

ANNEXURE-I

Government of Odisha

Department of Steel & Mines

No. 4380 /S&M, Bhubaneswar dated the 07.05.2022

IV(Misc.)SM-39/2020

NOTIFICATION

Sub: Allotment of Bazargarh Graphite Block over an area of 64.815 Sq. km. and Lamer- Panga Graphite Block over an area of 88.838 Sq. km. in Kalahandi District for exploration by the OMECL under rule 67 of MC Rules 2016.

Whereas, Ministry of Mines, Government of India has notified the Odisha Mineral Exploration Corporation Ltd. (OMECL) under the second provision to sub-section (1) of Section -4 of the Mines & Mineral (Development & Regulation) Act, 1957 vide its Notification No. GSR-389 (E), dtd. 23/04/2018.

Whereas, the Director (Geology), OMECL vide his letter No.243/OMECL/2022 dtd. 22/03/2022 & No.245/OMECL/2022 dtd. 22/03/2022 has requested the Director of Mines to take steps to notify Lamer-Panga Graphite Block over an area of 88.838 Sq. km. and Bazargarh Graphite Block over an area of 64.815 Sq. km. respectively in Kalahandi District in its favour for carrying out exploration under NMET funding.

Whereas, the Director of Mines vide his letter No.3067/DM dated 11/04/2022 has provided the map indicating Co-ordinates & Topo sheet No. of Lamer-Panga Block and Bazargarh Block in Kalahandi District over an area of 88.838 Sq. km. and of 64.815 Sq. km. respectively received from Director (Geology) OMECL and after examining that the proposed area are free from overlapping and not covered under any Prospecting Licence or Mining Lease, has requested for allotment of the said blocks under Rule-67 of M.C. Rules, 2016 in favour of OMECL for carrying out exploration upto G 2 level of UNFC under NMET funding.

Now, therefore, after careful consideration, the State Government in exercise of the power conferred under Rule-67 of Minerals (Other than Atomic & Hydro Carbons Energy Minerals) Concession Rules, 2016 do hereby assign Lamer-Panga Graphite Block over an area of 88.838 Sq. km. and Bazargarh Graphite Block over an area of 64.815 Sq. km. in Kalahandi District to OMECL for carrying out exploration upto G 2 level of UNFC for a period of two years under NMET funding.


The details of Blocks for carrying out exploration are duly mentioned here under;



[Signature]

SI No.	Block Name with Toppo-sheet No.	District	Block area	Level of Exploration	Co-ordinates	
					Latitude	Longitude
1.	Lamer-Panga Graphite Block F44X8(64P/8) & F44X12 (64P/12)	Kalahandi	88.838 Sq.Km.	G 2	20°01'45.0506" 20°06'06.4365" 20°06'05.3207" 20°01'45.9909"	83°25'41.4924" 83°25'39.4413" 83°32'01.6832" 83°32'02.3358"
2.	Bazargarh Graphite Block F44X8(64P/8)	Kalahandi	64.815 Sq.Km.	G 2	20°11'13.7037" 20°14'35.7013" 20°14'35.3692" 20°15'00.0284" 20°15'00.7309" 20°11'10.0703"	83°16'02.8853" 83°16'03.8612" 83°17'17.0606" 83°17'16.4500" 83°21'28.4108" 83°21'29.9814"

By order of the Governor


07/05/2022
(DK Singh, IAS)

Principal Secretary to Government

Steel and Mines Department

Memo No. 4381 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to the P.S. to Hon'ble Chief Minister, Odisha/ P.S. to Hon'ble Minister, Steel & Mines, Works for kind information of Hon'ble Chief Minister, Odisha/ Hon'ble Minister, Steel & Mines, Works.

07/05/2022
Addl. Secretary to Government

Memo No. 4382 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to the P.S. to Principal Secretary, Steel & Mines Department for kind information of Principal Secretary, Steel & Mines Department.

07/05/2022
Addl. Secretary to Government

Memo No. 4383 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to the Joint Secretary, Ministry of Mines, Govt. of India, Shastri Bhawan, New Delhi for kind information and necessary action.

07/05/2022
Addl. Secretary to Government

Memo No. 4384 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to Director of Mines, Odisha, Bhubaneswar/Director of Geology, Odisha, Bhubaneswar/Deputy Director (General), GSI, Bhubaneswar/CMD MECL, Nagpur, Maharastra/M.D., OMC Ltd., Bhubaneswar/M.D., OMECL, Bhubaneswar for information and necessary action.

07/05/2022
Addl. Secretary to Government

Memo No. 4385 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to the Officer-in-charge, Gazette Cell, Odisha Government Press, Commerce and Transport (Commerce) Department, LokSeva Bhawan, Bhubaneswar for publication in the extraordinary issue of the Odisha Gazette and supply of 20 copies to this Department.

07/05/2022
Addl. Secretary to Government

Memo No. 4386 /SM Bhubaneswar dated the 07.05.2022

Copy forwarded to Head, State PMU, Directorate of Mines, Odisha for information. They are requested to take steps for uploading the same in Department website.

07/05/2022
Addl. Secretary to Government

ANNEXURE-IIA

24/7/2022-सीएल-III

भारत सरकार
कारपोरेट कार्य मंत्रालय

शास्त्री भवन, "ए" विंग, 5वाँ तल,
डा. राजेन्द्र प्रसाद रोड़,
नई दिल्ली-110001
दिनांक : 03.05.2023

To,

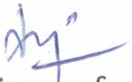
- ✓ 1. M/s IDCOL Ferro Chrome & Alloys Limited,
Jajpur Road, District Jajpur, 755 020 Odisha.
2. M/s IDCOL Kalinga Iron Works Limited,
P.O.: Matkambada, Barbil district, Keonjhar, 758036, Odisha.
3. M/s The Industrial Development Corporation of Odisha Limited
"IDCOL House" Unit -II, Ashok Nagar, Bhubaneswar 751009, Odisha.
4. M/s Odisha Mineral Exploration Corporation Limited
OMC House, Bhubaneshwar, Khordha – 751 001 Odisha.
5. M/s Odisha Mining Corporation Limited
Post Box No.34, Khurda, Bhubaneswar 751 001, Odisha.

Subject: Application received u/s 230-232 of the Companies Act, 2013 for approving the Composite Scheme of Amalgamation amongst IDCOL Ferro Chrome & Alloys Limited, IDCOL Kalinga Iron Works Limited, The Industrial Development Corporation of Odisha Limited, Odisha Mineral Exploration Corporation Limited and Odisha Mining Corporation Limited.

Sir,

I am directed to forward herewith a copy of this Ministry's Order dated 03.05.2023 on the above subject for information and necessary action.

भवदीय,


(संजय वर्मा)
उप निदेशक

Copy for information and necessary action:

(i) Shri Rusha Mitra, Khaitan & Co. LLP, Emerald House, 1 B Old Post Office
Street Kolkata 700 001, India.

Final Order
24/7/2022-CL-III

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

In the matter of Sections 230-232 of the Companies Act, 2013

AND

In the matter of Scheme of Amalgamation between

M/s IDCOL Ferro Chrome & Alloys Limited (IFCAL)

M/s IDCOL Kalinga Iron Works Limited (IKIWL)

M/s The Industrial Development Corporation of Odisha Limited (IDCOL)

M/s Odisha Mineral Exploration Corporation Limited (OMECL)

M/s Odisha Mining Corporation Limited (OMC)

1. M/s. IDCOL Ferro Chrome & Alloys Limited having its registered office at Jajpur Road, District Jajpur, 755 020 Odisha.

Applicant/Transferor Company No.1

2. M/s. IDCOL Kalinga Iron Works Limited having its registered office at P.O.: Matkambada, Barbil district, Keonjhar, 758036, Odisha.

Applicant/ Transferor Company No.2

3. M/s The Industrial Development Corporation of Odisha Limited having its registered office at "IDCOL House" Unit -II, Ashok Nagar, Bhubaneswar 751009, Odisha

Applicant/Transferee Company/ Amalgamating Company No.1

4. M/s Odisha Mineral Exploration Corporation Limited having its registered office at OMC House, Bhubaneshwar, Khordha - 751 001 Odisha

Applicant/ Amalgamating Company No.2

5. M/s Odisha Mining Corporation Limited having its registered office at Post Box No.34, Khurda, Bhubaneswar 751 001, Odisha.

Applicant/Amalgamated Company

Present:-

- i. Mr. Sandeep Lakhotia, Practising Company Secretary
- ii. Ms. Rusha Mitra, Advocate, Khaitan & Co. LLP

.....for applicant companies

Page 1 of 15

ORDER
(Hearing held on 13/03/2023)

Joint confirmation petition dated 08.02.2023 was filed with this ministry on 10.02.2023 by the petitioner companies with respect to the proposed Composite Scheme of Amalgamation amongst IDCOL Ferro Chrome & Alloys Limited (hereinafter referred as Transferor Company No.1), IDCOL Kalinga Iron Works Limited (hereinafter referred as Transferor Company No.2), The Industrial Development Corporation of Odisha Limited (hereinafter referred as Transferee Company/ Amalgamating Company No.1), Odisha Mineral Exploration Corporation Limited (hereinafter referred as Amalgamating Company No.2) and Odisha Mining Corporation Limited (hereinafter referred as Amalgamated Company) u/s 230-232 of the Companies Act, 2013 read with Government of India, Notification NO.GSR.582 (E) dated 13.06.2017.

2. The Transferor Company 1, i.e. IDCOL Ferro Chrome & Alloys Limited, was incorporated on 26.03.1999 as a company incorporated under the provisions of the Companies Act, 1956 and is a "government company" in terms of Section 2(45) of the Companies Act, 2013. The Transferor Company 1 is registered with the Registrar of Companies, Odisha having its registered office at Jajpur Road, District Jajpur, Pin 755020. The Transferor Company 1 is primarily engaged in the production of High Carbon Ferrochrome at Jajpur district, in the State of Odisha. The Transferor Company 1 is a wholly owned subsidiary of the Transferee Company. The Transferor Company 1 is an unlisted company.

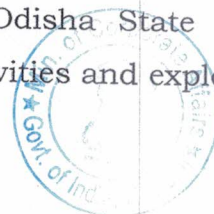
3. The Transferor Company 2, i.e. The IDCOL Kalinga Iron Works Limited, was incorporated on 26.03.1999 as a company incorporated under the provisions of the Companies Act, 1956 and is a "government company" in terms of Section 2(45) of the Companies Act, 2013. The Transferor Company 2 is registered with the Registrar of Companies having its registered office at P.O.: Matkambada, Barbil District, Keonjhar, Pin 758036. The Transferor Company 2 has been primarily engaged in the manufacture of high-quality pig iron and spun pipes at Barbil Town, Odisha. The



Transferor Company 2 is a wholly owned subsidiary of the Transferee Company. The Transferor Company 2 is an unlisted company.

4. The Transferee Company/Amalgamating Company 1, i.e. The Industrial Development Corporation of Odisha Limited, was incorporated on 29.03.1962 by the name of "Industrial Development Corporation of Orrisa Limited" as a company incorporated under the provisions of the Companies Act, 1956 and is a "government company" in terms of Section 2(45) of the Act. With effect from 02.04.2012, the name of the Transferee Company has been changed to the present one. The Transferee Company is registered with RoC having its registered office at "IDCOL HOUSE", Unit-II, Ashok Nagar, Bhubaneswar 751 009. The Transferee Company is primarily engaged, inter alia, in the business of managing its own mineral-based industries including operation of mine in the State of Odisha. The Transferee Company is presently focusing on consolidating its core activity of mineral based industries and venturing into beach sand mining. The Transferee Company is an unlisted company.

5. The Amalgamating Company 2, Odisha Mineral Exploration Corporation Limited was incorporated on 25.10.2016 as a company incorporated under the provisions of the Companies Act and is a "government company" in terms of Section 2(45) of the Act. The Amalgamating Company 2 is registered with RoC having its registered office at OMC House, Bhubaneshwar, Khordha-751 001, Odisha. The Government of Odisha had, vide Resolution No.-6065, dated the 4 July 2015, notified Odisha Mineral Exploration Policy, 2015 to strengthen institutional set up for mineral exploration in the State and upscale the mineral exploration activities so that the potential of mining sector is achieved through scientific exploration of mineral resources. In view of the same the Amalgamating Company 2 was incorporated in 2016 as a wholly owned subsidiary of Odisha Mining Corporation Limited. Subsequently as per the directive of the Government of Odisha, the shares of the company were transferred to the Government of Odisha in 2019 and the Amalgamating Company 2 became a wholly owned Odisha State government company with joint objectives of undertaking mining activities and exploration. The Amalgamating Company 2 is an unlisted company.



6. The Amalgamated Company, Odisha Mining Corporation Limited, was incorporated on 16.05.1956 by the name of "The Orissa Mining Corporation (Private) Limited" as a company incorporated under the provisions of the Companies Act, 1956 and is a "government company" in terms of section 2(45) of the Act. The name of the company changed over the years. With effect from 13.05.2021, the name of the Amalgamated Company has been changed to the present one. The Amalgamated Company is registered with RoC having its registered office at Post Box No.34, Khurda, Bhubaneswar-751 001, Odisha. The Amalgamated Company is primarily engaged, inter alia, in the business of mining major minerals including iron, chrome, bauxite and manganese ore which facilitate and cater to the requirement of mineral based industries such as steel, sponge iron, pig iron, ferro manganese and ferro chrome. The Amalgamated Company has been incorporated with the objective of harnessing the mineral wealth of the State of Odisha through exploration, extraction as well as value addition. The Amalgamated Company is an unlisted Company.

7. As per Government of India, Notification NO.GSR.582 (E) dated 13.06.2017, the powers under section 230-232 of the Companies Act, 2013 have been conferred upon the Central Government in respect of Government Companies. Accordingly, Ministry of Corporate Affairs has the jurisdiction to hear and decide the present petition.

8. As per the clause 2.1 of Part-I of the Scheme of the Amalgamation, this composite Scheme of Amalgamation provides for:

- i. The amalgamation of the Transferor Company 1 and the Transferor Company 2 with Transferee Company, with effect from the Appointed date 1 and the consequential cancellation of the respective existing share capitals of the Transferor Companies in the manner set out in this Scheme and dissolution of the Transferor Companies without being wound up, in accordance with the provisions of Sections 230 to 232 of the Act and other applicable provisions of Applicable Law; and
- ii. The amalgamation of the Amalgamating Company 1 and Amalgamating Company 2 with the Amalgamated Company, with effect from the Appointed

Date 2 and the consequent issuance of new equity shares by the Amalgamated Company to the respective shareholders of the Amalgamating Companies, in the manner set out in this Scheme, and dissolution of the Amalgamating Companies without being wound up, in accordance with the provisions of Sections 230 to 232 of the Act and other applicable provisions of Applicable Law.

9. As per clause 12.1 & 12.2 of Part-III of the Scheme, the Transferor Companies are wholly owned subsidiaries of the Transferee Company and therefore there shall be no issue of shares by the Transferee Company as consideration for the amalgamation of Transferor Company into Transferee Company. Upon Part III of the Scheme coming into effect, all equity shares of the Transferor Companies held by the Transferee Company (either directly or through its nominees) shall stand cancelled without any further application, act or deed. Further, as per clause 15.1 of Part-III of the Scheme, upon the Scheme becoming effective, the aggregate authorized share capital of the Transferor Companies as on the effective Date will be suitably reorganized and reclassified and combined with the authorized equity share capital of the Transferee Company and accordingly the authorized equity share capital of the Transferee Company shall stand automatically increased to that effect without any further act, instrument or deed on the part of Transferee Company including payment of stamp duty and fees to RoC by simply filing the requisite forms with the RoC and no separate procedure or instrument or deed shall be required to be followed under the Act. Further, as per clause 15.3 of Part-III of the Scheme, clause V of the memorandum of association of the Transferee Company shall without any further act, instrument or deed be and stand altered, modified and amended, to reflect the increased combined authorized share capital as per clause 15.1 above, pursuant to Sections 13,14, 61, 64 and other applicable provisions of the Act.

10. As per Clause 21.1 of Part IV of the Scheme of Amalgamation, upon coming into effect and in consideration of the amalgamation of the Amalgamating companies and other applicable provisions of this scheme, the Amalgamated Company shall, without any further application, act, deed, consent or instrument, issue and allot its



equity shares to the respective shareholders of the Amalgamating Companies whose names are recorded in the respective registers of members and / or respective records of the depositories on the Record Date, as follows:

- i. 1 (one) equity share of Rs.100/- (Rupees Hundred only) each fully paid up of the Amalgamated Company for every 614 (six hundred and fourteen) equity shares of Rs.100/- (Rupees Hundred only) each fully paid up of the Amalgamating Company 1; and
- ii. 1 (one) single equity share of Rs.100/- (Rupees Hundred only) fully paid up of the Amalgamated Company to the equity shareholders of the Amalgamating Company 2 taken collectively;

11. As per clause 24.1 of Part-IV of the Scheme, upon the Scheme becoming effective, the aggregate authorized share capital of the Amalgamating Companies as on the Effective date will be suitably reorganized and reclassified and combined with the authorized equity share capital of the Amalgamated Company and accordingly the authorized equity share capital of the Amalgamated Company shall stand automatically increased to that effect without any further act, instrument or deed on the part of Amalgamated Company including payment of stamp duty and fees to RoC by simply filing the requisite forms with the RoC and no separate procedure or instrument or deed shall be required to be followed under the act. Further, as per clause 24.3 of Part-IV of the scheme, clause V of the memorandum of association of the Amalgamated Company shall without any further act, instrument or deed be and stand altered, modified and amended, to reflect the increased combined authorized share capital as per clause 24.1 above, pursuant to Sections 13, 14, 61 & 64 and other applicable provisions of the Act.

12. The petitioner companies through their joint confirmation petition prayed before the Ministry of Corporate Affairs to sanction the Composite Scheme of Amalgamation amongst IDCOL Ferro Chrome & Alloys Limited (Transferor Company No.1), IDCOL Kalinga Iron Works Limited (Transferor Company No.2), The Industrial Development Corporation of Odisha Limited (Transferee Company/ Amalgamating



Company No.1), Odisha Mineral Exploration Corporation Limited (Amalgamating Company No.2) and Odisha Mining Corporation Limited (Amalgamated Company) so as to be binding on the petitioner companies and all their shareholders and all other concerned with effect from 01.04.2022.

13. The Department of Steel and Mines, Odisha by a notification bearing number 7872-24561800112022/SM dated 16.08.2022 published in the Odisha Gazette on 17.08.2022 notified that the Odisha State cabinet in its meeting held on 12.08.2022 in principally approved the merger of the Transferor Companies and the Amalgamating Company 1 with Amalgamated Company. Further, by notification bearing number 8533/SM, Bhubaneswar dated 06.09.2022 bearing file no.SM-SP-MISC-0051-2022 of the Department of Steel and Mines, the Government of Odisha – Steel & Mines Department in principally granted approval to merge the Amalgamating Company 2 with the Amalgamated Company.

14. The Scheme of Amalgamation has been approved by the Board of Directors of the Transferor Company 1 in its meeting held on 22.09.2022. The confirmation petition of Transferor Company 1 is supported by the affidavit of Shri Bira Kishore Sahoo, Managing Director and authorized representative of the Transferor Company No.1.

15. The Scheme of Amalgamation has been approved by the Board of Directors of the Transferor Company 2 in its meeting held on 22.09.2022. The confirmation petition of Transferor Company 2 is supported by the affidavit of Ms Shaijal Jain, Company Secretary and authorized representative of the Transferor Company No.2.

16. The Scheme of Amalgamation has been approved by the Board of Directors of the Transferee Company / Amalgamating Company 1 in its meeting held on 23.09.2022. The confirmation petition of Transferee Company / Amalgamating Company 1 is supported by the affidavit of Ms Shaijal Jain, Company Secretary and authorized representative of the Transferee Company/ Amalgamating Company 1.



17. The Scheme of Amalgamation has been approved by the Board of Directors of the Amalgamating Company 2 in its meeting held on 26.09.2022. The confirmation petition of Amalgamating Company 2 is supported by the affidavit of Shri Satyabrata Padhi, Company Secretary and authorized representative of the Amalgamating Company 2.

18. The Scheme of Amalgamation has been approved by the Board of Directors of the Amalgamated Company in its meeting held on 26.09.2022. The confirmation petition of Amalgamated Company is supported by the affidavit of Shri Satyajit Mohanty, Director (Finance) and authorized representative of the Amalgamated Company.

19. Pursuant to the hearing held on 31.01.2023 and order dated 03.02.2023 the requirement of convening the meeting of equity shareholders of all the applicant companies is dispensed with since all the applicant companies have furnished the consent affidavit(s) of all the equity shareholders.

20. Further, the Transferor Company 1 has only one secured creditor as on 30.06.2022 namely Indian Bank. The said secured creditor has furnished his consent by way of affidavit. Further, it is submitted by the Transferor Company No.2, Transferee Company/Amalgamating Company No.1, Amalgamating Company No.2 and Amalgamated Company that there is no secured creditor as on 30.06.2022 and in this regard, a certificate is also furnished by the statutory auditor of the respective companies that there is no secured creditor as on 30.06.2022. Hence, the meeting of secured creditors of all the applicant companies is dispensed with.

21. Further, all the applicant companies have furnished the consent by way of affidavit from their unsecured creditors constituting more than 90% of the total amount of unsecured creditor as on 30.06.2022. Hence, the meeting of the unsecured creditors of all the applicant companies is also dispensed.

22. Pursuant to the order dated 03.02.2023, the petitioners were directed to send notices to the concerned Regional Director, Registrar of Companies, Official

Page 8 of 15



Liquidator, Income Tax Authorities and other statutory authorities as mentioned in the scheme to send their report as per section 230(5) of the Companies Act, 2013. Further the petitioners were directed to file a confirmation petition after compliance with directions contained in the order.

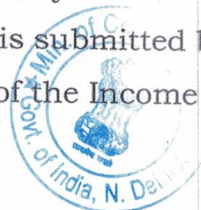
23. The petitioner companies filed their joint confirmation petition with this ministry on 10.02.2023 and informed to this ministry that notices have been served to statutory authorities namely (i) Regional Director, (Eastern Region, Kolkata) (ii) Office of the Registrar of Companies-cum-Official Liquidator, Odisha (iv) Department of Steels and Mines, Government of Odisha (v) Income Tax Department having jurisdiction over the petitioner companies as per section 230(5) of the Companies Act, 2013 on 03.02.2023 by way of email and on 04.02.2023 through speed post. The acknowledgement slip is also furnished to this ministry.

24. Final Hearing in the matter was fixed on 13.03.2023 and the ministry vide letter dated 20.02.2023 directed the petitioner companies to advertise the notice of the hearing in terms of Rule 16 of the Companies (Compromises, Arrangement and Amalgamation) Rules, 2016.

25. With respect to the compliance of the Rule 16 of Companies (Compromises, Arrangement and Amalgamation) Rule, 2016, the petitioner companies vide letter dated 06.03.2023 informed to this ministry that they have published the notice of the hearing in English Newspaper "Economic Times" and in the local newspaper "Sambad" on 27.02.2023 as per Rule 16(1) of the Companies (Compromises, Arrangements and Amalgamation) Rules, 2016. The original newspaper cuttings of the aforesaid newspaper are also submitted to this ministry. Further, the petitioner companies informed that they have received reply of Income Tax Department vide letter dated 28.02.2022 that there is outstanding demand of Rs. Rs.4,48,91,330 with respect to M/s IDCOL Ferro Chrome and Alloys Ltd and of Rs.2,80,17,042 with respect to M/s IDCOL Kalinga Iron Works Limited. Further, the Income Tax Department vide email dated 09.02.2023 replied that there is outstanding demand of Rs.12,78,317 against the M/s The Industrial Development Corporation of Odisha Limited and a penalty proceeding u/s 270A of Income Tax Act are pending against

the said company. Further, with respect to the M/s Odisha Mining Corporation Limited (Amalgamated Company) it is replied by Income Tax Department vide email dated 16.02.2023, that there is outstanding demand of Rs. Rs.926,87,35,766.

26. With regard to the aforesaid observation of the Income Tax Department, the petitioner companies submitted through affidavit that upon the coming into effect of this Scheme, if any suit, cause of action, decrees, demands, recovery certificates, appeal or other legal, quasi-judicial, arbitral or other administrative proceedings of whatsoever nature by or against the Transferor Companies/Amalgamating Companies pending on the effective date, the same shall not abate, be discontinued or be in any way prejudicially affected by anything contained in this Scheme, but such proceedings of the Transferor Companies / Amalgamating Companies may be continued, prosecuted and enforced by or against the Amalgamated Company in the same manner and to the same extent as it would or might have been continued, prosecuted and enforced by or against the Transferor Companies / Amalgamating Companies as if this Scheme had not been made. On and from the effective date, the Amalgamated Company may initiate any legal proceeding for and on behalf of the Transferor Companies / Amalgamating Companies. Further, it is submitted by the petitioner companies that no rights of the Income Tax Department are being affected by the present Scheme of Amalgamation as proposed by the Petitioner Companies. The rights of the Tax authorities to recover the outstanding dues shall remain intact. Nothing shall preclude the Tax Authorities from recovering its legitimate and recoverable outstanding tax dues from the Petitioner Companies. Petitioner companies further submitted that the Hon'ble National Company Law Appellate Tribunal ("NCLAT") in the matter of Ad2Pro Global Creative Solutions Private Limited [2019] 217 Comp Cases 443, NCLAT, held that the legitimate interests of the concerned tax authorities shall be lawfully protected and their right to recover the tax dues, as the case may be, shall remain intact. The Hon'ble NCLAT allowed the appeal holding that the payment of the income tax liability is not a condition to the sanction or implementation of the Scheme. Further, it is submitted by the petitioner companies that they undertake to make the payment of the Income Tax dues to the Income Tax Department in accordance with law.



27. This ministry also received the report of the Regional Director (Eastern Region) dated 28.03.2023 along with report of the Registrar of Companies cum Official Liquidator dated 27.02.2023. The Regional Director, Registrar of Companies cum Official Liquidator have not reported any adverse remark on the proposed scheme of amalgamation. However, the Regional Director have made certain observations regarding qualifications made by the Statutory Auditor on the financial statement as at 31.03.2022 of the Transferor Company 1, Transferor Company 2 and Transferee Company/Amalgamating Company 1. The Regional Director has reported violation of Section 129 read with schedule III of the Companies Act, 2013 in respect of Transferor company 1, violation of Section 129 read with Schedule III and Section 143(3) of the Companies Act, 2013 in respect of Transferor Company 2 and violation of Section 129 read with Accounting Standard 28 and Section 129 read with Schedule III of Companies Act, 2013 in respect of Amalgamating Company 1 in the financial statements as at 31.03.2022 of the respective companies.

28. Since, the Regional Director and the Registrar of Companies cum Official Liquidator have not reported any adverse remark on the proposed scheme of amalgamation and have made certain observations regarding qualifications made by the statutory auditor of Transferor Company 1, Transferor Company 2 and Transferee Company/Amalgamating Company 1 on the financial statement as at 31.03.2022, with regard to violation of section 129 read with schedule III of Companies Act, 2013, Section 129 read with Accounting Standard 28 and Section 143(3) of the Companies Act, 2013. The said qualifications/violations may be examined and taken up by Regional Director separately in accordance with the law. Further, the statutory auditor of the petitioner companies have submitted a certificate stating that the qualifications, observations, key audit matters, emphasis of matters in the auditor's reports for the financial years 2018-19, 2019-20, 2020-21 and 2021-22 shall not have any adverse impact on the proposed composite scheme of amalgamation and shareholders of petitioner companies.

29. That, a final hearing in the matter was held on 13.03.2023 and with regard to the notice of the aforesaid hearing published in the newspaper, the petitioner

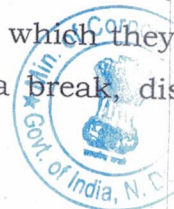


companies filed an affidavit with this ministry stating that neither the petitioners nor their Advocate have received any notice / affidavit or representation from any person intending to oppose the scheme except for the Income Tax Authorities having jurisdiction over the respective companies. No objection or representation whatsoever has been made by the other statutory authorities and / or any person from the date of publication of the notices till date.

30. With reference to clause 15.1 & 15.3 of Part-III & clause 24.1 & 24.3 of Part-IV of the Scheme of Amalgamation, wherein the applicant companies intends to alter the Memorandum of Association (MoA) and Articles of Association (AoA) and also intends to increase their authorized share capital, it is directed that applicant companies shall follow the provisions of the Companies Act, 2013.

31. For considering the proposal of amalgamation, the procedure as required under the provisions of the Companies Act, 2013 read with the Companies (Compromises, Arrangements and Amalgamations) Rules, 2016 was followed and transparency was maintained during the proceedings. Sufficient opportunity was provided to all concerned by way of giving direction to the Applicant Companies for publishing the notice of Scheme or supplying copies of the Scheme to anyone who required so with a view to eliciting views of all concerned to the proposed Scheme.

32. With reference to clause 9 of Part-III and clause 18 of Part-IV of the scheme, on and from the effective date, all the employees of the Transferor Companies in service on the effective date shall become the employees of the Transferee Company on terms and conditions not less favourable in totality than those on which they are engaged by the Transferor Companies without treating it as a break, discontinuance or interruption in service on the said date as a result of the transfer and vesting of the Undertaking of Transferor Companies into the Transferee Company and thereafter all employees of the Amalgamating Companies in service on the effective date shall become the employees of the Amalgamated Company on terms and conditions not less favourable in totality than those on which they are engaged by the Amalgamating Companies without treating it as a break, discontinuance or



interruption in service on the said date as a result of the transfer and vesting of the Undertaking of Amalgamating Companies into the Amalgamated Company.

33. The said Scheme does not violate any statutory provisions. It is fair, just, sound and is not against any public interest. The validity of all the actions, proceedings and obligations of the Transferor and Transferee Companies continues even after the implementation of the Scheme. Therefore, no person holding any claim or right against the applicant companies prior to the Scheme coming into effect would be prejudicially affected even after the implementation of the Scheme.

34. In the aforesaid facts and circumstances and having regard to the averments made in the petitions and during the course of the hearing, submission made by the Applicant Companies and further considering the reports of the concerned Regional Director, Registrar of Companies and Official Liquidator, the Scheme of Amalgamation of the applicant companies is found to be in order and hence the prayer for sanction of the composite Scheme of Amalgamation deserves to be allowed with effect from 01.04.2022, being the appointed date for coming into force of the said Scheme.

35. Now, therefore, the sanction of the Central Government is hereby accorded to the Composite Scheme of Amalgamation amongst IDCOL Ferro Chrome & Alloys Limited (Transferor Company No.1), IDCOL Kalinga Iron Works Limited (Transferor Company No.2), The Industrial Development Corporation of Odisha Limited (Transferee Company/ Amalgamating Company No.1), Odisha Mineral Exploration Corporation Limited (Amalgamating Company No.2) and Odisha Mining Corporation Limited (Amalgamated Company) under section 230-232 of the Companies Act, 2013. The Scheme shall be binding on the shareholders and creditors of the applicant companies and all concerned with effect from 01.04.2022, being the appointed date for coming into force of the said Scheme.

36. Consequent to the amalgamation of the companies, and the Scheme becoming effect:-



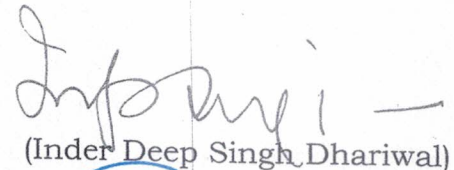
- i. All the property, rights and powers of Transferor Company 1 & 2 shall be transferred without further act or deed to the Transferee Company/ Amalgamating Company 1 and thereafter all the property, rights and powers of Amalgamating Company 1 & 2 shall be transferred without further act or deed to the Amalgamated Company in accordance with the Scheme, and accordingly the same shall, pursuant to section 232(3) of the Companies Act, 2013 be transferred to and vested in the Amalgamated Company for all the estate and interest of Transferor Companies and Amalgamating Companies therein;
 - ii. All the liabilities and duties of Transferor Company 1 & 2 shall be transferred without further act or deed to Transferee Company / Amalgamating Company 1 and thereafter all the liabilities and duties of Amalgamating Company 1 & 2 shall be transferred without further act or deed to Amalgamated Company in accordance with the Scheme and accordingly the same shall, pursuant to section 232(3) of the Companies Act, 2013 be, transferred to and become the liabilities and duties of Amalgamated Company;
 - iii. All Court cases/proceedings, now pending by or against the Transferor Company 1 & 2 and all Court cases/proceedings, now pending by or against the Amalgamating Company 1 & 2 shall be continued by or against the Amalgamated Company; and,
 - iv. The Applicant Companies shall apply the Accounting Standards as laid down under Section 133 of the Companies Act, 2013.
 - v. The Transferor Company 1 & 2 and Transferee Company /Amalgamating Company 1 & Amalgamating Company 2 shall stand dissolved without the process of winding up;
37. It is further ordered that the parties to the Scheme or other persons interested in the Scheme shall be at liberty to apply to the Ministry of Corporate Affairs, Government of India, for any direction that may be necessary in regard to working of the said Scheme.



38. It is further ordered that Applicant Companies shall file with the concerned Registrar of Companies, a certified copy of this order within 30 days of the receipt of the same, in Form No.INC 28. A copy of the order be made available to the parties concerned.

SCHEDULE:-

Copy of the Scheme of Amalgamation is annexed.


(Inder Deep Singh Dhariwal)

Joint Secretary to the Government of India



Dated: 03rd May 2023
Place : New Delhi

ANNEXURE-IIB

Government of Odisha

Department of Steel & Mines



ED(Geo)

No 7397 /S&M, Bhubaneswar dated the 20/07/2023

SM-AE-ME-0006-2022

NOTIFICATION

Sub: Substitution of the name Odisha Mineral Exploration Corporation Limited (OMECL) with Odisha Mining Corporation (OMC) in the notifications previously issued for allotment of mineral blocks for carrying out exploration.

Government had notified 8 iron and 8 bauxite blocks vide Notification no. 4505 dated 05.06.2018, one graphite block vide Notification no. 1966 dated 03.03.2022, two graphite blocks vide Notification no. 4380 dated 07.05.2022 and two iron ore blocks of Malangtoli Sector vide Notification no. 3459 dated 06.04.2023 under Rule-67 of MC Rules, 2016 in favour of OMECL for carrying out exploration for two years.

The validity of the Notification no. 4505 dated 05.06.2018 has been extended till 31.12.2023 vide letter no. 4740 dated 09.06.2020 and Notification no. 5906 dated 22.06.2022.

Consequent upon merging of OMECL with OMC vide Order No. 24/7/2022-CL-III dated 03.05.2023 of Ministry of Corporate Affairs, Government of India, it is hereby notified that the word "Odisha Mineral Exploration Corporation Limited" mentioned in full or abbreviated form in the aforesaid Notifications/ letter is substituted with "Odisha Mining Corporation (OMC) Limited".

By order of the Governor

[Signature]
20/7/2023

(DK Singh, IAS)

Additional Chief Secretary to Government

Steel and Mines Department

SEA
[Signature]
20/7/23

Gm(E)

[Signature]



Memo No. 7398 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to the P.S. to Hon'ble Chief Minister, Odisha/ P.S. to Hon'ble Minister, Steel & Mines, Works for kind information of Hon'ble Chief Minister, Odisha/ Hon'ble Minister, Steel & Mines, Works.


Officer on Special Duty

Memo No. 7399 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to the P.S. to Addl. Chief Secretary, Steel & Mines Department for kind information of Addl. Chief Secretary, Steel & Mines Department.


Officer on Special Duty

Memo No. 7400 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to the Joint Secretary, Ministry of Mines, Govt. of India, Shastri Bhawan, New Delhi for kind information and necessary action.


Officer on Special Duty

Memo No. 7401 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to Director of Mines and Geology, Odisha, Bhubaneswar/ /Deputy Director (General), GSI, Bhubaneswar/CMD MECL, Nagpur, Maharashtra/M.D. OMC Ltd., Bhubaneswar for information and necessary action.


Officer on Special Duty

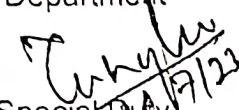
Memo No. 7402 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to the Officer-in-charge, Gazette Cell, Odisha Government Press, Commerce and Transport (Commerce) Department, LokSeva Bhawan, Bhubaneswar for publication in the extraordinary issue of the Odisha Gazette and supply of 20 copies to this Department.


Officer on Special Duty

Memo No. 7403 /SM Bhubaneswar dated the 20/07/2023

Copy forwarded to Head, State PMU, Directorate of Mines, Odisha for information. They are requested to take steps for uploading the same in Department website.


Officer on Special Duty

ANNEXURE-III A

Ministry of Mines National Mineral Exploration Trust

Minutes of the 44th Technical-cum-Cost Committee (TCC) meeting held on 25th and 26th August, 2022 through video conferencing at Ministry of Mines, Shastri Bhawan, New Delhi

The 44th Technical-cum-Cost Committee [TCC] meeting of National Mineral Exploration Trust [NMET] was held under the chairmanship of Shri Janardan Prasad, Additional Director General, Geological Survey of India [ADG, GSI] and Chairman, TCC, NMET on 25th and 26th August, 2022 at Ministry of Mines, Shastri Bhawan, New Delhi through video conferencing. The TCC members and representatives of Exploration Agencies [EAs] participated through their respective VC nodes. The list of participants is in **annexure-1**.

Shri Suresh Chander, Director, GSI and Member Secretary, TCC NMET, welcomed Shri Janardan Prasad, ADG, GSI & Chairman, TCC; Members of the TCC and participants representing various EAs. He conveyed that total 10 nos. of new project proposals have been received from different EAs for technical cum cost evaluation by the committee.

Shri Janardan Prasad, ADG, GSI, and Chairman, TCC welcomed the members and other participants from various EAs. He desired that a comprehensive summary of approved, ongoing and completed projects may be presented before the TCC in the next meeting by all the EAs. The proceeding of the meeting was initiated as per the circulated agenda.

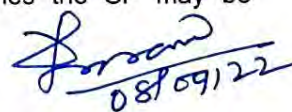
Agenda-wise discussions are summarised as follows.

44.1: Technical evaluation of new project proposals:

44.1.1. Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha. [Implementing Agency: OMECL]

- Geologically the area is exposed by the Eastern Ghat Supergroup of rocks represented by khondalite and charnockite groups with associated pegmatites and quartz veins.
- The lithounits present within this block are granite gneiss, pyroxene granulite (Basic charnockite), khondalite, and quartzite. The graphite is associated with the meta sedimentaries as quartz-graphite schist bands.
- It has been conveyed that the Geological Survey of India had carried out geological mapping in 1:12,500 scale in 1983-84 and reported four mineralized zones within the block. Graphite samples collected from the mineralized zones had shown Fixed Carbon ranging from 5.80% to 11.67%.
- The committee observed that the outcrops are scanty in nature, hence potential mineralized zones need to be identified through geological and geophysical methods in the 1st phase and the drilling may be carried out over the identified potential zones in 2nd phase. The committee further opined that initially the Self Potential (SP) may be implemented at 200m interval thereafter over identified zones the SP may be implemented at 100m interval.


08/09/2022


08/09/22

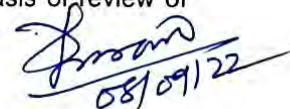
- e) The committee suggested to assess the orientation of the mineralised zone and accordingly the inclination of borehole angles be planned.
- f) The geological mapping (1:4,000 scale), 10line km of Self Potential (SP), trenching 200 cu. m, drilling 1000m (conditional), Bed rock sampling will be carried out in proposed block.
- g) The outcome of the geological and geophysical survey will be reviewed after eight months thereafter the decision on drilling will be taken in case of encouraging results. Initially first level drilling at vertical depth of 30m will be taken up.

In view of the encouraging results from earlier GSI studies (Fixed Carbon values ranging from 5.80% to 11.67% in some samples) the committee recommended the proposal for approval of EC for Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha with an estimated cost of Rs. 232.66 Lakh (including GST) in time schedule of 16 months for carrying out the proposed work and submission of report as per annexure- 2A & 2B.

44.1.2. Preliminary exploration (G3) for Iron Ore in Thakurani block (1.399 sq. km) in District: Keonjhar, Odisha. [Implementing Agency: OMECL]

- a) It has been submitted that the part of the proposed block is a taken-over lease of D. R. Patnaik mining lease and the block is adjacent to the Belkundi Fe & Mn Mines of OMDC Ltd. to the west and Thakurani Fe & Mn Mines of BPME Ltd. to the south. It is submitted that the proposed block is bound by the operational mining lease area.
- b) The Bonai-Keonjhar belt (BK belt) belt is U-shaped, well known horseshoe synclinorium consisting of eastern and western limbs. The Iron formations of the eastern limb are mostly restricted to Noamundi, Thakurani, Joda, Jaribahal, Malangtoli, Jilling, Jajang and Gurubeda area whereas the Iron deposit of western belt covers Kiriburu, Bolani, Kalta Barsuan and the Khandadhar area.
- c) Regionally, the area is represented by the principal Iron Ore formations viz., hard laminated ore, soft laminated Iron ore, Lateritic Iron ore, hard massive ore, Iron ore floats, and Banded Hematite Jasper (BHJ)/ Banded Hematite Quartzite (BHQ).
- d) It has been submitted that during field traverses the outcrops of Iron and Manganese are encountered within the block and also there is the existence of float ores of Iron in the northern part of the block. The mining activities for iron and manganese are operational in the nearby mining leases.
- e) In the adjoining blocks the borehole depth have been kept upto dolomite horizon at about 60m depth, and evidence of Iron and manganese occurrences are not recorded beyond dolomite horizon in the area. In view of this, the committee suggested to keep the maximum depth of boreholes upto 60m or upto dolomite horizon.
- f) The geological mapping (1:2,000 Scale) surface sampling, chemical analysis and drilling (conditional) will be carried out in proposed block. On the basis of review of


08/09/2022


08/09/22

Annexure-2A

Estimated cost for Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha.


