Proposal for

Regional mineral targeting in parts of Lalitpur and Jhansi districts of Uttar Pradesh and Shivpuri and Tikamgarh districts of Madhya Pradesh

Geovale Services Pvt. Ltd.

Earth System Science for sustainable Development

Contents

Summary of the Block for the Regional Mineral Targeting (RMT)

GENERAL INFORMATION ABOUT THE BLOCK

	Features	Details
	Block ID	
	Exploration Agency	Geovale Services Private Limited
	Commodity	REE/RM/Base metal
	Mineral Belt	Bundelkhand craton
	Completion Period with entire Time schedule to complete the project	24 months
	Objectives	(i) To target for mineralization potential for Base metal (Cu, Mo, Au) in and around parts of Lalitpur and Jhansi districts of Uttar Pradesh and Shivpuri and Tikamgarh districts of Madhya Pradesh area. ii)To define the nature of mineralization (iii) To recommend G4/G3 exploration blocks.
	Whether the work will be carried out by the proposed agency or through outsourcing and details thereof. Components to be outsourced and name of the outsource agency	The exploration will primarily be carried out by the proposed agency. Some elements of the exploration program like sample assay, drilling etc. will be outsourced (the details given in the exploration plan). The name of outsourced agencies and the components to be outsourced will be decided based upon the results from early stages of exploration.
	Name/ Number of Geoscientists	10 Geoscientists including PC, TAE, Project Geologist/Geophysicists.

	Features	Details description of the Block
	Expected Field days (Geology) Geological Party Days	
1.	**Location**	
	Latitude (N), Longitude (E)	Point: A — Latitude: 24°15'00.0" E — Longitude: 78°15'00.0 N Point: B — Latitude: 24°15'00.0" E — Longitude: 78°23'46.0" N Point: C — Latitude: 25°08'35.0 E — Longitude: 78°23'46.0" N Point: D — Latitude: 25°10'49.0 E — Longitude: 78°34'27.0" N Point: E — Latitude: 24°15'00.0" E — Longitude: 78°34'27.0" N Point: F — Latitude: 24°15'00.0" E — Longitude: 78°40'52.0" N Point: G — Latitude: 25°00'00.0" E — Longitude: 78°40'52.0" N Point: H — Latitude: 25°00'00.0" E — Longitude: 78°15'00.0" N (Plate 1)
	Villages	Talbehat, Pura Kalan, Hingara
	Tehsil/ Taluk	Lalitpur, Jhansi, Shivpuri and Tikamgarh
	District	Lalitpur, Jhansi, Shivpuri and Tikamgarh (Plate 1)
	State	Uttar Pradesh, Madhya Pradesh (Plate 1)
2.	**Area (hectares/ square kilometers)**	
	Block Area	1000 square kilometers
	Forest Area	Approximately 105 sq. km. (Plate 2)
	Government Land Area	Not known
	Private Land Area	Not known
3.	**Accessibility**	
	Nearest Rail Head	Talbehat Junction
	Road	NH 44 (Plate 3)

	Airport	Gwalior Airport, Raja Bhoj International Airport
4.	**Hydrography**	
	Local Surface Drainage Pattern (Channels)	Dendritic
	Rivers/ Streams	Betwa, Matatila Dam (water body)
5.	**Climate**	
	Mean Annual Rainfall	170 cm/yr in hilly areas to 84 cm/yr in Western U.P.
	Temperatures (December) (Minimum) Temperatures (June) (Maximum)	Minimum- 3 to 4 °C Maximum- 43 to 45 °C
6.	**Topography**	
	Toposheet Number	54K/08, 54K/12 (Plate 4)
	Morphology of the Area	This area is generally undulatory with inselbergs and long serrated ridges.
7	**Availability of baseline geoscience data**	
	Geological Map (1:50K/ 25K)	Available
	Geochemical Map	Available
	Geophysical Map (Aeromagnetic, ground geophysical, Regional as well as local scale GP maps)	Ground geophysical Available

8.	**Justification for taking up reconnaissance survey / Regional Exploration**	A robust, multi-faceted justification supports the proposed Regional Mineral Targeting (RMT) in the RMT-05 block. The project is strategically aligned with national exploration priorities and builds directly upon proven regional prospectivity and existing operational success. **1. Strategic Importance and Government Mandate** The RMT-05 block was awarded to Geovale Services by the Ministry of Mines on 4th March 2024, following a competitive expression of interest process initiated by the National Mineral Exploration Trust (NMET). Crucially, the Ministry identified this block as a high-priority target area specifically for its potential to host **Rare Earth Element (REE) and Rare Metal (RM) mineralization**. **2. Proven Regional Mineral Endowment** The block's prospectivity is firmly established by previous work and regional geological context: • The area is situated in the Bundelkhand Craton, which is characterized by multiple phases of granitic rocks, subvolcanic to volcanic suites, and numerous quartz reefs—a geological setting highly permissive for a variety of mineral systems. • Work by the Geological Survey of India (GSI) has confirmed the region's fertility, including a successful REE exploration project approximately 40 km south of the RMT block, which was initiated based on anomalous geochemical data. • Sporadic historical reports confirm the presence of gold (Au), molybdenum (Mo), and copper (Cu) mineralization within and adjacent to the block itself. **3. Direct Synergy with Ongoing Successful Exploration** A key advantage of this program is its synergy with Geovale's existing operations.

