	22	10.99	21.07	2.1	9.12	2.18	<0.5	1.82	<0.5	1.11	<0.5	0.82
189	108889	24.928957	78.342633	BR	Quartz	24	9.01	17.45	1.71	7.87	1.84	<0.5	1.73	<0.5	0.99	<0.5	0.71
190	108890	24.928423	78.342594	BR	Quartz	14	2.91	1.98	<0.5	2.84	0.73	<0.5	0.64	<0.5	0.57	<0.5	<0.5
191	108891	24.928733	78.342572	BR	Quartz	13	6.79	10.63	1.04	5.4	1.22	<0.5	1.07	<0.5	0.67	<0.5	0.53
192	108892	24.928904	78.342959	BR	Quartz	16	7.24	12.74	1.49	7.04	1.59	<0.5	1.45	<0.5	0.89	<0.5	0.6
193	108893	24.928957	78.342633	BR	Quartz	20	4.24	6.54	0.96	6.61	2.78	0.62	3.88	0.67	3.41	0.87	2.43
194	108894	24.935093	78.344232	BR	Quartz	15	12.59	26.85	2.63	11.35	2.75	<0.5	2.37	<0.5	1.32	<0.5	0.9
195	108895	24.935866	78.344586	BR	Quartz	21	9.26	16.37	1.6	7.03	1.59	<0.5	1.44	<0.5	0.74	<0.5	0.58
196	108896	24.93524	78.34414	SS	Quartz	245	134.01	250.28	28.57	97.92	19.62	2.71	16.67	1.7	6.14	1.35	3.97
197	108897	24.93524	78.34414	SS	Quartz	380	118.25	260	25.34	85.35	17.51	2.48	15.48	1.66	6.25	1.38	3.96
198	108898	24.9317	78.34269	SS	Quartz	264	111.23	240.92	23.99	79.54	16.32	1.63	14.23	1.56	5.78	1.25	3.89
199	108899	24.92741	78.34225	SS	Quartz	311	72.12	174.55	15.81	52.75	10.94	1.45	10.14	1.12	4.54	0.99	3.11
200	108900	24.92908	78.3425	SS	Quartz	383	111.45	270.35	24.51	81.27	17.27	2.19	15.63	1.86	7.74	1.71	5.1

Sl No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Tm (ppm)	Yb (ppm)	Lu (ppm)	Hf (ppm)	Ta (ppm)	W (ppm)	Tl (ppm)	Pb (ppm)	Bi (ppm)	Th (ppm)	U (ppm)	
182	108882	24.931402	78.342087	BR	Quartz	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	8	<0.5	1.05	<0.5	
183	108883	24.935093	78.344232	BR	Quartz	<0.5	<0.5	<0.5	0.76	<0.5	<0.5	<0.5	9	<0.5	<0.5	1.49	
184	108884	24.935093	78.344232	BR	Quartz	<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5	1.5	1.24	
185	108885	24.934696	78.34403	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5	0.6	0.52	
186	108886	24.928702	78.342991	BR	Quartz	<0.5	<0.5	<0.5	10.34	<0.5	<0.5	<0.5	39	12.26	<0.5	1.01	
187	108887	24.921751	78.326389	BR	Quartz	<0.5	<0.5	<0.5	2.65	2.82	<0.5	<0.5	8	<0.5	2.12	0.69	
188	108888	24.928876	78.342918	BR	Quartz	<0.5	0.64	<0.5	0.75	<0.5	<0.5	<0.5	7	<0.5	1.67	1.11	
189	108889	24.928957	78.342633	BR	Quartz	<0.5	0.59	<0.5	3.44	<0.5	<0.5	<0.5	<5	0.68	1.8	0.77	
190	108890	24.928423	78.342594	BR	Quartz	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	0.7	<0.5	
191	108891	24.928733	78.342572	BR	Quartz	<0.5	0.51	<0.5	0.7	<0.5	<0.5	<0.5	<5	<0.5	1.17	0.74	
192	108892	24.928904	78.342959	BR	Quartz	<0.5	0.55	<0.5	1.66	<0.5	<0.5	<0.5	7	<0.5	1.23	0.97	
193	108893	24.928957	78.342633	BR	Quartz	<0.5	2.44	<0.5	1.8	<0.5	<0.5	<0.5	<5	<0.5	1.51	2.02	
194	108894	24.935093	78.344232	BR	Quartz	<0.5	0.77	<0.5	0.8	<0.5	<0.5	<0.5	<5	<0.5	0.98	0.82	
195	108895	24.935866	78.344586	BR	Quartz	<0.5	0.56	<0.5	0.58	<0.5	<0.5	<0.5	7	<0.5	1.15	<0.5	
196	108896	24.93524	78.34414	SS	Quartz	0.59	3.42	0.52	3.1	2.06	1.31	<0.5	13	<0.5	16.47	2.73	
197	108897	24.93524	78.34414	SS	Quartz	0.56	3.46	0.5	3.21	1.32	<0.5	<0.5	21	<0.5	21.02	2.83	
198	108898	24.9317	78.34269	SS	Quartz	0.55	3.49	0.5	2.56	2.05	<0.5	0.69	22	<0.5	28.37	3.27	
199	108899	24.92741	78.34225	SS	Quartz	<0.5	2.89	<0.5	2.23	1.04	<0.5	<0.5	21	<0.5	23.49	3.18	
200	108900	24.92908	78.3425	SS	Quartz	0.8	4.84	0.72	19.03	1.03	<0.5	0.61	25	<0.5	38.42	3.96	

Annexure VI_ XRF Data of Surface samples

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
1	107026	24.956892	78.383585	Rockchip	12.44	0.02	2.38	0.01	4.02	1.09	1.1	0.12	6.61	0.3	0.44	69.9	1.01	0.2
2	107027	24.859002	78.343834	Rockchip	11.79	0.02	10.53	0.04	7.64	1.28	7.85	0.18	3.14	0.12	0.34	54.83	1.81	0.19
3	108029	24.934369	78.343823	Rockchip	12.19	<0.01	0.04	0.02	1.09	5.03	0.11	0.01	3.42	0.07	0.06	76.34	0.6	<0.05
4	108030	24.927088	78.353211	Rockchip	12.08	<0.01	0.16	0.02	0.85	5.18	0.12	<0.01	3.22	0.08	0.04	76.7	0.55	<0.05
5	108031	24.925095	78.362838	Rockchip	7.29	<0.01	<0.01	0.02	0.8	2.37	0.15	0.01	1.91	0.07	0.01	86.28	0.07	<0.05
6	108032	24.919977	78.367025	Rockchip	16.48	<0.01	7.27	0.02	9.39	1.2	6.24	0.12	1.78	0.16	0.82	53.02	2.43	0.06
7	108033	24.905705	78.374094	Rockchip	14.55	0.18	2.34	<0.01	3.77	4.07	0.86	0.07	3.69	0.24	0.59	67.71	0.88	<0.05
8	108034	24.952197	78.34173	Rockchip	9.87	<0.01	<0.01	<0.01	0.99	5.13	0.59	<0.01	1.33	0.08	0.05	79.74	1.24	<0.05
9	108035	24.945444	78.365848	Rockchip	15.93	0.28	1.16	<0.01	4.25	5.8	0.48	0.12	3.98	0.18	0.52	65.1	1.15	<0.05
10	108036	24.939433	78.375024	Rockchip	15.04	0.02	0.72	<0.01	2.87	6.01	0.18	0.1	4.05	0.11	0.35	68.54	0.89	<0.05
11	108037	24.935946	78.382855	Rockchip	15.69	0.1	0.58	<0.01	3.04	6.25	0.27	0.08	4.13	0.13	0.42	67.22	1.03	<0.05

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
12	108038	24.930897	78.390646	Rockchip	14.85	0.07	0.82	0.01	2.87	5.23	0.23	0.08	4.21	0.12	0.36	69.02	1.03	<0.05
13	108039	24.92312	78.403201	Rockchip	14.3	0.08	0.54	0.01	1.58	4.76	0.18	0.03	4.12	0.1	0.21	72.34	0.73	<0.05
14	108040	24.960473	78.380776	Rockchip	12.98	<0.01	0.21	0.02	1.55	5.42	0.13	0.02	3.35	0.08	0.13	74.24	0.8	<0.05
15	108041	24.967865	78.368574	Rockchip	12.97	0.01	0.35	0.01	1.5	5.15	0.36	0.02	3.6	0.09	0.16	73.74	0.96	<0.05
16	108042	24.966628	78.37625	Rockchip	15.17	0.22	1.39	0.02	3.21	5.08	0.31	0.1	4.31	0.15	0.46	67.54	0.94	<0.05
17	108043	24.959792	78.382393	Rockchip	14.77	0.21	0.59	<0.01	2.73	5.23	0.52	0.06	3.63	0.16	0.41	69.32	1.28	<0.05
18	108044	24.956212	78.386477	Rockchip	14.7	0.13	1.11	0.01	2.35	5.13	0.25	0.08	3.77	0.12	0.32	69.91	1.1	<0.05
19	107002	24.808567	78.289363	Rockchip	14	0.1	0.98	<0.01	1.94	6.86	0.58	0.12	3.97	0.06	0.52	69.3	1.03	<0.05
20	107003	24.767902	78.259403	Rockchip	10.76	0.02	7.37	0.02	12.6	0.51	6.35	0.32	3.31	0.09	1.02	53.99	2.76	0.32
21	107009	24.957541	78.382017	Rockchip	11.89	0.24	1.83	<0.01	3.62	5.22	0.58	0.12	3	0.13	0.45	70.6	1.58	<0.05
22	107013	24.956699	78.384343	Rockchip	12.33	0.13	1.31	<0.01	1.45	4.88	0.22	0.03	3.66	0.07	0.25	74.26	0.73	<0.05
23	107014	24.782548	78.261486	Rockchip	9.65	0.03	0.04	<0.01	0.87	3.83	0.34	0.03	0.09	0.01	0.1	81.92	2.19	<0.05
24	107017	24.85633	78.348305	Rockchip	11.55	0.05	8.65	0.02	9.97	1.6	7.48	0.2	2.14	0.12	0.54	54.27	2.69	0.13
25	107021	24.924873	78.341483	Rockchip	3.95	0.01	0.07	0.03	0.82	2.07	0.59	0.03	0.25	0.04	0.09	89.45	1.06	0.17

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
26	107029	24.885653	78.367528	Rockchip	10.89	0.15	1.09	0.01	2.2	4.67	0.15	0.08	3.62	0.04	0.28	75.23	0.74	<0.05
27	107031	24.796635	78.30369	Rockchip	12.26	0.08	3.31	0.02	4.04	4.31	1.35	0.47	3.03	0.21	0.53	67.74	1.95	0.71
28	107040	24.325174	78.469703	Rockchip	12.12	0.06	0.86	0.02	1.6	4.33	0.21	0.06	3.97	0.03	0.19	75.3	0.67	0.06
29	108851	24.90796	78.38388	Rockchip	14.79	0.12	2.48	<0.05	5.3	4.62	0.77	<0.05	3.34	0.28	0.78	66.3	1.05	-
30	108852	24.91029	78.37745	Rockchip	16.75	0.43	1.35	<0.05	4.29	6.06	0.39	0.06	3.94	0.11	0.49	65.19	0.8	-
31	108853	24.95772	78.40143	Rockchip	14.55	0.11	1.47	<0.05	3.63	5.23	0.41	<0.05	3.99	0.07	0.3	69.29	0.77	-
32	108854	24.95869	78.40052	Rockchip	13.9	0.13	0.47	<0.05	2.45	5.82	0.31	<0.05	3.28	0.06	0.23	72.53	0.7	-
33	108855	24.95904	78.39919	Rockchip	15.18	0.16	1.73	<0.05	3.76	5.62	0.38	<0.05	4.05	0.09	0.37	67.24	1.25	-
34	108856	24.95882	78.3989	Rockchip	15.64	0.11	0.83	<0.05	2.6	6.38	0.18	<0.05	3.73	<0.05	0.21	69.26	0.9	-
35	108857	24.95747	78.40114	Rockchip	14.44	0.13	1.18	<0.05	2.3	5.23	0.17	<0.05	4.13	<0.05	0.23	71.41	0.63	-
36	108858	24.98354	78.37279	Rockchip	13.76	0.08	0.48	<0.05	2.5	5.84	0.39	<0.05	3.38	<0.05	0.26	72.19	0.94	-
37	108859	24.90037	78.3453	Rockchip	19.98	0.06	8.87	<0.05	9.1	1.97	3.16	0.09	3.08	0.39	0.89	49.81	2.21	-
38	108860	24.85638	78.31877	Rockchip	19.59	<0.05	11.05	<0.05	7.82	1.39	6.36	0.09	1.71	0.08	0.3	49.41	2.01	-
39	108861	24.86476	78.31627	Rockchip	19.12	<0.05	10.96	<0.05	7.77	1.29	5.77	0.09	2.02	0.11	0.42	50.19	1.9	-

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
40	108862	24.92253	78.31972	Rockchip	13.21	0.08	2.22	0.05	4.84	3.51	2.52	<0.05	4.06	0.07	0.45	66.94	1.93	-
41	108863	24.86661	78.30237	Rockchip	14.83	<0.05	7.79	<0.05	12.45	1.11	5.45	0.13	3.73	0.12	1.3	50.99	1.92	-
42	108864	24.86704	78.30107	Rockchip	16.49	0.12	4.73	<0.05	6.68	3.47	2.12	0.07	3.71	0.3	0.73	59.96	1.32	-
43	108865	24.86534	78.26958	Rockchip	15.42	0.13	2.46	<0.05	4.6	4.28	1.23	<0.05	4	0.21	0.51	65.87	1.16	-
44	108866	24.87074	78.27734	Rockchip	17.24	<0.05	1.83	<0.05	5.34	0.27	0.86	<0.05	9.36	0.16	0.68	63.43	0.71	-
45	108867	24.95671	78.38456	Rockchip	14.37	0.09	1.97	<0.05	3.7	4.76	0.62	<0.05	3.81	0.08	0.34	69.61	0.51	-
46	108868	24.88931	78.37127	Rockchip	14.43	0.15	1.3	<0.05	4.09	3.89	0.38	<0.05	4.81	0.05	0.34	69.7	0.73	-
47	108869	24.77907	78.26504	Rockchip	18.15	<0.05	19.58	<0.05	14.87	< 0.05	2.31	0.13	0.09	<0.05	0.97	41.06	2.47	-
48	108870	24.95671	78.38456	Rockchip	15.21	0.15	1.28	<0.05	2.46	5.35	0.39	<0.05	4.11	0.06	0.3	70	0.58	-
49	108871	24.93608	78.34011	Rockchip	12.37	<0.05	0.53	<0.05	1.94	5.16	0.13	<0.05	3.46	<0.05	0.12	75.63	0.56	-
50	108872	24.92906	78.33713	Rockchip	11.94	<0.05	0.21	0.05	1.89	4.93	0.24	<0.05	3.32	<0.05	0.12	76.61	0.61	-
51	109301	24.92541	78.35782	Rockchip	16.52	<0.05	0.4	<0.05	2.33	7.11	0.12	<0.05	4.69	<0.05	0.15	67.91	0.66	-
52	109302	24.92843	78.35542	Rockchip	12.44	<0.05	0.32	<0.05	3.1	5.63	0.08	0.42	2.59	<0.05	0.11	74.42	0.78	-

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
53	109303	24.93331	78.35041	Rockchip	13.38	<0.05	0.28	<0.05	1.53	5.24	< 0.05	<0.05	3.99	0.08	0.11	74.7	0.56	-
54	109304	24.93287	78.35288	Rockchip	12.18	<0.05	0.11	<0.05	1.67	5.65	< 0.05	<0.05	3.31	<0.05	0.11	76.36	0.46	-
55	109305	24.88918	78.37031	Rockchip	13.2	0.06	0.72	<0.05	2.36	5.42	0.11	<0.05	3.74	<0.05	0.19	73.27	0.65	-
56	109306	24.93686	78.3619	Rockchip	12.62	<0.05	0.42	<0.05	2.09	5.52	0.1	<0.05	3.37	<0.05	0.13	75.08	0.53	-
57	109307	24.93967	78.35984	Rockchip	12.63	<0.05	0.33	<0.05	1.87	5.56	0.09	<0.05	3.3	<0.05	0.13	75.5	0.47	-
58	109308	24.94089	78.35911	Rockchip	15.56	0.17	1.3	<0.05	3.92	5.85	0.3	<0.05	4.4	0.08	0.41	67.31	0.5	-
59	109309	24.93421	78.36711	Rockchip	12.59	<0.05	0.42	<0.05	1.9	5.29	0.07	<0.05	3.6	<0.05	0.12	75.33	0.56	-
60	109310	24.95725	78.34677	Rockchip	16.02	0.15	0.27	<0.05	3.98	6.8	0.54	<0.05	3.36	0.05	0.41	66.83	1.41	-
61	109311	24.95354	78.34989	Rockchip	13.27	<0.05	0.31	<0.05	2.06	5.15	0.09	<0.05	3.87	<0.05	0.16	74.63	0.34	-
62	109312	24.9528	78.35032	Rockchip	13.57	<0.05	0.26	<0.05	2.61	5.71	0.28	<0.05	3.67	<0.05	0.2	72.92	0.62	-
63	109313	24.95475	78.3493	Rockchip	14.86	0.06	2.69	<0.05	2.86	3.81	0.35	0.07	2.73	<0.05	0.2	70.8	1.42	-
64	109314	24.96195	78.3701	Rockchip	15.21	0.28	1.54	<0.05	3.92	6.44	0.32	0.07	3.81	0.1	0.39	67.22	0.58	-

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
65	109315	24.95356	78.38058	Rockchip	13.37	0.06	0.76	<0.05	2.45	5.84	0.17	<0.05	3.36	<0.05	0.2	72.95	0.7	-
66	109316	24.95937	78.38004	Rockchip	13.55	0.12	1.34	<0.05	2.87	5.54	0.16	<0.05	3.5	<0.05	0.24	71.85	0.64	-
67	109317	24.9514	78.3791	Rockchip	15.87	0.3	1.71	<0.05	4.21	7.46	0.39	0.12	3.22	0.1	0.45	64.71	1.32	-
68	109318	24.9498	78.37544	Rockchip	15.4	0.38	1.51	<0.05	4.88	6.37	0.33	0.11	3.66	0.12	0.45	65.55	1.1	-
69	109319	24.96282	78.38005	Rockchip	15.53	0.26	2	<0.05	4.06	5.89	0.31	0.1	4.06	0.09	0.41	66.6	0.56	-
70	109320	24.96596	78.36622	Rockchip	14.35	0.12	1.24	<0.05	2.84	4.46	0.18	<0.05	4.63	0.05	0.27	70.9	0.82	-
71	109321	24.93921	78.37467	Rockchip	15	0.08	1.14	<0.05	3.65	5.88	0.15	<0.05	4.24	0.05	0.35	68.58	0.69	-
72	109322	24.94109	78.37434	Rockchip	15.38	<0.05	0.81	<0.05	4.1	6.34	0.15	<0.05	4.19	<0.05	0.35	67.95	0.48	-
73	109323	24.92244	78.37369	Rockchip	14.45	0.16	1.62	<0.05	3.64	5.36	0.23	0.06	3.98	0.06	0.32	69.26	0.73	-
74	109324	24.94116	78.37257	Rockchip	14.41	<0.05	0.95	<0.05	3.93	6.26	0.17	<0.05	3.78	<0.05	0.33	69.03	0.84	-
75	109325	24.96533	78.36339	Rockchip	13.85	0.14	0.67	<0.05	2.68	5.32	0.34	<0.05	3.7	<0.05	0.25	72.16	0.75	-
76	109326	24.96243	78.36581	Rockchip	13.25	0.08	0.43	<0.05	2.92	5.29	0.24	<0.05	3.43	<0.05	0.2	73.48	0.5	-
77	109327	24.96369	78.36463	Rockchip	12.58	0.1	0.1	<0.05	2.52	6.33	0.82	<0.05	2.02	<0.05	0.22	73.94	1.22	-
78	109328	24.91264	78.38617	Rockchip	15.64	0.37	1.56	<0.05	4.2	5.73	0.27	<0.05	3.95	0.1	0.44	66.62	0.98	-

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
79	109329	24.91373	78.38467	Rockchip	16.06	0.31	1.49	<0.05	4.34	5.93	0.31	0.08	4.18	0.1	0.45	65.54	1.1	-
80	109330	24.9143	78.38599	Rockchip	12.81	0.13	0.76	<0.05	3.19	5.28	0.2	<0.05	3.27	<0.05	0.28	73.18	0.69	-
81	109331	24.91394	78.38659	Rockchip	16.35	0.38	1.45	<0.05	4.31	6.13	0.37	<0.05	4.13	0.11	0.48	65.21	0.93	-
82	109332	24.9139	78.38659	Rockchip	13.85	<0.05	0.52	<0.05	3.14	5.77	0.1	<0.05	3.8	<0.05	0.24	71.7	0.67	-
83	109333	24.91756	78.38897	Rockchip	13.55	<0.05	0.57	<0.05	2.54	5.75	0.09	<0.05	3.68	<0.05	0.19	72.15	0.74	-
84	109334	24.91846	78.38735	Rockchip	12.92	<0.05	0.44	<0.05	1.29	5.66	<0.05	<0.05	3.55	<0.05	0.15	75.35	0.48	-
85	109335	24.9184	78.38587	Rockchip	13.83	0.12	0.76	<0.05	2.43	5.12	0.19	<0.05	3.81	<0.05	0.22	72.73	0.68	-
86	109336	24.93503	78.39471	Rockchip	15.52	0.13	2.47	<0.05	4.13	4.91	0.68	<0.05	3.95	0.12	0.37	65.99	1.6	-
87	109337	24.92357	78.36449	Rockchip	12.08	<0.05	0.59	<0.05	2.09	4.52	0.08	<0.05	3.21	<0.05	0.12	76.57	0.6	-
88	109338	24.92427	78.36366	Rockchip	12.55	<0.05	0.42	<0.05	1.75	4.94	0.06	<0.05	3.71	<0.05	0.12	76.01	0.34	-
89	109339	24.94797	78.34486	Rockchip	12.58	<0.05	0.12	<0.05	1.36	5.47	0.16	<0.05	3.23	<0.05	0.13	76.22	0.64	-
90	109340	24.93224	78.34001	Rockchip	12.27	<0.05	0.24	<0.05	1.57	5.45	0.06	<0.05	3.53	<0.05	0.11	76.41	0.27	-
91	109341	24.91073	78.36661	Rockchip	12.61	<0.05	0.39	<0.05	1.62	5.15	0.09	<0.05	3.51	<0.05	0.11	75.85	0.57	-

Sl No	Sample ID	Latitude	Longitude	Sample type	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
92	109342	24.91743	78.38978	Rockchip	13.18	<0.05	0.57	<0.05	2.64	5.4	0.09	<0.05	3.66	<0.05	0.19	73.39	0.74	-
93	109343	24.9684	78.33885	Rockchip	14.55	0.08	6.69	<0.05	9.23	2.56	5.3	0.09	2.85	0.25	0.8	55.7	1.6	-
94	109344	24.92906	78.33713	Rockchip	12.29	<0.05	0.19	<0.05	1.6	5.3	0.15	<0.05	3.28	<0.05	0.11	76.56	0.42	-
95	109345	24.91036	78.37749	Rockchip	15.92	0.38	1.69	<0.05	3.93	5.95	0.38	<0.05	4.12	0.1	0.44	66.4	0.55	-
96	109346	24.91291	78.37714	Rockchip	14.22	0.18	0.93	<0.05	4.15	5.12	0.43	0.09	3.78	0.09	0.38	69.62	0.86	-
97	109347	24.95371	78.40045	Rockchip	15.59	0.26	2	<0.05	4.78	5.52	0.37	0.08	4.04	0.1	0.44	65.68	1.01	-
98	109348	24.92834	78.33657	Rockchip	12.36	<0.05	0.29	<0.05	1.73	4.79	0.17	<0.05	3.61	<0.05	0.11	76.41	0.44	-
99	109349	24.91988	78.3763	Rockchip	1.12	<0.05	0.17	<0.05	1.18	0.28	0.18	<0.05	0.08	<0.05	0.06	96.53	0.3	-
100	109350	24.92741	78.34232	Rockchip	4.4	<0.05	0.16	<0.05	3.02	1.16	1.47	<0.05	0.08	0.11	0.28	87.76	1.44	-

Annexure VII_ XRF Data of Surface Check Samples

Sl No	Sample ID	Latitude	Longitude	Sample type	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	TiO2	SiO2	LOI	S
1	107002	24.808567	78.289363	Rockchip	Shiva	17.76	0.11	0.89	<0.05	2.56	7.78	0.64	<0.05	4.45	0.06	0.53	64.15	0.94	
					BV	14	0.1	0.98	<0.01	1.94	6.86	0.58	0.12	3.97	0.06	0.52	69.3	1.03	< 0.05
2	107003	24.767902	78.259403	Rockchip	Shiva	13.55	<0.05	7.22	<0.05	12.25	1.49	5.84	0.18	3.01	0.09	0.99	52.8	2.22	
					BV	10.76	0.02	7.37	0.02	12.6	0.51	6.35	0.32	3.31	0.09	1.02	53.99	2.76	0.32
3	107009	24.957541	78.382017	Rockchip	Shiva	15.76	0.38	1.82	<0.05	4.21	7.01	0.29	<0.05	3.25	0.12	0.46	65.13	1.39	
					BV	11.89	0.24	1.83	<0.01	3.62	5.22	0.58	0.12	3	0.13	0.45	70.6	1.58	< 0.05
4	107013	24.956699	78.384343	Rockchip	Shiva	15.08	0.16	1.18	<0.05	2.33	5.61	0.31	<0.05	4.06	0.08	0.29	70.05	0.76	
					BV	12.33	0.13	1.31	<0.01	1.45	4.88	0.22	0.03	3.66	0.07	0.25	74.26	0.73	< 0.05
5	107014	24.782548	78.261486	Rockchip	Shiva	11.88	<0.05	< 0.05	<0.05	1.87	4	0.39	<0.05	0.08	<0.05	0.1	79.84	1.73	
					BV	9.65	0.03	0.04	<0.01	0.87	3.83	0.34	0.03	0.09	0.01	0.1	81.92	2.19	< 0.05
6	107031	24.796635	78.30369	Rockchip	Shiva	15.27	0.13	1.07	<0.05	4.6	5.81	2.05	<0.05	3.27	0.23	0.59	65.1	1.76	
					BV	12.26	0.08	3.31	0.02	4.04	4.31	1.35	0.47	3.03	0.21	0.53	67.74	1.95	0.71
7	107040	24.948529	78.362874	Rockchip	Shiva	13.8	0.09	0.7	<0.05	2.3	5.5	0.17	<0.05	4.16	<0.05	0.22	72	0.89	
					BV	12.12	0.06	0.86	0.02	1.6	4.33	0.21	0.06	3.97	0.03	0.19	75.3	0.67	0.06
8	108037	24.935946	78.382855	Rockchip	Shiva	15.2	0.12	0.85	0.06	3.9	5.93	0.26	<0.05	4.4	0.07	0.39	67.62	1.03	
					BV	15.69	0.1	0.58	<0.01	3.04	6.25	0.27	0.08	4.13	0.13	0.42	67.22	1.03	<0.05
9	108038	24.930897	78.390646	Rockchip	Shiva	15.04	0.12	0.84	0.05	4.09	5.98	0.25	<0.05	3.82	0.06	0.36	68.16	1.05	
					BV	14.85	0.07	0.82	0.01	2.87	5.23	0.23	0.08	4.21	0.12	0.36	69.02	1.03	<0.05
10	108039	24.928874	78.386262	Rockchip	Shiva	14.7	0.13	0.72	<0.05	2.58	5.83	0.21	<0.05	4.12	<0.05	0.25	70.65	0.65	
					BV	14.3	0.08	0.54	0.01	1.58	4.76	0.18	0.03	4.12	0.1	0.21	72.34	0.73	<0.05

Annexure VIII_Gold Fire Assay Data of Surface Sample

SL No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Au (ppm)
1	107171	24.93838	78.37525	Pit Sample	Volcanic	<0.01
2	107177	24.9426	78.37723	Pit Sample	Volcanic	<0.01
3	107184	24.95703	78.38322	Pit Sample	Volcanic	<0.01
4	107186	24.95703	78.38322	Pit Sample	Volcanic	<0.01
5	108015	24.77914	78.26274	Pit Sample	Quartz	<0.01
6	107036	24.93943	78.37502	Bedrock	Volcanic	0.005
7	107037	24.93595	78.38286	Bedrock	Volcanic	0.005
8	107038	24.94422	78.37776	Bedrock	Quartz	0.016
9	107039	24.92526	78.38845	Bedrock	Volcanic	0.005
10	107041	24.94472	78.378	Bedrock	Quartz	0.005
11	107045	24.94422	78.37776	Bedrock	Volcanic	0.004
12	107047	24.94093	78.37718	Bedrock	Quartz	0.005
13	107048	24.94092	78.37652	Bedrock	Quartz	0.004
14	107049	24.94267	78.37725	Bedrock	Volcanic	0.006
15	108661	24.93509	78.34423	Bedrock	Quartz	<0.01
16	108662	24.93509	78.34423	Bedrock	Quartz	<0.01
17	108663	24.93509	78.34423	Bedrock	Quartz	<0.01
18	108664	24.9347	78.34403	Bedrock	Quartz	<0.01
19	108665	24.92175	78.32639	Bedrock	Quartz	<0.01
20	108666	24.9314	78.34209	Bedrock	Volcanic	<0.01
21	108667	24.9347	78.34403	Bedrock	Quartz	<0.01
22	108668	24.9287	78.34299	Bedrock	Quartz	<0.01
23	108669	24.92896	78.34263	Bedrock	Quartz	<0.01
24	108670	24.92888	78.34292	Bedrock	Quartz	<0.01
25	108671	24.92175	78.32639	Bedrock	Quartz	<0.01

SL No	Sample ID	Latitude	Longitude	Sample Type	Rock Type	Au (ppm)
26	108672	24.9289	78.34296	Bedrock	Quartz	<0.01
27	108673	24.92842	78.34259	Bedrock	Quartz	<0.01
28	108674	24.92873	78.34257	Bedrock	Quartz	<0.01
29	108675	24.95725	78.34677	Bedrock	Volcanic	<0.01
30	108676	24.9286	78.34275	Bedrock	Quartz	<0.01
31	108677	24.93122	78.34344	Bedrock	Volcanics	<0.01
32	108678	24.93509	78.34423	Bedrock	Quartz	<0.01
33	108769	24.92491	78.34159	Bedrock	Quartz	0.002
34	108770	24.9264	78.34232	Bedrock	Quartz	0
35	108771	24.9274	78.34234	Bedrock	Quartz	0.002
36	108772	24.9268	78.34213	Bedrock	Medium grained equigranular granite Sericitized	0.002
37	108779	24.92987	78.34318	Bedrock	Quartz	0.001
38	108780	24.92896	78.34263	Bedrock	Quartz	0.002
39	108781	24.92888	78.34292	Bedrock	Quartz	0.002
40	108782	24.92741	78.34232	Bedrock	Quartz	0
41	108783	24.92659	78.34218	Bedrock	Medium grained equigranular granite Sericitized	0.003
42	108784	24.92987	78.34318	Bedrock	Quartz	0
43	108786	24.95475	78.3493	Bedrock	Volcanic	0
44	108787	24.95475	78.3493	Bedrock	Volcanic	0.002
45	108789	24.95703	78.38325	Bedrock	Quartz	0.001
46	108790	24.95697	78.38322	Bedrock	Quartz	0.003
47	108791	24.95697	78.38322	Bedrock	Quartz	0.003
48	108792	24.95689	78.38316	Bedrock	Volcanic	0.004
49	108794	24.93096	78.34327	Bedrock	Quartz	0.003
50	108795	24.93074	78.34333	Bedrock	Quartz	0.004

Annexure IX_ Gold Fire Assay Data of Surface Check Samples

SL No	Sample ID	Latitude	Longitude	Sample Type	Lab	Au (ppm)
1	107037	24.935946	78.382855	BED ROCK	Shiva	<0.01
					BV	0.005
2	107038	24.944224	78.377758	BED ROCK	Shiva	0.01
					BV	0.016
3	107039	24.925257	78.388452	BED ROCK	Shiva	<0.01
					BV	0.005
4	107041	24.944723	78.377998	BED ROCK	Shiva	<0.01
					BV	0.005
5	107045	24.94422	78.37776	BED ROCK	Shiva	<0.01
					BV	0.004

Annexure X_ Anomalus Exploration Targets in Mailar Block

A. Target Identification & Location

1. **Target ID / Number-** 1
2. **Target Area -** 1.19 sq km
3. **Zone –** Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.889580/ 78.370748

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting-** NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- AHI anomaly, VCD anomaly, Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- W (6.4 ppm), Mo (1.8 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- Bedrock samples, Stream sediments

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** Magnetic High lineament trending NW SE

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators, b. Hydrothermal pathway, c. Structurally prepared site, d. Metal anomaly clustering

G. Target Ranking & Priority

17. **Priority Class-** High
18. **High Key Factors Driving Priority-** a. Geochemical strength, b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. IP/Resistivity b. Drilling c. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**2
2. **Target Area (in sq km)-** 1.24
3. **Zone** – Northen Zone
4. **Approximate Coordinates (Lat/Long)-** 24.917115/ 78.382453

B. Geological Context

5. **Host Lithology / Lithological Setting-** Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones, Sulphide staining

C. Hydrothermal Alteration Attributes

8. Alteration Type Present- a. Potassic b. EHT (epithermal overprint)

9. Alteration Intensity- Very Strong

10. **Alteration Mapping Evidence- a.** AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** Cu (1484 ppm), Mo (4.15 ppm), W (38 ppm), Sn (5.81 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- a. Bedrock samples b. Stream sediments

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** Magnetic High

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- a. Porphyry Cu–Mo b. Epithermal high-sulphidation

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class-** Very High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**3
2. **Target Area (in sq km)-** 0.63
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.936180/ 78.391031

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** Mo (2.5 ppm)
12. **Geochemical Signature Type-** Porphyry Cu–Mo signature
13. **Geochemical Evidence Source- a.** Bedrock samples b. Stream sediments

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style- a.** Porphyry Cu–Mo b. Epithermal high-sulphidation Cu–Bi c. Polymetallic vein system d. Skarn-like or dyke-related system e. Argillic lithocap with telescoping
16. **Exploration Rationale- a.** Fertility indicators b. Hydrothermal pathway c. Structurally prepared site d. Metal anomaly clustering e. Magnetic signature indicative of intrusion/alteration f. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class-** High
18. **Key Factors Driving Priority- a.** Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)- a.** Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**4
2. **Target Area (sq km)-** 0.19
3. **Zone** – Northen Zone
4. **Approximate Coordinates (Lat/Long)-** 24.955325/78.397031

B. Geological Context

5. **Host Lithology / Lithological Setting-** Felsic volcanics
6. **Structural Setting-** NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present- a.** Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence- a.** AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** Mo (2.5 ppm)
12. **Geochemical Signature Type-** Porphyry Cu–Mo signature
13. **Geochemical Evidence Source- a.** Bedrock samples b. Quartz vein samples c. Stream sediments

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style-** Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**5
2. **Target Area (sq km)-** 4.01
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.952888/ 78.376373

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Chalcopyrite, Pyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (500 ppm), Mo (2-3 ppm), Sn (6.73 ppm), W (94 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- a. Bedrock samples b. Stream sediments c. Pitting samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**6
2. **Target Area (sq km)-** 0.65
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.936726/ 78.354897

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- a. alteration zones b. Sulphide staining (Pyrite, Chalcopyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies- NA**

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- a. Bedrock samples b. Stream sediments c. Pitting/trenching samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (NW-SE trending lineaments present)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style –** Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. Drilling c. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**7
2. **Target Area (sq km)-** 0.13
3. **Zone** – Northern Part
4. **Approximate Coordinates (Lat/Long)- 24.956676/ 78.350037**

B. Geological Context

5. **Host Lithology / Lithological Setting**- a. Felsic volcanics b. Quartz vein
6. **Structural Setting**- NNW–SSE Quartz Vein
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (131 ppm), Mo (1.56 ppm),Sn (9.45 ppm), W (19.31 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature and Epithermal Quartz
13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. Drilling c. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**8
2. **Target Area (sq km)-** 0.10
3. **Zone** – Northern Part
4. **Approximate Coordinates (Lat/Long)-** 24.952258/ 78.343589

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (Lineament trending NW-SE)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale- a.** Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. Drilling c. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**9
2. **Target Area (sq km)-** 0.18
3. **Zone** – Nortern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.945119/ 78.343951

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NS trending Quartz Vein
7. **Surface Geological Features**- a. Veins, alteration zones, b. Sulphide staining (Pyrite, Chalcopyrite, Bornite), c. Quartz Vein

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint) c. Silica flooding
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (Lineament trending NW-SE)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- a. Porphyry Cu–Mo b. Epithermal high-sulphidation

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Structurally prepared site c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class-** High

18. **Key Factors Driving Priority**- a. Alteration intensity b. Structural complexity c. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment d. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**10
2. **Target Area (sq km)-** 1.15
3. **Zone** – Northern Part
4. **Approximate Coordinates (Lat/Long)-** 24.931386/78.342486

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting -** NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Sn (22.19 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Drilling b. Detailed geochemistry c. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**11
2. **Target Area (sq km)-** 26.43
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.935004/78.364595

B. Geological Context

5. **Host Lithology / Lithological Setting -** Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Sodic b. EHT (epithermal overprint)
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (109 ppm), Sn (3.3-9.4 ppm), W (2.9 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- a. Bedrock samples b. Pitting/trenching samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (Lineament NW SE trending)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Detailed Mapping b. Drilling c. Detailed geochemistry d. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**12
2. **Target Area (sq km)-** 0.12
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.932294/78.343568

B. Geological Context

5. **Host Lithology / Lithological Setting**- a. Felsic volcanics b. Epithermal Quartz vein
6. **Structural Setting**- NS trending Quartz Vein
7. **Surface Geological Features**- a. Veins, alteration zones, b. Sulphide staining (Pyrite, Chalcopyrite, Bornite, Cuprite, Chalcocite, Covellite, Chryscolla, Malachite, Gold, Silver, Molybdenite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Silica flooding
9. **Alteration Intensity**- Very Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly, b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**

- Cu (400-6785 ppm), Mo (5-21 ppm), Zn (680-1170 ppm), Sn (8.5-17.74 ppm), W (23-85.3 ppm), Pb (75- 14277 ppm), Bi (0.5-12 ppm), [Surface Sample]
- Cu (400- 31,000 ppm), Ag (6-50 ppm), Mo (8-61 ppm), Zn (131-814 ppm), Sn (6-92.6 ppm) [Subsurface Sample]

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- a. Bedrock samples b. Quartz vein samples c. Stream sediments d. Pitting/trenching samples e. Sub surface Sampling

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- a. Porphyry Cu–Mo b. Epithermal high-sulphidation Cu
16. **Exploration Rationale-** a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority** a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)** –a. Drilling

A. Target Identification & Location

1. **Target ID / Number-**13
2. **Target Area (sq km)-** 0.04
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.949445/78.380067

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NS trending epithemal Quartz Vein
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Enargite, Malachite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Silica flooding
9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (800-3800 ppm), Mo (12 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- a. Bedrock samples b. Quartz vein samples c. Stream sediments c. Pitting/trenching samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Very High
18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**14
2. **Target Area (sq km)-** 0.15
3. **Zone** – Northern Zonr
4. **Approximate Coordinates (Lat/Long)-** 24.944809/78.397700

B. Geological Context

5. **Host Lithology / Lithological Setting**- a. Epithermal Quartz vein
6. **Structural Setting** - NS trending
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. EHT (epithermal overprint) c. Silica flooding

9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (834 ppm) [Surface], Ag (13 ppm) [Subsurface]

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- a. Bedrock samples b. Quartz vein samples c. Stream sediments

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (Lineaments trending NW SE)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Structurally prepared site d. Metal anomaly clustering e. Magnetic signature indicative of intrusion/alteration f. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**15
2. **Target Area (sq km)-** 0.14
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.912686/ 78.358920

B. Geological Context

5. **Host Lithology / Lithological Setting**- Quartz vein
6. **Structural Setting**- NE–SW cross-structures
7. **Surface Geological Features**- Quartz–Vein

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Silica flooding
9. **Alteration Intensity-** NA
10. **Alteration Mapping Evidence-** NA

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Sn (6.8 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- a. Bedrock samples b. Quartz vein samples c. Stream sediments d. Pitting/trenching samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (NW SE trending)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Structural complexity b. Geophysical anomaly robustness c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**16
2. **Target Area (sq km)-** 0.14
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.910763/78.371000

B. Geological Context

5. **Host Lithology / Lithological Setting**- Quartz vein
6. **Structural Setting**- NNE-SSW tending quartz vein

7. **Surface Geological Features**- Quartz–Vein

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Silica flooding

9. **Alteration Intensity-** NA

10. **Alteration Mapping Evidence-** NA

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source -** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (NW SE Trending high lineaments)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Hydrothermal pathway b. Structurally prepared site c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Structural complexity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)** – a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**17
2. **Target Area (sq km)-** 0.42
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.922837/78.326069

B. Geological Context

5. **Host Lithology / Lithological Setting-** Quartz vein
6. **Structural Setting-** NW SE trending quartz vein

7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite) c. Fe–Mn oxides d. Quartz–vein

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Silica flooding

9. **Alteration Intensity**- Moderate

10. **Alteration Mapping Evidence-** NA

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Mo (3 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)** -NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Structurally prepared site d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Structural complexity b. Lithological suitability c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**18
2. **Target Area (sq km)-** 1.24
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)- 24.907433/78.340529**

B. Geological Context

5. **Host Lithology / Lithological Setting**- Diorite

6. **Structural Setting**- NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (Donut Str)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Structurally prepared site b. Magnetic signature indicative of intrusion/alteration c. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Lithological suitability c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**19
2. **Target Area (sq km)-** 3.35
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.860209/78.346692

B. Geological Context

5. **Host Lithology / Lithological Setting**- Diorite

6. **Structural Setting**- Not Applicable

7. **Surface Geological Features-** Sulphide staining (Pyrite, Chalcopyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic

9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- W (6.7 ppm), Mo (3.1 ppm), V (269 ppm).

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source-** Stream Sediments and Bedrock Sampling

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- Fertility indicators & Metal anomaly clustering

G. Target Ranking & Priority

17. **Priority Class**- Medium

18. **Key Factors Driving Priority**- Geochemical strength and Alteration intensity

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- Drilling and Detailed geochemistry.

A. Target Identification & Location

1. **Target ID / Number-**20

2. **Target Area (sq km)-** 1.20

3. **Zone** – Central Zone

4. **Approximate Coordinates (Lat/Long)-** 24.859416/ 78.321182

B. Geological Context

5. **Host Lithology / Lithological Setting**- Diorite

6. **Structural Setting-** NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- a. AHI anomaly, b. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**

- Fertility indicators
- Hydrothermal pathway
- Metal anomaly clustering
- Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Lithological suitability, b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**21
2. **Target Area (sq km)-** 0.32

3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.860430/ 78.282675

B. Geological Context

5. **Host Lithology / Lithological Setting -** Diorite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Sulphide staining

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence-** NA

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Lithological suitability b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**22
2. **Target Area (sq km)-** 0.06
3. **Zone** – Central Zone

4. **Approximate Coordinates (Lat/Long)-** 24.891691/ 78.270899

B. Geological Context

5. **Host Lithology / Lithological Setting**- Diorite
6. **Structural Setting-** NA
7. **Surface Geological Features**- Sulphide staining

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity-** NA
10. **Alteration Mapping Evidence-** NA

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Structurally prepared site c. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium
18. **Key Factors Driving Priority**- a. Lithological suitability b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**23
2. **Target Area (sq km)-** 1.06
3. **Zone** – Central Zone

4. **Approximate Coordinates (Lat/Long)-** 24.889769/ 78.308757

B. Geological Context

5. **Host Lithology / Lithological Setting**- High Mg mafic dyke

6. **Structural Setting**- NNE-SSW trending

7. **Surface Geological Features - NA**

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present- NA**

9. **Alteration Intensity- NA**

10. **Alteration Mapping Evidence- NA**

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- V (316 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- a. Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Hydrothermal pathway b. Structurally prepared site

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Lithological suitability b. Mineral system alignment c. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**24
2. **Target Area (sq km)-** 0.41
3. **Zone** – Southern Zone

4. **Approximate Coordinates (Lat/Long)- 24.786170 /78.257540**

B. Geological Context

5. **Host Lithology / Lithological Setting**- Pyrophyllite
6. **Structural Setting-**NA
7. **Surface Geological Features-** NA

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Advanced argillic
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Cu (4990 ppm), Sn (3-6 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic low

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**-a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**25
2. **Target Area (sq km)-** 0.93
3. **Zone** – Southern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.779991/78.256731

B. Geological Context

5. **Host Lithology / Lithological Setting**- Pyrophyllite
6. **Structural Setting**- NA
7. **Surface Geological Features-** NA

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Advanced argillic
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**

- Mo (28 ppm), Sn (10-40 ppm), W (7 ppm) [Surface]
- Sn (3-5.89 ppm) [Subsurface]

12. **Geochemical Signature Type**- a. Porphyry Cu–Mo signature b. Sn–W halo
13. **Geochemical Evidence Source**- a. Bedrock samples b. Quartz vein samples c. Stream sediments d. Pitting/trenching samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic low

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High
18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**26
2. **Target Area (sq km)-** 0.24
3. **Zone** – Southern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.781750/78.266378

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Potassic-argillic caps

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- a. Potassic b. argillic

9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- V (855 ppm), Zn (135 ppm), Sn (12 ppm), W (14 ppm), Sr (1669 ppm).
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- a. Magnetic high b. Magnetic low c. Magnetic Fault Zone

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Structurally prepared site d. Metal anomaly clustering e. Magnetic signature indicative of intrusion/alteration f. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**27
2. **Target Area (sq km)- 3.98**
3. **Zone** – Southern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.776422/78.273389

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- a. alteration zones b. Sulphide staining

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic to propyllitic
9. **Alteration Intensity**- Moderate -High
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Sn (1.6 ppm), Cu (103 ppm)
12. **Geochemical Signature Type**- a. Porphyry Cu–Mo signature b. Sn–W halo
13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high with East West trending lineament.

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Magnetic signature indicative of intrusion/alteration c. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Lithological suitability d. Mineral system alignment e. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**28
2. **Target Area (sq km)-** 0.38
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.966536/78.375144

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic Volcanics
6. **Structural Setting**- NA
7. **Surface Geological Feature- a.** Veins, alteration zones b. Sulphide staining

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Potassic
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Mo (4.7 ppm), Sn (2.1 ppm), W (1.1 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- a. Bedrock samples b. Stream Samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (NW-SE trending lineament)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**29
2. **Target Area (sq km)- 0.63**
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.946180/78.392901

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting-** NA
7. **Surface Geological Features**- a. Veins, alteration zones b. Sulphide staining (Pyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sodic

9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Zn (117 ppm), Mo (1.2 ppm), Sn (3.3 ppm), W (1 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high (NW SE trending lineament)

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Mineral system alignment e. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**30
2. **Target Area (sq km)-** 0.69
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.944520/78.363113

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Feature-** Veins, alteration zones b. Sulphide staining (Pyrite, Chalcopyrite, Bornite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sodic
9. **Alteration Intensity**- Strong
10. **Alteration Mapping Evidence**- a. AHI anomaly b. VCD anomaly c. Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**- Mo (1-1.5 ppm), Sn (2.4-6.9 ppm), W (5.7 ppm), V (231 ppm), Cr (428 ppm), Ni (421 ppm), Cu (129 ppm), Zn (151 ppm)
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)**- Magnetic high

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Fertility indicators b. Hydrothermal pathway c. Metal anomaly clustering d. Magnetic signature indicative of intrusion/alteration e. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- High

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Lithological suitability e. Mineral system alignment f. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry

A. Target Identification & Location

1. **Target ID / Number-**31
2. **Target Area (sq km)-** 0.35
3. **Zone** – Northern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.925858/78.308311

B. Geological Context

5. **Host Lithology / Lithological Setting**- Felsic volcanics
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic

9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA

12. **Geochemical Signature Type-** NA

13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)- NA**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Aero-Magnetic signature indicative of intrusion/alteration b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Aero Geophysical anomaly robustness b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**32
2. **Target Area (sq km)-** 0.46
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.903173/78.318681

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Sulphide staining (Pyrite)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type-** NA
13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Aero- Geophysical signature indicative of intrusion/alteration (Donut Shape Potassic Alteration) b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**33
2. **Target Area (sq km)-** 0.95
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.892537/ 78.285979

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting**- NA
7. **Surface Geological Features-** NA

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence-** Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type-** NA
13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** Donut Shaped Potassic Alteration

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Magnetic signature indicative of intrusion/alteration b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium

18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Lithological suitability c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Mapping b. Trenching c. IP/Resistivity d. Drilling e. Detailed geochemistry f. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**34
2. **Target Area (sq km)-** 0.63
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.885284/78.272529

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type-** NA
13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style-** NA
16. **Exploration Rationale**- a. Magnetic signature indicative of intrusion/alteration b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**35
2. **Target Area (sq km)-** 0.49
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.875006/78.289654

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitc

9. **Alteration Intensity**- Moderate

10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA

12. **Geochemical Signature Type-** NA

13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)- NA**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Magnetic signature (Donut Shape) indicative of intrusion/alteration b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Mineral system alignment c. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity b. Drilling c. Detailed geochemistry (Subsurface- Pitting) d. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**36
2. **Target Area (sq km)-** 0.77
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.872910/78.311648

B. Geological Context

5. **Host Lithology / Lithological Setting**- granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**-NA
12. **Geochemical Signature Type**-NA
13. **Geochemical Evidence Source**-NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style-** NA
16. **Exploration Rationale**- a. Metal anomaly clustering b. Magnetic signature indicative of intrusion/alteration (Donut Shape) c. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority- a.** Geophysical anomaly robustness b. Mineral system alignment c. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**37
2. **Target Area (sq km)-** 0.87
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.854123/78.270610

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic

9. **Alteration Intensity**- Strong

10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**-V (184 ppm), Mo (1.1 ppm)

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**- Bedrock samples

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)** -NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Fertility indicators b. Metal anomaly clustering c. Magnetic signature indicative of intrusion/alteration d. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Medium

18. **Key Factors Driving Priority**- a. Geochemical strength b. Alteration intensity c. Geophysical anomaly robustness d. Mineral system alignment e. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**38
2. **Target Area (sq km)-** 0.88
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.836742/78.297150

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA
12. **Geochemical Signature Type-** NA
13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo
16. **Exploration Rationale**- a. Magnetic signature indicative of intrusion/alteration (Donut Shape) b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low
18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**39
2. **Target Area (sq km)-** 0.65
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.823559/78.314294

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting**-NA

7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic

9. **Alteration Intensity**- Moderate

10. **Alteration Mapping Evidence**- Field-based alteration mapping (Pyrite present)

D. Geochemical Characteristics

11. **Key Geochemical Anomalies-** NA

12. **Geochemical Signature Type-** NA

13. **Geochemical Evidence Source-** NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)-** NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Magnetic signature indicative of intrusion/alteration (Donut Shaped), b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low
18. **Key Factors Driving Priority**- a. Geophysical anomaly robustness b. Lithological suitability c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**40
2. **Target Area (sq km)-** 0.45
3. **Zone** – Central Zone
4. **Approximate Coordinates (Lat/Long)-** 24.835158/78.331309

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite

6. **Structural Setting**- NA

7. **Surface Geological Features**- a. Veins, alteration zone b. Sulphide staining (Pyrite present)

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericite

9. **Alteration Intensity**- Moderate

10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**-NA

12. **Geochemical Signature Type**- Porphyry Cu–Mo signature

13. **Geochemical Evidence Source**-NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)** -NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Hydrothermal pathway b. Magnetic signature indicative of intrusion/alteration c. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness (Donut Shaped) c. Mineral system alignment d. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**41
2. **Target Area (sq km)-** 0.45
3. **Zone** – Central Zone

4. **Approximate Coordinates (Lat/Long)-** 24.838551/78.345255

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting**- NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present**- Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies**-NA
12. **Geochemical Signature Type**-NA
13. **Geochemical Evidence Source**-NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)** -NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**

- Porphyry Cu–Mo

16. **Exploration Rationale**

- Magnetic signature indicative of intrusion/alteration (Donut Shaped)
- Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low
18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Mineral system alignment d. Outcropping / Non - outcropping
19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-**42
2. **Target Area (sq km)-** 1.05

3. **Zone** – Southern Zone
4. **Approximate Coordinates (Lat/Long)-** 24.827517/78.263168

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting** -NA
7. **Surface Geological Features**- Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present-** Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies** -NA
12. **Geochemical Signature Type**- Porphyry Cu–Mo signature
13. **Geochemical Evidence Source**

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)** -NA

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**

- Porphyry Cu–Mo

16. **Exploration Rationale**- a. Magnetic signature indicative of intrusion/alteration b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class-** Low

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness (Donut Shaped) c. Mineral system alignment d. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

A. Target Identification & Location

1. **Target ID / Number-43**
2. **Target Area (sq km)- 0.91**
3. **Zone** – Souhern Zone
4. **Approximate Coordinates (Lat/Long)- 24.800596/78.261987**

B. Geological Context

5. **Host Lithology / Lithological Setting**- Granite
6. **Structural Setting** -NA
7. **Surface Geological Features-** Veins, alteration zones

C. Hydrothermal Alteration Attributes

8. **Alteration Type Present-** Sericitic
9. **Alteration Intensity**- Moderate
10. **Alteration Mapping Evidence**- Field-based alteration mapping

D. Geochemical Characteristics

11. **Key Geochemical Anomalies** -NA

12. **Geochemical Signature Type** -NA

13. **Geochemical Evidence Source** -NA

E. Geophysical Characteristics

14. **Magnetic Signature (TMI/RTP)- NA**

F. Integrated Mineral System Interpretation

15. **Modelled Mineralisation Style**- Porphyry Cu–Mo

16. **Exploration Rationale- a.** Magnetic signature indicative of intrusion/alteration (donut Shaped) b. Integration of all datasets

G. Target Ranking & Priority

17. **Priority Class**- Low

18. **Key Factors Driving Priority**- a. Alteration intensity b. Geophysical anomaly robustness c. Mineral system alignment d. Outcropping / Non - outcropping

19. **Recommended Follow-Up Work (in Post-G4 Phase of Exploration)**- a. Trenching b. IP/Resistivity c. Drilling d. Detailed geochemistry e. Additional magnetics or EM