[Block area- 13.99 sq. km; Average borehole vertical depth- 30m; Completion Time- 16 months]

S. No.	Item of Work	Unit	Rate as per NMET SoC 2020-21		Estimated cost of proposal		Remarks
			SoC item Sl. No.	Rate as per SoC (in Rs.)	Quantum of Work	Total Amount (Rs.)	
A	GEOLOGICAL WORK						
1	Charges for One Geologist - Field	per day	1.3	11,000	120	13,20,000	
2	Charges for One Geologist - HQ	per day	1.3	9,000	30	2,70,000	
3	Labour Charges for Geological mapping (2 Nos.) Base rate- 443/-	per day	5.7	443	240	1,06,320	Amount will be reimbursed as per notified rates by Central Labour Commission rates or respective State Govt. Whichever is higher
4	Charges for one Sampler	per day	1.5.2	5,100	35	1,78,500	
5	Labour Charges for sampling work (4 Nos.) Base rate- 443/-	per day	5.7	443	140	62,020	Amount will be reimbursed as per notified rates by Central Labour Commission rates or respective State Govt. Whichever is higher
6	Charges for 1 Surveyor	per day	1.6.1a	8,300	30	2,49,000	
7	Labour charges for Survey (4 Nos.) Base rate- 443/-	per day	5.7	443	120	53,160	Amount will be reimbursed as per notified rates by Central Labour Commission rates or respective State Govt. Whichever is higher
Sub Total- A						22,39,000	
B	TRENCHING						
1	Trenching	cu.m	2.1.1	3,330	200	6,66,000	10 trenches (2 trenches per each deposit)
Sub Total- B						6,66,000	

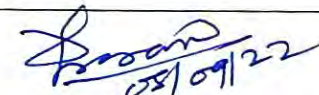
[Signature]
08/09/2022

[Signature]
08/09/22

C	DRILLING (Outsourced)						
1	Surface Drilling	per m	2.2.1.4	11,500	1000	1,15,00,000	
2	Land/Crop compensation	Per Bore hole	5.6	20,000	20	4,00,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities
3	Construction of concrete pillar(12"x12"x30")	Per Bore hole/Pillar	2.2.7a	2,000	20	40,000	
4	Drill core preservation	Per m	5.3	1,590	250	3,97,500	
Sub Total- C						1,23,37,500	
D	GROUND GEOPHYSICAL (Outsourced)						
1	Self-potential / Charged Potential	Line Km	3.3a	29,600	10	2,96,000	
Sub Total- D						2,96,000	
E	LABORATORY STUDIES (Outsourced)						
1	Chemical Analysis						
	i) Primary samples and Check samples for Graphite (Core Samples)						
	a) Primary samples for Proximate Analysis (Ash, Moisture, V.M. and F.C.)	Nos	4.1.16	3,000	250	7,50,000	100 core sample + 100 channel sample + 50 grab sample
	b) Check sample Proximate Analysis (Ash, Moisture, V.M. and F.C.)	Nos	4.1.16	3,000	25	75,000	
	c) REE	Nos	4.1.13	5,380	10	53,800	
	ii) Composite Samples for Graphite (Core Samples)						
	a)Proximate Analysis (Ash, Moisture, V.M. and F.C.)	Nos	4.1.16	3,000	30	90,000	
	b) Total Sulphur (S)	Nos	4.2.14	1,900	10	19,000	
2	Physical Analysis						
i)	X-RD Studies	Nos	4.5.1	4,000	10	40,000	5 core samples + 5 grab samples
ii)	ICP -MS studies (34 trace elements)	Nos	4.1.14	7,731	10	77,310	
iii)	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
iv)	Petrographic studies	Nos	4.3.4	4,232	10	42,320	
v)	Preparation of polished section	Nos	4.3.2	1,549	10	15,490	



08/09/2022



08/09/22

vi)	Mineralographic studies	Nos	4.3.4	4,232	10	42,320	
vii)	Bulk density	Nos	4.10	3,540	5	17,700	
Sub Total- E						12,46,470	
Total A+B+C+D+E						1,67,84,970	
F	Tender preparation, publishing & finalisation	one time	2.3	2% of the approved project cost or 5 lakh whichever is lower will be paid one time to exploration agency.		3,35,699	will be reimbursed when copy of signed agreement/tender for outsourced component will be submitted.
G	GEOLOGICAL REPORT PREPARATION	One Number (5 Hard copies) along with soft copy	5.2	Project cost 150 to 300 Lakh : A minimum of Rs 7.5 lakh of 3% of the work whichever is more and Rs 3000/- per each additional copy		7,50,000	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
H	PEER REVIEW		As per EC decision			10,000	
I	PREPARATION OF EXPLORATION PROPOSAL (2% of approved project cost or 3.8 lakh whichever is lower)	One Number (5 Hard copies) along with soft copy	5.1			3,35,699	EA has to submit the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
J	OPERATIONAL CHARGES		6.0 iii	In case total outsourced cost more than Rs. 1 Crore		15,00,000	will be reimbursed as per point 3 of NMET-SoC after recalculation when actual cost of outsourcing component will be provided. The copy of contract agreement for outsourced component and work completion report are also required to reimburse the operational charge
Total F+G+H+I+J						29,31,399	

[Signature]
08/09/2022

[Signature]
08/09/22

Total A+B+C+D+E+F+G+H+I+J	1,97,16,369	
GST 18%	35,48,946	GST will be reimbursed as per actual and as per notified prescribed rate
Grand Total (A+B+C+D+E+F+G+H+I+18% GST)	2,32,65,315	or say Rs. 232.66 Lakh
Note - 1. If any part of the project is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. In case of execution of the project by EA on its own, a Certificate regarding non outsourcing of any component/project is required.		

Annexure-2B

Schedule timeline for Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha.

S. No.	Item of Work	Months	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16
1	Camp Setting																		
2	Geological Mapping																		
3	Geological days																		
4	Trenching																		
5	Geophysical Survey (Self-potential)																		
6	Geophysical Report Preparation																		
7	Surface Drilling																		
8	Sampling days																		
9	Laboratory Studies																		
10	Camp Winding																		
11	Report Writing with Peer Review																		
Note 1: Commencement of project may be reckoned from the day the exploration acreage is available along with all statutory clearance.																			
2: Timeloss on account of monsoon/ agricultural activities/forest clearance/local law and order problem/lockdown etc. will be additional to above timeline.																			

[Signature]
08/09/2022

[Signature]
08/09/22

ANNEXURE-IIIB

Only through e-mail

Government of India
Ministry of Mines
National Mineral Exploration Trust

F.No.6/2/2015-NMET/302

New Delhi, 30th January, 2023

Subject: Circulation of minutes of 27th meeting of the Executive Committee (EC) of National Mineral Exploration Trust (NMET) held on 10th January, 2023.

Please find enclosed the minutes of 27th meeting of Executive Committee of NMET held on 10th January, 2023 for your kind perusal.

Action Taken Report on relevant paras may kindly be forwarded to this office.


[Vivek Kumar Sharma]
Director & HoD, NMET
30.01.23

To,

1. The Secretary, Dept. of Atomic Energy, Anushakti Bhawan, C.S.M. Marg, Mumbai- 400001.
2. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi- 110001.
3. The Secretary, Ministry of Petroleum and Natural Gas, Shastri Bhawan, New Delhi-110001.
4. The Joint Secretary and Financial Advisor, Ministry of Mines, Shastri Bhawan, New Delhi-110001.
5. The Director General, Geological Survey of India, 27, J. L. Nehru Road, Kolkata-700016.
6. The Controller General, Indian Bureau of Mines, 2nd Floor, Indira Bhawan, Civil Lines, Nagpur- 440001.
7. The Principal Secretary, Mineral Resources Department, Govt. of Madhya Pradesh, Mantralaya, Vallabh Bhawan, Bhopal- 462004.
8. The Principal Secretary, Industries, Energy and Labour Dept. 114 Annex Building Mantralaya, Mumbai- 400032.
9. The Additional Chief Secretary, Department of Mines and Petroleum Main Building Secretariat, Jaipur- 302005.
10. The Additional Chief Secretary, Industries, Investment Promotion and Commerce Dept. Industries Department Secretariat, Chennai- 600009.
11. Shri Alok Sharma, (Retd.) GM &HoD (Exploration), CMPDIL, 402, Lake Garden, Kanke Road, Ranchi- 834008.
12. Shri Naresh Nautiyal, Head (Business Development & Planning) (Retd.), MECL, 109, KT Nagar, Katol Road, Nagpur- 440013.

13. Dr. Yamuna Singh, Scientist-H, Atomic Minerals Directorate for Exploration and Research (Retd.), Flat G-7, Block G, Rainbow Vistas Rock Garden, Opp- IDL, Green Hills Road, Sanathnagar PO, Moosapet, Hyderabad- 500018.
14. Dr. Laxman Singh Shekhawat, Dy. Director General (Retd.), Geological Survey of India, 695 Shanti Nagar (Road No-3), Near Durgapura Railway Station, Durgapura, Jaipur- 302018.
15. Dr. Sahendra Singh, Associate Professor, Department of Applied Geology, Indian Institute of Technology (ISM), Dhanbad- 826004.

Copy to:

1. The Secretary (Mines), Government of Andhra Pradesh.
2. The Secretary (Geology and Mining), Government of Arunachal Pradesh.
3. The Principal Secretary, Department of Mines and Minerals, Government of Assam.
4. The Principal Secretary-cum-Mines Commissioner, Government of Bihar.
5. The Secretary, Mineral Resource Department, Government of Chhattisgarh.
6. The Principal Secretary, Department of Mines and Geology, Government of Goa.
7. The Addl. Chief Secretary (Industries), Government of Himachal Pradesh.
8. The Principal Secretary (Industry and Mines), Government of Gujarat.
9. The Commissioner Secretary (Industries and Commerce), Government of Jammu & Kashmir.
10. The Secretary (Industries, Mines and Geology), Government of Jharkhand.
11. The Secretary, (Industries and Commerce), Government of Karnataka.
12. The Principal Secretary, Industries Department, Government of Kerala.
13. The Secretary, Mineral Resource Department, Government of Madhya Pradesh.
14. The Addl. Chief Secretary (Industries and Mines), Government of Maharashtra.
15. The Commissioner and Secretary, Mining and Geology Department, Government of Meghalaya.
16. The Commissioner & Secretary, Geology and Mining, Government of Nagaland.
17. The Principal Secretary (Steel and Mines), Government of Odisha.
18. The Principal Secretary, Mines and Geology, Government of Punjab.
19. The Principal Secretary (Mines), Government of Rajasthan.
20. The Principal Secretary (Industries), Government of Tamil Nadu.
21. The Principal Secretary (Industries and Mines), Government of Telangana.
22. The Secretary (Mines and Geology), Government of Uttar Pradesh.
23. The Principal Secretary (Mines), Government of Uttarakhand.
24. The Secretary (Industry, Commerce and Enterprises), Government of West Bengal.
25. The Secretary, Department of Industries, Administration of Union Territory of Ladakh.
26. The Principal Secretary, Mines and Geology Department, Government of Sikkim.
27. The Secretary, Department of Industries and Commerce, Government of Tripura.
28. The Secretary, Commerce and Industries, Government of Mizoram.

29. The Secretary, Textiles, Commerce and Industry, Government of Manipur.
30. The Principal Secretary, Department of Mines and Geology, Government of Haryana.

Copy to:

1. The Director, Department of Mines and Geology, Government of Andhra Pradesh.
2. The Director, Department of Geology and Mining, Government of Arunachal Pradesh.
3. The Director, Directorate of Geology and Mining, Government of Assam.
4. The Director, Department of Mines and Geology, Government of Bihar.
5. The Director, Directorate of Geology and Mining, Government of Chhattisgarh.
6. The Director of Mines and Geology, Government of Goa.
7. The Commissioner of Geology and Mining, Government of Gujarat.
8. The Director, Department of Industries, Government of Himachal Pradesh.
9. The Director, Department of Geology and Mining, Government of Jammu and Kashmir.
10. The Director (Mines), Directorate of Mines, Government of Jharkhand.
11. The Director, Department of Mines and Geology, Government of Karnataka.
12. The Director, Directorate of Mining and Geology, Government of Kerala.
13. The Director, Directorate of Geology and Mining, Government of Madhya Pradesh.
14. The Director, Directorate of Geology and Mining, Government of Maharashtra.
15. The Director, Directorate of Mineral Resources, Government of Meghalaya.
16. The Director, Directorate of Geology and Mining, Government of Nagaland.
17. The Director, Directorate of Geology, Government of Odisha.
18. The Director, Directorate of Mines and Minerals, Government of Punjab.
19. The Director, Mines and Geology Directorate, Government of Rajasthan.
20. The Commissioner of Geology and Mining, Government of Tamil Nadu.
21. The Director of Mines and Geology, Government of Telangana.
22. The Director, Directorate of Geology and Mining, Government of Uttar Pradesh.
23. The Director, Geology and Mining Unit, Government of Uttarakhand.
24. The Director, Directorate of Mines and Minerals, Government of West Bengal.
25. The Director, Directorate of Industries and Commerce, Government of Ladakh.
26. The Director, Department of Mines, Minerals and Geology, Government of Sikkim.
27. The Director, Department of Industries and Commerce, Government of Tripura.
28. The Director, Directorate of Geology and Mineral Resource, Government of Mizoram.
29. The Director, Department of Trade, Commerce and Industries, Government of Manipur.
30. The Director, Department of Mines and Geology, Government of Haryana.

Copy to:

1. The Additional Director General and Chairman, TCC-NMET, Southern Region, GSI Complex, Bandlaguda, Hyderabad-500068.
2. The Director, AMD, Department of Atomic Energy, AMD Complex, Begumpet, Hyderabad-500016.
3. The Chairman-cum-Managing Director, MECL, Dr. Babasaheb Ambedkar Bhawan, Seminary Hills, Nagpur-440006.
4. The Chairman-cum-Managing Director, CMPDIL, Gondwana Place, Kanke Road, Ranchi-834031.
5. The Dy. Director General, RSAS, GSI, Vasudha Bhavan, Kumaraswamy Layout, Bengaluru-560078.
6. The Chairman-cum-Managing Director, KIOCL Ltd, Block-II, Koramangala, Sarjapura Road, Bengaluru, Karnataka-560034.
7. The Chairman-Cum-Managing Director, NMDC Ltd., Khanij Bhavan, Castle Hills, Masab Tank, Hyderabad-500028.
8. The General Manager, Telangana State Mineral Development Corporation Limited, H. No.6-2-915, HMWSSB premises, Rear Block, 3rd Floor, Khairatabad, Hyderabad.
9. The Director, Directorate of Geology & Mining, Indirawati Bhawan, Block-4, First & Second Floor Naya Raipur, Chhattisgarh- 492002.
10. The GM (Exploration), OMECL, Govt. of Odisha. Odisha Mineral Exploration Corporation Ltd. 3rd Floor, Boyan Bhawan, Unit-3, Pandit Jawaharlal Nehru Marg, Bhubaneswar- 751001.
11. The Madhya Pradesh State Mining Corporation Ltd., Paryawas Bhawan, Block 'A', IInd floor, Jail Road, Arera Hills, Bhopal, Madhya Pradesh-462011.
12. The Director (Dept. of Mines & Geology), Govt. of Telangana, DRDK Building, Tank Bund Road, Hyderabad-500022.
13. The Chief Executive Officer, Mineral Exploration Research and Innovation Trust (MERIT), Department of Mines & Geology, 6th Floor, B-Wing, Sri Anjaneya Towers, Ibrahimpatnam, District: Krishna-521456.
14. The Managing Director, Odisha Mining Corporation, OMC House, Bhubaneswar-751001.

Copy for information to:

PSO to Secretary/ PPS to AS(SL)/ PS to JS&FA, Ministry of Mines, Shastri Bhawan, New Delhi-110001.

**Government of India
Ministry of Mines
National Mineral Exploration Trust [NMET]**

Minutes of the 27th Executive Committee (EC) meeting of the National Mineral Exploration Trust (NMET) held on 10th January, 2023

The 27th meeting of the EC of NMET was held under the Chairmanship of Shri Vivek Bharadwaj, Secretary (Mines) on 10th January, 2023 in Khanij Kaksh, Ministry of Mines, Shastri Bhawan, New Delhi through video conference. The list of participants is at **Annexure-1**.

Shri Sanjay Lohiya, Additional Secretary, Mines welcomed all the participants in the meeting. He informed that the meeting is the first Executive Committee meeting of Secretary, Mines after assuming charge and asked all the participants to introduce themselves. The meeting proceeded with agenda wise discussion.

Shri Vivek Kumar Sharma, Director & HoD, NMET presented the agenda points for the EC meeting.

Following are the agenda points discussed and decisions taken.

1. Approval of minutes of 26th meeting of EC held on 25th August, 2022.

The minutes of the 26th meeting of EC held on 25th August, 2022 was circulated on 02nd September, 2022. No comments have been received.

Decision of EC:

EC approved the minutes of the 26th meeting of EC held on 25th August, 2022.

2. Action Taken Report (ATR) for minutes of 26th meeting of EC held on 25th August, 2022.

The ATR on minutes of the 26th meeting of EC held on 25th August, 2022 were presented in the meeting.

Shri Vivek Kumar Sharma, Director & HoD, NMET informed that necessary action have been taken on decisions of the minutes of 26th EC meeting.

Decision of EC:

EC accepted the action taken reports on minutes of 26th meeting of EC held on 25th August, 2022.

3. Nomination of representative from any four State Governments and experts with experience in exploration to the Executive Committee of NMET.

EC was informed that as per the NMET Notification G.S.R.633(E) dated 14th August, 2015 stipulates that "one representative from any four State Governments, as decided by the Central Government, not below the rank of Secretary to the State Government or equivalent on rotation basis for a term not exceeding two years at a time, with eligibility for re-nomination shall be Member (*ex-officio*) in the EC". Accordingly, the inclusion of

29th November and 22nd & 23rd December, 2022 respectively recommended 25 nos. of mineral exploration projects with estimated cost of **₹3902.14 Lakh** and 12 nos. of projects for financial assistance with estimated cost of **₹11783.65 Lakh** for EC approval.

The mineral exploration projects are of different commodities [Graphite (4), Iron Ore (2), Coal (4), Basemetal (3), Phosphorite/Glauconitic sandstone (3), Gold (1), PGE & associated minerals- Chromium, Nickel, Cobalt (2), Tin and associated minerals (1), Manganese (2), Bauxite (1) and Limestone (2)].

The financial assistance proposals recommended by TCC for the procurement of instruments/ equipment/ softwares are submitted by:

- Geological Survey of India [GSI] (1 no.)
- Indian Bureau of Mines [IBM] (2 Nos.)
- Department of Mines and Geology Karnataka (1 no.)
- Directorate of Geology and Mining, Maharashtra (1 no.)
- Directorate of Geology and Mining, Assam (2 Nos.)
- Directorate for Trade, Commerce and Industries, Manipur (1 no.)
- Directorate of Geology and Mining, Mizoram (1 no.)
- Directorate of Geology and Mining, Nagaland (1 no.)
- Department of Mines and Geology, Sikkim (1 no.)
- Department of Mines and Geology, Rajasthan (1 no.)

The detailed discussion and EC decision for project proposals recommended for approval of EC are as follows:

7.1 Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha.[Estimated cost ₹232.66 Lakh and Scheduled Timeline- 16 months] [Implementing agency- OMECL]

Discussion:

Shri Janardan Prasad, ADG GSI & Chairman, TCC, NMET discussed the technical and financial aspect of project. He informed that geological mapping (1:4,000 scale), 10 Line km of Self Potential (SP), trenching 200 cu. m, drilling 1000m (conditional), Bed rock sampling will be carried out. It was also informed that outcome of the geological and geophysical survey will be reviewed after eight months thereafter the decision on drilling will be taken in case of encouraging results.

EC Decision:

EC approved the project with estimated cost of **₹232.66 Lakh** and timeline of **16 months**.

(Action: NMET)

7.2 Preliminary exploration (G3) for Iron Ore in Thakurani block (1.399 sq. km) in District: Keonjhar, Odisha. [Estimated cost ₹223.08 Lakh and Scheduled Timeline- 10 months] [Implementing agency- OMECL]

Discussion:

Shri Janardan Prasad, ADG GSI & Chairman, TCC, NMET discussed the technical and financial aspect of project. He informed that geological mapping (1:2,000 Scale) surface sampling, chemical analysis and drilling (conditional). On the basis of review of

Annexure-2

The details of the projects approved in 27th EC meeting held on 10th January, 2022.

A. Mineral exploration projects

S. No.	Project/Block Name	Commodity	Stage	Duration (Months)	Proposed cost (₹ Lakh including GST)
Implementing Agency: OMECL					
1	Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District: Kalahandi, Odisha.	Graphite	G3	16	232.66
2	Preliminary exploration (G3) for Iron Ore in Thakurani block (1.399 sq. km) in District: Keonjhar, Odisha.	Iron	G3	10	223.08
3	Preliminary exploration (G3) for graphite in Lamer Panga Graphite Block-B (12.994 sq. km) Kalahandi district Odisha.	Graphite	G3	14	216.61
					672.35
Implementing Agency: CMPDI					
4	Preliminary exploration (G3) for coal in North of Urtan North block (10.28 sq. km), Sohagpur coalfield, District: Anuppur, Madhya Pradesh.	Coal	G3	12	345.22
5	Preliminary exploration (G3) for coal in North of Saoner (15.16 sq. km), Kamptee coalfield, District: Nagpur, Maharashtra.	Coal	G3	14	265.02
6	Reconnaissance survey (G4) for coal in West of Ghugus and Bellora block (39.15 sq. km), Wardha Valley Coalfield, District: Yavatmal, Maharashtra.	Coal	G4	12	215.77
7	Preliminary exploration (G3) for coal in Brahmani North block (21.73 sq. km), Talcher Coalfield, District: Dhenkanal, Odisha.	Coal	G3	12	254.50
8	Reconnaissance survey (G4) for Zinc and associated minerals in Jamua area, District: Giridih, Jharkhand.	Zinc and associated minerals	G4	12	47.40
9	Preliminary exploration (G3) for bauxite in Dhuluapat block (4.0 sq. km), District: Lohardaga and Gumla, Jharkhand.	Bauxite	G3	12	82.21

Ministry of Mines
National Mineral Exploration Trust
Minutes of the 73rd Technical-cum-Cost Committee-1 (TCC-1) meeting held on
30th and 31st January, 2025 through video conferencing

The 73rd meeting of the Technical-cum-Cost Committee-I (TCC-1) of the National Mineral Exploration Trust (NMET) was held via video conferencing under the chairmanship of Dr. S. Ravi, Deputy Director General (DDG), Geological Survey of India Training Institute (GSITI) and Chairman, TCC-1, NMET, on 30th and 31st January, 2025.

Members of TCC-1, NMET and representatives from DGM, Chhattisgarh, DMG, Karnataka, DGM Maharashtra, CGM Tamil Nadu, MECL, CMPDI, OMC Ltd., KIOCL Limited, Maheshwari Mining Pvt Ltd, Telangana Mineral Development Corporation Limited Agency, Geo Exploration and Mining Solutions, Gemcokati Exploration Pvt Ltd, Geo Marine Solutions Pvt. Ltd., Geo Technical Mining Solutions, Critical Mineral Trackers, APC Drilling & Construction Pvt. Ltd, Kartikay Exploration and Mining Services Pvt. Ltd, and PRB Infraprojects Pvt Ltd. have attended the meeting through their respective VC modes.

The list of participants is enclosed in Annexure-1.

Shri C. Parthasarathi, Director, GSI and Member Secretary, TCC-1, NMET, welcomed Dr. S. Ravi, DDG, GSI and Chairman, TCC-1, NMET, Members of the TCC-1 and participants representing various Notified Exploration Agencies (NEAs) and Notified Private Exploration Agencies (NPEAs).

Dr. S. Ravi, Chairman of TCC-1, NMET, extended a warm welcome to all members of TCC-1 and participants representing various NEAs and NPEAs and conducted the proceedings as per circulated agenda.

Agenda 73.1: Technical evaluation of new project proposals

Agenda.73.1.1. Preliminary Exploration (G3) for Limestone in Dhunki-Chilai Block (5.58 Sq.Km Area) District- Yavatmal, Maharashtra.
[Implementing Agency: MECL]

- a) This block is a lapsed lease area and falls under 10(A) 2(B) case. The MECL claimed that DGM Maharashtra has requested MECL to upgrade the block vide letter no. Tech/1848/2023/260, dated 23/01/2024 for further exploration.
- b) The proposed area belongs to Penganga Beds or Penganga Series and falls in Survey of India toposheet no. 55I/13.
- c) The proposed exploration block lies in the east of M/s Bajrang Sales Pvt. Ltd prospected Hiwardhara lease area which shows 30.50% to 51% Cao, 2% to 19.30% MgO and 2.8% to 8% SiO₂.
- d) MECL conducted preliminary field visit in and around the Hiradhwara, Ganeshpura, Dhunki and Chilai area and collected samples which yielded 18.99% to 50.52% Cao, 1.36% to 8.22% MgO and 4.85% to 34.53% SiO₂.
- e) Based on this, MECL proposed G3 stage item in Dhunki-Chilai Block.
- f) The District Mining Officer (DMO), DMG, Maharashtra conveyed that boundaries of the block need to be modified according to the existing mining leases. It was

Agenda 73.2.13. Preliminary exploration (G3) for graphite around Naringapanga block (S & W) (0.143 sq. km) block, District Rayagada, Odisha.

[Implementing Agency: DMG Odisha]

- a) DMG Odisha informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 05th April, 2023 with timeline of 09 months and approved cost was INR 1,20,92,849/-.
- b) DMG Odisha informed that the exploration activities have been completed and the report is ready for peer review. In view of above, DMG Odisha requested for time extension upto 31st March 2025 for submission of GR.

Recommendation of TCC-1

The TCC-1 recommended time line extension upto 31st March 2025 for submission of final GR.

Agenda 73.2.14. Preliminary exploration (G3) for Graphite in Lamer-Panga block A (13.99 sq. km), District Kalahandi, Odisha.

[Implementing Agency: OMC]

- a) OMC informed that the project was approved in the 27th EC Meeting held on 10th January, 2023. The sanction order was issued on 03rd February, 2023 with timeline of 16 months and approved cost was INR 2,32,65,315/-.
- b) In the 35th EC of NMET held on 16th May 2024, project timeline was extended upto 2nd December 2024.
- c) OMC informed that Geological mapping (1:4000 scale) has been completed over the total
- d) area of 13.99 Sq Km. Based on geological mapping, surface sampling, SP survey and drilling data, the two potential mineralization zones for graphite are delineated at north-western and south-eastern part of the Lamer village. OMC informed that as forest clearance is not obtaining, the trenching work was carried out.
- e) Further, Total 17 nos. of systematic boreholes (200 m intervals of foliation direction) have been drilled and two graphite mineralization zones are delineated. The total drilling was 883 meterage out of approved 1000m. 13 nos. of boreholes are positive and FC varies from 2 % to 17.07 %. OMC apprised that 677 nos of primary samples were analyzed although approved samples were 250 nos.
- f) OMC informed that the resource has been estimated in both Cross Sectional (CS) Area method and Longitudinal Vertical (LV) Section method A total of 3098039 tonnes or 3.098 million tonnes Inferred mineral resource (333) of graphite along with different ranges of FC i.e. 1.11 million tonnes (02-05% FC), 1.532 million tonnes (05-10% FC) and 0.455 million tonnes (above 10% FC) have been estimated in Cross Sectional Area method.
- g) OMC sought approval of the committee for the revised quantum of work and time extension upto 31st March 2025 for GR submission.
- h) In view of above, the committee advised to submit the revised cost sheet with revision of quantum for approval.

Recommendation of TCC-1

The TCC-1 recommended time extension upto 31st March 2025 to EC and advised OMC to submit revised cost sheet as the Chemical Analysis of core samples

has been carried out beyond the approved NQT. Revised cost sheet should be submitted with original cost against each item/quantum and deviated cost with justification for deviation in next TCC.

Agenda 73.2.15. Preliminary Exploration (G3) for Gold in Dimirimunda Block (5 Sq. Km), District Keonjhar, Odisha.

[Implementing Agency: OMC]

- a) OMC informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 05th October 2024 with timeline of 12 months.
- b) OMC informed that geological mapping was completed in the area and 5 BHs were drilled. However, DGPS survey, topographical survey, trenching could not be carried out in the block. In the 70th TCC-1 of NMET, the committee opined that the project may be reviewed again after completion of geophysical survey. In case, gold values are still not found encouraging, the project may be prematurely concluded after submission of justification from OMC. Meanwhile, the committee had agreed for time extension upto 31st December 2024.
- c) OMC informed drone based magnetic survey was carried out in the western margin of the Dimirimunda block at 50 m line spacing. Field verification indicated lateritized ultramafic rocks in contact with the shear zone. All 3 samples collected in the zone show consistency in Ni-Co-Cr-Cu-Pb-Zn along with Vanadium values.
- d) OMC informed that the analytical results did not indicate encouraging gold values. OMC sought approval of the committee for closure of the project with time extension up to 31st March 2025 for submission of GR.
- e) In view of above, the committee agreed for closure of the project and advised to submit the revised cost sheet with revision of quantum for approval.

Recommendation of TCC-1

The TCC-1 recommended time extension upto 31st March 2025 to EC and advised to submit revised cost sheet for the project in next TCC-1.

Agenda 73.2.16. Reconnaissance Survey (G4) for Graphite in Dindo-Belkurta-Basera Block, District Surguja, Chhattisgarh.

[Implementing Agency: Maheshwari Mining Pvt. Ltd.]

- a) Maheshwari Mining Pvt. Ltd. (MMPL) informed that the project was approved in the 31st EC Meeting held on 12th September, 2023. The sanction order was issued on 05th October, 2023 with timeline of 12 months and approved cost was INR 1,04,63,931/-.
- b) MMPL presented the outcome of the project with comments of the peer reviewer.
- c) The committee noted the outcome of the project and recommended time extension upto 15th February 2025 for GR submission after incorporation of peer reviewer's comments.

Recommendation of TCC-1

The TCC-1 recommended GR submission with time extension up to 15th February 2025 for approval of EC.



ANNEXURE-IV

OFFICE OF THE DIVISIONAL FOREST OFFICER, KALAHANDI NORTH DIVISION

INFRONT OF THE OFFICE OF DISTRICT JUDGE, KALAHANDI, OLD GOVT. BUS STAND, BHAWANIPATNA, KALAHANDI, ODISHA - 766001

E-mail ID: north_kalahandi@yahoo.co.in, dfokalahandinorth2003@gmail.com Phone No. 06670-230526

Letter No. C278 /4F-(Misc) Dt: 19.07.2023

To

General Manager (Exploration),
Odisha Mineral Exploration Corporation Limited,
OMC House, Bhubaneswar-751001

Sub:- Permission to carry out 20 BHs over an area of 13.99 Sq. Km in Lamer-Panga Graphite blocks-A allotted in favour OMECL in Kalahandi District under Kalahandi North Forest Division.

Ref:- Your letter No.434 /OMECL/2023 dated.05.06.2023

Sir,

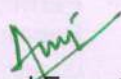
As requested by you in your above cited letter on the captioned subject, the necessary permission is hereby allowed to undertake exploratory drilling of 20 nos. boreholes of 4" dia exploratory boreholes within the lease area over 13.99 Sq. Km in Lamer-Panga Graphite blocks-A, under Narla, Lanjigarh and M. Rampur Tahasil of Kalahandi District under Narla Range without felling of trees as per as per para 4 (iv) of the Guideline No.5-3/2007-FC dt.24.12.2018 of the MoEF & CC is as follows.

"Prospecting of any minerals, done under prospecting licence granted under MMDR Act, including collection, removal of samples and seismic survey in the forest land, would be a stage between survey and investigation and grant of mining lease and as such permission under Forest (Conservation) Act,1980 would be required. However, for drilling upto 25 boreholes of maximum 4" dia per 10 Sq. Km for prospecting, exploration or reconnaissance operations, without felling of trees, shall not attract the provision of the Act".

This permission is granted subject to the following term conditions.

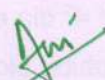
1. The permission for carrying out survey / investigation / prospecting / exploration or any payment of NPV deposited for such operations will not confer any right on the user agency to get Forest Clearance of the particular land under section-2 (ii) of the Forest (Conservation) Act,1980.
2. Existing path and roads are to be used by the user agency for the purpose of prospecting activities.
3. Proper plugging of boreholes shall be made after exploration activities are complete.
4. No work shall be allowed after sunset.
5. No tree felling shall be undertaken for exploration activities. Prospecting activities shall be restricted to clearing of bushes and lopping of tree branches if any for the purpose of site preparation.
6. Adequate measures shall be taken by the user agency to ensure that prospecting activities do not harm the wildlife in the area. Any damage done in this context, shall be dealt as per rule thereof.

7. In case of violation of conditions by the user agency, the permission for prospecting of minerals shall be suspended by the undersigned.
8. The persons deployed in the drilling work shall be responsible for the irregularities in the forest area, if any.
9. Local Forest Officials should be intimated before commencement of the work.
10. The completion of exploration work should be intimated to the undersigned.


Divisional Forest Officer,
Kalahandi North Division.

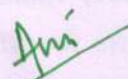
Memo No. G279 /4F-Dt: 19.07.2023

Copy forwarded to the Deputy Director of Mines, Kalahandi Circle, Bhawanipatna, for information and necessary action.


Divisional Forest Officer,
Kalahandi North Division.


Memo No. G280 /4F-Dt: 19.07.2023

Copy forwarded to the Regional Chief Conservator of Forests, Bhawanipatna Circle, Bhawanipatna for favour kind information and necessary action.


Divisional Forest Officer,
Kalahandi North Division

Memo No. G281 /4F-Dt: 19.07.2023

Copy forwarded to the Forest Range Officer, Narla Range for information and necessary action. He is requested to be vigilant on the exploratory drilling activity of the above block and any deviation / violation noticed should be reported to this office for taking immediate necessary action.


Divisional Forest Officer,
Kalahandi North Division.

ANNEXURE-V

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/01	Date of commencement : 05.02.2024
Latitude : 20°04'45.988"	Date of closing :10.03.2024
Longitude : 83°29'16.451"	Azimuth : 320°
RL of collar (m) : 270.607	Rig No. : DYNA-35-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :50.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :5.85	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.08	16	-	Pebbles of weathered granite gneiss	LPA/G3/01-01	0.00	3.50	3.50	0.03	3.48	95.2	1.29
0.50	1.00	0.50	0.11	22	-	Pebbles of weathered granite gneiss								
1.00	1.50	0.50	0.20	40	-	Hard massive fractured granite gneiss								
1.50	2.10	0.60	0.24	40	-	Highly weathered granite gneiss								
2.10	2.60	0.50	0.25	50	-	Highly weathered granite gneiss								
2.60	3.00	0.40	0.27	68	-	Highly weathered granite gneiss								
3.00	3.50	0.50	0.28	56	-	Highly weathered granite gneiss								
3.50	4.00	0.50	0.00	0	-	Core loss								
4.00	4.50	0.50	0.47	94	-	Highly weathered granite gneiss	LPA/G3/01-02	4.00	7.10	3.10	0.3	3.03	95.9	0.77
4.50	5.00	0.50	0.44	88	-	Highly fractured granite gneiss								
5.00	6.10	1.10	0.99	90	-	Highly fractured granite gneiss								
6.10	7.10	1.00	0.96	96	-	Highly fractured granite gneiss	LPA/G3/01-03	7.10	11.10	4.00	0.06	1.81	97.5	0.63
7.10	8.10	1.00	0.97	97	-	Highly fractured granite gneiss								
8.10	9.60	1.50	1.40	93	84	Highly fractured granite gneiss								
9.60	11.10	1.50	0.96	64	-	Highly fractured granite gneiss	LPA/G3/01-04	11.10	14.10	3.00	0.02	3.5	94.75	1.73
11.10	12.10	1.00	0.95	95	-	Highly fractured granite gneiss								
12.10	13.10	1.00	0.93	93	-	Highly fractured granite gneiss								
13.10	14.10	1.00	0.90	90	-	Highly fractured granite gneiss	LPA/G3/01-05	14.10	15.10	1.00	0.07	3.54	94.6	1.79
14.10	15.10	1.00	0.92	92	-	Highly fractured granite gneiss								
15.10	16.10	1.00	0.96	96	-	Inclusions of graphite within highly fractured granite gneiss								
16.10	17.10	1.00	0.95	95	-	Inclusions of graphite within highly fractured granite gneiss	LPA/G3/01-06	15.10	16.10	1.00	4.36	5.4	87.4	2.84
17.10	17.70	0.60	0.47	78	-	Highly fractured granite gneiss	LPA/G3/01-07	16.10	17.10	1.00	2.16	4.05	91.1	2.69
							LPA/G3/01-08	17.10	17.70	0.60	1.98	6.16	89	2.86
17.70	19.10	1.40	1.35	96	-	Inclusions of graphite in hard massive highly fractured granite gneiss	LPA/G3/01-09	17.70	18.70	1.00	3.49	4.7	89.4	2.41
							LPA/G3/01-10	18.70	19.80	1.10	2.84	3.38	92.2	1.58
19.10	20.60	1.50	1.49	99	-	0.70-Inclusions of graphite in hard massive fracture granite gneiss 0.79-Hard massive highly fractured granite gneiss	LPA/G3/01-11	19.80	20.60	0.80	0.69	2.05	96.5	0.76
20.60	22.10	1.50	1.42	95	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-12	20.60	21.60	1.00	2.67	3.05	93.7	0.58
22.10	23.60	1.50	1.49	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-13	21.60	22.60	1.00	5.51	3.69	89.8	1
							LPA/G3/01-14	22.60	23.60	1.00	6.03	4.49	87.9	1.58

23.60	25.10	1.50	1.40	93	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-15	23.60	24.60	1.00	9.4757	3.7977	85.4846	1.242
25.10	26.10	1.00	0.99	99	85	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-16	24.60	25.60	1.00	9.69	4.51	84.8	1
26.10	27.10	1.00	0.99	99	-	0.49-Inclusions of graphite within hard massive fractured granite gneiss 0.50-Fracture granite gneiss	LPA/G3/01-17	25.60	26.60	1.00	8.87	5.53	84.4	1.2
							LPA/G3/01-18	26.60	27.10	0.50	0.85	1.71	97.2	0.24
27.10	28.10	1.00	0.99	99	-	0.70-Graphite inclusions in hard massive fracture granite gneiss 0.29-Fracture granite gneiss	LPA/G3/01-19	27.10	27.80	0.70	3.45	3.6	92.3	0.65
28.10	29.10	1.00	0.97	97	-	Hard massive fractured granite gneiss	LPA/G3/01-20	27.80	29.10	1.30	0.27	0.95	98.4	0.38
29.10	30.10	1.00	0.96	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-21	29.10	30.10	1.00	10.1494	3.1066	86.12	0.624
30.10	31.10	1.00	0.96	96	-	0.63-Inclusions of graphite within hard massive fractured granite gneiss 0.33-Hard massive Fracture granite gneiss	LPA/G3/01-22	30.10	30.73	0.63	6.4046	4.6065	87.8286	1.1603
31.10	32.60	1.50	1.47	98	-	0.40-Hard massive fractured granite gneiss 0.30-Inclusions of graphite within hard massive granite gneiss 0.77-Hard massive fracture granite gneiss	LPA/G3/01-23	30.73	31.50	0.77	0.23	2.4923	96.6122	0.6655
							LPA/G3/01-24	31.50	31.80	0.30	2.4715	2.4002	94.3032	0.8251
32.60	33.60	1.00	0.99	99	83	0.40-Hard massive fractured granite gneiss 0.59-Inclusions of graphite within fractured granite gneiss	LPA/G3/01-25	31.80	33.00	1.20	2.0839	2.1223	95.3366	0.4572
33.60	35.00	1.40	1.38	99	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/01-26	33.00	34.00	1.00	11.2478	3.9622	83.1755	1.6145
							LPA/G3/01-27	34.00	35.00	1.00	10.4252	4.3552	83.6735	1.5461
35.00	36.00	1.00	0.93	93	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/01-28	35.00	36	1.00	12.6459	3.5741	82.2092	1.5708
36.00	37.00	1.00	0.82	82	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/01-29	36.00	37	1.00	11.6409	4.3356	82.2588	1.7647
							LPA/G3/01-30	37.00	37.30	0.30	12.7757	3.2129	82.8103	1.2011
37.00	37.40	0.40	0.38	95	-	0.30-Inclusions of graphite within altered granite gneiss 0.08-Carbonaceous material within granite gneiss			38.40		0.1449	1.3152	97.3487	1.1912
37.40	38.40	1.00	0.99	99	-	Carbonaceous material within hard massive fractured granite gneiss	LPA/G3/01-31	37.30		1.10				
38.40	38.90	0.50	0.49	98	-	0.30-Inclusions of graphite in granite gneiss 0.19- Carbonaceous material within granite gneiss	LPA/G3/01-32	38.40	38.7	0.30	7.7634	3.0572	87.8882	1.2912
							LPA/G3/01-33	38.70	39.7	1.00	0.0208	2.944	93.42	3.6152
38.90	40.00	1.10	1.09	99	-	Highly fractured granite gneiss								
40.00	41.50	1.50	1.48	99	-	Hard massive highly fractured granite gneiss					0.2398	0.6095	98.1953	0.9554
41.50	42.00	0.50	0.47	94	-	Hard massive highly fractured granite gneiss								
42.00	43.50	1.50	1.48	99	-	Hard massive highly fractured granite gneiss	LPA/G3/01-34	39.70	43.3	3.60				
											0.2468	1.2286	97.6273	0.8973
43.50	44.80	1.30	1.21	93	-	0.80-Hard massive fractured granite gneiss 0.41- Inclusions of graphite within highly fractured granite gneiss	LPA/G3/01-35	43.30	44.3	1.00				
							LPA/G3/01-36	44.30	44.8	0.50	6.722	3.7416	88.0403	1.4961

44.80	45.70	0.90	0.88	98	-	Hard massive highly fractured granite gneiss	LPA/G3/01-37	44.80	45.7	0.90	0.1666	3.941	93.7658	2.1266
45.70	47.20	1.50	1.48	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-38	45.70	46.7	1.00	7.0541	3.5688	87.9961	1.381
47.20	48.70	1.50	1.45	97	85	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-39	46.70	47.7	1.00	4.7715	2.6203	92.1353	0.4729
							LPA/G3/01-40	47.70	48.7	1.00	7.1148	3.3603	88.9912	0.5337
48.70	50.00	1.30	1.27	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/01-41	48.70	49.4	0.70	10.6687	4.2538	84.0437	1.0338
							LPA/G3/01-42	49.40	50	0.60	7.1035	3.6977	88.7893	0.4095
Borehole closed at 50.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/02	Date of commencement :20.04.2024
Latitude : 20°04'52.006"	Date of closing : 01.05.2024
Longitude : 83°29'19.342"	Azimuth : 320°
RL of collar (m) : 268.186	Rig No. : DYNA-50-CR-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :50.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :2.80	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.14	28	-	Highly weathered granite gneiss	LPA/G3/02-01	0.00	1.00	1.00	0.0741	4.9767	92.83	2.1175
0.50	1.00	0.50	0.20	40	-	Fractured rock fragment of granite gneiss								
1.00	2.00	1.00	0.80	80	-	Highly weathered granite gneiss	LPA/G3/02-02	1.00	2.00	1.00	1.0112	6.0202	90.96	2.0039
2.00	3.00	1.00	0.60	60	-	Soil with Inclusions of graphite	LPA/G3/02-03	2.00	3.00	1.00	3.033	7.6048	86.73	2.6361
3.00	3.90	0.90	0.17	19	-	Highly weathered granite gneiss	LPA/G3/02-04	3.00	5.20	2.20	0.8819	6.4994	89.27	3.3515
3.90	4.20	0.30	0.26	87	-	Highly weathered granite gneiss								
4.20	5.20	1.00	0.32	32	-	Highly weathered granite gneiss								
5.20	6.20	1.00	0.87	87	-	Highly weathered granite gneiss with inclusions of graphite	LPA/G3/02-05	5.20	6.20	1.00	4.3755	6.0661	85.63	3.9249
6.20	6.70	0.50	0.49	98	-	Highly weathered granite gneiss with inclusions of graphite	LPA/G3/02-06	6.20	7.20	1.00	4.6655	6.2483	86.16	2.9298
6.70	8.20	1.50	1.37	91	-	Highly weathered granite gneiss with inclusions of graphite	LPA/G3/02-07	7.20	8.20	1.00	3.7248	6.3166	84.63	5.3286
8.20	9.70	1.50	0.60	40	-	Highly weathered granite gneiss with inclusions of graphite	LPA/G3/02-08	8.20	9.70	1.50	4.719	4.8137	87.14	3.3292
9.70	10.70	1.00	0.26	26	-	Highly weathered granite gneiss	LPA/G3/02-09	9.70	11.70	2.00	1.4267	3.1591	93.04	2.3735
10.70	11.70	1.00	0.20	20	-	Highly weathered granite gneiss								
11.70	12.20	0.50	0.10	20	-	Fracture rock of weathered granite gneiss	LPA/G3/02-10	11.70	13.70	2.00	0.4491	5.9677	90.88	2.7069
12.20	12.70	0.50	0.25	50	-	0.10-Fractured rock fragments of granite gneiss 0.15-Highly weathered granite gneiss								
12.70	13.20	0.50	0.40	80	-	Highly weathered granite gneiss								
13.20	14.20	1.00	0.62	62	-	Highly weathered granite gneiss	LPA/G3/02-11	13.70	16.30	2.60	0.86	4.58	92.7	1.86
14.20	14.60	0.40	0.36	90	-	Highly weathered granite gneiss								
14.60	15.10	0.50	0.38	76	-	Highly weathered granite gneiss								
15.10	16.30	1.20	0.98	82	-	Highly weathered granite gneiss	LPA/G3/02-12	16.30	17.30	1.00	6.9438	5.2137	84.17	3.6728
16.30	17.30	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss								
17.30	18.10	0.80	0.79	99	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-13	17.30	18.30	1.00	7.0901	4.7647	85.83	2.3109
18.10	19.60	1.50	1.40	93	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-14	18.30	19.30	1.00	6.64	6.76	84.1	2.5
19.60	21.10	1.50	1.46	97	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-15	19.30	20.30	1.00	8.9582	5.4269	83.18	2.4348