		• The RMT-05 block is a direct geological extension of the terrain hosting two adjacent NMET-funded G4 projects for porphyry-style Cu-Mo-Au exploration (in the Mailar and Burogaon areas) that are currently being successfully executed by Geovale. • This ongoing work has already identified potential target zones for base metals, providing invaluable geological insights and a running start for the proposed RMT program. **4. Synthesized Justification** In summary, the RMT-05 block is a high-priority exploration area justified by the confluence of a government mandate, favorable geology, and confirmed regional mineralization. The block's status as a direct extension of Geovale's ongoing G4 projects provides a unique operational and technical advantage. This program is therefore strongly positioned to delineate new G4/G3 exploration blocks for its primary targets: **porphyry-style Cu-Mo-Au, epithermal Au-Ag, and evolved granite-hosted REE/RM mineralization**.

I. Block Summary

Physiography

The RMT project area is situated in the southernmost part of Uttar Pradesh and extends into northern Madhya Pradesh. The terrain is generally undulating, with elevations ranging from 270 m to 380 m above mean sea level (MSL). The Betwa River is the principal drainage system, flowing in a south-to-north direction through the central part of the block. The drainage pattern is predominantly dendritic to sub-parallel. The Matatila Reservoir, a major water body in the eastern part of the block, has a surface area of approximately 20 km^2.

Background Geology

Regional Geology

The RMT block is located within the Bundelkhand Craton, an Archean shield covering approximately 29,000 km^2. The craton is primarily composed of the following lithological successions (Basu, 1986; Pati, 2020):

- **Basement Gneisses:** Older Tonalite–Trondhjemite–Granodiorite (TTG) gneisses (3.4–2.5 Ga) host minor supracrustal sequences, including amphibolites, Banded Iron Formations (BIFs), meta-ultramafic rocks, and calc-silicate rocks.
- **Granite Intrusions:** Multiple episodes of granite emplacement (2.58–1.9 Ga) resulted in intrusions of monzogranite, syenogranite, and high-potash anatectic granites.
- **Giant Quartz Veins (GQVs):** Prominent NW-SE trending Giant Quartz Veins (GQVs), dated at approximately 2.0–1.4 Ga, represent major structural features in the craton.
- **Mafic Dyke Swarm:** A younger mafic dyke swarm (1.9–1.1 Ga) also trends predominantly NW-SE.

Updated Geology of the Block and Adjoining Areas

Recent exploration by Geovale in the adjacent Mailar G4 block has provided significant new insights:

- Presence of large mappable tracts of felsic to intermediate volcanic rock association along with the Bundelkhand Granitiods (BG). It is likely that the BG and the volcanic rock association are genetically related and forms the host rocks for porphyry copper related mineralization.

- Both the BG and the volcanic rock association hosts porphyry copper system related base metal mineralization along with systematic alteration mineralogy patterns characteristics of porphyry copper mineral systems.
- There are many discrete sulphide-rich diorite stocks closely associated with the BG and the volcanic rock association.
- There are some high-Mg mafic dikes present in the BG terrain that might represent some fundamental faults.
- GQVs (Giant Quartz Veins) that are very conspicuously present in the western part of the Bundelkhand craton seems to be barren of mineralization even though many smaller quartz veins (up to few km lengths and striking mostly NW-SE) represent epigenetic mineralization related to the porphyry copper mineralization.

Based on these findings, Geovale proposes the following updated geological sequence for the region (this regional geology will be validated for the block):

Legacy Geological Sequence (Bundelkhand Craton)	**Updated Geological Sequence (Geovale Services)**
Quartz reefs, veins, and dolerite dykes	Younger alkaline ultramafic intrusive (Kimberlite, Lamprophyre)
Bundelkhand Granitoids	Mafic extrusion (High-Mg basaltic flows)
Basement TTG	Later granitoid intrusions (Medium-grained granite, Syenite)
	Diorite intrusive
	Sub-aerial felsic-intermediate extrusions (Rhyolite, Andesite, Rhyodacite)
	Main Bundelkhand Granitoid intrusions (Coarse to medium-grained)
	Basement Tonalite-Trondhjemite-Granodiorite (TTG)

II. Previous Exploration in the Block and Adjoining Areas

Multiple investigations by the Geological Survey of India (GSI) have confirmed the mineral potential of the region.

- **REE and Basemetal (GSI, Tank and Kumari, 2019):** An investigation in the Pichor block (Shivpuri district, MP), located ~5 km west of the RMT block, reported elevated Cu, Pb, Zn, Ni, and Cr values near quartz reef–granite contacts. Trench samples of granite yielded Zn up to 440 ppm and Cu up to 175 ppm. Total REE (TREE) values reached up to 574 ppm in granite and 2092 ppm in soil samples, with REE-bearing minerals like monazite, allanite, and thorite confirmed in granite.
- **Base Metals and REEs (GSI, Rai et al., 2021):** A GSI RMT project ~30 km south of the proposed RMT-block identified granite bedrock samples with >1000 ppm Cu (max 2054 ppm) and regolith TREE values up to 1778 ppm. This work led to recommendations for detailed exploration near Narayanpur–Lakhaura and Ramnagar–Gangora
- **REEs and Rare Metals (GSI, Gupta and Moohanty, 2024):** A reconnaissance survey in the Ramnagar–Gangora area, Lalitpur (~ 5 km south-east of the block) documented anomalous REE values in both regolith (up to 1734 ppm) and granite bedrock (up to 868 ppm).
- **Base Metal Investigation (GSI, Singh and Singh, 1984):** A survey from Talbehat to Jamalpur, covering parts of the proposed RMT block, reported malachite staining and chalcopyrite occurrences. Copper values up to 700 ppm in dacite porphyry and 0.30% in quartz reefs were noted near Bijapura. A 6 km long shear zone was delineated, though drilling yielded low copper values.
- **Base Metal Investigation (GSI, Abser et.al., 1998):** Work near Harpura–Bar (~33 km northeast of the block) identified systematic alteration zones characteristic of porphyry copper systems, with copper grades increasing at depth.
- **Other Occurrences:** Sporadic occurrences of gold and molybdenite have been reported near Talbehat and Babina (Pati et al., 1994). Scheelite (a tungsten ore) was identified in stream sediments from the Bamaurisar and Targawan areas (Singh and Singh, 1986).