Annexure XI_ Alteration Data

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /1	78.36449	24.92357	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite may be present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	No	No	Yes (Quartz - center line)	No	No	No	Low	No	Yes	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic
ML/ALT /2	78.36366	24.92427	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic	No	No	No	No	No	No	Low/Very high	No	No	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic
ML/ALT /3	78.35958	24.92513	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy	No	No	No	No	No	No	Low/Very high	No	No	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			groundmass, amphibole clots be present. Volcanics/Plutonic												
ML/ALT /4	78.35782	24.92541	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present. Volcanics/Plutonic	No	No	Yes (Quartz - center line- 10 cm; dark alteration halo)	No	No	No	Medium	No	No	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic
ML/ALT /5	78.35627	24.92697	Mesocratic, coarse grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole clots be present.	No	No	No	No	No	No	Low	No	No	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			Volcanics/Plutonic; Dolerite dyke - 110-290 trend; Rhyolite porphyry - 045-235; contact of two - 110-290.												
ML/ALT /6	78.35542	24.92843	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	No	No	Yes	No	No	No	Medium	No	No	N.A.	Sericitic; superimposed by Na Ca alteration	Sodic
ML/ALT /7	78.35041	24.93331	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass. Upper surface: layer like. Immense quartz vein. Veins of mafic (amphibole + biotite?) + quartz Volcanics - Rhyolite/Rhyodacite	Yes	No	No	No	No	Less	High	No	Yes	33; 42/28 cm	Sericitic; superimposed by K-alteration	Potassic
ML/ALT /8	78.35288	24.93287	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz,	No	No	Yes (Amphibole	No	No	Less	High	No	No	48; 28/21 cm	Sericitic; superimposed by Na-	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			amphibole may be present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite			+ Quartz)								Ca alteration	
ML/ALT /9	78.35366	24.92976	Leucocratic, medium grained, porphyritic rock with phenocrysts of feldspar and quartz, amphibole may be present. Distinct grain boundary. Porphyritic granite. The rock is parallel to the rhyolite porphyry	No	No	No	No	Yes (Quartz)	No	Low	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /10	78.34338	24.95238	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole + biotite? present. Volcanic. At depth the rock is more dark and the planes are black in colour	No	No	Yes (Quartz +Biotite +Amphibole)	No	No	High at depth	High	No	Yes	N.A.	Sericitic; superimposed by K-alteration	Potassic
ML/ALT /11	78.34234	24.95302	Mesocratic, fine grained, porphyritic	No	No	Yes	No	No	No	Medium	No	Yes	N.A.	Sericitic; superimpos	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar (distinct grain boundary), glass and quartz, fuzzy groundmass, amphibole + biotite? present. Volcanic. Samples from well, the rock is more dark, fault planes are black in colour, pyrite present											ed on K/Na-Ca	
ML/ALT /12	78.34486	24.94797	Leucocratic, medium grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary.Lots of quartz vein present Porphyritic granite.	No	No	No	No	Yes (Quartz)	No	Low	No	Yes	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /13	78.34296	24.94746	Mesocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary. Porphyritic granite.	No	No	No	No	No	No	Low	No	Yes	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /14	78.34308	24.93678	Mesocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Distinct grain boundary, fuzzy at places. Porphyritic granite. Volcanic rock is also associated with the granite, may be it's the boundary	No	No	No	No	No	No	Low	No	Yes	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /15	78.37032	24.88847	Looks like granite, but due to the fuzzy grain boundary it seems to be volcanic though chances are less	No	No	Yes (Biotite)	No	Yes	High	High	No	Yes	12; 28/14 cm	K-alteration	Potassic
ML/ALT /16	78.37031	24.88918	Looks like granite, but due to the fuzzy grain boundary it seems to be volcanic though chances are less	No	Yes	Yes (Biotite)	No	No	No	High	Yes; Pyrite	Yes	N.A.	K-alteration	Potassic
ML/ALT /17	78.34173	24.93197	Mesocratic, Fine grained, porphyritic rock with phenocrysts of feldspar and quartz, grains are fuzzy and low alteration observed	No	Yes	Yes	No	No	No	Low	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			at places, A vein and EHT present												
ML/ALT /18	78.36349	24.93746	Melanocratic, porphyritic rock with phenocrysts of feldspar and glass with distinct grain boundary and fuzzy at places. Clots and veinlets of amphibole. Upper surface of the rock is layer like	Yes	No	No	No	No	No	Low	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /19	78.36286	24.93731	Contact of rhyolite and volcanics	No	No	No	No	No	No	Low	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /20	78.3619	24.93686	Melanocratic, porphyritic rock with phenocrysts of feldspar, quartz and glass with distinct grain boundary and groundmass is fuzzy. Clots and veinlets of amphibole, biotite? Upper surface of the rock is layer like,	Yes	No	Yes	No	No	No	Low	Yes; Pyrite	Yes	12; 10/4 cm	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			defined by quartz and feldspar												
ML/ALT /21	78.35984	24.93967	Melanocratic, porphyritic rock with phenocrysts of feldspar, quartz and glass with distinct grain boundary and groundmass is fuzzy. Clots and veinlets of amphibole, biotite? Upper surface of the rock is layer like, defined by quartz and feldspar	No	No	Yes (Quartz +Biotite +Amphibole)	No	No	Less	Low	No	Yes	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /22	78.35911	24.94089	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	No	No	No	No	No	No	Low	No	Yes	N.A.	K-alteration	No alteration
ML/ALT /23	78.35923	24.94164	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is	No	No	Yes	No	No	No	High	No	Yes	N.A.	K-alteration	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite												
ML/ALT/24	78.36711	24.93421	Mesocratic, fine grained porphyritic rock quartz and feldspar phenocrysts. B veins hardly present at lower altitude. At a higher altitude, A vein is present with moderate intensity	No	No	Yes	Yes	No	No	Low - Moderate	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT/25	78.34677	24.95725	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz having distinct grain boundary. Fuzzy groundmass. Volcanics - Rhyolite/Rhyodacite. At contact, a N-S trending quartz vein containing greenish chalcedony, white coarse grained quartz present and cut across the previous vein	No	No	Yes (Amphibole)	No	No	No	Moderate	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/26	78.34809	24.95649	Melanocratic, medium to fine grained, porphyritic rock with phenocrysts of feldspar and quartz, biotite is present. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite.Newly formed feldspar grains present and a flaky mineral present within the feldspar.	No	No	Yes (Quartz +Biotite +Amphibole)	No	No	No	Moderate	No	Yes	10;28/ 14 cm	Sericitic; superimposed by K-alteration	Sodic
ML/ALT/27	78.34989	24.95354	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and quartz. Fuzzy groundmass Volcanics - Rhyolite/Rhyodacite	No	No	Yes (Amphibole + Quartz)	Yes	No	No	Moderate	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT/28	78.35032	24.9528	Looks like granite, the grains are fuzzy, veins are greenish black in colour. End of the volcanics, chatan like hilly exposure	No	No	Yes	No	No	No	Moderate	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT/29	78.3493	24.95475	Smoky dark quartz, fine chert like NNE-SSW trending. Brecciated	No	No	No	No	No	No	Low	No	Yes	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			quartz filled by mafic (amphibole+biotite)												
ML/ALT /30	78.35	24.958	Samples from well, full of pyrite, chalcopyrite and arsenopyrite? The rock is volcanic	No	No	No	No	No	No	Low	Yes (Huge amount)	No	N.A.	N.A.	No alteration
ML/ALT /31	78.351	24.95928	well samples, Fe solution present along fault plane	No	No	No	No	No	No	Low	No	No	N.A.	N.A.	No alteration
ML/ALT /32	78.35165	24.96071	Dark red colour volcanic rock, less amount of pyrite	No	No	No	No	No	No	Low	Yes	No	N.A.	N.A.	No alteration
ML/ALT /33	78.36632	24.96733	Melanocratic, reddish coloured, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, groundmass is fuzzy, A-vein present but the central line is discrete; width of vein is 1-2cm; halo is 0.2cm. Halo is of less width compared to the vein width. Black coloured vein (biotite/amphibole) and quartz vein is	No	No	Yes (Granite)	No	No	No	Low	No	Yes	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present, granite vein within the volcanic rock												
ML/ALT /34	78.3675	24.9664	Melanocratic, reddish coloured, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, groundmass is fuzzy, fuzziness is more. Dark green big patches present, quartz, feldspar within the patch, may be the mingling effect. Contact of Rhyolite porphyry and rhyolite/rhyodacite. NE-SW (050)	No	No	No	No	No	Medium	Low	No	No	N.A.	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /35	78.36841	24.96488	Melanocratic , dark reddish black cl, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, on the surafce, layer like? present defined by quartz feldspar	Yes	No	Yes (Mafic)	No	No	No	Medium-High	No	No	25;40/ 28 cm	Sericitic (Less); superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /36	78.3701	24.96195	Melanocratic , dark reddish cl, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass, in fuzzy groundmass, on the surafce, layer? present defined by quartz feldspar. Biotite present.	No	No	Yes (Biotite)	No	No	No	Medium	No	Yes	N.A.	Sericitic; superimposed by K-alteration	Sodic
ML/ALT /37	78.38297	24.95873	Melanocratic, fine grained, porphyritic rock with phenocrysts of quartz, feldspar and glass having distinct grain boundary, groundmass is too fine to check the grain boundary, A-vein, EHT present. Flow structure present. Magnetite content is high, alteration intensity is also medium. Rhyolite	Yes	Yes	Yes	No	No	Medium	Medium	Yes	No	N.A.	Sericitic (Less); superimposed by Na-Ca alteration	Sodic
ML/ALT /38	78.38325	24.95703	Quartz vein	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /39	78.38322	24.95697	Quartz vein	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /40	78.38322	24.95697	Quartz vein	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /41	78.38316	24.95689	Quartz vein	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /42	78.38058	24.95356	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, bomb present Volcanics - Rhyolite/Rhyodacite	Agglomerate, Bomb	No	No	No	No	High	Medium	No	No	N.A.	Sericitic (Less); superimposed by Na-Ca alteration	Sodic
ML/ALT /43	78.38004	24.95937	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite	Agglomerate	Yes; Centre line Amphi	No	No	No	No	Medium	No	No	Intensity medium	Sericitic; superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present within the rock, alteration medium, lapilli present Volcanics - Rhyolite/Rhyodacite		bole										
ML/ALT /44	78.38058	24.95341	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, lapilli present Volcanics - Rhyolite/Rhyodacite	Agglomerate	No	No	Yes	No	No	Low	Yes	No	9; 70/56 cm;Intensity low	Sericitic; superimposed by Na-Ca alteration	Sodic
ML/ALT /45	78.3796	24.95128	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz. Fuzzy groundmass. Clots of amphibole, Magnetite present within the rock, alteration medium, bomb present	Agglomerate; lapilli	Yes ; Centre line Amphibole	No	No	No	Medium	Medium	No	No	Intensity low	Sericitic (Less); superimposed by Na-Ca alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			Volcanics - Rhyolite/Rhyodacite												
ML/ALT /46	78.3791	24.9514	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (High) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock,	Volcanoclastic; Agglomerate	Yes	No	No	No	High	High	?	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			having lapilli and bomb at places.												
ML/ALT /47	78.37583	24.95012	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Contact of coarse	Volcanoclastic; Agglomerate	Yes	No	No	No	Very high	High	?	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			grained granite porphyry trending NNW-SSE Volcanoclastic rock, having lapilli and bomb at places.												
ML/ALT/48	78.37544	24.9498	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite present and small clots of biotite within feldspar grain, magnetite (High) present within the rock, alteration intensity is high. Patches of amphibole is present. Intense veination; veins having center line	Volcanoclastic	No	No	Yes	No	High	High	?	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			composed of quartz and mafic (Biotite).Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock, having lapilli and bomb at places.												
ML/ALT /49	78.37703	24.95086	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less). Groundmass is too fine to be understood, but at places it has been coarsened due to alteration which seems to be granite and the grain boundaries are fuzzy . Clots of biotite clots present and small clots of biotite within feldspar grain, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz	Volcanoclastic	Yes	No	No	No	High	High	?	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			and mafic (Biotite), halo on the sides of the veins. Volcanics - Rhyolite/Rhyodacite. Contact of coarse grained granite porphyry trending NW-SE Volcanoclastic rock, having lapilli and bomb at places.												
ML/ALT /50	78.38005	24.96282	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line	No	Yes	Yes	No	No	High	High	No	Yes	25; 70/63 cm; Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT and A-vein. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT/51	78.37963	24.96372	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is medium. Vein intensity decreases; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT	No	No	Yes	No	Yes	Medium	Low	No	Yes	N.A.	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			and A-vein. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /52	78.3795	24.96237	Melanocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having sharp boundary and the groundmass is fuzzy. Patches of biotite present around which alteration has occured and also small clots of biotite within feldspar grain is observed, magnetite (very high) present within the rock, alteration intensity is high. Intense veination; veins having center line composed of quartz and mafic (Biotite), halo on the sides of the veins - EHT and A-vein. Volcanics - Rhyolite/Rhyodacite.	No	Yes	Yes	No	No	High	High	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /53	78.37834	24.96149	Mesocratic, fine grained, porphyritic	No	Yes	No	No	No	Medium	Medium	No	Yes	Intensity	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Biotite present, Magnetite present within the rock, alteration intensity and vein intensity less, EHT present. Volcanics -Rhyolite/Rhyodacite. Rhyolite porphyry present trending NE-SW.										medium		
ML/ALT/54	78.37883	24.96225	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Biotite present, Magnetite present within the rock, alteration intensity and vein intensity less, EHT present. Volcanics -Rhyolite/Rhyodacite.	No	Yes	No	No	No	Medium	Medium	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/55	78.37716	24.96105	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-vein present. Volcanics - Rhyolite/Rhyodacite. Diorite body present trending NE-SW	No	No	Yes	No	No	Medium	Medium	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT/56	78.37627	24.9609	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary, fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-	No	No	Yes	No	No	Medium	Medium	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			vein present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT/57	78.35243	24.9551	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, A-vein present. Volcanics - Rhyolite/Rhyodacite.	No	No	Yes	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/58	78.37575	24.9609	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, D-vein present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /59	78.37512	24.96096	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity and vein intensity less, D-	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			vein present. Volcanics - Rhyolite/Rhyodacite. Contact of Rhyolite and Rhyolite porphyry												
ML/ALT /60	78.37361	24.96152	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, B-vein present. Volcanics - Rhyolite/Rhyodacite.	No	No	No	Yes	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /61	78.37324	24.96175	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and	No	Yes	No	Yes	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, B-vein and EHT present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /62	78.37269	24.96198	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present, Magnetite present within the rock, alteration intensity less and vein intensity very less, EHT present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /63	78.37507	24.96194	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity less and vein intensity very less, EHT present. Volcanics - Rhyolite/Rhyodacite. Volcanoclastic rock, vesicles present	Yes	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /64	78.37606	24.96175	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary but the size of phenocrysts are comparitively larger than the previous locations and have fuzzy groundmass. Amphibole patches present, Magnetite present within the rock, alteration intensity medium and vein intensity high, EHT present. Volcanics - Rhyolite/Rhyodacite.	No	Yes	Yes	No	No	Yes	Medium	No	Yes	12- A-vein; 6-EHT;52 /28; Intensity high	K-alteration	Potassic
ML/ALT /65	78.36619	24.96647	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches	No	Yes	No	Yes	No	No	High	No	No	Intensity high	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present, Magnetite and biotite absent within the rock, alteration intensity high and vein intensity high, EHT and B-vein present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /66	78.36622	24.96596	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present, Magnetite and biotite absent within the rock, alteration intensity medium and vein intensity low, EHT present. Volcanics - Rhyolite/Rhyodacite.	No	Yes	No	No	No	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /67	78.36638	24.96618	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present with voids in it, Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low, EHT may be present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /68	78.36636	24.96517	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary and have fuzzy groundmass. Amphibole patches present with voids in it, Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low, EHT may be present.	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /69	78.3481	24.91671	Leucocratic, medium grained, porphyritic rock with phenocrysts of quartz- 25%, feldspar- 60% within fuzzy groundmass and mafic clots are present. Secondary biotite is present. Rhyolite porphyry trending NE-SW is present. Contact attitude - 030/75 NW	No	No	No	No	No	No	Low	No	Yes	N.A.	N.A.	No alteration
ML/ALT /70	78.34484	24.91449	Diorite, high magnetite, biotite (low) present. Many epidote veins are present all over the rock. Sericitised rock. Contact of rhyolite porphyry and diorite - 055/60 SE	No	No	No	No	Yes	Yes	Medium	Yes	Yes	Intensity medium	Propylitic Alteration	Propylitic
ML/ALT /71	78.34207	24.93144	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (less) having distinct grain boundary	No	No	No	No	Yes	Yes	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			and have fuzzy groundmass. Amphibole veins present. Magnetite is low and biotite absent within the rock, alteration intensity low and vein intensity low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite. Sericitised												
ML/ALT /72	78.37611	24.9683	Contact of rhyolite and coarse grained granite - 110/85 SW	No	No	No	No	No	No	N.A.	No	No	N.A.	N.A.	No alteration
ML/ALT /73	78.375	24.98204	Contact of rhyolite porphyry and coarse grained granite - 050/82 NW	No	No	No	No	No	No	N.A.	No	No	N.A.	N.A.	No alteration
ML/ALT /74	78.34164	24.93199	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /75	78.3411	24.93189	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /76	78.34064	24.93246	Mesocratic, fine grained, porphyritic rock with phenocrysts	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /77	78.33983	24.93263	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /78	78.34001	24.93224	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. Veins and veinlets of mafic + quartz present as a center line (darker halo is present); may be B-vein. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Volcanics - Rhyolite/Rhyodacite.	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /79	78.34052	24.9318	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT/80	78.3398	24.93103	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass. comparitively coarser, quartz % - 30; feldspar - 60%; mafic - 10%. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Volcanics - Rhyolite/Rhyodacite.	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /81	78.33977	24.93027	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low. Granite	No	No	No	No	Yes	No	Low	No	Yes	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /82	78.34327	24.93096	Quartz vein; smoky greenish, reddish coloured quartz reef	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /83	78.34333	24.93074	Quartz vein; smoky greenish, reddish coloured quartz reef	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /84	78.34049	24.93205	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (20%) having distinct grain boundary and have fuzzy groundmass.	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (smoky qtz vein) is present. Volcanics - Rhyolite/Rhyodacite.												
ML/ALT /85	78.34171	24.93101	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite present. Magnetite (low) and biotite negligible within the rock, alteration intensity low and vein intensity high, D-vein is present. Volcanics - Andesite	No	No	No	No	Yes	No	Low	No	No	Intensity high	Ca-Na Alteration	Sodic
ML/ALT /86	78.33961	24.93158	Leucoocratic, fine grained, porphyritic	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass and its distinct at some places. Amphibole veins present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein is present. Granite												
ML/ALT /87	78.3392	24.93207	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass . Amphibole veins present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very high, D-vein (Quartz) is present. Granite	No	No	No	No	Yes	No	Low	No	No	26; 20/30 cm Intensity very high	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /88	78.33831	24.93335	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite (very low) and biotite absent within the rock, alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite	No	Yes	No	No	No	No	Low	No	No	Intensity high	Ca-Na Alteration	Sodic
ML/ALT /89	78.33885	24.93244	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy groundmass. Amphibole veins present. Magnetite (very low) and biotite absent within the rock,	No	Yes	No	No	No	No	Low	No	No	Intensity high	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite												
ML/ALT /90	78.33914	24.93128	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have fuzzy groundmass and its distinct at some places. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein is present. Granite	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /91	78.34093	24.93059	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz (few) having distinct grain boundary and have fuzzy	No	Yes	No	No	No	No	Low	No	No	Intensity high	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			groundmass. Amphibole veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity high, EHT-vein (Mafic as a center line), D-vein is present. Volcanics - Andesite												
ML/ALT /92	78.32394	24.93059	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /93	78.32302	24.93165	Leucoocratic, medium grained, porphyritic	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-vein (Quartz) is present. Granite												
ML/ALT /94	78.32335	24.93233	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite (low) and biotite absent within the rock, alteration intensity low and vein intensity very low, D-	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			vein (Quartz) is present. Granite												
ML/ALT /95	78.34159	24.92491	Chert (smoky) with chalcopyrite; pyrite are leached out at places	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /96	78.34232	24.9264	Chert (smoky) with chalcopyrite; pyrite are leached out at places	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /97	78.34213	24.9268	Chert (smoky) with chalcopyrite; pyrite are leached out at places	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /98	78.34234	24.9274	Chert (smoky) with chalcopyrite; pyrite are leached out at places	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /99	78.34046	24.92684	Leucoocratic, medium grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) having distinct grain boundary and have distinct groundmass. Clots of Amphibole present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity very	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			low, D-vein (Quartz) is present. Granite												
ML/ALT /100	78.32584	24.92894	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite.	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /101	78.32681	24.92921	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite												
ML/ALT /102	78.32678	24.93052	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Magnetite (very less) and biotite absent within the rock, alteration intensity low and vein intensity low. The grain boundary is fuzzier and at places the groundmass is too finer to be identified; seems like volcanic and glass prsent (?). Granite	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /103	78.32767	24.93108	Leucoocratic, fine grained, porphyritic rock with phenocrysts	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite												
ML/ALT /104	78.32882	24.93101	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/105	78.32559	24.92987	Leucoocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%), mafic clots (secondary biotite) having distinct grain boundary and have fuzzy groundmass. Amphibole veins and quartz veins present. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Granite	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/106	78.37512	24.93908	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein	No	Yes	No	No	No	Yes	Medium	No	Yes	42, 14/49 cm; Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			intensity high, EHT-vein (Mafic as a center line) is present. Volcanics - Andesite												
ML/ALT /107	78.37467	24.93921	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein intensity high, A-vein, EHT-vein is present; EHT veins form checkerboard pattern. Volcanics - Andesite	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /108	78.37434	24.94109	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, having distinct grain boundary and have	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, A-vein, EHT-vein is present. Volcanics - Andesite												
ML/ALT /109	78.37369	24.92244	Mesocratic (blackish brown), fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz(10%) having distinct grain boundary and have fuzzy groundmass. Mafic clots present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. At places alteration halo is green and rest are	?	Yes	No	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			either lighter coloured (pinkish) or dark colored (reddish), green part contains amphibole. the rock surface is layered at places; volcanoclastic? Volcanics - Andesite												
ML/ALT /110	78.37334	24.9441	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches present. Magnetite (high) and biotite present within the rock, alteration intensity moderate and vein intensity moderate. The outer surface is vesicular Volcanics - Andesite	?	No	No	No	No	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /111	78.37257	24.94116	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass,	No	Yes	Yes	No	No	Yes	High	No	Yes	9- A-vein, 14-EHT;	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high, A-vein, EHT-vein is present. Volcanics - Andesite										28/28 cm; Intensity high		
ML/ALT /112	78.3746	24.93886	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass, quartz having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity medium and vein intensity moderate, A-	No	No	Yes	No	No	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			vein is present. Volcanics - Andesite												
ML/ALT /113	78.37614	24.96824	Contact between volcanic and coarse grained granite	No	No	No	No	No	No	N.A.	No	No	N.A.	N.A.	No alteration
ML/ALT /114	78.36646	24.96483	Rhyolite porphyry trending 040 (NE-SW). Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite negligible.	No	Yes	No	No	No	Yes	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /115	78.36622	24.96188	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. Alteration intensity and vein intensity is low	No	No	No	No	No	Yes	Low	No	Yes	Intensity low	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /116	78.37747	24.94461	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (very high) and biotite present within the rock, alteration intensity high and vein intensity high,EHT-vein is present and metal is present within the halo. Mafic clots surrounded by halo is present. Volcanics - Andesite TD	Yes	Yes	No	No	No	Yes	High	Yes	Yes	Intensity high	K-alteration	Potassic
ML/ALT /117	78.37705	24.94354	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite	Yes	Yes	No	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			(high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. Mafic clots surrounded by halo is present. Volcanics - Andesite												
ML/ALT /118	78.37875	24.95017	Mesocratic (black), fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Mafic patches and veins present. Magnetite (high) and biotite present within the rock, alteration intensity high and vein intensity high, EHT-vein is present. Mafic clots surrounded by halo is present. A plane contains shiny grains, may be metals. Volcanics - Andesite. Rhyolite porphyry	Yes	Yes	No	No	No	Yes	High	Yes	Yes	Intensity high	K alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			attitude changes from 030/70 SE to 050/70 SE												
ML/ALT /119	78.34248	24.92849	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /120	78.36503	24.96546	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite absent within the rock, alteration intensity low and vein intensity low. Volcanics - Andesite. Rhyolite porphyry trend ranges from 045 to 055	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /121	78.36512	24.96484	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Lots of greenish	No	Yes	No	No	Yes	Yes	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			patches of amphibole present. Magnetite (very less) and biotite absent within the rock, alteration intensity low and vein intensity low. EHT and D-vein (Quartz - centre) present. Layering present but not volcanoclatic. Volcanics - Andesite.												
ML/ALT /122	78.36339	24.96533	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. EHT present. Tilted volcanic marked by lapili layer- 245/60 NNW. Volcanics - Andesite.	Yes	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /123	78.36424	24.96142	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. EHT present. Volcanics - Andesite.	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /124	78.36614	24.9621	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, glass and quartz having distinct grain boundary and have fuzzy groundmass. Magnetite and biotite present but negligible within the rock, alteration intensity low and vein intensity low. Volcanoclastic but no agglomerate present. Volcanics - Andesite.	Yes	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /125	78.36581	24.96243	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /126	78.3428	24.92865	Quartz vein containing green material	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /127	78.34275	24.9286	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /128	78.34287	24.92869	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /128	78.34287	24.92853	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /129	78.36608	24.95963	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. Vein of mafic+quartz+alt halo. Alteration intensity is medium and vein intensity is low	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity low	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /130	78.36443	24.95956	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT preesnt. Alteration intensity is medium and vein intensity is low	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity low	K-alteration	Potassic
ML/ALT /131	78.36465	24.96209	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT preesnt. Alteration intensity is medium and vein intensity is low	No	Yes	No	No	No	Yes	Low	No	Yes	Intensity low	K-alteration	Potassic
ML/ALT /132	78.36463	24.96369	Mesocratic, fine grained, porphyritic	No	Yes	No	No	No	Yes	Low	No	Yes	Intensity low	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is low												
ML/ALT /133	78.363	24.944	Rhyolite porphyry trend changes from 050 to 035 (NE-SW). Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (20%) and glass. Mafic clots and patches present. Magnetite (medium) present, biotite present	No	Yes	No	No	No	Yes	Low	No	Yes	Intensity low	K-alteration	Potassic
ML/ALT /134	78.34268	24.92866	Quartz vein containing malachite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /135	78.36747	24.91062	Mesocratic (reddish), fine grained,	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low												
ML/ALT /136	78.36806	24.91312	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /137	78.36961	24.9145	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low												
ML/ALT /138	78.36948	24.91726	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /139	78.36661	24.91073	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. Mafic veins present without any	No	No	No	No	No	No	Low	No	No	5, 14/30 cm; Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			halo. The planes along the veins are greenish blue in colour. Alteration intensity is low and vein intensity is low												
ML/ALT /140	78.38617	24.91264	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar within fuzzy groundmass. EHT and D-vein (Dog tooth) present. Mafic clots with alteration present. Alteration intensity is low and vein intensity is very high. High magnetite and biotite	No	Yes	No	No	Yes	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /141	78.38467	24.91373	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar within fuzzy groundmass. EHT present. Alteration intensity is medium and vein intensity is	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			high. High magnetite and biotite												
ML/ALT/142	78.38529	24.91419	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT/143	78.38599	24.9143	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT/144	78.38659	24.91394	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz,	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite												
ML/ALT /145	78.38659	24.9139	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /146	78.38156	24.92638	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			intensity is high. High magnetite and biotite												
ML/ALT /147	78.38773	24.91177	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz, glass within fuzzy groundmass. EHT and A-vein present. Alteration intensity is medium and vein intensity is high. High magnetite and biotite	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /148	78.38793	24.91881	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is medium	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /149	78.38602	24.91796	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass.	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity low	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is medium and vein intensity is low												
ML/ALT /150	78.38897	24.91756	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. A-vein and D-vein present. Alteration intensity is high and vein intensity is medium. The whole rock seems to layered because of halo all over the rock	?	No	Yes	No	Yes	Yes	High	Yes	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /151	78.38735	24.91846	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium)	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present, biotite present. EHT present. Alteration intensity is medium and vein intensity is medium												
ML/ALT /152	78.38587	24.9184	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass. Mafic veins present. Magnetite (medium) present, biotite present. EHT present. Alteration intensity is high and vein intensity is low	No	Yes	No	No	No	Yes	High	No	Yes	Intensity low	K-alteration	Potassic
ML/ALT /153	78.34263	24.92923	Exsitu. Vugs filled up with brownish black coloured mineral; streak-brownish black. Reddish brown coloured mineral in vugs; streak- brown	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /154	78.34278	24.92927	Exsitu. Vugs filled up with brown coloured mineral in vugs; streak-brown	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/155	78.34298	24.92913	Insitu; white coloured mineral, platy. Vugs filled up with black coloured mineral; streak- black. Yellow coloured mineral in vugs. Ridge trending 005-185	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT/156	78.34295	24.92933	Insitu. Vugs filled up with black coloured mineral; streak- black.	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT/157	78.34319	24.92996	Malachite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT/158	78.34305	24.92987	Malachite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT/159	78.34328	24.92987	Malachite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT/160	78.34249	24.92897	Quartz with vuggy, vug sometimes filled up with malachite, brownish fine powdered materials. Chalcopyrite present. Quartz with very fine chert like, deep green	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			coloured along with malachite. At places red spot (vermilion powder cl) is present. Fine layer of chert containing pyrite. Quartz (white cl) veins cross cutting all through out												
ML/ALT /161	78.34249	24.92897	Glittery material, greyish in colour present in vugs. Yellow with tinge of black cl (covellite) in vugs. Red cl in planes. Malchite crystals in vugs	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /162	78.34259	24.92842	Miarolitic cavity in quartz, malachite increases	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /163	78.34158	24.92862	Malachite in bladed quartz	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /164	78.34286	24.92913	Red, yellow, black part with later formed white quartz, malchite present.	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /165	78.38529	24.91419	The whole rock is greenish in colour. Looks like, its due to the presence of malachite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /166	78.34296	24.9289	Abundance of malachite with green cl material and orpiment	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /167	78.34335	24.9307	Covellite, bladed quartz, malchite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /168	78.38777	24.9367	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT and D-vein present. Alteration intensity is medium and vein intensity is low	No	Yes	No	No	Yes	Yes	Medium	No	Yes	Intensity low	K-alteration	Potassic
ML/ALT /169	78.38787	24.93721	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			(10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock) and A-vein present. The halos of each veins mixes with each other, changing the origial colour of the rock Alteration intensity is high and vein intensity is high												
ML/ALT/170	78.38727	24.93805	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is high	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT/171	78.38719	24.93805	Mesocratic, fine grained, porphyritic	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is high												
ML/ALT /172	78.38768	24.94089	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is high	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /173	78.38773	24.94123	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			(10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is medium												
ML/ALT /174	78.38726	24.94093	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Mafic veins and patches present. Magnetite present, biotite present. EHT (all over the rock)and A-vein present. Alteration intensity is high and vein intensity is medium	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /175	78.38783	24.93576	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass	Yes	Yes	Yes	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. EHT and A-vein present. Alteration intensity is and vein intensity is . Volcanoclastic type layer of surface trending 065/64 NW												
ML/ALT /176	78.38902	24.93642	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is and vein intensity is .	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /177	78.38909	24.93756	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy	Yes	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			groundmass. Epidote veins and mafic veins present. Magnetite, biotite absent. Alteration intensity is medium and vein intensity is medium. Volcanoclastic is present												
ML/ALT /178	78.38741	24.94015	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /179	78.39115	24.93034	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, and glass. Mafic veins present. Chlorite patch. Magnetite present,	No	Yes	No	No	No	Yes	Medium	No	Yes	20 - EHT, 20/14 cm; Intensity	K-alteration superimposed with propylitic	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			biotite present. EHT present. Alteration intensity is high and vein intensity is medium										medium		
ML/ALT/180	78.39471	24.93503	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, and glass. Mafic patch (biotite like) present.biotite present with amphibole. Magnetite present, biotite present. EHT present. Alteration intensity is high and vein intensity is medium	No	Yes	No	No	No	Yes	Medium	No	Yes	Intensity medium	K-alteration superimposed with propylitic	Potassic
ML/ALT/181	78.39397	24.9362	Granite containing lots of amphibole patches, containing white plagioclase formation. Biotite and magnetite present	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/182	78.3989	24.95882	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass	Yes; lapilli tuff	No	Yes	No	Yes	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			within fuzzy groundmass. Contains green coloured veins; later phase (chlorite) with halo. Magnetite, biotite present within black patches. EHT and A-vein (smoky quartz) present. Feldspar phenocrysts present in huge amount at places. Alteration intensity is and vein intensity is . Volcanoclastic; small lapilli present, the area is covered by rocks containing lapilli tuff												
ML/ALT /183	78.40114	24.95747	Quartz vein trending 020 in the volcanics, quartz vein is white with grey patch	No	No	No	No	No	No	N.A.	No	No	N.A.	N.A.	No alteration
ML/ALT /184	78.39833	24.9571	Volcanic with A-vein and chlorite vein with halo?	No	Yes	Yes	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration superimposed by propylitic	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /185	78.40098	24.95558	Volcanic with A-vein and chlorite vein with halo?	No	Yes	Yes	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration superimposed by propylitic	Sodic
ML/ALT /186	78.40045	24.95371	Volcanic with EHT	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration superimposed by propylitic	Sodic
ML/ALT /187	78.40019	24.95679	Volcanic with EHT	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration superimposed by propylitic	Sodic
ML/ALT /188	78.39931	24.95803	Volcanic with EHT	No	Yes	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration superimposed by propylitic	Sodic
ML/ALT /189	78.3985	24.95696	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			and A-vein present. Alteration intensity is high and vein intensity is medium.												
ML/ALT /190	78.39764	24.95889	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite absent, biotite present but negligible. A-vein present, very less. Alteration intensity is low and vein intensity is low. Rhyolite porphyry trending NW	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /191	78.39743	24.95737	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			high and vein intensity is medium.												
ML/ALT /192	78.39697	24.95615	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity high	K-alteration	Potassic
ML/ALT /193	78.39561	24.95378	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /194	78.39626	24.95441	Mesocratic, fine grained, porphyritic	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.										medium		
ML/ALT/195	78.39771	24.95564	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT/196	78.39841	24.95693	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar, quartz (10%) and glass. Amphibole veins	No	Yes	Yes	No	No	Yes	High	No	Yes	Intensity medium	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Magnetite and biotite present. EHT and A-vein present. Alteration intensity is high and vein intensity is medium.												
ML/ALT /197	78.34318	24.92987	Greenish smoky coloured quartz	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /198	78.34318	24.92987	Smoky quartz with malachite, Au and covellite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /199	78.34263	24.92896	Bluish green coloured smoky quartz with no malachite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /200	78.34292	24.92888	Greenish coloured chert brecciated with crysocola and orpiment present	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /201	78.34232	24.92741	Smoky greenish black quartz with small Au flakes, chalcopyrite present	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /202	78.34218	24.92659	Smoky greenish black quartz with pyrite, chalcopyrite present small Au flakes may be present	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /203	78.34344	24.93122	Red, yellow tinge present in quartz and green coloured chert.	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /204	78.36134	24.91615	Tilted bladed quartz	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /205	78.36217	24.917	Bladed quartz	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /206	78.36001	24.91399	Fault gouge and greenish part may be alunite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /207	78.3442	24.93509	Vuggy quartz with chalcopyrite, malachite, bornite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /208	78.34461	24.93554	Smoky chert	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /209	78.34435	24.93536	Malachite rich silicified quartz	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /210	78.34459	24.93587	Malachite in brecciated chert	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /211	78.34514	24.93815	Smoky chert	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /212	78.34538	24.93755	Smoky brecciated chert	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /213	78.34356	24.9433	Contact of quartz and granite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /214	78.34354	24.94316	Malachite, chalcopyrite and pyrite present in quartz	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /215	78.34599	24.93985	Quartz D-vein in granite	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /216	78.34354	24.91959	Extension of qtz vein, no green chert, less vuggy	No	No	No	No	No	No	No	No	No	N.A.	N.A.	No alteration
ML/ALT /217	78.3421	24.91033	Mesocratic medium grained equigranular granite	No	No	No	No	No	No	No	No	Yes	N.A.	N.A.	No alteration
ML/ALT /218	78.34226	24.90996	Fine grained pink granite	No	No	No	No	No	No	No	No	No	N.A.	No alteration	No alteration
ML/ALT /219	78.34075	24.91024	Diorite	No	No	No	No	No	No	No	No	No	N.A.	Propylitic	Propylitic
ML/ALT /220	78.3389	24.90807	Diorite	No	No	No	No	No	No	No	No	No	N.A.	Propylitic	Propylitic
ML/ALT /221	78.3453	24.90037	Diorite, propylitic alteration	No	No	No	No	No	No	No	No	No	N.A.	Propylitic	Propylitic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /222	78.3663	24.92376	Volcanic, potassic alteration, D-vein (quartz) present	No	Yes	No	No	Yes	Yes	Medium	No	Yes	Intensity medium	K-alteration	Potassic
ML/ALT /223	78.31877	24.85638	Diorite with metals	No	No	No	No	No	No	No	Yes	No	N.A.	No alteration	No alteration
ML/ALT /224	78.318	24.86338	Quartz reef trending NE SW (024-204). No vugs, no metals	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /225	78.31627	24.86476	Diorite NW-SE trending, Quartz cross cutting trending almost N-S	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /226	78.322	24.939	Black cl fine grained rock with qtz amygdules	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /227	78.31972	24.92253	Lahar near Ganesh temple	No	No	No	No	No	No	No	Yes	No	No	No	No alteration
ML/ALT /228	78.32687	24.92069	Quartz reef NW-SE trending with malachite, enargite, bornite, arseno?	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /229	78.32623	24.92212	Pyrite, sulphur solution in qtz reef	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/230	78.32639	24.92175	Greenish all over the qtz pyrite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/231	78.34209	24.9314	Quartz with Cuprite, malachite and something silver (East)	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/232	78.34403	24.9347	Smoky greenish quartz, chalcopyrite (West)	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/233	78.34423	24.93509	cuprite malachite covellite chalcopyrite chalcocite (Central)	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/234	78.34467	24.93593	Exsolved qtz	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/235	78.34279	24.93537	Exsolved qtz	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/236	78.34279	24.93537	Exsolved qtz	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/237	78.34257	24.92873	Deep green colour chert, crysocola?	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT/238	78.34299	24.9287	Malachite in blackish chert	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /239	78.34244	24.92935	Mesocratic medium grained equigranular granite	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /240	78.32673	24.92066	greenish chert, crysocola?	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /241	78.32721	24.92096	Cuprite, chalcopyrite in quartz	No	No	No	No	No	No	No	Yes	No	N.A.	N.A.	No alteration
ML/ALT /242	78.31985	24.93868	Basalt coarse	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /243	78.29504	24.82197	Red linear patch in the converging zone of 1VD. Fresh granite	No	No	No	No	No	No	No	No	No	No	No alteration	No alteration
ML/ALT /244	78.31075	24.8143	Granite fresh medium grained	No	No	No	No	No	No	No	No	No	No	No alteration	No alteration
ML/ALT /245	78.3109	24.80725	Granite fresh medium grained	No	No	No	No	No	No	No	No	No	No	No alteration	No alteration
ML/ALT /246	78.30237	24.86661	Green lineament from 1VD. May be Basalt. Pods of calcite present along with epidote	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /247	78.30107	24.86704	Granite and basalt side by side. Granite contains biotite	No	No	No	No	No	No	No	No	No	No	Argillic alteration	Argillic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			amphibole and it's sericitised. Biotite granite. Basalt here is relatively coarser, also have calcite and epidote as veins												
ML/ALT /248	78.30707	24.8888	Biotite amphibole granite	No	No	No	No	No	No	No	No	Yes	No	No	No alteration
ML/ALT /249	78.30929	24.89262	Granite, potassic alteration superimposed by sericitic	No	Yes	No	No	No	Yes	Low	No	Yes	Low intensity	K-alteration superimposed by Ca-Na alteration	Potassic
ML/ALT /250	78.33925	24.92987	Granite, potassic altered	No	Yes	No	No	No	Yes	Low	No	Yes	Low intensity	K-alteration	Potassic
ML/ALT /251	78.33813	24.92947	Granite, potassic, magnetite low biotite present	No	Yes	No	No	No	Yes	Low	No	Yes	Low intensity	K-alteration	Potassic
ML/ALT /252	78.33713	24.92906	Medium grained granite containing primary biotite, feldspar grains are fuzzy, sericitic alteration, no metal	No	No	No	No	No	No	No	No	Yes	No	Argillic alteration	Argillic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /253	78.33657	24.92834	Altered granite may be, tends to be volcanic, grain boundary is fuzzy, biotite veins present and magnetite present, hence potassic alteration	No	Yes	No	No	No	Yes	No	No	Yes	Low intensity	K-alteration	Potassic
ML/ALT /254	78.33856	24.92966	Quartz vein within the granite (tending to be rhyolite) trending NNE-SSW 155. Granite clasts within the quartz. Quartz is white in clr (later formed) reddish chert contains crysocola, malachite might be present	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /255	78.39215	24.93018	Quartz vein trending N-S contains malachite, pyrite. Quartz vein within potassic zone, intense. But less intense than the intense zone	No	No	No	No	No	No	No	Yes	No	No	K-alteration	Potassic
ML/ALT /256	78.38659	24.91325	Rhyolite porphyry trending 032	No	No	No	No	No	No	No	No	No	No	No	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /257	78.38392	24.90737	Rhyolite porphyry trending 035	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /258	78.37749	24.91036	Volcanic rock, Potassic altered zone, high magnetite, pyrite present	No	Yes	No	No	No	Yes; high	No	Yes	Yes	Medium intensity	K-alteration	Potassic
ML/ALT /259	78.37714	24.91291	Quartz vein trending 040. Greenish and reddish chert at places. Brecciated chert present. Epidote chlorite veins present in the volcanic rock, no biotite, no magnetite. Arsenopyrite may be present. Pyrite not observed	No	No	No	No	No	No	No	Yes	No	No	Propyllitic	Propylic
ML/ALT /260	78.3763	24.91988	Quartz vein trending NE-SW, 038. Greenish and reddish chert, at places brecciated	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /261	78.38978	24.91743	Intense potassic altered zone, samples of A-veins and eht for chemical and thin section	No	Yes	Yes	No	No	Yes	High	No	Yes	Very intense	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /262	78.38388	24.90796	Intense potassic alteration, mainly A-vein present, halo all over. Rhyolite porphyry trending 035. Rhyolite porphyry contains epidote vein	No	No	Yes	No	No	Yes	High	No	Yes	Very intense	K-alteration	Potassic
ML/ALT /263	78.37745	24.91029	Volcanic rock, HIGH MAGNETITE, EHT, Potassic alteration	No	Yes	No	No	No	Yes	High	No	Yes	Very intense	K-alteration	Potassic
ML/ALT /264	78.36907	24.90861	Quartz reef trending 030, Black chert, no metal found	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /265	78.342	24.94315	Quartz vein trending 014, smoky chert, at places greenish reddish and greyish	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /266	78.34011	24.93608	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /267	78.34197	24.93585	Volcanic	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /268	78.34359	24.93515	A-vein, halo all over, rock seems to be granite	No	No	Yes	No	No	No	High	No	Yes	High intensity	Ca-Na alteration	Sodic
ML/ALT /269	78.36397	24.96828	Granite potassic altered	No	Yes	No	No	No	Yes	Medium	No	Yes	Medium intensty	K-alteration	Potassic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /270	78.37459	24.96888	Potassic altered volcanic	No	Yes	No	No	No	Yes	Medium	No	Yes	Medium intensty	K-alteration	Potassic
ML/ALT /271	78.40143	24.95772	Potassic alteration in volcanic, eht and a-vein, qtz vein trending 018 is present, no metal	No	Yes	Yes	No	No	Yes	Medium	No	Yes	Medium intensty	K-alteration	Potassic
ML/ALT /272	78.40052	24.95869	Lapilli, volcanic	Yes	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /273	78.39919	24.95904	Potassic altered volcanic	No	Yes	No	No	No	Yes	Low	No	Yes	Low intensity	K-alteration	Potassic
ML/ALT /274	78.26638	24.86235	Diorite containing less amount of pyrite	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /275	78.26958	24.86534	Granite porphyry, medium grained porphyritic granite	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /276	78.27734	24.87074	Fine grained porphyritic granite. Tends to be volcanic at places	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /277	78.2791	24.87414	TTG	No	No	No	No	No	No	No	No	No	No	No	No alteration

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /278	78.30093	24.88066	Fresh medium grained granite	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /279	78.3283	24.91496	Medium grained pink granite	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /280	78.38456	24.95671	Tuff, fresh volcanics	Yes	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /281	78.37127	24.88931	Potassic alteration, nagwans	No	yes	No	No	No	yes	medium	No	Yes	Low intensity	K-alteration	Potassic
ML/ALT /282	78.37198	24.88715	Rhyolite porphyry trending 035 (In the NW-SE RED LINEAMENT IN THE 1VD map). Basalt (may be) also present.	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /283	78.26299	24.77924	Mailar quartz vein	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /284	78.305	24.804	Granite, something silvery, red cl in 1VD map	No	No	No	No	No	No	No	No	No	No	No	No alteration
ML/ALT /285	78.35523	24.95967	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium												
ML/ALT /286	78.36346	24.95782	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /287	78.33895	24.94478	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /288	78.33804	24.95	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. D-vein present. Alteration intensity is medium and vein intensity is medium												
ML/ALT /289	78.38474	24.94683	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Yes	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /290	78.35847	24.93363	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches	Yes	Yes	Yes	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Magnetite, biotite absent. EHT and A-vein present. Alteration intensity and vein intensity is medium												
ML/ALT/291	78.3649	24.92965	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Yes	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT/292	78.36175	24.92386	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. Alteration intensity is	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			medium and vein intensity is medium												
ML/ALT /293	78.38368	24.92376	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /294	78.39175	24.92379	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Yes	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /295	78.38964	24.93574	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /296	78.38574	24.93437	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /297	78.37843	24.93968	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite,	Yes	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			biotite absent. Alteration intensity and vein intensity is medium												
ML/ALT /298	78.38684	24.94973	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite absent. Alteration intensity and vein intensity is medium	Yes	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /299	78.38846	24.96255	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins present. Magnetite, biotite absent. Alteration intensity medium and vein intensity is low	Yes	No	No	No	No	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /300	78.39675	24.95275	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins present. Magnetite, biotite absent. Alteration intensity and vein intensity is low	Yes	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /301	78.39574	24.94884	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic veins and patches present. Magnetite, biotite is absent. Alteration intensity is medium and vein intensity is medium	No	No	Yes	No	No	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /302	78.39684	24.95183	Volcanic rock, sodic alteration	No	No	No	No	No	No	Low	No	No	No	Ca-Na alteration	Sodic
ML/ALT /303	78.372	24.932	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT /304	78.39478	24.94729	Volcanic rock, sodic alteration	No	No	No	No	No	No	Low	No	No	No	Ca-Na alteration	Sodic
ML/ALT /305	78.333	24.941	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /306	78.34	24.939	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na alteration	Sodic
ML/ALT /307	78.339	24.948	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			vein intensity is less than before.												
ML/ALT /308	78.326	24.942	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na alteration	Sodic
ML/ALT /309	78.333	24.933	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /310	78.329	24.934	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	No	No	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /311	78.358	24.96	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /312	78.359	24.96	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Mafic	No	No	No	No	No	No	Low	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			veins and patches present. Magnetite, biotite is absent. Alteration low is medium and vein intensity is medium												
ML/ALT /313	78.37	24.953	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	No	No	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /314	78.362	24.948	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na alteration	Sodic
ML/ALT /315	78.372	24.953	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /316	78.371	24.966	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low												
ML/ALT /317	78.375	24.965	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /318	78.386	24.948	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite ,	No	No	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			biotite absent. Alteration intensity medium and vein intensity is less												
ML/ALT/319	78.389	24.951	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/320	78.382	24.943	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/321	78.394	24.943	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na alteration	Sodic
ML/ALT/322	78.385	24.93	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT/323	78.37	24.902	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. Alteration intensity is low and vein intensity is low	No	No	Yes	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/324	78.39	24.956	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT/325	78.375	24.901	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			present. Alteration intensity is low and vein intensity is low												
ML/ALT /326	78.377	24.897	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /327	78.374	24.908	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /328	78.371	24.902	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity	No	No	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			medium and vein intensity is less												
ML/ALT /329	78.377	24.916	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /330	78.371	24.927	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /331	78.371	24.928	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /332	78.383	24.923	Mesocratic, fine grained, porphyritic	No	Yes	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less												
ML/ALT /333	78.388	24.921	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity medium and vein intensity is less	No	No	No	No	Yes	No	Medium	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /334	78.385	24.928	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			veins and mafic veins present. Magnetite, biotite absent. Alteration intensity and vein intensity is less												
ML/ALT /335	78.387	24.96	Mesocratic (reddish), fine grained, porphyritic rock with phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT /336	78.387	24.959	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Magnetite , biotite absent. Alteration intensity and vein intensity is medium	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
ML/ALT/337	78.39	24.956	Volcanic rock, sodic alteration	No	No	No	No	No	No	Low	No	No	No	Ca-Na alteration	Sodic
ML/ALT/338	78.39	24.952	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT/339	78.389	24.947	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Magnetite , biotite absent. Alteration intensity and vein intensity is medium	No	No	No	No	Yes	No	Medium	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT/340	78.394	24.943	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less	No	No	No	No	Yes	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic
ML/ALT/341	78.395	24.943	Mesocratic, fine grained, porphyritic rock with phenocrysts	No	No	No	No	Yes	No	Medium	No	No	Intensity	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity and vein intensity is less than before.										medium		
ML/ALT /342	78.397	24.938	Mesocratic, fine grained, porphyritic rock with phenocrysts of feldspar and glass within fuzzy groundmass. Epidote veins and mafic veins present. Magnetite , biotite absent. Alteration intensity low	No	No	No	No	Yes	No	Low	No	No	Intensity medium	Ca-Na Alteration	Sodic
ML/ALT /343	78.4	24.951	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	Intensity medium	Ca-Na alteration	Sodic
ML/ALT /344	78.381	24.939	Volcanic rock, sodic alteration	No	No	No	No	No	No	Medium	No	No	No	Ca-Na alteration	Sodic
ML/ALT /345	78.357	24.951	Mesocratic (reddish), fine grained, porphyritic rock with	No	No	No	No	No	No	Low	No	No	Intensity low	Ca-Na Alteration	Sodic

Location No	Longitude	Latitude	Lithology	Volcanoclastic/ Agglomerate/ Tuff	EHT	A-vein	B-vein	D-vein	Magnetite	Alteration Intensity	Metal content	Biotite presence	No. of veins; area; Vein intensity	Alteration type	Alteration
			phenocrysts of feldspar, quartz and glass within fuzzy groundmass. Amphibole patches present. No veins present. Alteration intensity is low and vein intensity is low												

Annexure XII _ Details of Pitting Locations

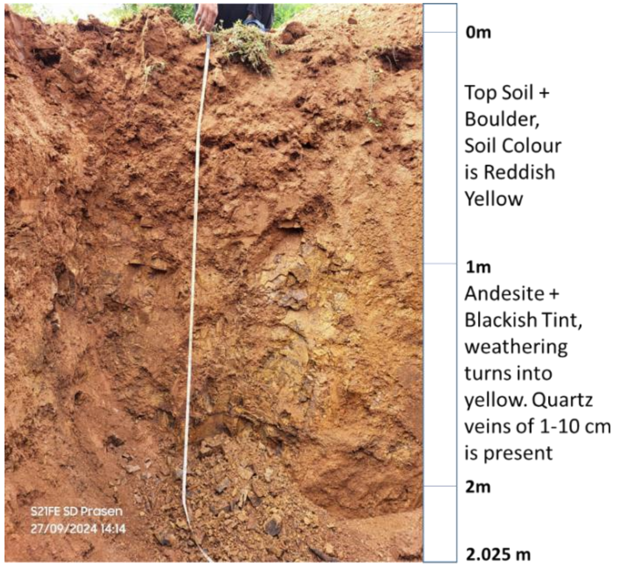
SL NO	Latitude	Longitude	Village Name	Rock Type	Length (m)	Width (m)	Depth(m)	Total pitting (in cubic meter)
MAILAR/PIT/1	24.92265	78.36557	Gulenda	Volcanics	2.4	2.5	1.4	8.4
MAILAR/PIT/2	24.93838	78.37525	Gulenda	Volcanics	2	2	2	8
MAILAR/PIT/3	24.94008	78.37601	Gulenda	Volcanics	2	2	2.025	8.1
MAILAR/PIT/4	24.94148	78.37685	Gulenda	Quartz	2	2	2	8
MAILAR/PIT/5	24.9426	78.37723	Gulenda	Quartz	2	2	2.04	8.1
MAILAR/PIT/6	24.94256	78.37698	Gulenda	Quartz	2.2	2.1	2	9.24
MAILAR/PIT/7	24.94443	78.37798	Gulenda	Quartz	2.2	2	2.1	9.2
MAILAR/PIT/8	24.95703	78.38322	Gulenda	Quartz	2.1	2.1	1.9	8.4
MAILAR/PIT/9	24.956919	78.383468	Gulenda	Quartz	2	2.1	2.4	10.08
MAILAR/PIT/10	24.958004	78.383892	Gulenda	Volcanics	2.2	2.2	2.8	13.52
MAILAR/PIT/11	24.947608	78.378649	Gulenda	Volcanics	2	2	2.2	8.8
MAILAR/PIT/12	24.954471	78.38153	Gulenda	Volcanics	2	2	2.4	9.6
MAILAR/PIT/13	24.924161	78.342033	Gulenda	Medium grained equigranular granite (Sericitized)	2	2	2.2	8.8
MAILAR/PIT/14	24.783262	78.26129	Mailar	Medium grained equigranular granite (Sericitized)	2	2	2.9	11.6
MAILAR/PIT/15	24.782907	78.260573	Mailar	Medium grained equigranular granite (Sericitized)	2	2	2.4	9.6
MAILAR/PIT/16	24.782486	78.260026	Mailar	Medium grained equigranular granite (Sericitized)	2	2	1.8	7.2
MAILAR/PIT/17	24.781875	78.260357	Mailar	Medium grained equigranular granite (Sericitized)	2	2	1.1	4.4
MAILAR/PIT/18	24.781598	78.261938	Mailar	Medium grained equigranular granite (Sericitized)	2.2	2.4	3.1	16.3
MAILAR/PIT/19	24.781074	78.262607	Mailar	Medium grained equigranular granite (Sericitized)	2	2	2.025	8.1
MAILAR/PIT/20	24.78079	78.262663	Mailar	Medium grained equigranular granite (Sericitized)	2	1.9	2	7.5

SL NO	Latitude	Longitude	Village Name	Rock Type	Length (m)	Width (m)	Depth(m)	Total pitting (in cubic meter)
MAILAR/PIT/21	24.78049	78.263156	Mailar	Medium grained equigranular granite (Sericitized)	2.3	2.2	2.6	13
MAILAR/PIT/22	24.779144	78.26274	Mailar	Medium grained equigranular granite (Sericitized)	2	2.08	3	12.48
MAILAR/PIT/23	24.780551	78.264686	Mailar	Medium grained equigranular granite (Sericitized)	2.4	2	3.3	15.84
MAILAR/PIT/24	24.780926	78.262067	Mailar	Medium grained equigranular granite (Sericitized)	3	2.2	2	13.2
MAILAR/PIT/25	24.78062	78.261042	Mailar	Medium grained equigranular granite (Sericitized)	3.1	2.6	1	8.06
MAILAR/PIT/26	24.786048	78.257894	Mailar	Pyrophyllite	3.1	2.6	2	16.12
MAILAR/PIT/27	24.785664	78.25691	Mailar	Pyrophyllite	3.8	3	2.4	27.36
MAILAR/PIT/28	24.785774	78.256372	Mailar	Pyrophyllite	2	2	3.4	13.6
MAILAR/PIT/29	24.785278	78.256142	Mailar	Pyrophyllite	2.3	2.3	2	10.58
MAILAR/PIT/30	78.25408	24.782777	Mailar	Pyrophyllite	3.4	2	1.3	8.84
					Total 322			

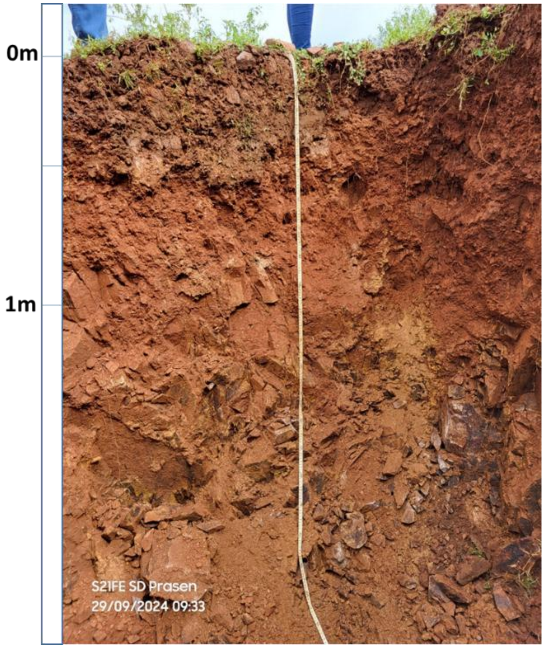
Annexure XIII_ Pitting Images

Pitting No-1

Pitting No-2

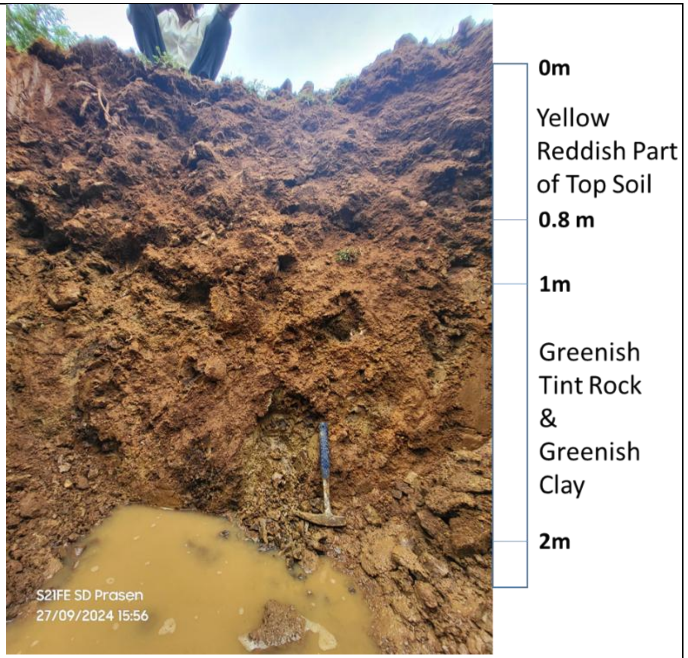


Pitting No-3



Pitting No-4

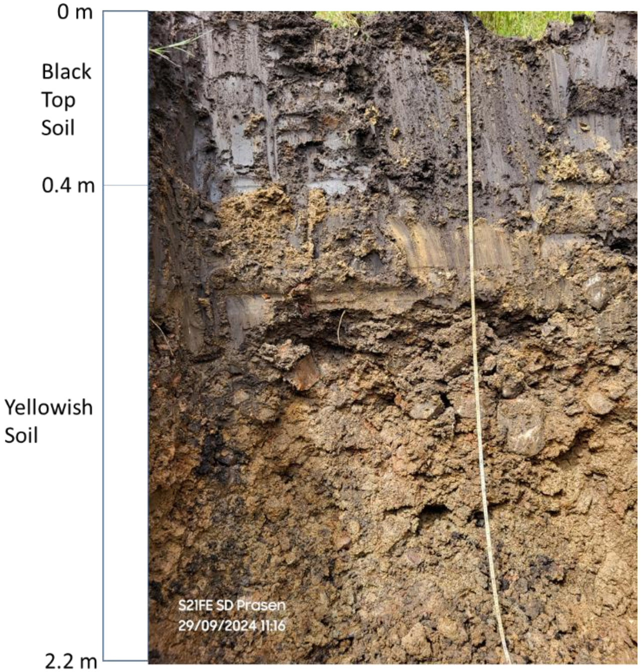
Pitting No-5



Pitting No-6

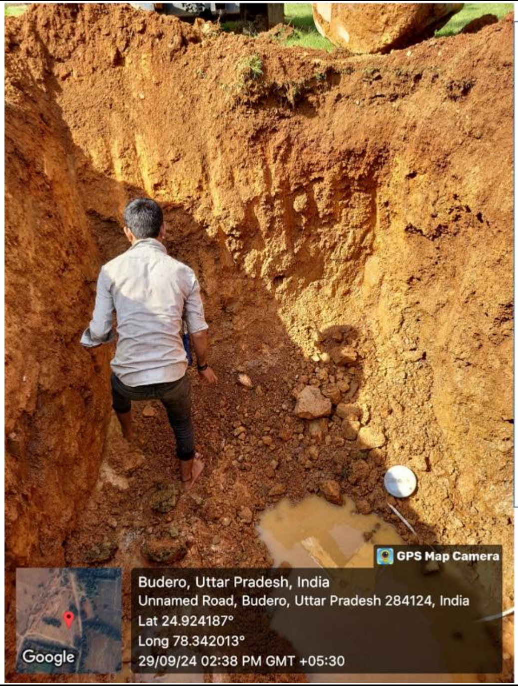
 0 m Brown Soil with Boulder 1m Volcanic rock altered at places, alteration produced yellow to reddish yellow material 2.1m	 0 m Greyish Qtz Reddish Soil 1m Yellowish Soil 1.9m	 0 m Top soil black in colour 0.6 m Yellowish soil with quartz vein 2.4 m
Pitting No-7	Pitting No-8	Pitting No-9