21.10	22.60	1.50	1.48	99	85	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-16	20.30	21.30	1.00	11.63	5.53	81.2	1.64
							LPA/G3/02-17	21.30	22.30	1.00	11.0694	5.3032	82.18	1.4425
22.60	24.10	1.50	1.48	99	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-18	22.30	23.30	1.00	10	4.82	83.6	1.58
							LPA/G3/02-19	23.30	24.10	0.80	6.1297	5.3772	85.15	3.3432
24.10	25.30	1.20	0.95	79	-	0.70-weathered granite gneiss 0.25-Inclusions of graphite within weathered granite gneiss	LPA/G3/02-20	24.10	24.80	0.70	0.25	7.34	88	4.41
							LPA/G3/02-21	24.80	26.15	1.35	4.86	9.21	78	7.93
25.30	26.80	1.50	1.35	90	-	0.85-Inclusions of graphite within weathered granite gneiss 0.50-Weathered granite gneiss	LPA/G3/02-22	26.15	26.80	0.65	1.96	9.18	83	5.86
							LPA/G3/02-23	26.80	27.80	1.00	5.44	7.89	81.6	5.07
26.80	28.30	1.50	1.35	90	-	Inclusions of graphite within weathered granite gneiss	LPA/G3/02-24	27.80	28.80	1.00	5.66	6.57	83.6	4.17
							LPA/G3/02-25	28.80	29.80	1.00	5.88	9.12	81.3	3.7
28.30	29.80	1.50	1.03	69	-	Inclusions of graphite within weathered granite gneiss	LPA/G3/02-26	29.80	30.80	1.00	6.52	6.6	83.5	3.38
							LPA/G3/02-27	30.80	32.10	1.30	6.67	8.34	78.6	6.39
29.80	31.30	1.50	1.38	92	-	Inclusions of graphite within weathered granite gneiss								
							LPA/G3/02-28	32.10	32.80	0.70	3.73	9.35	83.7	3.22
31.30	32.80	1.50	1.15	77	-	0.80-Inclusions of graphite within weathered granite gneiss 0.35-weathered granite gneiss								
							LPA/G3/02-29	32.80	33.80	1.00	6.44	5.67	85.8	2.09
32.80	34.30	1.50	1.46	97	-	Inclusions of graphite within weathered granite gneiss								
							LPA/G3/02-30	33.80	34.80	1.00	6.42	4.58	86.4	2.6
34.30	35.80	1.50	1.40	93	85	Inclusions of graphite within weathered granite gneiss								
							LPA/G3/02-31	34.80	35.80	1.00	6.76	4.99	85.3	2.95
35.80	37.30	1.50	1.40	93	-	Highly fractured granite gneiss	LPA/G3/02-32	35.80	36.80	1.00	2.35	7.1	87.2	3.35
							LPA/G3/02-33	36.80	37.80	1.00	3.23	6.65	86.9	3.22
37.30	38.80	1.50	1.42	95	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/02-34	37.80	38.80	1.00	6.74	5.24	85.9	2.12
38.80	39.30	0.50	0.49	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/02-35	38.80	39.80	1.00	6.48	5.39	86.9	1.23
39.30	40.30	1.00	0.95	95	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/02-36	39.80	40.80	1.00	7.45	5.35	85.2	2
40.30	41.30	1.00	0.98	98	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/02-37	40.80	41.80	1.00	6.95	5.87	85.1	2.08
41.30	42.00	0.70	0.69	99	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/02-38	41.80	42.80	1.00	6.36	6.34	85.8	1.5
42.00	43.50	1.50	1.49	99	84	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/02-39	42.80	43.80	1.00	6.42	5.39	86.3	1.89
43.50	44.60	1.10	1.08	98	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/02-40	43.80	44.60	0.80	4.51	4.03	89.5	1.96
44.60	45.60	1.00	0.97	97	-	Hard massive fractured granite gneiss	LPA/G3/02-41	44.60	45.60	1.00	0.96	6.38	88.7	3.96
45.60	46.60	1.00	0.99	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/02-42	45.60	46.60	1.00	4.1	4.33	90.1	1.47
46.60	47.60	1.00	0.95	95	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/02-43	46.60	47.60	1.00	3.1	5.13	89.9	1.87

47.60	48.60	1.00	0.96	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/02-44	47.60	50.00	2.40	3.64	3.61	91.5	1.25
48.60	49.50	0.90	0.81	90	-	Inclusions of graphite within hard massive fractured granite gneiss								
49.50	50.00	0.50	0.48	96	85	Inclusions of graphite within hard massive fractured granite gneiss								
Borehole closed at 50.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/03	Date of commencement : 08.02.2024
Latitude : 20°05'5.619"	Date of closing : 15.02.2024
Longitude : 83°29'33.909"	Azimuth : 310°
RL of collar (m) : 288.246	Rig No. : DYNA-35-02
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.90	0.90	0.55	61	-	0.18-Fractured pebbles of granite gneiss, 0.37-Hard massive granite gneiss	LPA/G3/03-01	0.00	3.00	3.00	0.08	1.06	98.54	0.32
0.90	1.90	1.00	0.94	94	-	Hard massive fractured granite gneiss								
1.90	2.40	0.50	0.45	90	-	Hard massive granite gneiss								
2.40	3.40	1.00	0.94	94	-	Hard massive fractured granite gneiss								
3.40	4.00	0.60	0.54	90	-	Hard massive fractured granite gneiss	LPA/G3/03-02	3.00	6.00	3.00	0.24	1.58	97.72	0.46
4.00	4.80	0.80	0.79	99	-	Hard massive fractured granite gneiss								
4.80	5.50	0.70	0.68	97	-	Hard massive fractured granite gneiss								
5.50	6.95	1.45	1.44	99	-	Hard massive fractured granite gneiss								
6.95	8.45	1.50	1.37	91	-	Hard massive fractured granite gneiss	LPA/G3/03-03	6.00	9.00	3.00	0.53	2.56	96.46	0.45
8.45	9.45	1.00	0.47	47	-	Highly fractured and altered granite gneiss	LPA/G3/03-04	9.00	12.00	3.00	0.15	0.48	99.03	0.35
9.45	9.95	0.50	0.23	46	-	Highly fractured granite gneiss								
9.95	10.50	0.55	0.33	60	-	Hard and fractured granite gneiss								
10.50	11.50	1.00	0.99	99	-	Hard massive and fractured granite gneiss								
11.50	12.95	1.45	1.39	96	-	Hard massive and fractured granite gneiss	LPA/G3/03-05	12.00	15.00	3.00	0.02	0.25	99.58	0.15
12.95	14.45	1.50	1.49	99	-	Hard massive and fractured granite gneiss								
14.45	15.95	1.50	1.48	99	79	Hard massive and fractured granite gneiss	LPA/G3/03-06	15.00	18.00	3.00	0.21	0.49	99.29	0.02
15.95	17.45	1.50	1.49	99	-	Hard massive and fractured granite gneiss								

17.45	18.90	1.45	1.44	99	-	Hard massive and fractured granite gneiss with silica intrusion	LPA/G3/03-07	18.00	21.00	3.00	0.12	0.42	99.40	0.06
18.90	20.30	1.40	1.39	99	-	Hard massive and fractured granite gneiss with silica intrusion								
20.30	21.80	1.50	1.49	99	-	Hard massive and fractured granite gneiss								
21.80	22.40	0.60	0.59	98	-	Hard massive and fractured granite gneiss	LPA/G3/03-08	21.00	24.00	3.00	0.03	0.05	99.90	0.02
22.40	23.90	1.50	1.49	99	80	Hard massive and fractured granite gneiss								
23.90	25.40	1.50	1.47	98	-	Hard massive and fractured granite gneiss								
25.40	26.90	1.50	1.49	99	-	Hard massive and fractured granite gneiss	LPA/G3/03-09	24.00	27.00	3.00	0.02	0.15	99.80	0.03
26.90	28.40	1.50	1.45	97	-	Hard massive and fractured granite gneiss								
28.40	29.20	0.80	0.78	97	-	Hard massive and fractured granite gneiss								
29.20	30.70	1.50	1.48	99	-	Hard massive and fractured granite gneiss with inclusion of mica	LPA/G3/03-10	27.00	30.00	3.00	0.12	0.94	98.32	0.62
30.70	32.20	1.50	1.48	99	-	Hard massive and fractured granite gneiss with inclusion of mica								
32.20	33.70	1.50	1.48	99	80	Hard massive granite gneiss,								
33.70	35.00	1.30	1.29	99	-	Hard massive granite gneiss	LPA/G3/03-11	30.00	33.00	3.00	0.26	0.93	98.80	0.01
							LPA/G3/03-12	33.00	35.00	2.00	0.59	0.77	98.60	0.04
Borehole closed at 35.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK	
Detailed Litholog	
Borehole No. :LPA/G3/04	Date of commencement : 01.04.2024
Latitude : 20°05'0.734"	Date of closing : 07.04.2024
Longitude : 83°29'29.694"	Azimuth : 310°
RL of collar (m) : 320.371	Rig No. : DYNA-50-CR-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) :3.80	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.16	32	-	Highly weathered granite gneiss	LPA/G3/04-01	0.00	3.00	3.00	0.05	3.43	94.53	1.99
0.50	1.00	0.50	0.18	36	-	Highly weathered granite gneiss								
1.00	1.30	0.30	0.16	53	-	Highly weathered granite gneiss								
1.30	2.00	0.70	0.40	57	-	Highly weathered granite gneiss								
2.00	2.50	0.50	0.45	90	-	Highly weathered granite gneiss								
2.50	3.00	0.50	0.48	96	-	Highly weathered granite gneiss								
3.00	3.50	0.50	0.48	96	-	Highly weathered granite gneiss	LPA/G3/04-02	3.00	6.00	3.00	0.01	2.89	94.37	2.73
3.50	4.00	0.50	0.49	98	-	Highly weathered granite gneiss								
4.00	4.50	0.50	0.45	90	-	Highly weathered granite gneiss								
4.50	5.00	0.50	0.47	94	-	Highly weathered granite gneiss								
5.00	5.50	0.50	0.49	98	-	Highly weathered and fractured granite gneiss								
5.50	6.00	0.50	0.40	80	-	Highly weathered and fractured granite gneiss								
6.00	6.80	0.80	0.69	86	-	Highly weathered and fractured granite gneiss	LPA/G3/04-03	6.00	9.00	3.00	0.03	1.49	97.20	1.28
6.80	7.30	0.50	0.45	90	-	weathered granite gneiss								
7.30	7.80	0.50	0.39	78	-	weathered granite gneiss								
7.80	8.30	0.50	0.46	92	-	weathered granite gneiss								
8.30	8.80	0.50	0.43	86	-	weathered granite gneiss								
8.80	9.30	0.50	0.40	80	-	weathered granite gneiss								
9.30	9.80	0.50	0.48	96	-	0.20m -weathered granite gneiss, 0.30m -Fractured granite gneiss	LPA/G3/04-04	9.00	12.00	3.00	0.02	0.65	98.62	0.70
9.80	10.30	0.50	0.34	68	-	Fractured granite gneiss								
10.30	10.80	0.50	0.33	66	-	Fractured granite gneiss								
10.80	11.30	0.50	0.40	80	-	Hard massive fractured granite gneiss								
11.30	11.80	0.50	0.48	96	-	Hard massive fractured granite gneiss with inclusions of mica								
11.80	12.90	1.10	1.03	94	-	Hard massive fractured granite gneiss with inclusions of mica								
12.90	13.50	0.60	0.57	95	-	Hard massive fractured granite gneiss	LPA/G3/04-05	12.00	15.00	3.00	0.20	0.62	98.77	0.41
13.50	14.40	0.90	0.88	98	-	Hard massive fractured granite gneiss								
14.40	15.40	1.00	0.96	96	85	Hard massive fractured granite gneiss								

15.40	15.90	0.50	0.49	98	-	Hard massive fractured granite gneiss	LPA/G3/04-06		15.00	18.00	3.00	0.21	1.05	98.25	0.49
15.90	16.10	0.20	0.18	90	-	Hard massive fractured granite gneiss									
16.10	17.40	1.30	1.26	97	-	Hard massive fractured granite gneiss									
17.40	18.80	1.40	1.38	99	-	Hard massive fractured granite gneiss	LPA/G3/04-07		18.00	21.00	3.00	0.25	0.53	99.17	0.06
18.80	20.30	1.50	1.47	98	-	Hard massive fractured granite gneiss									
20.30	21.80	1.50	1.47	98	-	Hard massive fractured granite gneiss									
21.80	23.30	1.50	1.49	99	-	Hard massive fractured granite gneiss	LPA/G3/04-08		21.00	24.00	3.00	0.02	0.10	99.80	0.08
23.30	24.70	1.40	1.38	99	-	Hard massive fractured granite gneiss									
24.70	26.20	1.50	1.47	98	-	Hard massive fractured granite gneiss									
26.20	27.70	1.50	1.45	97	-	Hard massive fractured granite gneiss	LPA/G3/04-09		24.00	27.00	3.00	0.10	0.83	99.00	0.07
27.70	29.20	1.50	1.48	99	85	Hard massive fractured granite gneiss									
29.20	29.70	0.50	0.43	86	-	Hard massive fractured granite gneiss									
29.70	30.90	1.20	1.17	98	-	Hard massive fractured granite gneiss	LPA/G3/04-10		27.00	30.00	3.00	0.07	0.17	99.56	0.20
30.90	32.40	1.50	1.47	98	-	Hard massive fractured granite gneiss									
32.40	33.40	1.00	0.96	96	-	Hard massive fractured granite gneiss									
33.40	34.50	1.10	1.07	97	-	Hard massive fractured granite gneiss	LPA/G3/04-11		30.00	33.00	3.00	0.02	0.06	99.91	0.01
34.50	35.00	0.50	0.44	88	-	Hard massive fractured granite gneiss									
Borehole closed at 35.00 m															

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/05	Date of commencement : 07.02.2024
Latitude : 20°04'35.31"	Date of closing : 06.04.2024
Longitude : 83°29'06.503"	Azimuth : 310°
RL of collar (m) : 306.985	Rig No. : DYNA-35-01
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :60.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.75	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.25	50	-	Pebbles of highly weathered granite gneiss	LPA/G3/05-01	0.00	1.10	1.10	0.9156	4.2586	93.0557	1.7701
0.50	1.10	0.60	0.25	42	-	Pebbles of highly weathered granite gneiss	LPA/G3/05-02	1.10	2.10	1.00	9.09	6.56	82.6	1.75
1.10	1.60	0.50	0.25	50	-	Inclusions of graphite within highly weathered granite gneiss								
1.60	2.00	0.40	0.30	75	-	Inclusions of graphite within highly weathered granite gneiss								
2.00	2.60	0.60	0.50	83	-	Inclusions of graphite within highly weathered granite gneiss								
2.60	3.10	0.50	0.33	66	-	Inclusions of graphite within highly weathered granite gneiss								
3.10	3.60	0.50	0.25	50	-	Highly weathered granite gneiss	LPA/G3/05-04	3.10	3.60	0.50	0.64	5.85	91.7	1.81
3.60	4.10	0.50	0.30	60	-	Inclusions of graphite within highly weathered granite gneiss	LPA/G3/05-05	3.60	5.10	1.50	13.13	3.75	82.3	0.82
4.10	4.60	0.50	0.20	40	-	Inclusions of graphite within highly weathered granite gneiss								
4.60	5.10	0.50	0.20	40	-	Inclusions of graphite within highly weathered granite gneiss								
5.10	5.60	0.50	0.00	0	-	Core Loss								
5.60	6.10	0.50	0.42	84	-	Inclusions of graphite within highly weathered granite gneiss	LPA/G3/05-06	5.60	6.60	1.00	7.17	5.37	84.7	2.76
6.10	7.10	1.00	0.85	85	-	Inclusions of graphite within highly weathered granite gneiss	LPA/G3/05-07	6.60	8.10	1.50	2.2709	3.2875	92.7751	1.6665
7.10	8.10	1.00	0.85	85	-	Inclusions of graphite within highly weathered granite gneiss								
8.10	9.10	1.00	0.85	85	-	Hard fractured granite gneiss	LPA/G3/05-08	8.10	9.10	1.00	2.52	3.12	92.6	1.76
9.10	10.10	1.00	0.55	55	-	Inclusions of graphite within highly weathered granite gneiss	LPA/G3/05-09	9.10	10.60	1.50	2.49	3.7	92.4	1.41
10.10	10.60	0.50	0.24	48	-	Inclusions of graphite within highly weathered granite gneiss								
10.60	11.10	0.50	0.25	50	-	Weathered granite gneiss	LPA/G3/05-10	10.60	12.10	1.50	0.18	6.38	90.5	2.94
11.10	11.60	0.50	0.40	80	-	Weathered granite gneiss								
11.60	12.10	0.50	0.45	90	-	Weathered granite gneiss								
12.10	12.60	0.50	0.43	86	-	Inclusions of graphite within highly weathered granite gneiss	LPA/G3/05-11	12.10	13.60	1.50	11.7822	3.5617	83.0549	1.6012
12.60	13.10	0.50	0.48	96	-	Inclusions of graphite within highly weathered granite gneiss								
13.10	13.60	0.50	0.41	82	-	Inclusions of graphite within highly weathered granite gneiss								
13.60	14.60	1.00	0.87	87	-	Weathered and fractured granite gneiss	LPA/G3/05-12	13.60	15.60	2.00	1.0449	2.1228	95.2233	1.609
14.60	15.10	0.50	0.47	94	-	Weathered and fractured granite gneiss								
15.10	15.60	0.50	0.37	74	-	Weathered and fractured granite gneiss								
15.60	16.10	0.50	0.35	70	-	Weathered and fractured granite gneiss	LPA/G3/05-13	15.60	16.86	1.26	1.6466	2.1623	94.8257	1.3654
16.10	16.60	0.50	0.42	84	-	Weathered and fractured granite gneiss								
16.60	17.10	0.50	0.41	82	-	0.26-Hard massive fractured granite gneiss 0.15-Inclusions of graphite within weathered granite gneiss	LPA/G3/05-14	16.86	18.10	1.24	9.2173	2.9833	86.1938	1.6056
17.10	17.60	0.50	0.45	90	-	Inclusions of graphite within weathered and fractured granite gneiss								
17.60	18.10	0.50	0.47	94	-	Inclusions of graphite within weathered and fractured granite gneiss								

18.10	18.60	0.50	0.31	62	-	Inclusions of graphite within weathered and fractured granite gneiss	LPA/G3/05-15	18.10	19.10	1.00	6.8497	5.1169	85.997	2.0364
18.60	19.10	0.50	0.35	70	-	Inclusions of graphite within weathered and fractured granite gneiss								
19.10	19.60	0.50	0.38	76	-	Inclusions of graphite within weathered and fractured granite gneiss	LPA/G3/05-16	19.10	20.45	1.35	11.8381	2.8709	83.8752	1.4158
19.60	20.20	0.60	0.46	77	-	Inclusions of graphite within weathered and fractured granite gneiss								
20.20	20.80	0.60	0.45	75	-	0.25-Inclusions of graphite within weathered and fractured granite gneiss 0.20-Fractured granite gneiss	LPA/G3/05-17	20.45	21.10	0.65	1.4395	3.7232	93.5244	1.3129
20.80	21.40	0.60	0.46	77	-	0.30 - Hard massive fractured granite gneiss 0.16- Minor graphite Inclusions in granite gneiss	LPA/G3/05-18	21.10	21.70	0.60	2.228	4.4422	90.9995	2.3303
21.40	22.10	0.70	0.66	94	-	0.30-Inclusions of graphite within weathered and fractured granite gneiss 0.36-Fractured granite gneiss	LPA/G3/05-19	21.70	22.60	0.90	0.4596	1.8638	96.2114	1.4652
22.10	22.60	0.50	0.49	98	-	Hard massive fractured granite gneiss								
22.60	23.10	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-20	22.60	23.60	1.00	16.2138	2.307	80.9198	0.5594
23.10	24.10	1.00	0.93	93	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-21	23.60	24.60	1.00	14.8922	1.0469	83.751	0.3099
24.10	25.10	1.00	0.80	80	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-22	24.60	25.60	1.00	11.6073	3.2129	84.027	1.1528
25.10	25.60	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-23	25.60	26.60	1.00	13.9706	2.1306	82.9333	0.9655
25.60	26.60	1.00	0.95	95	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-24	26.60	27.60	1.00	10.8199	3.562	84.1309	1.4872
26.60	27.10	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-25	27.60	28.60	1.00	11.5018	3.2152	83.4628	1.8202
27.10	28.10	1.00	0.96	96	80	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-26	28.60	29.60	1.00	12.5304	3.3281	81.864	2.2775
28.10	29.10	1.00	0.98	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-27	29.60	30.60	1.00	16.6512	2.2168	80.171	0.961
29.10	30.10	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-28	30.60	31.60	1.00	14.8506	2.9772	80.5998	1.5724
30.10	31.10	1.00	0.92	92	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-29	31.60	32.60	1.00	16.8855	2.3513	80.5729	0.1903
31.10	32.10	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-30	32.60	33.60	1.00	17.0782	2.344	79.8504	0.7274
32.10	33.10	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-31	33.60	34.60	1.00	15.1855	3.2976	80.4887	1.0282
33.10	34.10	1.00	0.76	76	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-32	34.60	35.60	1.00	15.1188	4.2246	79.927	0.7296
34.10	35.60	1.50	1.35	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-33	35.60	36.60	1.00	9.6911	4.8809	84.0876	1.3404
35.60	36.60	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-34	36.60	37.10	0.50	11.4465	4.5064	82.989	1.0581
36.60	37.10	0.50	0.44	88	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/05-35	37.10	38.10	1.00	9.9894	4.5246	84.5027	0.9833
37.10	38.10	1.00	0.99	99	-	Hard massive fractured granite gneiss	LPA/G3/05-36	38.10	39.30	1.20	11.7507	3.4038	84.165	0.6805
38.10	39.10	1.00	0.96	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-37	39.30	41.00	1.70	1.3398	1.1766	97.1147	0.3689
39.10	40.00	0.90	0.88	98	-	0.20-Inclusions of graphite within hard massive fractured granite gneiss 0.68- Hard massive fractured granite gneiss								
40.00	41.00	1.00	0.95	95	-	Hard massive fractured granite gneiss	LPA/G3/05-38	41.00	42.00	1.00	8.9779	2.2055	88.5284	0.2882
41.00	42.00	1.00	0.94	94	79	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-39	42.00	43.00	1.00	16.4445	2.6267	80.4341	0.4947
42.00	43.00	1.00	0.94	94	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-40	43.00	44.00	1.00	10.4091	2.2174	87.0506	0.3229
43.00	44.00	1.00	0.97	97	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-41	44.00	45.00	1.00	8.3009	3.0043	88.0218	0.673
44.00	45.00	1.00	0.97	97	-	Inclusions of graphite within hard massive fractured granite gneiss								

45.00	46.00	1.00	0.96	96	-	Inclusions of graphite within hard massive fractured granite gneiss with sulphide	LPA/G3/05-42	45.00	46.00	1.00	13.6009	2.4375	83.1493	0.8123
46.00	47.00	1.00	0.98	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-43	46.00	47.00	1.00	9.2119	2.4308	87.7712	0.5861
47.00	48.00	1.00	0.99	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-44	47.00	48.00	1.00	12.0146	2.8576	84.519	0.6088
48.00	49.00	1.00	0.98	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-45	48.00	49.00	1.00	13.8862	2.8038	82.1421	1.1679
49.00	50.00	1.00	0.96	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-46	49.00	50.00	1.00	13.0272	2.1321	84.2754	0.5653
50.00	51.00	1.00	0.95	95	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-47	50.00	51.00	1.00	12.7214	2.0895	84.5853	0.6038
51.00	52.50	1.50	1.47	98	80	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-48	51.00	52.00	1.00	8.5878	2.786	87.5093	1.1169
52.50	54.00	1.50	1.38	92	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-49	52.00	53.00	1.00	8.9246	2.6157	87.611	0.8487
54.00	55.00	1.00	0.99	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-50	53.00	54.00	1.00	8.6561	3.8985	86.1259	1.3195
55.00	56.00	1.00	0.98	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-51	54.00	55.00	1.00	10.0573	3.659	84.9638	1.3199
56.00	57.00	1.00	0.99	99	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-52	55.00	56.00	1.00	9.2623	2.8267	86.8206	1.0904
57.00	58.00	1.00	0.97	97	80	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-53	56.00	57.00	1.00	9.5052	3.2153	86.3544	0.9251
58.00	59.00	1.00	0.98	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-54	57.00	58.00	1.00	8.854	3.9854	85.962	1.1986
59.00	60.00	1.00	0.97	97	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-55	58.00	59.00	1.00	8.6598	4.1167	86.1964	1.0271
59.00	60.00	1.00	0.97	97	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/05-56	59.00	60.00	1.00	10.6104	2.2736	86.3699	0.7461
Borehole closed at 60.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/06	Date of commencement : 10.02.2024
Latitude : 20°04'41.889"	Date of closing : 03.04.2024
Longitude : 83°29'11.172"	Azimuth : 310°
RL of collar (m) : 279.961	Rig No. : DYNA-35-02
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :45.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.50	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.70	0.70	0.28	40	-	Highly weathered granite gneiss	LPA/G3/06-01	0.00	2.20	2.20	0.4734	5.3839	92.2749	1.8678
0.70	1.20	0.50	0.00	0	-	Core loss								
1.20	1.70	0.50	0.00	0	-	Core loss								
1.70	2.20	0.50	0.30	60	-	Highly weathered granite gneiss								
2.20	2.80	0.60	0.11	18	-	Highly weathered granite gneiss	LPA/G3/06-02	2.20	3.60	1.40	3.3356	5.0813	90.0396	1.5435
2.80	3.30	0.50	0.21	42	-	Inclusions of graphite withen weathered granite gneiss								
3.30	3.60	0.30	0.28	93	-	Inclusions of graphite within granite gneiss	LPA/G3/06-03	3.60	4.30	0.70	0.8625	4.6588	93.2164	1.2623
3.60	4.10	0.50	0.47	94	-	Inclusions of graphite within granite gneiss								
4.10	4.60	0.50	0.38	76	-	0.20 Inclusions of graphite within granite gneiss 0.18 Highly weathered granite gneiss	LPA/G3/06-04	4.30	6.10	1.80	0.0152	1.2585	98.47	0.2563
4.60	5.10	0.50	0.43	86	-	Highly fractured granite gneiss								
5.10	6.10	1.00	0.84	84	-	Highly fractured granite gneiss	LPA/G3/06-05	6.10	10.10	4.00	0.0303	0.8733	98.9	0.1964
6.10	6.95	0.85	0.79	93	-	Highly fractured granite gneiss								
6.95	8.45	1.50	1.39	93	-	Highly fractured granite gneiss								
8.45	9.50	1.05	1.02	97	-	Highly fractured granite gneiss								
9.50	10.10	0.60	0.59	98	-	Highly fractured granite gneiss	LPA/G3/06-06	10.10	14.10	4.00	0.0141	1.4781	97.91	0.5978
10.10	10.50	0.40	0.24	60	-	Highly weathered and fractured granite gneiss								
10.50	11.00	0.50	0.32	64	-	Highly weathered granite gneiss								
11.00	11.50	0.50	0.25	50	-	Highly weathered and fractured granite gneiss								
11.50	12.00	0.50	0.39	78	-	Highly weathered and fractured granite gneiss								
12.00	12.50	0.50	0.46	92	-	Highly weathered and fractured granite gneiss								
12.50	13.10	0.60	0.59	98	-	Hard massive fractured granite gneiss								
13.10	14.10	1.00	0.99	99	-	Hard massive fractured granite gneiss								
14.10	14.60	0.50	0.48	96	-	Hard massive fractured granite gneiss	LPA/G3/06-07	14.10	16.84	2.74	0.0239	0.9458	98.45	0.5803
14.60	15.10	0.50	0.45	90	-	Hard massive fractured granite gneiss								
15.10	16.10	1.00	0.95	95	-	Hard massive fractured granite gneiss								

16.10	17.10	1.00	0.94	94	-	0.74 Hard massiveFractured granite gneiss 0.20 Inclusions of graphite withen frctured granite gneiss	LPA/G3/06-08	16.84	18.10	1.26	1.6274	2.8946	93.9998	1.4782
17.10	18.10	1.00	0.99	99	-	Inclusions of graphite withen fractured granite gneiss								
18.10	19.10	1.00	0.99	99	80	0.69- fractured granite gneiss 0.30- Inclusions of graphite	LPA/G3/06-09	18.10	18.79	0.69	0.5509	1.8906	96.8158	0.7427
19.10	20.10	1.00	0.95	95	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-10	18.79	20.10	1.31	3.36	4.7375	89.9179	1.9846
20.10	21.10	1.00	0.98	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-11	20.10	21.10	1.00	3.4579	6.516	87.0125	3.0136
21.10	22.10	1.00	0.94	94	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-12	21.10	22.10	1.00	2.6744	8.0542	86.4984	2.773
22.10	23.15	1.05	1.00	95	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-13	22.10	23.10	1.00	2.2477	6.2553	89.2581	2.2389
23.15	24.15	1.00	0.56	56	-	Inclusions of graphite within fractured and altered granite gneiss	LPA/G3/06-14	23.10	24.10	1.00	4.3028	6.4041	87.2672	2.0259
24.15	24.55	0.40	0.3	75	-	0.25 Highly fractured and altered granite gneiss 0.20 Inclusions of graphite within fractured granite gneiss	LPA/G3/06-15	24.10	25.10	1.00	0.2366	2.7414	95.2283	1.7937
24.55	25.05	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss								
25.05	25.55	0.50	0.4	80	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/06-16	25.10	26.05	0.95	3.4498	3.2559	91.1489	2.1454
25.55	26.05	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-17	26.05	27.85	1.80	0.0786	1.6973	97.2385	0.9856
26.05	26.55	0.50	0.49	98	-	Highly fractured and altered granite gneiss								
26.55	27.10	0.55	0.54	98	-	Highly fractured and altered granite gneiss								
27.10	27.85	0.75	0.44	59	-	Highly fractured and altered granite gneiss								
27.85	28.30	0.45	0.42	93	-	Inclusions of graphite within highly fractured and altered granite gneiss	LPA/G3/06-18	27.85	28.80	0.95	2.6762	2.3707	93.1734	1.7797
28.30	28.80	0.50	0.36	72	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-19	28.80	30.00	1.20	1.7247	3.8529	91.7956	2.6268
28.80	29.40	0.60	0.54	90	-	Inclusions of graphite within fractured granite gneiss								
29.40	30.00	0.60	0.53	88	-	Inclusions of graphite within fractured granite gneiss								
30.00	30.60	0.60	0.59	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-20	30.00	31.00	1.00	3.1839	3.8215	91.4553	1.5393
30.60	31.60	1.00	0.82	82	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-21	31.00	32.00	1.00	1.8108	3.9291	92.2108	2.0493
31.60	32.20	0.60	0.49	82	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-22	32.00	33.00	1.00	3.6997	3.7974	90.8994	1.6035
32.20	33.00	0.80	0.65	81	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-23	33.00	33.40	0.40	2.0041	2.9183	93.717	1.3606
33.00	33.40	0.40	0.37	93	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-24	33.40	34.00	0.60	0.29	1.51	97.7	0.5
33.40	34.00	0.60	0.38	63	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-25	34.00	35.00	1.00	5.732	4.0548	88.4037	1.8095
34.00	34.50	0.50	0.43	86	-	Inclusions of graphite within fractured granite gneiss								
34.50	35.00	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss								

35.00	35.55	0.55	0.54	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-26	35.00	36.00	1.00	4.3949	3.9333	89.7445	1.9273
35.55	36.05	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss								
36.05	36.55	0.50	0.43	86	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/06-27	36.00	37.00	1.00	4.3405	4.2444	89.2285	2.1866
36.55	37.05	0.50	0.49	98	-	Inclusions of graphite within hard massive fractured granite gneiss								
37.05	38.00	0.95	0.64	67	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/06-28	37.00	38.00	1.00	4.44	4.48	89.6	1.48
38.00	38.50	0.50	0.49	98	-	Inclusions of graphite within hard massive fractured granite gneiss								
38.50	39.00	0.50	0.48	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/06-29	38.00	39.00	1.00	3.6411	3.0806	92.3776	0.9007
39.00	39.50	0.50	0.47	94	-	0.17-Inclusions of graphite within fractured granite gneiss 0.30-Highly fractured granite gneiss								
39.50	40.00	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-30	39.00	40.00	1.00	2.7128	3.4844	92.6776	1.1252
40.00	40.95	0.95	0.90	95	80	0.40-Inclusions of graphite within fractured granite gneiss 0.20-Highly fractured granite gneiss 0.30-Inclusions of graphite within fractured granite gneiss								
40.95	41.60	0.65	0.59	91	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/06-31	40.00	41.00	1.00	3.71	2.66	92.9	0.73
41.60	42.50	0.90	0.8	89	-	Inclusions of graphite within fractured granite gneiss								
42.50	43.10	0.60	0.54	90	-	0.34-Inclusions of graphite within fractured granite gneiss 0.20-Highly fractured granite gneiss	LPA/G3/06-32	41.00	42.00	1.00	2.61	5.44	90.1	1.85
43.10	43.60	0.50	0.45	90	-	Hard massive fractured granite gneiss	LPA/G3/06-33	42.00	42.85	0.85	1.86	5.63	91.3	1.21
43.60	44.15	0.55	0.5	91	-	Inclusions of graphite within hard massive fractured granite gneiss								
44.15	44.65	0.50	0.4	80	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/06-34	42.85	43.60	0.75	5.88	4.19	88.7	1.23
44.65	45.00	0.35	0.2	57	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/06-35	43.60	44.30	0.70	5.77	4.24	87.9	2.09
							LPA/G3/06-36	44.30	45.00	0.70	5.22	4.52	88.1	2.16
Borehole closed at 45.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/07	Date of commencement : 09.04.2024
Latitude : 20°05'32.538"	Date of closing : 16.04.2024
Longitude : 83°28'58.792"	Azimuth : 310°
RL of collar (m) : 305.257	Rig No. : DYNA-50-CR-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) : 35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 8.50	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	1.00	1.00	0.00	0	-	sludge	LPA/G3/07-01	1.50	5.50	4.00	1.47	4.02	92.45	2.07
1.00	1.50	0.50	0.00	0	-	sludge								
1.50	2.00	0.50	0.36	72	-	Highly weathered granite gneiss								
2.00	2.50	0.50	0.28	56	-	Highly weathered granite gneiss								
2.50	3.00	0.50	0.25	50	-	Highly weathered granite gneiss								
3.00	3.50	0.50	0.43	86	-	Highly weathered granite gneiss								
3.50	4.00	0.50	0.45	90	-	Highly weathered granite gneiss								
4.00	4.50	0.50	0.46	92	-	Highly weathered granite gneiss								
4.50	5.00	0.50	0.42	84	-	Highly weathered and fractured granite gneiss								
5.00	5.50	0.50	0.47	94	-	Highly fractured granite gneiss								
5.50	6.50	1.00	0.93	93	85	Highly fractured granite gneiss	LPA/G3/07-02	5.50	7.00	1.50	0.43	3.11	94.90	1.56
6.50	7.00	0.50	0.44	88	-	Highly weathered granite gneiss	LPA/G3/07-03	7.00	8.00	1.00	0.35	3.75	93.74	2.16
7.00	7.50	0.50	0.43	86	-	Weathered granite gneiss								
7.50	8.00	0.50	0.44	88	-	Weathered granite gneiss	LPA/G3/07-04	8.00	9.00	1.00	1.93	3.89	90.27	3.91
8.00	8.50	0.50	0.45	90	-	Inclusion of graphite in weathered granite gneiss								
8.50	9.00	0.50	0.39	78	-	Inclusion of graphite in weathered granite gneiss	LPA/G3/07-05	9.00	10.10	1.10	0.85	2.29	96.06	0.80
9.00	9.60	0.60	0.56	93	-	Hard massive fractured granite gneiss								
9.60	10.10	0.50	0.45	90	-	Hard massive highly fractured granite gneiss	LPA/G3/07-06	10.10	10.60	0.50	2.39	5.03	89.31	3.27
10.10	10.60	0.50	0.45	90	-	Inclusion of graphite within fracture granite gneiss								
10.60	11.10	0.50	0.43	86	-	Hard massive fractured granite gneiss	LPA/G3/07-07	10.60	11.10	0.50	0.52	1.70	96.83	0.95

11.10	11.60	0.50	0.43	86	-	Inclusion of graphite within fracture granite gneiss	LPA/G3/07-08	11.10	12.10	1.00	1.93	2.32	94.32	1.42
11.60	12.10	0.50	0.45	90	-	Inclusion of graphite within fracture granite gneiss								
12.10	12.60	0.50	0.45	90	-	Inclusion of graphite within fractured granite gneiss	LPA/G3/07-09	12.10	13.10	1.00	6.91	3.08	87.75	2.26
12.60	13.10	0.50	0.45	90	-	Inclusion of graphite within fractured granite gneiss								
13.10	13.60	0.50	0.43	86	-	Inclusion of graphite within fractured granite gneiss	LPA/G3/07-10	13.10	14.10	1.00	9.27	3.18	85.85	1.69
13.60	14.10	0.50	0.40	80	-	Inclusion of graphite within fractured granite gneiss								
14.10	14.60	0.50	0.45	90	-	Inclusion of graphite within fractured granite gneiss	LPA/G3/07-11	14.10	15.20	1.10	4.54	5.07	87.60	2.79
14.60	15.10	0.50	0.30	60	-	Inclusion of graphite within fractured granite gneiss								
15.10	15.60	0.50	0.30	60	-	0.10-Inclusion of graphite within fractured granite gneiss 0.20-Fractured granite gneiss	LPA/G3/07-12	15.20	16.10	0.90	0.35	2.55	96.10	1.00
15.60	16.10	0.50	0.25	50	-	Hard massive weathered and fractured granite gneiss								
16.10	16.60	0.50	0.45	90	-	Fractured granite gneiss	LPA/G3/07-13	16.10	17.10		0.50	3.93	94.40	1.17
16.60	17.10	0.50	0.40	80	-	Hard massive fractured granite gneiss				1.00				
17.10	17.60	0.50	0.48	96	-	Inclusion of graphite within fractured granite gneiss	LPA/G3/07-14	17.10	17.60	0.50	1.57	5.80	90.60	2.03
17.60	18.10	0.50	0.49	98	-	Hard massive fractured granite gneiss	LPA/G3/07-15	17.60	18.10	0.50	1.86	4.42	91.40	2.32
18.10	18.60	0.50	0.42	84	-	Inclusion of graphite within fractured granite gneiss	LPA/G3/07-16	18.10	18.80	0.70	4.39	5.08	88.60	1.93
18.60	18.80	0.20	0.16	80	-	Inclusion of graphite within fractured granite gneiss								
18.80	19.30	0.50	0.29	58	-	Highly fractured granite gneiss	LPA/G3/07-17	18.80	19.80	1.00	0.17	1.09	98.00	0.74
19.30	19.80	0.50	0.40	80	-	Hard massive fractured granite gneiss								
19.80	20.40	0.60	0.43	72	-	Hard massive fractured granite gneiss	LPA/G3/07-18	19.80	23.20	3.40	0.01	0.21	99.60	0.18
20.40	20.90	0.50	0.43	86	-	Hard massive fractured granite gneiss								
20.90	21.40	0.50	0.32	64	-	Hard massive fractured granite gneiss								
21.40	22.30	0.90	0.85	94	-	Hard massive fractured granite gneiss								
22.30	22.80	0.50	0.48	96	-	Hard massive fractured granite gneiss								
22.80	23.20	0.40	0.39	98	-	Highly fractured granite gneiss								
23.20	24.20	1.00	0.97	97	-	Hard massive fractured granite gneiss	LPA/G3/07-19	23.20	27.20	4.00	0.01	0.84	98.60	0.55
24.20	25.20	1.00	0.78	78	-	Hard massive granite gneiss								
25.20	25.70	0.50	0.30	60	-	Highly fractured pebbles granite gneiss								
25.70	26.20	0.50	0.20	40	-	Highly fractured granite gneiss								
26.20	27.20	1.00	0.62	62	-	Hard massive highly fractured granite gneiss								
27.20	27.60	0.40	0.30	75	-	Highly fractured granite gneiss								
27.60	28.30	0.70	0.68	97	-	Highly fractured granite gneiss	LPA/G3/07-20	27.20	29.50	2.30	0.22	1.33	98.00	0.45
28.30	29.00	0.70	0.68	97	-	Hard massive fractured granite gneiss								
29.00	30.00	1.00	0.92	92	85	Hard massive fractured granite gneiss								
30.00	31.00	1.00	0.94	94	-	0.50-Hard massive fractured granite gneiss 0.44-Inclusion of graphite within fracture granite gneiss	LPA/G3/07-21	29.50	30.50	1.00	1.06	3.56	94.36	1.02
							LPA/G3/07-22	30.50	31.00	0.50	0.75	4.58	92.75	1.93