Lamprophyres have been reported near Jagatpur, within the proposed block (Basu 1986, 1971; Mukherjee, 1971) (Fig. 1).

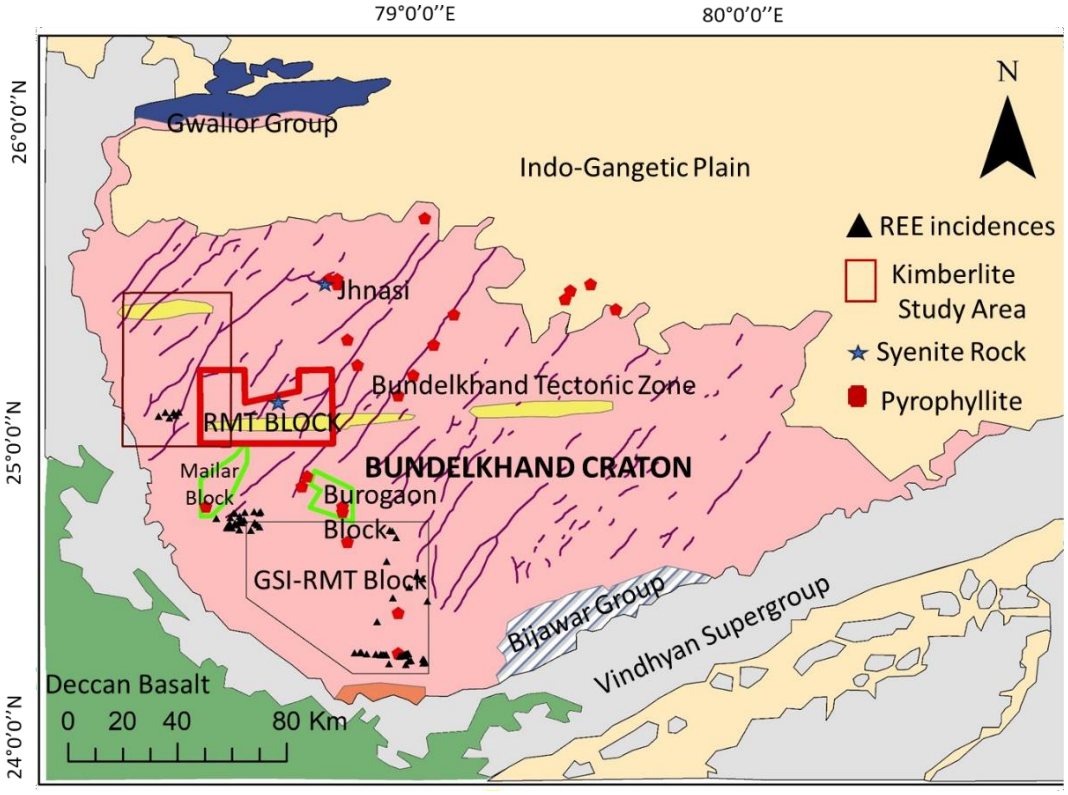


Figure 1: Geological map of Bundelkhand Craton shows RMT proposed blocks, and other NMET-blocks (previously taken) and incidences of REE, kimberlite study area, pyrophyllite, and syenite rocks.

III. Prospectivity analyses of the RMT block in a Mineral System Analyses framework

The convergence of geological, geochemical, and structural evidence within the RMT block and its surroundings indicates the potential for multiple, distinct mineral systems.

1. Porphyry Cu–Mo–(Au) System

The applicability of a porphyry copper model is strongly supported by widespread, systematic alteration zones (potassic, phyllic, argillic) identified in Geovale's adjacent Mailar project. The

presence of Early Halo Type (EHT), A-Vein Type (AVT), and epithermal quartz mineralization aligns with classic porphyry deposit zonation. This is corroborated by previous GSI reports documenting copper mineralization associated with quartz reefs and pyrophyllite-diaspore alteration zones (a feature of advanced argillic alteration in lithocaps) in and around the RMT block (Singh and Singh 1986; Abser et al., 1998).

2. Granite-Hosted Rare Metal & REE System

The block is highly prospective for REE-RM mineralization. GSI investigations within a 5 km radius have confirmed elevated TREE concentrations (up to 2092 ppm) and the presence of REE-bearing minerals (zircon, monazite, allanite) in granites (Tank and Kumari, 2019). Broader regional studies reinforce this, with significant REE values in both bedrock and regolith across the Bundelkhand Granitoid Complex. Such systems are typically associated with a low degree of partial melting followed by high-degree fractionation, which concentrates incompatible elements. While porphyry and REE systems often form in different tectonic settings, their spatial association has been noted in some metallogenic provinces, potentially resulting from post-orogenic granitic magmatism following porphyry emplacement. However, there are few reports of spatial association of these two disparate mineral systems (for example, some deposits in the Qinling metallogenic province in China; Huang et al., 2023). The association of REE mineralization with porphyry copper mineral system is due to post orogenic granitic magmatism after porphyry copper mineralization.

3. Lamprophyre–Kimberlite-Hosted Rare Metal Mineralization

The potential for this system is indicated by reports of lamprophyres within the RMT block (near Talbehat, Jaharghat area, Basu, 1971). While a GSI stream sediment study did not find kimberlites, it provides a valuable geochemical baseline (Singha & Rajak, 2009). Lamprophyres and kimberlites often share tectonic and magmatic environments, justifying the area as a target for mantle-derived intrusive bodies.