Pitting No-10



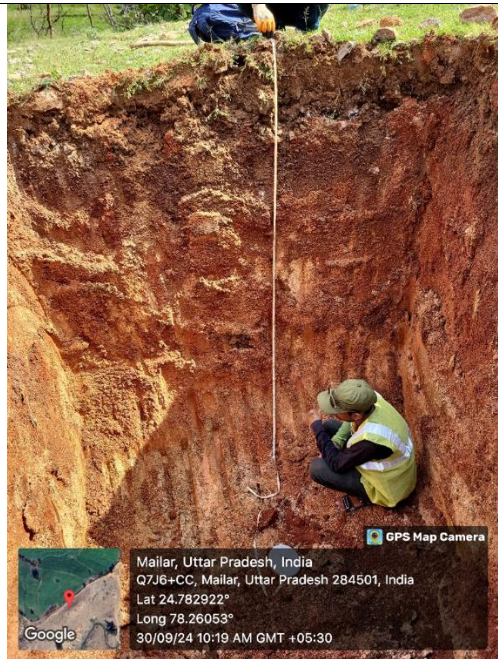
Pitting No-11

Pitting No-12



Pitting No-13

Pitting No-14



Pitting No-15

Pitting No-16

Pitting No-17

Pitting No-18

0 m

Top Soil with quartz

2.025 m

Pitting No-19

0 m

Top Soil with Boulder

2 m

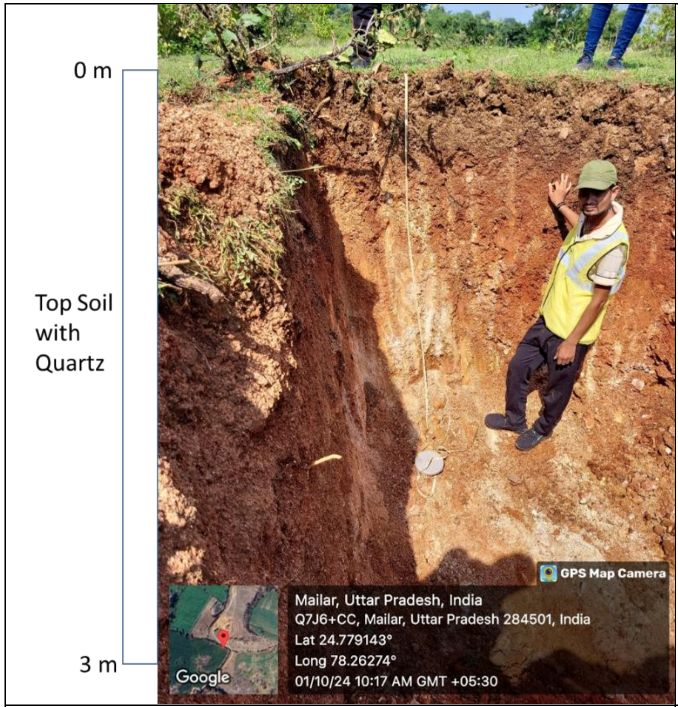
Pitting No-20

0 m

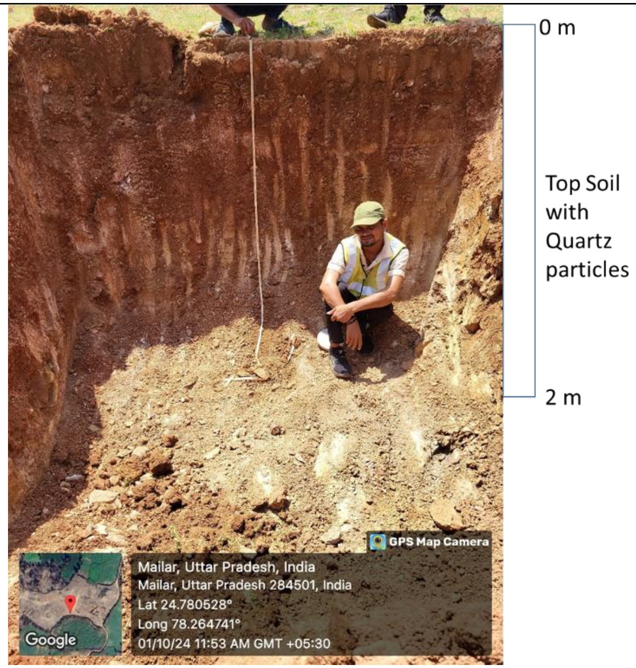
Red Soil

2.6 m

Pitting No-21



Pitting No-22



Pitting No-23

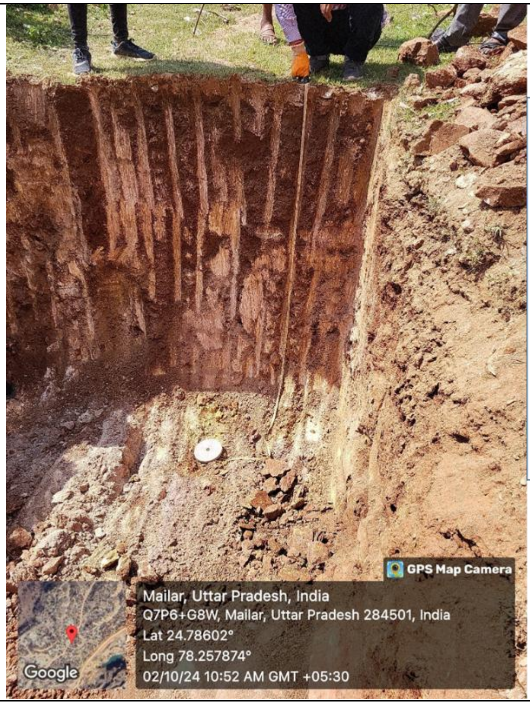
Pitting No-24

0 m

Granitic Hard Rock

1 m

Pitting No 25

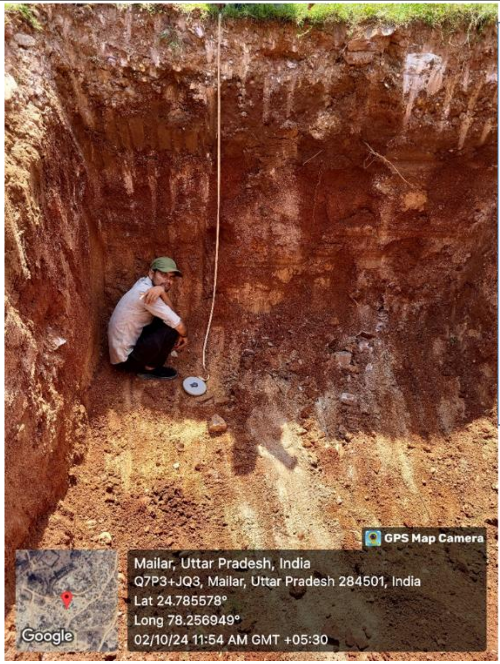


0 m

Granitic Rock with Quartz

2 m

Pitting No-26

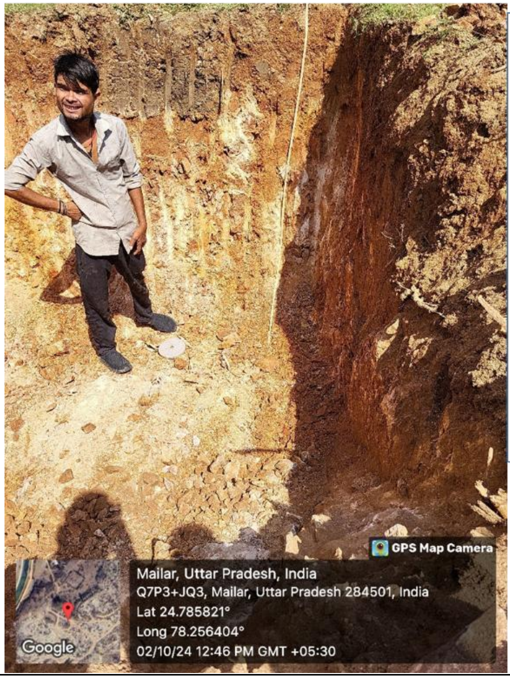


0 m

Granitic Rock with Quartz

2.4 m

Pitting No-27

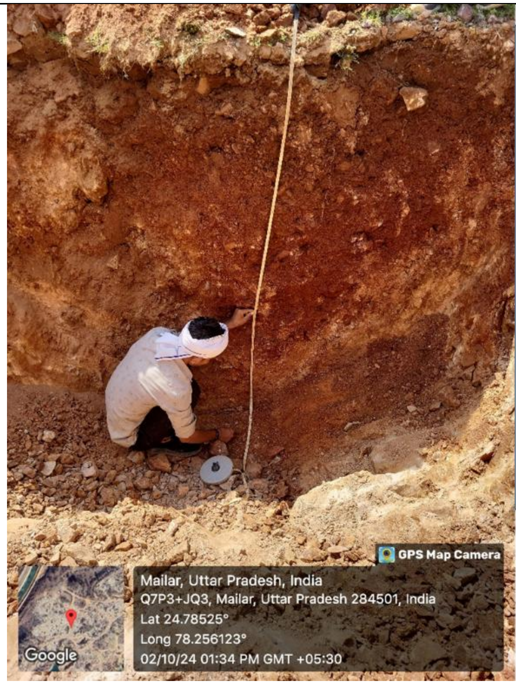


0 m

Yellowish Soil with Pyrophyllite

3.4 m

Pitting No-28



Reddish Soil

2 m

Pitting No-29

0 m

Pyrophyllite with Weathered soil

1.3 m

Pitting No-30

Annexure XIV_ Aeromagnetic Target Attributes

Target No	Target Group	Primary Aeromag Feature	Key Derivative Signature	Magnetic Depth Inference	Porphyry Significance	Comments
1	A – Hydrothermal alteration	Moderate RMI/RTP low on eastern flank of broader high	ANS & HGLAT gradient zone at eastern margin	Moderate (on flank of deeper body)	Outer propylitic–phyllic halo on intrusive flank	Magnetite-destructive alteration along eastern structural limb of deeper intrusion
2	A – Hydrothermal alteration	On nose of NE–SW RMI-GE high	ANS & HGLONG highlight NE–SW trend	Shallow–moderate	Inner halo / proximal potassic shell	Alteration on nose of magnetic high; potential for vein/stockwork development
3	A – Hydrothermal alteration	On nose of NE–SW RMI-GE high	ANS & HGLONG trend; subtle RTP high	Shallow–moderate	Inner halo adjacent to intrusive spine	Similar setting to T2; favourable for porphyry-related quartz veins
4	A – Hydrothermal alteration	Strong RMI & RTP high in NE domain	Sharp ANS edges; local 1VD relief	Shallow	Proximal potassic / magnetite-rich intrusive lobe	Near NE intrusive centre; good candidate for porphyry cupola edge
5	A – Hydrothermal alteration	On shoulder of strong RMI/RTP high	ANS gradient wrapping NE high	Shallow–moderate	Inner propylitic to potassic shell	Transitional zone between magnetic core and altered wall rock
6	A – Hydrothermal alteration	Diffuse RMI low within Gulenda corridor	Subtle RTP low; ANS picks N–S lineament	Moderate–deep	Magnetite-destructive Ca–Na / phyllic halo	Part of Gulenda deeper-level porphyry halo
7	A – Hydrothermal alteration	Weak RMI low in north-central block	ANS & HGLAT map structural break	Moderate–deep	Hydrothermal corridor within Gulenda system	Aligned with N–S lineaments; likely fluid pathway
8	A – Hydrothermal alteration	Irregular RMI/RTP low within magnetic background	Gradient zones in HGLAT & HGLONG	Moderate–deep	Inner phyllic halo around deeper intrusion	Within Gulenda alteration cluster; no single strong core
9	A – Hydrothermal alteration	Local RMI subdued zone	Intersecting ANS lineaments	Moderate	Hydrothermal structural node	Potential focus of EHT-style disseminated mineralisation
10	A – Hydrothermal alteration	Broad weak RMI low on northern flank	Low RTP; ANS moderate	Moderate–deep	Distal propylitic / phyllic halo	Outboard part of Gulenda hydrothermal system

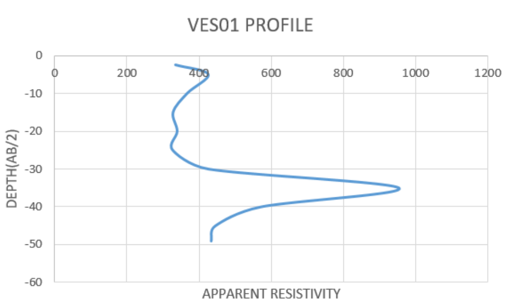
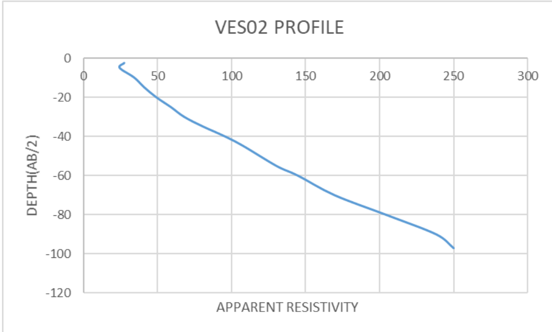
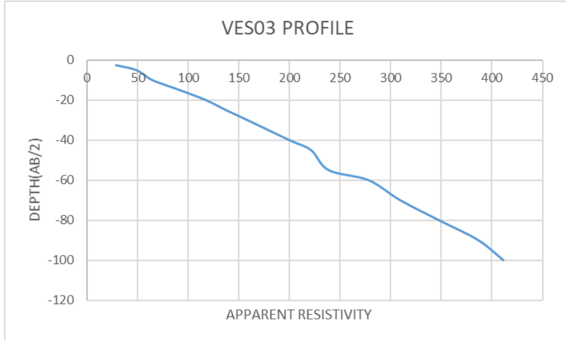
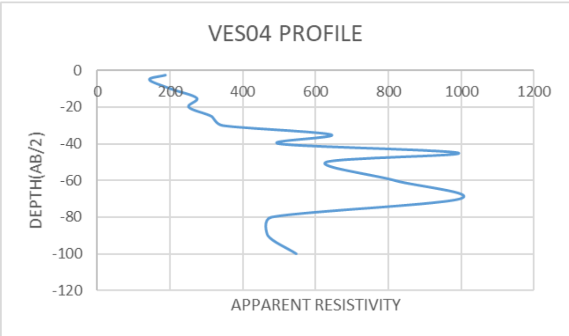
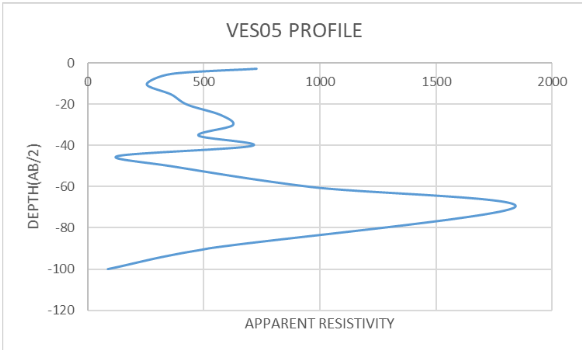
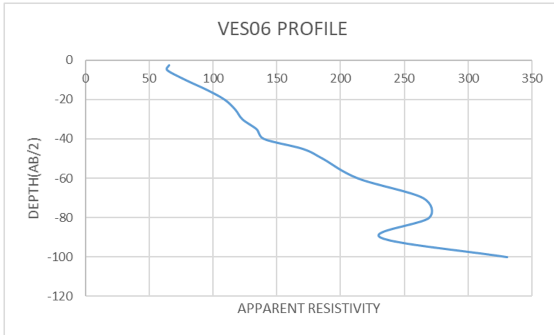
Target No	Target Group	Primary Aeromag Feature	Key Derivative Signature	Magnetic Depth Inference	Porphyry Significance	Comments
11	A – Sodic hydrothermal alteration	Subtle RMI low inside Gulenda corridor	Low RTP, gentle gradients; ANS subdued	Moderate–deep	Ca–Na alteration halo around porphyry core	Sodic alteration in magnetite-poor rocks at depth
12	B – Lithological / vein / dyke	Small irregular RMI/RTP disturbance along structure	ANS high at vein intersection	Shallow	Epithermal vein zone within corridor	Structurally localised quartz vein in Gulenda corridor
13	B – Lithological / vein / dyke	Similar small-scale magnetic irregularity	ANS & HGLONG emphasise structure	Shallow	Epithermal vein / breccia target	On same structural trend as T12; vein-related Cu–Au potential
14	B – Lithological / vein / dyke	Steep nose of high RMI/RTP in NE	Strong HGLONG gradient; ANS contact	Shallow–moderate	Intrusive margin / contact zone	Diorite–felsic contact; good for contact-hosted mineralisation
15	B – Lithological / vein / dyke	Moderate RMI on gradient between high and low	HGLAT gradient and ANS break	Moderate	Structural intersection on intrusive flank	Favourable position for porphyry-related quartz veins
16	B – Lithological / vein / dyke	Similar gradient-flank position to T15	HGLAT/HGLONG highlight saddle zone	Moderate	Inner to mid-halo on intrusive flank	Potential vein/breccia target linked to eastern margin structures
17	B – Lithological / vein / dyke	Part of NNE RMI/RTP high (dyke corridor)	Linear ANS and HGLONG high	Shallow	Magmatic feeder / dyke spine	Segment of high-Mg dyke; important plumbing feature
18	B – Lithological / vein / dyke	Lobate RMI high with internal variation	Closed ANS high; distinct 1VD rim	Shallow–moderate	Cupola-style intrusive apophysis	Possible small porphyry stock at central–eastern block
19	B – Lithological / vein / dyke	RMI high on southern limb of central belt	Moderate gradient in HGLAT; RTP high lobe	Shallow–moderate	Flank of intrusive body	Potential skarn/vein setting on margin of deeper intrusion
20	B – Lithological / vein / dyke	Distinct RMI/RTP lobe south of main dyke	Closed ANS high; strong 1VD expression	Shallow	Cupola / satellite intrusive centre	Good candidate for intrusive-hosted Cu–Mo system
21	B – Lithological / vein / dyke	Western shoulder of central RMI high	Gradient in HGLAT; moderate ANS	Moderate	Flanking intrusive / hornfels zone	Prospective for skarn or peripheral veins
22	B – Lithological / vein / dyke	RMI high on western flank	RTP and ANS moderate highs	Shallow–moderate	Intrusive shoulder / outer halo	Part of western intrusive belt with potential distal mineralisation
23	B – Lithological / vein / dyke	Most intense NNE-trending RMI/RTP high	Strong ANS & HGLONG lineament	Shallow	Key intrusive–structural node / feeder zone	Main high-Mg dyke axis; critical control on magmatic plumbing

Target No	Target Group	Primary Aeromag Feature	Key Derivative Signature	Magnetic Depth Inference	Porphyry Significance	Comments
24	B – Lithological / vein / dyke	Arcuate RMI/RTP high along southern margin	ANS emphasises arc-shaped boundary	Shallow–moderate	Outer shell of Mailar lithocap	Defines potassic–propylitic margin to deeper porphyry core
25	B – Lithological / vein / dyke	Segment of same arcuate southern high	Gradient and 1VD edge strong	Shallow	Inner halo around lithocap	Favourable for veins on rim of Mailar system
26	B – Lithological / vein / dyke	Continuation of southern magnetic arc	RMI-GE high; ANS contact	Shallow	Inner potassic shell	Part of ring around Mailar porphyry centre
27	B – Lithological / vein / dyke	SW end of arcuate southern high	Moderate RMI; gradients weaker	Shallow–moderate	Outer halo / distal flank	Distal but still within lithocap-related magnetic arch
28	C – Geophysical (RMI donut / lobe)	Strong compact RMI/RTP high in NE	Sharp ANS rim; clear in RMI-GE	Shallow	Magnetite-rich porphyry cupola	Good candidate for NE intrusive centre with limited surface exposure
29	C – Geophysical (RMI donut / lobe)	Quasi-circular RMI high with internal lower zone	Donut pattern in RMI-GE; ANS-defined rim	Shallow–moderate	Porphyry-style magnetic donut	Possible cupola with magnetite destruction in core
30	C – Geophysical (RMI donut / lobe)	Well-developed circular RMI high with subdued centre	Strong donut in RMI-GE & 1VD; ANS high along rim	Shallow	Classic porphyry donut target	High-priority concealed porphyry centre in NE–central block
31	C – Geophysical (RMI donut / lobe)	Moderate RMI high on western side of block	HGLONG trend; ANS moderate	Moderate	Intrusive belt parallel to main corridor	Potential blind porphyry centre in western block
32	C – Geophysical (RMI donut / lobe)	RMI lobe adjacent to dyke corridor	ANS high; 1VD shows shallow extent	Shallow–moderate	Satellite intrusive body	Bridge between western belt and central corridor
33	C – Geophysical (RMI donut / lobe)	Moderate RMI high	RTP high; subdued gradients	Moderate	Outer intrusive / hornfels zone	Part of western cluster; prospective but less focused than 36/38

Target No	Target Group	Primary Aeromag Feature	Key Derivative Signature	Magnetic Depth Inference	Porphyry Significance	Comments
34	C – Geophysical (RMI donut / lobe)	Similar moderate RMI high	Weak donut tendency in RMI-GE	Moderate	Peripheral intrusive lobe	Could host distal skarn/vein mineralisation
35	C – Geophysical (RMI donut / lobe)	RMI/RTP high shoulder within western cluster	HGLAT gradients; ANS moderate	Moderate	Flank of western intrusive body	Secondary target linked to T33–34 cluster
36	C – Geophysical (RMI donut / lobe)	Pronounced RMI high 'island' with sharp edges	Very clear in RMI-GE, 1VD and 2VD; ANS ring	Shallow	Prime porphyry cupola on dyke axis	One of best pure geophysical porphyry candidates in block
37	C – Geophysical (RMI donut / lobe)	Moderate RMI high at western–southern flank	RTP & ANS modest highs	Moderate	Outer intrusive / structural flank	Potential distal centre south of western cluster
38	C – Geophysical (RMI donut / lobe)	Large intense RMI high with subtle donut pattern	Strong in RMI-GE & 1VD; ANS rim evident	Shallow	Large intrusive centre / porphyry cluster	Major concealed intrusive body south of central corridor
39	C – Geophysical (RMI donut / lobe)	Moderate RMI high on southern limb of 38	RTP high; gradients modest	Moderate	Flanking intrusive body	Likely peripheral to T38 centre
40	C – Geophysical (RMI donut / lobe)	RMI/RTP lobe east of 38	1VD shows shallow expression	Shallow–moderate	Satellite intrusive cupola	Potential separate small porphyry centre or apophysis
41	C – Geophysical (RMI donut / lobe)	Smaller lobe near southern–eastern margin	ANS edge; moderate gradients	Moderate	Peripheral intrusive / halo	Minor but still prospective lobe around main southern complex

Target No	Target Group	Primary Aeromag Feature	Key Derivative Signature	Magnetic Depth Inference	Porphyry Significance	Comments
42	C – Geophysical (RMI donut / lobe)	Strong, elongated RMI high with donut-like internal pattern	RMI-GE and 1VD emphasise ring; radiometrics moderate–high	Shallow	Concealed porphyry cupola in far south	High-priority southern centre; likely potassic intrusive under cover
43	C – Geophysical (RMI donut / lobe)	Compact RMI high with good gradients	1VD & 2VD highlight shallow top; radiometrics lower	Shallow	Cupola / intrusive nose at south tip	Potential additional porphyry centre at block extremity

Annexure XV_ VES Models

		
Depth vs Apparent Resistivity of VES01	Depth vs Apparent Resistivity of VES02	Depth vs Apparent Resistivity of VES03
		
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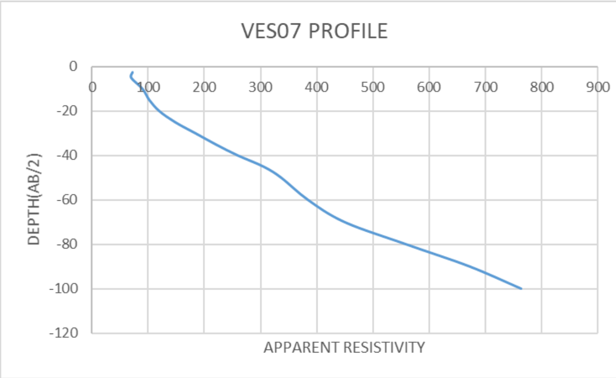

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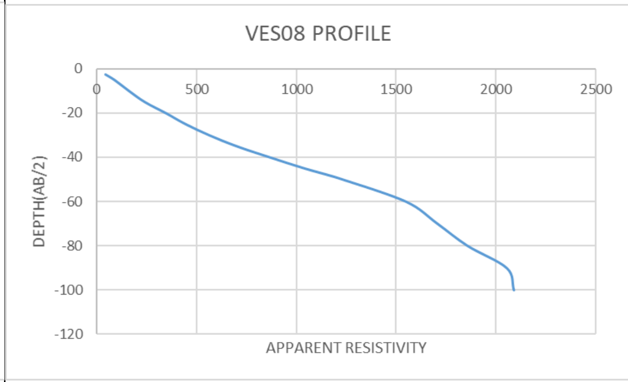

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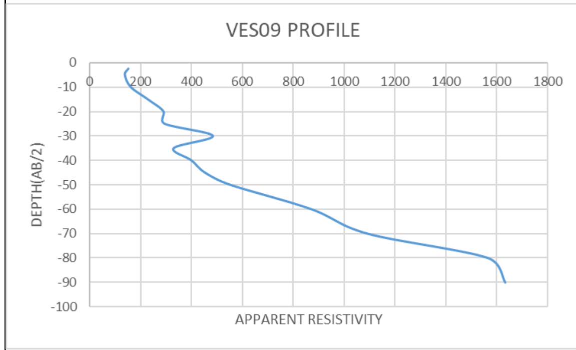

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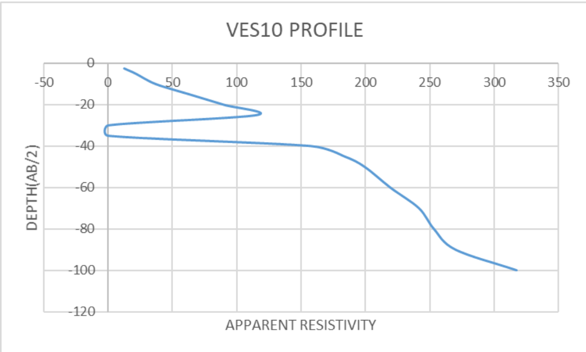

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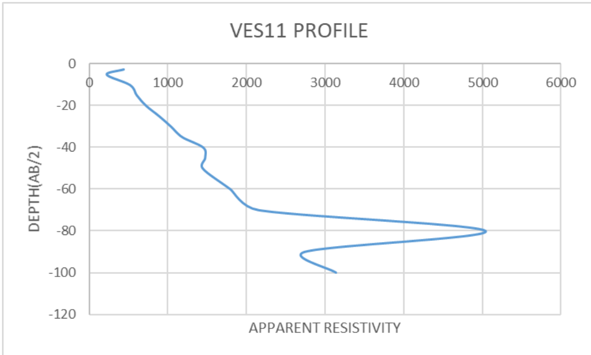

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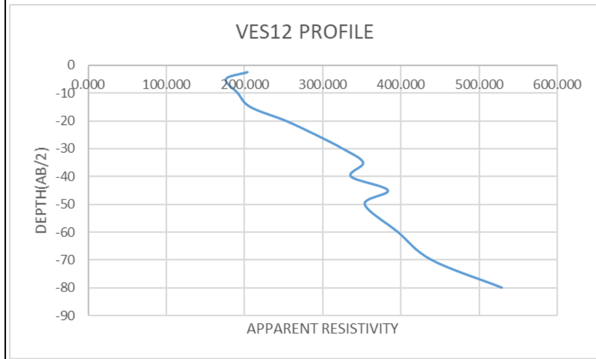

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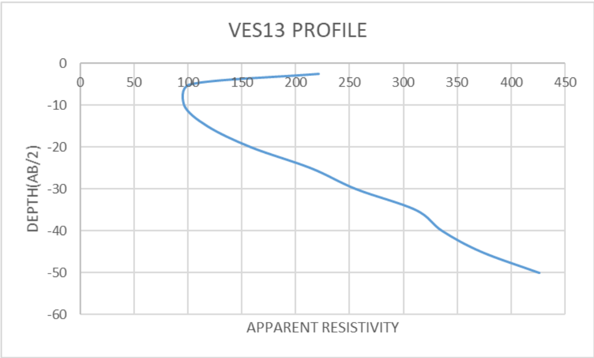

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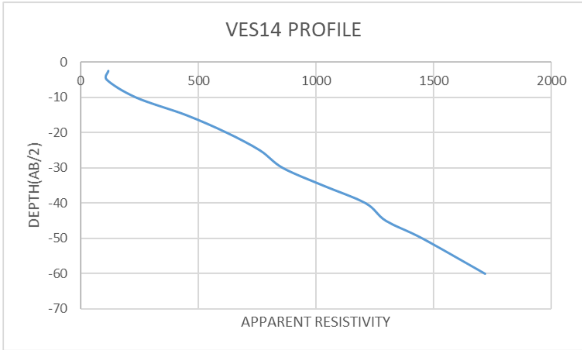

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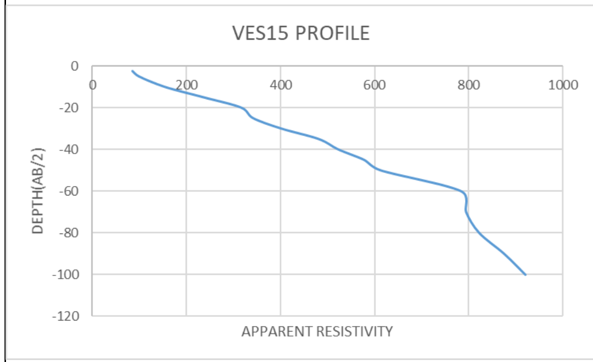

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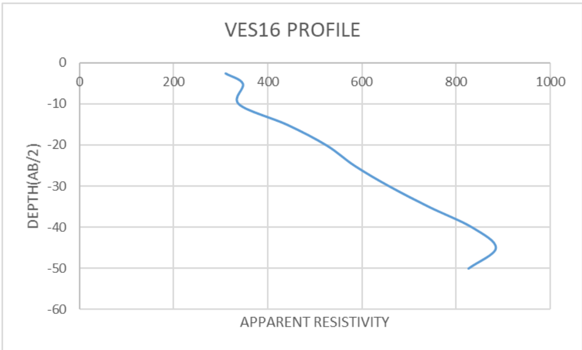

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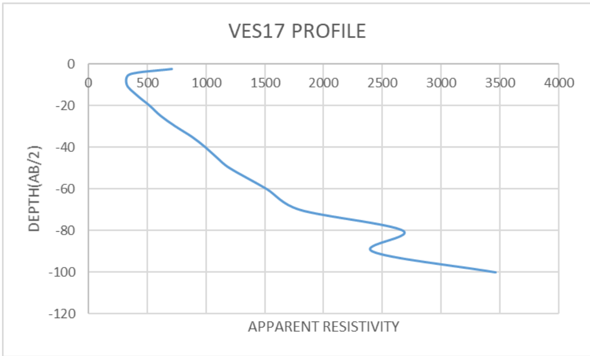

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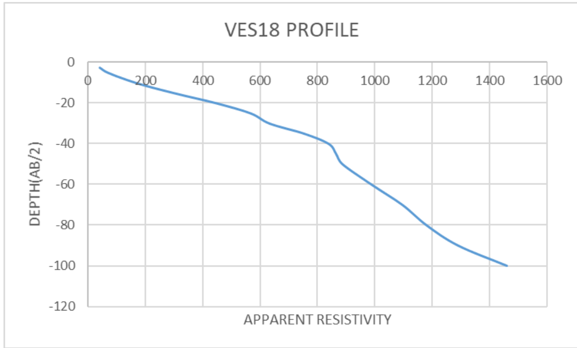

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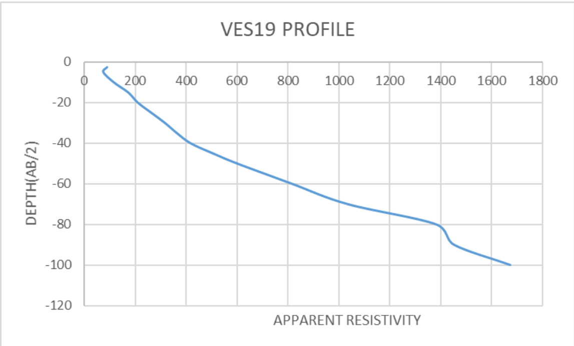

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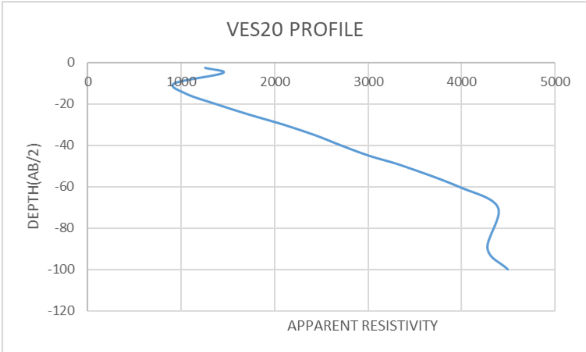

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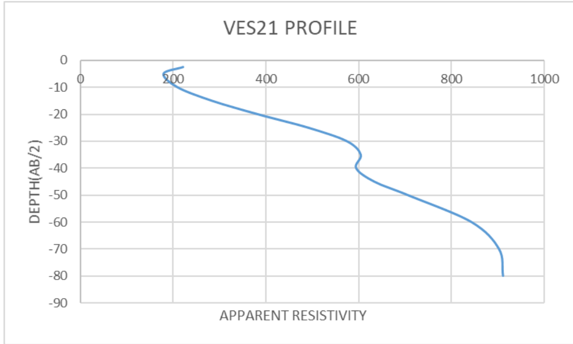

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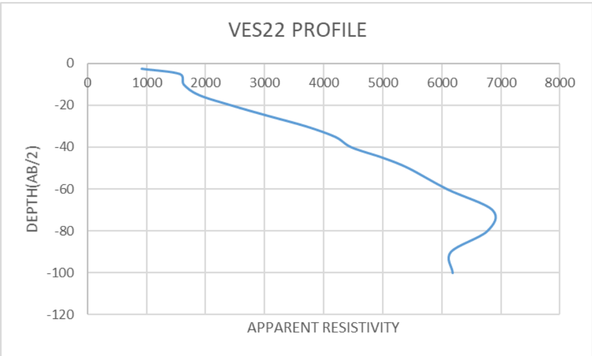

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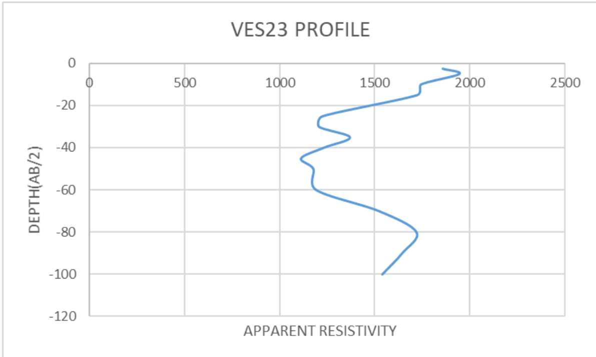

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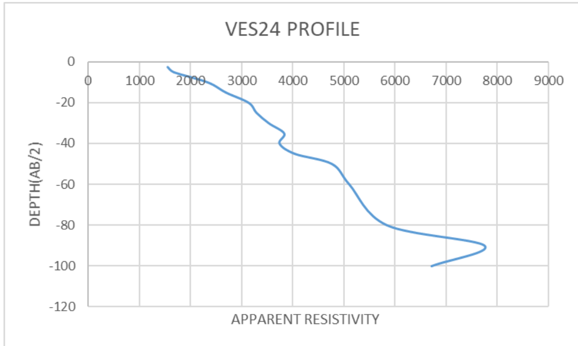

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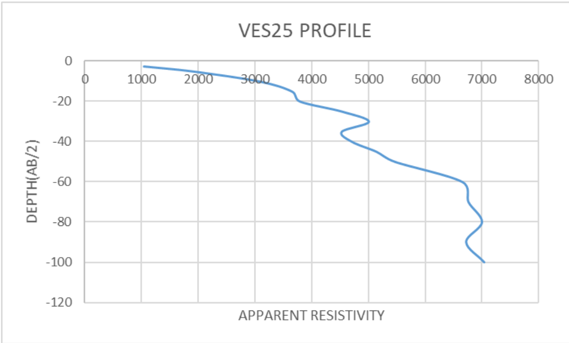

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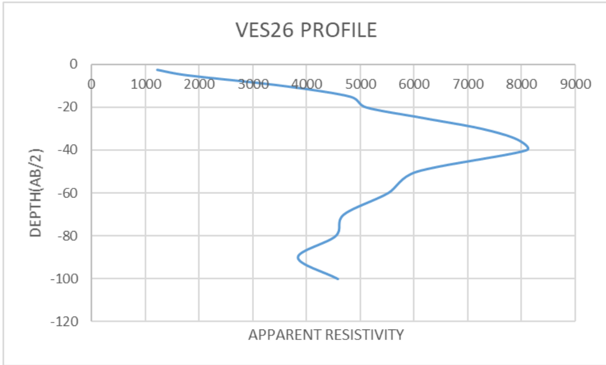

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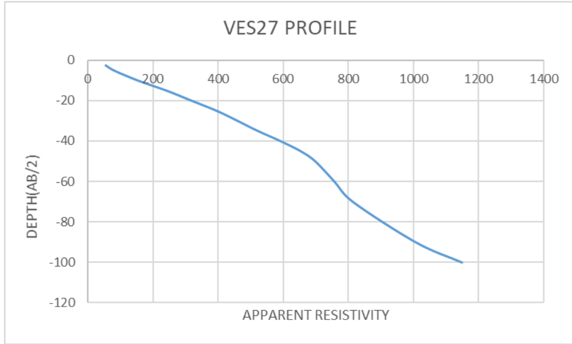

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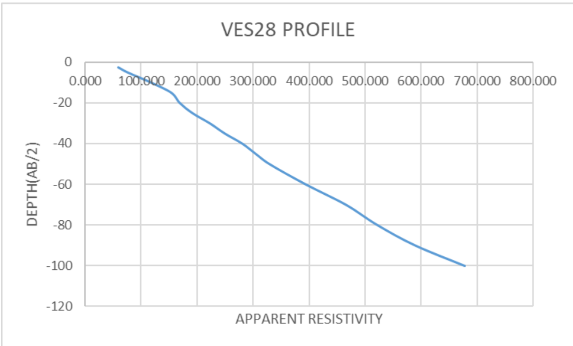

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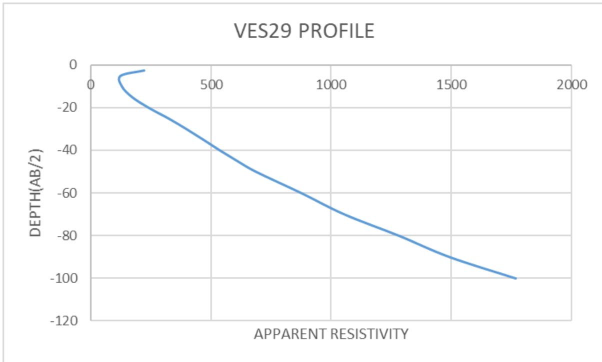

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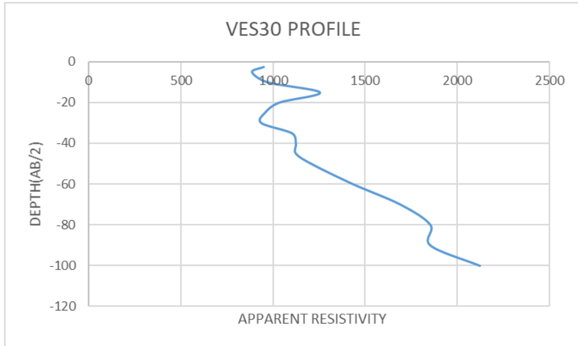

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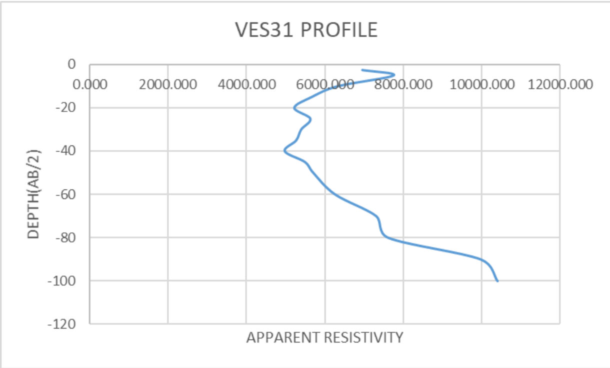

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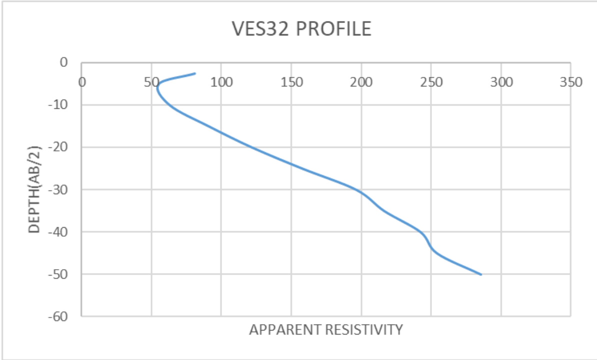

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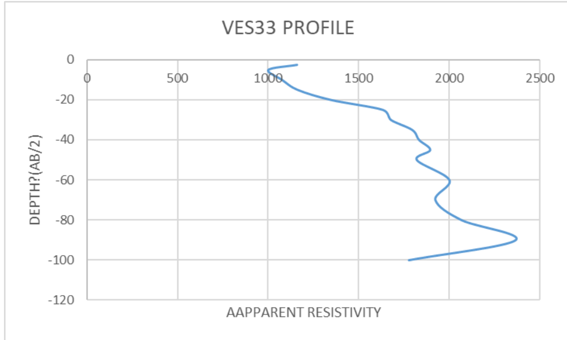

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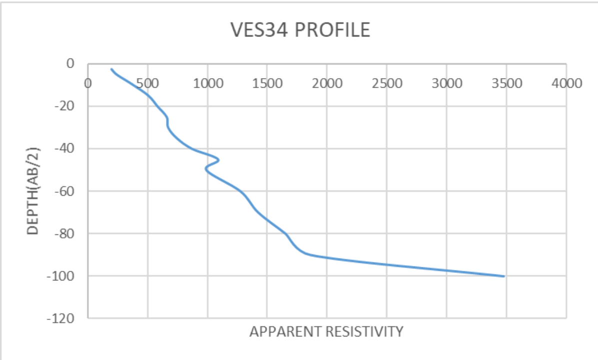

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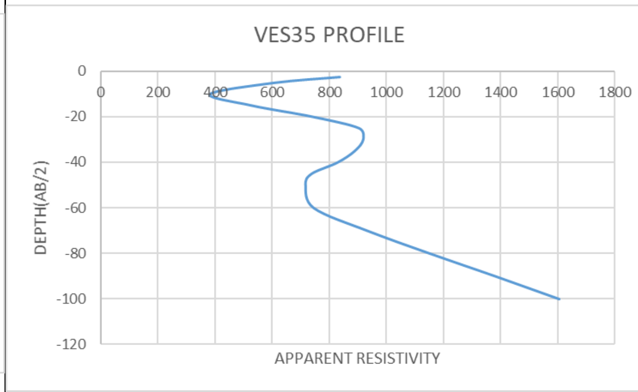

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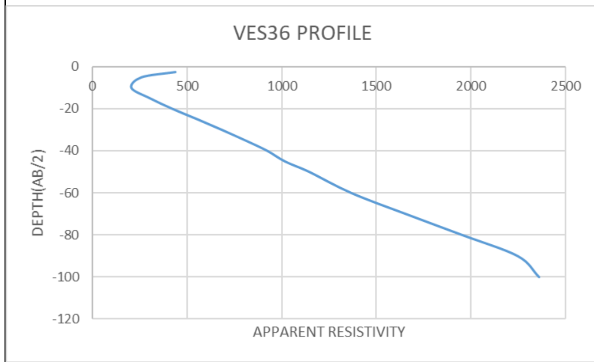

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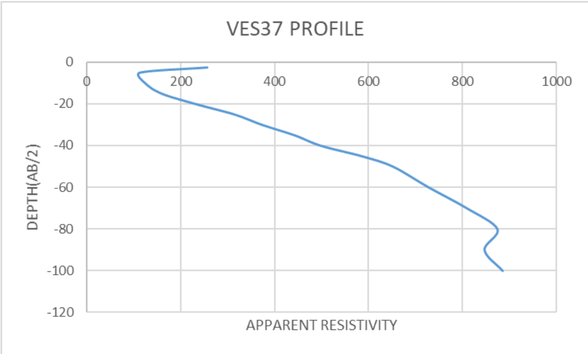

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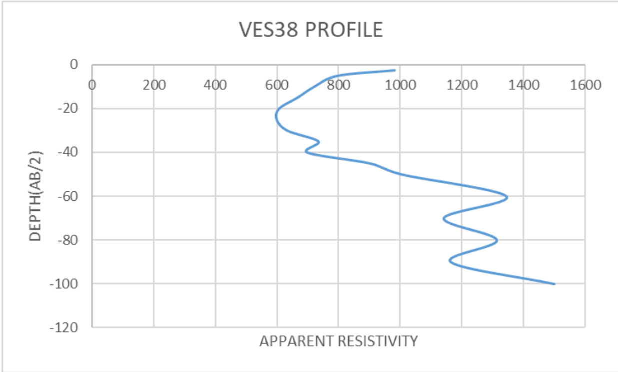

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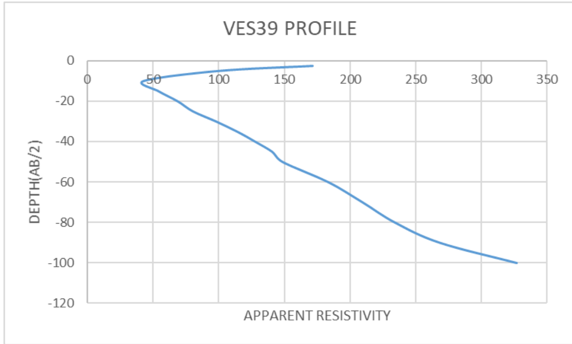

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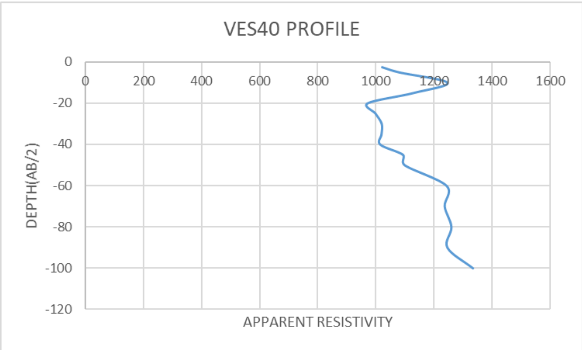

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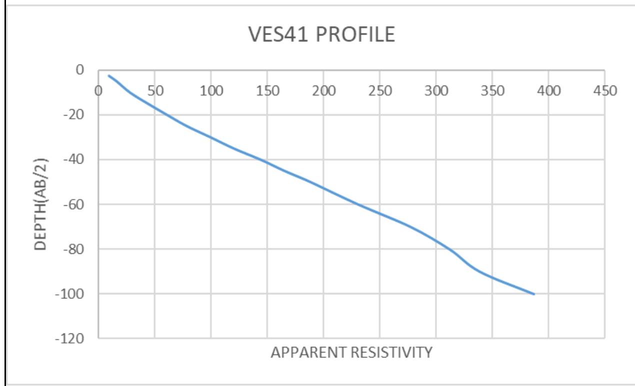

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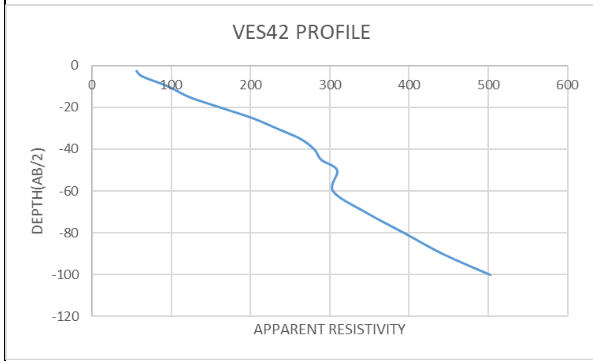

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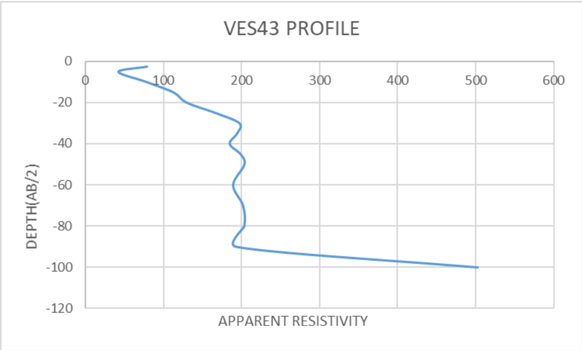

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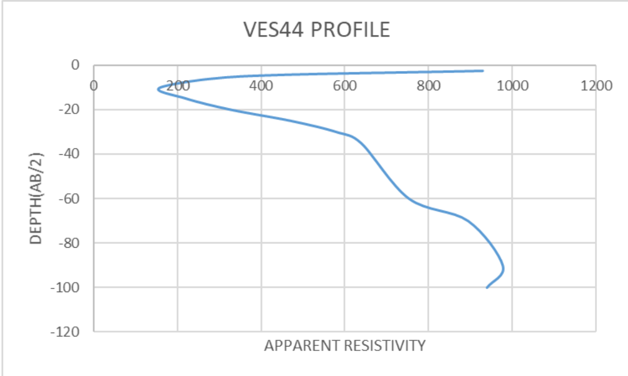

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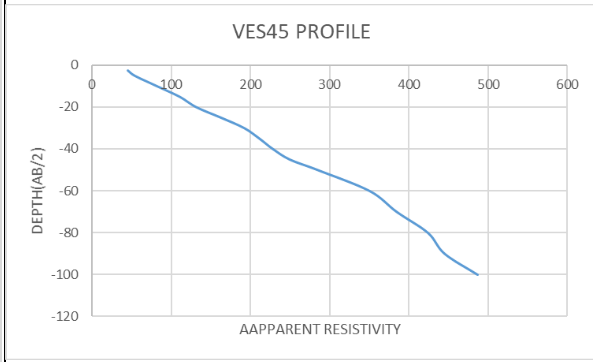

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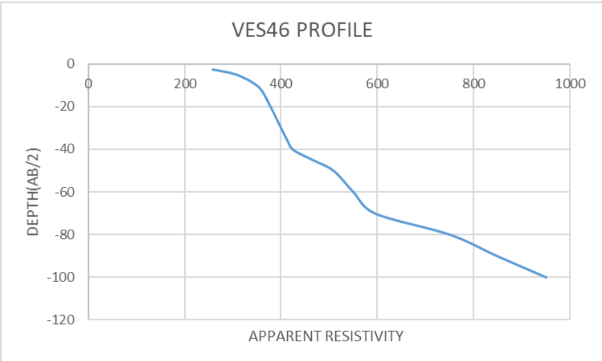

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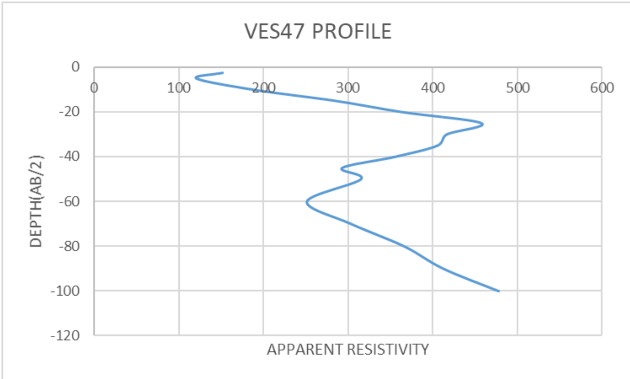

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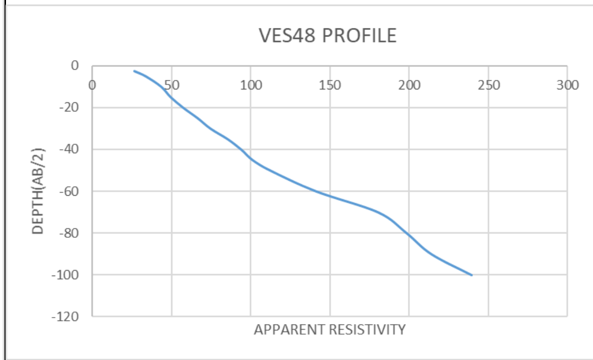

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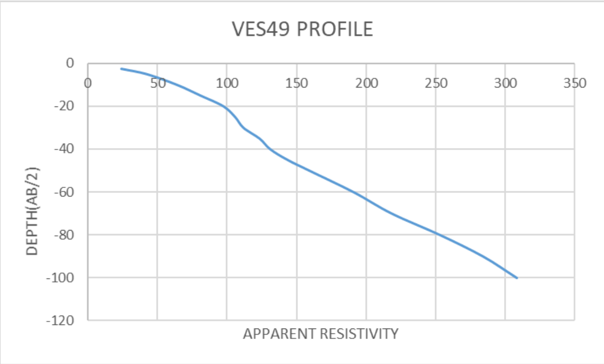

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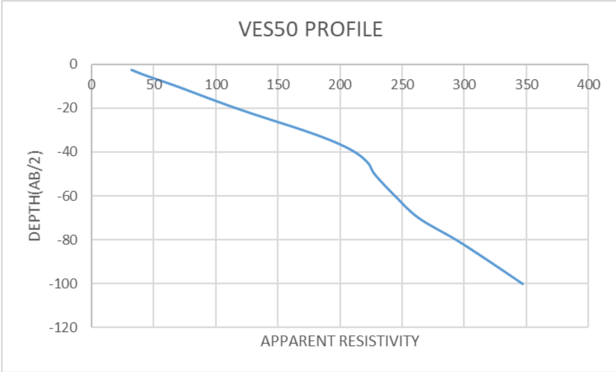

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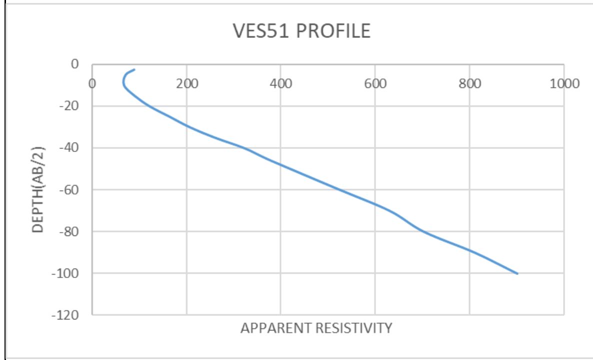

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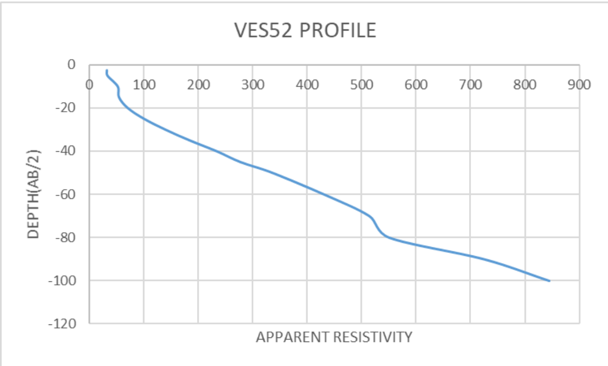

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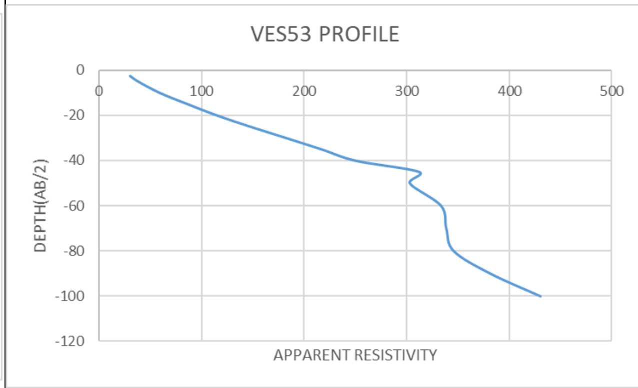

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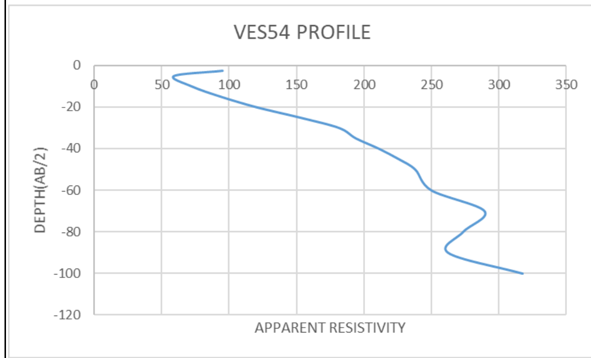

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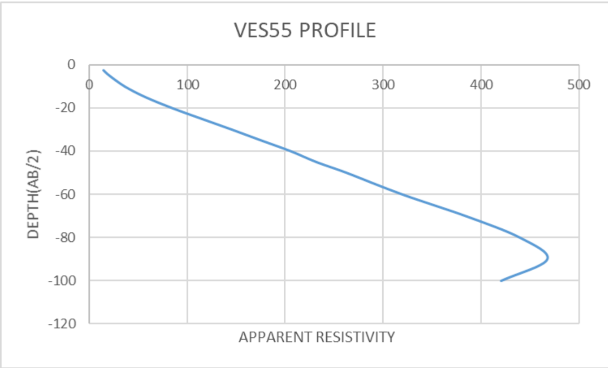

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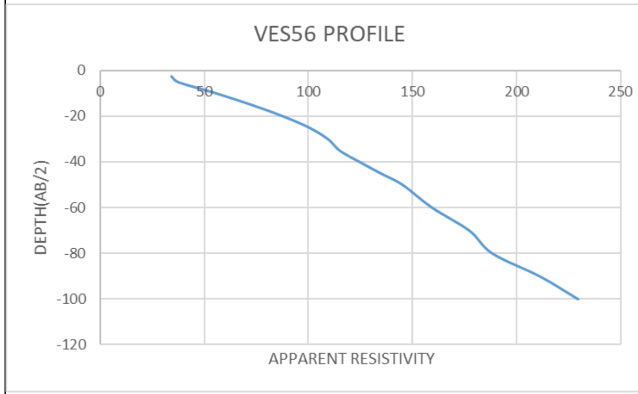

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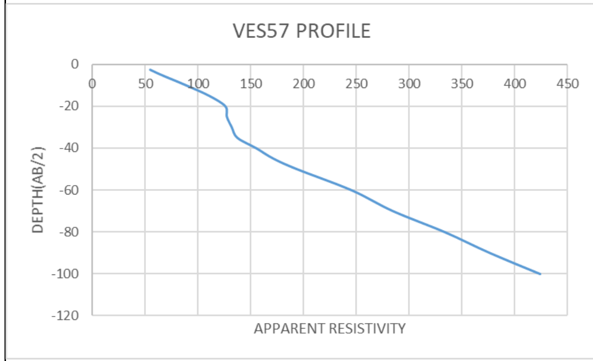

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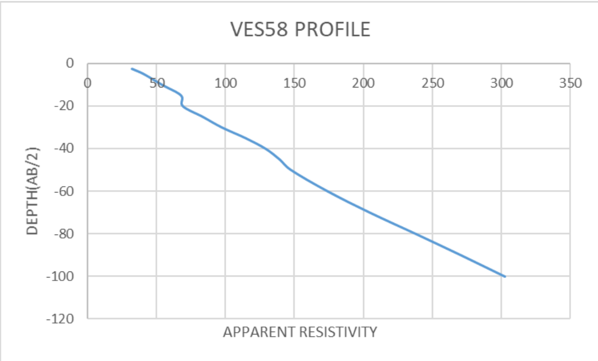

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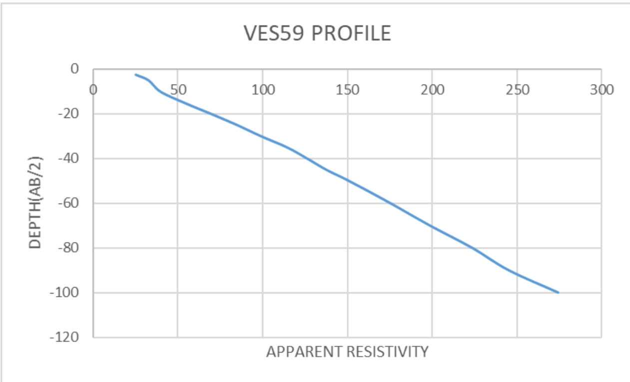