31.00	32.00	1.00	0.94	94	-	Inclusion of graphite in hard massive fractured granite gneiss	LPA/G3/07-23	31.00	32.00	1.00	0.73	3.99	93.55	1.73
32.00	33.00	1.00	0.60	60	-	Hard massive fractured granite gneiss	LPA/G3/07-24	32.00	33.00	1.00	1.07	3.70	93.76	1.47
33.00	34.00	1.00	0.50	50	-	Hard massive fractured granite gneiss	LPA/G3/07-25	33.00	35.00	2.00	0.69	4.24	92.85	2.22
34.00	35.00	1.00	0.97	97	-	Hard massive fractured granite gneiss								
Borehole closed at 35.00 m														



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/08	Date of commencement : 05.04.2024
Latitude : 20°05'27.376"	Date of closing : 11.04.2024
Longitude : 83°28'53.65"	Azimuth : 310°
RL of collar (m) : 284.657	Rig No. : DYNA-35-02
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) :5.90	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.30	0.30	0.24	80	-	Soil with fractured rock fragments of granite gneiss	LPA/G3/08-01	0.00	1.20	1.20	0.44	6.33	90.00	3.23
0.30	0.70	0.40	0.31	78	-	Soil with fractured rock fragments of granite gneiss								
0.70	1.20	0.50	0.30	60	-	Soil with fractured rock fragments of granite gneiss								
1.20	2.40	1.20	1.07	89	-	Highly weathered granite gneiss	LPA/G3/08-02	1.20	5.20	4.00	0.08	4.91	92.60	2.41
2.40	3.40	1.00	0.68	68	-	Highly weathered granite gneiss								
3.40	4.20	0.80	0.43	54	-	Highly weathered granite gneiss								
4.20	5.20	1.00	0.10	10	-	Weathered granite gneiss								
5.20	5.70	0.50	0.40	80	-	Highly weathered granite gneiss	LPA/G3/08-03	5.20	9.10	3.90	0.06	4.66	93.60	1.68
5.70	6.00	0.30	0.26	87	-	Hard massive fractured granite gneiss								
6.00	6.20	0.20	0.12	60	-	Hard massive fractured granite gneiss								
6.20	7.20	1.00	0.99	99	-	Altered granite gneiss								
7.20	7.80	0.60	0.54	90	-	Altered granite gneiss								
7.80	8.20	0.40	0.33	83	-	Altered granite gneiss								
8.20	8.70	0.50	0.46	92	-	Altered granite gneiss								
8.70	9.10	0.40	0.39	97	-	Altered granite gneiss								
9.10	9.30	0.20	0.14	70	-	Altered granite gneiss	LPA/G3/08-04	9.10	12.90	3.80	0.11	2.81	95.40	1.68
9.30	9.90	0.60	0.48	80	-	Altered granite gneiss								
9.90	10.35	0.45	0.44	98	-	Altered granite gneiss								
10.35	10.85	0.50	0.48	96	-	Altered granite gneiss								
10.85	11.40	0.55	0.54	98	-	Altered granite gneiss								
11.40	11.90	0.50	0.42	84	-	Altered granite gneiss								
11.90	12.90	1.00	0.99	99	-	Hard massive fractured granite gneiss								
12.90	13.90	1.00	0.74	74	-	Hard massive fractured granite gneiss								
13.90	14.40	0.50	0.42	84	-	Hard massive fractured granite gneiss	LPA/G3/08-05	12.90	16.80	3.90	0.03	3.59	93.50	2.88
14.40	15.25	0.85	0.84	99	-	Altered granite gneiss								
15.25	16.20	0.95	0.79	83	-	Hard massive fractured granite gneiss								
16.20	16.80	0.60	0.52	87	-	Hard massive fractured granite gneiss								

16.80	17.80	1.00	0.89	89	-	Altered granite gneiss	LPA/G3/08-06	16.80	20.70	3.90	0.13	2.67	95.40	1.80
17.80	18.80	1.00	0.89	89	-	Hard massive highly fractured granite gneiss								
18.80	19.80	1.00	0.99	99	-	Hard massive highly fractured granite gneiss								
19.80	20.40	0.60	0.40	67	-	Hard massive highly fractured granite gneiss								
20.40	20.70	0.30	0.25	83	-	Hard massive highly fractured granite gneiss								
20.70	21.20	0.50	0.43	86	84	Hard massive highly fractured granite gneiss	LPA/G3/08-07	20.70	24.00	3.30	0.12	2.45	96.00	1.43
21.20	22.20	1.00	0.70	70	-	Altered granite gneiss								
22.20	22.60	0.40	0.39	97	-	Hard massive highly fractured granite gneiss								
22.60	23.10	0.50	0.47	94	-	Hard massive highly fractured granite gneiss								
23.10	24.00	0.90	0.56	62	-	Highly altered granite gneiss								
24.00	24.50	0.50	0	0	-	Core Loss	LPA/G3/08-08	24.00	28.10	4.10	0.12	3.26	94.70	1.92
24.50	24.90	0.40	0.26	65	-	Highly altered granite gneiss								
24.90	25.20	0.30	0.29	97	-	Altered granite gneiss								
25.20	25.80	0.60	0.46	77	-	Highly fractured granite gneiss								
25.80	26.40	0.60	0.49	82	-	Altered granite gneiss								
26.40	26.60	0.20	0.16	80	-	Hard massive highly fractured granite gneiss								
26.60	27.10	0.50	0.29	58	-	Altered granite gneiss								
27.10	27.60	0.50	0.40	80	-	Altered granite gneiss								
27.60	28.10	0.50	0.46	92	-	Highly fractured hard massive granite gneiss								
28.10	29.00	0.90	0.82	91	-	Hard massive highly fractured granite gneiss	LPA/G3/08-09	28.10	32.00	3.90	0.11	3.33	94.20	2.36
29.00	30.00	1.00	0.99	99	-	Altered granite gneiss								
30.00	31.00	1.00	0.80	80	-	Altered granite gneiss								
31.00	32.00	1.00	0.99	99	-	Hard massive highly fractured granite gneiss								
32.00	32.90	0.90	0.58	64	-	Hard massive highly fractured granite gneiss	LPA/G3/08-10	32.00	35.00	3.00	0.35	2.26	95.90	1.49
32.90	34.00	1.10	0.96	87	-	Hard massive highly fractured granite gneiss								
34.00	35.00	1.00	0.97	97	85	Hard massive highly fractured granite gneiss								
Borehole closed at 35.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/09	Date of commencement : 08.04.2024
Latitude : 20°05'37.292"	Date of closing : 13.04.2024
Longitude : 83°29'2.782"	Azimuth : 310°
RL of collar (m) : 323.254	Rig No. : DYNA-35-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 6.30	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.23	46	-	Soil with fracture rock fragments of granite gneiss	LPA/G3/09-01	0.00	1.60	1.60	0.99	5.17	91.88	1.96
0.50	1.00	0.50	0.32	64	-	Soil with fracture rock fragments of granite gneiss								
1.00	1.60	0.60	0.59	98	-	Soil with fracture rock fragments of granite gneiss								
1.60	2.10	0.50	0.44	88	-	Highly weathered granite gneiss	LPA/G3/09-02	1.60	5.50	3.90	0.31	4.28	93.66	1.75
2.10	2.60	0.50	0.40	80	-	Highly weathered granite gneiss								
2.60	3.10	0.50	0.43	86	-	Highly weathered granite gneiss								
3.10	3.50	0.40	0.29	73	-	Highly weathered granite gneiss								
3.50	4.00	0.50	0.47	94	-	Highly weathered granite gneiss								
4.00	4.50	0.50	0.49	98	-	Highly weathered granite gneiss								
4.50	5.00	0.50	0.47	94	-	Moderately weathered highly fractured hard massive granite gneiss								
5.00	5.50	0.50	0.46	92	-	Moderately weathered highly fractured hard massive granite gneiss								
5.50	6.50	1.00	0.95	95	-	Moderately weathered highly fractured hard massive granite gneiss	LPA/G3/09-03	5.50	9.50	4.00	0.15	2.09	96.04	1.72
6.50	7.20	0.70	0.64	91	-	Highly fractured hard massive granite gneiss								
7.20	7.70	0.50	0.46	92	-	Highly fractured hard massive granite gneiss								
7.70	8.40	0.70	0.68	97	-	Highly fractured hard massive granite gneiss								
8.40	9.00	0.60	0.42	70	-	Highly fractured hard massive granite gneiss with Inclusions of charnockite								
9.00	9.70	0.70	0.52	74	-	Highly fractured hard massive granite gneiss	LPA/G3/09-04	9.50	13.40	3.90	0.07	1.68	97.48	0.77
9.70	10.00	0.30	0.29	97	-	Hard massive fractured granite gneiss								
10.00	10.30	0.30	0.28	93	-	Hard massive fractured granite gneiss								
10.30	10.70	0.40	0.39	98	-	Hard massive highly fractured granite gneiss								
10.70	11.30	0.60	0.52	87	-	Hard massive fractured granite gneiss								
11.30	11.80	0.50	0.48	96	-	Highly fractured hard massive granite gneiss								
11.80	12.90	1.10	0.99	90	-	Hard massive highly fractured granite gneiss								
12.90	14.40	1.50	1.47	98	85	Moderately weathered granite gneiss								

14.40	15.40	1.00	0.87	87	-	Inclusions of graphite within granite gneiss	LPA/G3/09-06	14.40	15.40	1.00	0.65	2.53	95.78	1.04
15.40	16.00	0.60	0.47	78	-	Hard massive fractured granite gneiss	LPA/G3/09-07	15.40	16.50	1.10	0.53	2.69	94.50	2.28
16.00	16.50	0.50	0.42	84	-	Hard massive fractured granite gneiss								
16.50	16.90	0.40	0.20	50	-	Highly fractured hard massive granite gneiss	LPA/G3/09-08	16.50	17.40	0.90	0.50	3.06	93.52	2.92
16.90	17.40	0.50	0.42	84	-	Highly fractured hard massive granite gneiss								
17.40	17.90	0.50	0.48	96	-	Inclusions of graphite within fracture and altered granite gneiss	LPA/G3/09-09	17.40	18.40	1.00	1.30	5.43	88.24	5.02
17.90	18.40	0.50	0.49	98	-	Inclusions of graphite within altered granite gneiss								
18.40	19.00	0.60	0.52	87	-	Inclusions of graphite within granite gneiss with quartz vein.	LPA/G3/09-10	18.40	19.40	1.00	5.00	7.83	84.07	3.10
19.00	19.50	0.50	0.49	98	-	Inclusions of graphite within fracture granite gneiss								
19.50	20.00	0.50	0.48	96	-	Inclusions of graphite within granite gneiss	LPA/G3/09-11	19.40	20.40	1.00	1.19	3.63	92.56	2.62
20.00	21.00	1.00	0.97	97	-	Inclusions of graphite within fracture granite gneiss	LPA/G3/09-12	20.40	21.40	1.00	1.63	4.93	90.48	2.96
21.00	21.90	0.90	0.82	91	-	Inclusions of graphite within fracture and altered granite gneiss	LPA/G3/09-13	21.40	22.40	1.00	1.89	5.85	87.65	4.62
21.90	22.90	1.00	0.99	99	-	0.50-Inclusions of graphite within granite gneiss, 0.49-Hard massive fractured granite gneiss	LPA/G3/09-14	22.40	23.40	1.00	0.09	0.66	98.81	0.44
22.90	23.40	0.50	0.49	98	-	Hard massive granite gneiss								
23.40	24.10	0.70	0.69	99	-	Hard massive fractured granite gneiss								
24.10	24.80	0.70	0.67	96	-	Hard massive fractured granite gneiss	LPA/G3/09-15	23.40	27.00	3.60	0.06	0.02	99.75	0.17
24.80	26.30	1.50	1.47	98	85	Hard massive fractured granite gneiss								
26.30	27.70	1.40	1.38	99	-	Hard massive fractured granite gneiss								
27.70	29.20	1.50	1.47	98	-	Hard massive granite gneiss	LPA/G3/09-16	27.00	31.00	4.00	0.09	0.13	99.70	0.08
29.20	30.00	0.80	0.79	99	-	Hard massive granite gneiss								
30.00	31.50	1.50	1.40	93	-	Hard massive granite gneiss								
31.50	33.00	1.50	1.48	99	-	Hard massive granite gneiss	LPA/G3/09-17	31.00	35.00	4.00	0.04	1.08	98.59	0.28
33.00	34.00	1.00	0.99	99	84	Hard massive granite gneiss								
34.00	35.00	1.00	0.99	99	-	Hard massive granite gneiss								
Borehole closed at 35.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/10	Date of commencement : 21.02.2024
Latitude : 20°04'54.364"	Date of closing : 05.04.2024
Longitude : 83°29'22.780"	Azimuth : 310°
RL of collar (m) : 316.993	Rig No. : DYNA-50H-01
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :115.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.21	42	-	Brown to black soil with rock fragments of granite gneiss	LPA/G3/10-01	0.00	1.30	1.30	0.57	8.14	88.40	2.89
0.50	0.80	0.30	0.28	93	-	Brown to black soil								
0.80	1.30	0.50	0.46	92	-	Brown to black soil with rock fragments of granite gneiss								
1.30	1.80	0.50	0.46	92	-	Brown soil	LPA/G3/10-02	1.30	2.30	1.00	0.40	8.15	86.00	5.45
1.80	2.30	0.50	0.47	94	-	Brown soil with rock fragments of granite gneiss								
2.30	2.80	0.50	0.46	92	-	Highly weathered granite gneiss with graphite inclusions	LPA/G3/10-03	2.30	3.20	0.90	3.77	5.34	89.40	1.49
2.80	3.80	1.00	0.92	92	-	0.40- Graphite inclusions within moderately hard granite gneiss 0.42- Highly fractured charnockite								
3.80	4.30	0.50	0.48	96	-	Hard massive fractured charnockite	LPA/G3/10-04	3.20	4.30	1.10	0.14	3.90	92.80	3.16
4.30	5.30	1.00	0.74	74	-	Hard massive fractured charnockite								
5.30	6.30	1.00	0.81	81	80	0.25-Hard massive fractured charnockite 0.56-Hard massive fractured granite gneiss with minor graphite inclusions								
6.30	6.80	0.50	0.43	86	-	Hard massive highly fractured charnockite	LPA/G3/10-05	4.30	5.55	1.25	0.05	0.15	99.20	0.60
6.80	7.30	0.50	0.49	98	-	0.39-Hard massive highly fractured charnockite 0.10-Granite gneiss with inclusions of graphite								
7.30	7.80	0.50	0.48	96	-	Graphite inclusions in hard massive granite gneiss	LPA/G3/10-06	5.55	6.30	0.75	3.15	4.11	91.00	1.74
7.80	8.30	0.50	0.47	94	-	Graphite inclusions in hard massive granite gneiss								
8.30	8.80	0.50	0.46	92	-	Graphite mineralisation within hard massive fracture granite gneiss								
8.80	9.80	1.00	0.98	98	-	Graphite mineralisation within hard massive granite gneiss	LPA/G3/10-07	6.30	7.20	0.90	0.05	2.93	94.90	2.12
9.80	10.80	1.00	0.98	98	-	Graphite mineralisation within hard massive granite gneiss								
10.80	11.80	1.00	0.98	98	-	Hard massive fractured granite gneiss								
11.80	12.30	0.50	0.48	96	-	Hard massive fractured granite gneiss	LPA/G3/10-08	7.20	8.20	1.00	7.36	4.14	86.20	2.30
12.30	12.80	0.50	0.37	74	-	Hard massive fractured granite gneiss								
							LPA/G3/10-09	8.20	9.20	1.00	5.61	6.72	84.50	3.17
							LPA/G3/10-10	9.20	10.20	1.00	4.52	5.43	87.20	2.85
							LPA/G3/10-11	10.20	10.80	0.60	2.31	3.54	92.50	1.65
							LPA/G3/10-12	10.80	11.80	1.00	2.02	2.70	94.10	1.18
							LPA/G3/10-13	11.80	13.30	1.50	1.45	2.73	94.70	1.12

12.80	13.80	1.00	0.86	86	-	0.46-Hard massive fractured granite gneiss 0.40-Graphite inclusions within hard massive granite gneiss								
							LPA/G3/10-14	13.30	14.30	1.00	4.42	5.16	87.70	2.72
13.80	14.70	0.90	0.89	99	-	Graphite inclusions within hard massive granite gneiss								
							LPA/G3/10-15	14.30	15.30	1.00	3.98	5.76	87.20	3.06
14.70	15.80	1.10	1.05	95	-	Graphite inclusions within hard massive granite gneiss								
							LPA/G3/10-16	15.30	15.80	0.50	2.68	4.51	91.00	1.81
15.80	16.50	0.70	0.68	97	-	Hard massive fractured charnockite								
							LPA/G3/10-17	15.80	16.80	1.00	2.33	2.72	93.90	1.05
16.50	18.00	1.50	1.48	99	-	Hard massive fractured charnockite								
							LPA/G3/10-18	16.80	19.80	3.00	0.43	0.73	98.40	0.44
18.00	19.50	1.50	1.49	99	79	Hard massive fractured charnockite								
19.50	21.00	1.50	1.47	98	-	Hard massive fractured charnockite								
							LPA/G3/10-19	19.80	22.80	3.00	1.10	1.96	96.20	0.74
21.00	22.50	1.50	1.48	99	-	Hard massive fractured charnockite								
							LPA/G3/10-20	22.80	23.80	1.00	2.43	2.79	93.46	1.32
22.50	23.50	1.00	0.98	98	-	Hard massive fractured charnockite								
							LPA/G3/10-21	23.80	24.80	1.00	3.10	3.57	91.46	1.87
23.50	24.50	1.00	0.99	99	-	0.30-Altered charnockite 0.69-Graphite mineralisation within hard massive granite gneiss								
							LPA/G3/10-22	24.80	25.80	1.00	4.47	3.18	91.22	1.13
24.50	25.50	1.00	0.98	98	-	Inclusions of graphite within hard massive highly fractured granite gneiss and partially altered bottom part								
							LPA/G3/10-23	25.80	26.50	0.70	7.40	3.36	88.02	1.21
25.50	26.50	1.00	0.95	95	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
							LPA/G3/10-24	26.50	27.50	1.00	5.81	3.34	89.62	1.22
26.50	27.50	1.00	0.98	98	-	Hard massive highly fractured granite gneiss								
							LPA/G3/10-25	27.50	28.50	1.00	1.89	2.72	94.70	0.70
27.50	28.70	1.20	1.12	93	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
							LPA/G3/10-26	28.50	29.50	1.00	5.19	3.61	90.01	1.19
28.70	30.00	1.30	1.26	97	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/10-27	29.50	30.50	1.00	1.95	2.90	94.37	0.78
30.00	30.50	0.50	0.48	96	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
							LPA/G3/10-28	30.50	31.50	1.00	3.78	3.41	90.82	1.99
30.50	31.60	1.10	1.08	98	-	Inclusions of graphite within hard massive fractured granite gneiss								
							LPA/G3/10-29	31.50	32.50	1.00	1.66	7.00	89.07	2.27
31.60	32.60	1.00	0.97	97	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
							LPA/G3/10-30	32.50	33.50	1.00	2.99	3.71	92.15	1.15
32.60	33.50	0.90	0.85	94	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
							LPA/G3/10-31	33.50	34.50	1.00	1.58	1.87	95.96	0.60
33.50	34.50	1.00	0.98	98	80	0.68-Inclusions of graphite within hard massive granite gneiss 0.30- Hard massive fracture granite gneiss								
							LPA/G3/10-32	34.50	35.50	1.00	0.23	0.72	98.58	0.46
34.50	35.50	1.00	0.97	97	-	Hard massive granite gneiss								
							LPA/G3/10-33	35.50	36.50	1.00	6.32	3.34	89.52	0.82
35.50	36.50	1.00	0.85	85	-	Inclusions of graphite within hard massive granite gneiss								
							LPA/G3/10-34	36.50	37.10	0.60	4.36	2.63	92.24	0.77
36.50	37.50	1.00	0.97	97	-	0.60-Inclusions of graphite within hard massive granite gneiss 0.57-Hard massive granite gneiss								
							LPA/G3/10-35	37.10	38.10	1.00	0.31	0.13	99.42	0.14
37.50	38.10	0.60	0.55	92	-	Hard massive granite gneiss								

38.10	39.10	1.00	0.98	98	-	Hard massive granite gneiss	LPA/G3/10-36	38.10	39.10	1.00	0.67	0.46	98.72	0.15
39.10	40.00	0.90	0.87	97	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-37	39.10	40.10	1.00	6.74	3.44	89.34	0.48
40.00	41.00	1.00	0.96	96	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-38	40.10	41.10	1.00	8.28	2.71	88.52	0.50
41.00	42.00	1.00	0.95	95	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-39	41.10	42.10	1.00	8.94	2.43	88.28	0.35
42.00	42.30	0.30	0.28	93	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-40	42.10	43.10	1.00	7.41	2.49	89.72	0.39
42.30	43.30	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-41	43.10	44.10	1.00	8.99	2.50	88.02	0.50
43.30	43.80	0.50	0.47	94	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-42	44.10	45.10	1.00	8.12	3.15	88.26	0.48
43.80	45.00	1.20	1.17	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-43	45.10	46.10	1.00	6.76	2.84	89.98	0.41
45.00	46.00	1.00	0.99	99	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-44	46.10	47.10	1.00	7.44	2.79	89.13	0.64
46.00	46.50	0.50	0.44	88	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-45	47.10	48.10	1.00	4.74	2.26	92.46	0.54
46.50	47.10	0.60	0.55	92	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-46	48.10	49.10	1.00	3.20	7.17	88.25	1.38
47.10	48.10	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-47	49.10	50.10	1.00	6.94	5.00	87.21	0.85
48.10	49.10	1.00	0.98	98	80	0.50-Inclusions of graphite within hard massive granite gneiss, 0.48-Altered granite gneiss in the fracture zone	LPA/G3/10-48	50.10	51.10	1.00	7.70	2.44	89.31	0.55
49.10	50.00	0.90	0.87	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-49	51.10	52.10	1.00	4.53	1.80	93.14	0.52
50.00	51.00	1.00	0.99	99	-	0.89-Inclusions of graphite within hard massive granite gneiss 0.10- Hard massive granite gneiss	LPA/G3/10-50	52.10	53.10	1.00	8.77	3.44	86.89	0.90
51.00	52.00	1.00	0.99	99	-	0.50- Hard massive granite gneiss 0.49-Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-51	53.10	54.10	1.00	7.13	5.13	85.70	2.04
52.00	53.00	1.00	0.99	99	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-52	54.10	55.10	1.00	6.67	4.77	86.80	1.76
53.00	54.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-53	55.10	56.10	1.00	2.76	3.21	92.90	1.13
54.00	55.00	1.00	0.99	99	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-54	56.10	57.10	1.00	5.89	5.15	87.10	1.86
55.00	56.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-55	57.10	58.10	1.00	6.42	5.13	86.40	2.05
56.00	57.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss								
57.00	58.00	1.00	0.96	96	-	Inclusions of graphite within hard massive granite gneiss								
58.00	59.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss								

59.00	60.00	1.00	0.98	98	79	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-56	58.10	59.10	1.00	6.59	4.16	87.60	1.65
60.00	61.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-57	59.10	60.10	1.00	4.55	2.90	91.70	0.85
61.00	62.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-58	60.10	61.10	1.00	6.04	2.86	90.30	0.80
62.00	63.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-59	61.10	62.10	1.00	7.95	3.66	87.30	1.09
63.00	64.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-60	62.10	63.10	1.00	6.43	3.52	89.20	0.85
64.00	65.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-61	63.10	64.10	1.00	6.27	4.41	88.60	0.72
65.00	66.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-62	64.10	65.10	1.00	6.67	4.78	87.20	1.35
66.00	67.00	1.00	0.98	98	80	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-63	65.10	67.10	2.00	7.04	4.55	87.20	1.21
67.00	68.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-64	67.10	68.10	1.00	7.55	4.56	86.60	1.29
68.00	69.00	1.00	0.99	99	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch	LPA/G3/10-65	68.10	69.20	1.10	6.82	5.03	86.90	1.25
69.00	70.00	1.00	0.97	97	-	0.20-Inclusions of graphite within hard massive granite gneiss 0.70- Hard massive granite gneiss	LPA/G3/10-66	69.20	70.50	1.30	0.95	1.66	97.10	0.29
70.00	70.50	0.50	0.49	98	-	Hard massive granite gneiss	LPA/G3/10-67	70.50	71.50	1.00	4.79	2.19	92.80	0.22
70.50	71.00	0.50	0.49	98	-	0.10-Hard massive granite gneiss 0.39-Inclusions of graphite within hard massive granite gneiss								
71.00	72.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-68	71.50	72.50	1.00	11.47	3.79	84.00	0.74
72.00	73.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-69	72.50	73.50	1.00	7.92	3.13	88.08	0.87
73.00	74.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-70	73.50	74.50	1.00	13.10	3.55	81.52	1.83
74.00	75.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-71	74.50	75.50	1.00	10.87	3.30	84.94	0.89
75.00	75.50	0.50	0.47	94	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-72	75.50	76.50	1.00	7.94	3.70	87.22	1.13
75.50	77.00	1.50	1.43	95	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-73	76.50	77.50	1.00	7.70	2.57	89.03	0.70
77.00	78.50	1.50	1.49	99	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-74	77.50	78.50	1.00	8.92	2.18	88.52	0.37
78.50	79.50	1.00	0.99	99	78	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-75	78.50	79.50	1.00	9.66	2.46	87.00	0.88

79.50	80.00	0.50	0.42	84	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-76	79.50	80.50	1.00	8.19	2.36	88.94	0.51
80.00	81.50	1.50	1.49	99	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-77	80.50	81.50	1.00	7.06	2.37	89.87	0.69
81.50	83.00	1.50	1.49	99	-	Inclusions of graphite within hard massive fracture granite gneiss	LPA/G3/10-78	81.50	82.50	1.00	6.70	1.28	91.62	0.39
83.00	84.50	1.50	1.49	99	-	Inclusions of graphite within hard massive fracture granite gneiss with sulphide patch in fracture zone	LPA/G3/10-79	82.50	83.50	1.00	9.66	1.25	88.77	0.32
84.50	85.00	0.50	0.49	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-80	83.50	84.50	1.00	5.63	1.36	92.68	0.34
85.00	86.50	1.50	1.47	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-81	84.50	85.50	1.00	5.92	1.33	92.38	0.37
86.50	87.50	1.00	0.93	93	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-82	85.50	86.50	1.00	7.22	1.08	91.56	0.14
87.50	88.50	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-83	86.50	87.50	1.00	6.12	0.91	92.79	0.18
88.50	89.30	0.80	0.77	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-84	87.50	88.50	1.00	6.48	0.87	92.54	0.11
89.30	90.00	0.70	0.65	93	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-85	88.50	89.50	1.00	6.06	1.07	92.71	0.16
90.00	91.00	1.00	0.95	95	80	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-86	89.50	90.50	1.00	4.68	0.67	94.61	0.04
91.00	92.00	1.00	0.97	97	-	Inclusions of graphite within hard massive fracture granite gneiss	LPA/G3/10-87	90.50	91.50	1.00	5.75	2.15	91.60	0.50
92.00	93.50	1.50	1.44	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-88	91.50	92.50	1.00	5.24	3.87	89.60	1.29
93.50	94.00	0.50	0.44	88	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-89	92.50	93.50	1.00	5.36	2.26	91.80	0.58
94.00	95.00	1.00	0.95	95	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-90	93.50	94.50	1.00	5.67	1.55	92.60	0.18
95.00	96.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-91	94.50	95.50	1.00	6.26	1.23	92.40	0.11
96.00	97.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-92	95.50	96.50	1.00	6.69	1.62	91.40	0.29
97.00	97.50	0.50	0.45	90	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-93	96.50	97.50	1.00	4.47	3.27	91.50	0.76
97.50	99.00	1.50	1.45	97	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-94	97.50	98.50	1.00	6.03	3.39	89.70	0.88
99.00	99.50	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-95	98.50	99.50	1.00	7.46	4.33	86.60	1.61
99.50	100.50	1.00	0.96	96	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-96	99.50	100.50	1.00	12.94	3.23	83.20	0.63
100.50	101.50	1.00	0.96	96	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-97	100.50	101.50	1.00	8.94	3.43	87.00	0.63
101.50	102.50	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-98	101.50	102.50	1.00	9.68	3.13	86.60	0.59

102.50	103.00	0.50	0.44	88	79	Inclusions of graphite within hard massive granite gneiss	LPA/G3/10-99	102.50	103.50	1.00	12.31	3.44	83.60	0.65
103.00	104.00	1.00	0.98	98	-	Inclusions of graphite within hard massive granite gneiss								
104.00	105.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss with sulphide patch in fracture zone	LPA/G3/10-100	103.50	104.50	1.00	10.40	3.94	84.90	0.76
105.00	106.00	1.00	0.97	97	-	Graphite Inclusions within hard massive granite gneiss	LPA/G3/10-101	104.50	105.50	1.00	10.60	3.42	85.20	0.78
106.00	107.00	1.00	0.98	98	-	Graphite inclusions within hard massive granite gneiss	LPA/G3/10-102	105.50	106.50	1.00	6.73	2.57	90.30	0.40
107.00	108.00	1.00	0.99	99	-	Graphite inclusions within hard massive fracture granite gneiss also some thin quartz veins present in fracture zones	LPA/G3/10-103	106.50	107.50	1.00	6.63	4.67	87.50	1.20
108.00	109.00	1.00	0.97	97	-	Inclusions of graphite within hard massive granite gneiss with some quartz vein and sulphide patch in fracture zone	LPA/G3/10-104	107.50	108.50	1.00	6.15	4.01	88.50	1.34
109.00	110.00	1.00	0.98	98	-	Hard massive fractured granite gneiss	LPA/G3/10-105	108.50	109.00	0.50	3.06	3.42	92.20	1.32
110.00	111.00	1.00	0.99	99	-	Hard massive fractured granite gneiss	LPA/G3/10-106	109.00	110.00	1.00	0.11	1.13	98.10	0.66
111.00	111.50	0.50	0.47	94	-	Hard massive granite gneiss with sulphide in different part	LPA/G3/10-107	110.00	112.20	2.20	0.16	0.86	98.60	0.38
111.50	112.20	0.70	0.68	97	-	Hard massive fractured granite gneiss with some sulfide and thin quartz vein in the fracture zone								
112.20	113.70	1.50	1.49	99	-	Hard massive highly fractured granite gneiss quartz vein present in fracture zone	LPA/G3/10-108	112.20	115.00	2.80	2.31	3.00	93.80	0.89
113.70	115.00	1.30	1.28	98	80	Hard massive granite gneiss								
Borehole closed at 115.00 m														



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK	
Detailed Litholog	
Borehole No. :LPA/G3/11	Date of commencement : 15.04.2024
Latitude : 20°05'33.292"	Date of closing : 01.05.2024
Longitude : 83°29'07.649"	Azimuth : 310°
RL of collar (m) : 369.934	Rig No. : DYNA-35-01
Inclination angle of borehole : 55°	Size of core: HQ3 and NQ3
Total Depth (m) :77.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) :22.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.16	32	-	Soil	LPA/G3/11-01	0.00	3.20	3.20	0.07	6.09	89.96	3.88
0.50	1.00	0.50	0.17	34	-	Soil with rock fragments of granite gneiss								
1.00	1.40	0.40	0.32	80	-	Soil with rock fragments of granite gneiss								
1.40	2.00	0.60	0.20	33	-	Soil with rock fragments of granite gneiss								
2.00	2.60	0.60	0.19	32	-	Soil with fractured rock fragments at bottom part								
2.60	3.20	0.60	0.42	70	-	Soil with rock fragments of granite gneiss	LPA/G3/11-02	3.20	6.70	3.50	0.19	1.00	97.87	0.94
3.20	3.60	0.40	0.39	98	-	0.10- Fractured rock fragments of granite gneiss 0.29- Altered granite gneiss								
3.60	4.30	0.70	0.48	69	-	Hard massive highly fractured granite gneiss								
4.30	4.80	0.50	0.45	90	-	Hard massive highly fractured granite gneiss								
4.80	5.30	0.50	0.44	88	-	Highly fractured and altered granite gneiss								
5.30	5.80	0.50	0.48	96	-	Hard massive fractured granite gneiss with thin quartz vein intrusion along the fractured zone	LPA/G3/11-03	6.70	10.70	4.00	0.21	4.27	93.34	2.17
5.80	6.30	0.50	0.45	90	-	Hard massive highly fractured granite gneiss								
6.30	6.70	0.40	0.37	92	-	Hard massive highly fractured granite gneiss with thin quartz vein along the fractured zone								
6.70	7.30	0.60	0.50	83	-	Hard massive highly fractured granite gneiss								
7.30	7.50	0.20	0.19	95	-	Highly fractured granite gneiss								
7.50	8.50	1.00	0.60	60	-	Altered granite gneiss	LPA/G3/11-04	10.70	14.70	4.00	0.05	1.29	96.92	1.74
8.50	9.00	0.50	0.44	88	-	Altered granite gneiss								
9.00	9.50	0.50	0.37	74	-	Altered granite gneiss								
9.50	10.20	0.70	0.60	86	-	Hard massive Highly fractured granite gneiss								
10.20	10.70	0.50	0.43	86	-	0.30- Altered granite gneiss 0.13- Hard massive fractured granite gneiss								
10.70	11.20	0.50	0.49	98	-	Hard massive fractured granite gneiss	LPA/G3/11-04	10.70	14.70	4.00	0.05	1.29	96.92	1.74
11.20	11.90	0.70	0.69	99	-	Hard massive fractured granite gneiss								
11.90	12.80	0.90	0.78	87	-	0.30-Altered granite gneiss 0.40-Hard massive fractured granite gneiss 0.08-Altered granite gneiss								
12.80	13.30	0.50	0.48	96	-	Hard massive fractured granite gneiss								
13.30	14.30	1.00	0.88	88	-	Altered and highly fractured granite gneiss	LPA/G3/11-04	10.70	14.70	4.00	0.05	1.29	96.92	1.74
14.30	14.70	0.40	0.39	98	-	Hard massive highly fractured granite gneiss								

14.70	16.00	1.30	1.20	92	75	Altered highly fractured granite gneiss	LPA/G3/11-05	14.70	18.70	4.00	0.26	1.29	96.66	1.79
16.00	17.00	1.00	0.80	80	-	Hard massive fractured granite gneiss								
17.00	17.50	0.50	0.44	88	-	Hard massive highly fractured charnockite								
17.50	18.50	1.00	0.94	94	-	0.60-Hard massive charnockite, 0.34-Hard massive highly fractured granite gneiss								
18.50	19.30	0.80	0.75	94	-	Hard massive fractured granite gneiss	LPA/G3/11-06	18.70	19.90	1.20	0.47	0.99	97.42	1.12
19.30	20.30	1.00	0.98	98	-	0.65-Hard massive fractured granite gneiss 0.33- Graphite flakes along the foliation of altered granite gneiss	LPA/G3/11-07	19.90	20.50	0.60	2.31	5.37	88.48	3.84
20.30	20.80	0.50	0.48	96	-	0.20-Graphite flakes along the foliation of altered granite gneiss 0.26-Hard massive fractured granite gneiss	LPA/G3/11-08	20.50	21.40	0.90	0.07	1.00	98.25	0.68
20.80	21.50	0.70	0.60	86	-	Hard massive fractured granite gneiss	LPA/G3/11-09	21.40	22.30	0.90	0.06	1.10	97.85	0.99
21.50	22.40	0.90	0.88	98	-	0.78-Hard massive fractured granite gneiss 0.10-Minor graphite specs in granite gneiss	LPA/G3/11-10	22.30	23.40	1.10	4.05	3.70	90.20	2.05
22.40	23.40	1.00	0.97	97	-	0.56-Hard massive fractured granite gneiss with graphite inclusions 0.29-Hard massive fractured granite gneiss, 0.12-Graphite inclusions in hard massive granite gneiss								
23.40	23.90	0.50	0.49	98	-	Graphite inclusions in hard massive granite gneiss	LPA/G3/11-11	23.40	24.40	1.00	6.49	3.56	87.81	2.13
23.90	24.80	0.90	0.85	94	-	Graphite inclusions in hard massive granite gneiss with quartzvein inclusions in bottom part.	LPA/G3/11-12	24.40	25.50	1.10	7.31	3.28	87.59	1.82
24.80	25.30	0.50	0.48	96	-	Graphite flakes in hard massive granite gneiss with thin quartz vein inclusions								
25.30	26.30	1.00	0.94	94	-	0.20- Graphite inclusions in hard massive granite gneiss 0.74-Hard massive fractured granite gneiss with thin quartz vein.	LPA/G3/11-13	25.50	26.50	1.00	0.20	1.27	97.90	0.63
26.30	27.70	1.40	1.36	97	74	Hard massive fractured garnetiferous granite gneiss	LPA/G3/11-14	26.50	29.50	3.00	0.09	1.11	98.49	0.31
27.70	28.70	1.00	0.98	98	-	Hard massive fractured garnetiferous granite gneiss with some silica vein fractured zone								
28.70	30.00	1.30	1.29	99	-	Hard massive fractured garnetiferous granite gneiss with showing detritic growth of ferromagnesian minerals								
30.00	30.50	0.50	0.30	60	-	Hard massive fractured garnetiferous granite gneiss	LPA/G3/11-15	29.50	30.50	1.00	0.17	0.80	98.67	0.36
30.50	31.00	0.50	0.49	98	-	Minor graphite inclusions in hard massive fractured granite gneiss with quartz vein along the fracture zone	LPA/G3/11-16	30.50	31.50	1.00	3.85	2.17	93.06	0.92
31.00	32.00	1.00	0.98	98	-	Graphite inclusions in granite gneiss	LPA/G3/11-17	31.50	32.50	1.00	6.68	2.89	88.74	1.70
32.00	32.80	0.80	0.79	99	-	0.50-Graphite inclusions in granite gneiss, 0.29-Hard massive garnetiferous granite gneiss	LPA/G3/11-18	32.50	33.50	1.00	0.05	0.21	99.67	0.07
32.80	33.80	1.00	0.68	68	-	Hard massive fractured garnetiferous granite gneiss	LPA/G3/11-19	33.50	37.40	3.90	0.39	0.39	99.20	0.03
33.80	34.10	0.30	0.25	83	-	Hard massive fractured garnetiferous granite gneiss								
34.10	34.60	0.50	0.39	78	-	Hard massive fractured granite gneiss								
34.60	35.00	0.40	0.39	98	-	Hard massive garnetiferous granite gneiss								
35.00	35.90	0.90	0.89	99	-	Hard massive garnetiferous granite gneiss								
35.90	36.20	0.30	0.29	97	-	Hard massive garnetiferous granite gneiss								
36.20	37.40	1.20	1.16	97	-	Hard massive garnetiferous granite gneiss with minor pyrite mineralization along the foliation								

37.40	38.80	1.40	1.35	96	-	Hard massive granite gneiss with thin quartz vein	LPA/G3/11-20	37.40	40.30	2.90	0.25	0.21	99.47	0.07
38.80	40.30	1.50	1.47	98	-	Hard massive fractured micaceous granite gneiss								
40.30	41.60	1.30	1.07	82	-	Hard massive fractured garnetiferous granite gneiss with thin quartz vein in fractured zone	LPA/G3/11-21	40.30	42.10	1.80	0.25	0.97	98.30	0.48
41.60	43.10	1.50	1.48	99	-	Hard massive garnetiferous granite gneiss	LPA/G3/11-22	42.10	43.10	1.00	0.63	0.21	98.93	0.24
43.10	44.50	1.40	1.39	99	75	Graphite inclusions in granite gneiss	LPA/G3/11-23	43.10	44.10	1.00	3.30	0.92	95.62	0.16
44.50	45.00	0.50	0.49	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/11-24	44.10	45.10	1.00	2.66	1.35	95.70	0.29
45.00	46.20	1.20	1.17	97	-	0.62-Graphite inclusions in hard massive granite gneiss 0.55-Hard massive granite gneiss	LPA/G3/11-25	45.10	45.60	0.50	4.11	1.22	94.59	0.08
46.20	47.20	1.00	0.91	91	-	Hard massive highly fractured granite gneiss with some pyrite mineralization	LPA/G3/11-26	45.60	46.70	1.10	0.36	0.31	99.00	0.33
47.20	48.40	1.20	1.18	98	-	0.65- Hrad massive granitiferous granite gneiss 0.53- Minor graphite inclusions in granite gneiss	LPA/G3/11-27	46.70	47.80	1.10	0.67	0.72	98.41	0.20
48.40	49.90	1.50	1.46	97	-	Inclusions of graphite within hard massive garnetiferous granite gneiss also some pyrite in the fractured zone	LPA/G3/11-28	47.80	48.80	1.00	2.09	1.65	96.06	0.20
49.90	51.40	1.50	1.48	99	73	Inclusions of graphite within hard massive granite gneiss	LPA/G3/11-29	48.80	49.80	1.00	0.88	1.16	97.50	0.46
51.40	52.90	1.50	1.48	99	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/11-30	49.80	50.80	1.00	2.30	2.28	94.71	0.71
52.90	53.40	0.50	0.45	90	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-31	50.80	51.80	1.00	1.92	2.02	95.28	0.78
53.40	54.50	1.10	0.99	90	-	Hard massive fractured granite gneiss	LPA/G3/11-32	51.80	52.80	1.00	6.77	2.25	89.63	1.35
54.50	55.00	0.50	0.49	98	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-33	52.80	53.40	0.60	1.45	1.33	96.59	0.62
55.00	56.00	1.00	0.97	97	-	0.30-Inclusions of graphite within hard massive fractured granite gneiss 0.67- hard massive fractured granite gneiss	LPA/G3/11-34	53.40	54.50	1.10	0.93	0.58	98.20	0.29
56.00	56.40	0.40	0.38	95	-	Hard massive fractured granite gneiss	LPA/G3/11-35	54.50	55.30	0.80	4.04	1.93	93.11	0.91
56.40	57.10	0.70	0.59	84	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-36	55.30	56.40	1.10	0.40	0.51	98.86	0.24
57.10	57.60	0.50	0.44	88	-	Inclusions of graphite in hard massive granite gneiss	LPA/G3/11-37	56.40	57.40	1.00	4.92	2.10	91.31	1.67
57.60	58.10	0.50	0.48	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-38	57.40	58.40	1.00	1.67	1.93	95.30	1.10
58.10	58.60	0.50	0.48	96	75	Inclusions of graphite in granite gneiss	LPA/G3/11-39	58.40	59.40	1.00	3.19	1.94	93.90	0.97
58.60	58.90	0.30	0.25	83	-	Inclusions of graphite in hard massive fractured granite gneiss	LPA/G3/11-40	59.40	60.40	1.00	1.67	1.80	95.70	0.83
58.90	59.50	0.60	0.55	92	-	Inclusions of graphite in hard massive granite gneiss	LPA/G3/11-41	60.40	61.40	1.00	1.59	2.07	95.40	0.94
59.50	60.00	0.50	0.42	84	-	Inclusions of graphite within hard massive fractured granite gneiss								
60.00	61.00	1.00	0.95	95	-	Inclusions of graphite within hard massive fractured granite gneiss								