4. Tungsten Mineralization (Scheelite)

The documented presence of scheelite in stream sediments within the Lalitpur district suggests a tungsten-enriched source rock in the catchment area (Singh and Singh, 1986). The geological

setting of the RMT block, characterized by felsic intrusive, extensive quartz veining, and evidence of hydrothermal activity, is permissive for skarn-type or vein-hosted tungsten mineralization.

5. Pegmatite-Hosted Lithium Mineralization

Reports of pegmatite and aplite veins near Pawa and Sar Kheri, composed of coarse-grained quartz, feldspar, and biotite, are highly prospective for lithium (Bau 1971; Mukherjee, 1971). These pegmatites are associated with evolved granitic systems where incompatible elements like lithium become concentrated during the final stages of magma differentiation. Their occurrence is consistent with the geological setting of lithium-caesium-tantalum (LCT) type pegmatite deposits globally, making this a valid exploration target.

6. Diorite-Hosted Refractory Gold Mineralization

The recent discovery of sulphide-rich diorite bodies by Geovale near Pipri and Sirsee, in close association with felsic volcanic rocks, points to a magmatic-hydrothermal system capable of hosting refractory gold. In such systems, fine-grained gold is encapsulated within sulphide minerals like pyrite and arsenopyrite. Historical reports of diorite within the RMT block further support the regional presence of these potentially fertile intrusive rocks.

7. Epithermal Quartz Vein/Reef-Hosted Mineralization

The region is characterized by numerous quartz veins and reefs, some exceeding 10 km in length, including a significant NW-SE trending Giant Quartz Vein (GQV). These features are definitive evidence of large-scale, late-stage hydrothermal fluid activity. The documented association of these veins with Cu-Mo-Ag mineralization confirms their genetic link to a metal-bearing magmatic-hydrothermal system, consistent with epithermal or vein-type deposits often found distal to porphyry canters.

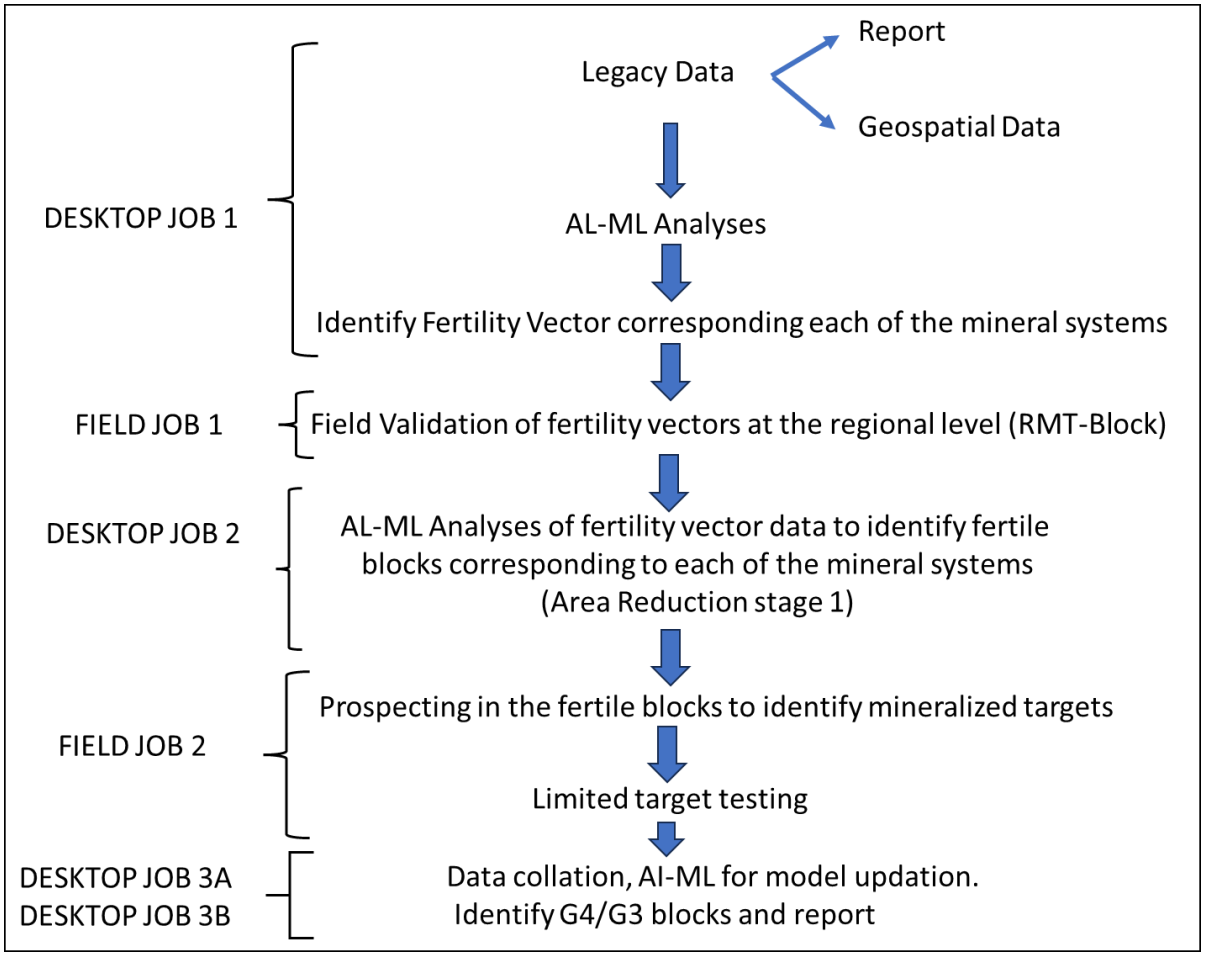
IV. Knowledge gaps prospectivity analyses in a Mineral System Framework

Despite previous work, significant knowledge gaps hinder a complete understanding of the region's mineral potential.