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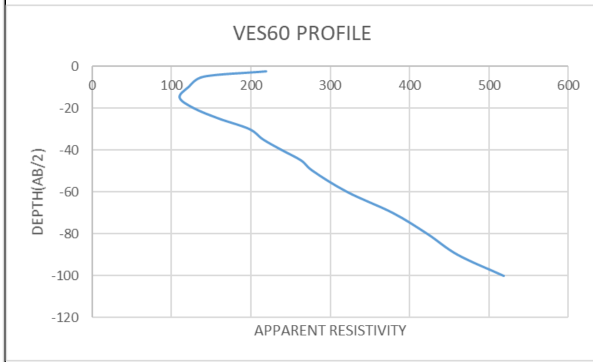

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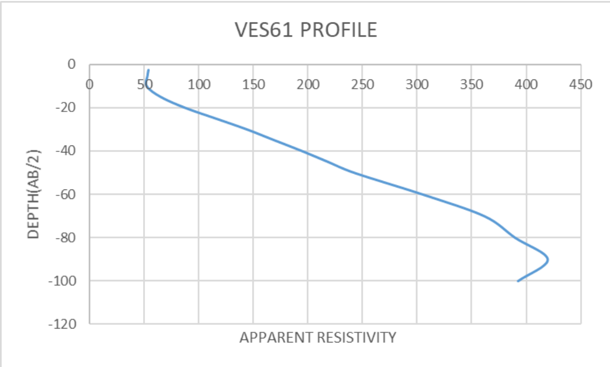

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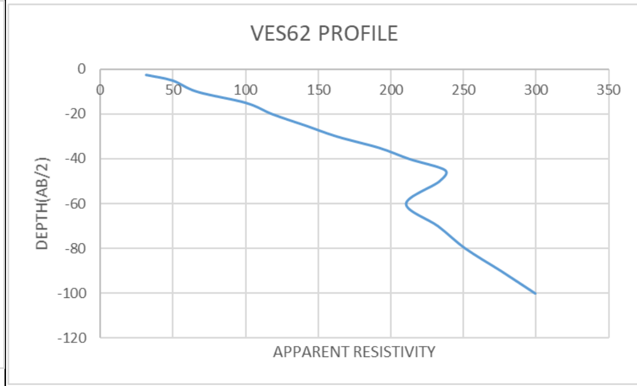
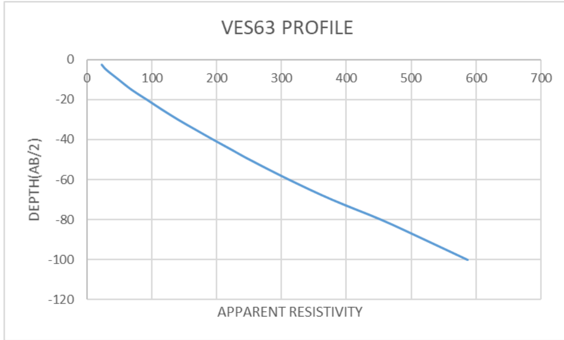
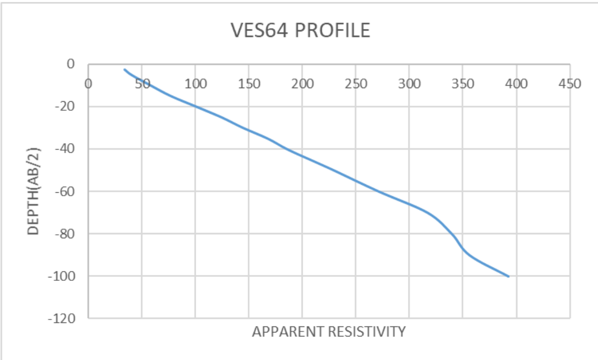


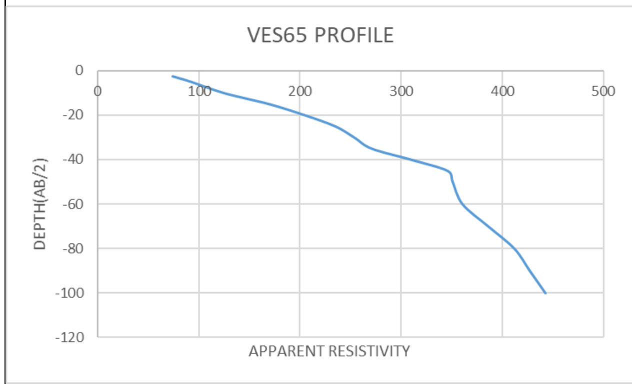
Depth vs Apparent Resistivity of VES62



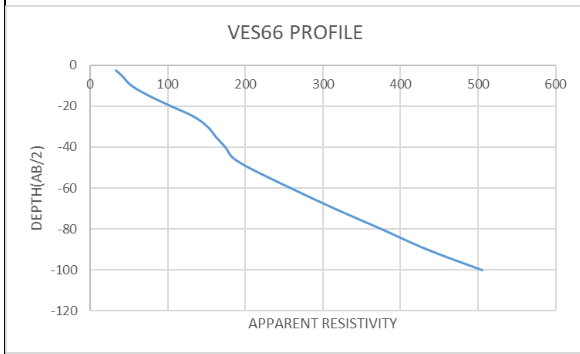
Depth vs Apparent Resistivity of VES63



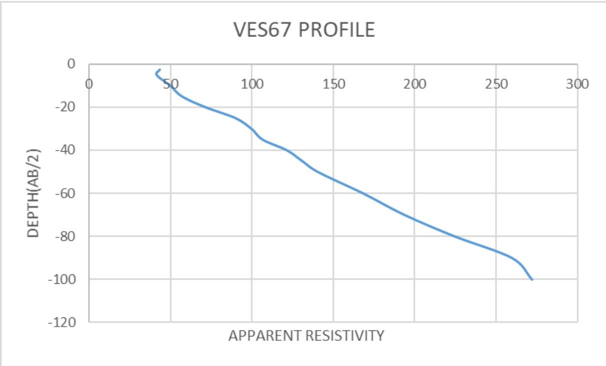
Depth vs Apparent Resistivity of VES64



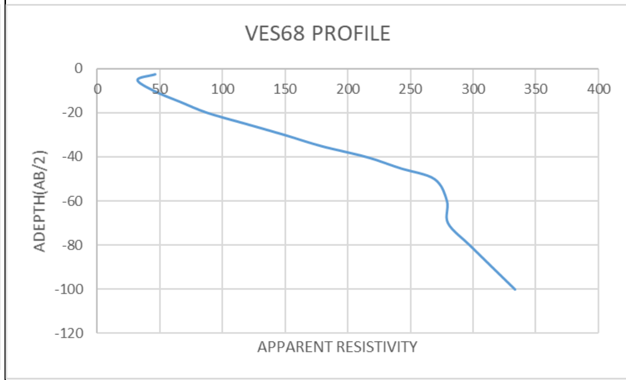
Depth vs Apparent Resistivity of VES65



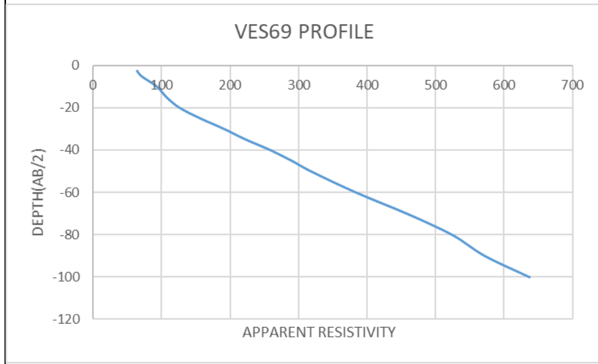
Depth vs Apparent Resistivity of VES66



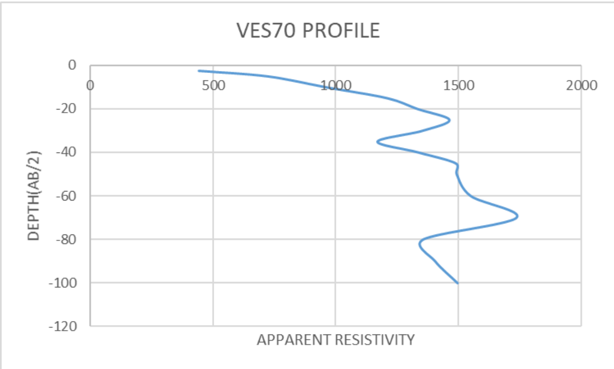
Depth vs Apparent Resistivity of VES67



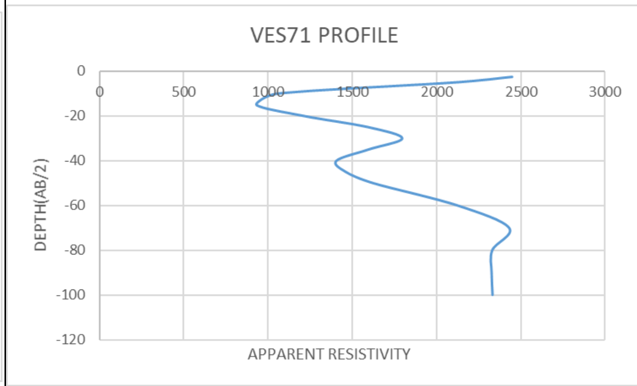
Depth vs Apparent Resistivity of VES68



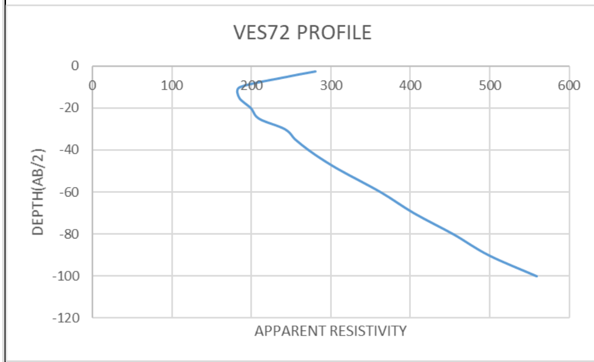
Depth vs Apparent Resistivity of VES69



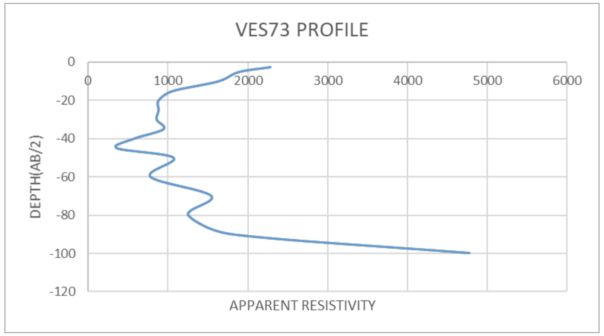
Depth vs Apparent Resistivity of VES70



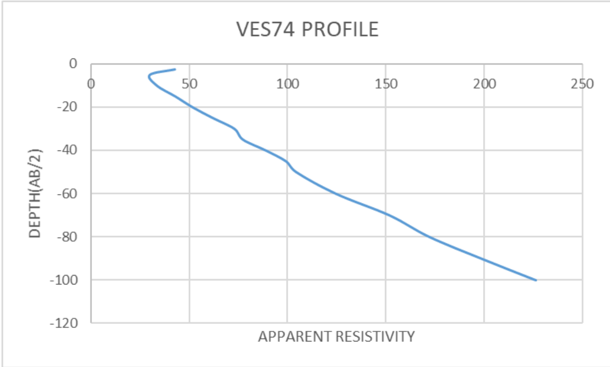
Depth vs Apparent Resistivity of VES71



Depth vs Apparent Resistivity of VES72



Depth vs Apparent Resistivity of VES73



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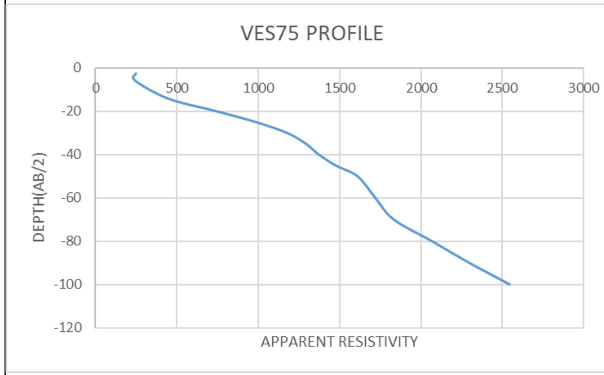
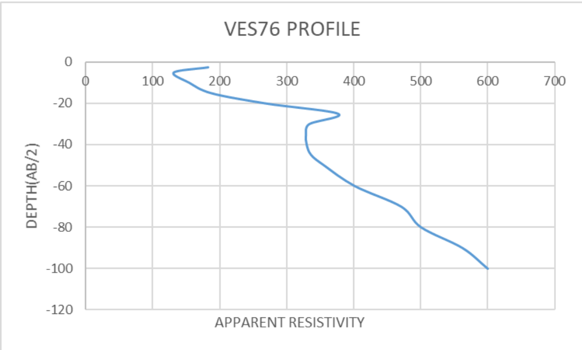
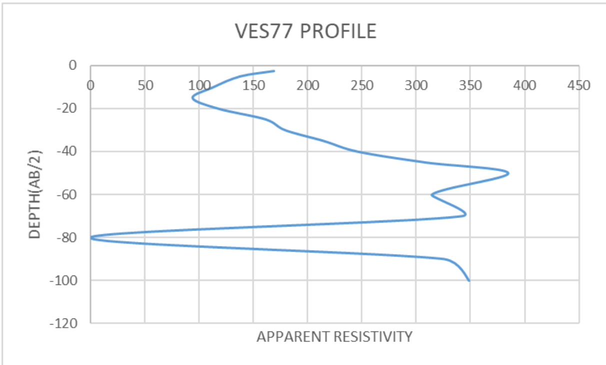


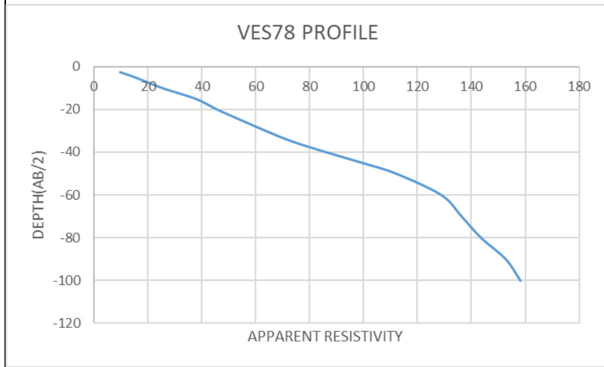
Depth vs Apparent Resistivity of VES75



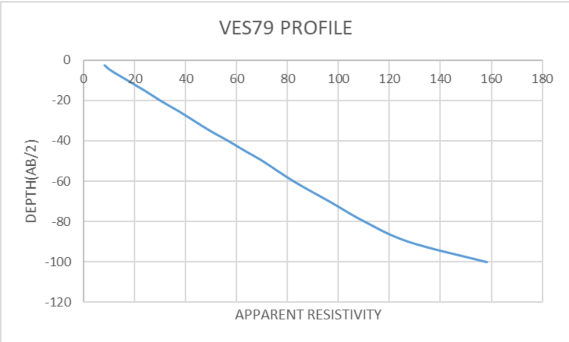
Depth vs Apparent Resistivity of VES76



Depth vs Apparent Resistivity of VES77



Depth vs Apparent Resistivity of VES78



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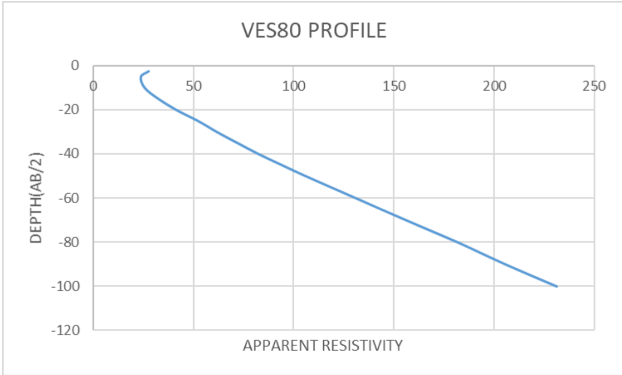
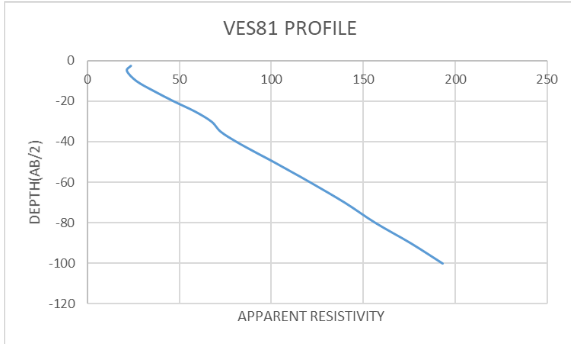
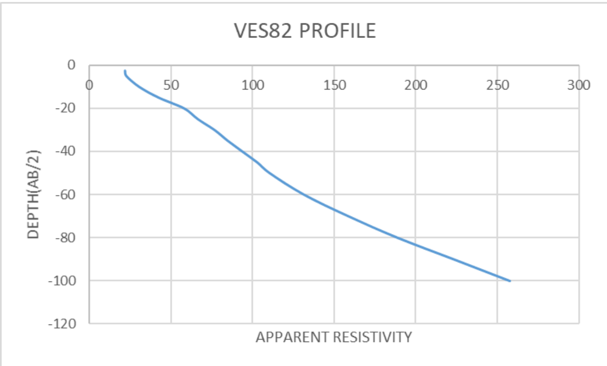


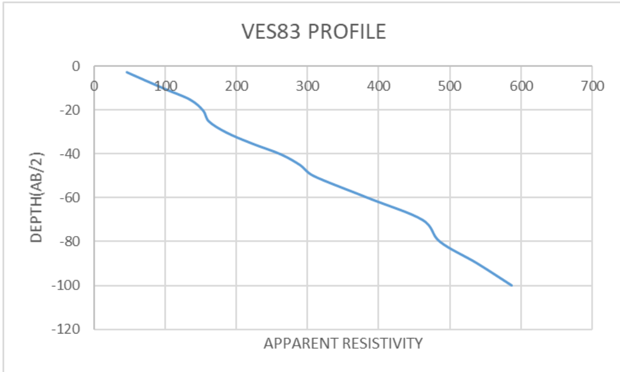
Depth vs Apparent Resistivity of VES80



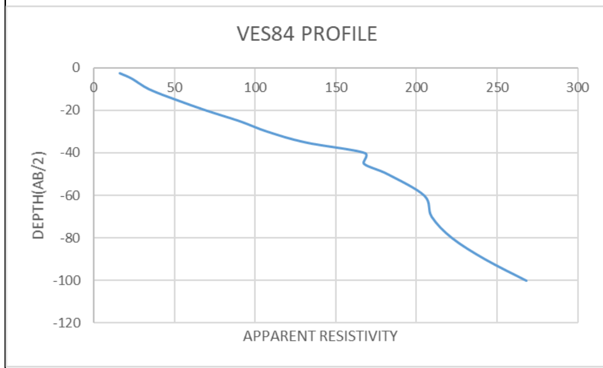
Depth vs Apparent Resistivity of VES81



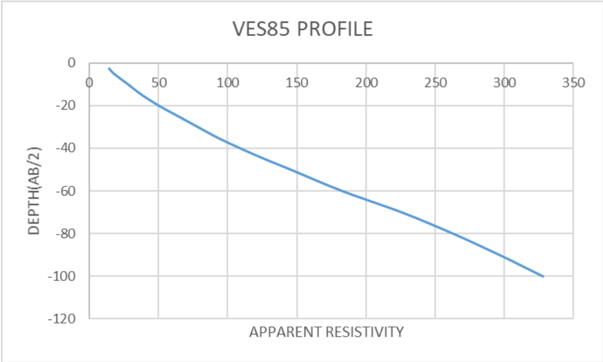
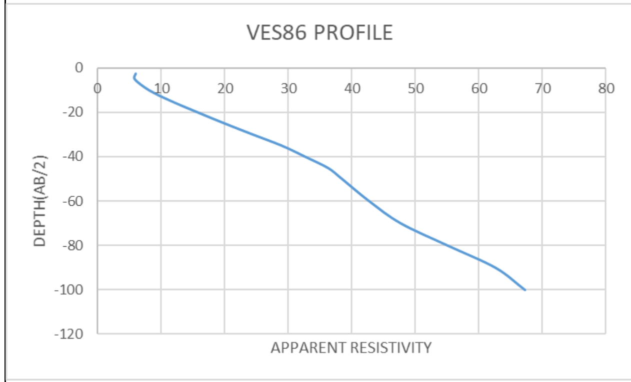
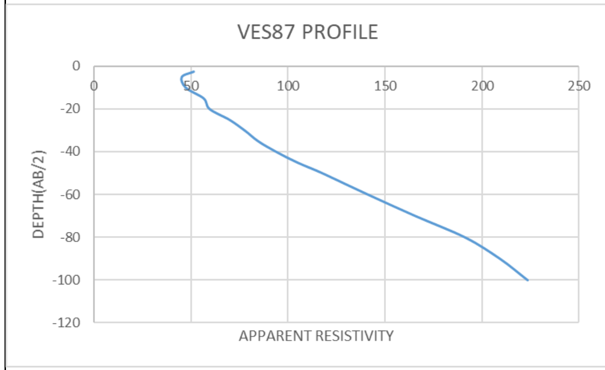
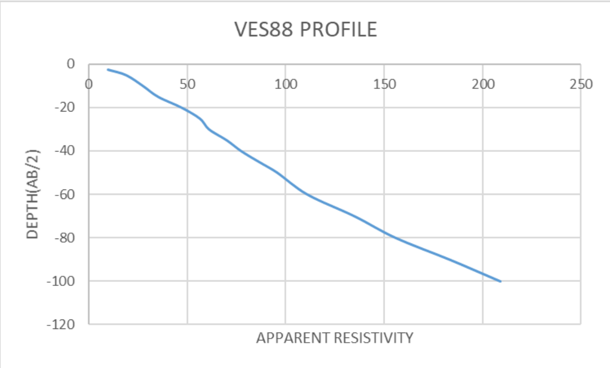
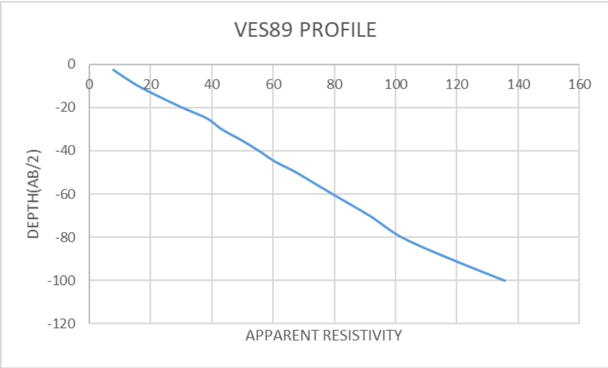
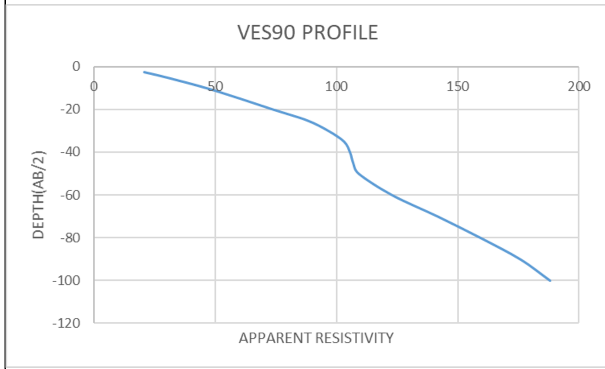
Depth vs Apparent Resistivity of VES82

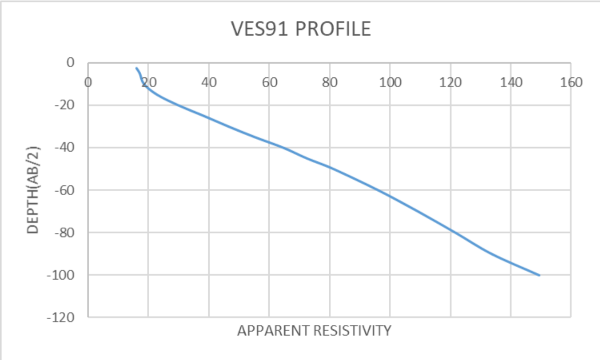


Depth vs Apparent Resistivity of VES83

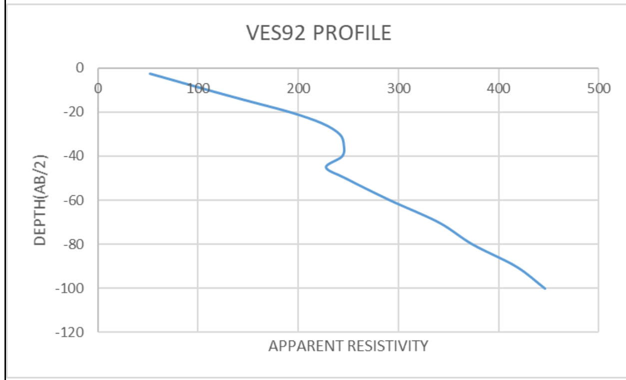


Depth vs Apparent Resistivity of VES84

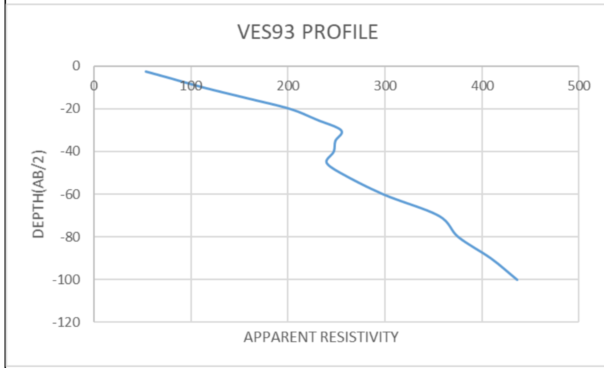
		
Depth vs Apparent Resistivity of VES85	Depth vs Apparent Resistivity of VES86	Depth vs Apparent Resistivity of VES87
		
Depth vs Apparent Resistivity of VES88	Depth vs Apparent Resistivity of VES89	Depth vs Apparent Resistivity of VES90



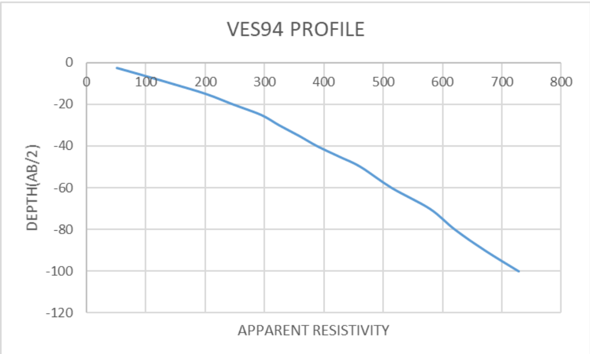
Depth vs Apparent Resistivity of VES91



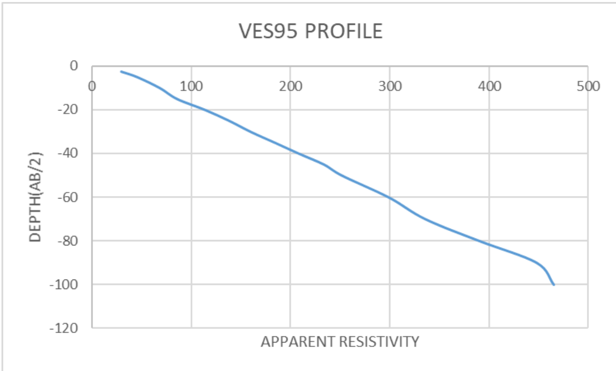
Depth vs Apparent Resistivity of VES92



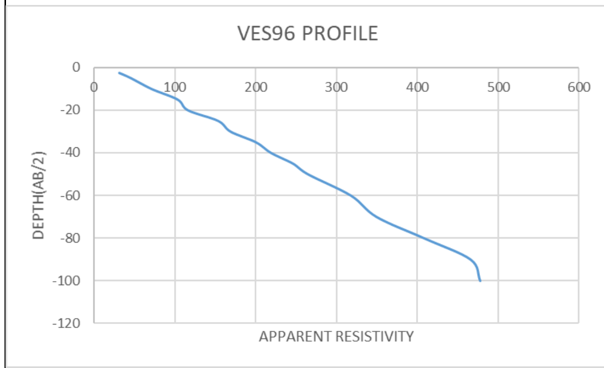
Depth vs Apparent Resistivity of VES93



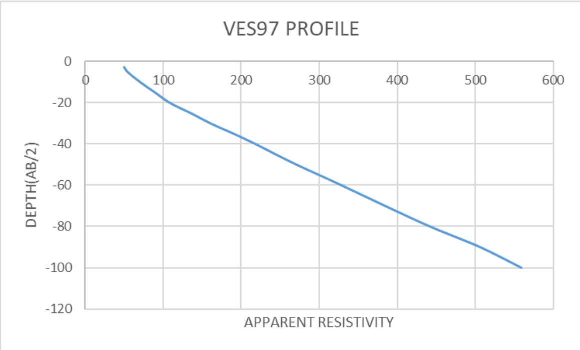
Depth vs Apparent Resistivity of VES94



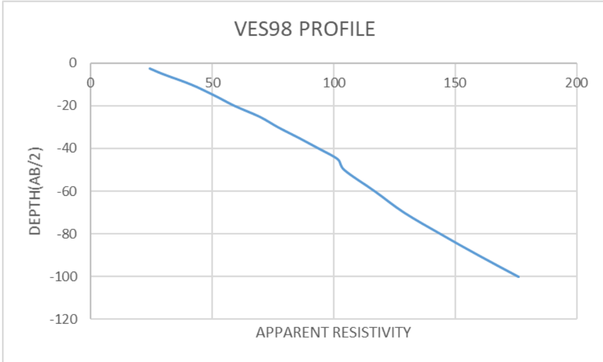
Depth vs Apparent Resistivity of VES95



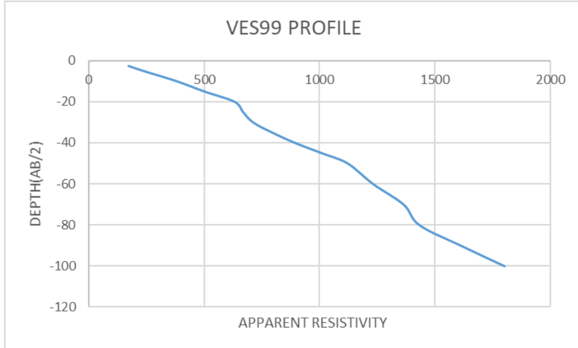
Depth vs Apparent Resistivity of VES96



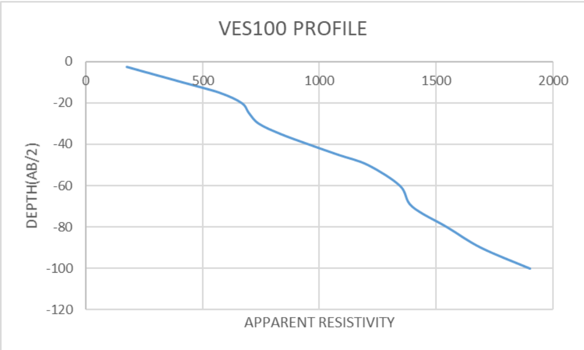
Depth vs Apparent Resistivity of VES97



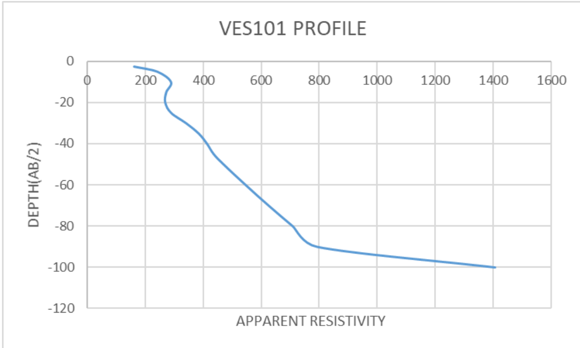
Depth vs Apparent Resistivity of VES98



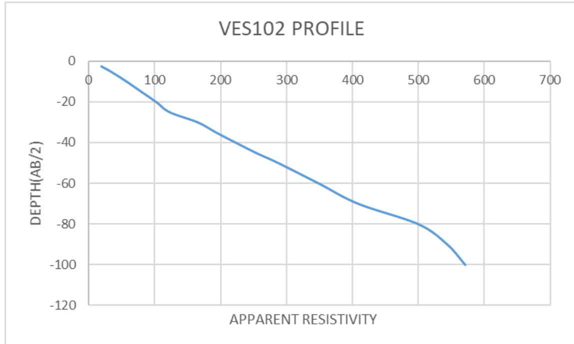
Depth vs Apparent Resistivity of VES99



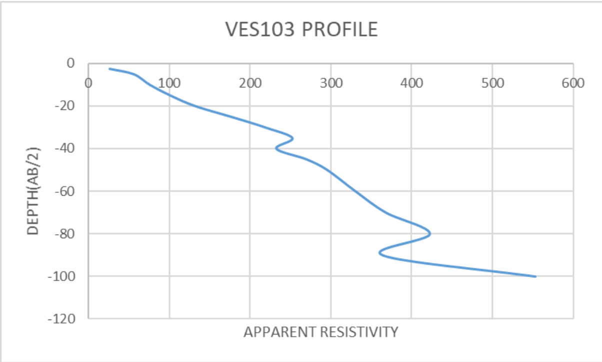
Depth vs Apparent Resistivity of VES100



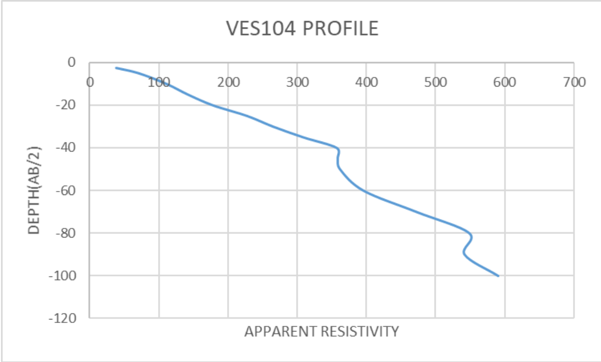
Depth vs Apparent Resistivity of VES101



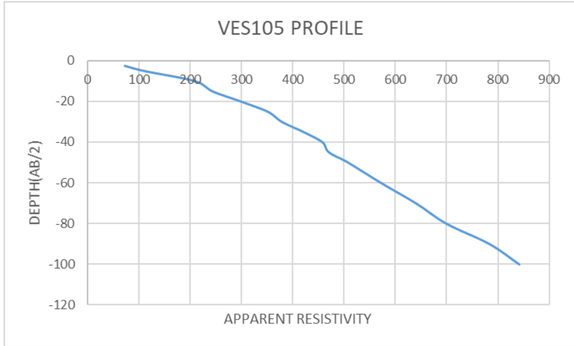
Depth vs Apparent Resistivity of VES102



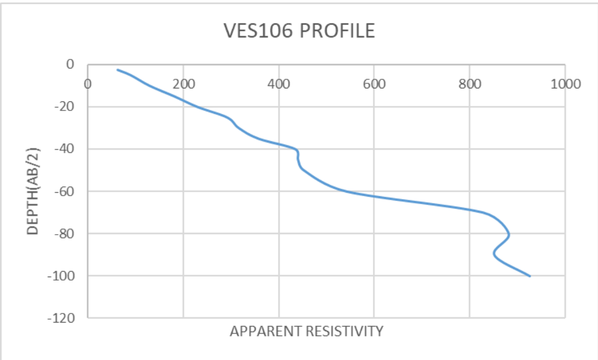
Depth vs Apparent Resistivity of VES103



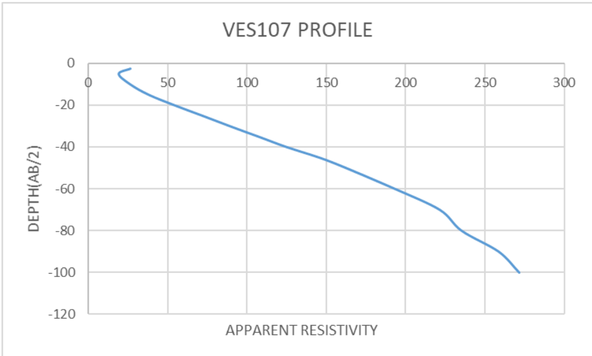
Depth vs Apparent Resistivity of VES104



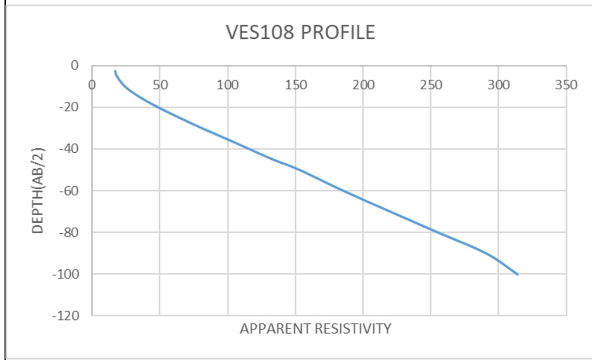
Depth vs Apparent Resistivity of VES105



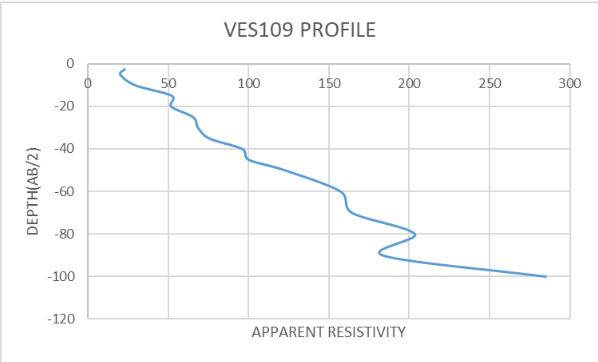
Depth vs Apparent Resistivity of VES106



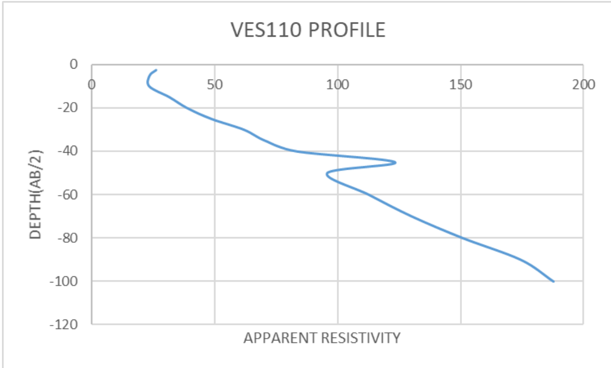
Depth vs Apparent Resistivity of VES107



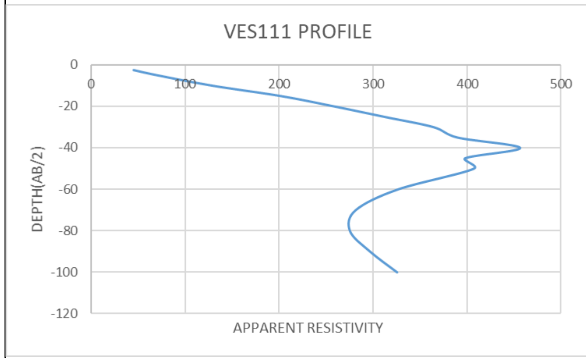
Depth vs Apparent Resistivity of VES108



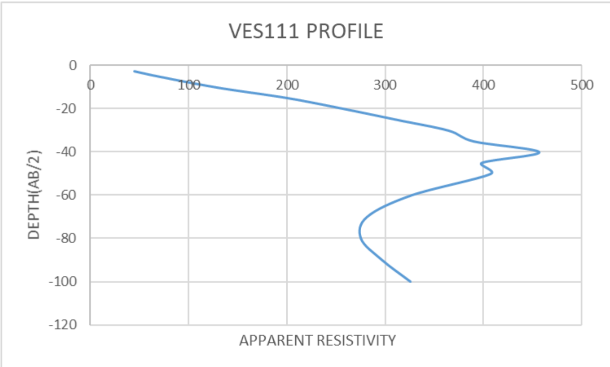
Depth vs Apparent Resistivity of VES109



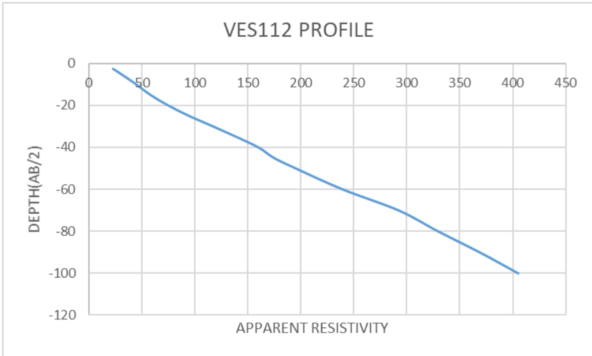
Depth vs Apparent Resistivity of VES110



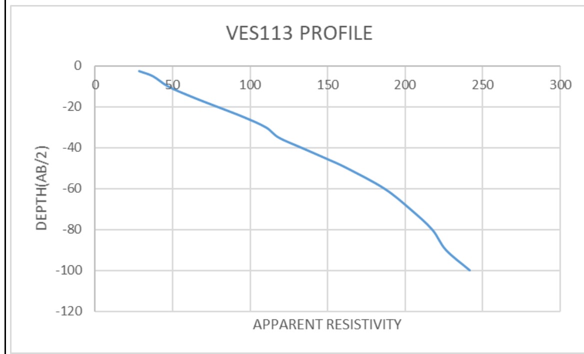
Depth vs Apparent Resistivity of VES111



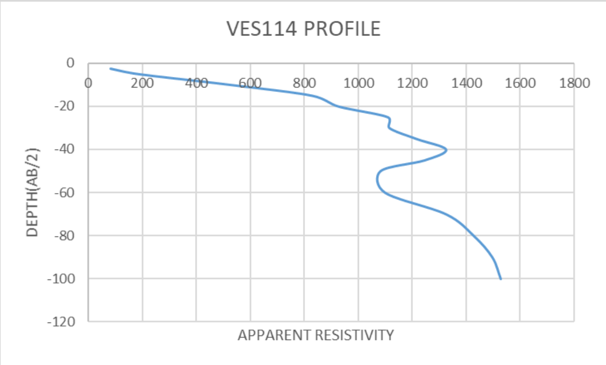
Depth vs Apparent Resistivity of VES111



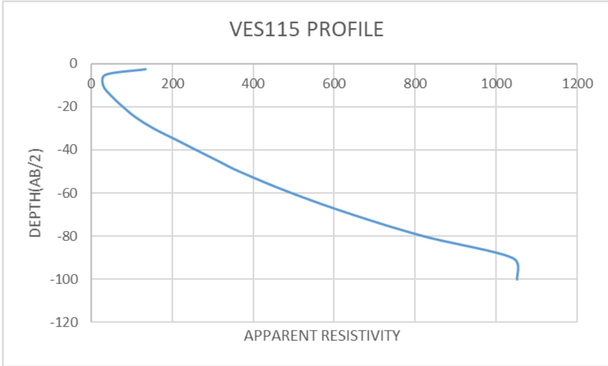
Depth vs Apparent Resistivity of VES112



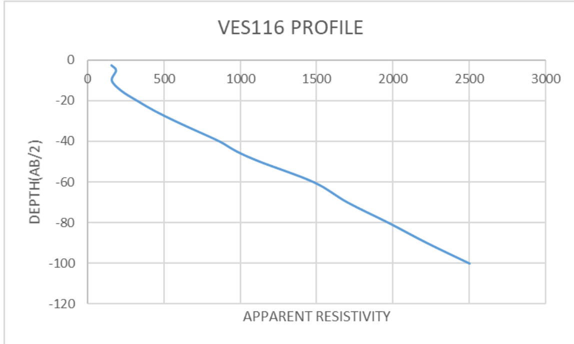
Depth vs Apparent Resistivity of VES113



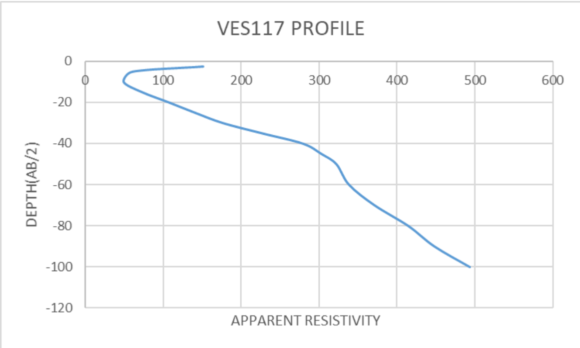
Depth vs Apparent Resistivity of VES114



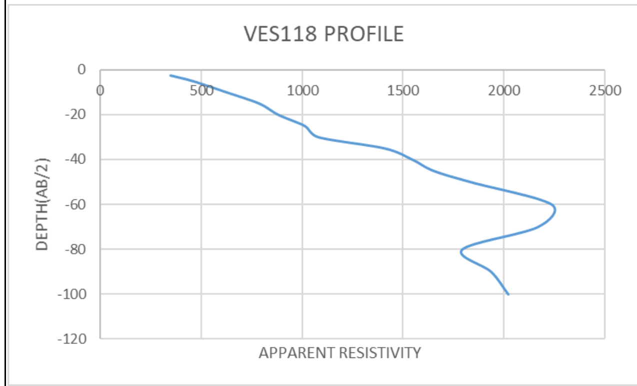
Depth vs Apparent Resistivity of VES115



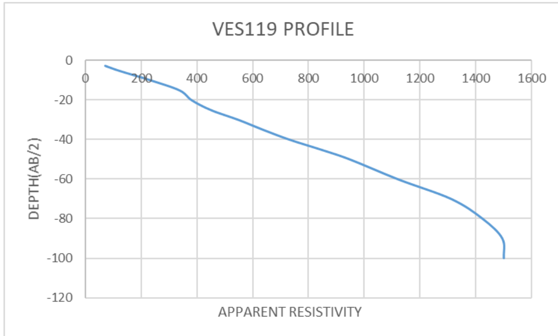
Depth vs Apparent Resistivity of VES116



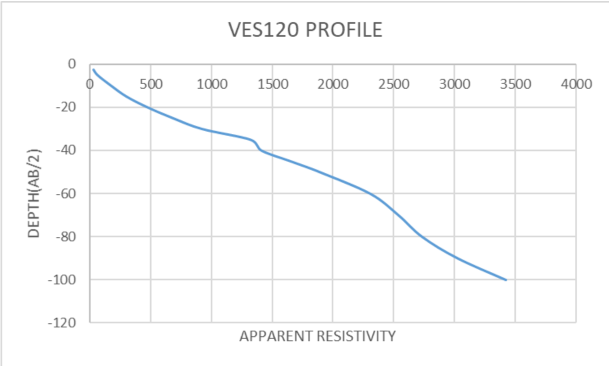
Depth vs Apparent Resistivity of VES117



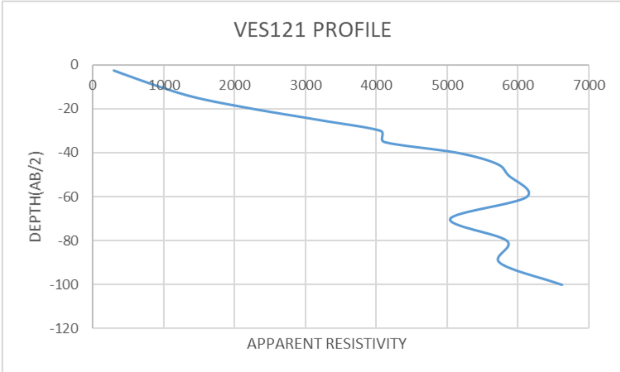
Depth vs Apparent Resistivity of VES118



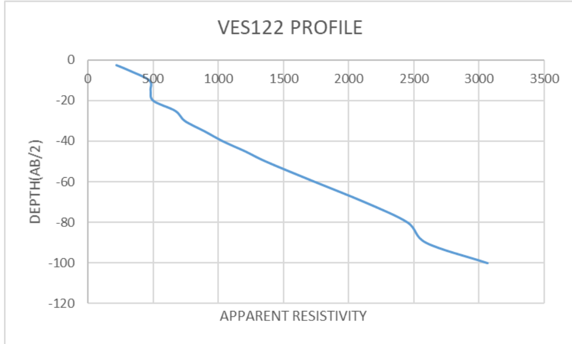
Depth vs Apparent Resistivity of VES119



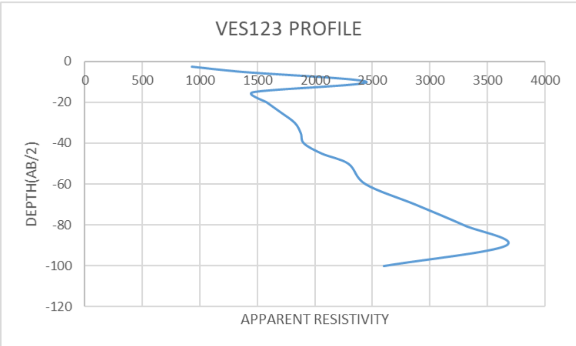
Depth vs Apparent Resistivity of VES120



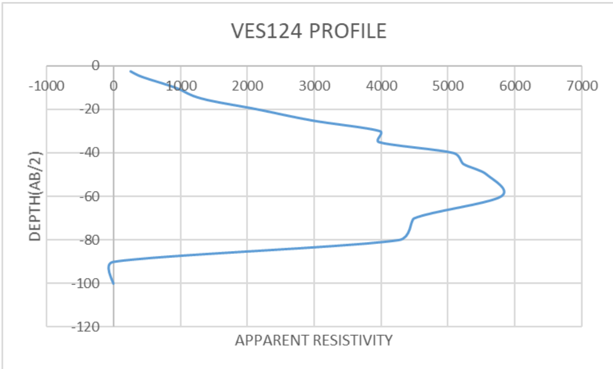
Depth vs Apparent Resistivity of VES121



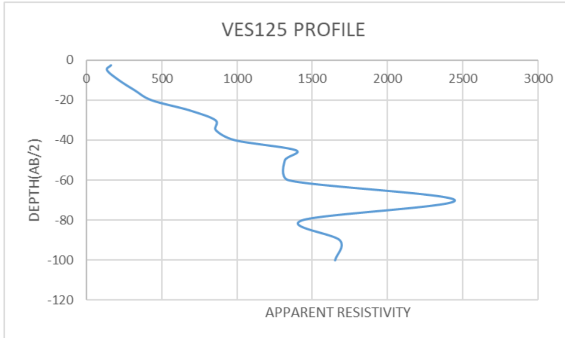
Depth vs Apparent Resistivity of VES122



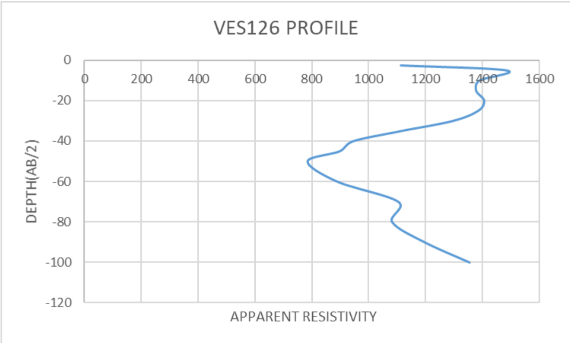
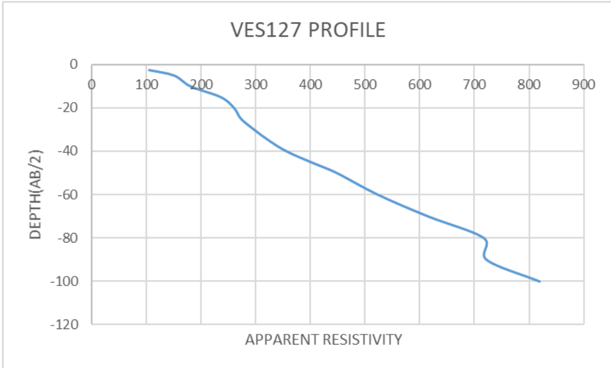
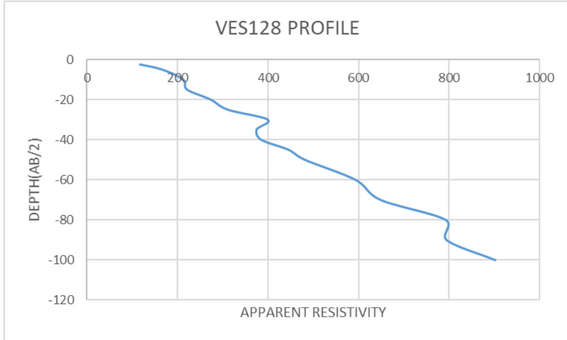
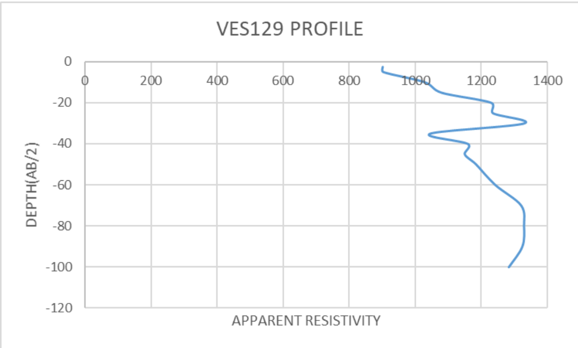
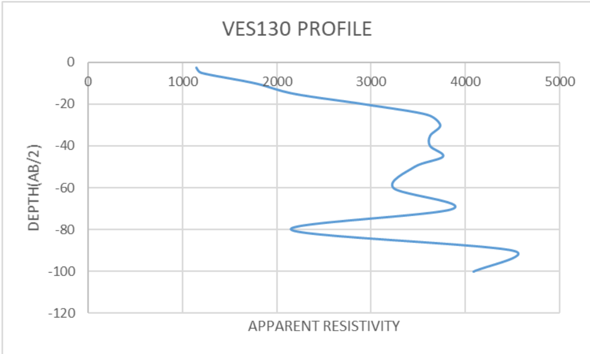
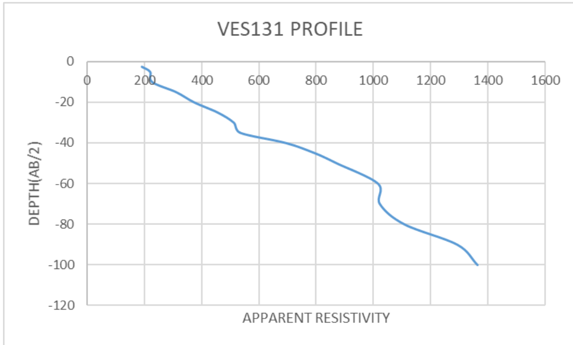
Depth vs Apparent Resistivity of VES123

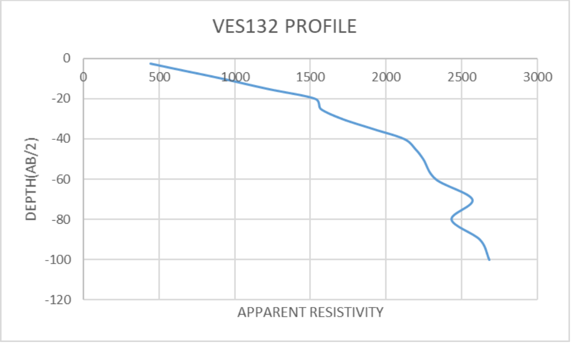


Depth vs Apparent Resistivity of VES124



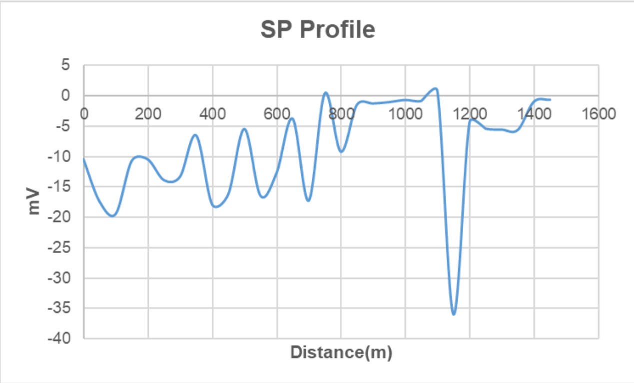
Depth vs Apparent Resistivity of VES125

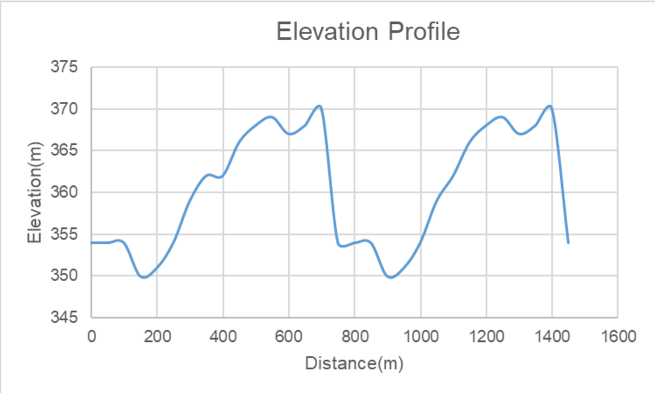
		
Depth vs Apparent Resistivity of VES126	Depth vs Apparent Resistivity of VES127	Depth vs Apparent Resistivity of VES128
		
Depth vs Apparent Resistivity of VES129	Depth vs Apparent Resistivity of VES130	Depth vs Apparent Resistivity of VES132