61.00	62.00	1.00	0.98	98	-	Graphite Flakes in hard massive granite gneiss with some pyrite along the foliation	LPA/G3/11-42	61.40	62.40	1.00	0.96	2.65	95.60	0.79
62.00	63.00	1.00	0.95	95	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-43	62.40	63.40	1.00	1.66	1.67	96.00	0.67
63.00	63.50	0.50	0.47	94	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-44	63.40	64.40	1.00	1.12	1.28	97.10	0.50
63.50	64.00	0.50	0.45	90	-	Inclusions of graphite within hard massive fractured granite gneiss								
64.00	64.50	0.50	0.47	94	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-45	64.40	65.40	1.00	3.52	2.50	92.90	1.08
64.50	65.00	0.50	0.44	88	-	Inclusions of graphite in hard massive fractured granite gneiss								
65.00	65.50	0.50	0.48	96	-	Inclusions of graphite in hard massive highly fractured granite gneiss	LPA/G3/11-46	65.40	66.40	1.00	3.77	2.70	91.90	1.63
65.50	66.00	0.50	0.43	86	-	Inclusions of graphite within hard massive fractured granite gneiss								
66.00	66.50	0.50	0.42	84	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-47	66.40	67.40	1.00	3.15	3.40	91.60	1.85
66.50	67.00	0.50	0.45	90	-	Inclusions of graphite within hard massive fractured granite gneiss								
67.00	67.50	0.50	0.43	86	74	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-48	67.40	68.10	0.70	1.36	3.43	93.80	1.41
67.50	68.10	0.60	0.55	92	-	Inclusions of graphite within hard massive highly fractured granite gneiss								
68.10	68.70	0.60	0.55	92	-	Hard massive highly granite gneiss	LPA/G3/11-49	68.10	68.70	0.60	0.08	0.26	99.40	0.26
68.70	69.40	0.70	0.67	96	-	Inclusions of graphite within hard massive highly fractured granite gneiss	LPA/G3/11-50	68.70	69.70	1.00	0.67	2.06	96.30	0.97
69.40	70.00	0.60	0.57	95	-	Inclusions graphite within hard massive granite gneiss	LPA/G3/11-51	69.70	70.70	1.00	1.74	4.38	92.60	1.28
70.00	71.00	1.00	0.98	98	-	Inclusions graphite within hard massive granite gneiss with a few pyrite along foliation	LPA/G3/11-52	70.70	71.70	1.00	1.91	3.92	93.00	1.17
71.00	71.50	0.50	0.45	90	-	Inclusions of graphite in hard massive granite gneiss								
71.50	72.50	1.00	0.95	95	-	Inclusions of graphite within hard massive highly fractured granite gneiss	LPA/G3/11-53	71.70	72.80	1.10	2.53	4.02	92.10	1.35
72.50	73.00	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/11-54	72.80	73.90	1.10	3.43	2.78	92.50	1.29
73.00	74.00	1.00	0.93	93	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/11-55	73.90	75.00	1.10	1.43	3.83	93.30	1.44
74.00	74.50	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss								
74.50	75.00	0.50	0.48	96	75	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/11-56	75.00	76.00	1.00	2.04	4.62	91.10	2.24
75.00	76.00	1.00	0.98	98	-	Hard massive fractured granite gneiss								
76.00	77.00	1.00	0.68	68	-	Hard massive fractured granite gneiss with a few pyrite along foliation	LPA/G3/11-57	76.00	77.00	1.00	2.76	5.79	89.50	1.95
Borehole closed at 77.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/12	Date of commencement : 20.04.2024
Latitude : 20°05'30.433"	Date of closing : 02.05.2024
Longitude : 83°29'01.417"	Azimuth : 310°
RL of collar (m) : 353.179	Rig No. : DYNA-35-02
Inclination angle of borehole : 60°	Size of core: HQ3
Total Depth (m) :62.00	Type of drilling: Wet(Tripplle tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.70	0.70	0.28	40	-	Top soil with debris of granite gneiss	LPA/G3/12-01	0.00	2.70	2.70	0.24	3.92	93.84	2.00
0.70	1.20	0.50	0.35	70	-	Soil with debris of granite gneiss								
1.20	1.70	0.50	0.40	80	-	Soil with debris of granite gneiss								
1.70	2.20	0.50	0.31	62	-	Soil with debris of granite gneiss								
2.20	2.70	0.50	0.48	96	-	Soil with debris of granite gneiss								
2.70	3.20	0.50	0.31	62	-	Weathered granite gneiss	LPA/G3/12-02	2.70	5.10	2.40	0.25	2.44	95.25	2.06
3.20	3.70	0.50	0.36	72	-	Weathered granite gneiss								
3.70	4.00	0.30	0.27	90	-	Debris of granite gneiss								
4.00	4.60	0.60	0.58	97	-	Debris of granite gneiss								
4.60	5.10	0.50	0.44	88	-	Weathered granite gneiss								
5.10	5.60	0.50	0.48	96	-	Hard massive fractured granite gneiss	LPA/G3/12-03	5.10	7.70	2.60	0.40	0.93	97.88	0.79
5.60	6.20	0.60	0.56	93	-	Hard massive fractured granite gneiss								
6.20	7.00	0.80	0.60	75	-	Hard massive fractured granite gneiss with quartz vein								
7.00	7.50	0.50	0.44	88	-	Hard massive fractured granite gneiss								
7.50	8.00	0.50	0.49	98	-	0.20-Hard massive fractured granite gneiss, 0.29-charnockite	LPA/G3/12-04	7.70	8.10	0.40	0.24	0.30	99.15	0.31
8.00	8.50	0.50	0.42	84	-	0.10-Hard massive charnockite, 0.32-Hard massive fractured granite gneiss	LPA/G3/12-05	8.10	10.50	2.40	0.11	1.46	98.00	0.43
8.50	9.00	0.50	0.49	98	-	Hard massive fractured granite gneiss								
9.00	9.90	0.90	0.84	93	-	Hard massive fractured granite gneiss								
9.90	10.20	0.30	0.27	90	-	Hard massive fractured granite gneiss								
10.20	10.70	0.50	0.47	94	-	Hard massive fractured granite gneiss	LPA/G3/12-06	10.50	11.50	1.00	0.02	0.67	98.60	0.71
10.70	11.50	0.80	0.77	96	70	Hard massive fractured granite gneiss								
11.50	12.50	1.00	0.93	93	-	Inclusion of graphite Hard massive fractured granite gneiss	LPA/G3/12-07	11.50	12.50	1.00	13.29	2.40	83.20	1.11

12.50	13.00	0.50	0.49	98	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-08	12.50	13.50	1.00	5.16	3.65	89.30	1.89
13.00	14.00	1.00	0.94	94	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-09	13.50	14.50	1.00	6.52	3.27	88.40	1.81
14.00	15.00	1.00	0.92	92	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-10	14.50	15.50	1.00	2.16	4.05	91.70	2.09
15.00	15.50	0.50	0.49	98	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-11	15.50	15.90	0.40	0.34	5.97	91.30	2.39
15.50	15.90	0.40	0.39	97	-	Highly fractured granite gneiss	LPA/G3/12-12	15.90	17.10	1.20	3.87	3.83	90.50	1.80
15.90	16.90	1.00	0.83	83	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-13	17.10	18.10	1.00	0.25	1.65	97.10	1.00
16.90	17.60	0.70	0.58	83	-	0.20-Inclusion of graphite within hard massive highly fractured granite gneiss. 0.38-Fractured granite gneiss	LPA/G3/12-14	18.10	18.60	0.50	1.09	3.29	94.00	1.62
17.60	18.10	0.50	0.48	96	-	Highly fractured granite gneiss	LPA/G3/12-15	18.60	19.60	1.00	5.01	3.98	88.60	2.41
18.10	18.60	0.50	0.44	88	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-16	19.60	21.10	1.50	0.18	1.90	96.90	1.02
18.60	19.60	1.00	0.97	97	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-17	21.10	21.70	0.60	1.87	3.87	92.10	2.16
19.60	20.60	1.00	0.95	95	-	Hard massive fractured granite gneiss	LPA/G3/12-18	21.70	22.20	0.50	0.63	3.79	94.00	1.58
20.60	21.90	1.30	1.25	96	-	0.50-Hard massive fractured granite gneiss 0.60- very minor graphite 0.15- Altered granite gneiss	LPA/G3/12-19	22.20	23.30	1.10	4.60	4.71	88.00	2.69
21.90	23.00	1.10	1.09	99	69	0.30- Hard massive granite gneiss 0.80- Graphite inclusion in hard massive granite gneiss	LPA/G3/12-20	23.30	24.00	0.70	0.23	1.33	97.80	0.64
23.00	24.10	1.10	1.07	97	-	0.30- Inclusion of graphite 0.67- Hard massive fractured charnokite 0.10- Inclusion of graphite in quartzite	LPA/G3/12-21	24.00	24.60	0.60	11.92	3.13	84.00	0.95
24.10	25.60	1.50	1.47	98	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-22	24.60	25.60	1.00	5.80	3.54	88.80	1.86
25.60	26.60	1.00	0.94	94	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-23	25.60	26.60	1.00	5.48	4.27	88.10	2.15
26.60	27.60	1.00	0.97	97	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-24	26.60	27.60	1.00	3.88	4.37	89.29	2.46
27.60	28.60	1.00	0.94	94	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-25	27.60	28.60	1.00	9.58	3.86	85.36	1.20
28.60	29.60	1.00	0.95	95	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-26	28.60	29.60	1.00	5.70	3.70	89.53	1.07
29.60	30.60	1.00	0.96	96	-	Inclusion of graphite within hard massive highly fractured quartzite	LPA/G3/12-27	29.60	30.60	1.00	3.72	3.72	90.98	1.58
30.60	31.60	1.00	0.97	97	-	Hard massive highly fractured granite gneiss	LPA/G3/12-28	30.60	31.60	1.00	0.03	0.93	98.58	0.46

31.60	32.50	0.90	0.86	96	-	Hard massive highly fractured granite gneiss	LPA/G3/12-29	31.60	33.00	1.40	0.67	4.26	91.84	3.23
32.50	33.30	0.80	0.74	93	-	0.50-Hard massive fractured granite gneiss 0.24- Inclusion of graphite within hard massive highly fractured granite gneiss								
33.30	33.80	0.50	0.45	90	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-30	33.00	34.00	1.00	3.99	6.08	87.31	2.62
33.80	34.30	0.50	0.48	96	-	Inclusion of graphite within hard massive highly fractured granite gneiss								
34.30	35.30	1.00	0.98	98	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-31	34.00	35.00	1.00	3.30	4.16	90.72	1.82
35.30	36.30	1.00	0.92	92	70	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-32	35.00	36.00	1.00	16.36	3.85	78.45	1.34
36.30	37.30	1.00	0.84	84	-	0.20- Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-33	36.00	36.50	0.50	10.24	4.81	83.23	1.72
						0.54- hard massive highly fractured granite gneiss	LPA/G3/12-34	36.50	37.00	0.50	0.84	5.13	92.86	1.17
						0.10-Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-35	37.00	37.60	0.60	4.30	5.19	88.60	1.91
37.30	38.30	1.00	0.87	87	-	0.30-Inclusion of graphite within hard massive highly fractured granite gneiss 0.57- Hard massive fractured granite gneiss	LPA/G3/12-36	37.60	38.30	0.70	0.50	5.17	92.25	2.08
38.30	38.80	0.50	0.48	96	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-37	38.30	40.00	1.70	1.10	3.78	92.81	2.31
38.80	39.30	0.50	0.46	92	-	Inclusion of graphite within hard massive highly fractured granite gneiss								
39.30	40.00	0.70	0.50	71	-	Inclusion of graphite within hard massive highly fractured granite gneiss								
40.00	40.20	0.20	0.16	80	-	Hard massive fractured granite gneiss	LPA/G3/12-38	40.00	40.80	0.80	0.88	3.33	93.56	2.23
40.20	41.20	1.00	0.95	95	-	Hard massive highly fractured granite gneiss								
41.20	41.80	0.60	0.58	97	-	Hard massive granite gneiss	LPA/G3/12-39	40.80	41.80	1.00	1.17	6.43	89.16	3.24
41.80	42.30	0.50	0.48	96	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-40	41.80	42.80	1.00	3.21	5.91	88.07	2.81
42.30	43.30	1.00	0.94	94	-	Inclusion of graphite within hard massive granite gneiss								
43.30	44.30	1.00	0.97	97	70	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-41	42.80	43.80	1.00	4.05	5.45	87.32	3.18
44.30	45.00	0.70	0.62	89	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-42	43.80	44.80	1.00	4.42	4.92	86.89	3.77
45.00	46.00	1.00	0.93	93	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-43	44.80	45.80	1.00	4.49	4.07	88.62	2.82
46.00	47.00	1.00	0.98	98	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-44	45.80	46.80	1.00	1.93	2.54	93.59	1.94
							LPA/G3/12-45	46.80	47.80	1.00	1.57	3.68	91.97	2.78

47.00	48.00	1.00	0.92	92	-	Inclusion of graphite within hard massive fractured granite gneiss	LPA/G3/12-46		47.80	48.80	1.00	2.18	6.67	87.28	3.86
48.00	48.60	0.60	0.58	97	-	Inclusion of graphite within hard massive fractured granite gneiss									
48.60	49.30	0.70	0.66	94	-	Inclusion of graphite within hard massive granite gneiss									
49.30	50.00	0.70	0.66	94	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-47		48.80	49.80	1.00	2.73	5.94	88.23	3.10
50.00	51.00	1.00	0.98	98	-	Inclusion of graphite within hard massive granite gneiss	LPA/G3/12-48		49.80	51.00	1.20	1.40	4.06	91.70	2.84
51.00	51.60	0.60	0.53	88	-	Hard massive altered granite gneiss	LPA/G3/12-49		51.00	51.60	0.60	0.14	1.62	95.87	2.37
51.60	52.00	0.40	0.33	83	-	Hard massive fractured charnockite	LPA/G3/12-50		51.60	53.00	1.40	0.10	0.13	99.33	0.45
52.00	53.00	1.00	0.98	98	-	Hard massive fractured charnockite with thin quartz vein intrusion in different part									
53.00	54.00	1.00	0.96	96	-	Hard massive fractured charnockite with thin quartz vein intrusion in different part									
54.00	54.40	0.40	0.39	98	-	Hard massive fractured charnockite	LPA/G3/12-52		54.00	54.40	0.40	0.04	0.26	99.27	0.44
54.40	55.10	0.70	0.47	67	-	Hard massive fractured granite gneiss	LPA/G3/12-53		54.40	56.00	1.60	0.04	1.86	95.79	2.31
55.10	55.80	0.70	0.65	93	-	Hard massive fractured granite gneiss									
55.80	56.50	0.70	0.60	86	-	Hard massive fractured granite gneiss									
56.50	57.00	0.50	0.38	76	-	Hard massive fractured granite gneiss	LPA/G3/12-54		56.00	57.00	1.00	0.04	0.42	98.92	0.62
57.00	57.80	0.80	0.69	86	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-55		57.00	58.00	1.00	1.53	4.37	92.60	1.51
57.80	58.30	0.50	0.48	96	-	Inclusion of graphite within hard massive highly fractured granite gneiss									
58.30	58.80	0.50	0.49	98	-	Inclusion of graphite within hard massive highly fractured granite gneiss									
58.80	59.40	0.60	0.54	90	-	Inclusion of graphite within hard massive highly fractured granite gneiss	LPA/G3/12-57		59.00	60.00	1.00	1.76	4.82	91.25	2.17
59.40	60.00	0.60	0.58	97	70	Inclusion of graphite within hard massive highly fractured granite gneiss									
60.00	60.60	0.60	0.55	92	-	Hard massive highly fractured granite gneiss									
60.60	61.60	1.00	0.97	97	-	Hard massive highly fractured granite gneiss	LPA/G3/12-58		60.00	61.00	1.00	1.60	3.07	93.65	1.67
61.60	62.00	0.40	0.37	93	-	Hard massive highly fractured granite gneiss	LPA/G3/12-59		61.00	62.00	1.00	0.09	0.33	98.68	0.91
Borehole closed at 62.00 m															

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK	
Detailed Litholog	
Borehole No. :LPA/G3/13	Date of commencement : 12.04.2024
Latitude : 20°05'25.33"	Date of closing : 04.05.2024
Longitude : 83°28'56.878"	Azimuth : 310°
RL of collar (m) : 333.327	Rig No. : DYNA-50-CR-07
Inclination angle of borehole : 55°	Size of core: HQ3
Total Depth (m) :71.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :4.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.40	0.40	0.15	38	-	Brown top soil	LPA/G3/13-01	0.00	3.90	3.90	0.12	3.64	94.30	1.94
0.40	1.10	0.70	0.25	36	-	Brown top soil								
1.10	1.60	0.50	0.20	40	-	Brownish soil with broken rock fragments of garnetiferous garnite gneiss								
1.60	2.10	0.50	0.41	82	-	Brownish soil with broken rock fragments of garnetiferous garnite gneiss								
2.10	2.90	0.80	0.65	81	-	Brownish soil with broken rock fragments of garnetiferous garnite gneiss								
2.90	3.40	0.50	0.24	48	-	Brownish to grey soil with broken rock fragments of garnetiferous garnite gneiss								
3.40	3.90	0.50	0.47	94	-	Brownish to grey soil with broken rock fragments of garnetiferous garnite gneiss	LPA/G3/13-02	3.90	7.50	3.60	0.12	2.84	95.50	1.54
3.90	4.40	0.50	0.40	80	-	Altered garnetiferous garnite gneiss								
4.40	5.00	0.60	0.59	98	-	Hard massive garnetiferous garnite gneiss								
5.00	5.50	0.50	0.45	90	-	Altered garnetiferous garnite gneiss								
5.50	6.00	0.50	0.47	94	-	Altered garnetiferous garnite gneiss								
6.00	6.50	0.50	0.42	84	-	Altered highly fractured garnetiferous garnite gneiss								
6.50	7.00	0.50	0.46	92	-	Altered garnetiferous garnite gneiss								
7.00	7.50	0.50	0.47	94	-	Altered garnetiferous garnite gneiss								
7.50	8.00	0.50	0.19	38	-	Altered garnetiferous garnite gneiss	LPA/G3/13-03	7.50	11.10	3.60	0.17	5.46	91.70	2.67
8.00	8.50	0.50	0.39	78	-	Altered garnetiferous garnite gneiss								
8.50	9.00	0.50	0.45	90	-	Hard massive fractured garnetiferous garnite gneiss								
9.00	9.50	0.50	0.47	94	-	Hard massive fractured garnetiferous garnite gneiss								
9.50	10.10	0.60	0.53	88	-	Altered garnetiferous garnite gneiss								
10.10	10.60	0.50	0.46	92	-	Altered garnetiferous garnite gneiss								
10.60	11.10	0.50	0.48	96	-	Altered garnetiferous garnite gneiss								
11.10	12.10	1.00	0.94	94	-	0.40-Altered garnetiferous garnite gneiss 0.54-Hard massive highly fractured garnetiferous garnite gneiss	LPA/G3/13-04	11.10	14.30	3.20	0.07	4.24	93.70	1.99
12.10	13.00	0.90	0.68	76	-	Altered garnetiferous garnite gneiss								
13.00	13.30	0.30	0.26	87	-	Altered garnetiferous garnite gneiss								
13.30	14.30	1.00	0.93	93	-	Altered garnetiferous garnite gneiss								

14.30	15.30	1.00	0.99	99	-	Hard massive fractured garnetiferous garnite gneiss with quartz vein intrusion	LPA/G3/13-05	14.30	17.80	3.50	0.10	2.22	96.60	1.08
15.30	16.20	0.90	0.89	99	-	Hard massive highly fractured garnetiferous garnite gneiss								
16.20	17.10	0.90	0.82	91	-	Altered garnetiferous garnite gneiss								
17.10	18.10	1.00	0.98	98	-	Altered garnetiferous garnite gneiss								
18.10	19.30	1.20	1.15	96	-	0.70-Partially weathere garnetiferous garnite gneiss 0.45- Graphite inclusion in garnetiferous garnite gneiss	LPA/G3/13-06	17.80	18.80	1.00	3.56	3.51	91.50	1.43
19.30	20.30	1.00	0.90	90	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-07	18.80	19.80	1.00	5.05	5.72	87.50	1.73
20.30	21.30	1.00	0.97	97	75	0.50-Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss 0.47- Hard massive fracture garnetiferous garnite gneiss	LPA/G3/13-08	19.80	20.80	1.00	5.10	6.47	85.90	2.53
21.30	22.30	1.00	0.97	97	-	Hard massive garnetiferous garnite gneiss	LPA/G3/13-09	20.80	21.80	1.00	0.46	2.37	96.00	1.17
22.30	23.30	1.00	0.93	93	-	Hard massive garnetiferous garnite gneiss	LPA/G3/13-10	21.80	25.30	3.50	0.29	1.61	97.50	0.60
23.30	24.30	1.00	0.96	96	-	Hard massive garnetiferous garnite gneiss								
24.30	25.30	1.00	0.98	98	-	Hard massive garnetiferous garnite gneiss								
25.30	26.30	1.00	0.95	95	-	Hard massive garnetiferous garnite gneiss								
26.30	27.30	1.00	0.97	97	-	Hard massive garnetiferous garnite gneiss	LPA/G3/13-11	25.30	28.80	3.50	0.49	1.88	96.90	0.73
27.30	28.20	0.90	0.87	97	-	Hard massive garnetiferous garnite gneiss								
28.20	29.20	1.00	0.97	97	-	Hard massive garnetiferous garnite gneiss								
29.20	30.20	1.00	0.95	95	73	0.60-Hard massive fractured garnetiferous garnite gneiss 0.35-Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss								
30.20	31.10	0.90	0.88	98	-	Inclusion of graphite within altered garnetiferous garnite gneiss	LPA/G3/13-12	28.80	29.80	1.00	0.54	2.08	96.40	0.98
31.10	32.10	1.00	0.88	88	-	0.60-Hard massive fractured garnetiferous garnite gneiss 0.28-Altered garnetiferous garnite gneiss	LPA/G3/13-13	29.80	31.10	1.30	3.48	5.16	89.30	2.06
32.10	33.10	1.00	0.92	92	-	Altered garnetiferous garnite gneiss	LPA/G3/13-14	31.10	32.10	1.00	0.70	3.98	93.20	2.12
33.10	34.00	0.90	0.88	98	-	Altered fractured garnetiferous garnite gneiss	LPA/G3/13-15	32.10	33.10	1.00	1.44	4.37	91.80	2.39
34.00	35.00	1.00	0.99	99	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-16	33.10	34.00	0.90	0.54	3.22	94.70	1.54
35.00	36.00	1.00	0.88	88	-	Hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-17	34.00	35.00	1.00	2.02	5.95	89.10	2.93
36.00	37.00	1.00	0.80	80	-	Hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-18	35.00	36.00	1.00	0.22	1.81	97.00	0.97
37.00	38.00	1.00	0.93	93	-	Inclusion of graphite within altered garnetiferous garnite gneiss	LPA/G3/13-19	36.00	37.00	1.00	3.75	4.76	88.60	2.89
38.00	39.00	1.00	0.93	93	-	Inclusion of graphite within altered garnetiferous garnite gneiss	LPA/G3/13-20	37.00	38.00	1.00	1.95	4.75	90.20	3.10
39.00	40.00	1.00	0.76	76	75	Altered garnetiferous garnite gneiss	LPA/G3/13-21	38.00	39.00	1.00	1.09	3.62	93.50	1.79
40.00	40.50	0.50	0.49	98	-	0.3-Altered garnetiferous garnite gneiss 0.46-Hard massive garnetiferous garnite gneiss	LPA/G3/13-22	39.00	41.60	2.60	1.49	2.44	94.90	1.17
41.00	41.50	0.50	0.48	96	-	Hard massive garnetiferous garnite gneiss								
42.00	42.60	0.60	0.54	90	-	Hard massive garnetiferous garnite gneiss								
43.00	44.00	1.00	0.97	97	-	Hard massive garnetiferous garnite gneiss								
44.00	45.00	1.00	0.97	97	-	Hard massive garnetiferous garnite gneiss	LPA/G3/13-23	41.60	42.60	1.00	1.27	2.19	95.40	1.14

42.60	43.10	0.50	0.46	92	-	Inclusion of graphite within altered garnetiferous garnite gneiss	LPA/G3/13-24	42.60	43.60	1.00	1.55	3.99	92.60	1.86
43.10	43.60	0.50	0.47	94	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss								
43.60	44.10	0.50	0.42	84	-	Inclusion of graphite within hard massive garnetiferous garnite gneiss	LPA/G3/13-25	43.60	44.60	1.00	1.71	5.63	90.30	2.36
44.10	44.60	0.50	0.48	96	-	Inclusion of graphite within hard massive garnetiferous garnite gneiss								
44.60	45.50	0.90	0.85	94	-	Inclusion of graphite within hard massive garnetiferous garnite gneiss	LPA/G3/13-26	44.60	45.60	1.00	2.28	6.18	89.50	2.04
45.50	46.50	1.00	0.95	95	-	Inclusion of graphite within hard massive garnetiferous garnite gneiss	LPA/G3/13-27							
46.50	47.50	1.00	0.90	90	75	Inclusion of graphite within hard massive garnetiferous garnite gneiss		45.60	46.60	1.00	1.72	5.07	91.70	1.51
47.50	48.40	0.90	0.88	98	-	Altered and fractured garnetiferous garnite gneiss	LPA/G3/13-28	46.60	47.50	0.90	2.16	4.86	91.80	1.18
48.40	49.40	1.00	0.94	94	-	Altered and fractured garnetiferous garnite gneiss	LPA/G3/13-29	47.50	48.40	0.90	0.90	4.19	91.90	3.01
49.40	50.00	0.60	0.56	93	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-30	48.40	49.40	1.00	1.09	7.52	87.40	3.99
50.00	51.20	1.20	1.15	96	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-31	49.40	50.40	1.00	10.12	4.07	83.80	2.01
51.20	52.20	1.00	0.97	97	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss								
52.20	53.20	1.00	0.97	97	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-32	50.40	51.40	1.00	5.94	6.69	85.00	2.37
53.20	54.20	1.00	0.97	97	-	0.60-Inclusion of graphite within hard massive garnetiferous garnite gneiss 0.37-Hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-33	51.40	52.40	1.00	6.06	7.11	84.10	2.73
							LPA/G3/13-34	52.40	53.40	1.00	8.03	5.84	83.90	2.23
							LPA/G3/13-35	53.40	53.80	0.40	3.42	5.95	88.30	2.33
							LPA/G3/13-36	53.80	55.00	1.20	0.75	5.47	90.80	2.98
54.20	55.00	0.80	0.70	88	-	Hard massive highly fractured garnetiferous garnite gneiss	LPA/G3/13-37							
55.00	56.00	1.00	0.95	95	74	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss		55.00	56.00	1.00	4.84	5.51	87.50	2.15
56.00	57.20	1.20	1.10	92	-	Inclusion of graphite within hard massive altered and fractured garnetiferous garnite gneiss	LPA/G3/13-38	56.00	57.00	1.00	6.50	5.93	84.90	2.67
57.20	58.20	1.00	0.95	95	-	0.80-Graphite inclusion in altered garnetiferous garnite gneiss 0.15-Altered garnetiferous garnite gneiss	LPA/G3/13-39	57.00	58.00	1.00	5.60	6.16	85.80	2.44
58.20	59.20	1.00	0.95	95	-	0.40-Hard massive fractured garnetiferous garnite gneiss 0.55- Inclusion of graphite within hard massive fractured garnetiferous quartzite	LPA/G3/13-40	58.00	58.60	0.60	0.54	4.42	92.60	2.44
59.20	60.00	0.80	0.78	98	-	Inclusion of graphite within hard massive fractured garnetiferous quartzite	LPA/G3/13-41							
60.00	61.00	1.00	0.93	93	-	Inclusion of graphite within hard massive fractured garnetiferous quartzite		58.60	59.60	1.00	1.25	4.38	91.30	3.07
61.00	62.00	1.00	0.95	95	-	Inclusion of graphite within hard massive fractured garnetiferous quartzite	LPA/G3/13-42	59.60	60.60	1.00	2.31	5.19	89.90	2.60
62.00	63.00	1.00	0.95	95	-	Partially weathere garnetiferous garnite gneiss	LPA/G3/13-43							
63.00	64.00	1.00	0.90	90	-	Hard massive highly fractured garnetiferous garnite gneiss		60.60	61.60	1.00	5.21	4.79	87.70	2.30
64.00	65.00	1.00	0.95	95	-	Hard massive highly fractured garnetiferous garnite gneiss	LPA/G3/13-44	61.60	62.00	0.40	6.37	5.32	85.90	2.41
							LPA/G3/13-45	62.00	63.00	1.00	1.15	5.64	90.40	2.81
							LPA/G3/13-46	63.00	64.00	1.00	1.47	4.57	91.50	2.46
							LPA/G3/13-47	64.00	65.00	1.00	0.68	5.11	91.80	2.41

65.00	66.00	1.00	0.94	94	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-48	65.00	66.00	1.00	1.86	5.37	89.10	3.67
66.00	67.00	1.00	0.95	95	-	Altered garnetiferous garnite gneiss with thin quartz vein intrusion	LPA/G3/13-49	66.00	67.00	1.00	0.72	4.26	92.20	2.82
67.00	68.00	1.00	0.96	96	-	Inclusion of graphite within hard massive fractured garnetiferous garnite gneiss	LPA/G3/13-50	67.00	68.00	1.00	1.46	5.95	89.50	3.09
68.00	69.00	1.00	0.92	92	-	Altered garnetiferous garnite gneiss with a few pyrite	LPA/G3/13-51	68.00	69.00	1.00	2.51	6.61	88.20	2.68
69.00	70.00	1.00	0.88	88	75	Altered garnetiferous garnite gneiss with a few pyrite	LPA/G3/13-52	69.00	71.00	2.00	2.27	5.81	89.30	2.62
70.00	71.00	1.00	0.93	93	-	Altered garnetiferous garnite gneiss								
Borehole closed at 71.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/14	Date of commencement : 08.02.2024
Latitude : 20°05'20.615"	Date of closing : 14.02.2024
Longitude : 83°28'52.244"	Azimuth : 310°
RL of collar (m) : 264.486	Rig No. : DYNA-50H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :42.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :5.90	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.30	0.30	0.23	77	-	Brown soil	LPA/G3/14-01	0.00	3.75	3.75	0.24	5.60	91.80	2.36
0.30	0.75	0.45	0.42	93	-	Brown soil								
0.75	1.25	0.50	0.42	84	-	Brown soil								
1.25	1.75	0.50	0.46	92	-	Brown soil with broken rock fragments of granite gneiss and charnockite								
1.75	2.25	0.50	0.46	92	-	Brown soil								
2.25	2.65	0.40	0.35	88	-	Brown soil								
2.65	3.25	0.60	0.58	97	-	Brown soil								
3.25	3.75	0.50	0.27	54	-	Brown soil								
3.75	4.25	0.50	0.48	96	-	Brown soil	LPA/G3/14-02	3.75	7.35	3.60	0.29	6.59	86.90	6.22
4.25	4.85	0.60	0.53	88	-	Brown soil								
4.85	5.35	0.50	0.40	80	-	Brown soil								
5.35	5.65	0.30	0.29	97	-	Brown soil								
5.65	6.15	0.50	0.35	70	-	Brown soil								
6.15	6.75	0.60	0.43	72	-	Brown soil								
6.75	7.35	0.60	0.58	97	-	Brown soil								
7.35	7.85	0.50	0.48	96	-	Brown soil								
7.85	8.25	0.40	0.32	80	-	Brown soil								
8.25	8.75	0.50	0.42	84	-	Brown soil								
8.75	9.30	0.55	0.48	87	-	Brown soil								
9.30	9.80	0.50	0.43	86	-	Brown soil								
9.80	10.30	0.50	0.43	86	-	Brown soil								
10.30	10.80	0.50	0.44	88	-	Brown soil								
10.80	11.30	0.50	0.42	84	-	Brown soil								

11.30	11.80	0.50	0.48	96	-	Broken rock fragments of granite gneiss and charnockite	LPA/G3/14-04	11.30	14.80	3.50	0.05	2.48	94.90	2.57
11.80	12.30	0.50	0.45	90	-	Broken rock fragments of granite gneiss and charnockite								
12.30	12.80	0.50	0.47	94	-	Broken rock fragments of granite gneiss and charnockite								
12.80	13.30	0.50	0.40	80	-	Broken rock fragments of granite gneiss and charnockite								
13.30	13.80	0.50	0.35	70	-	Broken rock fragments of granite gneiss and charnockite								
13.80	14.30	0.50	0.30	60	-	Broken rock fragments of granite gneiss								
14.30	14.80	0.50	0.47	94	-	Highly fractured altered granite gneiss	LPA/G3/14-05	14.80	15.80	1.00	0.27	3.31	92.80	3.62
14.80	15.30	0.50	0.40	80	-	Altered granite gneiss								
15.30	15.80	0.50	0.45	90	-	Altered granite gneiss	LPA/G3/14-06	15.80	16.80	1.00	1.65	4.35	89.40	4.60
15.80	16.30	0.50	0.45	90	-	Inclusions of graphite in altered granite gneiss								
16.30	16.80	0.50	0.49	98	-	Inclusions of graphite in altered granite gneiss	LPA/G3/14-07	16.80	17.80	1.00	1.42	5.66	86.90	6.02
16.80	17.30	0.50	0.38	76	-	Inclusions of graphite in altered granite gneiss								
17.30	17.80	0.50	0.48	96	-	Inclusions of graphite in altered granite gneiss	LPA/G3/14-08	17.80	18.80	1.00	3.21	5.14	87.20	4.45
17.80	18.30	0.50	0.47	94	-	Inclusions of graphite in altered granite gneiss								
18.30	18.80	0.50	0.46	92	-	Inclusions of graphite in altered granite gneiss	LPA/G3/14-09	18.80	19.80	1.00	2.89	4.88	87.40	4.83
18.80	19.30	0.50	0.40	80	-	Inclusions of graphite in altered granite gneiss								
19.30	19.80	0.50	0.44	88	-	Inclusions of graphite in altered granite gneiss	LPA/G3/14-10	19.80	21.30	1.50	0.22	5.63	90.50	3.65
19.80	20.30	0.50	0.43	86	-	Altered granite gneiss								
20.30	20.80	0.50	0.35	70	-	Altered granite gneiss								
20.80	21.30	0.50	0.35	70	-	Altered granite gneiss	LPA/G3/14-11	21.30	22.30	1.00	2.17	6.83	88.80	2.20
21.30	21.80	0.50	0.42	84	-	Inclusions of graphite in altered granite gneiss								
21.80	22.30	0.50	0.48	96	-	Inclusions of graphite in altered granite gneiss	LPA/G3/14-12	22.30	22.80	0.50	2.07	6.60	89.40	1.93
22.30	22.80	0.50	0.45	90	-	Inclusions of graphite in altered granite gneiss								
22.80	23.30	0.50	0.40	80	-	Altered granite gneiss	LPA/G3/14-13	22.80	23.80	1.00	1.32	6.25	89.70	2.73
23.30	23.80	0.50	0.45	90	-	Altered granite gneiss								
23.80	24.30	0.50	0.48	96	85	Inclusions of graphite in altered granite gneiss	LPA/G3/14-14	23.80	24.80	1.00	2.62	6.42	88.80	2.16
24.30	24.80	0.50	0.45	90	-	Graphite inclusions in altered granite gneiss								
24.80	25.30	0.50	0.46	92	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-15	24.80	25.80	1.00	1.80	6.21	89.80	2.19
25.30	25.80	0.50	0.48	96	-	Graphite inclusions in altered granite gneiss								
25.80	26.30	0.50	0.47	94	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-16	25.80	26.80	1.00	1.68	5.99	90.30	2.03
26.30	27.30	1.00	0.95	95	-	Altered granite gneiss with inclusions of graphite								
27.30	27.80	0.50	0.42	84	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-17	26.80	27.80	1.00	2.36	5.55	89.67	2.41

27.80	28.30	0.50	0.45	90	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-18	27.80	28.80	1.00	3.17	5.13	89.85	1.85
28.30	29.00	0.70	0.65	93	-	Altered granite gneiss with inclusions of graphite		LPA/G3/14-19	28.80	29.80	1.00	2.44	5.44	90.02
29.00	29.50	0.50	0.47	94	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-20							
29.50	30.00	0.50	0.45	90	-	Altered granite gneiss with inclusions of graphite		LPA/G3/14-21	30.80	31.80	1.00	3.58	5.76	88.77
30.00	30.80	0.80	0.71	89	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-22							
30.80	31.40	0.60	0.54	90	-	Altered granite gneiss with inclusions of graphite		LPA/G3/14-23	32.80	33.80	1.00	1.89	4.67	91.87
31.40	32.00	0.60	0.54	90	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-24							
32.00	33.00	1.00	0.97	97	-	Altered granite gneiss with inclusions of graphite		LPA/G3/14-25	34.80	35.80	1.00	2.92	3.76	91.45
33.00	33.80	0.80	0.70	88	-	Altered granite gneiss with inclusions of graphite	LPA/G3/14-26							
33.80	34.30	0.50	0.48	96	-	Inclusions of graphite within hard massive fractured granite gneiss		LPA/G3/14-27	36.90	38.00	1.10	1.25	2.99	94.41
34.30	35.00	0.70	0.63	90	84	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/14-28							
35.00	36.00	1.00	0.93	93	-	Inclusions of graphite within hard massive fractured granite gneiss		LPA/G3/14-28	38.00	42.00	4.00	0.15	1.20	97.88
36.00	36.90	0.90	0.86	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/14-28							
36.90	37.90	1.00	0.98	98	-	Hard massive granite gneiss with quartz vein		LPA/G3/14-28	38.00	42.00	4.00	0.15	1.20	97.88
37.90	38.40	0.50	0.48	96	-	Hard massive fractured quartzite with quartz vein	LPA/G3/14-28							
38.40	39.40	1.00	0.91	91	85	Hard massive fractured quartzite with quartz vein		LPA/G3/14-28	38.00	42.00	4.00	0.15	1.20	97.88
39.40	40.00	0.60	0.58	97	-	Hard massive fractured quartzite with quartz vein and sulphide minerals	LPA/G3/14-28							
40.00	41.00	1.00	0.99	99	-	Hard massive fractured quartzite with sulphide minerals		LPA/G3/14-28	38.00	42.00	4.00	0.15	1.20	97.88
41.00	42.00	1.00	0.98	98	-	Hard massive fractured quartzite with sulphide minerals	LPA/G3/14-28							
Borehole closed at 42.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK Detailed Litholog	
Borehole No. :LPA/G3/15	Date of commencement : 05.02.2024
Latitude : 20°05'35.282"	Date of closing : 08.04.2024
Longitude : 83°29'05.939"	Azimuth : 310°
RL of collar (m) : 338.832	Rig No. : DYNA-50-CR-07
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :59.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.00	0	-	Core Loss								
0.50	1.00	0.50	0.00	0	-	Core Loss								
1.00	1.50	0.50	0.09	18	-	Boulders of granite gneiss	LPA/G3/15-01	1.00	4.10	3.10	0.33	4.61	93.43	1.63
1.50	1.90	0.40	0.18	45	-	Brown to black soil with rock fragments of granite gneiss								
1.90	2.40	0.50	0.32	64	-	Brown soil with rock fragments of granite gneiss								
2.40	2.90	0.50	0.20	40	-	Brown soil with rock fragments of granite gneiss								
2.90	3.40	0.50	0.35	70	-	Brown soil with rock fragments of granite gneiss								
3.40	3.60	0.20	0.17	85	-	Grey soil with fragments of granite gneiss								
3.60	4.10	0.50	0.30	60	-	Brown soil with rock fragments of granite gneiss								
4.10	4.60	0.50	0.28	56	-	Brown soil with rock fragments of granite gneiss	LPA/G3/15-02	4.10	6.80	2.70	0.47	4.94	92.55	2.04
4.60	5.10	0.50	0.40	80	-	Brown soil with rock fragments of granite gneiss								
5.10	5.60	0.50	0.15	30	-	Brown soil with rock fragments of granite gneiss								
5.60	6.10	0.50	0.15	30	-	Altered granite gneiss								
6.10	6.60	0.50	0.43	86	-	Altered granite gneiss								
6.60	7.10	0.50	0.38	76	-	Altered granite gneiss	LPA/G3/15-03	6.80	7.80	1.00	0.95	5.62	91.24	2.19
7.10	7.60	0.50	0.40	80	-	Altered granite gneiss								
7.60	7.80	0.20	0.10	50	-	Altered granite gneiss								
7.80	8.30	0.50	0.40	80	-	0.20- Altered granite gneiss 0.20-Inclusions of graphite within altered granite gneiss	LPA/G3/15-04	7.80	8.80	1.00	3.52	4.51	89.72	2.25
8.30	8.80	0.50	0.42	84	-	Inclusions of graphite within altered granite gneiss								
8.80	9.30	0.50	0.33	66	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-05	8.80	9.30	0.50	3.38	4.45	90.51	1.67
9.30	9.80	0.50	0.12	24	-	Altered granite gneiss	LPA/G3/15-06	9.30	10.80	1.50	1.28	5.35	90.04	3.32
9.80	10.30	0.50	0.22	44	-	Altered granite gneiss								
10.30	10.80	0.50	0.23	46	-	Altered granite gneiss								

10.80	11.30	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-07	10.80	11.80	1.00	2.29	4.34	91.45	1.93
11.30	11.80	0.50	0.47	94	-	Inclusions of graphite within altered granite gneiss								
11.80	12.30	0.50	0.49	98	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-08	11.80	12.80	1.00	1.12	6.29	90.46	2.12
12.30	12.80	0.50	0.47	94	-	Inclusions of graphite within altered granite gneiss								
12.80	13.20	0.40	0.32	80	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-09	12.80	13.80	1.00	2.26	6.09	89.48	2.16
13.20	13.70	0.50	0.45	90	-	Inclusions of graphite within altered granite gneiss								
13.70	14.10	0.40	0.37	92	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-10	13.80	14.80	1.00	2.39	5.47	90.65	1.50
14.10	14.60	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								
14.60	15.10	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-11	14.80	15.80	1.00	2.54	4.76	91.21	1.49
15.10	15.60	0.50	0.49	98	80	Inclusions of graphite within altered granite gneiss								
15.60	16.00	0.40	0.24	60	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-12	15.80	16.80	1.00	3.11	5.41	90.24	1.24
16.00	16.50	0.50	0.42	84	-	Inclusions of graphite within altered granite gneiss								
16.50	17.00	0.50	0.45	90	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-13	16.80	17.80	1.00	1.83	6.29	89.77	2.11
17.00	17.50	0.50	0.47	94	-	Inclusions of graphite within altered granite gneiss								
17.50	18.00	0.50	0.43	86	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-14	17.80	18.80	1.00	2.55	6.66	88.84	1.95
18.00	18.50	0.50	0.49	98	-	Inclusions of graphite within altered granite gneiss								
18.50	19.00	0.50	0.47	94	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-15	18.80	19.80	1.00	2.50	8.46	86.58	2.47
19.00	19.50	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								
19.50	20.00	0.50	0.49	98	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-16	19.80	20.80	1.00	2.84	7.19	88.05	1.92
20.00	20.50	0.50	0.46	92	-	Inclusions of graphite within altered granite gneiss								
20.50	21.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-17	20.80	21.80	1.00	2.74	6.14	88.87	2.25
21.00	21.50	0.50	0.47	94	-	Inclusions of graphite within altered granite gneiss								
21.50	22.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-18	21.80	22.80	1.00	2.43	5.57	89.63	2.38
22.00	22.30	0.30	0.23	77	-	Inclusions of graphite within altered granite gneiss								
22.30	22.80	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								