- **Limited System-Based Drilling:** Past drilling was often based on geophysical anomalies alone, without integrating key geological vectors like alteration zonation or fluid pathways, which are critical for targeting porphyry systems.
- **Uncharacterized Alteration:** While advanced argillic alteration has been noted, there has been no systematic mapping or mineralogical characterization to define temperature gradients and fluid chemistry, which are essential for vectoring towards a mineralized core.
- **Poorly Constrained Tectonics:** The link between the subduction-related geodynamic setting and mineralization is not well understood, limiting regional-scale predictive modeling.
- **Lack of Geochronology:** The ages of the Giant Quartz Veins and their correlation with specific intrusive events are poorly constrained, preventing the establishment of a robust timeline for mineralization.
- **Regolith Cover:** Extensive regolith cover obscures bedrock geology across approximately two-thirds of the area, potentially masking critical alteration zones, structures, and fertility indicators.
- **Insufficient Subsurface Data:** A lack of systematic shallow drilling, pitting, or trenching has limited the ability to sample bedrock and prioritize targets under cover.
- **Unassessed Granitoid Fertility:** Detailed geochemical and petrological studies are needed to differentiate between barren and mineral-fertile granitoid phases.

V. Exploration Workflow and Approach

The summarised exploration workflow in the Bundelkhand RMT area is given in Figure 1 below.



The exploration program will follow a systematic, multi-stage workflow designed to progressively de-risk the project and narrow the search area from a regional scale to specific drill-ready targets. This iterative approach alternates between desktop analysis and field investigations, ensuring that each phase of work is built upon a robust, data-driven foundation. The workflow is divided into five main stages.

VI. Planned Methodology

Stage 1: Regional Data Synthesis and Vector Identification (Desktop Job 1)

This initial stage focuses on building a comprehensive regional model from all available information to identify the key ingredients for mineralization.

- **Data Compilation:** The workflow begins by compiling all **legacy data**, including historical GSI reports, academic literature, and geological maps, alongside modern **geospatial data** such as satellite imagery (Landsat, ASTER), and regional geophysical datasets.
- **AI/ML Analysis:** These diverse datasets will be integrated into a unified GIS platform and processed using **Artificial Intelligence (AI) and Machine Learning (ML) algorithms**.
- **Fertility Vector Identification:** The primary goal of this stage is to use the AI/ML analysis to identify initial **fertility vectors** corresponding to each of the potential mineral systems. These vectors are measurable features that indicate a geological environment is conducive to mineralization. Examples include:
    - Specific geochemical ratios (Sr/Y, La/Yb) for **porphyry systems**.
    - Radiometric anomalies for **REE-syenite systems**.
    - Key structural intersections for **epithermal or kimberlite systems**.

Stage 2: Regional Field Validation (Field Job 1)

This stage involves targeted fieldwork to confirm that the conceptual fertility vectors identified in the desktop study are present on the ground.

- **Ground-Truthing:** Field teams will conduct reconnaissance-level geological mapping and sampling across the entire RMT block to **validate the fertility vectors at a regional level**. This work will confirm, for instance, that a specific granite phase identified from geochemistry does indeed show field evidence of being a potential source rock, or that a lineament identified from satellite data corresponds to a physical shear zone.

Stage 3: Fertile Block Delineation (Desktop Job 2)

Data from the regional field validation is integrated back into the model to refine the areas of interest, marking the first major step in reducing the search space.

- **Refined AI/ML Analysis:** The newly acquired field data is used to train and refine the AI/ML models.
- **Area Reduction (Stage 1):** The analysis of this validated data allows for the delineation of discrete **"fertile blocks"**—smaller, high-priority areas within the larger RMT block that show the strongest evidence for hosting one or more mineral systems. This crucial area reduction step allows subsequent, more expensive exploration work to be focused efficiently.

Stage 4: Prospecting and Target Testing (Field Job 2)

With the search area narrowed to fertile blocks, this stage involves more intensive, prospect-scale fieldwork to define specific targets.

- **Prospecting within Fertile Blocks:** Detailed geological mapping, grid-based geochemical sampling (soil, rock), and ground geophysical surveys (e.g., Induced Polarization for disseminated sulfides) will be conducted within the fertile blocks to **identify specific mineralized targets**.
- **Limited Target Testing:** The most promising targets identified through prospecting will undergo **limited physical testing**. This may include digging trenches or pits to expose bedrock and, where warranted, drilling a small number of shallow scout boreholes to confirm the presence and nature of mineralization at depth.

Stage 5: Final Model Updation and G4/G3 Block Identification (Desktop Job 3)

The final stage involves collating all data from the project to produce the final deliverables.

- **Data Collation and Model Updation:** All data from the prospecting and target testing phases are compiled and used for a final **updation of the AI-ML model**. This creates a highly refined, data-rich prospectivity model for the project area.
- **Identification of G4/G3 Blocks and Reporting:** The final model is used to precisely delineate and recommend specific **G4/G3 exploration blocks** for further, more advanced stages of exploration. A comprehensive final report detailing the project's workflow, findings, and recommendations will be prepared.

The exploration program will deploy a suite of modern tools in a phased, iterative workflow. **Artificial Intelligence (AI) and Machine Learning (ML)** serve as the predictive engine throughout this process, with the model being continuously updated with new field data to refine targeting and increase the probability of success.

Stage 1 & 2: Predictive Modeling and Regional Validation (Desktop Job 1 & Field Job 1)

This initial phase uses AI/ML to build a baseline predictive model from existing data, which is then tested on the ground.