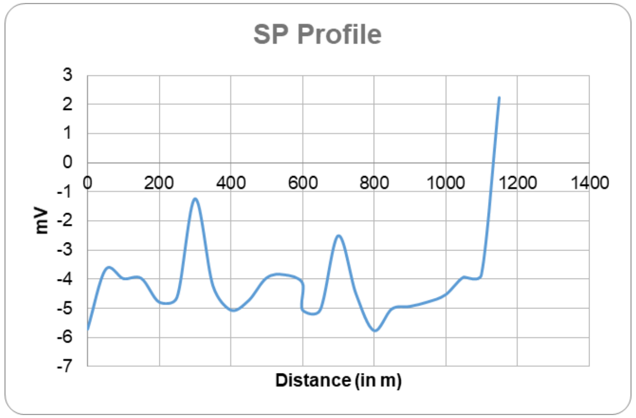
Depth vs Apparent Resistivity of VES132

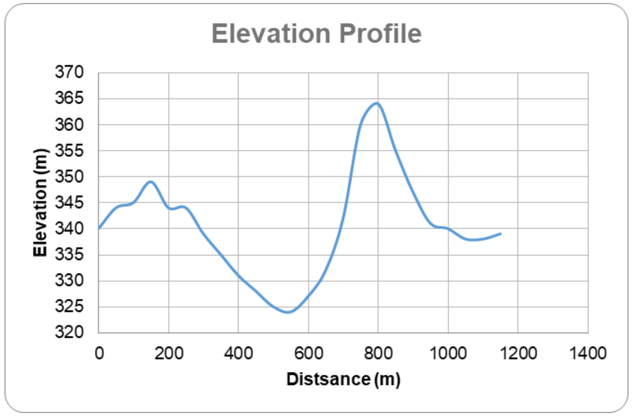
Annexure XVI_SP Models



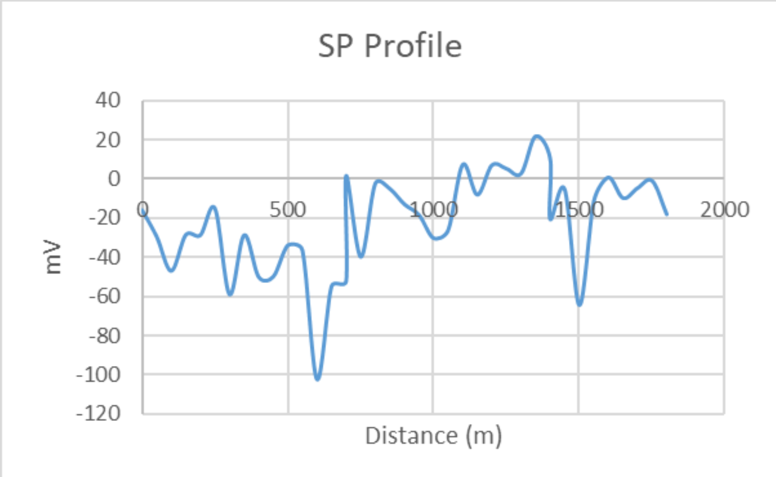


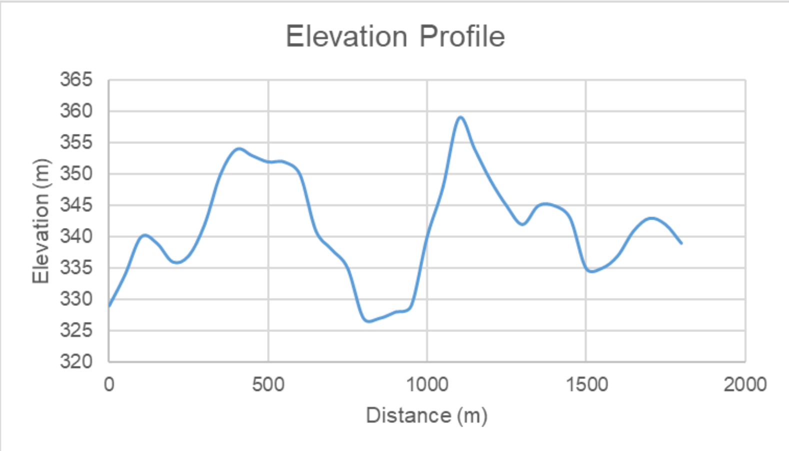
SP and Elevation Profiles for Line 4



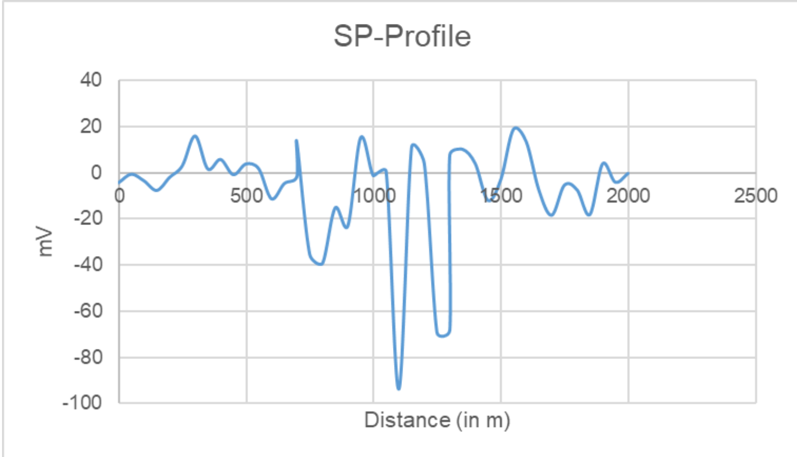


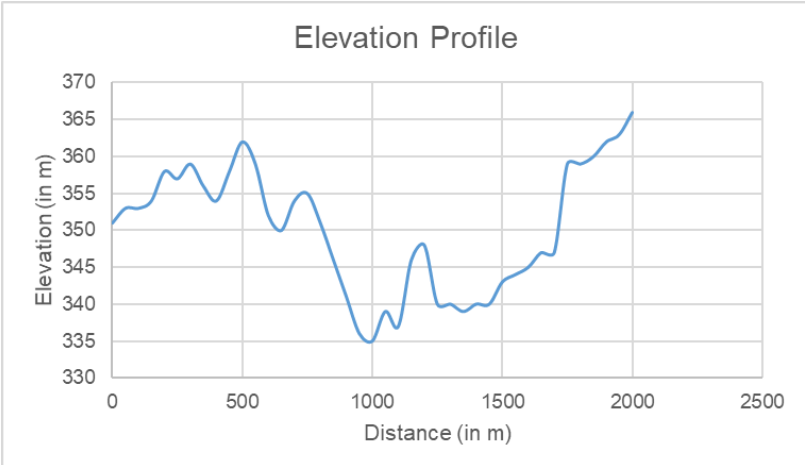
SP and Elevation Profiles for Line 2



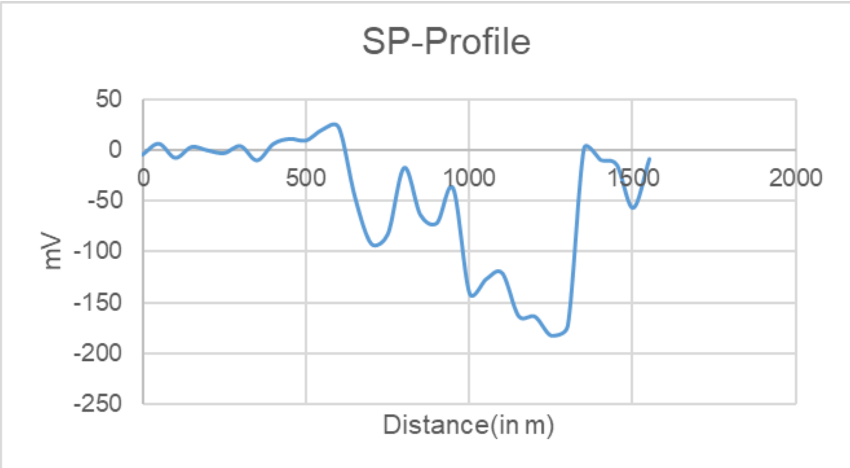


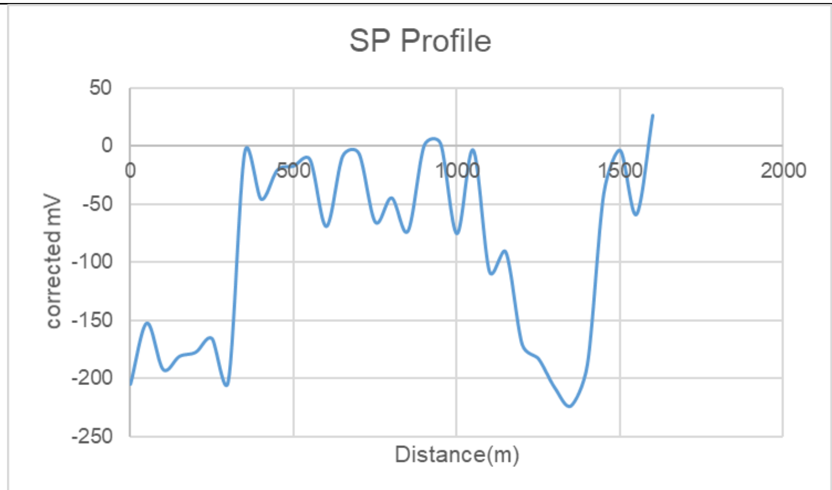
SP and Elevation Profiles for Line 6

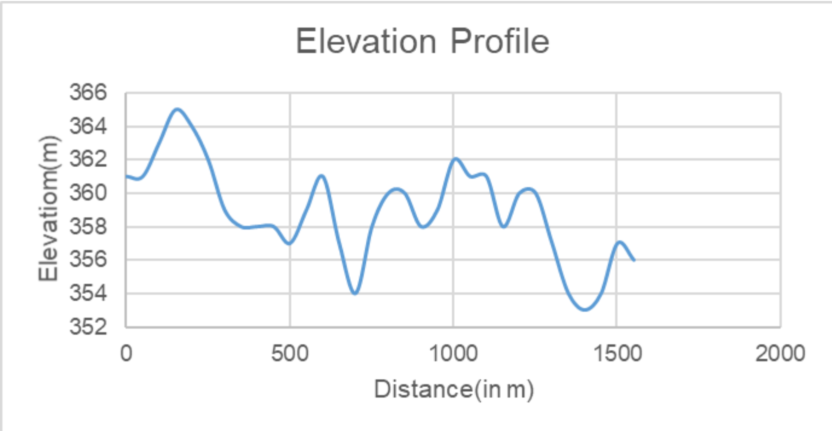


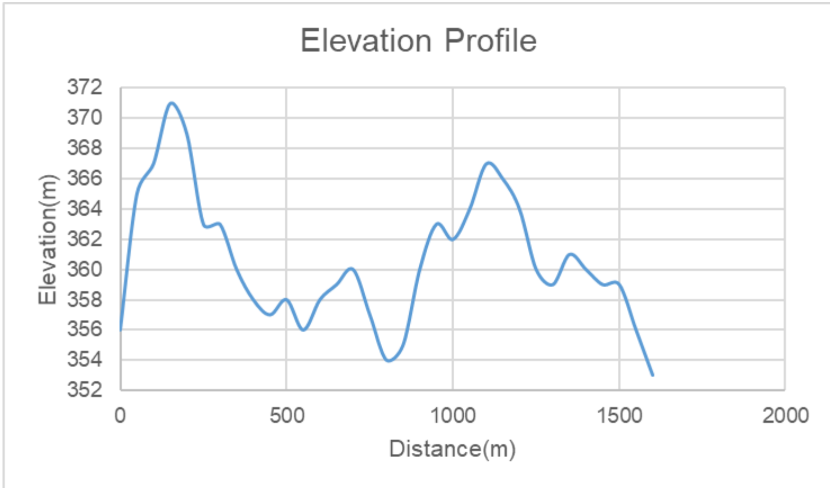


SP and Elevation Profiles for Line 7



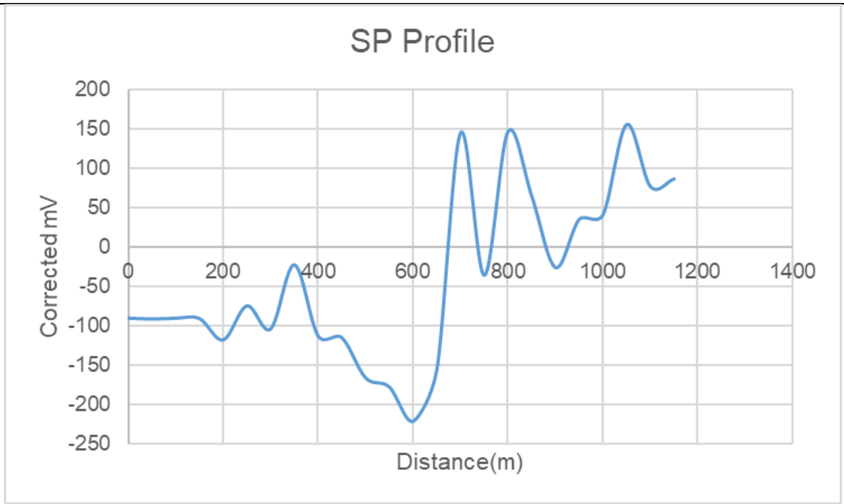
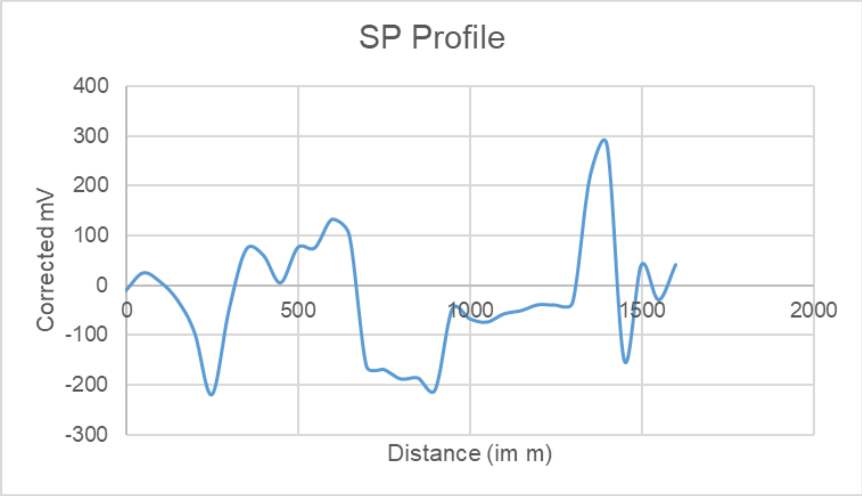
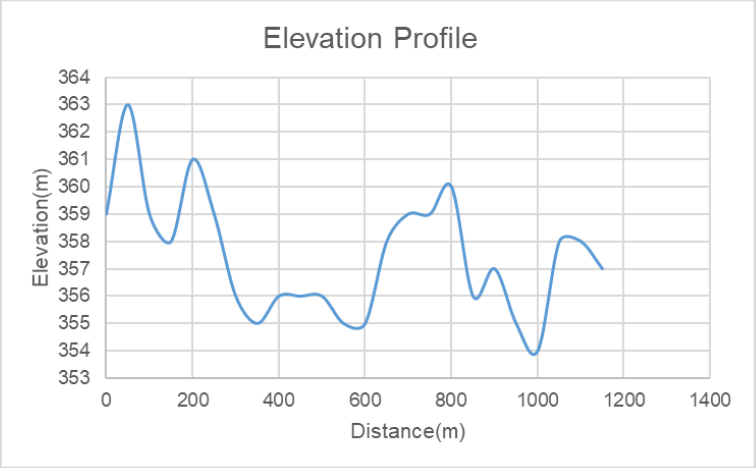
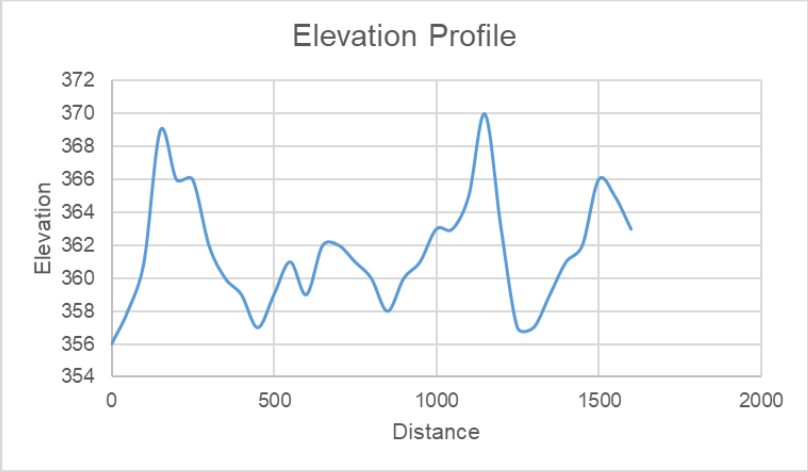


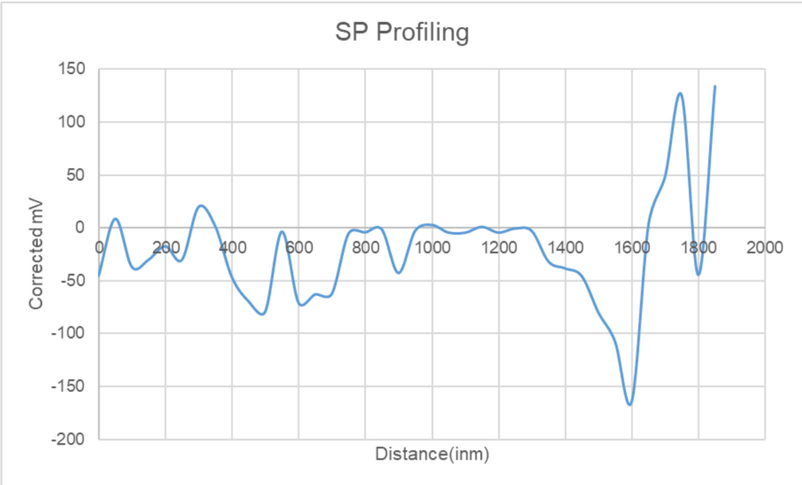


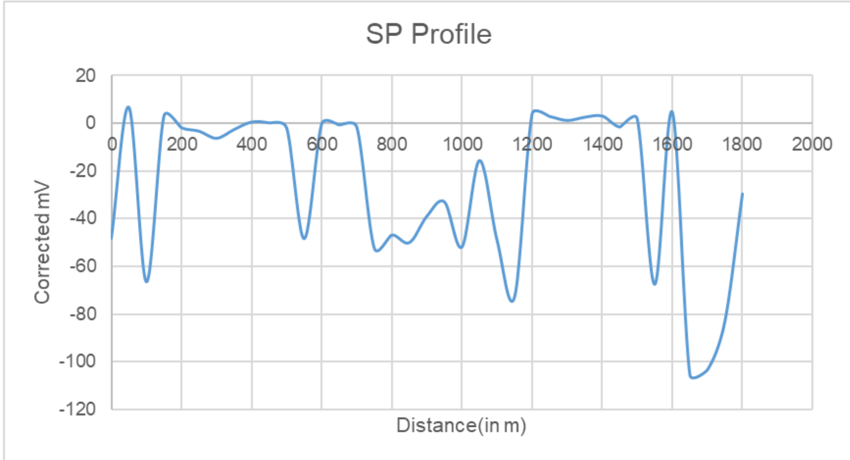


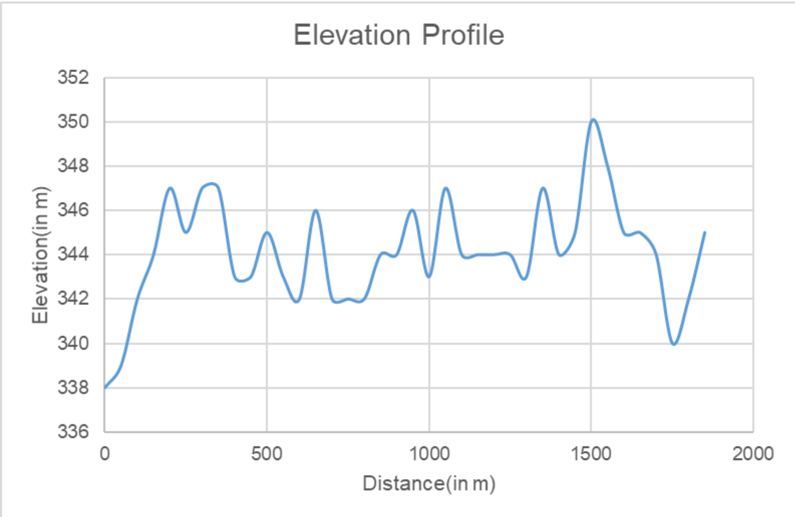
SP and Elevation Profiles for Line 1

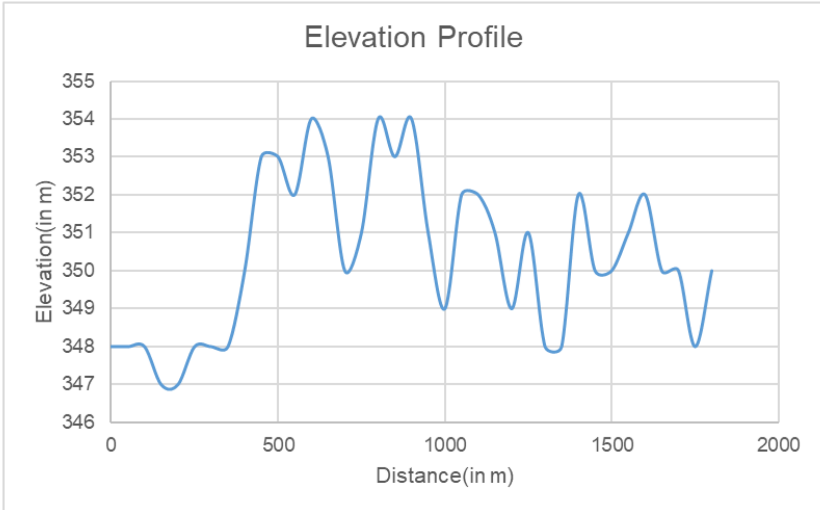
SP and Elevation Profiles for Line 8

	
	
SP and Elevation Profiles for Line 9	SP and Elevation Profiles for Line 10

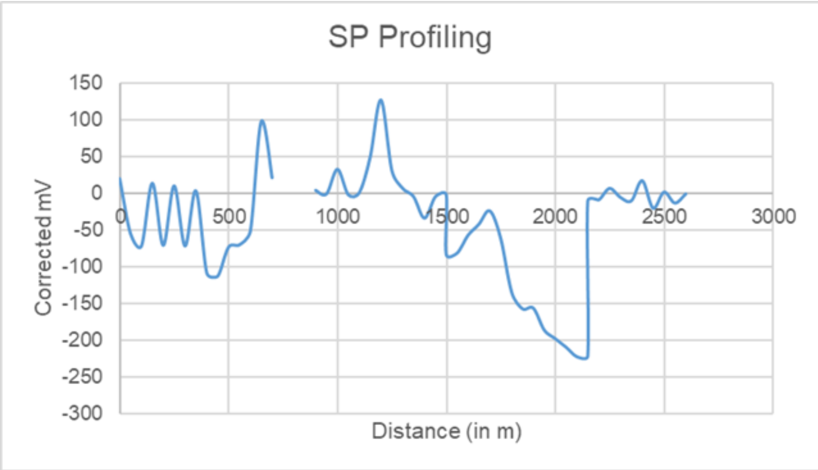


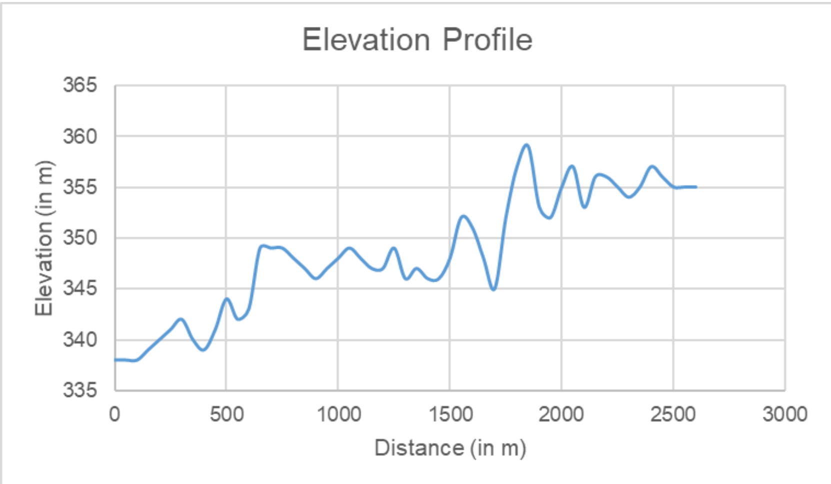




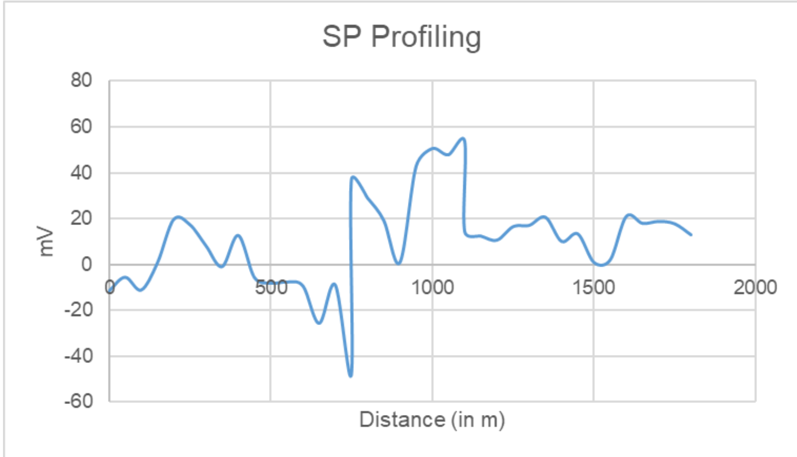


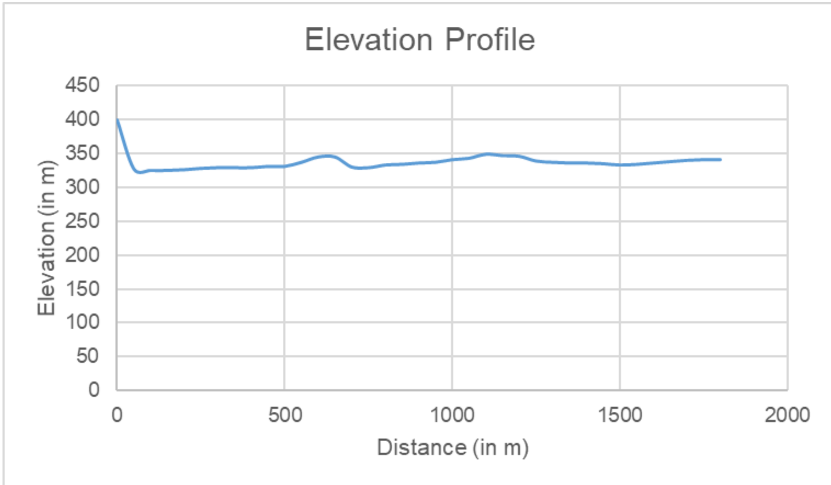
SP and Elevation Profiles for Line 3.1	SP and Elevation Profiles for Line 3.2



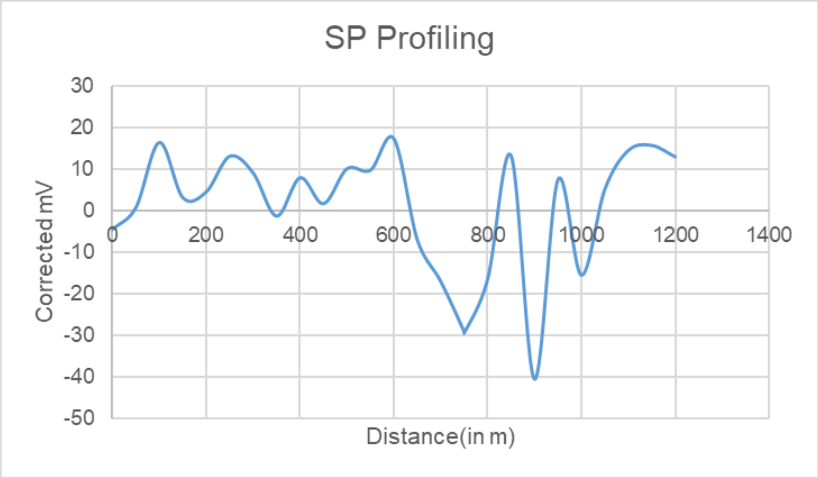
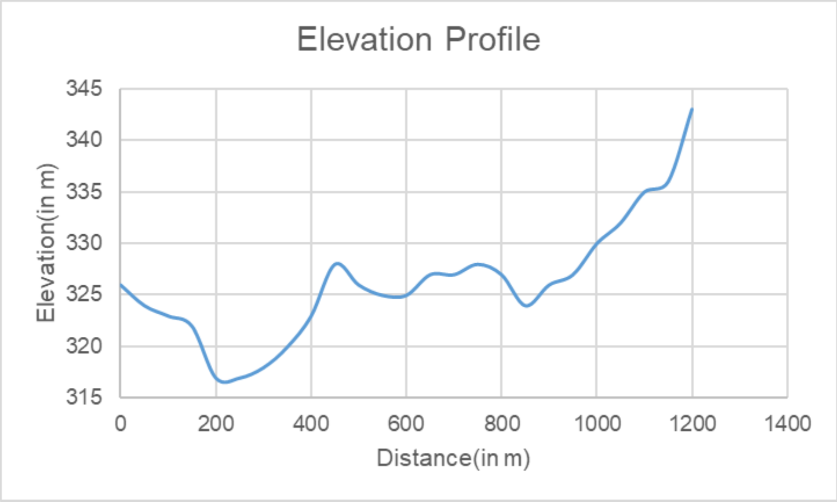
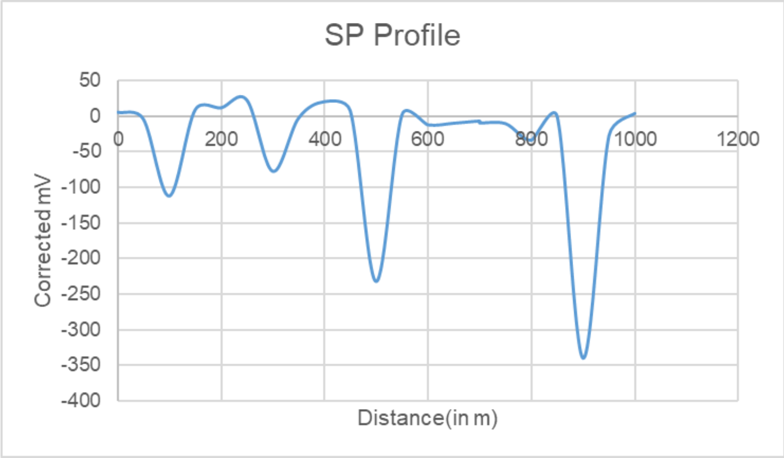
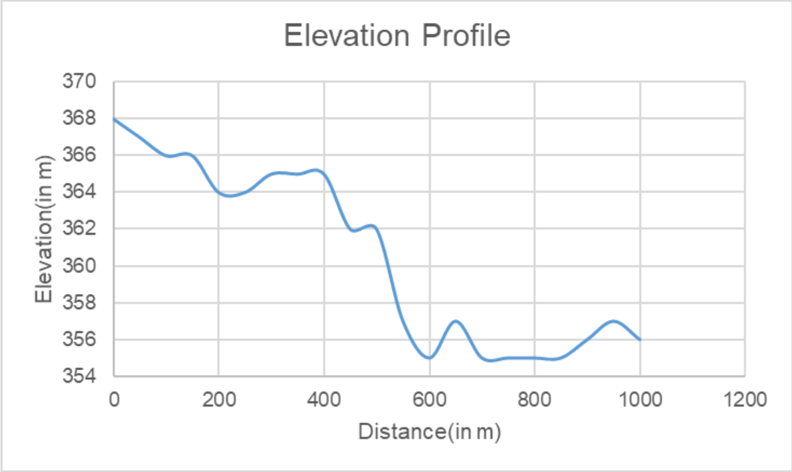


SP and Elevation Profiles for Line 3.3





SP and Elevation Profiles for Line 4.1

 	 
SP and Elevation Profiles for Line 4.2	SP and Elevation Profiles for Line 5.1

Annexure XVII_ XRF Data of Subsurface Samples

BH-01 XRF

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110877	3.4	4.4	16.65	0.06	<0.05	0.05	2.5	4.87	0.37	<0.05	0.06	<0.05	72.79	<0.05	<0.05	<0.05	<0.05	0.05	2.38
2	107126	12	13	14.08	0.06	0.21	<0.05	4.5	4.57	2.12	0.12	<0.05	0.13	70.26	<0.05	<0.05	0.4	<0.05	<0.05	3.05
3	107127	22	23	12.06	0.05	<0.05	<0.05	1.11	4.45	0.23	<0.05	<0.05	<0.05	79.66	<0.05	<0.05	<0.05	<0.05	0.06	1.94
4	110878	31.5	32.5	14.3	0.05	<0.05	<0.05	1.36	4.48	0.35	<0.05	0.06	<0.05	76.95	<0.05	<0.05	<0.05	<0.05	0.06	2.05
5	107129	41	42	12.99	0.06	<0.05	<0.05	1.16	3.98	0.3	<0.05	0.07	<0.05	79.27	<0.05	<0.05	<0.05	<0.05	0.06	1.85
6	110879	67	68	13.37	<0.05	<0.05	<0.05	1.25	4.16	0.33	<0.05	0.06	<0.05	78.38	<0.05	<0.05	<0.05	<0.05	0.06	2.08
7	110879	67	68	12.94	<0.05	<0.05	<0.05	1.25	4.16	0.31	<0.05	0.07	<0.05	78.79	<0.05	<0.05	<0.05	<0.05	0.06	2.08
8	107140	91	92	13.81	0.05	<0.05	<0.05	1.57	4.09	0.49	<0.05	0.08	<0.05	77.63	<0.05	<0.05	<0.05	<0.05	0.06	1.96
9	107145	123	124	12.29	<0.05	<0.05	<0.05	1.21	3.79	0.36	<0.05	0.06	<0.05	80.17	<0.05	<0.05	<0.05	<0.05	0.06	1.77
10	110880	131.5	132.5	13.8	<0.05	<0.05	<0.05	1.94	4.33	0.73	<0.05	0.05	<0.05	76.41	<0.05	<0.05	<0.05	<0.05	0.06	2.31
11	110881	147.5	148.5	30.31	0.1	0.41	<0.05	9.17	8.46	4	0.2	0.11	0.34	39.71	<0.05	<0.05	0.85	<0.05	<0.05	6.13
12	110883	227.5	228.5	20.9	<0.05	0.07	<0.05	2.57	11.41	4.91	<0.05	0.19	<0.05	55.61	<0.05	<0.05	0.08	<0.05	<0.05	3.97
13	110884	249.3	250.3	19.27	0.07	0.21	<0.05	2.36	9.38	1.11	0.06	3.77	<0.05	61.62	<0.05	<0.05	0.36	<0.05	<0.05	1.44
14	110885	275.5	276.5	18.98	0.11	0.34	<0.05	2.27	8.64	0.65	<0.05	5.18	<0.05	62.63	<0.05	<0.05	0.15	<0.05	<0.05	0.75
15	110886	283.5	284.5	21.06	0.12	0.08	<0.05	2.29	11.41	0.97	<0.05	0.17	<0.05	60.93	<0.05	<0.05	0.28	<0.05	<0.05	2.34
16	110887	299.5	300.5	16.97	0.11	0.88	<0.05	2.69	6.76	0.98	0.07	4.42	0.06	65.48	<0.05	<0.05	0.31	<0.05	0.05	0.95
17	110889	325.5	326.5	18.39	0.08	0.48	<0.05	2.3	7.72	0.97	0.06	4.69	0.06	63.4	<0.05	<0.05	0.36	<0.05	0.05	1.2
18	110891	342.5	343.5	18.79	<0.05	0.33	<0.05	3.91	2.6	2.03	0.1	7.63	0.07	62.06	<0.05	<0.05	0.39	<0.05	0.05	1.73

BH-02 XRF

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	107101	19	20	10.74	<0.05	0.8	<0.05	12.28	0.91	8.12	0.2	<0.05	0.38	59.27	<0.05	<0.05	0.73	<0.05	<0.05	6.24
2	107102	24	25	11.07	<0.05	0.12	0.05	1.92	2.84	0.82	<0.05	3.08	<0.05	78.33	0.16	<0.05	<0.05	<0.05	0.06	1.36
3	107103	31	32	8.03	<0.05	0.09	<0.05	1.28	3.72	0.43	<0.05	1.46	<0.05	83.85	<0.05	<0.05	<0.05	<0.05	0.06	0.89
4	107104	35.5	36.5	6.95	<0.05	<0.05	<0.05	1.14	3.45	0.22	<0.05	<0.05	<0.05	86.9	0.25	<0.05	<0.05	<0.05	0.06	0.81
5	107105	39	40	3.39	<0.05	<0.05	0.06	0.97	1.71	0.18	<0.05	<0.05	<0.05	92.81	0.08	<0.05	<0.05	<0.05	0.06	0.54
6	107106	42.5	43.5	3.64	<0.05	<0.05	<0.05	0.92	1.05	0.3	<0.05	<0.05	<0.05	92.87	0.09	<0.05	<0.05	<0.05	0.06	0.79
7	107108	47.2	48.2	1.26	<0.05	0.07	0.05	1.8	<0.05	0.74	<0.05	<0.05	<0.05	95.07	<0.05	<0.05	<0.05	<0.05	0.06	0.65
8	107109	50	51	1.65	<0.05	0.08	0.05	1.82	0.19	0.5	<0.05	<0.05	<0.05	94.71	<0.05	<0.05	<0.05	<0.05	0.06	0.68
9	107110	54.2	55.2	2.45	<0.05	0.09	<0.05	2.18	0.21	0.77	<0.05	<0.05	<0.05	92.94	<0.05	<0.05	<0.05	<0.05	0.06	1.03
10	107111	60.5	61.5	2.1	<0.05	<0.05	0.05	1.28	0.24	0.48	<0.05	<0.05	<0.05	94.89	<0.05	<0.05	<0.05	<0.05	0.06	0.69
11	107112	61.5	62.5	2.77	<0.05	0.05	0.05	1.6	0.42	0.48	<0.05	<0.05	<0.05	93.31	0.2	<0.05	<0.05	<0.05	0.06	0.74
12	110894	71.3	72.3	4.52	<0.05	<0.05	0.06	1.21	2.4	0.18	<0.05	<0.05	<0.05	90.72	<0.05	<0.05	<0.05	<0.05	0.06	0.66
13	107117	78.5	79.5	8.01	<0.05	0.44	0.05	7.57	1.29	4.19	0.11	<0.05	0.33	74.52	<0.05	<0.05	0.46	<0.05	<0.05	2.76
14	110897	86.5	87.5	17.64	<0.05	0.08	<0.05	5.16	7.79	2.31	0.09	0.06	<0.05	63.33	<0.05	<0.05	<0.05	<0.05	<0.05	3.26
15	107120	93.6	94.6	14.36	<0.05	0.17	<0.05	19.6	<0.05	14.69	0.17	0.05	0.14	48.15	<0.05	<0.05	2.2	0.08	<0.05	0.24
16	107125	106	107	10.63	<0.05	<0.05	<0.05	2.25	8.24	1.44	<0.05	0.36	<0.05	74.88	0.28	<0.05	<0.05	<0.05	<0.05	1.46
17	110901	119	120	10.33	<0.05	0.07	0.05	1.89	4.73	0.36	<0.05	2.8	<0.05	78.88	<0.05	<0.05	<0.05	<0.05	0.06	0.59
18	110904	129.95	130.95	11.57	<0.05	0.07	0.05	1.83	4.53	0.39	<0.05	2.91	<0.05	77.39	0.12	<0.05	<0.05	<0.05	0.06	0.96
19	110905	134.2	135.2	11.97	<0.05	0.1	0.05	1.62	5.25	0.25	<0.05	3.36	<0.05	76.67	<0.05	<0.05	<0.05	<0.05	0.06	0.47
20	110907	141.98	142.98	9.49	<0.05	<0.05	0.05	5.63	3.67	3.21	0.06	1.32	<0.05	74.24	0.12	<0.05	<0.05	<0.05	<0.05	1.97
21	110910	153.35	154.35	10.54	<0.05	0.06	<0.05	2.45	4.29	1.2	<0.05	2.32	<0.05	78.05	<0.05	<0.05	<0.05	<0.05	0.05	0.81
22	110913	162.5	163.5	12.11	<0.05	0.07	<0.05	2.09	6	1.01	<0.05	1.84	<0.05	75.45	<0.05	<0.05	<0.05	<0.05	0.05	1.12
23	110917	176.35	177.35	10.82	<0.05	0.12	0.05	1.75	4.88	0.49	<0.05	2.97	<0.05	77.7	<0.05	<0.05	<0.05	<0.05	0.06	0.88
24	110919	182.5	183.5	12.39	<0.05	0.12	<0.05	2.15	5.66	1.15	<0.05	1.04	<0.05	75.23	<0.05	<0.05	<0.05	<0.05	0.05	2.02
25	110922	190	191	12.31	<0.05	0.1	<0.05	1.77	5.43	0.3	<0.05	3.31	<0.05	75.75	<0.05	<0.05	<0.05	<0.05	0.06	0.76

BH-03 XRF

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110924	5.5	6.5	15.61	0.2	0.22	<0.05	2.9	5.61	0.99	<0.05	3.23	0.05	69.07	<0.05	<0.05	0.23	<0.05	<0.05	1.56
2	110939	9	10	16.73	<0.05	0.53	<0.05	14.61	1.89	10.21	0.34	1.94	0.34	46.78	0.05	<0.05	0.52	<0.05	<0.05	5.76
3	110926	18.5	19.5	14.73	0.24	0.13	<0.05	3.33	6.79	0.6	<0.05	3.02	<0.05	66.81	2.5	<0.05	0.17	<0.05	<0.05	1.36
4	110928	26	27	16.07	0.12	0.54	<0.05	12.01	2.64	7.84	0.35	2.53	0.35	52.19	<0.05	<0.05	0.51	<0.05	<0.05	4.58
5	110930	33	34	14.08	0.23	0.26	<0.05	2.93	6.47	1.01	<0.05	2.26	<0.05	70	<0.05	<0.05	0.2	<0.05	0.05	2.12
6	110852	50.65	51.65	15.56	0.12	0.52	<0.05	11.22	3.97	7.86	0.31	0.67	0.34	53.61	<0.05	<0.05	0.63	<0.05	<0.05	4.9
7	110854	51.6	52.6	16.02	<0.05	0.73	<0.05	11.94	1.22	8.71	0.21	2.33	0.37	50.4	0.12	<0.05	0.71	<0.05	<0.05	6.95
8	110856	54.5	55.5	6.32	<0.05	0.23	0.05	4.01	0.74	2.38	0.08	1.04	0.13	82.51	<0.05	<0.05	0.15	<0.05	0.06	2.01
9	110965	60	61	22.02	<0.05	0.1	<0.05	9.87	4.49	6.04	0.08	3.61	<0.05	47.96	0.71	<0.05	0.15	<0.05	<0.05	4.7
10	110861	62	63	19.09	<0.05	0.1	<0.05	6.22	4	1.43	<0.05	3.78	<0.05	61.77	0.49	<0.05	<0.05	<0.05	<0.05	2.79
11	110933	66.8	67.8	5.94	<0.05	0.14	<0.05	5.25	1.04	2.45	0.11	<0.05	0.09	82.34	<0.05	<0.05	0.1	<0.05	0.05	2.11
12a	110934	69.5	70.5	10.53	<0.05	0.24	0.05	9.21	1.67	4.12	0.16	0.09	0.17	66.12	3.26	<0.05	0.24	<0.05	<0.05	3.64
12b	110934	69.5	70.5	9.94	<0.05	0.24	0.05	9.32	1.69	4.12	0.16	0.08	0.17	66.51	3.34	<0.05	0.25	<0.05	<0.05	3.64
13	110935	75	76	11.88	<0.05	0.09	<0.05	1.45	5.91	0.43	<0.05	2.39	<0.05	76.61	0.16	<0.05	<0.05	<0.05	0.05	0.75
14	110936	81.3	82.3	10.58	<0.05	0.07	<0.05	2.13	4.32	0.59	<0.05	2.89	<0.05	77.68	0.34	<0.05	<0.05	<0.05	0.05	0.96
15	110938	87.5	88.5	18.22	<0.05	0.55	<0.05	12.77	2.42	8.44	0.38	1.58	0.38	48.56	0.05	<0.05	0.62	<0.05	<0.05	5.65
16	110864	91.3	92.3	5.47	<0.05	0.21	<0.05	11.03	0.73	3.18	0.16	<0.05	0.16	65.95	6.36	<0.05	0.23	<0.05	<0.05	3.31
17	110867	100.5	101.5	0.08	<0.05	<0.05	<0.05	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	98.07	0.29	<0.05	<0.05	<0.05	0.07	0.37
18	110940	106	107	5.71	<0.05	<0.05	<0.05	1.31	2.59	0.15	<0.05	<0.05	<0.05	89.86	<0.05	<0.05	<0.05	<0.05	0.06	0.09
19	110866	116.25	117.25	0.33	<0.05	<0.05	<0.05	0.6	<0.05	0.06	<0.05	0.07	<0.05	97.85	0.3	<0.05	<0.05	<0.05	0.07	0.28
20	110941	122.3	123.3	1.5	<0.05	<0.05	<0.05	1.33	0.56	0.47	<0.05	<0.05	<0.05	95.28	<0.05	<0.05	<0.05	<0.05	0.06	0.47
21	110943	127.6	128.6	6.81	<0.05	0.21	<0.05	4.03	0.91	2.46	0.07	1.22	0.13	81.78	0.15	<0.05	0.13	<0.05	<0.05	1.84
22	110944	134.6	135.6	10.95	<0.05	0.11	<0.05	1.69	5.29	0.54	<0.05	2.4	<0.05	77.99	0.12	<0.05	<0.05	<0.05	0.05	0.63
23	110946	143.5	144.5	14.66	0.24	0.28	<0.05	3.39	5.66	0.67	0.07	4.77	0.06	68.12	0.11	<0.05	0.22	<0.05	<0.05	1.48

BH-04 XRF

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110869	16.8	17.8	5.27	<0.05	0.48	0.07	3.7	0.78	3.31	0.06	0.09	0.2	82.13	<0.05	<0.05	0.23	<0.05	0.06	3.36
2	110870	26.5	27.5	1.63	<0.05	0.18	0.06	1.25	0.29	0.91	<0.05	<0.05	<0.05	94.36	<0.05	<0.05	<0.05	<0.05	0.06	1
3	110873	33.3	34.3	8.21	<0.05	0.49	0.06	4.67	1.69	5.84	0.08	<0.05	0.25	74.41	<0.05	<0.05	0.38	<0.05	0.05	3.64
4	110874	35.5	36.5	4.03	<0.05	0.32	0.06	2.7	0.67	2.77	0.05	<0.05	0.13	86.87	<0.05	<0.05	0.13	<0.05	0.06	1.98

BH-05 XRF

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110948	8	9	13.27	<0.05	<0.05	<0.05	1.95	1.11	<0.05	<0.05	0.06	<0.05	80.04	<0.05	<0.05	0.17	<0.05	0.06	2.88
2	110947	12	13	16.16	<0.05	<0.05	<0.05	1.65	1.27	<0.05	<0.05	0.06	<0.05	76.68	<0.05	<0.05	0.21	<0.05	0.06	3.38
3	110950	18	19	35.2	0.05	<0.05	<0.05	2.11	7.86	<0.05	<0.05	0.32	0.07	48.2	<0.05	<0.05	0.33	<0.05	0.05	5.37
4	110952	25	26	31.04	<0.05	<0.05	<0.05	7.96	1.48	0.4	<0.05	0.09	0.07	52.21	<0.05	<0.05	0.46	<0.05	<0.05	5.75
5	110954	29.1	30.1	20.6	<0.05	<0.05	<0.05	4.08	<0.05	0.19	<0.05	<0.05	0.06	69.8	<0.05	<0.05	0.37	<0.05	0.06	4.2
6	110955	32	33	17.17	<0.05	<0.05	<0.05	4.7	<0.05	0.21	<0.05	0.07	0.08	72.86	0.08	<0.05	0.37	<0.05	0.06	3.82
7	110956	35.3	36.3	31.71	<0.05	0.23	<0.05	6.24	5.54	0.32	<0.05	0.21	0.3	48.21	0.07	<0.05	1.27	<0.05	<0.05	5.21
8	110957	40	41	27.96	<0.05	2.17	<0.05	18.46	1.91	1.01	0.08	0.08	1.7	39.66	<0.05	<0.05	0.98	<0.05	<0.05	5.56
9	110959	47.1	48.1	14.06	<0.05	0.07	<0.05	5.7	0.06	0.34	<0.05	0.09	0.14	75.33	<0.05	<0.05	0.8	<0.05	<0.05	2.91
10	110961	55.7	56.7	23.36	<0.05	<0.05	<0.05	7.58	1.63	0.47	<0.05	0.1	<0.05	61.79	<0.05	<0.05	0.21	<0.05	<0.05	4.38
11	112604	63	64	26.31	<0.05	0.13	<0.05	3.05	6.24	0.19	<0.05	0.21	0.15	58.53	<0.05	<0.05	0.55	<0.05	0.05	4.04
12	112606	71	72	13.59	<0.05	<0.05	<0.05	2.15	4.11	0.12	<0.05	0.13	<0.05	77.08	<0.05	<0.05	0.16	<0.05	0.06	2.14
13	112610	85	86	17.71	<0.05	<0.05	<0.05	1.29	5.46	0.2	<0.05	0.18	<0.05	71.98	<0.05	<0.05	0.21	<0.05	0.06	2.45
14	112609	82	83	21.95	<0.05	<0.05	0.09	1.94	4.72	0.25	<0.05	0.32	<0.05	67.19	<0.05	<0.05	0.22	<0.05	0.06	2.8
15	112613	93	94	19.68	0.07	<0.05	<0.05	1.6	6.23	0.44	<0.05	0.17	<0.05	68.26	<0.05	<0.05	0.23	<0.05	0.06	2.83
16	112615	99	100	19.63	0.05	0.2	<0.05	7.45	4.47	5.78	0.32	0.13	0.15	56.29	<0.05	<0.05	0.55	<0.05	<0.05	4.65
17	112616	102	103	16.97	0.07	<0.05	<0.05	2.54	4.76	2.31	0.14	0.14	<0.05	69.47	<0.05	<0.05	0.19	<0.05	0.06	2.99
18	112620	116	117	15.08	0.1	1.89	<0.05	1.68	4.94	1.82	0.29	0.09	<0.05	70.15	<0.05	<0.05	0.19	<0.05	0.06	3.29
19	112622	123	124	18.41	0.12	1.28	<0.05	3.6	5.72	2.63	0.25	0.12	0.08	63.13	<0.05	<0.05	0.57	<0.05	<0.05	3.61
20	112625	135	136	18.3	0.12	1.16	<0.05	1.68	7.05	1.4	0.09	0.61	<0.05	65.94	<0.05	<0.05	0.23	<0.05	0.06	2.94
21	112628	143	144	17.41	0.15	1.69	<0.05	2.19	9	1.46	0.11	0.21	<0.05	63.25	<0.05	<0.05	0.31	<0.05	<0.05	3.77
22	112631	156	157	18.06	0.14	<0.05	<0.05	2.54	9.02	2	0.07	0.13	<0.05	64.84	<0.05	<0.05	0.22	<0.05	<0.05	2.53
23	112634	166	167	18.02	0.09	1.69	<0.05	1.51	9.61	0.95	0.07	2.44	<0.05	62.62	<0.05	<0.05	0.23	<0.05	<0.05	2.36
24	112635	170	171	17.68	0.09	0.5	<0.05	3.26	9.18	3.45	0.13	1.27	<0.05	60.5	<0.05	<0.05	0.21	<0.05	<0.05	3.34
25	112640	185	186	39.72	0.09	0.09	<0.05	1.92	6.16	1.62	<0.05	1.11	<0.05	45.35	<0.05	<0.05	0.33	<0.05	0.07	2.66
26	112643	195.5	196.5	16.55	0.09	<0.05	<0.05	2.96	5.49	1.14	0.07	0.1	<0.05	70.07	<0.05	<0.05	0.24	<0.05	0.06	2.82
27	112648	212	213	24.83	0.11	0.15	<0.05	6.02	8	1.6	0.11	0.13	0.17	52.91	0.09	<0.05	1.05	<0.05	<0.05	4.04
28	112650	219	220	23.57	0.1	0.1	<0.05	7.49	7.17	1.84	0.14	0.13	0.11	54.32	<0.05	<0.05	0.72	<0.05	<0.05	3.8
29a	111041	227.5	228.5	25.36	0.11	0.47	<0.05	4.3	8.43	0.64	<0.05	0.14	0.39	51.64	2.63	<0.05	1	<0.05	<0.05	4.54

SL No	Sample ID	From (m)	To (m)	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
29b	111041	227.5	228.5	25.37	0.11	0.47	<0.05	4.3	8.42	0.63	<0.05	0.13	0.39	51.67	2.63	<0.05	1	<0.05	<0.05	4.54
30	111043	235	236	23.58	0.12	0.09	<0.05	5.48	7.7	1.25	0.11	0.13	0.1	56.59	<0.05	<0.05	0.6	<0.05	<0.05	3.78
31	111044	241.5	242.5	17.57	0.07	6.62	<0.05	3.06	4.13	0.71	0.16	0.08	0.06	63.38	<0.05	<0.05	0.51	<0.05	<0.05	3.1

Annexure XVIII_ XRF Data of Subsurface Check Samples

BH-01 XRF

SL No	Sample ID	From (m)	To (m)	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	107126	12	13	BV	14.08	0.06	0.21	<0.05	4.5	4.57	2.12	0.12	<0.05	0.13	70.26	<0.05	<0.05	0.4	<0.05	<0.05	3.05
2	112671	12	13	Shiva	17.18	0.06	0.27	<0.05	8.24	4.01	4.09	0.19	<0.08	0.22	59.91	<0.05		1.25	<0.05		4.29
3	110879	67	68	BV	13.37	<0.05	<0.05	<0.05	1.25	4.16	0.33	<0.05	0.06	<0.05	78.38	<0.05	<0.05	<0.05	<0.05	0.06	2.08
4	112672	67	68	Shiva	11.80	<0.05	<0.05	<0.05	1.39	3.66	0.33	<0.05	0.08	<0.05	80.75	<0.05		0.13	<0.05		1.72
5	110891	342.5	343.5	BV	18.79	<0.05	0.33	<0.05	3.91	2.6	2.03	0.1	7.63	0.07	62.06	<0.05	<0.05	0.39	<0.05	0.05	1.73
6	112673	342.5	343.5	Shiva	16.99	0.07	0.09	<0.05	2.86	7.75	1.36	<0.05	4.14	<0.05	65.26	<0.05		0.24	<0.05		1.07

BH-02 XRF

SL No	Sample ID	From (m)	To (m)	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	107104	35.5	36.5	BV	6.95	<0.05	<0.05	<0.05	1.14	3.45	0.22	<0.05	<0.05	<0.05	86.9	0.25	<0.05	<0.05	<0.05	0.06	0.81
2	112674	35.5	36.5	Shiva	8.97	<0.05	<0.05	0.06	1.33	4.63	0.29	<0.05	0.08	<0.05	83.22	<0.05		0.07	<0.05		1.23
3	107117	78.5	79.5	BV	8.01	<0.05	0.44	0.05	7.57	1.29	4.19	0.11	<0.05	0.33	74.52	<0.05	<0.05	0.46	<0.05	<0.05	2.76
4	112675	78.5	79.5	Shiva	7.70	<0.05	0.32	0.07	7.62	1.92	4.08	0.06	<0.08	0.28	74.32	<0.05		0.53	<0.05		2.93

BH-03 XRF

SL No	Sample ID	From (m)	To (m)	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110861	62	63	BV	19.09	<0.05	0.1	<0.05	6.22	4	1.43	<0.05	3.78	<0.05	61.77	0.49	<0.05	<0.05	<0.05	<0.05	2.79
2	112676	62	63	Shiva	14.81	<0.05	0.07	<0.05	4.64	2.67	1.36	<0.05	3.80	<0.05	69.45	0.59		0.12	<0.05		2.34
3	110935	75	76	BV	11.88	<0.05	0.09	<0.05	1.45	5.91	0.43	<0.05	2.39	<0.05	76.61	0.16	<0.05	<0.05	<0.05	0.05	0.75
4	112677	75	76	Shiva	17.91	<0.05	0.65	<0.05	13.65	3.40	8.92	0.39	<0.08	0.46	46.77	0.14		0.89	<0.05		6.52

BH-04 XRF

SL No	Sample ID	From (m)	To (m)	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110873	33.3	34.3	BV	8.21	<0.05	0.49	0.06	4.67	1.69	5.84	0.08	<0.05	0.25	74.41	<0.05	<0.05	0.38	<0.05	0.05	3.64
2	112678	33.3	34.3	Shiva	2.13	<0.05	0.18	0.07	1.73	0.29	1.48	<0.05	0.08	0.06	92.75	<0.05		0.14	<0.05		1.02

BH-05 XRF

SL No	Sample ID	From (m)	To (m)	Lab	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SO3	SnO2	TiO2	V2O5	WO3	LOI@ 950°C
1	110955	32	33	BV	17.17	<0.05	<0.05	<0.05	4.7	<0.05	0.21	<0.05	0.07	0.08	72.86	0.08	<0.05	0.37	<0.05	0.06	3.82
2	112679	32	33	Shiva	19.97	<0.05	<0.05	0.06	2.79	0.07	0.19	<0.05	<0.08	0.09	72.27	<0.05		0.34	<0.05		4.03
3	112622	123	124	BV	18.41	0.12	1.28	<0.05	3.6	5.72	2.63	0.25	0.12	0.08	63.13	<0.05	<0.05	0.57	<0.05	<0.05	3.61
4	112680	123	124	Shiva	18.33	0.10	1.95	<0.05	2.51	5.34	1.85	0.10	<0.08	0.06	65.80	<0.05		0.42	<0.05		3.38

Annexure XIX_ ICPMS Data of Subsurface Samples

BH-01 ICPMS (All values are in ppm)

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
1	110877	3.4	4.4	1.4	2.17	1.38	17.46	241.96	1.52	5.45	<0.1	18.88	17.88	<0.1	1.3
2	107126	12	13	11.22	2.55	9.81	36.65	52.57	6.19	13.64	7.54	57	28.33	0.15	2.89
3	107127	22	23	3.31	1.55	2.24	4.36	134	1.18	7.61	<0.1	6.58	17.03	<0.1	0.98
4	110878	31.5	32.5	1.74	2.06	1.82	3.96	181.93	1.56	3.8	<0.1	8.99	18.35	<0.1	5.38
5	107129	41	42	2.7	1.63	1.55	4.27	99.57	0.79	7.29	<0.1	5.9	15.52	<0.1	0.7
6	107130	50.5	51.5	1.53	1.52	1.53	6.81	74.67	1.01	6.89	<0.1	6.04	15.09	<0.1	1.41
7	107131	56	57	1.66	1.4	1.87	4.43	93.71	1.11	7.22	9.1	14.07	14.75	<0.1	0.66
8	107132	62	63	1.83	1.9	2.15	7.03	86.42	1.4	7.1	<0.1	7.62	13.84	<0.1	1.03
9a	**110879**	67	68	**1.91**	**1.94**	**1.84**	**8.04**	**183.51**	**1.84**	**7.95**	**1.47**	**38.66**	**13.72**	**<0.1**	**1.56**
9b	**110879**	67	68	**1.51**	**1.94**	**1.93**	**8.57**	**187.21**	**1.84**	**8.01**	**1.07**	**38.6**	**13.57**	**<0.1**	**1.66**
10	107133	72	73	1.24	1.28	1.79	4.85	91.69	1.08	6.85	0.84	4.97	12.96	<0.1	1.02
11a	**107134**	73	74	6.68	1.63	1.59	7.34	94.38	0.82	8.53	8.44	11.64	13.76	<0.1	0.55
11b	**107134**	73	74	6.63	1.46	1.54	7.01	93.17	0.83	8.51	8.21	11.85	13.55	<0.1	0.58
12	107135	75.5	76.5	6.14	1.61	1.7	6.31	89.92	0.84	8.49	5.27	10.53	13.62	<0.1	0.65
13	107136	79	80	3.78	1.52	2.33	5.19	77.64	0.78	7.85	2.24	5.82	14.45	<0.1	1.01
14	107137	82.5	83.5	4.13	1.72	2.06	7.9	81	0.82	7.5	3.16	7.1	16.31	<0.1	0.46
15	107140	91	92	4.65	2.03	1.5	5.77	74.07	1.14	8	1.38	10.97	16.3	<0.1	0.85
16	107142	100.5	101.5	6.11	2.34	1.93	14.13	88.75	1.91	7.98	4.07	16.42	22.68	0.11	1.88
17	107143	110	111	10.26	2.19	6.07	10.97	55.2	2.89	8.7	40.39	33.76	20.51	<0.1	1.67
18	107144	114	115	4.12	1.87	2.29	3.79	69.01	1.18	7.63	1.13	12.32	17.3	<0.1	0.91
19	107145	123	124	4.72	1.86	2.07	3.64	82.11	0.78	7.61	0.68	6.61	13.63	<0.1	0.91
20	110880	131.5	132.5	3.81	1.84	2.55	5.14	169.46	2.41	4.47	<0.1	22.14	14.24	<0.1	0.41
21	107146	142.5	143.5	8.88	3.69	3.33	31.45	4.69	4.36	7.62	1.21	40.12	48.55	<0.1	3.01