22.80	23.30	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-19	22.80	23.80	1.00	3.45	5.46	89.39	1.70
23.30	23.80	0.50	0.34	68	-	Inclusions of graphite within fractured granite gneiss								
23.80	24.30	0.50	0.39	78	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-20	23.80	24.80	1.00	1.53	4.09	92.06	2.32
24.30	24.80	0.50	0.48	96	-	0.10-Inclusions of graphite within fractured granite gneiss 0.38-Hard massive fractured granite gneiss								
24.80	25.30	0.50	0.47	94	-	Hard massive fractured granite gneiss	LPA/G3/15-21	24.80	25.80	1.00	0.08	0.27	99.26	0.39
25.30	25.80	0.50	0.47	94	-	Hard massive fractured granite gneiss								
25.80	26.30	0.50	0.48	96	-	Hard massive fractured granite gneiss with thin quartz vein in fracture zone	LPA/G3/15-22	25.80	28.00	2.20	0.06	0.62	98.44	0.87
26.30	26.80	0.50	0.43	86	-	Hard massive highly fractured granite gneiss								
26.80	27.30	0.50	0.46	92	-	Hard massive highly fractured granite gneiss								
27.30	27.60	0.30	0.24	80	-	Hard massive highly fractured granite gneiss								
27.60	28.00	0.40	0.35	88	-	Hard massive highly fractured granite gneiss								
28.00	28.50	0.50	0.48	96	-	Hard massive highly fractured granite gneiss	LPA/G3/15-23	28.00	29.00	1.00	0.05	0.45	98.64	0.87
28.50	29.00	0.50	0.47	94	-	Hard massive highly fractured granite gneiss								
29.00	29.50	0.50	0.45	90	-	0.25-Hard massive highly fractured granite gneiss 0.20- Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/15-24	29.00	30.00	1.00	2.53	2.17	94.36	0.94
29.50	30.00	0.50	0.42	84	-	Inclusions of graphite within fractured granite gneiss								
30.00	30.50	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/15-25	30.00	31.00	1.00	5.50	2.89	91.00	0.61
30.50	31.00	0.50	0.49	98	79	Inclusions of graphite within hard massive granite gneiss								
31.00	31.50	0.50	0.46	92	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/15-26	31.00	32.00	1.00	4.47	3.11	91.03	1.38
31.50	32.00	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss								
32.00	32.50	0.50	0.48	96	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/15-27	32.00	33.00	1.00	1.46	1.53	95.82	1.18
32.50	33.00	0.50	0.46	92	-	Inclusions of graphite within hard massive fractured granite gneiss								
33.00	33.50	0.50	0.48	96	-	Inclusions of graphite within hard massive fractured granite gneiss	LPA/G3/15-28	33.00	33.50	0.50	1.47	1.55	96.17	0.81
33.50	34.00	0.50	0.46	92	-	Hard massive highly fractured granite gneiss	LPA/G3/15-29	33.50	34.50	1.00	2.15	3.66	91.50	2.68
34.00	34.50	0.50	0.48	96	-	Hard massive highly fractured granite gneiss								
34.50	35.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-30	34.50	35.50	1.00	6.18	5.78	84.89	3.16
35.00	35.50	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								
35.50	36.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-31	35.50	36.50	1.00	3.45	4.65	89.18	2.72
36.00	36.50	0.50	0.47	94	-	Inclusions of graphite within fractured granite gneiss								
36.50	37.00	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-32	36.50	37.00	0.50	3.03	5.55	86.64	4.78
37.00	37.50	0.50	0.44	88	-	Fractured granite gneiss	LPA/G3/15-33	37.00	38.00	1.00	2.04	3.66	90.47	3.84
37.50	38.00	0.50	0.39	78	-	Fractured granite gneiss								

38.00	38.50	0.50	0.48	96	-	Hard massive highly fractured granite gneiss	LPA/G3/15-34	38.00	39.00	1.00	1.70	2.89	93.41	1.99
38.50	39.00	0.50	0.48	96	-	Hard massive fractured granite gneiss								
39.00	39.50	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-35	39.00	40.00	1.00	3.22	3.61	91.44	1.73
39.50	40.00	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss								
40.00	40.50	0.50	0.48	96	78	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-36	40.00	41.00	1.00	5.01	5.71	86.90	2.38
40.50	41.00	0.50	0.42	84	-	Inclusions of graphite within fractured granite gneiss								
41.00	41.50	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-37	41.00	41.50	0.50	3.30	7.56	86.03	3.11
41.50	42.00	0.50	0.48	96	-	Altered granite gneiss	LPA/G3/15-38	41.50	42.00	0.50	4.63	6.02	85.06	4.29
42.00	42.50	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-39	42.00	43.00	1.00	6.46	5.51	85.21	2.81
42.50	43.00	0.50	0.46	92	-	Inclusions of graphite within altered granite gneiss								
43.00	43.50	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-40	43.00	44.00	1.00	7.94	5.16	84.57	2.33
43.50	44.00	0.50	0.47	94	-	Inclusions of graphite within hard massive granite gneiss								
44.00	44.50	0.50	0.46	92	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/15-41	44.00	44.50	0.50	5.36	5.12	87.13	2.39
44.50	45.00	0.50	0.48	96	-	Altered granite gneiss	LPA/G3/15-42	44.50	45.00	0.50	3.09	7.95	85.39	3.57
45.00	45.50	0.50	0.46	92	-	0.36-Altered fractured granite gneiss 0.10-Inclusions of graphite within fractured granite gneiss	LPA/G3/15-43	45.00	46.00	1.00	3.35	6.30	86.40	3.95
45.50	46.00	0.50	0.46	92	-	Inclusions of graphite within granite gneiss with quartz vein intrusion								
46.00	46.50	0.50	0.47	94	-	Inclusions of graphite within granite gneiss	LPA/G3/15-44	46.00	47.00	1.00	5.38	6.43	86.10	2.09
46.50	47.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								
47.00	47.50	0.50	0.46	92	80	Inclusions of graphite within altered granite gneiss	LPA/G3/15-45	47.00	48.00	1.00	5.54	4.36	88.10	2.00
47.50	48.00	0.50	0.46	92	-	Inclusions of graphite within altered granite gneiss								
48.00	48.45	0.45	0.43	96	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-46	48.00	49.00	1.00	7.46	4.32	86.60	1.62
48.45	49.00	0.55	0.53	96	-	Inclusions of graphite within altered granite gneiss								
49.00	49.50	0.50	0.44	88	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-47	49.00	50.00	1.00	6.46	6.31	84.30	2.93
49.50	50.00	0.50	0.48	96	-	Inclusions of graphite within altered granite gneiss								
50.00	50.50	0.50	0.45	90	-	Inclusions of graphite within altered granite gneiss	LPA/G3/15-48	50.00	51.00	1.00	6.29	7.11	84.60	2.00
50.50	51.00	0.50	0.45	90	-	Inclusions of graphite within altered granite gneiss with quartz vein intrusion								
51.00	51.50	0.50	0.49	98	-	Inclusions of graphite within altered granite gneiss with quartz vein intrusion	LPA/G3/15-49	51.00	51.50	0.50	6.44	4.95	86.60	2.01
51.50	52.00	0.50	0.46	92	-	Hard massive granite gneiss	LPA/G3/15-50	51.50	52.50	1.00	2.25	5.74	89.70	2.31
52.00	52.50	0.50	0.43	86	-	Hard massive granite gneiss								
52.50	53.00	0.50	0.49	98	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-51	52.50	53.50	1.00	7.07	3.11	88.20	1.62
53.00	53.50	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss								

53.50	54.00	0.50	0.45	90	80	Inclusions of graphite within fractured granite gneiss	LPA/G3/15-52	53.50	54.00	0.50	2.26	4.13	92.40	1.21
54.00	54.50	0.50	0.45	90	-	Hard massive fractured granite gneiss	LPA/G3/15-53	54.00	55.00	1.00	1.10	5.79	90.80	2.31
54.50	55.00	0.50	0.48	96	-	Hard massive fractured granite gneiss								
55.00	55.50	0.50	0.45	90	-	Hard massive fractured granite gneiss	LPA/G3/15-54	55.00	59.00	4.00	0.12	2.59	95.30	1.99
55.50	56.00	0.50	0.44	88	-	Hard massive fractured granite gneiss								
56.00	56.50	0.50	0.48	96	-	Hard massive highly fractured granite gneiss								
56.50	57.00	0.50	0.47	94	-	Hard massive fractured granite gneiss								
57.00	57.40	0.40	0.35	88	-	Hard massive fractured granite gneiss								
57.40	58.00	0.60	0.57	95	-	Hard massive fractured granite gneiss								
58.00	58.40	0.40	0.37	93	-	Hard massive fractured granite gneiss								
58.40	59.00	0.60	0.07	12	-	Hard massive granite gneiss								
Borehole closed at 59.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/16	Date of commencement : 10.04.2024
Latitude : 20°05'15.575"	Date of closing : 18.04.2024
Longitude : 83°28'47.651"	Azimuth : 310°
RL of collar (m) : 245.134	Rig No. : DYNA-50-H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :42.00	Type of drilling: Wet(Tripplle tube)
Casing Depth (m) : 3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.50	0.50	0.44	88	-	Brown oil	LPA/G3/16-01	0.00	2.00	2.00	0.06	5.88	91.40	2.66
0.50	1.00	0.50	0.30	60	-	Brown oil								
1.00	1.50	0.50	0.33	66	-	Brown oil								
1.50	2.00	0.50	0.27	54	-	Brown oil								
2.00	2.50	0.50	0.38	76	-	Weathered Granite gneiss	LPA/G3/16-02	2.00	3.40	1.40	0.08	3.24	94.99	1.69
2.50	3.00	0.50	0.43	86	-	Weathered Granite gneiss								
3.00	3.30	0.30	0.26	87	-	Weathered Granite gneiss								
3.30	3.80	0.50	0.11	22	-	Weathered Granite gneiss	LPA/G3/16-03	3.40	4.40	1.00	0.05	2.71	95.30	1.94
3.80	4.10	0.30	0.13	43	-	Weathered Granite gneiss								
4.10	4.40	0.30	0.23	77	-	Weathered Granite gneiss	LPA/G3/16-04	4.40	5.40	1.00	2.30	4.28	90.80	2.62
4.40	5.00	0.60	0.54	90	-	Inclusions of graphite in altered granite gneiss								
5.00	5.50	0.50	0.43	86	-	Inclusions of graphite in altered granite gneiss	LPA/G3/16-05	5.40	6.40	1.00	1.21	5.35	89.30	4.14
5.50	6.00	0.50	0.49	98	-	Inclusions of graphite in altered granite gneiss								
6.00	6.50	0.50	0.46	92	-	Inclusions of graphite in altered granite gneiss	LPA/G3/16-06	6.40	7.40	1.00	2.48	4.82	90.50	2.20
6.50	7.10	0.60	0.59	98	-	Inclusions of graphite in altered granite gneiss								
7.10	7.70	0.60	0.58	97	-	Inclusions of graphite in altered granite gneiss	LPA/G3/16-07	7.40	8.40	1.00	4.69	4.02	89.70	1.59
7.70	8.70	1.00	0.98	98	-	Inclusions of graphite in altered granite gneiss								
8.70	9.70	1.00	0.93	93	85	Inclusions of graphite in altered granite gneiss	LPA/G3/16-08	8.40	9.40	1.00	1.78	3.68	92.90	1.64
9.70	10.10	0.40	0.39	97	-	Inclusions of graphite in altered granite gneiss								
10.10	11.10	1.00	0.95	95	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-09	9.40	10.40	1.00	4.40	5.85	87.10	2.65
							LPA/G3/16-10	10.40	11.10	0.70	0.38	3.73	93.60	2.29

11.10	11.90	0.80	0.67	84	-	Hard massive fractured granite gneiss	LPA/G3/16-11	11.10	12.10	1.00	0.17	1.37	98.10	0.36
11.90	12.40	0.50	0.44	88	-	Hard massive fractured granite gneiss	LPA/G3/16-12	12.10	15.40	3.30	0.16	2.34	96.10	1.40
12.40	13.00	0.60	0.55	92	-	Hard massive fractured granite gneiss with thin quartz vein intrusion								
13.00	13.50	0.50	0.44	88	-	Hard massive fractured granite gneiss with thin quartz vein intrusion								
13.50	14.50	1.00	0.93	93	-	Hard massive fractured granite gneiss								
14.50	15.40	0.90	0.88	98	-	Hard massive fractured granite gneiss								
15.40	16.10	0.70	0.59	84	-	Hard massive fractured granite gneiss with thin quartz vein intrusion	LPA/G3/16-13	15.40	19.10	3.70	0.20	2.65	95.90	1.25
16.10	17.10	1.00	0.97	97	-	Hard massive fractured granite gneiss								
17.10	18.10	1.00	0.98	98	-	Hard massive fractured granite gneiss								
18.10	19.10	1.00	0.97	97	83	Hard massive fractured granite gneiss								
19.10	20.10	1.00	0.98	98	-	Hard massive fractured granite gneiss	LPA/G3/16-14	19.10	20.60	1.50	0.57	2.69	96.00	0.74
20.10	21.10	1.00	0.97	97	-	Hard massive fractured granite gneiss								
21.10	21.60	0.50	0.44	88	-	Hard massive fractured granite gneiss	LPA/G3/16-15	20.60	21.60	1.00	0.77	5.71	90.00	3.52
21.60	22.10	0.50	0.48	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-16	21.60	22.60	1.00	1.42	3.94	93.30	1.34
22.10	23.10	1.00	0.97	97	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-17	22.60	23.60	1.00	4.07	4.14	90.40	1.39
23.10	24.10	1.00	0.96	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-18	23.60	24.60	1.00	3.67	5.28	89.50	1.55
24.10	25.00	0.90	0.89	99	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-19	24.60	25.60	1.00	2.79	4.62	90.80	1.79
25.00	25.50	0.50	0.46	92	-	Inclusions of graphite within fractured granite gneiss								
25.50	26.00	0.50	0.42	84	-	Inclusions of graphite within fractured granite gneiss								
26.00	26.50	0.50	0.44	88	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-20	25.60	26.50	0.90	1.39	3.27	93.90	1.44
26.50	27.00	0.50	0.38	76	-	Hard massive fractured granite gneiss	LPA/G3/16-21	26.50	27.50	1.00	1.06	2.49	94.60	1.85
27.00	27.50	0.50	0.45	90	-	Hard massive fractured granite gneiss								
27.50	28.00	0.50	0.47	94	85	Hard massive fractured granite gneiss								
28.00	28.50	0.50	0.45	90	-	Hard massive fractured granite gneiss with quartz veins	LPA/G3/16-22	27.50	29.00	1.50	1.61	3.21	93.50	1.68
28.50	29.00	0.50	0.44	88	-	Hard massive fractured granite gneiss with quartz veins								
29.00	29.50	0.50	0.45	90	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-23	29.00	30.00	1.00	0.42	3.37	95.70	0.51
29.50	30.00	0.50	0.46	92	-	Inclusions of graphite within fractured granite gneiss								
30.00	30.50	0.50	0.48	96	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-24	30.00	31.00	1.00	1.57	5.98	91.60	0.85
30.50	31.00	0.50	0.42	84	-	Inclusions of graphite within fractured granite gneiss								
31.00	31.50	0.50	0.43	86	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-25	31.00	32.00	1.00	3.98	4.89	89.50	1.63
31.50	32.00	0.50	0.46	92	-	Inclusions of graphite within fractured granite gneiss								

32.00	32.50	0.50	0.44	88	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-26	32.00	33.00	1.00	0.88	3.57	94.60	0.95
32.50	33.00	0.50	0.38	76	-	Inclusions of graphite within fractured granite gneiss								
33.00	33.50	0.50	0.48	96	84	Inclusions of graphite within hard massive granite gneiss	LPA/G3/16-27	33.00	34.00	1.00	1.12	2.87	94.70	1.31
33.50	34.00	0.50	0.46	92	-	Inclusions of graphite within hard massive granite gneiss								
34.00	34.50	0.50	0.49	98	-	Inclusions of graphite within hard massive granite gneiss	LPA/G3/16-28	34.00	35.00	1.00	3.41	4.07	91.30	1.22
34.50	35.00	0.50	0.46	92	-	Inclusions of graphite within hard massive granite gneiss								
35.00	35.50	0.50	0.46	92	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-29	35.00	36.00	1.00	4.90	4.56	88.90	1.64
35.50	36.00	0.50	0.48	96	-	Inclusions of graphite within fractured granite gneiss								
36.00	36.50	0.50	0.47	94	-	Inclusions of graphite within fractured granite gneiss	LPA/G3/16-30	36.00	37.00	1.00	4.32	4.89	89.60	1.19
36.50	37.00	0.50	0.48	96	-	Inclusions of graphite within highly fractured granite gneiss								
37.00	37.50	0.50	0.40	80	-	Hard massive fractured granite gneiss	LPA/G3/16-31	37.00	38.00	1.00	0.37	3.88	94.70	1.05
37.50	38.00	0.50	0.48	96	-	Hard massive fractured granite gneiss								
38.00	38.50	0.50	0.42	84	-	Hard massive fractured granite gneiss								
38.50	39.00	0.50	0.48	96	-	Hard massive fractured granite gneiss								
39.00	39.50	0.50	0.47	94	-	Hard massive fractured granite gneiss with quartz veins								
39.50	40.00	0.50	0.48	96	-	Hard massive fractured granite gneiss with altered fracture zone	LPA/G3/16-32	38.00	42.00	4.00	0.29	1.53	97.60	0.58
40.00	40.50	0.50	0.49	98	-	Hard massive granite gneiss								
40.50	41.00	0.50	0.47	94	-	Hard massive granite gneiss								
41.00	41.50	0.50	0.46	92	-	Hard massive highly fractured granite gneiss								
41.50	42.00	0.50	0.47	94	85	Hard massive granite gneiss								
Borehole closed at 42.00 m														

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Detailed Litholog</u>	
Borehole No. :LPA/G3/17	Date of commencement : 22.04.2024
Latitude : 20°05'40.181"	Date of closing : 01.05.2024
Longitude : 83°29'10.319"	Azimuth : 310°
RL of collar (m) : 274.989	Rig No. : DYNA-50-H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS						Rock Description	SAMPLE DETAILS				CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)	Core axial angle (in degree)		Sample No.	Depth From (m)	Depth To (m)	Length (m)	Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.40	0.40	0.00	0	-	Core Loss								
0.40	0.80	0.40	0.29	73	-	Brown reddish soil	LPA/G3/17-01	0.40	1.80	1.40	0.19	6.92	90.00	2.89
0.80	1.30	0.50	0.30	60	-	Brown reddish soil								
1.30	1.80	0.50	0.20	40	-	Brown reddish soil								
1.80	2.10	0.30	0.18	60	-	Soil with rock fragments of granite gneiss								
2.10	2.60	0.50	0.45	90	-	Soil with fractured rock fragments of granite gneiss	LPA/G3/17-02	1.80	4.30	2.50	0.11	7.13	90.30	2.46
2.60	3.10	0.50	0.40	80	-	Soil with fractured rock fragments of granite gneiss								
3.10	3.60	0.50	0.45	90	-	Soil with fractured rock fragments of granite gneiss								
3.60	3.80	0.20	0.10	50	-	Red brownish soil with fractured rock fragments of granite gneiss								
3.80	4.30	0.50	0.35	70	-	Red brownish soil with fractured rock fragments of granite gneiss								
4.30	4.80	0.50	0.45	90	-	Soil with fractured rock fragments of granite gneiss	LPA/G3/17-03	4.30	6.80	2.50	0.20	7.07	87.40	5.33
4.80	5.30	0.50	0.46	92	-	Soil with rock fragments of granite gneiss								
5.30	5.80	0.50	0.45	90	-	Soil with fractured rock fragments of granite gneiss								
5.80	6.30	0.50	0.45	90	-	Soil with fractured rock fragments of granite gneiss								
6.30	6.80	0.50	0.47	94	-	Soil with fractured rock fragments of granite gneiss								
6.80	7.30	0.50	0.42	84	-	Altered granite gneiss	LPA/G3/17-04	6.80	10.80	4.00	0.35	4.48	93.90	1.27
7.30	7.80	0.50	0.40	80	-	Altered granite gneiss								
7.80	8.30	0.50	0.40	80	-	Altered granite gneiss								
8.30	8.80	0.50	0.32	64	-	Altered granite gneiss								
8.80	9.30	0.50	0.48	96	-	Altered granite gneiss								
9.30	9.80	0.50	0.46	92	-	Altered granite gneiss								
9.80	10.30	0.50	0.42	84	-	Altered granite gneiss								
10.30	10.80	0.50	0.46	92	-	Altered granite gneiss								

10.80	11.30	0.50	0.48	96	-	Altered granite gneiss	LPA/G3/17-05	10.80	14.80	4.00	1.21	6.41	87.90	4.48
11.30	11.80	0.50	0.46	92	-	Altered granite gneiss								
11.80	12.30	0.50	0.48	96	-	Altered granite gneiss								
12.30	12.80	0.50	0.46	92	-	Altered granite gneiss								
12.80	13.30	0.50	0.47	94	-	Altered granite gneiss								
13.30	13.80	0.50	0.48	96	-	Altered granite gneiss								
13.80	14.30	0.50	0.46	92	-	Altered granite gneiss								
14.30	14.80	0.50	0.45	90	-	Altered granite gneiss								
14.80	15.30	0.50	0.45	90	-	Highly fractured granite gneiss	LPA/G3/17-06	14.80	18.80	4.00	0.20	3.64	94.10	2.06
15.30	15.80	0.50	0.46	92	-	Altered granite gneiss								
15.80	16.30	0.50	0.48	96	-	Altered granite gneiss								
16.30	16.80	0.50	0.48	96	-	Hard massive granite gneiss								
16.80	17.30	0.50	0.37	74	-	Highly fractured granite gneiss								
17.30	17.80	0.50	0.46	92	-	Highly fractured and altered granite gneiss								
17.80	18.30	0.50	0.40	80	-	Altered granite gneiss								
18.30	18.80	0.50	0.47	94	-	Altered granite gneiss								
18.80	19.30	0.50	0.38	76	-	Highly fractured granite gneiss	LPA/G3/17-07	18.80	22.80	4.00	0.29	2.60	95.20	1.91
19.30	19.80	0.50	0.40	80	-	Hard massive fractured granite gneiss								
19.80	20.30	0.50	0.42	84	-	Hard massive fractured granite gneiss								
20.30	20.80	0.50	0.38	76	-	Highly fractured and altered granite gneiss								
20.80	21.30	0.50	0.45	90	-	Highly fractured and altered granite gneiss								
21.30	21.80	0.50	0.45	90	-	Hard massive fractured granite gneiss								
21.80	22.30	0.50	0.43	86	-	Hard massive fractured granite gneiss								
22.30	22.80	0.50	0.48	96	-	Hard massive fractured granite gneiss								
22.80	23.30	0.50	0.48	96	85	Hard massive fractured granite gneiss	LPA/G3/17-08	22.80	26.80	4.00	0.69	5.03	92.10	2.18
23.30	23.80	0.50	0.45	90	-	Hard massive fractured granite gneiss								
23.80	24.30	0.50	0.42	84	-	Hard massive fractured granite gneiss								
24.30	24.80	0.50	0.46	92	-	Fractured granite gneiss								
24.80	25.30	0.50	0.45	90	-	Hard massive fractured granite gneiss								
25.30	25.80	0.50	0.44	88	-	Hard massive granite gneiss								
25.80	26.30	0.50	0.48	96	-	Hard massive fractured granite gneiss								
26.30	26.80	0.50	0.45	90	-	Fractured granite gneiss								
26.80	27.30	0.50	0.48	96	-	Hard massive fractured granite gneiss	LPA/G3/17-09	26.80	29.80	3.00	0.75	5.36	91.50	2.39
27.30	27.80	0.50	0.43	86	-	Hard massive fractured granite gneiss								
27.80	28.30	0.50	0.45	90	-	Hard massive fractured granite gneiss								
28.30	29.30	1.00	0.95	95	-	Hard massive fractured granite gneiss								
29.30	29.80	0.50	0.42	84	-	Hard massive fractured granite gneiss								

29.80	30.30	0.50	0.47	94	-	Hard massive fractured granite gneiss	LPA/G3/17-10	29.80	32.80	3.00	0.52	4.76	91.70	3.02
30.30	30.80	0.50	0.46	92	-	Altered granite gneiss								
30.80	31.30	0.50	0.42	84	-	Hard massive fractured granite gneiss								
31.30	31.80	0.50	0.48	96	85	Hard massive fractured granite gneiss								
31.80	32.30	0.50	0.46	92	-	Hard massive fractured granite gneiss								
32.30	32.80	0.50	0.40	80	-	Altered granite gneiss								
32.80	33.30	0.50	0.45	90	-	Hard massive granite gneiss	LPA/G3/17-11	32.80	35.00	2.20	0.04	2.90	94.75	2.31
33.30	33.80	0.50	0.47	94	-	Hard massive highly fractured granite gneiss with								
33.80	34.30	0.50	0.46	92	-	Highly fractured and altered granite gneiss								
34.30	35.00	0.70	0.68	97	-	Highly fractured granite gneiss								
Borehole closed at 35.00 m														

Logged by: Bhupati Kumar Nayak

ANNEXURE-VI

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/01	Date of commencement :05.02.2024
Latitude : 20°04'45.988"	Date of closing :10.03.2024
Longitude : 83°29'16.451"	Azimuth : 320°
RL of collar (m) : 270.607	Rig No. : DYNA-35-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :50.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :5.85	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	3.50	3.50	1.43	40.86	Granite gneiss	0.03	3.48	95.20	1.29
3.50	4.00	0.50	0.00	0.00	Core loss				
4.00	15.10	11.10	9.89	89.10	Granite gneiss	0.12	2.76	96.05	1.07
15.10	21.60	6.50	6.16	94.77	Graphite bearing granite gneiss	2.70	4.04	91.33	1.94
21.60	27.80	6.20	6.04	97.39	Graphite bearing granite gneiss	6.84	4.10	88.00	1.06
27.80	29.10	1.30	1.26	96.92	Granite gneiss	0.27	0.95	98.40	0.38
29.10	30.73	1.63	1.56	95.71	Graphite bearing granite gneiss	8.70	3.69	86.78	0.83
30.73	31.50	0.77	0.74	96.10	Granite gneiss	0.23	2.49	96.61	0.67
31.50	33.00	1.50	1.47	98.00	Graphite bearing granite gneiss	2.16	2.18	95.13	0.53
33.00	37.30	4.30	4.01	93.23	Graphite bearing granite gneiss	11.58	4.00	82.83	1.59
37.30	44.30	7.00	6.83	97.57	Granite gneiss	0.52	1.25	96.86	1.38
44.30	45.70	1.40	1.34	95.71	Graphite bearing granite gneiss	2.51	3.87	91.72	1.90
45.70	50.00	4.30	4.20	97.67	Graphite bearing granite gneiss	7.13	3.43	88.66	0.78
Borehole closed at 50.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/02	Date of commencement : 20.04.2024
Latitude : 20°04'52.006"	Date of closing : 01.05.2024
Longitude : 83°29'19.342"	Azimuth : 320°
RL of collar (m) : 268.186	Rig No. : DYNA-50-CR-01
Inclination angle of borehole: 45°	Size of core: HQ3
Total Depth (m) :50.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) :2.80	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile matters (%)	Ash %	Moisture (%)
0.00	1.00	1.00	0.34	34.00	Granite gneiss	0.07	4.98	92.83	2.12
1.00	2.00	1.00	0.80	80.00	Graphitic schist	1.01	6.02	90.96	2.00
2.00	3.00	1.00	0.60	60.00	Graphite bearing granite gneiss	3.03	7.60	86.73	2.64
3.00	5.20	2.20	0.75	34.09	Granite gneiss	0.88	6.50	89.27	3.35
5.20	9.70	4.50	3.33	74.00	Graphite bearing granite gneiss	4.41	5.74	86.03	3.82
9.70	11.70	2.00	0.46	23.00	Graphitic schist	1.43	3.16	93.04	2.37
11.70	16.30	4.60	3.09	67.17	Granite gneiss	0.68	5.18	91.91	2.23
16.30	24.10	7.80	7.57	97.05	Graphite bearing granite gneiss	8.62	5.40	83.64	2.34
24.10	26.80	2.70	2.29	84.81	Graphite bearing granite gneiss	2.97	8.72	81.80	6.52
26.80	44.60	17.80	16.27	91.40	Graphite bearing granite gneiss	5.84	6.37	84.78	3.00
44.60	45.60	1.00	0.97	97.00	Granite gneiss	0.96	6.38	88.70	3.96
45.60	50.00	4.40	4.19	95.23	Graphite bearing granite gneiss	3.62	4.12	90.82	1.44
Borehole closed at 50.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/03	Date of commencement : 08.02.2024
Latitude : 20°05'5.619"	Date of closing : 15.02.2024
Longitude : 83°29'33.909"	Azimuth : 310°
RL of collar (m) : 288.246	Rig No. : DYNA-35-02
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	35.00	35.00	32.89	93.97	Granite gneiss	0.19	0.81	98.79	0.22
Borehole closed at 35.00 m									

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/04	Date of commencement : 01.04.2024
Latitude : 20°05'0.734"	Date of closing : 07.04.2024
Longitude : 83°29'29.694"	Azimuth : 310°
RL of collar (m) : 320.371	Rig No. : DYNA-50-CR-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.80	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	35.00	35.00	31.96	91.31	Granite gneiss	0.09	1.03	98.19	0.69
Borehole closed at 35.00 m									

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK	
<u>Summerized Litholog</u>	
Borehole No. :LPA/G3/05	Date of commencement : 07.02.2024
Latitude : 20°04'35.31"	Date of closing : 06.04.2024
Longitude : 83°29'06.503"	Azimuth : 310°
RL of collar (m) : 306.985	Rig No. : DYNA-35-01
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :60.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.75	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	1.10	1.10	0.50	45.45	Granite gneiss	0.92	4.26	93.06	1.77
1.10	6.60	5.50	3.17	57.64	Graphite bearing granite gneiss	9.60	4.35	75.64	1.32
6.60	10.60	4.00	2.91	72.75	Graphite bearing granite gneiss	2.42	3.40	92.59	1.59
10.60	12.10	1.50	1.10	73.33	Granite gneiss	0.18	6.38	90.50	2.94
12.10	13.60	1.50	1.32	88.00	Graphite bearing granite gneiss	11.78	3.56	83.05	1.60
13.60	16.86	3.26	2.69	82.52	Graphitic schist	1.28	2.14	95.07	1.51
16.86	20.45	3.59	2.80	77.99	Graphite bearing granite gneiss	9.54	3.54	85.27	1.65
20.45	22.60	2.15	1.87	86.98	Graphitic schist	1.25	3.15	93.94	1.66
22.60	39.30	16.70	15.50	92.81	Graphite bearing granite gneiss	13.58	3.11	82.26	1.04
39.30	41.00	1.70	1.63	95.88	Graphitic schist	1.34	1.18	97.11	0.37
41.00	60.00	19.00	18.37	96.68	Graphite bearing granite gneiss	10.62	2.85	85.70	0.83
Borehole closed at 60.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/06	Date of commencement : 10.02.2024
Latitude : 20°04'41.889"	Date of closing : 03.04.2024
Longitude : 83°29'11.172"	Azimuth : 310°
RL of collar (m) : 279.961	Rig No. : DYNA-35-02
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :45.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) :3.50	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	2.20	2.20	0.58	26.36	Granite gneiss	0.47	5.38	92.27	1.87
2.20	3.60	1.40	0.60	42.86	Graphite bearing granite gneiss	3.34	5.08	90.04	1.54
3.60	18.79	15.19	13.55	89.20	Granite gneiss	0.22	1.48	97.74	0.56
18.79	24.10	5.31	4.79	90.21	Graphite bearing granite gneiss	3.22	6.30	88.10	2.38
24.10	25.10	1.00	0.81	81.00	Granite gneiss	0.24	2.74	95.23	1.79
25.10	26.05	0.95	0.85	89.47	Graphite bearing granite gneiss	3.45	3.26	91.15	2.15
26.05	27.85	1.80	1.47	81.67	Granite gneiss	0.08	1.70	97.24	0.99
27.85	42.85	15.00	13.20	87.99	Graphite bearing granite gneiss	3.16	3.78	91.47	1.59
42.85	45.00	2.15	1.78	82.56	Graphite bearing granite gneiss	5.63	4.31	88.24	1.81
Borehole closed at 45.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are devided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/07	Date of commencement : 09.04.2024
Latitude : 20°05'32.538"	Date of closing : 16.04.2024
Longitude : 83°28'58.792"	Azimuth : 310°
RL of collar (m) : 305.257	Rig No. : DYNA-50-CR-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) : 35.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) : 8.50	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	1.50	1.50	0.00	0.00	Core loss				
1.50	5.50	4.00	3.12	78.00	Graphitic schist	1.47	4.02	92.45	2.07
5.50	8.00	2.50	2.24	89.60	Granite gneiss	0.40	3.37	94.44	1.80
8.00	12.10	4.10	3.61	88.05	Graphitic schist	1.53	2.95	93.49	2.03
12.10	15.20	3.10	2.54	81.94	Graphite bearing granite gneiss	6.83	3.82	87.08	2.26
15.20	17.10	1.90	1.34	70.53	Granite gneiss	0.43	3.28	95.21	1.09
17.10	18.10	1.00	0.97	97.00	Graphitic schist	1.72	5.11	91.00	2.18
18.10	29.50	11.40	9.16	80.35	Granite gneiss	0.34	1.03	98.11	0.52
29.50	30.50	1.00	0.93	93.00	Graphitic schist	1.06	3.56	94.36	1.02
30.50	32.00	1.50	1.41	94.00	Granite gneiss	0.73	4.19	93.28	1.80
32.00	33.00	1.00	0.60	60.00	Graphitic schist	1.07	3.70	93.76	1.47
33.00	35.00	2.00	1.47	73.50	Granite gneiss	0.69	4.24	92.85	2.22
Borehole closed at 35.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are devided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/08	Date of commencement : 05.04.2024
Latitude : 20°05'27.376"	Date of closing : 11.04.2024
Longitude : 83°28'53.65"	Azimuth : 310°
RL of collar (m) : 284.657	Rig No. : DYNA-35-02
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :5.90	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	24.00	24.00	19.39	80.79	Granite gneiss	0.10	3.69	94.14	2.06
24.00	24.50	0.50	0.00	0.00	Core loss				
24.50	35.00	10.50	8.92	84.95	Charnockite	0.18	3.00	94.86	1.96
Borehole closed at 35.00 m									

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/09	Date of commencement : 08.04.2024
Latitude : 20°05'37.292"	Date of closing : 13.04.2024
Longitude : 83°29'2.782"	Azimuth : 310°
RL of collar (m) : 323.254	Rig No. : DYNA-35-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 6.30	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	17.40	17.40	15.06	86.55	Granite gneiss	0.35	2.99	95.04	1.62
17.40	18.40	1.00	0.97	97.00	Graphitic schist	1.30	5.43	88.24	5.02
18.40	22.40	4.00	3.77	94.25	Graphite bearing granite gneiss	2.43	5.56	88.69	3.33
22.40	35.00	12.60	12.31	97.70	Granite gneiss	0.78	2.15	95.74	1.33
Borehole closed at 35.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/10	Date of commencement : 21.02.2024
Latitude : 20°04'54.364"	Date of closing : 05.04.2024
Longitude : 83°29'22.780"	Azimuth : 310°
RL of collar (m) : 316.993	Rig No. : DYNA-50H-01
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :115.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	2.30	2.30	1.88	81.74	Granite gneiss	0.50	8.14	87.36	4.00
2.30	3.20	0.90	0.83	92.22	Graphite bearing granite gneiss	3.77	5.34	89.40	1.49
3.20	5.55	2.35	1.97	83.83	Charnockite	0.09	1.91	96.20	1.80
5.55	6.30	0.75	0.61	81.33	Graphite bearing granite gneiss	3.15	4.11	91.00	1.74
6.30	7.20	0.90	0.82	91.11	Charnockite	0.05	2.93	94.90	2.12
7.20	9.20	2.00	1.9	95.00	Graphite bearing granite gneiss	6.49	5.43	85.35	2.74
9.20	16.80	7.60	7.17	94.34	Graphite bearing granite gneiss	2.92	3.98	91.20	1.90
16.80	19.80	3.00	2.97	99.00	Charnockite	0.43	0.73	98.40	0.44
19.80	22.80	3.00	2.95	98.33	Graphitic schist	1.10	1.96	96.20	0.74
22.80	25.80	3.00	2.94	98.00	Graphite bearing granite gneiss	3.34	3.18	92.05	1.44
25.80	27.50	1.70	1.65	97.06	Graphite bearing granite gneiss	6.47	3.35	88.96	1.22
27.50	33.50	6.00	5.76	96.00	Graphite bearing granite gneiss	2.91	3.89	91.85	1.35
33.50	34.50	1.00	0.98	98.00	Graphitic schist	1.58	1.87	95.96	0.60
34.50	35.50	1.00	0.97	97.00	Granite gneiss	0.23	0.72	98.58	0.46
35.50	37.10	1.60	1.43	89.37	Graphite bearing granite gneiss	5.59	3.07	90.54	0.80
37.10	39.10	2.00	1.92	96.00	Granite gneiss	0.49	0.29	99.07	0.15

39.10	69.20	30.10	29.32	97.41	Graphite bearing granite gneiss	6.68	3.77	88.57	0.99
69.20	70.50	1.30	1.27	97.69	Granite gneiss	0.95	1.66	97.10	0.29
70.50	71.50	1.00	0.98	98.00	Graphite bearing granite gneiss	4.79	2.19	92.80	0.22
71.50	109.00	37.50	36.24	96.64	Graphite bearing granite gneiss	7.74	2.57	89.04	0.65
109.00	112.20	3.20	3.12	97.50	Granite gneiss	0.14	0.94	98.44	0.47
112.20	115.00	2.80	2.77	98.93	Graphite bearing granite gneiss	2.31	3.00	93.80	0.89
Borehole closed at 115.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/11	Date of commencement : 15.04.2024
Latitude : 20°05'33.292"	Date of closing : 01.05.2024
Longitude : 83°29'07.649"	Azimuth : 310°
RL of collar (m) : 369.934	Rig No. : DYNA-35-01
Inclination angle of borehole : 55°	Size of core: HQ3 and NQ3
Total Depth (m) :77.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :22.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	3.20	3.20	1.46	45.63	Soil	0.07	6.09	89.96	3.88
3.20	19.90	16.70	14.61	87.49	Granite gneiss	0.20	1.92	96.24	1.64
19.90	20.50	0.60	0.58	96.67	Graphite bearing granite gneiss	2.31	5.37	88.48	3.84
20.50	22.30	1.80	1.67	92.78	Granite gneiss	0.06	1.05	98.05	0.84
22.30	25.50	3.20	3.07	95.94	Graphite bearing granite gneiss	5.93	3.51	88.56	2.00
25.50	30.50	5.00	4.68	93.60	Granite gneiss	0.13	1.08	98.41	0.38
30.50	32.50	2.00	1.96	98.00	Graphite bearing granite gneiss	5.26	2.53	90.90	1.31
32.50	43.10	10.60	9.71	91.60	Granite gneiss	0.32	0.40	99.14	0.14
43.10	45.60	2.50	2.46	98.40	Graphite bearing granite gneiss	3.21	1.15	95.45	0.20
45.60	47.80	2.20	2.08	94.55	Granite gneiss	0.52	0.51	98.71	0.26
47.80	48.80	1.00	0.97	97.00	Graphite bearing granite gneiss	2.09	1.65	96.06	0.20
48.80	49.80	1.00	0.97	97.00	Granite gneiss	0.88	1.16	97.50	0.46
49.80	51.80	2.00	1.98	98.90	Graphite bearing granite gneiss	2.11	2.15	95.00	0.75
51.80	52.80	1.00	0.99	99.00	Graphite bearing granite gneiss	6.77	2.25	89.63	1.35
52.80	53.40	0.60	0.55	91.67	Graphitic schist	1.45	1.33	96.59	0.62
53.40	54.50	1.10	0.99	90.00	Granite gneiss	0.93	0.58	98.20	0.29
54.50	55.30	0.80	0.78	97.50	Graphite bearing granite gneiss	4.04	1.93	93.11	0.91
55.30	56.40	1.10	1.05	95.45	Granite gneiss	0.40	0.51	98.86	0.24

56.40	59.40	3.00	2.70	90.00	Graphite bearing granite gneiss	5.39	3.28	156.10	1.89
59.40	61.40	2.00	1.85	92.50	Graphitic schist	1.63	1.94	95.55	0.89
61.40	62.40	1.00	0.96	96.00	Granite gneiss	0.96	2.65	95.60	0.79
62.40	64.40	2.00	1.86	93.00	Graphitic schist	1.40	1.89	95.96	0.75
64.40	67.40	3.00	2.65	88.33	Graphite bearing granite gneiss	3.48	2.87	92.13	1.52
67.40	71.70	4.30	4.04	93.95	Graphitic schist	1.24	3.00	94.70	1.06
71.70	73.90	2.20	2.07	94.09	Graphite bearing granite gneiss	2.98	3.40	92.30	1.32
73.90	75.00	1.10	1.05	95.45	Graphitic schist	1.43	3.83	93.30	1.44
75.00	77.00	2.00	1.66	83.00	Graphite bearing granite gneiss	2.40	5.21	90.30	2.10
Borehole closed at 77.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/12	Date of commencement : 20.04.2024
Latitude : 20°05'30.433"	Date of closing : 02.05.2024
Longitude : 83°29'01.417"	Azimuth : 310°
RL of collar (m) : 353.179	Rig No. : DYNA-35-02
Inclination angle of borehole : 60°	Size of core: HQ3
Total Depth (m) : 62.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) : 3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	5.10	5.10	3.78	74.12	Soil	0.24	3.22	94.51	2.03
5.10	7.70	2.60	2.28	87.69	Granite gneiss	0.40	0.93	97.88	0.79
7.70	8.10	0.40	0.35	87.50	Charnockite	0.24	0.30	99.15	0.31
8.10	11.50	3.40	3.05	89.71	Granite gneiss	0.08	1.23	98.18	0.51
11.50	14.50	3.00	2.82	94.00	Graphite bearing granite gneiss	8.32	3.11	86.97	1.60
14.50	17.10	2.60	2.34	90.00	Graphite bearing granite gneiss	2.67	4.24	91.08	2.00
17.10	18.60	1.50	1.33	88.67	Granite gneiss	0.53	2.20	96.07	1.21
18.60	19.60	1.00	0.97	97.00	Graphite bearing granite gneiss	5.01	3.98	88.60	2.41
19.60	22.20	2.60	2.50	96.15	Granite gneiss	0.66	2.72	95.23	1.39
22.20	23.30	1.10	1.08	98.18	Graphite bearing granite gneiss	4.60	4.71	88.00	2.69
23.30	24.00	0.70	0.68	97.14	Granite gneiss	0.23	1.33	97.80	0.64
24.00	30.60	6.60	6.33	95.91	Graphite bearing granite gneiss	6.26	3.84	88.25	1.65
30.60	33.00	2.40	2.29	95.42	Granite gneiss	0.40	2.87	94.65	2.08
33.00	35.00	2.00	1.89	94.50	Graphite bearing granite gneiss	3.65	5.12	89.02	2.22
35.00	36.50	1.50	1.38	92.00	Graphite bearing granite gneiss	14.32	4.17	80.04	1.47
36.50	37.60	1.10	0.93	84.55	Graphite bearing granite gneiss	2.73	5.16	90.54	1.57
37.60	41.80	4.20	3.74	89.05	Granite gneiss	0.97	4.56	91.99	2.48