- **Desktop Tools (AI-ML Driven):** The workflow begins by training **AI/ML algorithms** on all legacy and geospatial data.
    - This initial model analyses patterns in remote sensing data, regional geophysics, and structural geology to **predict and identify initial fertility vectors** for each mineral system. For example, the model might predict areas with a high probability of hosting **Porphyry** systems by correlating specific alteration signatures with certain structural settings.
- **Field Validation Tools:** Field teams conduct reconnaissance mapping, regional geochemical sampling, and specialized surveys (e.g., **indicator mineral sampling** for **Kimberlites**) to **validate the AI-predicted fertility vectors** on the ground. This step confirms whether the model's predictions match the real-world geology.

Stage 3 & 4: Model Retraining and Prospect-Scale Targeting (Desktop Job 2 & Field Job 2)

The new data from field validation is used to "teach" and improve the AI/ML model, allowing it to delineate high-priority areas with greater accuracy.

- **Desktop Tools (AI-ML Refinement):** The field-validated data is fed back into the system to **retrain and update the AI/ML model**.
    - This improved model then analyses the validated fertility vector data to

predict and delineate specific "fertile blocks". This is a crucial **Area Reduction** step, driven by the machine's enhanced understanding of the local geology.

- **Field Prospecting Tools:** Intensive fieldwork is now focused *only* within these AI-delineated fertile blocks.

- This includes detailed grid-based geochemistry, ground geophysics like **EM** (for **Porphyry/Diorite Au**) and **magnetics** (for **Skarns**), and initial **drilling** on the highest-confidence targets.

Stage 5: Final Model Updation and G4/G3 Block Definition (Integrated with Desktop Job 3)

The high-density data from prospect-scale fieldwork allows for the final and most powerful iteration of the predictive model.

- **Laboratory Tools:** Samples from drilling and prospecting undergo detailed analysis (**Petrography**, **EPMA**, **XRD**, **Fire Assay**, etc.) to provide quantitative data on mineralization and alteration.
- **Final AI-ML Model Updation:** This rich laboratory and field data is used for a **final update to the AI-ML model**.
  - This mature, highly trained model can now generate a detailed, property-wide mineral prospectivity map with a high degree of confidence. It uses this final predictive understanding to **identify and delineate the final G4/G3 blocks** recommended for advanced exploration.

Summary Table (Applicable Exploration Tools for RMT)

Mineral System	Field Tools	Desktop Tools	Laboratory Tools
Porphyry Cu–Mo–Au	Mapping, geochemistry, IP, UV, drilling.	Remote sensing, geophysics modelling, geochemical diagrams.	Petrography, EPMA, XRD, fluid inclusion, isotopes.
Syenite–REE	Mapping, heavy mineral, geochemistry, radiometric analyses.	Remote sensing, radiation GIS, 3D-modelling.	EPMA, heavy miner., isotopes, rock geochemistry.
Lamprophyre/Kimberlite	Indicator mineral sampling, geochemistry, geophysics.	Structural lineaments, aero survey modelling.	EPMA, Indicator mineral analysis.

Mineral System	Field Tools	Desktop Tools	Laboratory Tools
Scheelite Skarns	Mapping, UV, geochemistry, gravity/magnetic	Geophysics inversion, GIS.	EPMA, petrography, fluid inclusions, geochronology.
Pegmatite Lithium	Mapping, heavy mineral analyses., geochemistry.	Remote sensing, radiometric, modelling.	EPMA, heavy miner., petrography, geochemistry.
Diorite-Au (Refractory)	Geochemistry, IP/magnetic, mapping, drilling.	GIS geochemical data analyses, 3D IP modelling.	EPMA, fire-assay, petrography, isotopes.
Epithermal Quartz-Reef/veins	Mapping, spectral tools, geochemistry, drilling.	Remote sensing, resistivity / modelling.	XRD, fluid inclusions, petrography, isotopes.

VII. Cost Sheet

A table containing the cost sheet table is given below:

Title of Project - Regional Mineral Targeting in Parts of Lalitpur and Jhansi Districts of Uttar Pradesh and Shivpuri and Tikamgarh Districts of Madhya Pradesh.
Name of the Exploration Agency - Geovale Services Pvt. Ltd.
Total Area - 1000 sq. km; **Core drilling:** Total 2500m (4 BH 400m, 6 BH 150m each);
Completion Time -24 Months, **Review: 4** months

S.N	Item of work	Unit	Rates as per NMET SoC				Remarks
			SoC-Item - Sl No.	Rates as per SOC	Quantum	Total Amount (Rs)	
1	**Geological Work**						
A	**HQ Activities**						
a	Geospatial and remote sensing work(HQ)	1 geologist/ day	1.2	10,500.00	120	1,260,000.00	
b	AI ML Work(HQ)		1.2	500,000.00	-	-	
c	Cost of interpretation in terms of	day	3.18	10,500.00	45	472,500.00	

	Geophysicist mandays (HQ)						
	Sub-Total 1					**1,732,500.00**	
	GST (18%)					**311,850.00**	
	Total (Phase 1)					**2,044,350.00**	

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XII List of Plates

Plate 1: Geological map on 1:50,000 with location index and block boundary.