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
1	110877	3.4	4.4	137.64	10.95	7.88	117.08	7.95	0.43	2.23	0.05	1.81	28.13		0.7
2	107126	12	13	161.45	9.77	25.7	316.88	26.89	0.29	0.45	0.1	3.64	51.94		1.65
3	107127	22	23	134.95	6	9.87	117.96	11	0.18	0.42	0.05	1.54	55.42		1.97
4	110878	31.5	32.5	124.42	9.68	9.52	145.51	12.23	0.15	1.34	0.02	1.45	28.5		0.75
5	107129	41	42	122.74	6.25	9.44	108.55	9.32	0.16	0.37	0.05	1.54	40.2		1.47
6	107130	50.5	51.5	116.27	5.96	7.67	75.36	7.02	0.11	0.31	0.03	1.27	40.87		1.04
7	107131	56	57	107.16	5.72	7.16	88.74	8.1	0.36	0.32	0.02	1.32	60.79		0.64
8	107132	62	63	100.65	5.9	6.05	90.66	6.25	0.14	0.31	0.02	0.91	59.34		0.68
9a	**110879**	67	68	**121.79**	**8.9**	**4.67**	**87.41**	**5.81**	**0.26**	**2.39**	**0.04**	**1.26**	**31.1**		**0.96**
9b	**110879**	67	68	**121.49**	**8.65**	**4.82**	**87.33**	**5.91**	**0.11**	**2.07**	**0.04**	**1.12**	**31.55**		**1.01**
10	107133	72	73	105.23	6.29	4.95	88	6.77	0.11	0.34	0.02	0.88	42.71		0.97
11a	**107134**	73	74	114.52	6.76	3.68	51.99	4.04	0.14	0.33	0.02	0.97	23.21		0.87
11b	**107134**	73	74	111.91	6.49	3.38	50.8	3.85	0.14	0.31	0.02	1.06	22.03		0.89
12	107135	75.5	76.5	111.9	6.06	5.05	100.37	5.57	0.17	0.35	0.02	1.14	58.87		0.97
13	107136	79	80	115.6	6.17	4.57	105.02	4.47	0.15	0.32	0.02	0.98	57.26		1.12
14	107137	82.5	83.5	134.22	6.61	4.5	83.29	5.11	0.12	0.31	0.02	1.06	56.57		1.21
15	107140	91	92	132.71	6.78	5.77	91.17	9.64	0.18	0.32	0.02	1.14	58.59		1.34
16	107142	100.5	101.5	158.21	7.99	14.26	194.82	13.86	0.1	0.35	0.03	2.09	49.26		1.31
17	107143	110	111	138.47	8.49	31.73	273.67	18.23	0.21	0.38	0.04	2.3	37.3		0.83
18	107144	114	115	142.79	7.76	7.32	96.12	11.11	0.22	0.32	0.03	1.56	41.11		1.42
19	107145	123	124	116.8	6.43	12.51	87.17	9.25	0.11	0.33	0.02	1.24	51.76		1.05
20	110880	131.5	132.5	142.3	8.05	6.86	99.52	10.24	0.13	1.51	0.02	1.45	27.85		0.8
21	107146	142.5	143.5	333.17	11.65	18.54	244.02	15.89	0.13	0.36	0.03	2.67	63.26		1.26

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	110877	3.4	4.4	495.12	29.2	57	5.66	16.84	2.82	0.38	2.05	0.29	1.37	0.29	1
2	107126	12	13	510.34	112.71	275.26	28.66	94.79	15.28	1.74	10.36	1.19	6.23	0.88	2.87
3	107127	22	23	452.74	31.94	67.31	7.14	22.99	4.12	0.32	2.93	0.38	2	0.36	1.04
4	110878	31.5	32.5	387.87	39.78	80.66	8.74	27.9	5.74	0.5	3.79	0.44	2.09	0.39	1.2
5	107129	41	42	512.64	37.56	80.69	8.68	28.21	4.91	0.38	3.76	0.42	2.06	0.33	0.99
6	107130	50.5	51.5	438.18	30.26	60.29	6.16	19.03	3.34	0.37	2.74	0.35	1.7	0.27	0.8
7	107131	56	57	375.54	28.33	59.29	5.93	17.94	2.95	0.33	2.41	0.33	1.51	0.26	0.78
8	107132	62	63	337.31	26.97	54.04	5.22	15.67	2.51	0.27	2.04	0.26	1.32	0.2	0.54
9a	**110879**	67	68	**398.22**	**23.01**	**42.96**	**4.3**	**12.71**	**2.24**	**0.29**	**1.65**	**0.22**	**0.87**	**0.18**	**0.52**
9b	**110879**	67	68	**398.22**	**22.53**	**42.24**	**4.18**	**12.56**	**2.2**	**0.29**	**1.71**	**0.22**	**0.85**	**0.19**	**0.53**
10	107133	72	73	374.01	40.05	76.3	7.19	20.6	2.84	0.42	2.28	0.26	1.15	0.17	0.5
11a	**107134**	73	74	405.2	31.59	59.55	5.53	16.19	2.26	0.37	1.75	0.2	0.81	0.13	0.37
11b	**107134**	73	74	399.26	31.61	60.14	5.6	16.59	2.21	0.39	1.79	0.2	0.82	0.11	0.35
12	107135	75.5	76.5	386.13	26.98	51.45	5.04	15.04	2.25	0.44	1.79	0.22	1.03	0.17	0.52
13	107136	79	80	363.26	35.36	66.9	6.23	18.42	2.54	0.37	2.13	0.23	0.98	0.15	0.45
14	107137	82.5	83.5	498.88	40.15	72.61	6.51	18.68	2.46	0.39	2.04	0.22	0.94	0.15	0.43
15	107140	91	92	492.7	32.16	62.38	6	18.14	2.69	0.5	2.13	0.25	1.15	0.19	0.52
16	107142	100.5	101.5	484.95	80.03	171.39	16.18	50.57	8.18	1.16	6.26	0.67	3.26	0.51	1.8
17	107143	110	111	513.99	67.15	154.42	15.22	48.91	8.66	1.13	7.23	0.99	6.19	1.08	3.25
18	107144	114	115	478.53	32.03	60.67	5.5	15.54	2.36	0.28	2.11	0.28	1.47	0.25	0.77
19	107145	123	124	353.8	27.68	55.71	5.45	15.88	2.71	0.26	2.29	0.33	2.01	0.39	1.24
20	110880	131.5	132.5	336.66	21.09	41	4.16	11.89	2.14	0.27	1.93	0.26	1.22	0.27	0.85
21	107146	142.5	143.5	867.45	119.46	245.55	21.66	64.42	8.58	2.19	7.19	0.8	4.03	0.63	1.84

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
1	110877	3.4	4.4	0.15	1.12	0.19	4.18	0.79	0.24	3.27	12.01	0.12	32.5	1.3	
2	107126	12	13	0.43	2.77	0.41	9.63	2.09	0.3	0.69	11.66	0.14	39.55	4.15	
3	107127	22	23	0.16	1.01	0.16	4.59	0.93	0.29	0.63	0.1	<0.1	34.03	2.71	
4	110878	31.5	32.5	0.18	1.2	0.17	4.5	1.17	1.66	0.81	1.32	<0.1	25.48	2.36	
5	107129	41	42	0.14	1	0.16	4.14	0.82	0.18	0.59	0.1	0.11	26.37	1.98	
6	107130	50.5	51.5	0.12	0.74	0.11	2.76	0.61	0.25	0.43	0.1	0.15	24.72	1.33	
7	107131	56	57	0.11	0.76	0.12	3.41	0.64	0.16	0.38	0.1	<0.1	29.45	1.26	
8	107132	62	63	<0.1	0.51	0.09	3.14	0.5	0.17	0.35	0.1	0.1	26.49	1.12	
9a	**110879**	67	68	**<0.1**	**0.54**	**0.09**	**2.94**	**0.45**	**0.25**	**0.94**	**2**	**<0.1**	**17.89**	**1.15**	
9b	**110879**	67	68	**<0.1**	**0.55**	**0.09**	**2.9**	**0.39**	**0.25**	**0.9**	**1.34**	**<0.1**	**18.89**	**1.14**	
10	107133	72	73	<0.1	0.54	0.11	3.17	0.44	0.54	0.37	0.1	<0.1	20.88	1.42	
11a	**107134**	73	74	<0.1	0.43	0.08	2	0.26	0.2	0.42	0.1	<0.1	16.47	0.8	
11b	**107134**	73	74	<0.1	0.36	0.07	1.87	0.26	0.2	0.4	0.1	<0.1	16.24	0.8	
12	107135	75.5	76.5	<0.1	0.56	0.11	3.71	0.31	0.24	0.41	0.39	0.28	17.17	1.32	
13	107136	79	80	<0.1	0.49	0.1	3.56	0.23	0.29	0.42	0.1	<0.1	23.65	1.11	
14	107137	82.5	83.5	<0.1	0.5	0.08	2.76	0.31	0.28	0.49	4.6	<0.1	16.85	0.97	
15	107140	91	92	<0.1	0.64	0.1	3.28	0.76	0.21	0.49	0.1	<0.1	32.8	1.28	
16	107142	100.5	101.5	0.2	1.32	0.21	5.98	1.22	0.15	0.56	0.1	<0.1	41.5	1.71	
17	107143	110	111	0.48	3.2	0.45	8.19	1.35	0.15	0.48	0.1	<0.1	43.34	2.45	
18	107144	114	115	0.19	0.86	0.14	3.36	0.94	0.1	0.51	0.1	0.86	38.75	3.7	
19	107145	123	124	0.19	1.22	0.19	3.22	0.75	0.13	0.43	0.1	<0.1	31.72	3.44	
20	110880	131.5	132.5	0.11	0.82	0.13	3.47	0.8	0.19	0.81	1.09	<0.1	31.61	1.57	
21	107146	142.5	143.5	0.26	1.94	0.33	8.81	1.36	0.22	1.09	0.1	<0.1	85.13	2.77	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
22	110881	147.5	148.5	20.07	3.6	10.1	82.37	33.17	18.18	21.96	<0.1	113.51	47.48	0.21	10
23a	**107147**	155.5	156.5	8.97	1.91	7.99	21.57	73.33	4.07	11.78	6.93	55.36	23.36	0.11	3.12
23b	**107147**	155.5	156.5	8.47	2.07	8.08	22.53	72.15	4.22	12.44	7.03	55.39	24.26	0.12	3
24	107148	174.5	176	7.8	3.9	5.62	16.01	6.24	2.2	7.69	1.99	19.78	36.34	0.11	3.05
25	110882	182.5	183.5	3.63	2.84	2.4	10.72	97.64	2.41	3.71	<0.1	25.35	20.43	0.11	5.39
26	107149	202	203	10.79	4.23	8.29	30.84	34.89	2.62	8.56	2.83	38.24	38.89	0.17	5.2
27	107150	223	224	15.46	2.21	2.67	7.75	36.32	3.33	8.08	2.47	27.24	22.31	<0.1	1.2
28	110883	227.5	228.5	59.08	3.7	2.75	5.7	50.46	11.98	12.7	4.78	32.87	17	0.11	3.1
29	110884	249.3	250.3	6.77	1.27	4.6	9.4	99.29	3.44	6.03	<0.1	54.67	19.7	0.18	8.5
30	110851	268.5	269.5	10.07	2.26	6.46	24.84	69.76	5.35	9.68	1.79	73.86	30.74	0.17	3.14
31	110885	275.5	276.5	9.31	1.78	4.19	12.35	144.63	1.54	3.77	<0.1	18.31	20.87	0.16	8.15
32	110886	283.5	284.5	5.03	2.88	4.91	13.23	80.49	2.16	3.45	0.61	42.64	27.82	0.2	11.8
33	110887	299.5	300.5	7.34	1.94	4.8	16.06	126.24	4.07	1.79	<0.1	42.72	22.65	0.17	11.01
34	110888	310.5	311.5	11.01	3.56	5.76	22.34	91.79	3.44	1.28	<0.1	47.04	29.55	0.28	20.6
35	110889	325.5	326.5	5.19	1.35	3.73	17.27	106.23	2.31	<0.1	<0.1	37.91	18.65	0.25	6.56
36	110890	339.5	340.5	6.8	2.02	4.24	17.88	89.43	2.04	0.8	1.53	57.61	19.28	0.15	7.79
37	110891	342.2	343.5	8.75	2.25	7.27	21.33	79.79	3.65	1.59	0.18	54.17	16.89	0.13	3.48

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
22	110881	147.5	148.5	169.29	13	22.68	602.54	47.45	0.24	1.57	0.07	5.89	32.59		1.19
23a	**107147**	155.5	156.5	140.92	8.51	29.52	299.06	18.33	0.13	0.35	0.06	3.92	56.86		1.13
23b	**107147**	155.5	156.5	142.24	8.27	29.41	300.39	19.81	0.13	0.36	0.05	4.04	56.71		1.12
24	107148	174.5	176	291.87	13.06	21.04	314.75	23.41	0.31	0.36	0.05	3.62	57.37		2.79
25	110882	182.5	183.5	175.16	11.11	12.95	146.09	11.67	<0.1	1.59	0.04	1.73	31.38		2.41
26	107149	202	203	278.56	14.79	33.54	409.51	26.63	0.27	0.39	0.06	3	46.41		2.23
27	107150	223	224	246.69	11.97	10.11	144.93	9.3	0.13	0.35	0.03	1.87	58.69		1.79
28	110883	227.5	228.5	187.19	17.75	12.06	119.5	8.98	<0.1	1.53	0.04	1.65	30.05		2.6
29	110884	249.3	250.3	209.03	27.71	30.01	344.42	20.81	0.22	1.48	0.03	2.89	29.48		1.16
30	110851	268.5	269.5	99.61	183.71	28.01	464.67	13.12	0.38	0.43	0.04	2	60.77		0.62
31	110885	275.5	276.5	186.74	57.47	24.82	234.98	17.46	0.11	1.5	0.03	2.23	30.55		0.76
32	110886	283.5	284.5	351.32	27.84	44.92	341.13	24.51	0.47	1.53	0.03	2.38	30.63		2.07
33	110887	299.5	300.5	135.82	99.33	35.8	385.07	18.01	0.33	1.57	0.05	3.35	28.02		1.01
34	110888	310.5	311.5	237.14	17.32	54.66	459.48	20.76	0.17	1.48	0.03	3.49	28.08		3.05
35	110889	325.5	326.5	130.08	36.97	22.93	410.39	18.25	0.23	1.47	0.03	3.07	28.59		0.77
36	110890	339.5	340.5	105.22	58.72	10.56	213.33	15.78	0.22	1.46	0.04	3.02	28.95		1.17
37	110891	342.2	343.5	19.21	45.82	5.24	213.02	19.07	0.25	1.33	0.06	3.58	28.06		0.5

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
22	110881	147.5	148.5	505.85	108.48	259.12	29.45	100.12	17.15	2.48	12.26	1.44	5.44	1.11	3.67
23a	**107147**	155.5	156.5	437.81	99.28	232.43	24.25	80.07	13.65	1.57	10.55	1.15	5.96	0.93	2.74
23b	**107147**	155.5	156.5	440.55	98.66	231.35	23.92	79.7	13.69	1.59	10.59	1.2	6.02	0.99	2.8
24	107148	174.5	176	769.79	90.49	200.72	18.95	58.49	9.97	1.04	8.11	0.97	5.1	0.77	2.18
25	110882	182.5	183.5	431.82	71.89	127.54	12.44	35.56	5.71	1.03	4.78	0.58	2.39	0.47	1.46
26	107149	202	203	845.64	196.95	396.78	36.4	111.91	17.03	2.67	12.99	1.43	7.34	1.17	3.34
27	107150	223	224	653.93	42.98	85.21	8.4	25.16	4.01	0.52	3.45	0.43	2.31	0.37	1.1
28	110883	227.5	228.5	249.2	44.31	82.82	9.54	29.43	4.99	0.62	3.88	0.51	2.35	0.52	1.59
29	110884	249.3	250.3	450.66	116.3	241.62	23.65	73.07	12.67	1.27	10.04	1.31	5.62	1.19	3.6
30	110851	268.5	269.5	1011.08	200.16	366.44	32.42	96.75	12.66	2.39	10.74	1.11	5.65	0.89	2.49
31	110885	275.5	276.5	771.84	75.56	153.4	16.88	56	10.03	1.39	7.88	1.12	5.13	1.08	3.29
32	110886	283.5	284.5	814.44	137.69	263.05	26.86	85.8	15.28	1.96	13	1.77	8.2	1.74	4.98
33	110887	299.5	300.5	745.03	128.02	266.69	27.35	88.23	14.71	1.84	11.76	1.52	6.63	1.4	4.28
34	110888	310.5	311.5	538.7	178.06	363.29	40.86	140.42	26.18	3.34	20.19	2.64	12.36	2.26	6.37
35	110889	325.5	326.5	446.98	49.32	127.84	15.99	60.49	13.01	1.52	9.05	1.19	5.05	1.05	3.07
36	110890	339.5	340.5	507.31	44.88	98.79	13.47	49.33	10.1	1.35	6.97	0.8	2.85	0.52	1.54
37	110891	342.2	343.5	184.11	26.18	60.16	8.25	30.24	6	0.79	4.28	0.5	1.64	0.28	0.83

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
22	110881	147.5	148.5	0.45	3.2	0.46	15.77	4.13	0.95	1.41	2.78	<0.1	36.57	3.65	
23a	**107147**	155.5	156.5	0.37	2.2	0.35	8.69	1.37	0.21	0.51	0.1	0.12	33.54	5.22	
23b	**107147**	155.5	156.5	0.39	2.24	0.39	8.74	1.39	0.23	0.52	0.1	0.13	33.22	5.38	
24	107148	174.5	176	0.3	2.01	0.31	11.01	1.99	0.93	1.01	1.93	0.23	79.28	6.14	
25	110882	182.5	183.5	0.18	1.23	0.21	4.83	0.88	0.27	1.1	2.04	0.24	42.46	1.57	
26	107149	202	203	0.47	3.2	0.57	12.81	2.23	0.59	0.96	6.46	0.14	125.56	6.41	
27	107150	223	224	0.16	1.04	0.17	4.66	0.84	0.24	0.89	1.44	0.2	29.4	3.62	
28	110883	227.5	228.5	0.23	1.51	0.22	3.75	0.82	0.32	1.17	2.44	<0.1	19.66	2.74	
29	110884	249.3	250.3	0.43	2.82	0.43	8.93	1.83	0.24	1.32	6.69	0.31	29.25	4.41	
30	110851	268.5	269.5	0.35	2.28	0.42	11.1	0.65	0.15	0.39	14.31	0.25	100.95	10.12	
31	110885	275.5	276.5	0.42	2.8	0.41	6.78	1.33	0.38	1.07	8.16	<0.1	26.62	4.12	
32	110886	283.5	284.5	0.62	3.95	0.6	9.78	1.62	0.42	1.67	11.4	0.36	56.2	6.94	
33	110887	299.5	300.5	0.54	3.33	0.48	9.66	1.57	0.47	0.85	6.48	0.11	25.56	3.67	
34	110888	310.5	311.5	0.79	4.58	0.67	11.18	1.84	0.56	1.17	2.92	<0.1	34.2	4.37	
35	110889	325.5	326.5	0.36	2.27	0.32	9.64	1.48	0.41	0.97	5.85	<0.1	10.62	3.51	
36	110890	339.5	340.5	0.16	1.03	0.15	5.69	1.31	0.36	0.74	8.12	<0.1	5.2	0.68	
37	110891	342.2	343.5	<0.1	0.61	0.1	5.43	1.23	0.33	0.43	1.11	<0.1	3.61	0.49	

BH-02 ICPMS (All values are in ppm)

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
1	107101	19	20	25.73	1.27	23.18	172.10	182.18	48.63	118.12	33.77	324.46	34.31	<0.5	4.39
2	107102	24	25	8.31	0.76	4.72	23.48	141.99	4.20	12.23	82.77	56.07	19.43	0.54	1.43
3	110892	27.5	28.5	2.14	1.77	2.36	4.05	184.18	1.68	0.9	6.8	15.9	13.78	0.11	1.48
4	107103	31	32	<0.5	0.75	2.75	6.34	91.64	1.95	13.02	30.50	39.54	13.94	0.86	<0.5
5	107104	35.5	36.5	4.15	1.31	3.09	9.71	99.76	1.90	13.23	29.64	16.06	12.19	1.29	1.51
6	112602	37	38	12.69	0.93	3.08	18.32	208.25	3.88	9.92	56.61	24.41	8.92	<0.1	<0.1
7	112603	38	39	6.05	0.78	0.87	4.84	229.48	2.27	7.28	15.50	16.23	3.33	<0.1	<0.1
8	107105	39	40	17.87	0.96	1.62	8.54	166.34	1.65	13.16	34.92	11.00	7.28	<0.5	3.74
9	107106	42.5	43.5	1.02	0.75	2.91	14.43	114.67	1.14	10.97	31.64	13.44	8.74	0.74	2.33
10	107107	45.1	46.1	11.11	<0.5	2.36	14.53	160.35	2.50	17.89	39.17	29.59	6.40	1.58	<0.5
11a	107108	47.2	48.2	9.25	<0.5	2.11	12.63	84.26	2.40	17.18	22.56	28.63	4.99	<0.5	2.33
11b	107108	47.2	48.2	9.06	<0.5	2.14	12.27	86.31	2.48	15.03	20.14	25.51	5.16	<0.5	2.19
12	107109	50	51	16.72	0.72	1.76	13.61	99.82	3.12	21.37	48.67	38.14	5.99	<0.5	1.03
13	107110	54.2	55.2	11.98	<0.5	1.56	14.45	94.99	2.98	16.74	37.28	60.18	8.02	<0.5	2.27
14	107113	56.1	57.1	13.43	<0.5	1.79	11.92	190.24	1.59	6.91	19.90	16.98	6.21	<0.5	1.83
15	107114	57.1	58.1	16.19	1.08	2.25	15.38	70.55	1.95	7.63	19.81	27.28	7.35	<0.5	2.62
16	107115	58.2	59.2	13.34	0.95	2.22	18.70	103.30	3.30	11.86	19.01	59.51	9.93	<0.5	<0.5
17	107116	59.5	60.5	26.54	0.73	1.27	7.02	98.92	1.70	5.81	12.17	11.62	4.01	<0.5	0.98
18	107111	60.5	61.5	4.52	<0.5	1.57	8.17	77.46	1.08	5.98	12.77	13.74	4.24	<0.5	<0.5
19	107112	61.5	62.5	11.27	<0.5	0.93	10.24	86.99	2.69	8.94	949.26	15.83	5.36	<0.5	0.54
20	111000	62.5	63.5	12.54	1.44	2.75	22.09	161.45	4.4	11.85	5.99	41.52	13.68	<0.1	0.21
21a	110999	63.5	64.5	10.49	0.89	1.95	13.52	181.78	2.76	8.81	13.81	25.54	7.83	<0.1	<0.1
21b	110999	63.5	64.5	11.28	0.91	1.9	13.6	183.77	2.83	8.61	14.49	25.35	7.38	<0.1	<0.1
22	112601	65	66	13.69	0.97	1.78	13.09	132.22	1.66	7.11	65.93	23.9	6.8	<0.1	<0.1

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
1	107101	19	20	44.08	25.48	11.50	110.58	4.95	<0.5	0.55	<0.5	1.64	0.57	<0.5	0.66
2	107102	24	25	99.01	17.90	13.33	126.47	13.30	<0.5	<0.5	<0.5	8.07	<0.5	<0.5	<0.5
3	110892	27.5	28.5	142.65	10.69	11.43	127.5	16.79	0.16	1.44	0.02	1.65	28.92	-	0.89
4	107103	31	32	121.32	12.99	9.45	101.09	13.65	<0.5	<0.5	<0.5	1.86	<0.5	<0.5	0.71
5	107104	35.5	36.5	166.45	5.08	10.82	83.45	12.47	0.99	<0.5	<0.5	2.07	<0.5	<0.5	1.03
6	112602	37	38	51.42	14.07	7.92	32.04	43.79	14.13	2.23	0.56	64.30	3.27		0.47
7	112603	38	39	18.14	13.07	7.08	12.68	47.01	1.08	2.29	0.11	72.45	3.52		<0.1
8	107105	39	40	87.95	4.32	7.24	38.43	5.16	2.32	<0.5	<0.5	0.93	<0.5	<0.5	0.69
9	107106	42.5	43.5	84.23	4.90	12.14	34.32	4.98	3.21	<0.5	<0.5	0.91	<0.5	0.68	0.62
10	107107	45.1	46.1	11.39	3.56	5.55	22.02	4.36	0.53	<0.5	<0.5	0.62	0.53	<0.5	<0.5
11a	107108	47.2	48.2	3.87	3.11	5.31	16.56	4.29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11b	107108	47.2	48.2	3.88	2.89	4.61	15.30	4.46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12	107109	50	51	13.90	3.88	5.42	18.57	3.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
13	107110	54.2	55.2	16.59	5.32	8.95	25.93	4.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
14	107113	56.1	57.1	32.86	5.99	5.09	24.03	3.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15	107114	57.1	58.1	36.37	6.04	7.35	29.40	4.47	<0.5	<0.5	<0.5	1.91	<0.5	<0.5	<0.5
16	107115	58.2	59.2	38.07	5.24	6.68	34.32	6.74	<0.5	<0.5	<0.5	2.13	<0.5	<0.5	<0.5
17	107116	59.5	60.5	11.33	2.72	3.79	16.40	2.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
18	107111	60.5	61.5	17.75	3.66	3.88	17.80	2.93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19	107112	61.5	62.5	30.49	4.13	6.29	23.41	3.26	2.94	<0.5	<0.5	0.68	<0.5	<0.5	<0.5
20	111000	62.5	63.5	154.73	16.36	15.25	91.17	36.22	0.47	2.29	1.17	48.7	3.06		1.18
21a	110999	63.5	64.5	80.68	15.41	11.22	71.05	36.72	0.45	2.16	0.53	55.56	2.68		0.26
21b	110999	63.5	64.5	82.61	14.91	11.5	69.72	36.47	0.49	2.2	0.61	54.45	2.75		0.27
22	112601	65	66	53	13.27	6.92	32.19	26.9	0.57	2.18	0.39	41.08	2.44		<0.1

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	107101	19	20	47.72	35.39	76.30	8.95	35.82	6.66	1.23	5.25	0.51	2.45	<0.5	1.09
2	107102	24	25	107.59	19.11	42.42	4.98	17.21	2.94	<0.5	2.67	<0.5	3.02	0.58	2.19
3	110892	27.5	28.5	63.28	29.56	58.16	7.1	23.84	4.47	0.16	3.66	0.51	2.46	0.52	1.63
4	107103	31	32	72.69	29.88	65.26	7.64	24.99	4.49	<0.5	3.74	<0.5	2.11	0.57	1.56
5	107104	35.5	36.5	136.16	18.15	40.09	4.88	16.34	2.63	<0.5	3.27	<0.5	2.73	0.65	1.73
6	112602	37	38	55.57	48.15	153.10	6.92	38.10	6.78	0.41	2.44	0.18	1.69	0.20	0.58
7	112603	38	39	32.79	9.38	30.90	2.17	8.99	1.49	0.13	1.18	0.12	1.08	0.25	0.31
8	107105	39	40	64.27	13.85	31.00	3.76	13.26	2.00	<0.5	1.90	<0.5	1.34	<0.5	0.78
9	107106	42.5	43.5	53.31	29.07	61.47	6.55	23.01	4.96	<0.5	3.71	<0.5	2.18	<0.5	1.47
10	107107	45.1	46.1	17.71	11.82	24.36	2.81	8.78	1.57	<0.5	1.47	<0.5	0.94	<0.5	0.61
11a	107108	47.2	48.2	9.15	10.49	23.00	2.93	9.02	1.32	<0.5	1.38	<0.5	0.72	<0.5	<0.5
11b	107108	47.2	48.2	7.46	11.05	23.65	2.71	9.48	1.30	<0.5	1.56	<0.5	0.84	<0.5	<0.5
12	107109	50	51	20.49	8.99	19.79	2.29	8.25	1.21	<0.5	1.35	<0.5	0.72	<0.5	0.57
13	107110	54.2	55.2	27.10	19.31	41.02	4.22	16.29	2.68	<0.5	2.31	<0.5	1.30	<0.5	0.91
14	107113	56.1	57.1	39.34	12.40	26.41	2.86	8.88	1.26	<0.5	1.90	<0.5	0.91	<0.5	0.62
15	107114	57.1	58.1	36.98	21.77	45.25	5.12	17.12	2.39	<0.5	2.10	<0.5	1.01	<0.5	0.70
16	107115	58.2	59.2	29.12	13.66	28.89	3.41	12.50	2.01	<0.5	2.01	<0.5	1.29	<0.5	0.82
17	107116	59.5	60.5	9.27	7.47	15.12	1.79	6.58	1.03	<0.5	0.84	<0.5	0.66	<0.5	<0.5
18	107111	60.5	61.5	14.96	8.30	17.19	1.98	6.90	1.13	<0.5	1.21	<0.5	0.87	<0.5	<0.5
19	107112	61.5	62.5	30.60	14.02	29.67	3.27	12.37	1.60	<0.5	1.72	<0.5	1.20	<0.5	0.73
20	111000	62.5	63.5	186.75	31.28	95.36	5.02	26.71	4.94	0.38	2.76	0.29	3.11	0.69	0.91
21a	110999	63.5	64.5	134.95	28.91	91.32	4.18	23.66	4.42	0.33	1.98	0.21	2.32	0.58	0.56
21b	110999	63.5	64.5	133.96	28.34	88.95	4.2	23.41	5.03	0.31	1.94	0.2	2.31	0.47	0.48
22	112601	65	66	49.51	22.53	72.29	3.35	19.12	2.7	0.3	1.58	0.14	1.56	0.5	0.44

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
1	107101	19	20	<0.5	1.17	<0.5	3.23	<0.5	1.12	<0.5	<0.5	<0.5	5.04	1.60	
2	107102	24	25	<0.5	2.01	<0.5	4.79	1.10	<0.5	<0.5	6.27	<0.5	23.34	4.01	
3	110892	27.5	28.5	0.23	1.59	0.24	4.48	1.12	0.24	0.69	3.91	0.05	23.24	3.02	
4	107103	31	32	<0.5	1.59	<0.5	4.06	1.28	<0.5	0.60	3.25	<0.5	18.89	2.89	
5	107104	35.5	36.5	<0.5	1.65	<0.5	3.17	1.22	<0.5	0.79	<0.5	0.55	16.05	2.86	
6	112602	37	38	0.11	0.54	0.03	1.39	0.55	0.31	1.43	11.79	2.47	3.45	1.00	
7	112603	38	39	0.11	0.39	0.02	0.50	0.48	<0.1	0.29	8.66	1.02	1.60	0.75	
8	107105	39	40	<0.5	1.07	<0.5	1.44	<0.5	<0.5	<0.5	<0.5	0.86	6.93	1.45	
9	107106	42.5	43.5	<0.5	1.32	<0.5	1.38	<0.5	<0.5	<0.5	<0.5	1.95	4.91	1.52	
10	107107	45.1	46.1	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	<0.5	<0.5	<0.5	2.79	0.65	
11a	107108	47.2	48.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.01	<0.5	1.30	<0.5	
11b	107108	47.2	48.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.01	<0.5	1.18	<0.5	
12	107109	50	51	<0.5	0.57	<0.5	0.53	<0.5	0.55	<0.5	<0.5	<0.5	1.75	0.94	
13	107110	54.2	55.2	<0.5	0.66	<0.5	0.76	<0.5	1.28	<0.5	<0.5	<0.5	3.02	0.92	
14	107113	56.1	57.1	<0.5	<0.5	<0.5	0.61	<0.5	0.93	<0.5	<0.5	<0.5	3.48	0.51	
15	107114	57.1	58.1	<0.5	0.72	<0.5	1.01	<0.5	<0.5	<0.5	<0.5	<0.5	4.16	0.84	
16	107115	58.2	59.2	<0.5	0.58	<0.5	1.10	<0.5	<0.5	<0.5	5.66	<0.5	4.31	1.33	
17	107116	59.5	60.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.08	0.60	
18	107111	60.5	61.5	<0.5	<0.5	<0.5	0.56	<0.5	<0.5	<0.5	<0.5	<0.5	2.24	0.54	
19	107112	61.5	62.5	<0.5	0.65	<0.5	0.87	<0.5	<0.5	<0.5	<0.5	0.58	3.39	1.12	
20	111000	62.5	63.5	0.11	0.68	0.04	3.58	0.68	1.66	1.55	8.53	<0.1	5.86	1.53	
21a	110999	63.5	64.5	0.11	0.74	0.02	2.76	0.54	0.72	1.81	8.05	0.56	4.04	0.9	
21b	110999	63.5	64.5	0.11	0.73	0.02	2.56	0.49	0.79	1.87	8.4	0.69	4.09	0.84	
22	112601	65	66	0.11	0.46	0.02	1.24	0.33	0.21	1.24	7.47	0.45	2.5	0.66	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
23	110893	65.5	66.5	20.63	0.36	0.51	7.69	318.46	1.75	2.83	15.37	13.74	3.37	0.11	0.71
24a	110894	71.3	72.3	6	0.79	1.28	9.24	226.21	1.38	2.11	21.86	11.68	6.52	0.06	1.08
24b	110894	71.3	72.3	5.61	0.68	1.27	8.75	227.57	1.34	1.67	20.87	10.77	6.18	0.04	0.91
25	110895	74.5	75.5	9.08	1.52	1.92	9.36	183.61	2.31	3.26	<0.000	16.31	10.63	0.05	1.68
26	107117	78.5	79.5	17.87	<0.5	7.68	39.73	167.50	11.52	58.63	20.07	124.81	27.68	<0.5	2.95
27	110896	82.3	83.3	4.81	1.23	2.46	10.6	231.53	2	2.22	<0.000	15.05	12.29	0.05	1.11
28	110897	86.5	87.5	19.82	2.93	5.88	31.11	142.54	8.01	5.26	2.76	50.02	32.55	0.13	5.85
29a	107118	89.8	90.8	15.31	1.11	1.10	10.75	78.39	2.31	8.64	20.07	23.20	7.35	<0.5	1.45
29b	107118	89.8	90.8	16.55	1.01	1.08	11.07	80.53	2.39	10.09	18.94	20.99	7.11	<0.5	1.93
30	107119	90.8	91.8	26.78	1.11	11.97	114.30	126.06	8.88	31.85	24.83	100.98	24.09	<0.5	2.75
31	107120	93.6	94.6	84.45	2.32	25.44	359.50	101.12	23.08	50.97	15.96	249.76	45.72	<0.5	<0.5
32	107121	95.3	96.3	67.07	0.74	24.62	262.17	92.78	14.59	33.24	19.95	177.15	34.66	<0.5	3.20
33	107122	99	100	88.32	<0.5	11.49	96.92	61.20	9.41	15.88	18.50	88.04	22.54	<0.5	1.36
34	107123	102	103	31.74	<0.5	2.17	18.99	128.91	2.44	5.30	12.91	30.60	11.73	<0.5	1.78
35	107124	105	106	12.92	<0.5	3.15	11.55	79.08	1.34	3.50	18.62	13.63	13.40	<0.5	0.92
36	107125	106	107	21.88	0.90	2.51	11.94	82.83	2.18	3.86	25.73	21.69	15.17	<0.5	1.86
37	110898	109.5	110.5	47.87	2.45	13.94	114.3	166.04	13.78	21.83	283.33	124.88	33.88	0.39	13.08
38	110899	112.5	113.5	9.52	1.72	3	6.2	192.01	1.79	0.56	<0.1	25.72	12.65	0.15	1.76
39	110900	115.5	116.5	5.17	1.77	2.68	5.13	218.7	1.82	0.28	10.63	8.24	15.43	0.11	2.83
40	110901	119	120	5.76	1.76	2.72	5.92	201.44	2.16	0.77	13.52	9.92	15.88	0.1	1.09
41	110902	124.5	125.5	3.48	1.67	3.16	4.1	212.58	1.58	0.54	8.02	1.99	17.72	0.13	1.57
42	110903	127.5	128.5	2.76	1.59	2.85	3.78	190.88	1.47	<0.1	4.34	<0.1	15.69	0.14	2.25
43a	110904	129.95	130.95	4.82	2.11	2.83	5.59	250.51	1.88	0.98	34.96	9.64	16.42	0.12	2.43
43b	110904	129.95	130.95	5.03	1.91	2.61	5.54	247.83	1.82	1.07	35.24	10.78	14.8	0.74	2.34
44	110905	134.2	135.2	3.35	2.26	3.08	3.86	192.43	1.24	<0.1	0.47	12.75	16.28	0.93	1.52

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
23	110893	65.5	66.5	20.79	6.78	3.48	12.99	1.51	0.24	1.38	0.02	1.51	28.31		0.33
24a	110894	71.3	72.3	98.89	7.39	5.03	64.05	7.09	0.16	1.34	0.02	1.33	26.22		0.92
24b	110894	71.3	72.3	98.24	7.54	4.98	61.33	7.1	0.13	1.35	0.02	1.29	28.42		0.85
25	110895	74.5	75.5	177.04	9.48	11.5	105.87	10.31	0.15	1.43	0.02	1.47	28.02		1.01
26	107117	78.5	79.5	52.24	9.69	25.08	163.80	14.55	<0.5	<0.5	<0.5	4.99	<0.5	<0.5	<0.5
27	110896	82.3	83.3	204.54	7.72	7.88	111.88	12.73	0.17	1.43	0.03	1.97	28.2		0.98
28	110897	86.5	87.5	357.08	11.81	21.07	184.27	21.52	0.14	1.38	0.09	5.24	28.26		1.89
29a	107118	89.8	90.8	16.66	2.44	5.45	33.13	4.40	0.75	<0.5	<0.5	1.11	<0.5	<0.5	<0.5
29b	107118	89.8	90.8	16.81	2.77	5.78	32.00	4.11	0.79	<0.5	<0.5	1.12	<0.5	<0.5	<0.5
30	107119	90.8	91.8	7.00	5.58	43.20	69.13	6.84	0.65	<0.5	<0.5	1.20	<0.5	<0.5	<0.5
31	107120	93.6	94.6	1.92	6.04	39.97	139.96	12.61	<0.5	<0.5	<0.5	3.04	<0.5	<0.5	<0.5
32	107121	95.3	96.3	0.92	3.85	36.46	86.29	12.94	<0.5	<0.5	<0.5	5.42	<0.5	<0.5	<0.5
33	107122	99	100	20.75	4.24	15.43	76.03	7.86	<0.5	<0.5	<0.5	2.28	<0.5	<0.5	<0.5
34	107123	102	103	51.24	3.61	8.86	44.99	5.20	<0.5	<0.5	<0.5	1.29	<0.5	<0.5	<0.5
35	107124	105	106	189.76	7.26	11.60	129.31	13.89	<0.5	<0.5	<0.5	2.15	<0.5	<0.5	1.02
36	107125	106	107	246.34	10.19	14.60	144.89	16.00	<0.5	<0.5	<0.5	2.94	<0.5	<0.5	1.25
37	110898	109.5	110.5	1.79	8.32	24.99	109.59	30.24	0.61	1.4	0.06	5.3	30.99		0.14
38	110899	112.5	113.5	166.29	7.8	10.45	137.9	15.2	0.28	1.38	0.02	2.9	27.76		1.13
39	110900	115.5	116.5	172.33	14.79	25.41	149.71	17.65	0.37	1.97	0.03	2.72	30.39		0.92
40	110901	119	120	165.32	19.26	24.46	153.19	15.52	0.46	1.9	0.03	2.47	31.11		1.02
41	110902	124.5	125.5	203.7	15.94	28.23	185.64	19.38	0.35	1.97	0.03	3.08	29.85		1.09
42	110903	127.5	128.5	169.27	16.34	25.05	165.91	15.82	0.28	1.71	0.03	3.68	62.31		0.48
43a	110904	129.95	130.95	172.02	19.86	24.06	164.77	19.64	0.47	1.87	0.03	3.08	30.79		1.67
43b	110904	129.95	130.95	175.25	20.14	21.65	162.12	20.2	0.49	2.03	0.04	3.31	35.66		1.31
44	110905	134.2	135.2	179.93	6.46	19.98	193.07	18.92	0.4	1.99	0.06	3.18	37.11		0.64

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
23	110893	65.5	66.5	29.09	6.72	13.69	1.52	5.02	0.97	0.09	0.83	0.12	0.54	0.12	0.36
24a	110894	71.3	72.3	98.16	8.98	19.4	2.14	6.91	1.45	0.13	1.16	0.19	0.9	0.2	0.64
24b	110894	71.3	72.3	96.12	8.76	18.9	2.13	7.13	1.39	0.12	1.23	0.18	0.88	0.19	0.6
25	110895	74.5	75.5	155.83	8.62	18.63	2.12	6.96	1.55	0.17	1.71	0.33	1.88	0.46	1.27
26	107117	78.5	79.5	53.07	126.54	268.36	30.81	110.44	19.96	2.01	13.35	1.23	5.00	1.01	3.20
27	110896	82.3	83.3	149.82	8.13	18.03	2.02	6.65	1.52	0.14	1.48	0.27	1.45	0.32	0.99
28	110897	86.5	87.5	227.4	67.59	147.87	15.45	50.07	8.33	0.64	6.7	0.9	4	0.87	2.83
29a	107118	89.8	90.8	13.42	19.84	41.25	4.64	16.41	2.61	<0.5	2.45	<0.5	0.96	<0.5	0.60
29b	107118	89.8	90.8	14.82	19.38	41.14	4.58	16.30	2.24	<0.5	2.39	<0.5	1.01	<0.5	0.56
30	107119	90.8	91.8	10.83	162.45	323.11	36.99	133.02	25.85	2.49	18.59	1.60	6.71	1.59	6.21
31	107120	93.6	94.6	7.20	213.61	434.45	48.72	174.09	34.09	3.16	22.50	1.80	7.34	1.45	5.06
32	107121	95.3	96.3	10.45	174.65	339.80	37.43	128.22	23.23	2.50	15.00	1.26	5.63	1.27	3.93
33	107122	99	100	13.11	104.22	210.69	22.29	78.41	14.81	1.44	9.46	0.87	3.16	0.62	2.06
34	107123	102	103	52.82	97.24	207.33	22.98	76.15	13.05	1.11	7.50	0.53	1.94	<0.5	2.56
35	107124	105	106	148.56	44.72	94.05	10.73	35.49	6.22	<0.5	4.23	0.51	2.41	0.62	1.76
36	107125	106	107	223.00	38.71	84.31	9.53	31.69	6.37	<0.5	4.20	0.50	2.84	0.70	2.04
37	110898	109.5	110.5	21.56	217.84	453.32	48.17	156.18	21.4	1.42	13.92	1.31	4.3	0.98	3.87
38	110899	112.5	113.5	82.71	18.4	41.21	4.9	17.25	3.4	0.16	2.99	0.48	2.37	0.56	1.71
39	110900	115.5	116.5	114.16	52.98	104.85	11.31	38.76	7.98	0.32	6.68	0.8	4.8	0.83	2.49
40	110901	119	120	131.26	51.1	98.63	10.18	35.18	6.77	0.26	5.53	0.66	3.81	0.68	2.05
41	110902	124.5	125.5	90.36	63.54	122.53	12.78	42.51	8.42	0.24	6.88	0.81	5.29	0.84	2.46
42	110903	127.5	128.5	88.57	58.72	111.32	11.76	39.09	7.4	0.27	5.97	0.67	4.9	0.73	2.16
43a	110904	129.95	130.95	89.54	27.67	91.17	9.58	32.19	6.18	0.21	5.17	0.67	4.26	0.78	2.19
43b	110904	129.95	130.95	86.14	28.9	89.88	8.57	31.82	5.4	0.19	4.85	0.63	4.05	0.77	2.44
44	110905	134.2	135.2	48.09	31.58	59.17	6.8	22.85	4.9	0.16	4.37	0.58	3.82	0.68	2.05

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
23	110893	65.5	66.5	0.04	0.3	0.04	0.44	0.15	0.2	0.4	3.42	0.08	1.95	0.33	
24a	110894	71.3	72.3	0.09	0.66	0.1	2.19	0.56	0.27	0.7	0.49	0.03	10.56	0.89	
24b	110894	71.3	72.3	0.1	0.65	0.1	2.04	0.52	0.26	0.56	0.5	0.03	10.32	0.88	
25	110895	74.5	75.5	0.18	1.26	0.2	3.58	0.86	0.79	1.03	1.69	0.06	16.84	2.41	
26	107117	78.5	79.5	<0.5	2.22	<0.5	4.48	<0.5	1.91	<0.5	<0.5	<0.5	10.72	2.23	
27	110896	82.3	83.3	0.15	1.08	0.17	3.86	0.86	0.47	1.03	0.74	0.07	18.34	1.47	
28	110897	86.5	87.5	0.39	2.62	0.4	6.33	1.66	0.44	1.52	1.14	0.12	28.01	1.84	
29a	107118	89.8	90.8	<0.5	0.64	<0.5	1.10	<0.5	<0.5	<0.5	<0.5	<0.5	4.16	0.60	
29b	107118	89.8	90.8	<0.5	0.51	<0.5	0.96	<0.5	<0.5	<0.5	<0.5	<0.5	3.86	0.55	
30	107119	90.8	91.8	0.59	3.19	0.69	2.18	<0.5	0.95	<0.5	<0.5	1.40	3.92	2.02	
31	107120	93.6	94.6	0.67	4.23	0.98	4.39	0.98	3.34	<0.5	12.30	4.47	2.28	3.37	
32	107121	95.3	96.3	0.58	4.01	0.69	2.67	<0.5	2.51	<0.5	58.19	2.15	1.18	2.67	
33	107122	99	100	<0.5	1.73	<0.5	2.56	<0.5	0.78	<0.5	<0.5	0.65	8.39	1.85	
34	107123	102	103	<0.5	0.73	<0.5	1.69	<0.5	<0.5	<0.5	<0.5	<0.5	6.72	1.20	
35	107124	105	106	<0.5	1.68	<0.5	4.80	0.86	<0.5	1.08	<0.5	<0.5	19.43	4.50	
36	107125	106	107	<0.5	2.23	<0.5	4.74	0.96	<0.5	1.38	45.08	0.56	21.44	6.21	
37	110898	109.5	110.5	0.49	3.67	0.62	3.23	0.57	1.01	0.38	1.08	0.49	3.19	4.12	
38	110899	112.5	113.5	0.23	1.64	0.24	4.65	0.99	0.24	0.97	5.94	0.14	18.92	3.71	
39	110900	115.5	116.5	0.37	2.71	0.34	5.7	1.01	0.26	1.45	12.81	<0.01	27.22	6.59	
40	110901	119	120	0.31	2.28	0.29	5.34	0.9	0.25	1.33	34.03	<0.01	24.77	4.83	
41	110902	124.5	125.5	0.37	2.7	0.34	6.38	0.96	0.31	1.52	2.78	<0.01	28.76	5.89	
42	110903	127.5	128.5	0.32	2.47	0.3	5.43	0.6	0.31	1.3	4.66	<0.01	24.01	4.73	
43a	110904	129.95	130.95	0.36	2.59	0.38	5.72	1.06	0.33	1.34	11.16	0.1	25.02	5.68	
43b	110904	129.95	130.95	0.41	3.05	0.4	5.89	1.37	0.32	1.44	9.52	0.15	27.91	5.9	
44	110905	134.2	135.2	0.33	2.35	0.3	6.99	1.1	0.51	1.67	14.06	<0.01	24.49	7.05	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
45	110906	136	137	9.12	2.57	2.87	6.51	126.46	2.74	0.52	3.08	31	19.1	0.7	<0.1
46	110923	139.65	140.65	4.23	1.92	3.39	3.09	167.85	1.55	<0.1	<0.1	19.69	18.85	0.16	2.97
47	110907	141.98	142.98	21.97	1.16	4.06	13.68	203.36	6.07	4.82	2.5	95.31	20.31	0.1	2.34
48	110908	145.9	146.9	45.18	1.94	6.46	18.28	77.38	9.17	6.82	<0.1	140.99	22.22	0.44	0.87
49	110909	148.5	149.5	3.39	1.72	2.85	3.19	177.67	1.48	<0.1	<0.1	5.81	16.52	0.12	1.53
50	110910	153.35	154.35	15.52	2.01	3.19	4.08	182.85	2.56	1.14	<0.1	27.02	16.86	0.12	1.17
51	110911	155.8	156.8	2.57	2.54	3.18	1.87	172.67	1.38	1	<0.1	10.19	19.64	0.16	2.45
52	110912	159.5	160.5	3.77	2.78	3.48	2.25	200.81	1.36	0.19	<0.1	21.87	17.84	1.02	2
53	110913	162.5	163.5	13.88	3.12	3.18	2.82	161.89	1.71	<0.1	<0.1	32.23	16.17	1.03	1.33
54a	110914	165.5	166.5	12.54	2.2	2.87	3.56	192.59	2.13	1.23	1	29.53	15.07	0.76	0.58
54b	110914	165.5	166.5	12.69	1.88	2.68	3.47	190.89	2.08	1.93	1.36	28.58	14.75	1.03	0.58
55	110915	169.1	170.1	10.22	1.85	2.5	3.73	190.86	2.35	3.23	<0.1	15.57	13.86	<0.1	0.55
56	110916	172.9	173.9	3.52	2.12	3.27	2.26	154.77	1.35	1.29	<0.1	12.75	18.38	0.11	1.85
57	110917	176.35	177.35	4.98	2.18	3.32	2.14	215.54	1.4	<0.1	<0.1	17.11	18.71	0.13	2.24
58	110918	178.5	179.5	2.08	2.07	3.25	2.42	176.74	1.23	<0.1	0.93	15.59	19.62	0.15	5.04
59	110919	182.5	183.5	13.05	2.33	3.34	5.79	167.16	2.47	<0.1	<0.1	23.65	16.61	<0.1	1.91
60	110920	185.5	186.5	7.42	2.09	3.68	4.62	204.1	2.42	<0.1	<0.1	10.18	17.73	0.11	1.89
61a	110921	188.5	189.5	2.28	1.91	3.31	1.68	174.49	1.02	<0.1	<0.1	15.11	20.22	0.17	4.61
61b	110921	188.5	189.5	2.17	1.83	3.5	1.87	176.11	1	<0.1	<0.1	15.73	19.61	0.16	5.51
62	110922	190	191.5	3.65	2.73	3.34	2.99	193.79	1.13	<0.1	<0.1	15.19	19.28	0.17	3.84

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
45	110906	136	137	217.25	9.31	8.21	221.96	21.25	0.38	1.98	0.06	3.88	35.28		0.83
46	110923	139.65	140.65	206.46	11.13	20.34	194.49	18.88	0.24	1.53	0.04	3.31	27.89		1.42
47	110907	141.98	142.98	117.13	14.06	12.13	127.41	12.37	0.33	4.26	<0.01	2.64	12157.15		0.78
48	110908	145.9	146.9	147.73	9.8	23.53	168.38	20.86	0.16	1.77	0.09	4.23	32.01		1.31
49	110909	148.5	149.5	189.25	11.6	24.45	158.68	17.33	0.4	1.7	0.03	2.46	31.3		0.62
50	110910	153.35	154.35	174.35	11.67	22.78	135.53	15.3	0.68	1.71	0.03	2.64	30.39		1.05
51	110911	155.8	156.8	204.02	12.79	28.11	171.94	18.56	1.38	1.77	0.04	2.44	30.51		0.59
52	110912	159.5	160.5	181.86	6.97	20.77	170.96	20.78	1.03	1.96	0.06	2.85	40.35		0.62
53	110913	162.5	163.5	180.27	10.31	17.35	174.6	19.34	0.39	2.03	0.08	2.71	37.58		0.61
54a	110914	165.5	166.5	179.54	9.39	19.04	147.73	16.41	0.45	1.83	0.07	2.87	35.06		1.21
54b	110914	165.5	166.5	175.45	15.19	20.95	143.4	16.06	0.46	1.89	0.06	2.93	35.61		0.99
55	110915	169.1	170.1	171.33	10.74	19.36	136.21	17	0.37	1.68	0.04	2.47	31.12		1.1
56	110916	172.9	173.9	210.94	12.58	24.97	169.48	18.65	0.65	1.64	0.05	2.88	31.02		1.18
57	110917	176.35	177.35	199.99	10.56	16.81	183.58	14.5	0.68	1.66	0.04	4.2	29.51		3.3
58	110918	178.5	179.5	207.53	12.41	23.19	184.46	17.87	0.64	1.48	0.04	3.45	28.56		1.33
59	110919	182.5	183.5	198.61	12.75	23.92	171.27	18.19	0.15	1.57	0.05	6.43	27.94		1.24
60	110920	185.5	186.5	201.77	10.64	20.8	161.94	17.38	0.74	1.5	0.07	6.48	28.81		1.23
61a	110921	188.5	189.5	215.34	9.88	22.74	183.8	17.57	1.45	1.55	0.05	3.33	30.19		0.99
61b	110921	188.5	189.5	213.7	10.61	22.85	182.99	17.94	1.46	1.48	0.04	3.42	28.89		1.01
62	110922	190	191.5	209.51	10.12	26.43	178.25	24.69	0.31	1.51	0.07	5.17	29.06		1.98

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
45	110906	136	137	47.31	5.88	11.36	1.39	4.83	1.12	<0.01	1.19	0.22	1.69	0.33	1.01
46	110923	139.65	140.65	60.25	64.56	134.8	12.97	45.53	9.07	0.22	6.02	0.76	4.7	0.85	2.26
47	110907	141.98	142.98	146.24	42.39	68.83	7.23	24.15	4.2	0.18	3.23	0.37	2.2	0.38	1.16
48	110908	145.9	146.9	80.83	15.94	35.27	3.75	12.75	3.01	0.22	3.41	0.58	4.18	0.75	2.21
49	110909	148.5	149.5	74.33	53.51	105.25	11.28	38.41	7.59	0.26	6.51	0.74	4.53	0.77	2.2
50	110910	153.35	154.35	63.01	40.44	78.7	8.46	27.85	5.67	0.21	4.86	0.66	4.16	0.75	2.14
51	110911	155.8	156.8	63.01	62.15	121.45	13.25	44.61	9.03	0.24	7.23	0.9	5.27	0.89	2.64
52	110912	159.5	160.5	48.03	28.22	56.04	6.42	21.44	4.73	0.15	4.29	0.64	4.14	0.74	2.15
53	110913	162.5	163.5	43.79	16.98	37.61	3.88	13.58	2.98	0.11	2.92	0.5	3.6	0.66	2.01
54a	110914	165.5	166.5	75.84	18.65	40.99	4.07	14.37	3.53	0.18	3.36	0.54	3.12	0.69	2.04
54b	110914	165.5	166.5	71.83	16.85	38.75	3.93	14.88	3.93	0.17	3.07	0.44	2.91	0.65	1.92
55	110915	169.1	170.1	78.06	20.97	44.52	4.55	15.22	3.32	0.18	3.45	0.53	3.7	0.67	2.01
56	110916	172.9	173.9	72.63	54.23	105.75	11.17	37.97	7.67	0.23	6.03	0.77	4.78	0.82	2.51
57	110917	176.35	177.35	65.16	61.87	132.34	13.22	44.93	8.48	0.23	5.37	0.66	4.61	0.76	2.08
58	110918	178.5	179.5	69.97	63.25	134.62	13.39	46.2	9.16	0.22	5.91	0.79	5.25	0.99	3.01
59	110919	182.5	183.5	95.1	29.26	66.79	6.79	23.23	4.71	0.13	3.82	0.62	5.05	0.93	2.7
60	110920	185.5	186.5	78.07	31.38	70.3	7.11	24.17	4.86	0.14	3.7	0.58	5.71	0.85	2.33
61a	110921	188.5	189.5	54.76	62.97	135.26	13.38	46.62	9.31	0.16	6.53	0.82	5.27	0.94	2.44
61b	110921	188.5	189.5	53.28	62.07	132.55	13.36	45.5	9.25	0.17	6.36	0.81	5.38	0.94	2.45
62	110922	190	191.5	53.06	54.57	116.76	11.85	41.32	8.71	0.16	6.24	0.85	5.99	1.07	2.78

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
45	110906	136	137	0.18	1.46	0.19	7.97	1.81	0.22	2.01	9.45	0.11	14.44	5.39	
46	110923	139.65	140.65	0.35	3.27	0.38	6.71	1.38	0.45	1.17	4.36	<0.01	31.4	6.04	
47	110907	141.98	142.98	0.18	1.28	0.17	4.16	0.43	0.33	1.27	130.65	2.1	11.1	2.93	
48	110908	145.9	146.9	0.35	2.45	0.32	6.08	1.59	0.17	1.44	8	<0.01	24.82	6.03	
49	110909	148.5	149.5	0.34	2.37	0.29	5.61	0.75	0.21	1.41	10.94	0.14	27.33	5.9	
50	110910	153.35	154.35	0.32	2.24	0.28	4.88	0.79	1.45	1.31	13.27	<0.01	24.64	6.25	
51	110911	155.8	156.8	0.39	2.66	0.34	6.12	0.84	3.09	1.46	15.06	<0.01	30.08	6.03	
52	110912	159.5	160.5	0.35	2.49	0.31	6.73	1.32	3.45	1.81	21.79	<0.01	27.75	7.23	
53	110913	162.5	163.5	0.33	2.42	0.3	6.54	1.16	5.24	1.75	19.01	<0.01	25.24	5.02	
54a	110914	165.5	166.5	0.32	2.25	0.29	5.54	1.13	2.55	1.6	28.68	<0.01	25.3	6.71	
54b	110914	165.5	166.5	0.24	2.64	0.21	5.43	1.12	2.35	1.57	26.92	<0.01	26.93	6.49	
55	110915	169.1	170.1	0.3	2.2	0.29	5.05	1.05	2.28	1.44	5.57	<0.01	24.4	5.92	
56	110916	172.9	173.9	0.38	2.72	0.35	6.28	0.93	3.72	1.57	9.61	<0.01	29.56	6.15	
57	110917	176.35	177.35	0.31	2.23	0.33	6.58	0.81	0.55	1.23	8.6	0.1	27.77	4.47	
58	110918	178.5	179.5	0.41	2.9	0.38	6.72	1.03	0.45	1.2	9.35	0.12	34.06	7.78	
59	110919	182.5	183.5	0.42	2.75	0.43	6.17	1.71	0.55	1.21	2.13	0.23	34.6	4.2	
60	110920	185.5	186.5	0.37	2.3	0.35	5.76	1.24	0.72	1.22	1.46	0.32	28.87	8.81	
61a	110921	188.5	189.5	0.37	2.43	0.35	6.5	2	0.48	1.27	8.26	<0.01	32.19	6.07	
61b	110921	188.5	189.5	0.36	2.47	0.36	6.49	1.92	0.53	1.36	8.44	<0.01	31.98	6.06	
62	110922	190	191.5	0.45	3.12	0.45	6.75	2.4	0.53	1.21	7.08	0.14	34.66	6.45	