41.80	51.00	9.20	8.72	94.78	Graphite bearing granite gneiss	2.86	4.79	89.35	3.01
51.00	51.60	0.60	0.53	88.33	Granite gneiss	0.14	1.62	95.87	2.37
51.60	54.40	2.80	2.66	95.00	Charnockite	0.06	0.42	98.92	0.60
54.40	57.00	2.60	2.10	80.77	Granite gneiss	0.04	1.30	96.99	1.66
57.00	61.00	4.00	3.72	93.00	Graphitic schist	1.70	4.04	92.53	1.74
61.00	62.00	1.00	0.95	95.00	Granite gneiss	0.09	0.33	98.68	0.91
Borehole closed at 62.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/13	Date of commencement : 12.04.2024
Latitude : 20°05'25.33"	Date of closing : 04.05.2024
Longitude : 83°28'56.878"	Azimuth : 310°
RL of collar (m) : 333.327	Rig No. : DYNA-50-CR-07
Inclination angle of borehole : 55°	Size of core: HQ3
Total Depth (m) :71.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :4.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	3.90	3.90	2.22	56.92	Soil	0.12	3.64	94.30	1.94
3.90	17.80	13.90	12.43	89.42	Granite gneiss	0.12	3.68	94.38	1.82
17.80	18.80	1.00	0.96	96.00	Graphite bearing granite gneiss	3.56	3.51	91.50	1.43
18.80	20.80	2.00	1.86	93.00	Graphite bearing granite gneiss	5.08	6.10	86.70	2.13
20.80	29.80	9.00	8.66	96.22	Granite gneiss	0.41	1.85	96.98	0.76
29.80	31.10	1.30	1.16	89.23	Graphite bearing granite gneiss	3.48	5.16	89.30	2.06
31.10	32.10	1.00	0.98	98.00	Granite gneiss	0.70	3.98	93.20	2.12
32.10	33.10	1.00	0.92	92.00	Graphitic schist	1.44	4.37	91.80	2.39
33.10	34.00	0.90	0.88	97.78	Granite gneiss	0.54	3.22	94.70	1.54
34.00	35.00	1.00	0.99	99.00	Graphite bearing granite gneiss	2.02	5.95	89.10	2.93
35.00	36.00	1.00	0.88	88.00	Granite gneiss	0.22	1.81	97.00	0.97
36.00	38.00	2.00	1.73	86.50	Graphite bearing granite gneiss	2.85	4.76	89.40	3.00
38.00	44.60	6.60	5.96	90.30	Graphitic schist	1.44	3.30	93.72	1.54
44.60	47.50	2.90	2.70	93.10	Graphite bearing granite gneiss	2.05	5.39	90.97	1.59
47.50	49.40	1.90	1.82	95.79	Graphitic schist	1.00	5.94	89.53	3.53
49.40	53.80	4.40	4.23	96.14	Graphite bearing granite gneiss	7.16	5.93	84.57	2.33
53.80	55.00	1.20	1.09	90.83	Granite gneiss	0.75	5.47	90.80	2.98
55.00	58.00	3.00	2.81	93.67	Graphite bearing granite gneiss	5.65	5.87	86.07	2.42
58.00	59.60	1.60	1.53	95.62	Granite gneiss	0.98	4.40	91.79	2.83
59.60	60.60	1.00	0.95	95.00	Graphite bearing quartzite	2.31	5.19	89.90	2.60
60.60	62.00	1.40	1.32	94.29	Graphite bearing quartzite	5.54	4.94	87.19	2.33

62.00	64.00	2.00	1.85	92.50	Graphitic schist	1.31	5.11	90.95	2.64
64.00	65.00	1.00	0.95	95.00	Granite gneiss	0.68	5.11	91.80	2.41
65.00	66.00	1.00	0.94	94.00	Graphitic schist	1.86	5.37	89.10	3.67
66.00	67.00	1.00	0.95	95.00	Granite gneiss	0.72	4.26	92.20	2.82
67.00	68.00	1.00	0.96	96.00	Graphitic schist	1.46	5.95	89.50	3.09
68.00	71.00	3.00	1.81	60.33	Graphite bearing granite gneiss	2.35	6.08	88.93	2.64
Borehole closed at 71.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are devided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK	
<u>Summerized Litholog</u>	
Borehole No. :LPA/G3/14	Date of commencement : 08.02.2024
Latitude : 20°05'20.615"	Date of closing : 14.02.2024
Longitude : 83°28'52.244"	Azimuth : 310°
RL of collar (m) : 264.486	Rig No. : DYNA-50H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :42.00	Type of drilling: Wet(Tripplle tube)
Casing Depth (m) :5.90	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	11.30	11.30	9.67	85.58	Soil	0.20	5.73	89.49	4.58
11.30	15.80	4.50	3.77	83.78	Granite gneiss	0.10	2.66	94.43	2.80
15.80	17.80	2.00	1.80	90.00	Graphitic schist	1.54	5.01	88.15	5.31
17.80	19.80	2.00	1.77	88.50	Graphite bearing granite gneiss	3.05	5.01	87.30	4.64
19.80	21.30	1.50	1.13	75.33	Granite gneiss	0.22	5.63	90.50	3.65
21.30	36.90	15.60	14.29	91.60	Graphite bearing granite gneiss	2.54	5.44	89.98	2.05
36.90	38.00	1.10	1.07	97.27	Graphitic schist	1.25	2.99	94.41	1.36
38.00	42.00	4.00	3.84	96.00	Quartzite	0.15	1.20	97.88	0.77
Borehole closed at 42.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are devided into two ranges i.e. (2 -5)% and above 5% FC.

Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/15	Date of commencement : 05.02.2024
Latitude : 20°05'35.282"	Date of closing : 08.04.2024
Longitude : 83°29'05.939"	Azimuth : 310°
RL of collar (m) : 338.832	Rig No. : DYNA-50-CR-07
Inclination angle of borehole : 50°	Size of core: HQ3
Total Depth (m) :59.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	1.00	1.00	0.00	0.00	Core loss				
1.00	4.10	3.10	1.61	51.94	Soil	0.33	4.61	93.43	1.63
4.10	7.80	3.70	2.29	61.89	Granite gneiss	0.60	5.12	92.20	2.08
7.80	23.80	16.00	13.59	84.94	Graphite bearing granite gneiss	2.45	5.81	89.67	2.08
23.80	24.80	1.00	0.87	87.00	Graphitic schist	1.53	4.09	92.06	2.32
24.80	29.00	4.20	3.85	91.67	Granite gneiss	0.06	0.50	98.68	0.76
29.00	30.00	1.00	0.87	87.00	Graphite bearing granite gneiss	2.53	2.17	94.36	0.94
30.00	31.00	1.00	0.97	97.00	Graphite bearing granite gneiss	5.50	2.89	91.00	0.61
31.00	32.00	1.00	0.94	94.00	Graphite bearing granite gneiss	4.47	3.11	91.03	1.38
32.00	33.50	1.50	1.42	94.67	Graphitic schist	1.47	1.54	95.94	1.06
33.50	34.50	1.00	0.94	94.00	Graphite bearing granite gneiss	2.15	3.66	91.50	2.68
34.50	35.50	1.00	0.96	96.00	Graphite bearing granite gneiss	6.18	5.78	84.89	3.16
35.50	42.00	6.50	5.94	91.38	Graphite bearing granite gneiss	3.22	4.63	89.27	2.88
42.00	44.50	2.50	2.32	92.80	Graphite bearing granite gneiss	6.83	5.30	85.34	2.54
44.50	46.00	1.50	1.40	93.33	Graphite bearing granite gneiss	3.26	6.85	86.06	3.82
46.00	51.50	5.50	5.14	93.45	Graphite bearing granite gneiss	6.25	5.64	86.00	2.12
51.50	52.50	1.00	0.89	89.00	Graphite bearing granite gneiss	2.25	5.74	89.70	2.31
52.50	53.50	1.00	0.94	94.00	Graphite bearing granite gneiss	7.07	3.11	88.20	1.62
53.50	54.00	0.50	0.45	90.00	Graphite bearing granite gneiss	2.26	4.13	92.40	1.21
54.00	55.00	1.00	0.93	93.00	Graphitic schist	1.10	5.79	90.80	2.31
55.00	59.00	4.00	3.20	80.00	Granite gneiss	0.12	2.59	95.30	1.99
Borehole closed at 59.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK
Summerized Litholog

Borehole No. :LPA/G3/16	Date of commencement : 10.04.2024
Latitude : 20°05'15.575"	Date of closing : 18.04.2024
Longitude : 83°28'47.651"	Azimuth : 310°
RL of collar (m) : 245.134	Rig No. : DYNA-50-H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :42.00	Type of drilling: Wet(Trippl tube)
Casing Depth (m) : 3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	2.00	2.00	1.34	67.00	Soil	0.06	5.88	91.40	2.66
2.00	4.40	2.40	1.54	64.17	Granite gneiss	0.07	3.02	95.12	1.79
4.40	10.40	6.00	5.68	94.67	Graphite bearing granite gneiss	2.81	4.67	90.05	2.47
10.40	21.60	11.20	10.48	93.57	Granite gneiss	0.30	2.79	95.50	1.41
21.60	22.60	1.00	0.97	97.00	Graphitic schist	1.42	3.94	93.30	1.34
22.60	25.60	3.00	2.87	95.67	Graphite bearing granite gneiss	3.51	4.68	90.23	1.58
25.60	29.00	3.40	2.97	87.35	Graphitic schist	1.39	3.01	93.93	1.67
29.00	30.00	1.00	0.91	91.00	Granite gneiss	0.42	3.37	95.70	0.51
30.00	31.00	1.00	0.90	90.00	Graphitic schist	1.57	5.98	91.60	0.85
31.00	32.00	1.00	0.89	89.00	Graphite bearing granite gneiss	3.98	4.89	89.50	1.63
32.00	33.00	1.00	0.82	82.00	Granite gneiss	0.88	3.57	94.60	0.95
33.00	34.00	1.00	0.94	94.00	Graphitic schist	1.12	2.87	94.70	1.31
34.00	37.00	3.00	2.84	94.67	Graphite bearing granite gneiss	4.21	4.51	89.93	1.35
37.00	42.00	5.00	4.62	92.40	Granite gneiss	0.31	2.00	97.02	0.67
Borehole closed at 42.00 m									

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.



Logged by: Bhupati Kumar Nayak

BLOCK NAME-LAMER-PANGA BLOCK-A (G-3) GRAPHITE BLOCK <u>Summerized Litholog</u>	
Borehole No. :LPA/G3/17	Date of commencement : 22.04.2024
Latitude : 20°05'40.181"	Date of closing : 01.05.2024
Longitude : 83°29'10.319"	Azimuth : 310°
RL of collar (m) : 274.989	Rig No. : DYNA-50-H-01
Inclination angle of borehole : 45°	Size of core: HQ3
Total Depth (m) :35.00	Type of drilling: Wet(Triple tube)
Casing Depth (m) :3.00	Drilling Agency : Mining Associates Private Limited

DRILL RUN DETAILS					Rock Description	CHEMICAL ANALYSIS RESULTS			
From (m)	To (m)	Length (m)	Rec. Length (m)	Rec. (%)		Fixed Carbon %	Volatile Matter (%)	Ash %	Moisture (%)
0.00	0.40	0.40	0.00	0.00	Core loss				
0.40	6.80	6.40	5.00	78.13	Soil	0.16	7.06	89.10	3.68
6.80	10.80	4.00	3.36	84.00	Granite gneiss	0.35	4.48	93.90	1.27
10.80	14.80	4.00	3.74	93.50	Graphitic schist	1.21	6.41	87.90	4.48
14.80	35.00	20.20	18.07	89.46	Granite gneiss	0.53	4.45	92.58	2.44
Borehole closed at 35.00 m									

Logged by: Bhupati Kumar Nayak

ANNEXURE-VII

LAMER-PANGA BLOCK-A (G3) GRAPHITE BLOCK										
Details of primary core sample analysis for 4 radicals										
BH ID	FROM (m)	TO (m)	LENGTH (m)	SAMPLE ID	CHEMICAL ANALYSIS RESULTS				LITHOLOGY	LITHO CODE
					Fixed Carbon (%)	Volatile matter (%)	Ash (%)	Moisture (%)		
LPA/G3/01	0.00	3.50	3.50	LPA/G3/01-01	0.03	3.48	95.20	1.29	Granite gneiss	GG
LPA/G3/01	4.00	7.10	3.10	LPA/G3/01-02	0.30	3.03	95.90	0.77	Granite gneiss	GG
LPA/G3/01	7.10	11.10	4.00	LPA/G3/01-03	0.06	1.81	97.50	0.63	Granite gneiss	GG
LPA/G3/01	11.10	14.10	3.00	LPA/G3/01-04	0.02	3.50	94.75	1.73	Granite gneiss	GG
LPA/G3/01	14.10	15.10	1.00	LPA/G3/01-05	0.07	3.54	94.60	1.79	Granite gneiss	GG
LPA/G3/01	15.10	16.10	1.00	LPA/G3/01-06	4.36	5.40	87.40	2.84	Graphite bearing granite gneiss	G+GG
LPA/G3/01	16.10	17.10	1.00	LPA/G3/01-07	2.16	4.05	91.10	2.69	Graphite bearing granite gneiss	G+GG
LPA/G3/01	17.10	17.70	0.60	LPA/G3/01-08	1.98	6.16	89.00	2.86	Graphitic Schist	GS
LPA/G3/01	17.70	18.70	1.00	LPA/G3/01-09	3.49	4.70	89.40	2.41	Graphite bearing granite gneiss	G+GG
LPA/G3/01	18.70	19.80	1.10	LPA/G3/01-10	2.84	3.38	92.20	1.58	Graphite bearing granite gneiss	G+GG
LPA/G3/01	19.80	20.60	0.80	LPA/G3/01-11	0.69	2.05	96.50	0.76	Granite gneiss	GG
LPA/G3/01	20.60	21.60	1.00	LPA/G3/01-12	2.67	3.05	93.70	0.58	Graphite bearing granite gneiss	G+GG
LPA/G3/01	21.60	22.60	1.00	LPA/G3/01-13	5.51	3.69	89.80	1.00	Graphite bearing granite gneiss	G+GG
LPA/G3/01	22.60	23.60	1.00	LPA/G3/01-14	6.03	4.49	87.90	1.58	Graphite bearing granite gneiss	G+GG
LPA/G3/01	23.60	24.60	1.00	LPA/G3/01-15	9.48	3.80	85.48	1.24	Graphite bearing granite gneiss	G+GG
LPA/G3/01	24.60	25.60	1.00	LPA/G3/01-16	9.69	4.51	84.80	1.00	Graphite bearing granite gneiss	G+GG
LPA/G3/01	25.60	26.60	1.00	LPA/G3/01-17	8.87	5.53	84.40	1.20	Graphite bearing granite gneiss	G+GG
LPA/G3/01	26.60	27.10	0.50	LPA/G3/01-18	0.85	1.71	97.20	0.24	Granite gneiss	GG
LPA/G3/01	27.10	27.80	0.70	LPA/G3/01-19	3.45	3.60	92.30	0.65	Graphite bearing granite gneiss	G+GG
LPA/G3/01	27.80	29.10	1.30	LPA/G3/01-20	0.27	0.95	98.40	0.38	Granite gneiss	GG
LPA/G3/01	29.10	30.10	1.00	LPA/G3/01-21	10.15	3.11	86.12	0.62	Graphite bearing granite gneiss	G+GG
LPA/G3/01	30.10	30.73	0.63	LPA/G3/01-22	6.40	4.61	87.83	1.16	Graphite bearing granite gneiss	G+GG
LPA/G3/01	30.73	31.50	0.77	LPA/G3/01-23	0.23	2.49	96.61	0.67	Granite gneiss	GG
LPA/G3/01	31.50	31.80	0.30	LPA/G3/01-24	2.47	2.40	94.30	0.83	Graphite bearing granite gneiss	G+GG
LPA/G3/01	31.80	33.00	1.20	LPA/G3/01-25	2.08	2.12	95.34	0.46	Graphite bearing granite gneiss	G+GG
LPA/G3/01	33.00	34.00	1.00	LPA/G3/01-26	11.25	3.96	83.18	1.61	Graphite bearing granite gneiss	G+GG
LPA/G3/01	34.00	35.00	1.00	LPA/G3/01-27	10.43	4.36	83.67	1.55	Graphite bearing granite gneiss	G+GG
LPA/G3/01	35.00	36	1.00	LPA/G3/01-28	12.65	3.57	82.21	1.57	Graphite bearing granite gneiss	G+GG
LPA/G3/01	36.00	37	1.00	LPA/G3/01-29	11.64	4.34	82.26	1.76	Graphite bearing granite gneiss	G+GG
LPA/G3/01	37.00	37.30	0.30	LPA/G3/01-30	12.78	3.21	82.81	1.20	Graphite bearing granite gneiss	G+GG
LPA/G3/01	37.30	38.40	1.10	LPA/G3/01-31	0.14	1.32	97.35	1.19	Granite gneiss	GG
LPA/G3/01	38.40	38.7	0.30	LPA/G3/01-32	7.76	3.06	87.89	1.29	Graphite bearing granite gneiss	G+GG
LPA/G3/01	38.70	39.7	1.00	LPA/G3/01-33	0.02	2.94	93.42	3.62	Granite gneiss	GG
LPA/G3/01	39.70	43.3	3.60	LPA/G3/01-34	0.24	0.61	98.20	0.96	Granite gneiss	GG
LPA/G3/01	43.30	44.3	1.00	LPA/G3/01-35	0.25	1.23	97.63	0.90	Granite gneiss	GG
LPA/G3/01	44.30	44.8	0.50	LPA/G3/01-36	6.72	3.74	88.04	1.50	Graphite bearing granite gneiss	G+GG
LPA/G3/01	44.80	45.7	0.90	LPA/G3/01-37	0.17	3.94	93.77	2.13	Graphitic Schist	GS
LPA/G3/01	45.70	46.7	1.00	LPA/G3/01-38	7.05	3.57	88.00	1.38	Graphite bearing granite gneiss	G+GG
LPA/G3/01	46.70	47.7	1.00	LPA/G3/01-39	4.77	2.62	92.14	0.47	Graphite bearing granite gneiss	G+GG
LPA/G3/01	47.70	48.7	1.00	LPA/G3/01-40	7.11	3.36	88.99	0.53	Graphite bearing granite gneiss	G+GG
LPA/G3/01	48.70	49.4	0.70	LPA/G3/01-41	10.67	4.25	84.04	1.03	Graphite bearing granite gneiss	G+GG
LPA/G3/01	49.40	50	0.60	LPA/G3/01-42	7.10	3.70	88.79	0.41	Graphite bearing granite gneiss	G+GG
LPA/G3/02	0.00	1.00	1.00	LPA/G3/02-01	0.0741	4.9767	92.8317	2.1175	Granite gneiss	GG
LPA/G3/02	1.00	2.00	1.00	LPA/G3/02-02	1.0112	6.0202	90.9647	2.0039	Graphitic Schist	GS
LPA/G3/02	2.00	3.00	1.00	LPA/G3/02-03	3.033	7.6048	86.7261	2.6361	Graphite bearing granite gneiss	G+GG
LPA/G3/02	3.00	5.20	2.20	LPA/G3/02-04	0.8819	6.4994	89.2672	3.3515	Granite gneiss	GG
LPA/G3/02	5.20	6.20	1.00	LPA/G3/02-05	4.3755	6.0661	85.6335	3.9249	Graphite bearing granite gneiss	G+GG
LPA/G3/02	6.20	7.20	1.00	LPA/G3/02-06	4.6655	6.2483	86.1564	2.9298	Graphite bearing granite gneiss	G+GG
LPA/G3/02	7.20	8.20	1.00	LPA/G3/02-07	3.7248	6.3166	84.63	5.3286	Graphite bearing granite gneiss	G+GG
LPA/G3/02	8.20	9.70	1.50	LPA/G3/02-08	4.719	4.8137	87.1381	3.3292	Graphite bearing granite gneiss	G+GG
LPA/G3/02	9.70	11.70	2.00	LPA/G3/02-09	1.4267	3.1591	93.0407	2.3735	Graphitic Schist	GS
LPA/G3/02	11.70	13.70	2.00	LPA/G3/02-10	0.4491	5.9677	90.8763	2.7069	Granite gneiss	GG

LPA/G3/02	13.70	16.30	2.60	LPA/G3/02-11	0.86	4.58	92.7	1.86	Granite gneiss	GG
LPA/G3/02	16.30	17.30	1.00	LPA/G3/02-12	6.9438	5.2137	84.1697	3.6728	Graphite bearing granite gneiss	G+GG
LPA/G3/02	17.30	18.30	1.00	LPA/G3/02-13	7.0901	4.7647	85.8343	2.3109	Graphite bearing granite gneiss	G+GG
LPA/G3/02	18.30	19.30	1.00	LPA/G3/02-14	6.64	6.76	84.1	2.5	Graphite bearing granite gneiss	G+GG
LPA/G3/02	19.30	20.30	1.00	LPA/G3/02-15	8.9582	5.4269	83.1801	2.4348	Graphite bearing granite gneiss	G+GG
LPA/G3/02	20.30	21.30	1.00	LPA/G3/02-16	11.63	5.53	81.2	1.64	Graphite bearing granite gneiss	G+GG
LPA/G3/02	21.30	22.30	1.00	LPA/G3/02-17	11.0694	5.3032	82.1849	1.4425	Graphite bearing granite gneiss	G+GG
LPA/G3/02	22.30	23.30	1.00	LPA/G3/02-18	10	4.82	83.6	1.58	Graphite bearing granite gneiss	G+GG
LPA/G3/02	23.30	24.10	0.80	LPA/G3/02-19	6.1297	5.3772	85.1499	3.3432	Graphite bearing granite gneiss	G+GG
LPA/G3/02	24.10	24.80	0.70	LPA/G3/02-20	0.25	7.34	88	4.41	Granite gneiss	GG
LPA/G3/02	24.80	26.15	1.35	LPA/G3/02-21	4.86	9.21	78	7.93	Graphite bearing granite gneiss	G+GG
LPA/G3/02	26.15	26.80	0.65	LPA/G3/02-22	1.96	9.18	83	5.86	Graphitic Schist	GS
LPA/G3/02	26.80	27.80	1.00	LPA/G3/02-23	5.44	7.89	81.6	5.07	Graphite bearing granite gneiss	G+GG
LPA/G3/02	27.80	28.80	1.00	LPA/G3/02-24	5.66	6.57	83.6	4.17	Graphite bearing granite gneiss	G+GG
LPA/G3/02	28.80	29.80	1.00	LPA/G3/02-25	5.88	9.12	81.3	3.7	Graphite bearing granite gneiss	G+GG
LPA/G3/02	29.80	30.80	1.00	LPA/G3/02-26	6.52	6.6	83.5	3.38	Graphite bearing granite gneiss	G+GG
LPA/G3/02	30.80	32.10	1.30	LPA/G3/02-27	6.67	8.34	78.6	6.39	Graphite bearing granite gneiss	G+GG
LPA/G3/02	32.10	32.80	0.70	LPA/G3/02-28	3.73	9.35	83.7	3.22	Graphite bearing granite gneiss	G+GG
LPA/G3/02	32.80	33.80	1.00	LPA/G3/02-29	6.44	5.67	85.8	2.09	Graphite bearing granite gneiss	G+GG
LPA/G3/02	33.80	34.80	1.00	LPA/G3/02-30	6.42	4.58	86.4	2.6	Graphite bearing granite gneiss	G+GG
LPA/G3/02	34.80	35.80	1.00	LPA/G3/02-31	6.76	4.99	85.3	2.95	Graphite bearing granite gneiss	G+GG
LPA/G3/02	35.80	36.80	1.00	LPA/G3/02-32	2.35	7.1	87.2	3.35	Graphite bearing granite gneiss	G+GG
LPA/G3/02	36.80	37.80	1.00	LPA/G3/02-33	3.23	6.65	86.9	3.22	Graphite bearing granite gneiss	G+GG
LPA/G3/02	37.80	38.80	1.00	LPA/G3/02-34	6.74	5.24	85.9	2.12	Graphite bearing granite gneiss	G+GG
LPA/G3/02	38.80	39.80	1.00	LPA/G3/02-35	6.48	5.39	86.9	1.23	Graphite bearing granite gneiss	G+GG
LPA/G3/02	39.80	40.80	1.00	LPA/G3/02-36	7.45	5.35	85.2	2	Graphite bearing granite gneiss	G+GG
LPA/G3/02	40.80	41.80	1.00	LPA/G3/02-37	6.95	5.87	85.1	2.08	Graphite bearing granite gneiss	G+GG
LPA/G3/02	41.80	42.80	1.00	LPA/G3/02-38	6.36	6.34	85.8	1.5	Graphite bearing granite gneiss	G+GG
LPA/G3/02	42.80	43.80	1.00	LPA/G3/02-39	6.42	5.39	86.3	1.89	Graphite bearing granite gneiss	G+GG
LPA/G3/02	43.80	44.60	0.80	LPA/G3/02-40	4.51	4.03	89.5	1.96	Graphite bearing granite gneiss	G+GG
LPA/G3/02	44.60	45.60	1.00	LPA/G3/02-41	0.96	6.38	88.7	3.96	Granite gneiss	GG
LPA/G3/02	45.60	46.60	1.00	LPA/G3/02-42	4.1	4.33	90.1	1.47	Graphite bearing granite gneiss	G+GG
LPA/G3/02	46.60	47.60	1.00	LPA/G3/02-43	3.1	5.13	89.9	1.87	Graphite bearing granite gneiss	G+GG
LPA/G3/02	47.60	50.00	2.40	LPA/G3/02-44	3.64	3.61	91.5	1.25	Graphite bearing granite gneiss	G+GG
LPA/G3/03	0.00	3.00	3.00	LPA/G3/03-01	0.08	1.06	98.54	0.32	Granite gneiss	GG
LPA/G3/03	3.00	6.00	3.00	LPA/G3/03-02	0.24	1.58	97.72	0.46	Granite gneiss	GG
LPA/G3/03	6.00	9.00	3.00	LPA/G3/03-03	0.53	2.56	96.46	0.45	Granite gneiss	GG
LPA/G3/03	9.00	12.00	3.00	LPA/G3/03-04	0.15	0.48	99.03	0.35	Granite gneiss	GG
LPA/G3/03	12.00	15.00	3.00	LPA/G3/03-05	0.02	0.25	99.58	0.15	Granite gneiss	GG
LPA/G3/03	15.00	18.00	3.00	LPA/G3/03-06	0.21	0.49	99.29	0.02	Granite gneiss	GG
LPA/G3/03	18.00	21.00	3.00	LPA/G3/03-07	0.12	0.42	99.40	0.06	Granite gneiss	GG
LPA/G3/03	21.00	24.00	3.00	LPA/G3/03-08	0.03	0.05	99.90	0.02	Granite gneiss	GG
LPA/G3/03	24.00	27.00	3.00	LPA/G3/03-09	0.02	0.15	99.80	0.03	Granite gneiss	GG
LPA/G3/03	27.00	30.00	3.00	LPA/G3/03-10	0.12	0.94	98.32	0.62	Granite gneiss	GG
LPA/G3/03	30.00	33.00	3.00	LPA/G3/03-11	0.26	0.93	98.80	0.01	Granite gneiss	GG
LPA/G3/03	33.00	35.00	2.00	LPA/G3/03-12	0.59	0.77	98.60	0.04	Granite gneiss	GG
LPA/G3/04	0.00	3.00	3.00	LPA/G3/04-01	0.05	3.43	94.53	1.99	Granite gneiss	GG
LPA/G3/04	3.00	6.00	3.00	LPA/G3/04-02	0.01	2.89	94.37	2.73	Granite gneiss	GG
LPA/G3/04	6.00	9.00	3.00	LPA/G3/04-03	0.03	1.49	97.20	1.28	Granite gneiss	GG
LPA/G3/04	9.00	12.00	3.00	LPA/G3/04-04	0.02	0.65	98.62	0.70	Granite gneiss	GG
LPA/G3/04	12.00	15.00	3.00	LPA/G3/04-05	0.20	0.62	98.77	0.41	Granite gneiss	GG
LPA/G3/04	15.00	18.00	3.00	LPA/G3/04-06	0.21	1.05	98.25	0.49	Granite gneiss	GG
LPA/G3/04	18.00	21.00	3.00	LPA/G3/04-07	0.25	0.53	99.17	0.06	Granite gneiss	GG
LPA/G3/04	21.00	24.00	3.00	LPA/G3/04-08	0.02	0.10	99.80	0.08	Granite gneiss	GG
LPA/G3/04	24.00	27.00	3.00	LPA/G3/04-09	0.10	0.83	99.00	0.07	Granite gneiss	GG
LPA/G3/04	27.00	30.00	3.00	LPA/G3/04-10	0.07	0.17	99.56	0.20	Granite gneiss	GG

LPA/G3/04	30.00	33.00	3.00	LPA/G3/04-11	0.02	0.06	99.91	0.01	Granite gneiss	GG
LPA/G3/04	33.00	35.00	2.00	LPA/G3/04-12	0.02	0.37	99.60	0.01	Granite gneiss	GG
LPA/G3/05	0.00	1.10	1.10	LPA/G3/05-01	0.9156	4.2586	93.0557	1.7701	Granite gneiss	GG
LPA/G3/05	1.10	2.10	1.00	LPA/G3/05-02	9.09	6.56	82.6	1.75	Graphite bearing granite gneiss	G+GG
LPA/G3/05	2.10	3.10	1.00	LPA/G3/05-03	16.54	3.44	79.4	0.62	Graphite bearing granite gneiss	G+GG
LPA/G3/05	3.10	3.60	0.50	LPA/G3/05-04	0.64	5.85	91.7	1.81	Granite gneiss	GG
LPA/G3/05	3.60	5.10	1.50	LPA/G3/05-05	13.13	3.75	82.3	0.82	Graphite bearing granite gneiss	G+GG
LPA/G3/05	5.60	6.60	1.00	LPA/G3/05-06	7.17	5.37	84.7	2.76	Graphite bearing granite gneiss	G+GG
LPA/G3/05	6.60	8.10	1.50	LPA/G3/05-07	2.2709	3.2875	92.7751	1.6665	Graphite bearing granite gneiss	G+GG
LPA/G3/05	8.10	9.10	1.00	LPA/G3/05-08	2.52	3.12	92.6	1.76	Graphite bearing granite gneiss	G+GG
LPA/G3/05	9.10	10.60	1.50	LPA/G3/05-09	2.49	3.7	92.4	1.41	Graphite bearing granite gneiss	G+GG
LPA/G3/05	10.60	12.10	1.50	LPA/G3/05-10	0.18	6.38	90.5	2.94	Granite gneiss	GG
LPA/G3/05	12.10	13.60	1.50	LPA/G3/05-11	11.7822	3.5617	83.0549	1.6012	Graphite bearing granite gneiss	G+GG
LPA/G3/05	13.60	15.60	2.00	LPA/G3/05-12	1.0449	2.1228	95.2233	1.609	Graphitic Schist	GS
LPA/G3/05	15.60	16.86	1.26	LPA/G3/05-13	1.6466	2.1623	94.8257	1.3654	Graphitic Schist	GS
LPA/G3/05	16.86	18.10	1.24	LPA/G3/05-14	9.2173	2.9833	86.1938	1.6056	Graphite bearing granite gneiss	G+GG
LPA/G3/05	18.10	19.10	1.00	LPA/G3/05-15	6.8497	5.1169	85.997	2.0364	Graphite bearing granite gneiss	G+GG
LPA/G3/05	19.10	20.45	1.35	LPA/G3/05-16	11.8381	2.8709	83.8752	1.4158	Graphite bearing granite gneiss	G+GG
LPA/G3/05	20.45	21.10	0.65	LPA/G3/05-17	1.4395	3.7232	93.5244	1.3129	Graphitic Schist	GS
LPA/G3/05	21.10	21.70	0.60	LPA/G3/05-18	2.228	4.4422	90.9995	2.3303	Graphite bearing granite gneiss	G+GG
LPA/G3/05	21.70	22.60	0.90	LPA/G3/05-19	0.4596	1.8638	96.2114	1.4652	Granite gneiss	GG
LPA/G3/05	22.60	23.60	1.00	LPA/G3/05-20	16.2138	2.307	80.9198	0.5594	Graphite bearing granite gneiss	G+GG
LPA/G3/05	23.60	24.60	1.00	LPA/G3/05-21	14.8922	1.0469	83.751	0.3099	Graphite bearing granite gneiss	G+GG
LPA/G3/05	24.60	25.60	1.00	LPA/G3/05-22	11.6073	3.2129	84.027	1.1528	Graphite bearing granite gneiss	G+GG
LPA/G3/05	25.60	26.60	1.00	LPA/G3/05-23	13.9706	2.1306	82.9333	0.9655	Graphite bearing granite gneiss	G+GG
LPA/G3/05	26.60	27.60	1.00	LPA/G3/05-24	10.8199	3.562	84.1309	1.4872	Graphite bearing granite gneiss	G+GG
LPA/G3/05	27.60	28.60	1.00	LPA/G3/05-25	11.5018	3.2152	83.4628	1.8202	Graphite bearing granite gneiss	G+GG
LPA/G3/05	28.60	29.60	1.00	LPA/G3/05-26	12.5304	3.3281	81.864	2.2775	Graphite bearing granite gneiss	G+GG
LPA/G3/05	29.60	30.60	1.00	LPA/G3/05-27	16.6512	2.2168	80.171	0.961	Graphite bearing granite gneiss	G+GG
LPA/G3/05	30.60	31.60	1.00	LPA/G3/05-28	14.8506	2.9772	80.5998	1.5724	Graphite bearing granite gneiss	G+GG
LPA/G3/05	31.60	32.60	1.00	LPA/G3/05-29	16.8855	2.3513	80.5729	0.1903	Graphite bearing granite gneiss	G+GG
LPA/G3/05	32.60	33.60	1.00	LPA/G3/05-30	17.0782	2.344	79.8504	0.7274	Graphite bearing granite gneiss	G+GG
LPA/G3/05	33.60	34.60	1.00	LPA/G3/05-31	15.1855	3.2976	80.4887	1.0282	Graphite bearing granite gneiss	G+GG
LPA/G3/05	34.60	35.60	1.00	LPA/G3/05-32	15.1188	4.2246	79.927	0.7296	Graphite bearing granite gneiss	G+GG
LPA/G3/05	35.60	36.60	1.00	LPA/G3/05-33	9.6911	4.8809	84.0876	1.3404	Graphite bearing granite gneiss	G+GG
LPA/G3/05	36.60	37.10	0.50	LPA/G3/05-34	11.4465	4.5064	82.989	1.0581	Graphite bearing granite gneiss	G+GG
LPA/G3/05	37.10	38.10	1.00	LPA/G3/05-35	9.9894	4.5246	84.5027	0.9833	Graphite bearing granite gneiss	G+GG
LPA/G3/05	38.10	39.30	1.20	LPA/G3/05-36	11.7507	3.4038	84.165	0.6805	Graphite bearing granite gneiss	G+GG
LPA/G3/05	39.30	41.00	1.70	LPA/G3/05-37	1.3398	1.1766	97.1147	0.3689	Graphitic Schist	GS
LPA/G3/05	41.00	42.00	1.00	LPA/G3/05-38	8.9779	2.2055	88.5284	0.2882	Graphite bearing granite gneiss	G+GG
LPA/G3/05	42.00	43.00	1.00	LPA/G3/05-39	16.4445	2.6267	80.4341	0.4947	Graphite bearing granite gneiss	G+GG
LPA/G3/05	43.00	44.00	1.00	LPA/G3/05-40	10.4091	2.2174	87.0506	0.3229	Graphite bearing granite gneiss	G+GG
LPA/G3/05	44.00	45.00	1.00	LPA/G3/05-41	8.3009	3.0043	88.0218	0.673	Graphite bearing granite gneiss	G+GG
LPA/G3/05	45.00	46.00	1.00	LPA/G3/05-42	13.6009	2.4375	83.1493	0.8123	Graphite bearing granite gneiss	G+GG
LPA/G3/05	46.00	47.00	1.00	LPA/G3/05-43	9.2119	2.4308	87.7712	0.5861	Graphite bearing granite gneiss	G+GG
LPA/G3/05	47.00	48.00	1.00	LPA/G3/05-44	12.0146	2.8576	84.519	0.6088	Graphite bearing granite gneiss	G+GG
LPA/G3/05	48.00	49.00	1.00	LPA/G3/05-45	13.8862	2.8038	82.1421	1.1679	Graphite bearing granite gneiss	G+GG
LPA/G3/05	49.00	50.00	1.00	LPA/G3/05-46	13.0272	2.1321	84.2754	0.5653	Graphite bearing granite gneiss	G+GG
LPA/G3/05	50.00	51.00	1.00	LPA/G3/05-47	12.7214	2.0895	84.5853	0.6038	Graphite bearing granite gneiss	G+GG
LPA/G3/05	51.00	52.00	1.00	LPA/G3/05-48	8.5878	2.786	87.5093	1.1169	Graphite bearing granite gneiss	G+GG
LPA/G3/05	52.00	53.00	1.00	LPA/G3/05-49	8.9246	2.6157	87.611	0.8487	Graphite bearing granite gneiss	G+GG
LPA/G3/05	53.00	54.00	1.00	LPA/G3/05-50	8.6561	3.8985	86.1259	1.3195	Graphite bearing granite gneiss	G+GG
LPA/G3/05	54.00	55.00	1.00	LPA/G3/05-51	10.0573	3.659	84.9638	1.3199	Graphite bearing granite gneiss	G+GG
LPA/G3/05	55.00	56.00	1.00	LPA/G3/05-52	9.2623	2.8267	86.8206	1.0904	Graphite bearing granite gneiss	G+GG
LPA/G3/05	56.00	57.00	1.00	LPA/G3/05-53	9.5052	3.2153	86.3544	0.9251	Graphite bearing granite gneiss	G+GG
LPA/G3/05	57.00	58.00	1.00	LPA/G3/05-54	8.854	3.9854	85.962	1.1986	Graphite bearing granite gneiss	G+GG