Plate 2: Proposed block boundary over Land Use Land Cover

Plate 3: Accessibility map on 150,000 scale

Plate 4: Proposed block boundary over topographic map on 150,000 scale

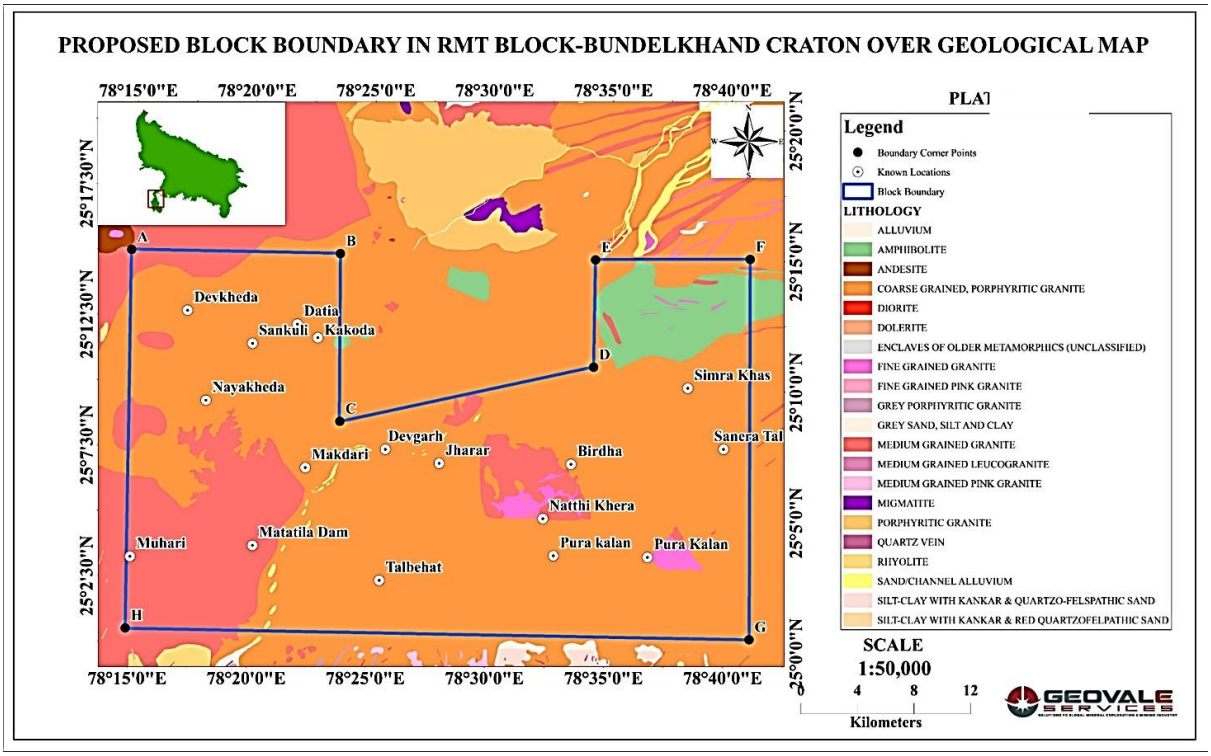

Plate 1: Geological map on 1:50,000 with location index and block boundary.