BH-03 ICPMS (All values are in ppm)

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
1	110924	5.5	6.5	5.17	2.21	9.39	4.57	92.35	2.48	<0.1	<0.1	32.49	21.16	0.17	3.09
2a	110939	9.5	10.5	37.8	2.64	19.55	169.11	152.34	40.4	116.46	<0.1	389.87	27.3	0.19	3.83
2b	110939	9.5	10.5	36.37	2.37	19.11	169.59	150.78	39.6	113.4	<0.1	387.45	27.43	0.19	4.16
3	110925	14.8	15.8	4.98	1.53	7.97	4.55	95.27	5.06	<0.1	<0.1	38.47	16.35	0.12	3.33
4	110926	18.5	19.5	3.68	1.47	7.25	8.07	78.29	3.06	<0.1	10.78	22.47	18.47	0.17	2.84
5	110927	23.4	24.4	3.71	1.73	8.92	2.74	79.21	2.12	<0.1	4.23	48.71	19.77	0.19	2.79
6	110928	26	27	24.18	1.67	17.98	131.55	121.62	30.32	106.76	<0.1	398.14	29.09	0.21	3.59
7a	110929	29	30	5.24	1.15	7.58	6.96	78.27	2.02	<0.1	9.28	48.02	18.59	0.15	2.56
7b	110929	29	30	5.54	1.1	7.11	6.72	79.3	2.05	<0.1	8.16	48.83	16.7	0.17	2.06
8	110930	33	34	5	1.61	7.74	5.02	81.64	1.91	<0.1	1.44	36.14	19.26	0.16	3.47
9	110931	37.4	38.4	5.42	1.49	8.07	9.44	94.52	2.19	<0.1	6.29	42.84	21.3	0.16	4.09
10	110991	41	42	5.47	1.35	6.23	4.64	160.39	4.59	5.59	3.11	40.82	16.31	0.11	<0.1
11	110992	42	43	5.42	1.03	6.2	5.98	166.83	3.97	5.92	3.33	41.06	13.33	<0.1	<0.1
12	110993	43	44	5.18	1.79	9	5.83	106.94	5.48	4.72	3.18	48.03	20.08	0.15	<0.1
13	110994	44	45	3.94	1.59	6.74	4.9	120.63	4.3	5.16	2.5	41.61	17.58	0.1	0.38
14	110995	45	46	4.99	1.52	7.14	5.3	136.01	5	5.42	4.31	49.69	18.95	0.18	<0.1
15	110996	46	47	4.73	1.54	7.71	5.75	151.87	4.83	5.94	5.78	48.68	17.17	<0.1	<0.1
16	110997	47	48	7.57	1.43	7.87	6.64	119.66	5.47	5.54	2.32	43.48	17.48	0.1	<0.1
17	110998	48	49	7.33	1.8	7.02	12.3	85.68	7.84	6.37	7.06	47.62	16.24	<0.1	<0.1
18	110932	47	48	7.73	1.22	8.51	8	115.35	2.42	<0.1	13.39	131.09	20.76	0.16	3.84
19	110852	50.15	51.15	38.03	2.43	17.18	152.29	159.49	37.78	78.41	27.51	422.63	27.36	<0.5	1.49
20	110853	51.1	52.1	4.75	1.19	5.97	3.42	151.42	2.02	3.92	11.34	40.58	19.13	<0.5	1.33
21a	110854	52	53	30.95	1.42	14.17	146.68	108.71	32.25	61.83	10.86	204.3	23.5	<0.5	3.94
21b	110854	52	53	30.27	1.51	14.19	146.52	107.94	32.15	60.91	10.63	203.72	23.06	<0.5	4.01

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
1	110924	5.5	6.5	169.19	76.65	18.23	384.58	12.48	0.13	1.47	0.1	4.75	29.26		1.2
2a	110939	9.5	10.5	63.97	43.67	9.36	122.87	3.86	0.15	1.4	0.15	2.01	30.9		1.05
2b	110939	9.5	10.5	62.94	39.9	8.8	119.45	3.66	0.11	1.38	0.15	1.62	30.01		0.93
3	110925	14.8	15.8	124.36	51.88	15.61	329.36	11.32	0.18	1.42	0.07	2.39	29.98		0.83
4	110926	18.5	19.5	212.25	43.33	19.75	350.77	12.46	0.27	1.44	0.04	2.36	30.1		1.1
5	110927	23.4	24.4	173.8	45.92	16.98	359.28	13.48	0.55	1.57	0.04	2.21	28.22		1.52
6	110928	26	27	95.64	43.26	14.74	119.65	3.61	0.39	1.47	0.07	1.12	28.66		0.82
7a	110929	29	30	173.23	32.38	17.84	347.61	11.82	0.79	1.63	0.03	1.73	29.78		0.95
7b	110929	29	30	169.29	30.9	17.31	343.6	12.78	0.58	1.62	0.04	2.35	31.96		0.98
8	110930	33	34	172.18	46.41	19.61	342.01	15.17	0.22	1.41	0.03	2.6	28.61		1.35
9	110931	37.4	38.4	148.3	58.06	18.96	357.41	13.47	0.19	1.49	0.03	2.53	30.38		0.53
10	110991	41	42	183.24	40.4	18.08	312.32	37.15	0.76	2.19	1.95	48.5	1.4		4.77
11	110992	42	43	143.8	37.17	13.83	286.5	37.12	1.98	2.17	1.6	49.83	2.65		3.08
12	110993	43	44	196.26	52.33	23.61	405.19	27.52	0.6	2.27	2.22	31.92	3.43		4.79
13	110994	44	45	211	47.71	16.89	333.38	30.64	0.67	2.24	1.77	36.07	2.45		4.59
14	110995	45	46	203.56	57.13	17.9	372.14	33	0.75	2.18	2.18	41.2	2.58		5
15	110996	46	47	218.62	57.22	17.53	369.31	34.65	0.81	2.42	2.07	45.44	4.03		3.84
16	110997	47	48	237.44	48.31	20.85	374.9	29.86	0.59	2.2	2.02	34.97	1.96		6.1
17	110998	48	49	223.21	38.24	18.45	327.68	22.61	1.29	2.31	2.06	25.18	2.18		5.51
18	110932	47	48	177.01	46.46	20.15	374.1	13.89	0.45	1.5	0.04	2.69	31.35		0.93
19	110852	50.15	51.15	180.64	53.42	10.84	110.07	5.57	<0.5	<0.5	<0.5	6.11	3.44	<0.5	1.47
20	110853	51.1	52.1	153.63	36.2	16.56	220.78	9.73	0.61	<0.5	<0.5	1.39	3.03	<0.5	1.18
21a	110854	52	53	46.18	42.29	18.2	119.78	3.56	<0.5	<0.5	<0.5	1.29	1.8	<0.5	0.6
21b	110854	52	53	46.35	42.06	18.18	120.46	3.23	<0.5	<0.5	<0.5	1.37	1.83	<0.5	0.58

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	110924	5.5	6.5	1657.39	77.18	158.05	14.98	52.53	9.26	2.09	6.15	0.8	4.03	0.73	1.86
2a	110939	9.5	10.5	333.5	50.41	113.79	12.6	48.95	9.32	1.86	5.66	0.55	2.46	0.39	1.04
2b	110939	9.5	10.5	335.1	49.35	111.3	12.32	48.32	9.5	1.87	5.37	0.52	2.29	0.36	1.02
3	110925	14.8	15.8	1085.72	41.15	83.31	8.17	27.57	5.13	1.22	3.65	0.49	3.45	0.61	1.59
4	110926	18.5	19.5	1758.91	58.71	118.55	11.44	39.01	7.14	1.74	5.06	0.62	3.91	0.73	1.93
5	110927	23.4	24.4	1902.77	61.86	126.46	12.43	42.39	7.62	1.96	5.22	0.6	3.73	0.66	1.74
6	110928	26	27	1149.25	42.92	96.7	10.66	41.93	8.17	1.73	5.14	0.63	3.23	0.51	1.26
7a	110929	29	30	1675.02	61.37	120.26	11.97	41.11	7.27	1.97	5.1	0.6	3.81	0.67	1.8
7b	110929	29	30	1685.92	21.41	118.96	5.03	17.91	7.58	1.98	5.08	0.35	2.43	0.66	1.13
8	110930	33	34	1777.29	65.56	131.23	12.62	43.34	7.87	1.98	5.4	0.66	4.4	0.76	1.93
9	110931	37.4	38.4	1732.33	59.88	120.87	11.67	40.62	7.58	1.77	5.31	0.62	3.92	0.7	1.79
10	110991	41	42	1669.69	54.77	166.43	7.41	43.07	5.81	1.4	3.47	0.53	3.68	0.72	1.27
11	110992	42	43	1498.03	49.47	148.87	6.73	38.66	4.86	1.5	2.96	0.51	2.86	0.63	1.03
12	110993	43	44	1804.75	60.98	189.37	8.01	49.55	6.64	1.63	3.91	0.65	4.73	0.88	1.77
13	110994	44	45	1686.38	57.94	175.04	7.26	44.71	5.99	1.71	3.37	0.55	3.23	<0.1	1.46
14	110995	45	46	1792.39	59.76	179.8	7.43	46.34	5.53	1.65	3.48	0.58	3.84	0.72	1.41
15	110996	46	47	1874.99	63.18	190.93	8.59	48.69	6.16	1.84	3.73	0.62	3.68	0.62	1.4
16	110997	47	48	2029.43	69.35	208	8.85	53.5	7.06	1.89	3.93	0.62	4.16	0.78	1.49
17	110998	48	49	1670.54	66.84	202.38	9.11	52.13	7.18	1.64	3.99	0.58	4.03	0.65	1.32
18	110932	47	48	1940.05	67.78	136.45	13.2	45.05	7.98	2.14	5.62	0.64	4.61	0.76	2.02
19	110852	50.15	51.15	1022.16	28.01	60.03	7.1	27.47	5.18	1.09	3.5	<0.5	2.11	<0.5	1
20	110853	51.1	52.1	675.87	85.95	168.14	17.12	57.44	9.24	0.96	6.6	0.8	3.92	0.63	4.16
21a	110854	52	53	120.47	44.4	87.78	9.89	36.41	7.55	1.13	5.71	0.66	3.73	0.64	1.85
21b	110854	52	53	119.79	44.11	86.8	9.81	36.56	7.12	1.1	5.49	0.66	3.77	0.65	1.86

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
1	110924	5.5	6.5	0.29	1.91	0.3	8.73	0.6	1.7	0.97	4.44	0.34	21.79	4.25	
2a	110939	9.5	10.5	0.15	1.11	0.16	3.09	0.22	0.66	0.9	0.66	0.37	6.58	1.35	
2b	110939	9.5	10.5	0.13	0.96	0.16	3.14	0.19	0.65	0.85	0.47	0.3	6.07	1.31	
3	110925	14.8	15.8	0.25	1.74	0.28	7.42	0.78	0.77	0.86	4.19	0.18	22.13	4.33	
4	110926	18.5	19.5	0.3	2.05	0.31	7.81	0.77	0.59	1.39	7.83	0.52	22.1	5.68	
5	110927	23.4	24.4	0.27	1.92	0.33	8.33	0.86	0.8	1.07	8.37	<0.1	24.5	4.1	
6	110928	26	27	0.19	1.22	0.21	3.01	0.2	0.8	0.96	<0.1	<0.1	6.12	1.66	
7a	110929	29	30	0.3	1.86	0.29	7.95	0.98	0.59	1.21	9.15	0.47	27.57	6.16	
7b	110929	29	30	0.19	1.36	0.2	7.99	1.04	0.54	1.16	10.03	0.46	26.69	6.11	
8	110930	33	34	0.3	2.1	0.32	8.3	1.31	0.92	1.17	6.61	0.13	27.72	3	
9	110931	37.4	38.4	0.3	2.23	0.31	8.21	0.91	0.65	1.12	8.7	0.2	22.54	4.65	
10	110991	41	42	0.12	0.85	0.04	13.35	0.8	1.23	1.11	28.51	<0.1	8.05	0.91	
11	110992	42	43	0.13	0.67	0.04	11.69	0.67	0.67	2.02	16.28	<0.1	6.51	0.69	
12	110993	43	44	0.11	1.18	0.07	15.57	0.94	1.03	3.4	16.54	<0.1	8.32	1.57	
13	110994	44	45	0.12	0.84	0.04	13.87	0.75	1.24	1.61	19.65	<0.1	8.75	1.2	
14	110995	45	46	0.12	0.89	0.06	14.57	0.73	1.81	1.65	16.78	<0.1	8.63	1.41	
15	110996	46	47	0.12	0.84	0.06	14.95	0.65	1.01	1.52	19.83	<0.1	8.05	1.28	
16	110997	47	48	0.12	0.91	0.06	15.57	0.73	1.03	1.07	19.6	0.22	7.95	1.18	
17	110998	48	49	0.1	0.85	0.06	13.49	0.75	1.06	1.44	16.8	<0.1	8.01	1.47	
18	110932	47	48	0.29	2.03	0.32	8.68	0.93	0.67	1.3	8.9	<0.1	23.65	5.71	
19	110852	50.15	51.15	<0.5	1.03	<0.5	3.51	3.79	5.57	<0.5	<0.5	0.83	6.54	1.64	
20	110853	51.1	52.1	<0.5	1.88	<0.5	6.13	1.12	25.86	<0.5	4.53	<0.5	23.86	3.98	
21a	110854	52	53	<0.5	1.72	<0.5	3.04	1.61	2.47	<0.5	<0.5	<0.5	6.01	2.73	
21b	110854	52	53	<0.5	1.76	<0.5	2.95	1.6	2.42	<0.5	<0.5	<0.5	5.95	2.7	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
22	110855	53	54	28.9	1.66	14.67	151.4	92.56	35.4	64.7	8.54	247.05	23.64	<0.5	1.55
23	110966	53	54	4.92	1.66	5.5	6.81	121.66	5.84	6.52	33.59	29.48	15	<0.1	<0.1
24	110856	54.5	55.5	16.5	1.12	6.74	48.15	208.65	10.08	24.49	77.89	84.98	13.37	<0.5	1.43
25	110967	56	57	9.86	1.77	11.79	9.89	142.23	7.04	11.75	4.98	62.92	15.91	0.11	<0.1
26	110857	56.5	57.5	10.58	0.88	7.27	8.55	123.17	2.96	8.99	14.7	56.86	12.7	<0.5	2.46
27	110858	58.1	59.1	11.41	1.13	2.39	20.2	203.03	5.35	8.81	205.48	118.07	6.45	<0.5	1.58
28a	110859	58.8	59.8	15.36	5.18	8.24	33.74	125.17	6.27	12.49	19.94	108.77	23.73	<0.5	1.99
28b	110859	58.8	59.8	14.7	5.9	8.56	33.91	124.13	6.24	12.46	19.87	108.05	23.45	<0.5	1.9
29	110860	61	62	7.87	6.21	6.73	24.7	55.28	4.63	28.31	14.37	58.94	24.57	<0.5	1.41
30a	110965	60	61	32.05	5.58	12.86	54.7	40.7	18.99	20.95	8.83	91.42	34.25	0.19	<0.1
30b	110965	60	61	32.55	5.62	12.88	55.34	40.67	19.29	21.08	9.33	92.12	34.45	0.15	<0.1
31	110861	62	63	8.15	4.47	2.65	50.51	60.99	6.46	9.44	11.22	52.11	24.38	<0.5	0.97
32	110862	63.4	64.4	4.84	2.08	3.13	11.71	112.57	3.68	5.96	27.49	43.97	15.79	<0.5	2.05
33	110968	63	64	3.26	1.58	2.31	6.94	148.68	4.09	6.62	8.86	25.75	12.12	<0.1	<0.1
34	111045	65	66	14.99	0.83	4.7	40.31	137.24	12.13	25.22	57.6	128.29	11.33	0.17	<0.1
35	110933	66.8	67.8	18.11	1.03	5.75	55	151.9	14.2	25.59	312.81	93.57	18.49	0.16	5.77
36	110863	68.9	69.9	27.83	3.04	13.06	109.99	109.4	37.42	39.02	2927.41	159.65	20.46	0.13	2.42
37	110969	67	68	17.18	1.65	10.07	79.91	140.56	22.35	44.68	266.03	121.63	17.81	<0.1	0.32
38	110970	70	71	22.83	2.08	11.84	95.97	120.7	25.45	56.68	88.54	158.59	23.58	0.11	<0.1
39	110934	69.5	70.5	32.1	1.69	11.32	115.63	225.53	66.79	66.76	3716.81	163.37	25.44	0.18	5.51
40	110971	72	73	4.06	1.81	3.24	2.39	127.09	2.36	5.48	23.38	33.81	15.64	<0.1	0.15
41	110972	74	75	8.33	2.56	5.5	34.4	169.23	10.39	24.5	84.01	109.95	15.08	<0.1	<0.1
42	110935	75	76	2.65	1.66	3	2.94	139.61	1.93	<0.1	15.52	24.2	16.53	<0.1	1.86
43a	110865	77.15	78.15	26.16	2.29	19.8	161.23	188	48.48	119.14	51.8	818.65	30.52	0.21	3.74
43b	110865	77.15	78.15	25.97	2.22	19.79	160.59	189.87	47.93	117.94	50.58	814.21	29.77	0.19	3.48

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
22	110855	53	54	55.75	41.13	18.48	123.06	3.55	<0.5	<0.5	<0.5	1.07	0.53	<0.5	0.62
23	110966	53	54	129.88	41.61	14.87	269.78	29.86	0.47	2.14	1.83	37.13	3.22		1.73
24	110856	54.5	55.5	37.2	24.72	11.31	46.84	1.8	0.97	<0.5	<0.5	1.17	2.66	0.69	<0.5
25	110967	56	57	191.75	49.5	17.82	552.53	32.1	1.95	2.39	2.28	42.08	3.62		4.95
26	110857	56.5	57.5	121.21	26.1	15.95	346.81	5.93	3.09	<0.5	<0.5	1.94	3.07	<0.5	0.87
27	110858	58.1	59.1	23.48	11.61	10.83	78.27	3.26	<0.5	0.76	<0.5	1.15	2.09	<0.5	0.79
28a	110859	58.8	59.8	219.15	69.07	25.61	311.01	10.77	0.7	0.62	<0.5	5.6	3.02	<0.5	2.36
28b	110859	58.8	59.8	220.92	68.48	25.93	310.84	10.49	0.72	0.56	<0.5	5.43	2.92	<0.5	2.29
29	110860	61	62	249.62	100.99	11.93	362.27	23.14	<0.5	<0.5	<0.5	5.86	3.27	<0.5	2.17
30a	110965	60	61	342.24	40.92	18.57	370.45	18.23	0.45	2.58	4.11	10.08	3.94		2.29
30b	110965	60	61	345.41	41.19	18.56	369.95	17.95	0.47	2.7	4.85	9.7	4.21		2.6
31	110861	62	63	250.02	64.83	7.07	120.58	4.78	<0.5	<0.5	<0.5	1.89	2.98	<0.5	2
32	110862	63.4	64.4	108.94	36.95	19.44	148.38	9.83	<0.5	<0.5	<0.5	2.07	3.28	<0.5	5.27
33	110968	63	64	122.97	39.12	14.83	156.49	33.16	0.75	2.12	1.16	44.61	3.11		0.54
34	111045	65	66	22.28	23.59	11.88	41.74	28.91	0.32	2.6	2.06	49.53	3.06		6.48
35	110933	66.8	67.8	64.84	12.31	54.4	35.77	2.55	<0.1	1.42	0.09	1.7	29.43		0.54
36	110863	68.9	69.9	145.82	12.05	29.49	87.12	3.59	1.09	<0.05	0.1	1.76	11.65		1.24
37	110969	67	68	105.73	19.73	12.97	65.86	29.46	0.67	2.53	3.02	40	3.01		7.59
38	110970	70	71	90.52	31.16	16.07	116.41	27.96	0.5	2.7	3.7	32.89	3.88		13.47
39	110934	69.5	70.5	77.45	16.44	15.63	64.01	2.87	2.11	1.38	0.32	2.26	28.97		1.13
40	110971	72	73	232.22	19.87	13.74	180.72	33.1	1.23	2.16	1.27	39.75	1.97		1.27
41	110972	74	75	110.75	67.02	20.15	172.16	41.33	1.65	2.26	2.04	50.68	1.68		4.56
42	110935	75	76	216.24	39.49	11.51	177.6	17.9	0.72	1.48	0.05	3.3	30.76		1.45
43a	110865	77.15	78.15	117.84	38.49	18.72	135.11	4.55	2.15	0.2	0.19	1.01	25.46		0.84
43b	110865	77.15	78.15	113.2	37.86	17.56	132.64	4.3	1.9	0.2	0.17	0.96	25.5		0.73

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
22	110855	53	54	169.51	57.66	114.02	12.69	47.41	8.89	1.34	6.47	0.73	3.88	0.64	1.88
23	110966	53	54	612.92	49.96	161.48	6.62	37.78	5.98	0.61	2.77	0.36	3.2	0.49	1.04
24	110856	54.5	55.5	103.05	37.12	74.77	8.34	29.6	5.52	0.89	3.57	<0.5	1.82	<0.5	0.72
25	110967	56	57	2271.73	42.08	141.15	7.56	38.74	5.83	2.05	3.74	0.63	3.66	<0.1	1.41
26	110857	56.5	57.5	1673.18	39.71	81.16	8.72	30.75	5.14	1.29	4.19	<0.5	2.66	<0.5	1.54
27	110858	58.1	59.1	113.09	17.59	34.51	3.87	13.16	2.85	<0.5	2.48	<0.5	1.86	<0.5	1.06
28a	110859	58.8	59.8	263.76	63.21	131.58	14.14	48.97	9.12	0.92	6.93	0.97	5.45	1.01	2.86
28b	110859	58.8	59.8	262.82	62.6	130.15	14.2	48.28	8.97	0.95	6.73	0.97	5.26	0.99	2.9
29	110860	61	62	413.04	3.34	7.73	1.12	4.21	1.39	<0.5	1.84	<0.5	2.43	<0.5	1.6
30a	110965	60	61	332.07	87.46	287.31	16.5	68.71	12.46	1.22	7.35	0.6	3.89	<0.1	1.37
30b	110965	60	61	335.31	86.28	283.64	16.09	67.65	12.3	1.32	7.08	0.61	3.97	<0.1	1.22
31	110861	62	63	376.85	2.03	4.25	0.52	2.08	0.73	<0.5	1.02	<0.5	1.23	<0.5	0.72
32	110862	63.4	64.4	309.42	29.05	54.94	5.9	19.88	3.63	<0.5	3.47	0.57	3.6	0.7	2.08
33	110968	63	64	433.35	36.08	107.44	5.02	27.54	5.04	0.23	2.22	0.28	3.21	0.67	1.09
34	111045	65	66	75.53	25.3	52.52	1.37	22.52	4.73	0.79	3.85	0.53	2.61	<0.1	0.32
35	110933	66.8	67.8	152.83	52.63	115.61	11.75	43.11	9.43	1.31	8.49	1.29	9.54	1.88	4.01
36	110863	68.9	69.9	416.55	24.35	46.38	5.2	19.6	5.22	0.73	6.39	0.79	4.91	1.05	2.62
37	110969	67	68	237.83	30.36	87.52	7.99	31.02	4.78	1	4.51	0.63	2.67	0.36	1.23
38	110970	70	71	262.07	73.02	216.89	15.11	67.23	13.07	1.85	7.13	0.93	3.96	0.62	1.58
39	110934	69.5	70.5	232.86	56.12	110.51	11.15	40.51	8.54	1.14	5.46	0.58	3.21	0.57	1.64
40	110971	72	73	129.43	24.06	78.02	3.96	20.98	4.35	0.15	1.93	0.24	3.46	0.76	0.92
41	110972	74	75	368.95	61.25	195.09	9.54	53.69	9.28	0.85	4.37	0.53	4.47	0.86	1.35
42	110935	75	76	321.26	18.94	43.25	4.42	15.19	3.58	0.2	2.57	0.4	3.18	0.53	1.45
43a	110865	77.15	78.15	131.81	54.32	109.43	14.06	49.78	10.78	2.13	7.6	0.76	3.77	0.71	1.89
43b	110865	77.15	78.15	130.91	53.38	106.13	13.51	48.46	9.91	1.86	6.99	0.66	3.37	0.7	2.06

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
22	110855	53	54	<0.5	1.77	<0.5	3.08	1.98	3.96	<0.5	6.58	<0.5	6.01	2.86	
23	110966	53	54	0.11	0.76	0.04	9.45	0.54	0.46	2.73	15.06	<0.1	7.68	0.7	
24	110856	54.5	55.5	<0.5	0.76	<0.5	1.2	<0.5	13.89	<0.5	<0.5	0.77	2.28	0.86	
25	110967	56	57	0.11	0.85	0.06	18.21	0.82	1.46	0.27	25.58	<0.1	7.79	2	
26	110857	56.5	57.5	<0.5	1.67	<0.5	6.7	0.55	15.43	<0.5	<0.5	<0.5	10.69	4.04	
27	110858	58.1	59.1	<0.5	1.07	<0.5	1.83	<0.5	7.26	<0.5	22.86	0.86	4.21	2.09	
28a	110859	58.8	59.8	0.53	3.06	<0.5	10.92	2.01	1.28	0.59	11.05	0.51	91.07	5.07	
28b	110859	58.8	59.8	0.5	3.08	<0.5	11.06	1.92	1.2	0.57	11.12	0.52	90.92	5	
29	110860	61	62	<0.5	2.16	<0.5	12.76	2.08	3.6	0.6	2.05	<0.5	44.54	3.3	
30a	110965	60	61	0.11	1.24	0.12	14.51	1.2	1.92	3.06	11.3	0.61	28.81	7.51	
30b	110965	60	61	0.11	1.24	0.12	14.42	1.02	0.96	1.99	12.07	0.54	28.87	7.34	
31	110861	62	63	<0.5	0.86	<0.5	4.03	0.74	6.6	0.55	1.09	<0.5	19.89	1.63	
32	110862	63.4	64.4	<0.5	2.08	<0.5	5.09	<0.5	2.79	<0.5	0.97	<0.5	21.07	2.11	
33	110968	63	64	0.1	0.72	0.03	6.71	0.51	1.17	<0.05	16.33	<0.1	6.47	0.76	
34	111045	65	66	0.1	0.71	0.06	0.87	0.87	1.27	1.45	6.09	<0.1	6.77	2.78	
35	110933	66.8	67.8	0.55	2.95	0.49	1.18	0.11	0.49	0.79	<0.1	0.17	1.96	1.71	
36	110863	68.9	69.9	0.39	2.12	0.34	2.15	0.17	1.41	1.09	44.9	2.23	3.9	3.66	
37	110969	67	68	0.11	0.67	0.08	1.93	1.01	1.94	1.8	13.53	<0.1	8.02	3.63	
38	110970	70	71	0.1	0.88	0.1	3.61	1.57	2.68	2.01	14.68	<0.1	12.15	4.07	
39	110934	69.5	70.5	0.2	1.34	0.2	1.69	<0.1	0.76	0.88	7.42	3.52	3.17	2.7	
40	110971	72	73	0.11	0.92	0.03	6.8	0.74	1.18	2.55	33.51	0.25	8.35	1.47	
41	110972	74	75	0.1	0.9	0.06	6.69	0.93	1.64	1.29	36.9	<0.1	8.88	1.44	
42	110935	75	76	0.26	1.85	0.27	6.19	0.91	0.59	1.43	25.74	0.32	29.42	6.5	
43a	110865	77.15	78.15	0.25	1.29	0.22	3.01	0.36	3.03	0.8	10.27	0.38	5.93	2.1	
43b	110865	77.15	78.15	0.21	1.19	0.2	2.94	0.29	2.8	0.76	12.53	0.36	5.24	2	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
44	110964	79	80	5.34	1.68	3.11	12.37	97.42	2.07	5.1	6.06	62.61	19.49	<0.1	<0.1
45	110936	81.3	82.3	3.45	1.07	3.43	10.37	120.57	3.55	4.79	48.88	64.94	16.09	0.13	2.42
46	110973	81	82	3.27	1.6	2.6	3.81	132.48	2.4	5.36	27.86	34.92	14.18	<0.1	<0.1
47	110975	83	84	2.71	1.76	2.69	4.53	119.48	2.72	5.95	14.99	30.53	14.39	<0.1	<0.1
48	110937	84.9	85.9	11.98	0.61	2.75	24.37	346.51	8.74	14.23	483.54	86.9	11.54	0.16	2.98
49	110974	85	86	12.48	0.95	3.9	27.08	184.15	7.71	19.35	243.6	112.23	10.33	<0.1	0.73
50	110976	86	87	7.28	1.49	3.81	17.72	186.67	6.86	18.01	36.06	69.04	14.19	<0.1	<0.1
51	110977	87	88	3.05	1.29	2.53	4.51	121.12	2.53	5.41	20	31.26	13.14	<0.1	0.27
52	110938	87.5	88.5	25.72	2.51	18.19	166.41	180.48	38.56	115.51	0.65	661.46	36.97	0.23	5.52
53	110978	88	89	24.76	1.9	13.15	96.8	159.61	32.69	76.38	838.46	313.22	23.53	<0.1	<0.1
54a	110979	90	91	17.51	1.95	8.36	60.28	143.42	16.81	42.41	18.39	214.02	19.81	0.12	0.39
54b	110979	90	91	17.73	1.99	8.46	61.55	144.8	16.49	42.21	19.54	215.62	20.14	0.13	0.32
55	110864	91.3	92.3	18.85	1.13	8.27	81.95	149.54	36.42	41.12	31211.66	146.61	27.22	0.15	5.99
56	110980	92	93	20.25	0.86	3.56	38.17	219.06	11.23	21.96	2204.93	70.78	12.86	<0.1	<0.1
57	110981	94	95	23.06	1.81	10.41	66.87	196.32	24.04	57.57	2778.33	194.11	21.71	0.15	1.52
58	110982	97	98	7.64	0.76	1.69	8.05	207.21	4.06	7.46	4339.41	28.23	6.3	<0.1	0.17
59	110868	96.3	97.3	12.52	1.3	4.79	42.84	164.31	9.39	22.67	1555.62	118.65	15.95	0.16	1.84
60	110983	98	99	5.59	0.79	1.12	15.76	220.14	2.3	8.39	15.16	28.63	6.97	<0.1	<0.1
61	110867	100.5	101.5	8.05	0.14	0.17	1.98	181.06	1.04	1.9	1407.5	17.66	1.35	<0.1	0.42
62	110984	101	102	8.23	0.67	0.83	11.96	215.76	3.59	8.53	378.43	21.1	3.78	<0.1	0.17
63	110985	102	103	13.76	1.4	6.02	41.28	150.01	10.65	28.42	869.66	74.56	19.57	<0.1	0.38
64	110986	103	104	9.38	0.58	2.92	20.77	148.7	6.68	10.67	82.21	31.83	8.69	<0.1	<0.1
65	110987	104	105	8.92	0.35	0.99	10.15	295.82	3.09	9.79	45.48	30.35	4.94	<0.1	0.16
66	110940	106	107	7.31	0.78	2.44	11.48	149.13	1.2	<0.1	4.68	<0.1	8.26	<0.1	0.84
67	110988	106	107	7.53	1.2	3.36	24.63	148.76	3.35	11.3	9.38	30.17	9.08	<0.1	0.26

SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
44	110964	79	80	361.79	24.86	16.28	195.49	26.96	1.29	2.26	2.23	28.75	2.91		0.75
45	110936	81.3	82.3	141.3	44.24	14.76	175.93	15.53	0.94	1.5	0.04	3.55	29.5		0.73
46	110973	81	82	200.99	27.43	13.57	172.2	33.24	1.35	2.06	1.42	40.43	2.75		1.19
47	110975	83	84	222.73	22.06	14.65	170.7	29.83	1.24	2.17	1.36	36.08	2.34		0.35
48	110937	84.9	85.9	26.33	11.25	8.96	34.54	3.96	1	1.46	0.05	2.64	28.7		0.24
49	110974	85	86	44.19	14.45	15.07	46.95	38.65	7.91	2.47	1.42	54.83	2.56		2.55
50	110976	86	87	125.33	23.07	19.08	132.12	43.39	1.25	2.13	1.13	55.2	1.92		3.41
51	110977	87	88	215.64	21.87	12.18	170.95	27.85	1.86	2.11	0.59	36.81	1.78		2.16
52	110938	87.5	88.5	190.67	33.18	17.97	137.56	4.29	0.31	1.36	0.12	1.64	29.69		1.43
53	110978	88	89	134.45	29.52	11.54	91.57	32.63	1.03	2.65	4.43	44.27	4.69		9.75
54a	110979	90	91	231.54	28.56	15.45	136.02	31.42	5.43	2.28	2.12	40.42	2.68		3.69
54b	110979	90	91	230.7	29.09	17.1	137.97	32.46	5.25	2.47	2.14	41.89	2.39		4.34
55	110864	91.3	92.3	32.7	4.35	24.91	59.33	5.88	61.61	<0.05	0.5	2.15	5.58		0.21
56	110980	92	93	20.7	14.41	6.72	18.13	44.88	1.28	2.48	1.66	63.45	2.98		1.64
57	110981	94	95	65.53	16.88	10.04	77.69	37.8	0.37	2.64	3.25	53.37	4.19		11.81
58	110982	97	98	72.06	15.4	11.26	64.19	40.54	7.53	2.2	0.33	62.2	2.05		<0.1
59	110868	96.3	97.3	50.99	7.18	14.44	39.95	4.54	4.01	<0.05	0.04	1.34	0.78		0.35
60	110983	98	99	46.22	17.71	4.75	20.26	43.52	0.39	2.2	0.6	68.03	3.67		<0.1
61	110867	100.5	101.5	1.49	1.28	0.63	1.07	0.27	13.3	<0.05	<0.01	0.14	17.74		<0.1
62	110984	101	102	5.74	12.72	6.89	8.37	43.24	2.26	2.26	0.6	66.7	2.74		<0.1
63	110985	102	103	113.65	15.74	14.81	84.93	33.16	5.25	2.39	1.22	43.92	2.57		3.97
64	110986	103	104	28.63	12.85	8.64	24.88	31.97	2.16	2.18	<0.01	44.92	2.3		2.46
65	110987	104	105	1.38	12.62	3.9	10.29	59.1	1.33	2.36	0.33	92.67	3.39		<0.1
66	110940	106	107	115.1	9	6.4	80.53	4.66	0.4	1.38	0.03	1.61	28.36		0.8
67	110988	106	107	107.11	14.14	8.86	78.22	32.41	0.8	2.17	0.36	44.73	3.23		0.13

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
44	110964	79	80	578.09	18.15	57.66	4.14	16.97	3.2	0.22	2.36	0.26	3.83	<0.1	1.13
45	110936	81.3	82.3	260.48	32.24	72.61	7.36	25.92	5.52	0.3	3.74	0.63	3.6	0.62	1.8
46	110973	81	82	168.65	24.56	79.37	3.91	21.32	3.99	<0.1	2	0.28	3.13	0.74	0.88
47	110975	83	84	235.66	24.03	76.49	3.72	20.67	2.94	0.26	1.95	0.26	3.27	0.76	0.96
48	110937	84.9	85.9	55.07	51.65	115.85	11.83	42.13	8.33	0.52	5.32	0.5	2.3	0.36	0.89
49	110974	85	86	91.45	27.66	84.08	5.7	25.23	4.17	0.31	3.41	0.38	2.79	<0.1	0.84
50	110976	86	87	190.44	81.3	253.8	11	64.15	9.69	0.82	4.55	0.43	4.13	<0.1	1.12
51	110977	87	88	166.96	28.71	88.96	3.92	23.54	3.48	0.25	1.92	0.23	2.79	0.65	0.83
52	110938	87.5	88.5	293.16	88.6	198.63	20.37	75.54	14.76	2.3	8.87	0.88	4.61	0.71	1.83
53	110978	88	89	493.64	48.18	144.36	13.17	50.58	7.62	1.56	6.77	0.88	3.23	0.37	1.4
54a	110979	90	91	638.25	28.3	89.12	7.05	31.02	4.21	0.86	3.93	0.56	3.01	0.64	1.08
54b	110979	90	91	640.74	29.46	90.32	6.89	31.72	4.47	0.84	4.01	0.5	3.19	0.54	1.32
55	110864	91.3	92.3	50.03	39.81	74.26	9.02	30.61	7.14	0.84	6.18	0.73	5.79	0.9	2.14
56	110980	92	93	43.28	29.3	87.68	7.39	28.01	4.32	0.94	3.57	0.36	1.41	<0.1	0.53
57	110981	94	95	169.63	32.77	94.9	9.44	35.65	4.69	1.12	5.27	0.83	2.53	<0.1	1.23
58	110982	97	98	156.39	17.32	55.45	3.21	14.81	2.03	0.22	1.8	0.18	2.39	0.2	0.8
59	110868	96.3	97.3	100.05	49.86	94.85	11.71	39.07	8.29	1	5.37	0.56	2.8	0.52	1.19
60	110983	98	99	98.2	13.57	40.88	2.73	11.28	1.59	0.27	1.46	0.12	0.88	0.32	0.19
61	110867	100.5	101.5	7.14	0.62	1.22	0.13	0.54	0.14	<0.1	0.14	<0.1	0.11	<0.1	<0.1
62	110984	101	102	49.38	3.84	10.13	1.84	4.54	0.64	0.1	1.28	0.13	1.17	0.49	0.33
63	110985	102	103	216.8	38.11	113	7.62	33.27	5.09	0.73	3.79	0.43	2.71	0.51	1
64	110986	103	104	54.31	96.18	297.87	12.33	73.3	10.56	1.45	3.88	0.26	2.19	0.53	0.66
65	110987	104	105	24.16	15.91	47.22	3.44	12.56	1.8	0.19	1.52	0.13	0.68	0.31	0.31
66	110940	106	107	293.4	11.75	25.53	2.45	8.66	1.79	0.28	1.39	0.2	1.49	0.26	0.66
67	110988	106	107	284.76	47.04	142.93	5.99	35.38	4.88	0.68	2.63	0.23	1.86	0.51	0.67

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
44	110964	79	80	0.12	1.08	0.06	9.09	0.76	0.84	2.28	23.08	<0.1	9.89	2.28	
45	110936	81.3	82.3	0.28	1.99	0.29	5.72	0.61	0.52	1.19	20.9	0.21	26.14	5.28	
46	110973	81	82	0.11	0.85	0.03	6.49	0.52	0.42	1.48	33.83	<0.1	7.94	1.2	
47	110975	83	84	0.12	0.92	0.04	6.75	0.47	1.11	3.13	22.35	0.33	7.38	1.11	
48	110937	84.9	85.9	0.11	0.7	0.11	1.07	0.13	0.37	0.61	20.8	0.28	3.91	1.71	
49	110974	85	86	0.12	0.84	0.04	1.58	0.57	1.56	1.46	25.49	<0.1	5.63	2.29	
50	110976	86	87	0.11	0.82	0.06	4.87	0.62	1.3	<0.05	16.98	<0.1	7.31	1.36	
51	110977	87	88	0.12	0.76	0.03	6.15	0.44	<0.1	4	22.52	0.2	6.5	0.86	
52	110938	87.5	88.5	0.26	1.61	0.24	3.43	0.25	0.6	1.17	<0.1	0.15	6.66	3.54	
53	110978	88	89	0.11	0.74	0.11	3.18	1.52	4.09	0.64	11.41	<0.1	11.94	5.86	
54a	110979	90	91	0.11	0.83	0.07	6.12	0.91	3.41	2.73	11.89	<0.1	9.03	2.53	
54b	110979	90	91	0.11	0.86	0.07	6.32	0.98	3.54	2.51	11.51	<0.1	9.08	2.61	
55	110864	91.3	92.3	0.32	1.62	0.25	1.44	0.17	4.29	0.76	16.88	3.97	3.4	3.51	
56	110980	92	93	0.11	0.52	0.06	0.44	0.7	0.5	1.37	16	<0.1	6.22	3.75	
57	110981	94	95	0.11	0.89	0.09	2.04	1.42	2.68	0.34	7.57	<0.1	10.02	4.37	
58	110982	97	98	0.11	0.82	0.03	2.52	0.51	0.14	0.32	13.27	0.44	4.42	1.13	
59	110868	96.3	97.3	0.18	0.86	0.14	0.98	0.15	5.14	0.39	1.38	0.29	3.1	1.93	
60	110983	98	99	0.11	0.36	0.02	0.88	0.45	0.52	0.36	9.12	0.98	2.29	0.9	
61	110867	100.5	101.5	<0.1	<0.1	<0.01	<0.05	<0.1	21.28	0.19	7.06	<0.1	0.11	0.15	
62	110984	101	102	0.12	0.31	0.02	0.34	0.43	0.42	1.84	8.69	0.9	2.13	1.31	
63	110985	102	103	0.12	0.67	0.07	2.85	0.72	1.32	1.98	10.48	0.56	7.46	3.04	
64	110986	103	104	0.11	0.48	0.03	0.76	0.48	0.12	0.18	9.12	1.52	2.94	0.78	
65	110987	104	105	0.12	0.25	0.02	0.37	0.54	0.64	2.67	7.63	0.87	2.45	1.14	
66	110940	106	107	0.11	0.74	0.11	2.24	0.33	1.37	1.07	<0.1	0.13	8.81	0.83	
67	110988	106	107	0.11	0.61	0.03	3.05	0.54	0.73	2.37	8.72	<0.1	3.95	1.12	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
68a	110989	108	109	10.06	0.86	2.61	15.53	198.51	2.97	10.61	17.04	27.33	7.42	<0.1	2.29
68b	110989	108	109	9.93	0.86	2.6	15.68	199.44	3.33	10.77	16.7	27.93	7.99	<0.1	2.87
69	110990	110	111	10.03	0.72	2.32	16.11	205.21	2.77	12.61	12.79	29.04	6.33	<0.1	<0.1
70	110866	116.25	117.25	2.07	0.19	0.96	6.24	242.74	2.05	5.38	38.84	37.25	2.37	<0.1	0.58
71	110941	122.3	123.3	5.01	0.38	2.23	10.09	186.39	2.91	5.21	0.48	29.36	9.76	0.18	5.71
72	110942	125	126	5.88	1.1	2.44	7.27	132.69	1.34	<0.1	6.88	26.69	10.5	<0.1	0.12
73	110943	127.6	128.6	14.92	1.46	4.83	59.84	163.06	15.25	18.71	<0.1	107.51	14.86	0.13	2.2
74	110944	134.6	135.6	4.62	1.81	3.17	5.16	150.19	1.59	<0.1	14.15	29.32	15.07	<0.1	1.29
75	110945	141	142	2.34	2.4	3.56	2.48	124.7	1.26	<0.1	<0.1	27.43	17.19	0.13	1.13
76a	110946	143.5	144.5	3.29	1.54	8.57	5.38	93.39	2.01	<0.1	3.64	67	19.05	0.15	2.1
76b	110946	143.5	144.5	3.71	1.62	8.44	5.37	91.93	2	<0.1	4.63	67.55	18.86	0.16	2.02
SL No	Sample ID	Depth From (m)	Depth To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
68a	110989	108	109	79.57	13.95	8.47	58.67	40.39	0.81	2.14	0.22	60.43	2.81		<0.1
68b	110989	108	109	77.77	14.26	8.39	57.06	41.71	0.85	2.29	0.29	61.39	3.08		<0.1
69	110990	110	111	12.66	13.51	9.58	26.54	43.3	0.47	2.31	0.7	61.93	3.53		1.66
70	110866	116.25	117.25	6.91	1.99	1.57	12.7	1.14	1.27	<0.05	<0.01	<0.1	17.61		<0.1
71	110941	122.3	123.3	20.5	11.67	25.71	23.16	3.18	<0.1	1.39	0.01	1.23	29.38		0.31
72	110942	125	126	201.82	14.22	10.47	122.2	11.2	<0.1	1.45	0.03	1.83	29.72		1.4
73	110943	127.6	128.6	45.64	18.33	17.9	39.64	4.28	0.11	1.52	0.05	1.15	28.88		0.52
74	110944	134.6	135.6	182.42	13.46	16.59	149.58	16.7	0.24	1.45	0.04	2.7	28.78		0.81
75	110945	141	142	171.9	12.38	20.02	167.2	15.47	0.45	1.53	0.02	3.11	30.03		0.96
76a	110946	143.5	144.5	139	60.72	17.62	393.55	12.92	0.25	1.46	0.04	2.34	29.97		0.83
76b	110946	143.5	144.5	145.5	61.08	17.6	389.57	12.51	0.24	1.47	0.05	2.43	28.92		0.85

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
68a	110989	108	109	246.82	46.27	140.81	5.83	34.17	4.93	0.73	2.16	0.18	1.64	0.13	0.47
68b	110989	108	109	249.55	46.16	139.98	5.62	34.6	4.85	0.69	2.18	0.18	2.01	0.17	0.42
69	110990	110	111	37.18	56.64	170.05	7.67	42.92	5.98	1.05	3	0.24	2.04	<0.1	0.58
70	110866	116.25	117.25	26.82	3.45	6.71	0.71	2.65	0.48	0.1	0.49	<0.1	0.33	<0.1	0.19
71	110941	122.3	123.3	64.12	98.41	208.46	19.99	69.92	14.17	0.82	9.38	0.96	5.32	0.9	2.24
72	110942	125	126	313.48	8.81	19.4	2.17	7.65	1.76	0.15	1.62	0.32	2.13	0.4	1.2
73	110943	127.6	128.6	148.48	34.22	74.62	8.42	30.71	6.09	0.75	5.13	0.65	3.43	0.62	1.6
74	110944	134.6	135.6	99.96	25.93	56.99	6.26	21.47	4.24	0.12	3.3	0.56	3.4	0.63	1.95
75	110945	141	142	65.29	52.2	111.99	12.14	41.08	7.86	0.18	6.16	0.86	5.07	0.83	2.58
76a	110946	143.5	144.5	1786.15	69.12	130.29	13.66	46.54	7.91	2.43	5.79	0.76	3.78	0.67	1.97
76b	110946	143.5	144.5	1779.41	68.09	129.52	13.39	45.04	7.34	2.45	5.68	0.73	3.58	0.64	2.04

SL No	Sample ID	Depth From (m)	Depth To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
68a	110989	108	109	0.11	0.49	0.02	2.3	0.46	0.12	3.74	6.03	0.47	2.47	0.53	
68b	110989	108	109	0.11	0.49	0.02	2.24	0.5	0.69	3.54	6.06	0.56	2.75	0.47	
69	110990	110	111	0.11	0.48	0.03	0.66	0.6	1.07	2.33	7.1	<0.1	2.8	0.83	
70	110866	116.25	117.25	<0.1	0.16	0.02	0.27	<0.1	5.29	0.24	18	<0.1	0.7	0.13	
71	110941	122.3	123.3	0.26	1.63	0.24	0.92	0.12	0.29	0.75	<0.1	0.39	3.25	1.68	
72	110942	125	126	0.21	1.35	0.2	4.52	0.73	0.5	1.82	0.5	0.15	21.93	5.08	
73	110943	127.6	128.6	0.29	1.25	0.17	1.15	0.12	0.69	0.77	<0.1	0.26	1.92	1.54	
74	110944	134.6	135.6	0.31	2.02	0.31	5.64	1.05	0.54	1.48	2.86	0.1	27.71	6.71	
75	110945	141	142	0.41	2.65	0.39	6.17	0.57	0.63	1.48	4.87	<0.1	27.61	6.12	
76a	110946	143.5	144.5	0.31	1.93	0.32	9.25	0.73	0.79	1.45	11.76	0.22	20.57	4.14	
76b	110946	143.5	144.5	0.29	1.84	0.29	9.04	0.72	0.88	1.53	12.97	0.23	20.41	4.05	

BH-04 ICPMS (All values are in ppm)

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
1	110869	16.8	17.8	40.17	1.7	6.7	48.59	388.93	16.06	100.01	6.82	55.88	10.5	<0.1	1.84
2	110870	26.5	27.5	20.98	0.89	1.73	16.62	248.04	4.59	25.77	<0.1	20.75	4.45	<0.1	1.12
3	110871	23.4	24.4	6.54	0.23	0.12	3.32	354.91	1.15	5.12	<0.1	8.11	0.46	<0.1	<0.1
4	110872	29.5	30.5	15.75	0.45	0.53	7.19	315.9	2.44	12.5	0.51	9.29	1.66	<0.1	0.26
5	110873	33.3	34.4	48.31	3.5	8.5	60.06	333.37	19.55	100.09	<0.1	72.13	16.17	<0.1	2.19
6	110874	35.5	36.5	30.27	1.64	4.48	37.73	335.64	10.85	61.99	<0.1	36.32	9.75	<0.1	1.06
7	110875	38.2	39.2	13.98	0.98	6.91	9.18	12.29	5.39	8.09	<0.1	43.49	29.68	0.17	7.6
8	110876	38.5	39	14.99	0.21	0.12	2.39	332.23	1.09	4.77	<0.1	4.73	0.59	<0.1	<0.1

SL No	Sample ID	From (m)	To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
1	110869	16.8	17.8	30.15	14.72	5.87	64.76	2.85	0.16	1.38	0.04	1.15	26.89		0.95
2	110870	26.5	27.5	19.95	8.93	2.07	17.69	0.76	0.27	1.3	0.02	1.52	27.28		0.21
3	110871	23.4	24.4	2.8	7.37	0.88	2.1	<0.1	<0.1	1.29	0.02	0.55	26.68		<0.1
4	110872	29.5	30.5	5.52	7.49	1.08	6.19	0.31	0.12	1.27	0.02	0.92	27.72		<0.1
5	110873	33.3	34.4	55.08	17.28	8.78	91.35	3.54	0.16	1.29	0.03	0.98	29.66		1.19
6	110874	35.5	36.5	36.91	10.46	4.27	46.12	2	0.18	1.25	0.02	0.78	29.33		0.52
7	110875	38.2	39.2	20.61	48.95	16.92	487.79	10.64	0.34	1.3	0.03	1.46	30.11		0.24
8	110876	38.5	39	1.02	6.4	0.64	1.47	<0.1	0.18	1.29	0.01	0.49	29		<0.1

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	110869	16.8	17.8	159.58	15.22	31.98	3.84	14.89	3.05	0.82	2.33	0.26	1.23	0.22	0.62
2	110870	26.5	27.5	65.29	4.28	8.84	1.09	4.13	0.84	0.22	0.59	<0.1	0.35	<0.1	0.19
3	110871	23.4	24.4	26.06	<0.1	0.15	<0.1	<0.1	0.11	<0.1	0.12	<0.1	0.17	<0.1	<0.1
4	110872	29.5	30.5	26.89	0.91	1.94	0.23	0.98	0.27	<0.1	0.24	<0.1	0.22	<0.1	0.1
5	110873	33.3	34.4	252.93	22.57	46.63	5.55	21.37	4.26	1.15	3.09	0.38	1.82	0.34	1
6	110874	35.5	36.5	112.67	9.6	20.2	2.49	9.65	2.17	0.56	1.58	0.19	0.92	0.17	0.48
7	110875	38.2	39.2	81.85	67.65	144.14	15.65	51.62	10.57	1.01	8.21	0.96	4.31	0.76	2.23
8	110876	38.5	39	18.44	2.56	5.62	0.64	2.3	0.5	<0.1	0.24	<0.1	0.13	<0.1	<0.1

SL No	Sample ID	From (m)	To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
1	110869	16.8	17.8	<0.1	0.52	0.08	1.51	0.58	0.34	0.21	12.61	1.2	1.3	0.45	
2	110870	26.5	27.5	<0.1	0.15	0.03	0.42	<0.1	0.15	0.08	1.45	<0.1	0.36	0.23	
3	110871	23.4	24.4	<0.1	<0.1	<0.01	<0.05	<0.1	0.11	<0.05	<0.1	<0.1	<0.1	<0.1	
4	110872	29.5	30.5	<0.1	<0.1	0.01	0.13	<0.1	0.11	<0.05	<0.1	<0.1	0.12	<0.1	
5	110873	33.3	34.4	0.13	0.83	0.11	2.06	0.19	0.33	0.27	4.47	<0.1	1.89	0.67	
6	110874	35.5	36.5	<0.1	0.39	0.06	1.06	0.12	0.23	0.15	1.82	<0.1	0.92	0.32	
7	110875	38.2	39.2	0.3	2.13	0.32	12.31	0.87	1.79	0.17	7.7	0.45	28.22	7.02	
8	110876	38.5	39	<0.1	<0.1	<0.01	<0.05	<0.1	0.17	<0.05	0.14	<0.1	<0.1	<0.1	

BH-05 ICPMS (All values are in ppm)

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
1	110948	8	9	7.48	0.58	1.57	12.56	101.61	2.37	6.5	3.71	19.15	13.17	<0.1	<0.1
2	110947	12	13	8.19	0.72	2.22	13.56	91.98	2.53	5.81	3.34	17.06	15.04	<0.1	<0.1
3	110949	15.5	16.5	15.04	0.68	2.27	17.05	93.16	2.01	7.9	5.18	37.32	16.17	<0.1	<0.1
4	110950	18	19	13.95	1.77	4.93	19.87	14.36	3.47	6.11	2.93	16.45	34.77	<0.1	<0.1
5	110951	21	22	15.42	1.07	5.26	12.37	10.86	6.54	13.84	1.53	42.7	25.87	<0.1	<0.1
6	110952	25	26	20.49	1	3.56	15.25	11.63	6.64	13.08	2.71	46.13	27.44	0.14	<0.1
7	110953	26	27	15.37	0.71	3.12	10.24	11.3	2.11	5.27	10.32	15.68	22.96	<0.1	<0.1
8a	110954	29.1	30.1	10.17	0.6	3.68	10.35	65.44	3.55	7.64	3.11	32.32	21.96	<0.1	<0.1
8b	110954	29.1	30.1	10.18	0.61	3.68	11.04	66.16	3.69	7.63	3.22	32.65	21.28	<0.1	<0.1
9	110955	32	33	10.37	0.51	4.2	10.28	101.73	4.83	8.65	5.76	39.32	19.53	<0.1	<0.1
10	110956	35.3	36.3	19.51	2.06	12.87	32.12	18.63	10.85	8.98	4.36	36.25	36.44	0.27	<0.1
11	110957	40	41	23.28	1.13	11.57	19.78	16.31	11.79	12.78	1.33	83.54	47.29	0.35	<0.1
12	110958	42	43	12.26	1.04	4.27	13.12	9.45	4.47	5.31	1.09	26.26	34.58	<0.1	0.73
13	110959	47.1	48.1	11.62	0.77	7.06	13.87	67.41	7.34	7.26	1.57	32.15	19.03	0.18	<0.1
14	110960	52.2	53.2	8.72	0.48	1.55	9.49	94.83	2.74	5.26	2.53	18.3	19.01	<0.1	<0.1
15	110961	55.7	56.7	14.85	0.52	1.9	17.29	73.61	5.41	6.38	0.83	39.42	24.96	<0.1	<0.1
16	110962	60.3	61.3	5.69	0.47	1.17	10.78	136.42	2.85	6.52	1.3	15.66	13.57	<0.1	<0.1
17	112604	63	64	15.06	1.55	3.62	18.03	69.88	6.02	7.32	1.28	19.34	28.52	0.17	0.41
18	112605	67	68	4.68	0.86	2.07	14.65	121.23	2.81	5.45	1.52	14.71	17.89	<0.1	<0.1
19	112606	71	72	4.25	1.21	1.83	10.51	138.79	2.51	5.18	1.69	19.45	17.66	<0.1	<0.1
20	112607	75.5	76.5	47.15	1.62	2.88	10.16	67.1	2.73	4.64	2.36	18.25	18.84	<0.1	<0.1
21	112608	79	80	5.76	1.99	2.71	9.08	88.05	2.67	4.7	1.23	19.4	20.31	<0.1	<0.1
22a	112609	82	83	5.01	2.23	1.94	8.9	113.42	2.79	4.93	1.12	20.64	18.59	<0.1	<0.1
22b	112609	82	83	5.03	2.2	1.94	8.75	116.56	2.66	4.81	1.5	20.01	18.75	<0.1	<0.1
23	112610	85	86	2.28	2.03	2.16	10.23	95.83	2.01	4.66	1.5	13.55	17.42	<0.1	1.28

SL No	Sample ID	From (m)	To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
1	110948	8	9	28.88	30.35	6.57	117.2	22.9	0.79	2.25	1.3	25.88	2.95		3.58
2	110947	12	13	33.6	57.72	8.36	162.02	22.19	0.59	2.19	1.52	27.05	3.21		3.93
3	110949	15.5	16.5	5.17	46.63	5.63	130.05	20.83	0.7	2.41	1.86	26.55	0.9		3.31
4	110950	18	19	276.78	55.78	12.33	216.84	11.58	0.92	2.15	3.21	5.96	1.91		5.65
5	110951	21	22	43.2	76.22	13.31	319.91	10.33	3.39	2.63	4.39	3.11	1.71		8.25
6	110952	25	26	46.45	64.97	13.26	298.79	11.36	28.87	2.63	4.46	2.89	2.3		9.17
7	110953	26	27	<0.1	64.11	6.76	253.07	8.73	1.83	2.18	2.66	3.92	1.57		4.58
8a	110954	29.1	30.1	<0.1	65.58	20.31	275.52	18.72	0.57	2.4	2.67	16.62	2.97		8.35
8b	110954	29.1	30.1	<0.1	63.28	20.44	277.46	19.48	0.55	2.41	2.85	17.18	3.04		8.97
9	110955	32	33	<0.1	64.22	10.71	273.99	25.76	1.27	2.48	2.68	28.11	2.16		8.03
10	110956	35.3	36.3	191.31	95.16	82.76	876.48	33.18	1	2.37	5.22	5.83	1.24		29.78
11	110957	40	41	55.5	93.7	39.66	775.03	20.88	0.65	3.33	9.01	3.69	5.8		18.03
12	110958	42	43	213.86	42.12	16.59	260.05	9.98	0.55	2.36	4.12	2.63	1.64		6.12
13	110959	47.1	48.1	0.17	80.73	18.98	625.66	25.53	1.5	2.58	3.11	16.89	0.97		21.58
14	110960	52.2	53.2	4.45	29.47	15.79	132.75	22.6	5.75	2.25	2.2	27.88	2.45		4.87
15	110961	55.7	56.7	44.13	20.6	4.37	153.88	17.95	0.21	2.47	4.17	19.54	2.55		3.63
16	110962	60.3	61.3	58.26	27.58	4.18	129.56	29.02	0.59	2.23	1.51	40.99	1.27		4.61
17	112604	63	64	211.96	53.93	15.86	411.27	24.86	0.83	2.15	3.59	21.33	4.47		14.23
18	112605	67	68	105.33	28.53	3.54	95.03	26.44	0.45	2.22	1.44	36.55	1.98		3.4
19	112606	71	72	113.02	24.29	5.87	91.16	30.4	0.56	2.14	1.24	41.18	2.61		2.96
20	112607	75.5	76.5	165.27	19	7.3	149.65	17.66	0.57	2.28	2.15	19.23	2.17		3.02
21	112608	79	80	159.84	15.52	16.34	164.71	21.94	0.35	2.12	1.67	25.73	1.68		3.36
22a	112609	82	83	163.74	16.19	10.78	156.35	26.7	0.7	2.15	1.58	31.09	3.18		3.53
22b	112609	82	83	165.88	15.67	10.61	158.42	27.02	0.68	2.06	1.29	33.39	3.03		3.3
23	112610	85	86	174.72	15.29	11.14	140.13	22.7	0.44	2.02	1.69	28.24	2.81		2.75

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
1	110948	8	9	70.87	66.59	178.9	6.74	36.07	5.34	0.54	2.24	0.26	1.63	<0.1	0.5
2	110947	12	13	68.24	64.19	171.08	6.55	34.82	4.61	0.71	2.45	0.28	1.87	0.43	0.53
3	110949	15.5	16.5	31.14	57.43	154.09	6.6	32.79	5.22	0.69	2.93	0.26	1.3	<0.1	0.46
4	110950	18	19	430.64	115.62	301.12	10.29	59.65	9.62	1.2	3.49	0.47	3.1	<0.1	1.13
5	110951	21	22	105	149.99	414.31	18.46	81.24	13.47	1.9	6.93	0.56	2.9	<0.1	1.23
6	110952	25	26	119.31	99.82	294.63	16.49	74.76	13.06	1.89	6.67	0.61	3.23	<0.1	1.1
7	110953	26	27	43.88	116.39	315.98	10.34	58.67	8.04	1.47	2.64	0.23	1.57	0.56	0.66
8a	110954	29.1	30.1	32.19	110	339.02	13.4	78.06	14.19	1.47	5.48	0.47	4.18	0.81	1.46
8b	110954	29.1	30.1	31.48	109.37	335.02	13.11	77.72	14.11	1.54	5.44	0.46	4.4	0.85	1.28
9	110955	32	33	30.14	100.33	303.47	13.7	70.97	12.35	1.33	5.17	0.44	2.72	<0.1	0.86
10	110956	35.3	36.3	321.77	232.85	797.76	32.39	210.61	41.4	3.92	14.59	1.74	20.36	1.51	4.76
11	110957	40	41	115.44	223.27	720.87	38.86	172.73	33.85	2.21	17.13	1.33	9.42	<0.1	2.39
12	110958	42	43	322.34	77.67	236.95	12.2	61	10.62	1.26	5.03	0.53	3.73	0.74	1.29
13	110959	47.1	48.1	27.87	208.16	659.04	24.67	134.18	23.26	1.51	8.34	0.88	5.31	0.83	1.61
14	110960	52.2	53.2	30.33	40.53	118.58	5.9	31.98	5.54	1.14	2.84	0.35	3.28	0.58	1.02
15	110961	55.7	56.7	72.64	47.65	115.38	8.5	23.38	3.51	0.34	4.21	0.4	0.68	<0.1	0.47
16	110962	60.3	61.3	90.22	45.56	122.73	5.09	28.84	4.11	0.63	1.81	0.25	1.26	0.37	0.34
17	112604	63	64	283.72	163.07	480.74	17.72	104.94	17.05	2.13	5.4	0.71	4.4	0.64	1.42
18	112605	67	68	194.34	48.05	129.64	4.99	28.81	3.69	0.75	1.6	0.24	0.88	0.26	0.53
19	112606	71	72	234.78	78.21	196.34	6.78	34.31	4.31	0.9	2.29	0.24	0.99	0.33	0.46
20	112607	75.5	76.5	324.61	58.29	159.41	6.12	33.41	4.14	0.73	2.12	0.33	1.79	<0.1	0.74
21	112608	79	80	362.44	56.99	160.56	6.53	38.63	6.72	0.87	3.02	0.36	3.14	0.57	1.16
22a	112609	82	83	369.44	75.29	200.8	7.55	42.26	6.44	0.73	2.79	0.35	2.29	0.55	0.79
22b	112609	82	83	368.33	73.36	198.47	7.73	41.22	6.2	0.74	2.74	0.32	2.38	0.5	0.91
23	112610	85	86	404.06	52.01	147.52	5.6	34.78	5.48	0.75	2.24	0.28	2.48	0.4	0.73

SL No	Sample ID	From (m)	To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
1	110948	8	9	0.12	0.56	0.03	4.27	0.55	1.56	1.39	16.05	0.68	6.87	0.88	
2	110947	12	13	0.12	0.58	0.02	5.73	0.5	1.52	3.26	14.51	0.23	7.25	0.64	
3	110949	15.5	16.5	0.11	0.58	0.04	4.68	0.63	0.89	<0.05	32.53	<0.1	8.93	2.31	
4	110950	18	19	0.12	0.83	0.03	9.05	0.63	1.46	3.4	26.01	<0.1	13.43	0.52	
5	110951	21	22	0.11	0.88	0.1	11.5	1.04	1.48	<0.05	16.2	<0.1	21.37	5.59	
6	110952	25	26	0.11	0.95	0.11	9.95	1.09	2.43	1.56	25.71	4.35	18.9	5.52	
7	110953	26	27	0.11	0.54	0.02	8.81	0.39	2.03	1.42	22.94	14.51	12.52	0.35	
8a	110954	29.1	30.1	0.13	0.9	0.07	7.61	0.69	2.34	3.77	20.51	<0.1	11.34	2.28	
8b	110954	29.1	30.1	0.13	0.89	0.07	7.87	0.72	2.87	3.33	19.21	<0.1	11.36	2.64	
9	110955	32	33	0.12	0.88	0.07	7.48	0.66	1.8	4.12	29.32	4.65	12	3.03	
10	110956	35.3	36.3	0.13	2.81	0.12	25.12	1.69	7.73	2.36	34.06	<0.1	26.61	1.61	
11	110957	40	41	0.11	2.09	0.22	20.95	1.74	2.94	3.05	30.22	0.48	35.49	14.28	
12	110958	42	43	0.13	0.88	0.07	9.63	0.79	1.6	2.04	27.96	<0.1	13.47	2.78	
13	110959	47.1	48.1	0.11	0.99	0.09	16.99	0.97	1.52	1.56	14.89	<0.1	19.7	2.49	
14	110960	52.2	53.2	0.13	0.77	0.04	4.36	0.46	0.86	1.52	8.73	<0.1	6.46	1.33	
15	110961	55.7	56.7	0.12	0.7	0.09	4.98	0.88	1.59	1.6	8.77	<0.1	15.93	6.41	
16	110962	60.3	61.3	0.12	0.43	0.02	4.21	0.6	0.88	2.3	14.17	<0.1	5.08	0.63	
17	112604	63	64	0.11	0.78	0.04	12.31	0.93	1.24	1.08	14.03	<0.1	12.32	0.6	
18	112605	67	68	0.12	0.35	0.02	3.8	0.54	0.44	2.4	10.9	<0.1	7.47	0.45	
19	112606	71	72	0.11	0.53	0.03	4	0.47	<0.1	1.36	14.53	<0.1	9.95	1.17	
20	112607	75.5	76.5	0.11	0.67	0.03	6.1	0.52	0.98	1.49	15.42	<0.1	10.18	0.81	
21	112608	79	80	0.1	0.7	0.04	7.67	0.6	0.39	3.14	13	<0.1	9.86	1.16	
22a	112609	82	83	0.11	0.78	0.03	6.42	0.56	0.48	2.74	14.48	<0.1	8.25	0.84	
22b	112609	82	83	0.11	0.79	0.03	6.45	0.46	0.61	2.77	13.65	<0.1	8.73	0.77	
23	112610	85	86	0.11	0.64	0.02	6.1	0.53	1.03	2.4	13.48	<0.1	7.59	0.35	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
24	112611	89	90	3.12	3	2.86	9.66	60.59	1.97	4.51	2.59	14.39	19.69	<0.1	0.29
25	112612	91	92	<0.1	2.03	2.15	9.66	56.34	2.09	4.82	3.03	28.15	14.54	<0.1	<0.1
26a	112613	93	94	0.21	2.7	2.49	10.35	34.88	2.55	4.57	1.56	24.76	17.41	<0.1	<0.1
26b	112613	93	94	0.2	2.68	2.5	10.09	33.42	2.36	4.25	1.92	24.48	17.31	<0.1	<0.1
27	112614	96	97	15.47	2.59	7.24	29.07	56.77	10.36	33.1	0.9	89.2	23.09	0.13	1.14
28	112615	99	100	33.25	2.61	6.69	61.3	44.27	16.27	48.05	2.32	144.96	28.88	0.16	<0.1
29	112616	102	103	8	2.82	2.25	10.06	66.79	3.53	5.51	2.23	58.8	17.03	<0.1	1.54
30	112617	105	106	4.91	2.66	2.16	8.53	92.26	2.85	5.21	1.74	42.07	15.42	<0.1	<0.1
31	112618	107.5	108.5	19.5	3.29	7.92	21.51	40.81	6.2	5.89	2.67	73.06	20.73	0.14	<0.1
32	112619	110	111	10.29	3.35	3.34	10.22	46.05	4.05	5.42	2.76	50.68	18.37	<0.1	2.1
33	112620	116	117	2.76	5.54	2.26	12.05	35.7	3.08	4.92	1.5	36.39	16.45	<0.1	1.08
34	112621	119	120	2.61	6.84	3.08	18	60.07	3.98	5.08	1.89	35.9	18.44	0.1	0.53
35	112622	123	124	8.39	4.8	5.8	22.54	41.71	8.28	6.81	1.58	61.37	21.75	0.22	1.86
36a	112623	127	128	1.38	4.07	2.86	10.9	45.93	3.6	5.36	2.31	35.58	17.47	<0.1	0.36
36b	112623	127	128	1.24	4.02	2.8	11.23	46.79	3.48	5.38	2.21	33.75	16.75	<0.1	0.34
37	112624	131	132	2.64	3.85	4.14	14.66	29.05	4.4	5.16	0.88	40.53	21.6	0.1	0.2
38	112625	135	136	14.26	5.08	2.88	13.27	29.94	3.28	5.13	2.22	32.05	19.18	<0.1	0.86
39	112626	138	139	<0.1	3.74	3.16	10.94	28.44	4.31	4.72	1.74	33.19	16.99	<0.1	0.53
40	112627	141	142	5.2	2.82	3.3	10.41	27.4	4.31	5.24	2.17	46.46	16.58	<0.1	0.24
41	112628	143	144	5.09	2.59	3.99	10.7	38.75	4.43	5.4	1.8	44.41	16.52	0.11	<0.1
42	112629	147	148	5.13	1.8	3.62	9.25	45.75	3.83	5.57	1.77	46.98	17.56	<0.1	1.24
43	112630	152	153	23.33	2.46	7.36	12.9	32.49	5.61	5.92	5	104.79	21.2	0.17	0.5
44	112631	156	157	7.07	2.99	3.96	11.87	45.94	3.34	5.21	15.01	80.19	18.22	<0.1	<0.1
45	112632	159.5	160.5	4.37	2.54	2.36	7.59	36.52	3.23	4.83	1.13	40.62	17.37	<0.1	0.62
46a	112633	162	163	1.18	0.95	1.99	8.63	43.7	2.71	4.54	2.33	27.08	15.8	<0.1	0.71
46b	112633	162	163	1.08	0.98	2.05	8.42	45.21	2.75	5.08	2.17	28.57	15.46	<0.1	0.62

SL No	Sample ID	From (m)	To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
24	112611	89	90	254	17.07	13.42	190.09	15.48	0.98	2.19	1.96	17.14	3.07		3.44
25	112612	91	92	152.79	23.26	23.63	117.49	20.33	0.83	2.16	1.57	21.21	2.54		5.88
26a	112613	93	94	197.9	24.61	14.11	154.14	14.01	0.69	1.97	2.33	12.54	2.51		4.8
26b	112613	93	94	198.75	23.73	13.47	153.84	12.42	0.75	1.97	2	12.99	2.35		4.3
27	112614	96	97	197.99	25.86	10.49	181.65	16.5	0.47	2.32	3.83	19.48	3.25		10.75
28	112615	99	100	153.77	23.7	11.17	156.09	11.62	0.65	2.42	3.46	14.43	2.48		5.27
29	112616	102	103	162.39	25.33	9.82	155.72	19.36	0.78	2.13	1.97	25.42	4.02		3.68
30	112617	105	106	167.24	24.96	8.36	118.49	24.21	0.86	2.1	1.41	36.29	3.19		1.84
31	112618	107.5	108.5	182.7	28.78	19.06	366.56	21.18	0.67	2.16	2.23	15.65	2.76		10.14
32	112619	110	111	196.89	27.84	16.93	233.1	17.98	0.74	2.08	1.98	18.23	3.54		6.02
33	112620	116	117	235.96	110.51	15.4	147.69	12.87	0.88	2.15	1.68	13.12	4.47		2.35
34	112621	119	120	199.2	169.07	22.84	214.73	20.17	0.74	2.13	1.83	21.89	3.92		6.1
35	112622	123	124	233.6	80.11	34.66	441.12	27.05	0.78	2.26	2.97	14.54	3.26		14.84
36a	112623	127	128	245.58	64.13	14.78	185.56	16.63	0.66	2.16	2.12	16.86	4.17		4.32
36b	112623	127	128	243.07	63.1	15.31	184.71	17.39	0.56	2.09	2.7	17.61	3.99		4.76
37	112624	131	132	268.19	163.22	28.66	269.75	16.11	0.84	2.11	2.99	10.28	3.84		7.18
38	112625	135	136	267.26	79.55	16.2	175.66	13.67	0.78	2.16	2.29	10.03	3.15		6.87
39	112626	138	139	284.55	109.4	28.99	247.43	15.26	0.86	1.97	2.87	11.45	3.79		4.81
40	112627	141	142	307.05	32.99	27.26	239.44	15.32	0.81	2.16	2	8.97	3.93		6.66
41	112628	143	144	313.78	39.11	28.75	242.07	17.75	0.73	2.08	2.57	13.81	2.68		8.21
42	112629	147	148	235.97	43.62	28.5	219.34	17.98	0.74	2.06	2.12	17.02	2.79		6.07
43	112630	152	153	340.42	27.53	26.82	307.14	18.3	0.61	2.15	2.57	11.27	2.63		9.59
44	112631	156	157	343.48	25.42	12.36	183.15	16.05	0.65	2.29	2.43	16.82	2.25		3.62
45	112632	159.5	160.5	367.84	28.81	9.71	156.15	13.41	0.71	2.11	1.86	14	3.64		4.24
46a	112633	162	163	227.52	112.96	18.8	160.45	14.53	0.86	2.06	2.29	15.25	3.61		3.43
46b	112633	162	163	229.94	113.22	19.27	158.25	15.72	0.89	2.54	1.81	16.1	4.4		3.79

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
24	112611	89	90	610.68	40.15	110.17	4.62	26.98	3.9	0.69	1.97	0.32	2.8	0.56	0.94
25	112612	91	92	429.9	192.83	363.96	3.63	94.81	17.95	2.41	5.49	0.46	6.6	0.98	0.63
26a	112613	93	94	556.58	77.83	156.64	1.61	45.67	8.58	1.13	3.01	0.4	3.36	0.56	0.39
26b	112613	93	94	556.8	76.28	153.83	1.68	45.5	8.64	1.25	2.99	0.39	3.24	0.76	0.41
27	112614	96	97	595.63	60.39	109.14	1.65	36.41	5.37	1.07	3.88	0.66	2.54	<0.1	0.51
28	112615	99	100	506.58	28.46	51.33	1.5	24.95	4.84	0.84	4.57	0.52	3.51	<0.1	0.43
29	112616	102	103	691.41	51.03	93.18	1.13	25.14	3.47	0.55	2.43	0.36	2.36	0.47	0.33
30	112617	105	106	802.4	41.13	74.89	0.91	20.41	2.99	0.39	1.9	0.3	1.91	<0.1	0.3
31	112618	107.5	108.5	892.52	139.96	298.52	3.03	78.84	13.1	1.09	4.67	0.76	5.59	0.8	0.78
32	112619	110	111	870.77	95.71	193.89	1.93	49.34	7.35	1.13	2.94	0.53	4.19	<0.1	0.59
33	112620	116	117	941.6	48.43	93.68	1.21	29.05	4.92	0.73	2.22	0.33	3.8	0.53	0.51
34	112621	119	120	828.94	107.57	210.33	2.18	49.86	7.58	1.03	3.1	0.5	4.67	0.74	0.64
35	112622	123	124	1018.83	180.92	381.4	3.94	106.14	19.69	1.78	7.34	1.06	10.04	1.38	1.19
36a	112623	127	128	1069.78	60.02	125.28	1.36	36.09	6.17	0.72	2.56	0.37	3.55	0.56	0.56
36b	112623	127	128	1068.98	62.76	127	1.42	36.42	6.16	0.69	2.72	0.44	3.54	0.64	0.53
37	112624	131	132	935.56	121.21	241.6	2.57	59.59	10.48	1.46	4.05	0.6	5.79	0.92	0.84
38	112625	135	136	965.2	95.21	180.47	1.73	43.11	6.49	0.89	2.54	0.37	3.11	0.59	0.52
39	112626	138	139	959.82	78.38	166.19	1.9	47.4	7.95	0.93	3.35	0.57	5.69	0.91	0.84
40	112627	141	142	1122.83	82.09	165.62	1.69	46.85	7.59	0.86	3.45	0.56	5.28	0.84	0.9
41	112628	143	144	1123.81	111.33	214.69	2.07	54.39	8.98	0.92	3.66	0.59	6.06	0.98	0.87
42	112629	147	148	683.35	76.12	148.1	1.66	38.76	6.38	0.68	3.21	0.52	6.14	0.59	0.76
43	112630	152	153	880.1	97.33	202.99	2.22	53.85	8.84	0.79	4.14	0.66	5.78	0.89	0.85
44	112631	156	157	1037.42	44.5	82.05	1	24.09	3.68	0.49	2.37	0.44	2.52	0.49	0.45
45	112632	159.5	160.5	1036.24	52.79	97.13	0.94	25.01	3.17	0.39	1.81	0.33	1.59	0.32	0.29
46a	112633	162	163	458.86	51.16	109.33	1.17	30.83	5.06	0.62	2.28	0.42	3.74	0.75	0.55
46b	112633	162	163	461.33	53.26	108.05	1.19	32.37	5.57	0.66	2.4	0.37	3.84	0.71	0.57

SL No	Sample ID	From (m)	To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
24	112611	89	90	0.11	0.79	0.03	11.49	0.44	1.33	2.88	12.71	<0.1	7.74	0.64	
25	112612	91	92	<0.1	1.08	0.03	4.87	0.6	1.24	1.47	10.38	<0.1	8.07	<0.1	
26a	112613	93	94	0.1	0.8	0.03	6.39	0.71	0.82	1.18	8.11	<0.1	10.42	0.27	
26b	112613	93	94	0.1	0.76	0.03	6.34	0.63	0.66	1.46	7.9	<0.1	9.99	0.25	
27	112614	96	97	0.1	0.78	0.07	6.67	1	1.54	0.83	9.26	<0.1	13.14	2.2	
28	112615	99	100	0.1	0.93	0.09	4.7	1.18	0.83	4.18	10.01	1.01	10.42	3.97	
29	112616	102	103	0.1	0.62	0.03	6.84	0.78	0.86	0.57	8.94	<0.1	13.67	0.99	
30	112617	105	106	0.1	0.56	0.03	6.28	0.67	0.72	1.6	8.43	0.34	13.1	0.64	
31	112618	107.5	108.5	<0.1	1.29	0.06	12.26	1.29	0.79	3.74	15.7	<0.1	17.78	0.67	
32	112619	110	111	<0.1	1.09	0.04	9.01	1.12	1.01	3.69	52.12	<0.1	11.82	0.43	
33	112620	116	117	<0.1	0.9	0.03	7.27	0.83	0.44	3.33	83	<0.1	10.06	0.41	
34	112621	119	120	<0.1	1.29	0.04	8.35	0.92	0.45	2.84	43.38	<0.1	12	0.18	
35	112622	123	124	<0.1	1.55	0.06	15.31	1.6	0.63	4.04	47.89	<0.1	27.71	0.54	
36a	112623	127	128	<0.1	0.81	0.03	8.65	0.84	1.15	3.1	21.74	<0.1	11.41	0.25	
36b	112623	127	128	<0.1	0.8	0.03	7.96	0.76	1.21	3.71	22.4	<0.1	12.39	0.19	
37	112624	131	132	<0.1	1.3	0.05	10.1	1.03	0.74	4.55	37.52	<0.1	14.55	0.44	
38	112625	135	136	<0.1	0.73	0.03	8.34	0.78	0.15	3.12	21.16	<0.1	14.84	0.15	
39	112626	138	139	<0.1	1.54	0.04	9.59	0.99	1.12	2.1	16.69	<0.1	13.97	0.3	
40	112627	141	142	<0.1	1.42	0.04	10.03	0.95	0.68	2.98	17.79	<0.1	15.59	0.53	
41	112628	143	144	0.1	1.5	0.05	10.03	0.99	1.2	4.62	12.85	<0.1	16.03	0.16	
42	112629	147	148	0.11	1.4	0.05	8.42	1.07	1.25	3.13	16.61	<0.1	12.84	0.54	
43	112630	152	153	0.1	1.53	0.06	10.73	1.15	0.91	1.85	10.81	<0.1	18.5	1.25	
44	112631	156	157	<0.1	0.75	0.04	8.31	0.93	1.36	1.1	39.74	<0.1	15.08	0.84	
45	112632	159.5	160.5	0.1	0.67	0.03	7.69	0.73	0.68	3.83	9.82	<0.1	11.68	0.44	
46a	112633	162	163	0.11	0.96	0.03	5.87	0.7	1.44	3.74	15.83	<0.1	10.86	0.21	
46b	112633	162	163	0.11	0.97	0.03	5.77	0.74	1.1	4.21	17.49	<0.1	11.64	0.14	

SL No	Sample ID	Depth From (m)	Depth To (m)	Li	Be	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	Se
47	112634	166	167	1.12	1.2	2.37	8.07	45.2	2.92	4.8	1.47	29.02	14.87	<0.1	<0.1
48	112635	170	171	13.67	1.88	4.19	8.8	49.7	3.27	4.91	0.72	75.88	19.52	0.11	<0.1
49	112636	173	174	1.94	0.94	1.58	8.96	44.89	2.43	4.79	1.33	29.81	14.61	<0.1	<0.1
50	112637	176	177	5.21	1.53	2.87	10.9	58.28	3.7	4.83	1.03	49.32	15.81	<0.1	0.15
51	112638	179	180	5.3	1.55	2.53	9.35	66.33	1.75	2.45	1.09	60.67	11.42	<0.1	<0.1
52	112639	183	184	0.56	1.42	1.66	5.25	50.16	1.15	1.75	2.13	35.25	7.93	<0.1	0.47
53	112640	185	186	<0.1	1.73	1.12	8.45	68.59	0.7	1.96	4.83	25.43	7.08	<0.1	<0.1
54	112641	188.5	189.5	1.08	1.77	1.78	7.5	53.62	1.54	2.52	3.09	47.76	10.12	<0.1	0.94
55	112642	192	193	7.49	1.59	3.52	8.2	28.42	1.69	1.67	0.87	44.16	9.59	<0.1	0.61
56a	112643	195.5	196.5	1.57	1.29	1.08	5.34	77.5	1.75	2.47	0.94	50.44	7.96	<0.1	<0.1
56b	112643	195.5	196.5	1.91	1.47	1.22	5.87	77.84	1.67	2.49	1.01	50.46	8.47	<0.1	<0.1
57	112644	199	200	2.34	0.85	1.75	5.62	62.17	3.13	3.3	1.03	72.47	6.77	0.18	<0.1
58	112646	203	204	7.22	2.23	9.21	31.25	28.27	11.5	6.64	6.67	104.78	27.31	0.28	<0.1
59	112647	207.5	208.5	5.69	2.5	6.11	25.66	60.27	8.86	6.38	22.57	93.24	19.75	0.15	<0.1
60	112648	212	213	5.6	2.48	10.43	38.43	44.17	13.05	7.06	12.71	104.14	27.62	0.36	<0.1
61	112649	215	216	4.54	2.8	10.9	35.36	27.13	11.06	6.72	67.96	95.84	28.33	0.25	<0.1
62	112650	219	220	9.56	2.31	9.97	30.92	25.81	10.85	7.42	5.07	117.7	27.14	0.33	1.32
63	111040	224	225	4.44	2.56	9.85	27.76	38.73	9.63	7.2	1.93	70.64	25.16	0.32	0.44
64	111041	227.5	228.5	0.87	3.26	9.28	32.24	30.6	12.04	6.04	12	44.02	29.64	0.46	2.26
65	111042	231	232	0.68	2.99	4.84	16.33	33.02	4.33	5.65	12	37.45	24.57	0.21	1.08
66	111043	235	236	5.3	2.34	14.55	25.7	27.49	9.31	5.86	1.42	77.12	25.56	0.29	0.6
67	111044	241.5	242.5	0.14	1.64	6.15	19.63	69.84	5.98	5.4	2.06	49.3	21.18	0.2	<0.1

SL No	Sample ID	From (m)	To (m)	Rb	Sr	Y	Zr	Nb	Mo	Cd	In	Sn	Sb	Te	Cs
47	112634	166	167	293.1	91.96	19.47	161	16.27	0.63	2.07	2.35	17.04	2.98		5.43
48	112635	170	171	317.26	31.23	12.41	164.1	19.34	0.63	2.2	2.92	17.34	3.99		13.07
49	112636	173	174	220.49	93.93	17.46	127.26	13.74	0.61	2.06	1.98	16.7	3.53		2.35
50	112637	176	177	269.62	59.84	27.89	212.24	20.42	0.57	2.02	2.72	20.75	2.73		4.93
51	112638	179	180	136.17	16.21	27.16	46.33	18.28	0.83	0.2	0.94	23.85	2.35		3.41
52	112639	183	184	110.04	7.19	19.96	31.57	14.76	0.41	0.13	0.5	18.29	2.35		<0.1
53	112640	185	186	93.97	7.24	29.63	28.87	20.14	0.74	0.09	0.44	24.93	3.37		0.93
54	112641	188.5	189.5	133.52	8.09	21	33.46	15.9	0.66	0.16	0.82	18.1	2.74		0.51
55	112642	192	193	90.03	6.31	10.41	25.58	9.69	0.58	0.2	0.71	10.1	1.68		0.2
56a	112643	195.5	196.5	81.3	5.83	7.59	28.69	19.25	0.75	0.14	0.91	28.11	3.17		0.48
56b	112643	195.5	196.5	86.18	6.1	7.55	29.33	19.24	0.5	0.18	1.02	27.44	2.67		0.39
57	112644	199	200	26.55	5.93	19.77	15.36	21.86	0.44	0.25	1.63	20.66	2.79		4.19
58	112646	203	204	293.46	27.76	33.68	718.19	24.51	0.79	2.33	4.32	8.58	2.56		26.57
59	112647	207.5	208.5	220.49	25.71	27.02	483.88	23.13	0.67	2.23	2.48	20.93	1.42		13.29
60	112648	212	213	316.72	28.02	54.19	931.27	33.56	1.03	2.41	4.95	13.66	4.44		34.77
61	112649	215	216	335.27	29.14	32.16	684.34	25.21	0.74	2.36	4.86	7.84	4.79		22.87
62	112650	219	220	275.36	25.75	33.64	579.45	22.13	0.67	2.46	4.72	7.41	4.21		21.17
63	111040	224	225	284.17	28.18	29.55	691.44	23.85	0.89	2.34	3.23	13.7	3.2		24.71
64	111041	227.5	228.5	340.75	34.42	76.17	714.59	36.82	1.2	2.27	5.24	9.99	4.7		34.42
65	111042	231	232	318.14	29.2	38.68	267.37	23.49	1.18	2.04	3.65	11.7	3.31		8.83
66	111043	235	236	312.44	28.57	46.74	704.27	25	0.55	2.33	3.85	9.92	3.1		15.75
67	111044	241.5	242.5	188.17	545.11	50.88	444.22	29	1.28	2.3	3.47	24.65	2.55		15.56

SL No	Sample ID	From (m)	To (m)	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
47	112634	166	167	639.66	56.36	104.73	1.07	28.27	5.08	0.69	2.01	0.41	3.33	0.62	0.62
48	112635	170	171	673.11	368.04	696.75	6.25	138.7	19.26	2.39	5.25	0.5	3.72	0.67	0.54
49	112636	173	174	462.13	35.87	67.36	0.92	23.89	4.9	0.72	2.17	0.33	3.32	0.74	0.43
50	112637	176	177	623.54	90.03	198.82	2.37	61.53	11.92	1.05	4	0.6	6.35	0.97	0.92
51	112638	179	180	749.59	75.47	166.02	2	51.44	11.76	0.91	4.32	0.37	6.65	0.88	0.75
52	112639	183	184	440.43	91.27	204.35	2.21	59.93	13.23	1.13	4.14	0.33	5.15	0.98	0.47
53	112640	185	186	328.31	110.67	232.12	2.49	68.48	16.29	1.38	5.16	0.4	7.64	1	0.64
54	112641	188.5	189.5	607.86	82.74	179.2	2.13	55.59	12.74	1.23	4.26	0.34	5.62	0.9	0.55
55	112642	192	193	360.23	96.28	202.83	2.21	57.01	10.62	1.79	3.63	0.28	3.27	0.39	0.29
56a	112643	195.5	196.5	344.97	68.6	161.15	1.92	49.77	9.29	1.59	3.36	0.27	2.85	0.55	0.2
56b	112643	195.5	196.5	349.27	68.57	159.8	2	49.38	9.31	1.66	3.42	0.27	2.47	0.49	0.22
57	112644	199	200	117.2	187.39	432.1	5.03	134.68	28.96	2.74	8.56	0.55	7.24	1.03	0.49
58	112646	203	204	749.3	283.91	678.93	7.56	206.51	39.54	4.71	11.62	1.51	10.45	<0.1	1.32
59	112647	207.5	208.5	766.52	127.61	311.66	3.63	100.34	19.58	3.15	6.9	0.94	7.49	1.09	0.83
60	112648	212	213	859.77	347.46	818.65	7.86	247.77	48.09	5.36	14.09	1.87	16.05	<0.1	1.78
61	112649	215	216	878.18	291.34	667.94	7.27	199.63	37.93	4.19	11.35	1.37	9.82	<0.1	1.19
62	112650	219	220	723.53	196.3	444.57	5.04	134.71	25.52	3	9.64	1.29	9.35	1.1	1.21
63	111040	224	225	732.5	218.64	500.68	5.3	148.11	26.43	2.94	8.35	1.23	8.39	1.12	1.17
64	111041	227.5	228.5	832.99	252.73	606.88	6.83	196.82	40.18	3.41	12.69	1.81	19.98	2.61	2.38
65	111042	231	232	770.33	114.11	256.02	2.95	83.81	18.4	1.47	6.35	0.74	9.14	1.38	1.03
66	111043	235	236	880.43	166.71	425.68	5.31	148.56	33.39	3.38	10.81	1.21	14.34	<0.1	1.48
67	111044	241.5	242.5	663.36	148.46	351.65	4.44	120.57	25.68	2.97	8.76	1.11	13.98	<0.1	1.44

SL No	Sample ID	From (m)	To (m)	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	
47	112634	166	167	0.11	1.04	0.03	6.65	0.75	0.96	3.77	17.44	<0.1	15.45	<0.1	
48	112635	170	171	<0.1	0.82	0.04	6.59	0.92	0.84	2.25	9.17	<0.1	12.71	0.52	
49	112636	173	174	0.11	0.86	0.03	5.06	0.66	0.2	3.01	14.27	<0.1	11.49	0.24	
50	112637	176	177	0.11	1.32	0.04	7.33	0.91	0.25	1.49	12.44	<0.1	13.47	0.24	
51	112638	179	180	0.1	1.25	0.04	4.07	0.49	0.67	2.37	15.95	0.21	14.47	0.9	
52	112639	183	184	0.1	0.79	0.02	2.63	0.4	0.57	<0.05	12.71	0.3	9.34	0.34	
53	112640	185	186	<0.1	1.04	0.02	2.04	0.47	0.61	0.63	10.48	0.22	7.54	0.12	
54	112641	188.5	189.5	0.1	0.82	0.03	3.05	0.45	0.94	2.53	16.53	<0.1	9.33	0.6	
55	112642	192	193	0.1	0.57	0.03	2.05	0.54	1.23	0.93	12.45	<0.1	9.6	0.85	
56a	112643	195.5	196.5	0.1	0.41	0.03	1.85	0.52	0.56	1.15	19.25	<0.1	9.27	1.04	
56b	112643	195.5	196.5	0.1	0.41	0.03	2.31	0.56	0.67	1.08	17.8	<0.1	9.22	1.17	
57	112644	199	200	0.1	0.69	0.05	1	0.69	0.59	3.41	13.14	0.23	11.85	0.98	
58	112646	203	204	0.1	1.74	0.09	18.11	1.59	1.51	0.54	12.63	<0.1	16.83	1.03	
59	112647	207.5	208.5	<0.1	1.3	0.07	12.93	1.17	3.42	0.31	17.02	<0.1	12.04	0.99	
60	112648	212	213	0.1	2.61	0.11	23.2	2.06	2.37	3.61	18.2	<0.1	23.22	0.85	
61	112649	215	216	<0.1	1.71	0.09	17.95	1.66	3.16	2.77	10.78	<0.1	17.94	0.98	
62	112650	219	220	0.1	1.73	0.1	15.08	1.68	1.79	1.6	8.69	<0.1	23.15	1.94	
63	111040	224	225	0.1	1.7	0.08	17.41	1.34	1.04	2.75	7.57	<0.1	16.09	0.68	
64	111041	227.5	228.5	0.11	4.01	0.12	20.07	2.26	1.91	2.45	16.85	<0.1	18.59	0.37	
65	111042	231	232	0.1	1.99	0.07	10.77	1.22	0.98	3.24	7.86	<0.1	15.14	0.56	
66	111043	235	236	0.1	2.63	0.1	18.11	1.86	1.29	3.05	8.45	<0.1	16.26	1.11	
67	111044	241.5	242.5	0.11	2.22	0.08	11.37	1.35	1.29	2.21	67.09	<0.1	10.61	0.49	

Annexure XX_ Gold Fire Assay Data of Subsurface Samples

(BH-01) (All Values are in ppm)

SL No	Sample ID	From (m)	To (m)	Ag	Te	Au
1	107128	36	37	0.23	<0.05	<0.001
2	107129	41	42	0.1	0.06	0.033
3	107130	50.5	51.5	<0.05	<0.05	0.001
4	107131	56	57	<0.05	<0.05	<0.001
5	107132	62	63	<0.05	<0.05	<0.001
6	110879	67	68	1.28	0.11	0.004
7a	107134	73	74	0.28	0.06	<0.001
7b	107134	73	74	0.27	0.06	<0.001
8	107135	75.5	76.5	0.17	<0.05	0.001
9	107138	84.5	85.5	0.27	<0.05	<0.001
10	107139	89	90	0.14	0.05	0.001
11	107141	95	96	0.25	<0.05	0.001
12	107142	100.5	101.5	0.28	0.06	<0.001

(BH-02) (All Values are in ppm)

SL No	Sample ID	From (m)	To (m)	Ag	Te	Au
1	112603	38	39	0.71	<0.05	0.025
2	107112	61.5	62.5	5.87	<0.05	0.058
3	112601	65	66	0.87	<0.05	0.002
4	107108	47.2	48.2			<0.001
5	110895	74.5	75.5	0.18	<0.05	0.025
6	110896	82.3	83.3	0.15	0.08	0.069
7	107121	95.3	96.3	0.53	<0.05	0.071
8	110901	119	120	50.61	0.09	0.045
9	110905	134.2	135.2	0.32	<0.05	0.088

(BH-03) (All Values are in ppm)

SL No	Sample ID	From (m)	To (m)	Ag	Te	Au
1	110992	42	43	3.61	2.02	0.007
2	110856	55	56			0.017
3	110857	57	58			0.018
4	110965	60	61	4.69	4.64	0.005
5	110968	63	64	2.04	0.43	0.061
6	110969	67	68	1.24	3.25	0.068
7	110863	68.9	69.9			0.01
8	110972	74	75	2.26	2.42	0.02
9	110973	81	82	1.54	<0.05	0.003
10	110864	91.3	92.3			0.012
11a	110981	94	95	1.35	4.85	0.012
11b	110981	94	95	1.31	4.81	0.013
12	110868	96.8	97.8			0.093
13	110867	101	102			0.033
14	110985	102	103	3.25	2.22	0.006
15	110989	108	110	1.07	0.05	0.005
16	110941	122.3	123.3	0.11	0.11	0
17	110943	127.6	128.6	0.57	0.3	0.01

(BH-04) (All Values are in ppm)

SL No	Sample ID	From (m)	To (m)	Ag	Te	Au
1	110872	29.5	30.5	3.63	0	0.003
2	110875	37.5	38.5	13.8	0	0.01
3	110876	38.5	39	0.4	0	0.003

(BH-05) (All Values are in ppm)

SL No	Sample ID	From (m)	To (m)	Ag	Te	Au
1	110952	25	26	4.01	5.09	0.01
2	110957	40	41	8.29	11.84	0.001
3	110959	47.1	48.1	7.59	5.14	<0.001
4	110963	60.3	61.3	0.93	1.55	<0.001
5	112617	105	106	0.62	1.09	0.024
6	112622	123	124	1.68	5.59	0.021
7	112639	183	184	0.13	0.62	0.03
8	112645	199	200	0.14	2.6	0.029
9	111044	241.5	242.5	1.54	4.5	0.014

Annexure XXI_Fire assay data of subsurface Check samples

Gold Fire assay data of Subsurface samples (BH-01), (All values are in ppm)

SL No	Sample ID	From (m)	To (m)	Lab	Ag	Te	Au
1	107135	75.5	76.5	BV	0.17	<0.05	0.001
	112681	75.5	76.5	Shiva	<1	<50	<0.01

Gold Fire assay data of Subsurface samples (BH-02), (All values are in ppm)

SL No	Sample ID	From (m)	To (m)	Lab	Ag	Te	Au
1	107112	61.5	62.5	BV	5.87	<0.05	0.058
	112682	61.5	62.5	Shiva	<1	<50	<0.01

Gold Fire assay data of Subsurface samples (BH-03), (All values are in ppm)

SL No	Sample ID	From (m)	To (m)	Lab	Ag	Te	Au
1	110857	57	58	BV			0.018
	112683	57	58	Shiva	<1	<50	<0.01

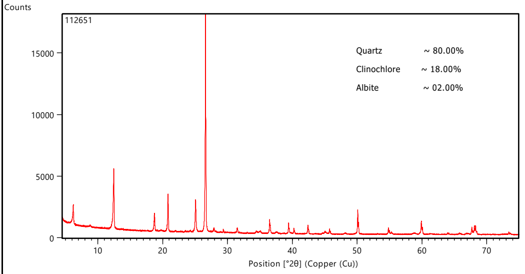
Gold Fire assay data of Subsurface samples (BH-04), (All values are in ppm)

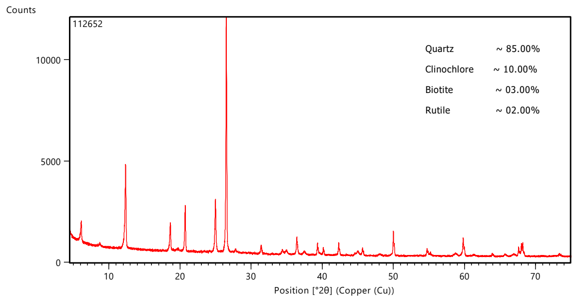
SL No	Sample ID	From (m)	To (m)	Lab	Ag	Te	Au
1	110872	29.5	30.5	BV	3.63	0	0.003
	112684	29.5	30.5	Shiva	<1	<50	<0.01

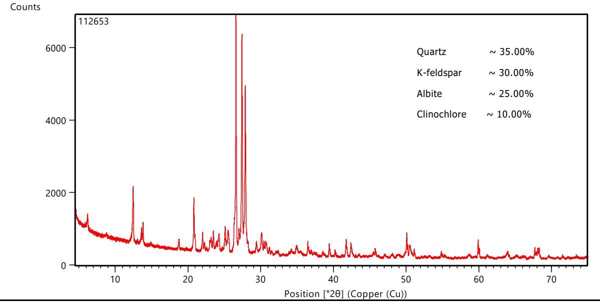
Gold Fire assay data of Subsurface samples (BH-05), (All values are in ppm)

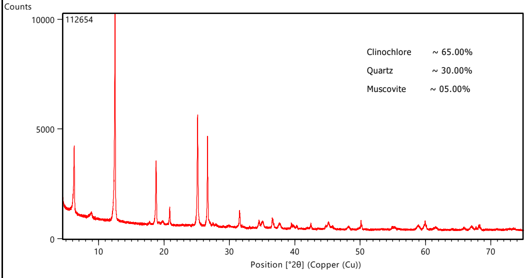
SL No	Sample ID	From (m)	To (m)	Lab	Ag	Te	Au
1	110952	25	26	BV	4.01	5.09	0.01
	112685	25	26	Shiva	<1	<50	<0.01

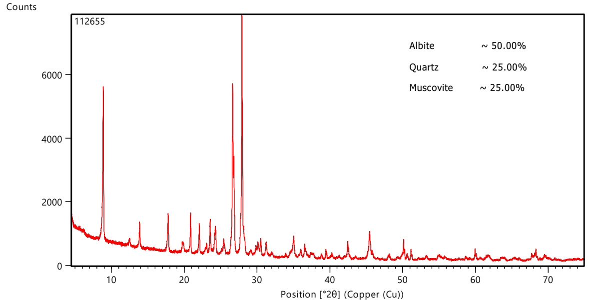
Annexure XXII_ XRD Graphs of Subsurface Samples

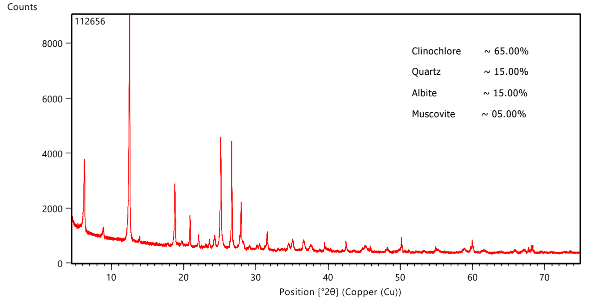


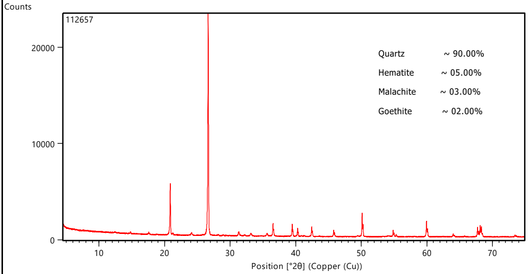


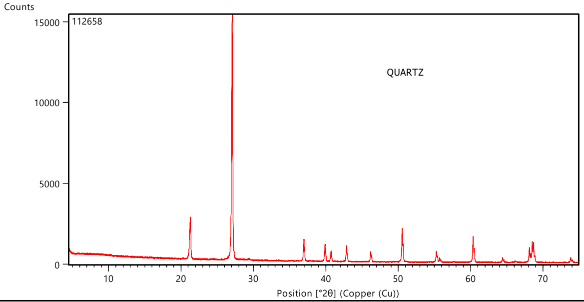


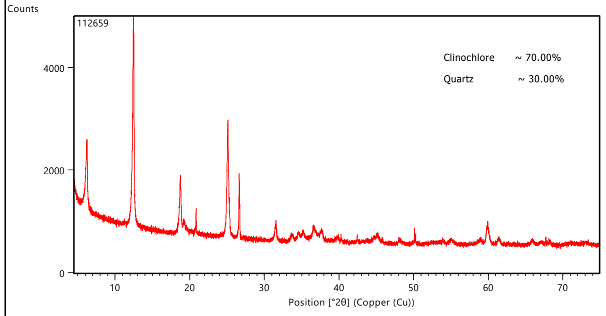


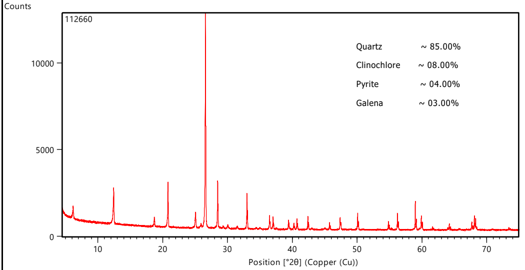


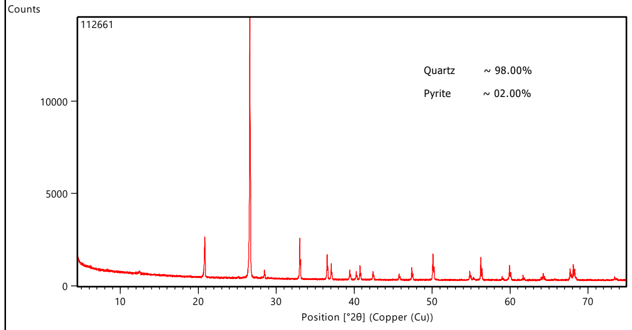


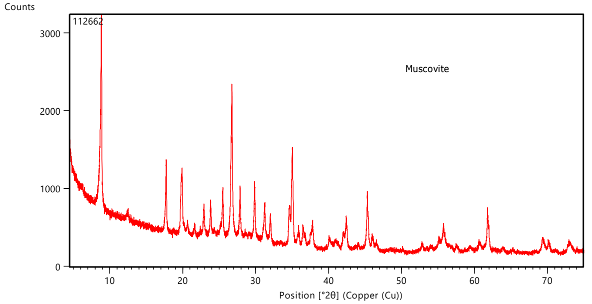

Counts
112657
Quartz ~ 90.00%
Hematite ~ 05.00%
Malachite ~ 03.00%
Goethite ~ 02.00%
Position [°2θ] (Copper (Cu))

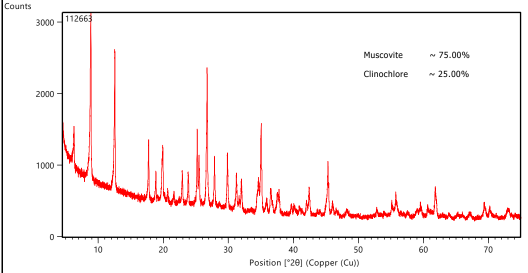

Counts
112658
QUARTZ
Position [°2θ] (Copper (Cu))

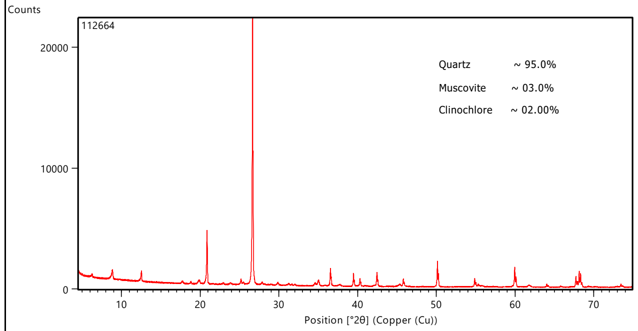

Counts
112659
Clinochlore ~ 70.00%
Quartz ~ 30.00%
Position [°2θ] (Copper (Cu))

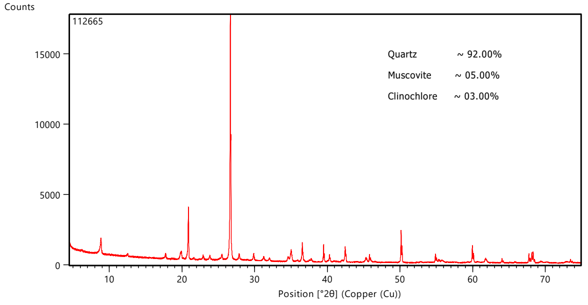

Counts
112660
Quartz ~ 85.00%
Clinochlore ~ 08.00%
Pyrite ~ 04.00%
Galena ~ 03.00%
Position [°2θ] (Copper (Cu))

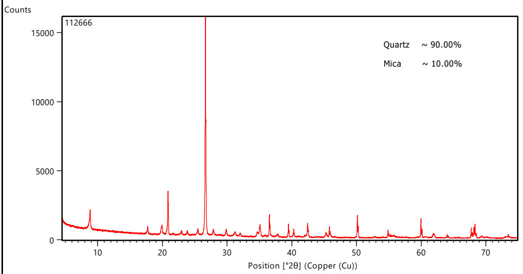

Counts
112661
Quartz ~ 98.00%
Pyrite ~ 02.00%
Position [°2θ] (Copper (Cu))

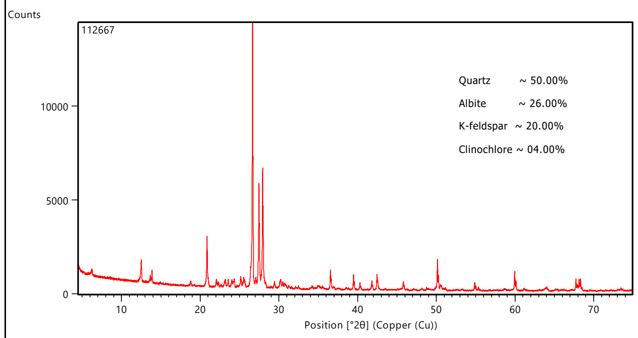

Counts
112662
Muscovite
Position [°2θ] (Copper (Cu))

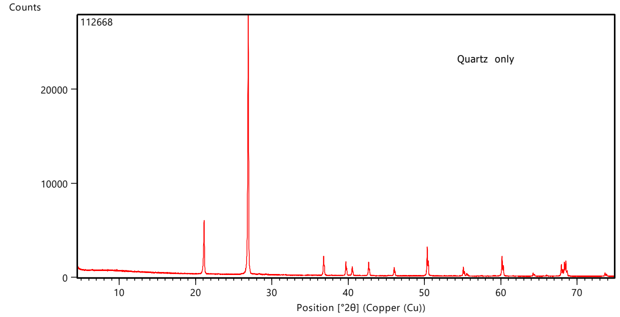

Counts
112663
Muscovite ~ 75.00%
Clinochlore ~ 25.00%
Position [°2θ] (Copper (Cu))

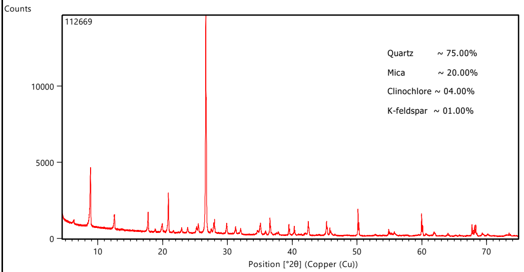

Counts
112664
Quartz ~ 95.0%
Muscovite ~ 03.0%
Clinochlore ~ 02.00%
Position [°2θ] (Copper (Cu))

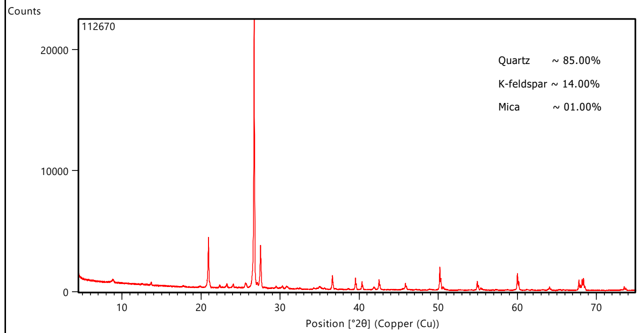

Counts
112665
Quartz ~ 92.00%
Muscovite ~ 05.00%
Clinochlore ~ 03.00%
Position [°2θ] (Copper (Cu))


Counts
112666
Quartz ~ 90.00%
Mica ~ 10.00%
Position [°2θ] (Copper (Cu))


Counts
112667
Quartz ~ 50.00%
Albite ~ 26.00%
K-feldspar ~ 20.00%
Clinochlore ~ 04.00%
Position [°2θ] (Copper (Cu))


Counts
112668
Quartz only
Position [°2θ] (Copper (Cu))


Counts
112669
Quartz ~ 75.00%
Mica ~ 20.00%
Clinochlore ~ 04.00%
K-feldspar ~ 01.00%
Position [°2θ] (Copper (Cu))


Counts
112670
Quartz ~ 85.00%
K-feldspar ~ 14.00%
Mica ~ 01.00%
Position [°2θ] (Copper (Cu))

Annexure XXIII_ EPMA Data of Subsurface Samples

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	NiO	ZnO	BaO	Total
112507	K-Feldspar	0.12	65.15	18.06	0	0	16.42	0	0.02	0.06	0	0	0	0	0.14	99.98
112507	Chlorite	0.06	29.27	20.2	13.85	0	0.27	0.05	0	24.01	0.21	0.51	0.04	0	0	88.47
112507	Chlorite	0.05	30.26	20.17	13.52	0	0.57	0.05	0.03	22.53	0.28	0.56	0.13	0	0	88.17
112507	Chlorite	0.04	29.04	21.68	13.02	0	0.66	0.04	0.03	22.35	0.17	0.94	0.01	0	0.01	87.98
112507	Apatite	0.01	0.11	0	0	42.51	0	56.46	0	0.07	0	0.03	0	0.18	0	99.36
112507	Apatite	0.05	0.12	0.01	0	42.82	0.18	56.25	0	0.07	0.01	0.28	0	0.18	0	99.97
112507	Rutile	0.01	0.08	0.01	0	0	0.05	0	98.68	0.3	0	0.06	0	0	0.57	99.75

ID	Minerals	S	Fe	Co	Ni	Zn	As	Sb	Ag	Mo	Pb	Bi	Te	Ba	Ta	Au	Sr	Cu	Total
112507	Chalcopyrite	34.73	29.94	0.1	0	0	0.1	0	0.07	0	0	0	0	0	0.03	0	0	35.22	100.2
112507	Bornite	27.18	11.64	0	0.01	0	0	0	0	0	0	0.1	0.01	0.11	0	0	0	60.77	99.82
112507	Bornite	28.05	3.43	0	0	0.1	0	0	0	0.02	0	0	0	0.14	0	0	0.01	70.24	101.98
112507	Pyrite	52.75	44.42	1.84	0.01	0	0.03	0	0	0	0	0.13	0.02	0	0	0	0	0	99.19
112507	Chalcopyrite	34.69	29.77	0	0	0.04	0.12	0.01	0	0	0	0.18	0.03	0	0	0	0	34.56	99.4
112507	Pyrite	54.57	45.93	0.11	0	0.03	0.08	0	0	0	0	0.08	0	0	0	0	0	0	100.8
112507	Bornite	26.2	10.85	0.04	0.02	0	0	0	0	0.11	0	0	0	0.12	0	0	0	63.14	100.48
112507	Chalcopyrite	34.49	29.68	0.01	0	0.09	0	0	0	0	0	0.16	0.01	0.01	0	0	0	35.27	99.73
112507	Bornite	25.95	11.32	0.12	0	0.05	0	0	0.05	0.07	0	0.03	0	0.21	0	0	0	62.46	100.27
112543	Pyrite	53.48	46.09	0.09	0	0	0.26	0	0	0.17	0	0.1	0	0	0	0	0	0.12	100.31
112543	Pyrite	53.36	46.28	0	0	0.03	0.13	0	0	0	0	0	0	0.01	0	0	0	0	99.81

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	NiO	ZnO	BaO	Total
112509	Chlorite	0.05	25.39	19.26	13.07	0	0.06	0.07	0	27.13	0.11	0.41	0.02	0.41	0	85.98
112509	Apatite	0.1	0.05	0.02	0.06	42.28	0.02	56.6	0.07	0.61	0.02	0.22	0	0.12	0	100.16
112509	Chlorite	0.03	26.18	18.74	12.72	0	0.09	0.06	0.05	27.76	0.04	0.54	0	0.21	0	86.41
112509	Rutile	0.02	0.32	0.14	0	0.1	0.01	0.73	96.63	0.98	0	0.06	0.02	0	0.46	99.46

ID	Minerals	S	Fe	Co	Ni	Zn	As	Sb	Ag	Mo	Pb	Bi	Te	Ba	Ta	Au	Sr	Cu	Total
112509	Chalcopyrite	34.53	29.17	0.04	0	0	0	0.02	0	0	0	0	0	0.06	0	0	0	34.78	98.6
112509	Chalcopyrite	34.65	29.55	0.05	0	0	0.08	0	0	0	0	0.07	0	0	0	0	0	34.97	99.38
112509	Chalcopyrite	34.76	29.78	0	0	0	0	0	0	0	0	0	0	0.05	0	0	0	34.43	99.03
112509	Bornite	25.88	10.82	0.01	0.02	0.21	0.02	0	0.05	0.06	0	0.2	0	0.07	0	0	0	61.65	99
112509	Bornite	25.72	10.15	0	0	0	0	0	0.08	0.15	0	0.02	0	0.07	0	0	0	63.62	99.8

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	NiO	ZnO	BaO	Total
112543	Chlorite	0	28.29	18.24	19.09	0	0.02	0.07	0.03	19.65	0.07	1.12	0	0.15	0.02	86.76
112543	K-Feldspar	0.11	63.63	18.51	0.01	0	16.5	0	0	0.19	0	0.11	0	0.24	0.5	99.81
112543	Apatite	0	0.71	0.14	0.16	42.24	0.03	56.32	0	0.56	0	0.24	0.04	0	0	100.43

ID	Minerals	Na2O	SiO2	Al2O3	MgO	P2O5	K2O	CaO	TiO2	FeO	Cr2O3	MnO	NiO	ZnO	BaO	Total
112534	Chlorite	0.04	25.69	16.48	9.67	0	0.03	0.01	0	34.62	0	1.2	0	0.12	0	87.86
112534	Chlorite	0	25.65	16.98	10.43	0	0.02	0.09	0	33.3	0.02	1.49	0	0	0	88
112534	Chlorite	0.01	26.39	18.94	15.39	0	0.03	0.03	0	26.38	0	0.26	0.01	0	0	87.45
112534	Muscovite	0.08	48.42	30.28	0.16	0	10.59	0	0.13	4.71	0	0.05	0	0	0	94.43
112534	K-Feldspar	0.12	63.76	17.55	0	0	16.89	0	0	0.04	0.07	0	0.04	0.02	0	98.5
112534	Chlorite	0.05	21.84	20.73	1.57	0	0.02	0.02	0.02	42.82	0.04	2.3	0	0	0	89.42
112534	K-Feldspar	0.17	65.19	18	0	0	16.9	0	0	0.13	0.02	0	0	0	0.14	100.55

ID	Minerals	S	Fe	Co	Ni	Zn	As	Sb	Ag	Mo	Pb	Bi	Te	Ba	Ta	Au	Sr	Cu	Total
112534	Galena	13.57	0	0	0	0.14	0	0.03	0.31	0	84.98	1.77	0.02	0	0	0	0.03	0	100.85