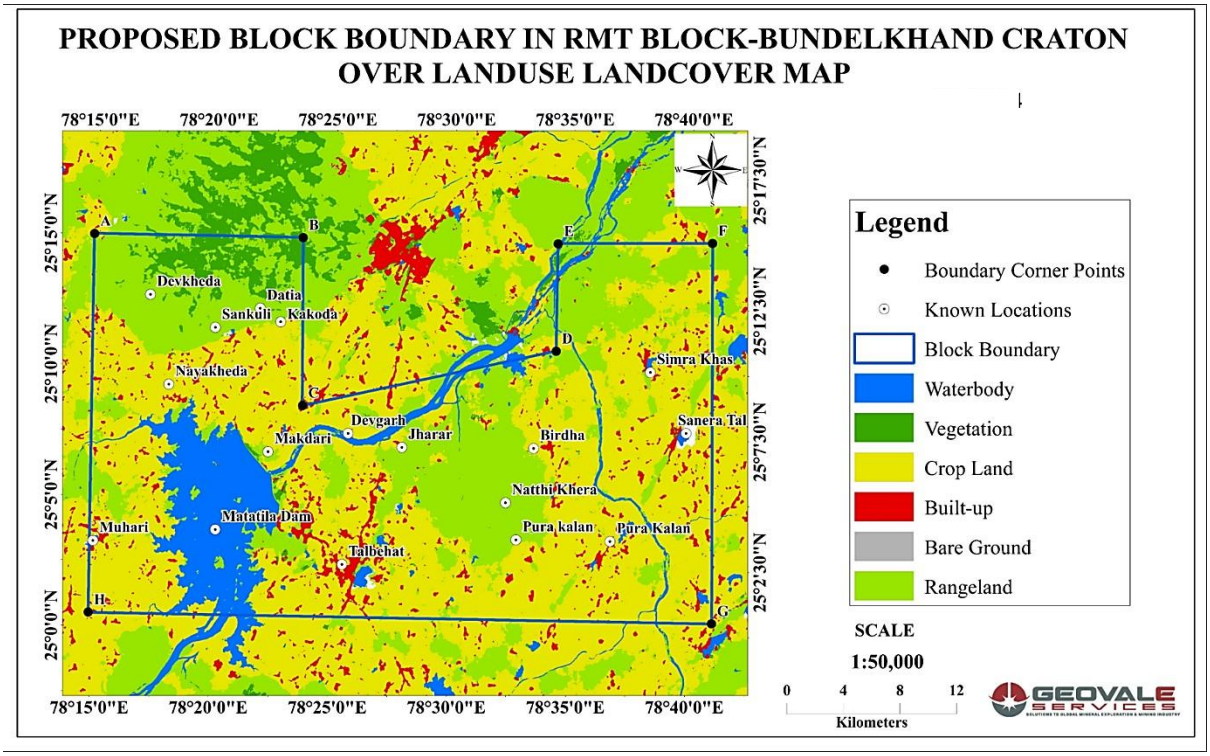

Plate 2: Proposed block boundary over Land Use Land Cover

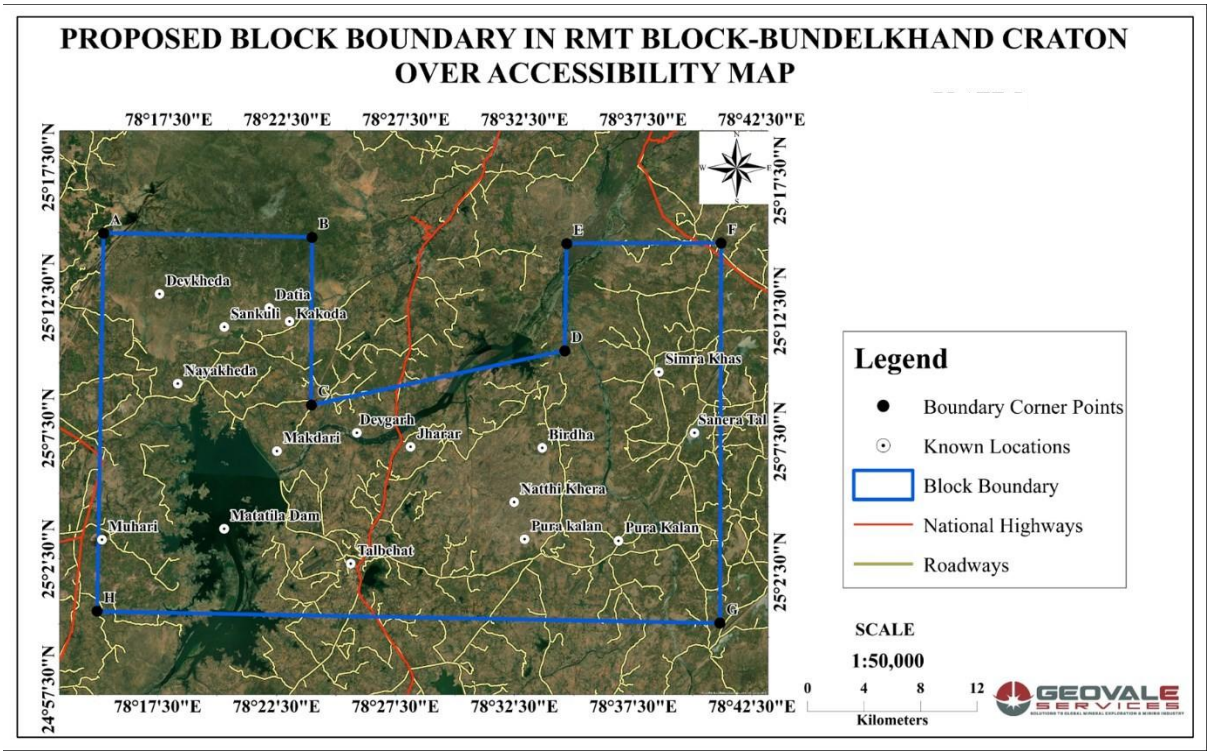

Plate 3: Accessibility map on 150,000 scale

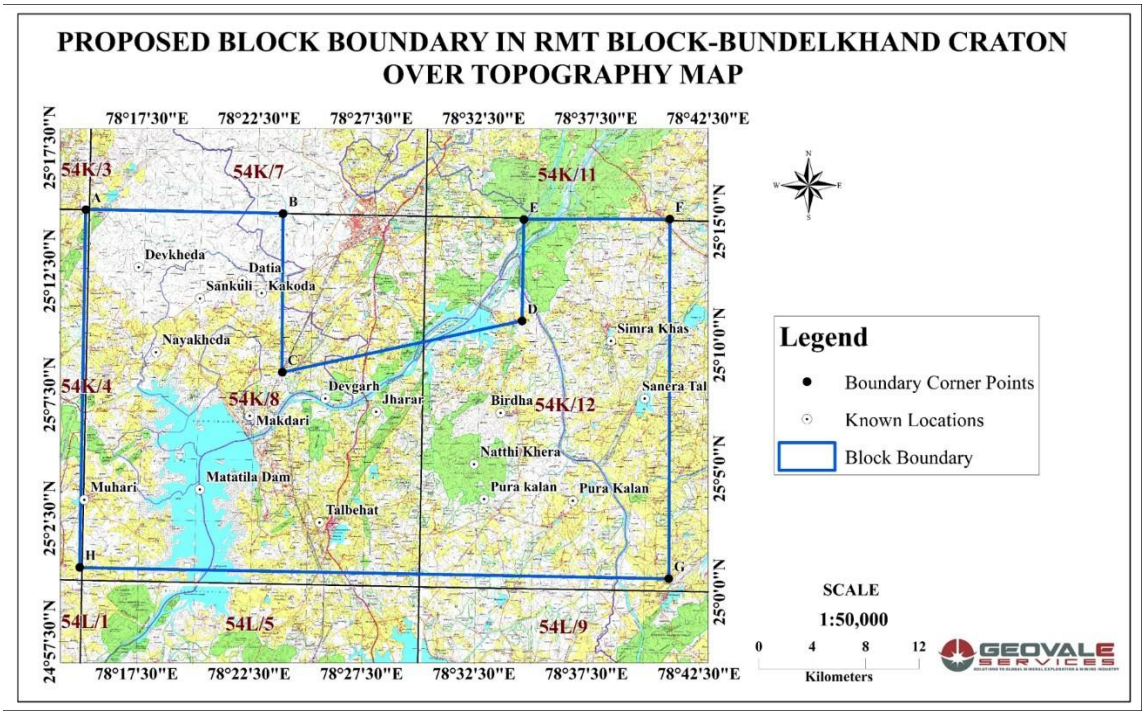

Plate 4: Proposed block boundary over topographic map on 150,000 scale