LPA/G3/05	58.00	59.00	1.00	LPA/G3/05-55	8.6598	4.1167	86.1964	1.0271	Graphite bearing granite gneiss	G+GG
LPA/G3/05	59.00	60.00	1.00	LPA/G3/05-56	10.6104	2.2736	86.3699	0.7461	Graphite bearing granite gneiss	G+GG
LPA/G3/06	0.00	2.20	2.20	LPA/G3/06-01	0.4734	5.3839	92.2749	1.8678	Granite gneiss	GG
LPA/G3/06	2.20	3.60	1.40	LPA/G3/06-02	3.3356	5.0813	90.0396	1.5435	Graphite bearing granite gneiss	G+GG
LPA/G3/06	3.60	4.30	0.70	LPA/G3/06-03	0.8625	4.6588	93.2164	1.2623	Granite gneiss	GG
LPA/G3/06	4.30	6.10	1.80	LPA/G3/06-04	0.0152	1.2585	98.47	0.2563	Granite gneiss	GG
LPA/G3/06	6.10	10.10	4.00	LPA/G3/06-05	0.0303	0.8733	98.9	0.1964	Granite gneiss	GG
LPA/G3/06	10.10	14.10	4.00	LPA/G3/06-06	0.0141	1.4781	97.91	0.5978	Granite gneiss	GG
LPA/G3/06	14.10	16.84	2.74	LPA/G3/06-07	0.0239	0.9458	98.45	0.5803	Granite gneiss	GG
LPA/G3/06	16.84	18.10	1.26	LPA/G3/06-08	1.6274	2.8946	93.9998	1.4782	Graphitic Schist	GS
LPA/G3/06	18.10	18.79	0.69	LPA/G3/06-09	0.5509	1.8906	96.8158	0.7427	Granite gneiss	GG
LPA/G3/06	18.79	20.10	1.31	LPA/G3/06-10	3.36	4.7375	89.9179	1.9846	Graphite bearing granite gneiss	G+GG
LPA/G3/06	20.10	21.10	1.00	LPA/G3/06-11	3.4579	6.516	87.0125	3.0136	Graphite bearing granite gneiss	G+GG
LPA/G3/06	21.10	22.10	1.00	LPA/G3/06-12	2.6744	8.0542	86.4984	2.773	Graphite bearing granite gneiss	G+GG
LPA/G3/06	22.10	23.10	1.00	LPA/G3/06-13	2.2477	6.2553	89.2581	2.2389	Graphite bearing granite gneiss	G+GG
LPA/G3/06	23.10	24.10	1.00	LPA/G3/06-14	4.3028	6.4041	87.2672	2.0259	Graphite bearing granite gneiss	G+GG
LPA/G3/06	24.10	25.10	1.00	LPA/G3/06-15	0.2366	2.7414	95.2283	1.7937	Granite gneiss	GG
LPA/G3/06	25.10	26.05	0.95	LPA/G3/06-16	3.4498	3.2559	91.1489	2.1454	Graphite bearing granite gneiss	G+GG
LPA/G3/06	26.05	27.85	1.80	LPA/G3/06-17	0.0786	1.6973	97.2385	0.9856	Granite gneiss	GG
LPA/G3/06	27.85	28.80	0.95	LPA/G3/06-18	2.6762	2.3707	93.1734	1.7797	Graphite bearing granite gneiss	G+GG
LPA/G3/06	28.80	30.00	1.20	LPA/G3/06-19	1.7247	3.8529	91.7956	2.6268	Graphitic Schist	GS
LPA/G3/06	30.00	31.00	1.00	LPA/G3/06-20	3.1839	3.8215	91.4553	1.5393	Graphite bearing granite gneiss	G+GG
LPA/G3/06	31.00	32.00	1.00	LPA/G3/06-21	1.8108	3.9291	92.2108	2.0493	Graphitic Schist	GS
LPA/G3/06	32.00	33.00	1.00	LPA/G3/06-22	3.6997	3.7974	90.8994	1.6035	Graphite bearing granite gneiss	G+GG
LPA/G3/06	33.00	33.40	0.40	LPA/G3/06-23	2.0041	2.9183	93.717	1.3606	Graphite bearing granite gneiss	G+GG
LPA/G3/06	33.40	34.00	0.60	LPA/G3/06-24	0.29	1.51	97.7	0.5	Granite gneiss	GG
LPA/G3/06	34.00	35.00	1.00	LPA/G3/06-25	5.732	4.0548	88.4037	1.8095	Graphite bearing granite gneiss	G+GG
LPA/G3/06	35.00	36.00	1.00	LPA/G3/06-26	4.3949	3.9333	89.7445	1.9273	Graphite bearing granite gneiss	G+GG
LPA/G3/06	36.00	37.00	1.00	LPA/G3/06-27	4.3405	4.2444	89.2285	2.1866	Graphite bearing granite gneiss	G+GG
LPA/G3/06	37.00	38.00	1.00	LPA/G3/06-28	4.44	4.48	89.6	1.48	Graphite bearing granite gneiss	G+GG
LPA/G3/06	38.00	39.00	1.00	LPA/G3/06-29	3.6411	3.0806	92.3776	0.9007	Graphite bearing granite gneiss	G+GG
LPA/G3/06	39.00	40.00	1.00	LPA/G3/06-30	2.7128	3.4844	92.6776	1.1252	Graphite bearing granite gneiss	G+GG
LPA/G3/06	40.00	41.00	1.00	LPA/G3/06-31	3.71	2.66	92.9	0.73	Graphite bearing granite gneiss	G+GG
LPA/G3/06	41.00	42.00	1.00	LPA/G3/06-32	2.61	5.44	90.1	1.85	Graphite bearing granite gneiss	G+GG
LPA/G3/06	42.00	42.85	0.85	LPA/G3/06-33	1.86	5.63	91.3	1.21	Graphitic Schist	GS
LPA/G3/06	42.85	43.60	0.75	LPA/G3/06-34	5.88	4.19	88.7	1.23	Graphite bearing granite gneiss	G+GG
LPA/G3/06	43.60	44.30	0.70	LPA/G3/06-35	5.77	4.24	87.9	2.09	Graphite bearing granite gneiss	G+GG
LPA/G3/06	44.30	45.00	0.70	LPA/G3/06-36	5.22	4.52	88.1	2.16	Graphite bearing granite gneiss	G+GG
LPA/G3/07	1.50	5.50	4.00	LPA/G3/07-01	1.47	4.02	92.45	2.07	Graphitic Schist	GS
LPA/G3/07	5.50	7.00	1.50	LPA/G3/07-02	0.43	3.11	94.90	1.56	Granite gneiss	GG
LPA/G3/07	7.00	8.00	1.00	LPA/G3/07-03	0.35	3.75	93.74	2.16	Granite gneiss	GG
LPA/G3/07	8.00	9.00	1.00	LPA/G3/07-04	1.93	3.89	90.27	3.91	Graphitic Schist	GS
LPA/G3/07	9.00	10.10	1.10	LPA/G3/07-05	0.85	2.29	96.06	0.80	Granite gneiss	GG
LPA/G3/07	10.10	10.60	0.50	LPA/G3/07-06	2.39	5.03	89.31	3.27	Graphite bearing granite gneiss	G+GG
LPA/G3/07	10.60	11.10	0.50	LPA/G3/07-07	0.52	1.70	96.83	0.95	Granite gneiss	GG
LPA/G3/07	11.10	12.10	1.00	LPA/G3/07-08	1.93	2.32	94.32	1.42	Graphitic Schist	GS
LPA/G3/07	12.10	13.10	1.00	LPA/G3/07-09	6.91	3.08	87.75	2.26	Graphite bearing granite gneiss	G+GG
LPA/G3/07	13.10	14.10	1.00	LPA/G3/07-10	9.27	3.18	85.85	1.69	Graphite bearing granite gneiss	G+GG
LPA/G3/07	14.10	15.20	1.10	LPA/G3/07-11	4.54	5.07	87.60	2.79	Graphite bearing granite gneiss	G+GG
LPA/G3/07	15.20	16.10	0.90	LPA/G3/07-12	0.35	2.55	96.10	1.00	Granite gneiss	GG
LPA/G3/07	16.10	17.10	1.00	LPA/G3/07-13	0.50	3.93	94.40	1.17	Granite gneiss	GG
LPA/G3/07	17.10	17.60	0.50	LPA/G3/07-14	1.57	5.80	90.60	2.03	Graphitic Schist	GS
LPA/G3/07	17.60	18.10	0.50	LPA/G3/07-15	1.86	4.42	91.40	2.32	Graphitic Schist	GS
LPA/G3/07	18.10	18.80	0.70	LPA/G3/07-16	4.39	5.08	88.60	1.93	Graphite bearing granite gneiss	G+GG
LPA/G3/07	18.80	19.80	1.00	LPA/G3/07-17	0.17	1.09	98.00	0.74	Granite gneiss	GG
LPA/G3/07	19.80	23.20	3.40	LPA/G3/07-18	0.01	0.21	99.60	0.18	Granite gneiss	GG

LPA/G3/07	23.20	27.20	4.00	LPA/G3/07-19	0.01	0.84	98.60	0.55	Granite gneiss	GG
LPA/G3/07	27.20	29.50	2.30	LPA/G3/07-20	0.22	1.33	98.00	0.45	Granite gneiss	GG
LPA/G3/07	29.50	30.50	1.00	LPA/G3/07-21	1.06	3.56	94.36	1.02	Graphitic Schist	GS
LPA/G3/07	30.50	31.00	0.50	LPA/G3/07-22	0.75	4.58	92.75	1.93	Granite gneiss	GG
LPA/G3/07	31.00	32.00	1.00	LPA/G3/07-23	0.73	3.99	93.55	1.73	Granite gneiss	GG
LPA/G3/07	32.00	33.00	1.00	LPA/G3/07-24	1.07	3.70	93.76	1.47	Graphitic Schist	GS
LPA/G3/07	33.00	35.00	2.00	LPA/G3/07-25	0.69	4.24	92.85	2.22	Granite gneiss	GG
LPA/G3/08	0.00	1.20	1.20	LPA/G3/08-01	0.44	6.33	90.00	3.23	Granite gneiss	GG
LPA/G3/08	1.20	5.20	4.00	LPA/G3/08-02	0.08	4.91	92.60	2.41	Granite gneiss	GG
LPA/G3/08	5.20	9.10	3.90	LPA/G3/08-03	0.06	4.66	93.60	1.68	Granite gneiss	GG
LPA/G3/08	9.10	12.90	3.80	LPA/G3/08-04	0.11	2.81	95.40	1.68	Granite gneiss	GG
LPA/G3/08	12.90	16.80	3.90	LPA/G3/08-05	0.03	3.59	93.50	2.88	Granite gneiss	GG
LPA/G3/08	16.80	20.70	3.90	LPA/G3/08-06	0.13	2.67	95.40	1.80	Granite gneiss	GG
LPA/G3/08	20.70	24.00	3.30	LPA/G3/08-07	0.12	2.45	96.00	1.43	Granite gneiss	GG
LPA/G3/08	24.50	28.10	3.60	LPA/G3/08-08	0.12	3.26	94.70	1.92	Granite gneiss	GG
LPA/G3/08	28.10	32.00	3.90	LPA/G3/08-09	0.11	3.33	94.20	2.36	Granite gneiss	GG
LPA/G3/08	32.00	35.00	3.00	LPA/G3/08-10	0.35	2.26	95.90	1.49	Granite gneiss	GG
LPA/G3/09	0.00	1.60	1.60	LPA/G3/09-01	0.99	5.17	91.88	1.96	Granite gneiss	GG
LPA/G3/09	1.60	5.50	3.90	LPA/G3/09-02	0.31	4.28	93.66	1.75	Granite gneiss	GG
LPA/G3/09	5.50	9.50	4.00	LPA/G3/09-03	0.15	2.09	96.04	1.72	Granite gneiss	GG
LPA/G3/09	9.50	13.40	3.90	LPA/G3/09-04	0.07	1.68	97.48	0.77	Granite gneiss	GG
LPA/G3/09	13.40	14.40	1.00	LPA/G3/09-05	0.76	3.94	93.20	2.10	Granite gneiss	GG
LPA/G3/09	14.40	15.40	1.00	LPA/G3/09-06	0.65	2.53	95.78	1.04	Granite gneiss	GG
LPA/G3/09	15.40	16.50	1.10	LPA/G3/09-07	0.53	2.69	94.50	2.28	Granite gneiss	GG
LPA/G3/09	16.50	17.40	0.90	LPA/G3/09-08	0.50	3.06	93.52	2.92	Granite gneiss	GG
LPA/G3/09	17.40	18.40	1.00	LPA/G3/09-09	1.30	5.43	88.24	5.02	Graphitic Schist	GS
LPA/G3/09	18.40	19.40	1.00	LPA/G3/09-10	5.00	7.83	84.07	3.10	Graphite bearing granite gneiss	G+GG
LPA/G3/09	19.40	20.40	1.00	LPA/G3/09-11	1.19	3.63	92.56	2.62	Graphitic Schist	GS
LPA/G3/09	20.40	21.40	1.00	LPA/G3/09-12	1.63	4.93	90.48	2.96	Graphitic Schist	GS
LPA/G3/09	21.40	22.40	1.00	LPA/G3/09-13	1.89	5.85	87.65	4.62	Graphitic Schist	GS
LPA/G3/09	22.40	23.40	1.00	LPA/G3/09-14	0.09	0.66	98.81	0.44	Granite gneiss	GG
LPA/G3/09	23.40	27.00	3.60	LPA/G3/09-15	0.06	0.02	99.75	0.17	Granite gneiss	GG
LPA/G3/09	27.00	31.00	4.00	LPA/G3/09-16	0.09	0.13	99.70	0.08	Granite gneiss	GG
LPA/G3/09	31.00	35.00	4.00	LPA/G3/09-17	0.04	1.08	98.59	0.28	Granite gneiss	GG
LPA/G3/10	0.00	1.30	1.30	LPA/G3/10-01	0.57	8.14	88.40	2.89	Granite gneiss	GG
LPA/G3/10	1.30	2.30	1.00	LPA/G3/10-02	0.40	8.15	86.00	5.45	Granite gneiss	GG
LPA/G3/10	2.30	3.20	0.90	LPA/G3/10-03	3.77	5.34	89.40	1.49	Graphite bearing granite gneiss	G+GG
LPA/G3/10	3.20	4.30	1.10	LPA/G3/10-04	0.14	3.90	92.80	3.16	Charnockite	CH
LPA/G3/10	4.30	5.55	1.25	LPA/G3/10-05	0.05	0.15	99.20	0.60	Charnockite	CH
LPA/G3/10	5.55	6.30	0.75	LPA/G3/10-06	3.15	4.11	91.00	1.74	Graphite bearing granite gneiss	G+GG
LPA/G3/10	6.30	7.20	0.90	LPA/G3/10-07	0.05	2.93	94.90	2.12	Charnockite	CH
LPA/G3/10	7.20	8.20	1.00	LPA/G3/10-08	7.36	4.14	86.20	2.30	Graphite bearing granite gneiss	G+GG
LPA/G3/10	8.20	9.20	1.00	LPA/G3/10-09	5.61	6.72	84.50	3.17	Graphite bearing granite gneiss	G+GG
LPA/G3/10	9.20	10.20	1.00	LPA/G3/10-10	4.52	5.43	87.20	2.85	Graphite bearing granite gneiss	G+GG
LPA/G3/10	10.20	10.80	0.60	LPA/G3/10-11	2.31	3.54	92.50	1.65	Graphite bearing granite gneiss	G+GG
LPA/G3/10	10.80	11.80	1.00	LPA/G3/10-12	2.02	2.70	94.10	1.18	Graphite bearing granite gneiss	G+GG
LPA/G3/10	11.80	13.30	1.50	LPA/G3/10-13	1.45	2.73	94.70	1.12	Graphitic Schist	GS
LPA/G3/10	13.30	14.30	1.00	LPA/G3/10-14	4.42	5.16	87.70	2.72	Graphite bearing granite gneiss	G+GG
LPA/G3/10	14.30	15.30	1.00	LPA/G3/10-15	3.98	5.76	87.20	3.06	Graphite bearing granite gneiss	G+GG
LPA/G3/10	15.30	15.80	0.50	LPA/G3/10-16	2.68	4.51	91.00	1.81	Graphite bearing granite gneiss	G+GG
LPA/G3/10	15.80	16.80	1.00	LPA/G3/10-17	2.33	2.72	93.90	1.05	Graphite bearing granite gneiss	G+GG
LPA/G3/10	16.80	19.80	3.00	LPA/G3/10-18	0.43	0.73	98.40	0.44	Charnockite	CH
LPA/G3/10	19.80	22.80	3.00	LPA/G3/10-19	1.10	1.96	96.20	0.74	Graphitic Schist	GS
LPA/G3/10	22.80	23.80	1.00	LPA/G3/10-20	2.43	2.79	93.46	1.32	Graphite bearing granite gneiss	G+GG
LPA/G3/10	23.80	24.80	1.00	LPA/G3/10-21	3.10	3.57	91.46	1.87	Graphite bearing granite gneiss	G+GG
LPA/G3/10	24.80	25.80	1.00	LPA/G3/10-22	4.47	3.18	91.22	1.13	Graphite bearing granite gneiss	G+GG

LPA/G3/10	25.80	26.50	0.70	LPA/G3/10-23	7.40	3.36	88.02	1.21	Graphite bearing granite gneiss	G+GG
LPA/G3/10	26.50	27.50	1.00	LPA/G3/10-24	5.81	3.34	89.62	1.22	Graphite bearing granite gneiss	G+GG
LPA/G3/10	27.50	28.50	1.00	LPA/G3/10-25	1.89	2.72	94.70	0.70	Graphitic Schist	GS
LPA/G3/10	28.50	29.50	1.00	LPA/G3/10-26	5.19	3.61	90.01	1.19	Graphite bearing granite gneiss	G+GG
LPA/G3/10	29.50	30.50	1.00	LPA/G3/10-27	1.95	2.90	94.37	0.78	Graphitic Schist	GS
LPA/G3/10	30.50	31.50	1.00	LPA/G3/10-28	3.78	3.41	90.82	1.99	Graphite bearing granite gneiss	G+GG
LPA/G3/10	31.50	32.50	1.00	LPA/G3/10-29	1.66	7.00	89.07	2.27	Graphitic Schist	GS
LPA/G3/10	32.50	33.50	1.00	LPA/G3/10-30	2.99	3.71	92.15	1.15	Graphite bearing granite gneiss	G+GG
LPA/G3/10	33.50	34.50	1.00	LPA/G3/10-31	1.58	1.87	95.96	0.60	Graphitic Schist	GS
LPA/G3/10	34.50	35.50	1.00	LPA/G3/10-32	0.23	0.72	98.58	0.46	Granite gneiss	GG
LPA/G3/10	35.50	36.50	1.00	LPA/G3/10-33	6.32	3.34	89.52	0.82	Graphite bearing granite gneiss	G+GG
LPA/G3/10	36.50	37.10	0.60	LPA/G3/10-34	4.36	2.63	92.24	0.77	Graphite bearing granite gneiss	G+GG
LPA/G3/10	37.10	38.10	1.00	LPA/G3/10-35	0.31	0.13	99.42	0.14	Granite gneiss	GG
LPA/G3/10	38.10	39.10	1.00	LPA/G3/10-36	0.67	0.46	98.72	0.15	Granite gneiss	GG
LPA/G3/10	39.10	40.10	1.00	LPA/G3/10-37	6.74	3.44	89.34	0.48	Graphite bearing granite gneiss	G+GG
LPA/G3/10	40.10	41.10	1.00	LPA/G3/10-38	8.28	2.71	88.52	0.50	Graphite bearing granite gneiss	G+GG
LPA/G3/10	41.10	42.10	1.00	LPA/G3/10-39	8.94	2.43	88.28	0.35	Graphite bearing granite gneiss	G+GG
LPA/G3/10	42.10	43.10	1.00	LPA/G3/10-40	7.41	2.49	89.72	0.39	Graphite bearing granite gneiss	G+GG
LPA/G3/10	43.10	44.10	1.00	LPA/G3/10-41	8.99	2.50	88.02	0.50	Graphite bearing granite gneiss	G+GG
LPA/G3/10	44.10	45.10	1.00	LPA/G3/10-42	8.12	3.15	88.26	0.48	Graphite bearing granite gneiss	G+GG
LPA/G3/10	45.10	46.10	1.00	LPA/G3/10-43	6.76	2.84	89.98	0.41	Graphite bearing granite gneiss	G+GG
LPA/G3/10	46.10	47.10	1.00	LPA/G3/10-44	7.44	2.79	89.13	0.64	Graphite bearing granite gneiss	G+GG
LPA/G3/10	47.10	48.10	1.00	LPA/G3/10-45	4.74	2.26	92.46	0.54	Graphite bearing granite gneiss	G+GG
LPA/G3/10	48.10	49.10	1.00	LPA/G3/10-46	3.20	7.17	88.25	1.38	Graphite bearing granite gneiss	G+GG
LPA/G3/10	49.10	50.10	1.00	LPA/G3/10-47	6.94	5.00	87.21	0.85	Graphite bearing granite gneiss	G+GG
LPA/G3/10	50.10	51.10	1.00	LPA/G3/10-48	7.70	2.44	89.31	0.55	Graphite bearing granite gneiss	G+GG
LPA/G3/10	51.10	52.10	1.00	LPA/G3/10-49	4.53	1.80	93.14	0.52	Graphite bearing granite gneiss	G+GG
LPA/G3/10	52.10	53.10	1.00	LPA/G3/10-50	8.77	3.44	86.89	0.90	Graphite bearing granite gneiss	G+GG
LPA/G3/10	53.10	54.10	1.00	LPA/G3/10-51	7.13	5.13	85.70	2.04	Graphite bearing granite gneiss	G+GG
LPA/G3/10	54.10	55.10	1.00	LPA/G3/10-52	6.67	4.77	86.80	1.76	Graphite bearing granite gneiss	G+GG
LPA/G3/10	55.10	56.10	1.00	LPA/G3/10-53	2.76	3.21	92.90	1.13	Graphite bearing granite gneiss	G+GG
LPA/G3/10	56.10	57.10	1.00	LPA/G3/10-54	5.89	5.15	87.10	1.86	Graphite bearing granite gneiss	G+GG
LPA/G3/10	57.10	58.10	1.00	LPA/G3/10-55	6.42	5.13	86.40	2.05	Graphite bearing granite gneiss	G+GG
LPA/G3/10	58.10	59.10	1.00	LPA/G3/10-56	6.59	4.16	87.60	1.65	Graphite bearing granite gneiss	G+GG
LPA/G3/10	59.10	60.10	1.00	LPA/G3/10-57	4.55	2.90	91.70	0.85	Graphite bearing granite gneiss	G+GG
LPA/G3/10	60.10	61.10	1.00	LPA/G3/10-58	6.04	2.86	90.30	0.80	Graphite bearing granite gneiss	G+GG
LPA/G3/10	61.10	62.10	1.00	LPA/G3/10-59	7.95	3.66	87.30	1.09	Graphite bearing granite gneiss	G+GG
LPA/G3/10	62.10	63.10	1.00	LPA/G3/10-60	6.43	3.52	89.20	0.85	Graphite bearing granite gneiss	G+GG
LPA/G3/10	63.10	64.10	1.00	LPA/G3/10-61	6.27	4.41	88.60	0.72	Graphite bearing granite gneiss	G+GG
LPA/G3/10	64.10	65.10	1.00	LPA/G3/10-62	6.67	4.78	87.20	1.35	Graphite bearing granite gneiss	G+GG
LPA/G3/10	65.10	67.10	2.00	LPA/G3/10-63	7.04	4.55	87.20	1.21	Graphite bearing granite gneiss	G+GG
LPA/G3/10	67.10	68.10	1.00	LPA/G3/10-64	7.55	4.56	86.60	1.29	Graphite bearing granite gneiss	G+GG
LPA/G3/10	68.10	69.20	1.10	LPA/G3/10-65	6.82	5.03	86.90	1.25	Graphite bearing granite gneiss	G+GG
LPA/G3/10	69.20	70.50	1.30	LPA/G3/10-66	0.95	1.66	97.10	0.29	Granite gneiss	GG
LPA/G3/10	70.50	71.50	1.00	LPA/G3/10-67	4.79	2.19	92.80	0.22	Graphite bearing granite gneiss	G+GG
LPA/G3/10	71.50	72.50	1.00	LPA/G3/10-68	11.47	3.79	84.00	0.74	Graphite bearing granite gneiss	G+GG
LPA/G3/10	72.50	73.50	1.00	LPA/G3/10-69	7.92	3.13	88.08	0.87	Graphite bearing granite gneiss	G+GG
LPA/G3/10	73.50	74.50	1.00	LPA/G3/10-70	13.10	3.55	81.52	1.83	Graphite bearing granite gneiss	G+GG
LPA/G3/10	74.50	75.50	1.00	LPA/G3/10-71	10.87	3.30	84.94	0.89	Graphite bearing granite gneiss	G+GG
LPA/G3/10	75.50	76.50	1.00	LPA/G3/10-72	7.94	3.70	87.22	1.13	Graphite bearing granite gneiss	G+GG
LPA/G3/10	76.50	77.50	1.00	LPA/G3/10-73	7.70	2.57	89.03	0.70	Graphite bearing granite gneiss	G+GG
LPA/G3/10	77.50	78.50	1.00	LPA/G3/10-74	8.92	2.18	88.52	0.37	Graphite bearing granite gneiss	G+GG
LPA/G3/10	78.50	79.50	1.00	LPA/G3/10-75	9.66	2.46	87.00	0.88	Graphite bearing granite gneiss	G+GG
LPA/G3/10	79.50	80.50	1.00	LPA/G3/10-76	8.19	2.36	88.94	0.51	Graphite bearing granite gneiss	G+GG
LPA/G3/10	80.50	81.50	1.00	LPA/G3/10-77	7.06	2.37	89.87	0.69	Graphite bearing granite gneiss	G+GG
LPA/G3/10	81.50	82.50	1.00	LPA/G3/10-78	6.70	1.28	91.62	0.39	Graphite bearing granite gneiss	G+GG

LPA/G3/10	82.50	83.50	1.00	LPA/G3/10-79	9.66	1.25	88.77	0.32	Graphite bearing granite gneiss	G+GG
LPA/G3/10	83.50	84.50	1.00	LPA/G3/10-80	5.63	1.36	92.68	0.34	Graphite bearing granite gneiss	G+GG
LPA/G3/10	84.50	85.50	1.00	LPA/G3/10-81	5.92	1.33	92.38	0.37	Graphite bearing granite gneiss	G+GG
LPA/G3/10	85.50	86.50	1.00	LPA/G3/10-82	7.22	1.08	91.56	0.14	Graphite bearing granite gneiss	G+GG
LPA/G3/10	86.50	87.50	1.00	LPA/G3/10-83	6.12	0.91	92.79	0.18	Graphite bearing granite gneiss	G+GG
LPA/G3/10	87.50	88.50	1.00	LPA/G3/10-84	6.48	0.87	92.54	0.11	Graphite bearing granite gneiss	G+GG
LPA/G3/10	88.50	89.50	1.00	LPA/G3/10-85	6.06	1.07	92.71	0.16	Graphite bearing granite gneiss	G+GG
LPA/G3/10	89.50	90.50	1.00	LPA/G3/10-86	4.68	0.67	94.61	0.04	Graphite bearing granite gneiss	G+GG
LPA/G3/10	90.50	91.50	1.00	LPA/G3/10-87	5.75	2.15	91.60	0.50	Graphite bearing granite gneiss	G+GG
LPA/G3/10	91.50	92.50	1.00	LPA/G3/10-88	5.24	3.87	89.60	1.29	Graphite bearing granite gneiss	G+GG
LPA/G3/10	92.50	93.50	1.00	LPA/G3/10-89	5.36	2.26	91.80	0.58	Graphite bearing granite gneiss	G+GG
LPA/G3/10	93.50	94.50	1.00	LPA/G3/10-90	5.67	1.55	92.60	0.18	Graphite bearing granite gneiss	G+GG
LPA/G3/10	94.50	95.50	1.00	LPA/G3/10-91	6.26	1.23	92.40	0.11	Graphite bearing granite gneiss	G+GG
LPA/G3/10	95.50	96.50	1.00	LPA/G3/10-92	6.69	1.62	91.40	0.29	Graphite bearing granite gneiss	G+GG
LPA/G3/10	96.50	97.50	1.00	LPA/G3/10-93	4.47	3.27	91.50	0.76	Graphite bearing granite gneiss	G+GG
LPA/G3/10	97.50	98.50	1.00	LPA/G3/10-94	6.03	3.39	89.70	0.88	Graphite bearing granite gneiss	G+GG
LPA/G3/10	98.50	99.50	1.00	LPA/G3/10-95	7.46	4.33	86.60	1.61	Graphite bearing granite gneiss	G+GG
LPA/G3/10	99.50	100.50	1.00	LPA/G3/10-96	12.94	3.23	83.20	0.63	Graphite bearing granite gneiss	G+GG
LPA/G3/10	100.50	101.50	1.00	LPA/G3/10-97	8.94	3.43	87.00	0.63	Graphite bearing granite gneiss	G+GG
LPA/G3/10	101.50	102.50	1.00	LPA/G3/10-98	9.68	3.13	86.60	0.59	Graphite bearing granite gneiss	G+GG
LPA/G3/10	102.50	103.50	1.00	LPA/G3/10-99	12.31	3.44	83.60	0.65	Graphite bearing granite gneiss	G+GG
LPA/G3/10	103.50	104.50	1.00	LPA/G3/10-100	10.40	3.94	84.90	0.76	Graphite bearing granite gneiss	G+GG
LPA/G3/10	104.50	105.50	1.00	LPA/G3/10-101	10.60	3.42	85.20	0.78	Graphite bearing granite gneiss	G+GG
LPA/G3/10	105.50	106.50	1.00	LPA/G3/10-102	6.73	2.57	90.30	0.40	Graphite bearing granite gneiss	G+GG
LPA/G3/10	106.50	107.50	1.00	LPA/G3/10-103	6.63	4.67	87.50	1.20	Graphite bearing granite gneiss	G+GG
LPA/G3/10	107.50	108.50	1.00	LPA/G3/10-104	6.15	4.01	88.50	1.34	Graphite bearing granite gneiss	G+GG
LPA/G3/10	108.50	109.00	0.50	LPA/G3/10-105	3.06	3.42	92.20	1.32	Graphite bearing granite gneiss	G+GG
LPA/G3/10	109.00	110.00	1.00	LPA/G3/10-106	0.11	1.13	98.10	0.66	Granite gneiss	GG
LPA/G3/10	110.00	112.20	2.20	LPA/G3/10-107	0.16	0.86	98.60	0.38	Granite gneiss	GG
LPA/G3/10	112.20	115.00	2.80	LPA/G3/10-108	2.31	3.00	93.80	0.89	Graphite bearing granite gneiss	G+GG
LPA/G3/11	0.00	3.20	3.20	LPA/G3/11-01	0.07	6.09	89.96	3.88	Soil	S
LPA/G3/11	3.20	6.70	3.50	LPA/G3/11-02	0.19	1.00	97.87	0.94	Granite gneiss	GG
LPA/G3/11	6.70	10.70	4.00	LPA/G3/11-03	0.21	4.27	93.34	2.17	Granite gneiss	GG
LPA/G3/11	10.70	14.70	4.00	LPA/G3/11-04	0.05	1.29	96.92	1.74	Granite gneiss	GG
LPA/G3/11	14.70	18.70	4.00	LPA/G3/11-05	0.26	1.29	96.66	1.79	Granite gneiss	GG
LPA/G3/11	18.70	19.90	1.20	LPA/G3/11-06	0.47	0.99	97.42	1.12	Granite gneiss	GG
LPA/G3/11	19.90	20.50	0.60	LPA/G3/11-07	2.31	5.37	88.48	3.84	Graphite bearing granite gneiss	G+GG
LPA/G3/11	20.50	21.40	0.90	LPA/G3/11-08	0.07	1.00	98.25	0.68	Granite gneiss	GG
LPA/G3/11	21.40	22.30	0.90	LPA/G3/11-09	0.06	1.10	97.85	0.99	Granite gneiss	GG
LPA/G3/11	22.30	23.40	1.10	LPA/G3/11-10	4.05	3.70	90.20	2.05	Graphite bearing granite gneiss	G+GG
LPA/G3/11	23.40	24.40	1.00	LPA/G3/11-11	6.49	3.56	87.81	2.13	Graphite bearing granite gneiss	G+GG
LPA/G3/11	24.40	25.50	1.10	LPA/G3/11-12	7.31	3.28	87.59	1.82	Graphite bearing granite gneiss	G+GG
LPA/G3/11	25.50	26.50	1.00	LPA/G3/11-13	0.20	1.27	97.90	0.63	Granite gneiss	GG
LPA/G3/11	26.50	29.50	3.00	LPA/G3/11-14	0.09	1.11	98.49	0.31	Granite gneiss	GG
LPA/G3/11	29.50	30.50	1.00	LPA/G3/11-15	0.17	0.80	98.67	0.36	Granite gneiss	GG
LPA/G3/11	30.50	31.50	1.00	LPA/G3/11-16	3.85	2.17	93.06	0.92	Graphite bearing granite gneiss	G+GG
LPA/G3/11	31.50	32.50	1.00	LPA/G3/11-17	6.68	2.89	88.74	1.70	Graphite bearing granite gneiss	G+GG
LPA/G3/11	32.50	33.50	1.00	LPA/G3/11-18	0.05	0.21	99.67	0.07	Granite gneiss	GG
LPA/G3/11	33.50	37.40	3.90	LPA/G3/11-19	0.39	0.39	99.20	0.03	Granite gneiss	GG
LPA/G3/11	37.40	40.30	2.90	LPA/G3/11-20	0.25	0.21	99.47	0.07	Granite gneiss	GG
LPA/G3/11	40.30	42.10	1.80	LPA/G3/11-21	0.25	0.97	98.30	0.48	Granite gneiss	GG
LPA/G3/11	42.10	43.10	1.00	LPA/G3/11-22	0.63	0.21	98.93	0.24	Granite gneiss	GG
LPA/G3/11	43.10	44.10	1.00	LPA/G3/11-23	3.30	0.92	95.62	0.16	Graphite bearing granite gneiss	G+GG
LPA/G3/11	44.10	45.10	1.00	LPA/G3/11-24	2.66	1.35	95.70	0.29	Graphite bearing granite gneiss	G+GG
LPA/G3/11	45.10	45.60	0.50	LPA/G3/11-25	4.11	1.22	94.59	0.08	Graphite bearing granite gneiss	G+GG
LPA/G3/11	45.60	46.70	1.10	LPA/G3/11-26	0.36	0.31	99.00	0.33	Granite gneiss	GG

LPA/G3/11	46.70	47.80	1.10	LPA/G3/11-27	0.67	0.72	98.41	0.20	Granite gneiss	GG
LPA/G3/11	47.80	48.80	1.00	LPA/G3/11-28	2.09	1.65	96.06	0.20	Graphite bearing granite gneiss	G+GG
LPA/G3/11	48.80	49.80	1.00	LPA/G3/11-29	0.88	1.16	97.50	0.46	Granite gneiss	GG
LPA/G3/11	49.80	50.80	1.00	LPA/G3/11-30	2.30	2.28	94.71	0.71	Graphite bearing granite gneiss	G+GG
LPA/G3/11	50.80	51.80	1.00	LPA/G3/11-31	1.92	2.02	95.28	0.78	Graphitic Schist	GS
LPA/G3/11	51.80	52.80	1.00	LPA/G3/11-32	6.77	2.25	89.63	1.35	Graphite bearing granite gneiss	G+GG
LPA/G3/11	52.80	53.40	0.60	LPA/G3/11-33	1.45	1.33	96.59	0.62	Graphitic Schist	GS
LPA/G3/11	53.40	54.50	1.10	LPA/G3/11-34	0.93	0.58	98.20	0.29	Granite gneiss	GG
LPA/G3/11	54.50	55.30	0.80	LPA/G3/11-35	4.04	1.93	93.11	0.91	Graphite bearing granite gneiss	G+GG
LPA/G3/11	55.30	56.40	1.10	LPA/G3/11-36	0.40	0.51	98.86	0.24	Granite gneiss	GG
LPA/G3/11	56.40	57.40	1.00	LPA/G3/11-37	4.92	2.10	91.31	1.67	Graphite bearing granite gneiss	G+GG
LPA/G3/11	57.40	58.40	1.00	LPA/G3/11-38	1.67	1.93	95.30	1.10	Graphitic Schist	GS
LPA/G3/11	58.40	59.40	1.00	LPA/G3/11-39	3.19	1.94	93.90	0.97	Graphite bearing granite gneiss	G+GG
LPA/G3/11	59.40	60.40	1.00	LPA/G3/11-40	1.67	1.80	95.70	0.83	Graphitic Schist	GS
LPA/G3/11	60.40	61.40	1.00	LPA/G3/11-41	1.59	2.07	95.40	0.94	Graphitic Schist	GS
LPA/G3/11	61.40	62.40	1.00	LPA/G3/11-42	0.96	2.65	95.60	0.79	Granite gneiss	GG
LPA/G3/11	62.40	63.40	1.00	LPA/G3/11-43	1.66	1.67	96.00	0.67	Graphitic Schist	GS
LPA/G3/11	63.40	64.40	1.00	LPA/G3/11-44	1.12	1.28	97.10	0.50	Graphitic Schist	GS
LPA/G3/11	64.40	65.40	1.00	LPA/G3/11-45	3.52	2.50	92.90	1.08	Graphite bearing granite gneiss	G+GG
LPA/G3/11	65.40	66.40	1.00	LPA/G3/11-46	3.77	2.70	91.90	1.63	Graphite bearing granite gneiss	G+GG
LPA/G3/11	66.40	67.40	1.00	LPA/G3/11-47	3.15	3.40	91.60	1.85	Graphite bearing granite gneiss	G+GG
LPA/G3/11	67.40	68.10	0.70	LPA/G3/11-48	1.36	3.43	93.80	1.41	Graphitic Schist	GS
LPA/G3/11	68.10	68.70	0.60	LPA/G3/11-49	0.08	0.26	99.40	0.26	Granite gneiss	GG
LPA/G3/11	68.70	69.70	1.00	LPA/G3/11-50	0.67	2.06	96.30	0.97	Granite gneiss	GG
LPA/G3/11	69.70	70.70	1.00	LPA/G3/11-51	1.74	4.38	92.60	1.28	Graphitic Schist	GS
LPA/G3/11	70.70	71.70	1.00	LPA/G3/11-52	1.91	3.92	93.00	1.17	Graphitic Schist	GS
LPA/G3/11	71.70	72.80	1.10	LPA/G3/11-53	2.53	4.02	92.10	1.35	Graphite bearing granite gneiss	G+GG
LPA/G3/11	72.80	73.90	1.10	LPA/G3/11-54	3.43	2.78	92.50	1.29	Graphite bearing granite gneiss	G+GG
LPA/G3/11	73.90	75.00	1.10	LPA/G3/11-55	1.43	3.83	93.30	1.44	Graphitic Schist	GS
LPA/G3/11	75.00	76.00	1.00	LPA/G3/11-56	2.04	4.62	91.10	2.24	Graphite bearing granite gneiss	G+GG
LPA/G3/11	76.00	77.00	1.00	LPA/G3/11-57	2.76	5.79	89.50	1.95	Graphite bearing granite gneiss	G+GG
LPA/G3/12	0.00	2.70	2.70	LPA/G3/12-01	0.24	3.92	93.84	2.00	Soil	S
LPA/G3/12	2.70	5.10	2.40	LPA/G3/12-02	0.25	2.44	95.25	2.06	Soil	S
LPA/G3/12	5.10	7.70	2.60	LPA/G3/12-03	0.40	0.93	97.88	0.79	Granite gneiss	GG
LPA/G3/12	7.70	8.10	0.40	LPA/G3/12-04	0.24	0.30	99.15	0.31	Charnockite	CH
LPA/G3/12	8.10	10.50	2.40	LPA/G3/12-05	0.11	1.46	98.00	0.43	Granite gneiss	GG
LPA/G3/12	10.50	11.50	1.00	LPA/G3/12-06	0.02	0.67	98.60	0.71	Granite gneiss	GG
LPA/G3/12	11.50	12.50	1.00	LPA/G3/12-07	13.29	2.40	83.20	1.11	Graphite bearing granite gneiss	G+GG
LPA/G3/12	12.50	13.50	1.00	LPA/G3/12-08	5.16	3.65	89.30	1.89	Graphite bearing granite gneiss	G+GG
LPA/G3/12	13.50	14.50	1.00	LPA/G3/12-09	6.52	3.27	88.40	1.81	Graphite bearing granite gneiss	G+GG
LPA/G3/12	14.50	15.50	1.00	LPA/G3/12-10	2.16	4.05	91.70	2.09	Graphite bearing granite gneiss	G+GG
LPA/G3/12	15.50	15.90	0.40	LPA/G3/12-11	0.34	5.97	91.30	2.39	Granite gneiss	GG
LPA/G3/12	15.90	17.10	1.20	LPA/G3/12-12	3.87	3.83	90.50	1.80	Graphite bearing granite gneiss	G+GG
LPA/G3/12	17.10	18.10	1.00	LPA/G3/12-13	0.25	1.65	97.10	1.00	Granite gneiss	GG
LPA/G3/12	18.10	18.60	0.50	LPA/G3/12-14	1.09	3.29	94.00	1.62	Graphitic Schist	GS
LPA/G3/12	18.60	19.60	1.00	LPA/G3/12-15	5.01	3.98	88.60	2.41	Graphite bearing granite gneiss	G+GG
LPA/G3/12	19.60	21.10	1.50	LPA/G3/12-16	0.18	1.90	96.90	1.02	Granite gneiss	GG
LPA/G3/12	21.10	21.70	0.60	LPA/G3/12-17	1.87	3.87	92.10	2.16	Graphitic Schist	GS
LPA/G3/12	21.70	22.20	0.50	LPA/G3/12-18	0.63	3.79	94.00	1.58	Granite gneiss	GG
LPA/G3/12	22.20	23.30	1.10	LPA/G3/12-19	4.60	4.71	88.00	2.69	Graphite bearing granite gneiss	G+GG
LPA/G3/12	23.30	24.00	0.70	LPA/G3/12-20	0.23	1.33	97.80	0.64	Granite gneiss	GG
LPA/G3/12	24.00	24.60	0.60	LPA/G3/12-21	11.92	3.13	84.00	0.95	Graphite bearing quartzite	G+QTZ
LPA/G3/12	24.60	25.60	1.00	LPA/G3/12-22	5.80	3.54	88.80	1.86	Graphite bearing quartzite	G+QTZ
LPA/G3/12	25.60	26.60	1.00	LPA/G3/12-23	5.48	4.27	88.10	2.15	Graphite bearing quartzite	G+QTZ
LPA/G3/12	26.60	27.60	1.00	LPA/G3/12-24	3.88	4.37	89.29	2.46	Graphite bearing quartzite	G+QTZ
LPA/G3/12	27.60	28.60	1.00	LPA/G3/12-25	9.58	3.86	85.36	1.20	Graphite bearing quartzite	G+QTZ

LPA/G3/12	28.60	29.60	1.00	LPA/G3/12-26	5.70	3.70	89.53	1.07	Graphite bearing quartzite	G+QTZ
LPA/G3/12	29.60	30.60	1.00	LPA/G3/12-27	3.72	3.72	90.98	1.58	Graphite bearing quartzite	G+QTZ
LPA/G3/12	30.60	31.60	1.00	LPA/G3/12-28	0.03	0.93	98.58	0.46	Granite gneiss	GG
LPA/G3/12	31.60	33.00	1.40	LPA/G3/12-29	0.67	4.26	91.84	3.23	Granite gneiss	GG
LPA/G3/12	33.00	34.00	1.00	LPA/G3/12-30	3.99	6.08	87.31	2.62	Graphite bearing granite gneiss	G+GG
LPA/G3/12	34.00	35.00	1.00	LPA/G3/12-31	3.30	4.16	90.72	1.82	Graphite bearing granite gneiss	G+GG
LPA/G3/12	35.00	36.00	1.00	LPA/G3/12-32	16.36	3.85	78.45	1.34	Graphite bearing granite gneiss	G+GG
LPA/G3/12	36.00	36.50	0.50	LPA/G3/12-33	10.24	4.81	83.23	1.72	Graphite bearing granite gneiss	G+GG
LPA/G3/12	36.50	37.00	0.50	LPA/G3/12-34	0.84	5.13	92.86	1.17	Granite gneiss	GG
LPA/G3/12	37.00	37.60	0.60	LPA/G3/12-35	4.30	5.19	88.60	1.91	Graphite bearing granite gneiss	G+GG
LPA/G3/12	37.60	38.30	0.70	LPA/G3/12-36	0.50	5.17	92.25	2.08	Granite gneiss	GG
LPA/G3/12	38.30	40.00	1.70	LPA/G3/12-37	1.10	3.78	92.81	2.31	Graphitic Schist	GS
LPA/G3/12	40.00	40.80	0.80	LPA/G3/12-38	0.88	3.33	93.56	2.23	Granite gneiss	GG
LPA/G3/12	40.80	41.80	1.00	LPA/G3/12-39	1.17	6.43	89.16	3.24	Graphitic Schist	GS
LPA/G3/12	41.80	42.80	1.00	LPA/G3/12-40	3.21	5.91	88.07	2.81	Graphite bearing granite gneiss	G+GG
LPA/G3/12	42.80	43.80	1.00	LPA/G3/12-41	4.05	5.45	87.32	3.18	Graphite bearing granite gneiss	G+GG
LPA/G3/12	43.80	44.80	1.00	LPA/G3/12-42	4.42	4.92	86.89	3.77	Graphite bearing granite gneiss	G+GG
LPA/G3/12	44.80	45.80	1.00	LPA/G3/12-43	4.49	4.07	88.62	2.82	Graphite bearing granite gneiss	G+GG
LPA/G3/12	45.80	46.80	1.00	LPA/G3/12-44	1.93	2.54	93.59	1.94	Graphitic Schist	GS
LPA/G3/12	46.80	47.80	1.00	LPA/G3/12-45	1.57	3.68	91.97	2.78	Graphitic Schist	GS
LPA/G3/12	47.80	48.80	1.00	LPA/G3/12-46	2.18	6.67	87.28	3.86	Graphite bearing granite gneiss	G+GG
LPA/G3/12	48.80	49.80	1.00	LPA/G3/12-47	2.73	5.94	88.23	3.10	Graphite bearing granite gneiss	G+GG
LPA/G3/12	49.80	51.00	1.20	LPA/G3/12-48	1.40	4.06	91.70	2.84	Graphitic Schist	GS
LPA/G3/12	51.00	51.60	0.60	LPA/G3/12-49	0.14	1.62	95.87	2.37	Granite gneiss	GG
LPA/G3/12	51.60	53.00	1.40	LPA/G3/12-50	0.10	0.13	99.33	0.45	Charnockite	CH
LPA/G3/12	53.00	54.00	1.00	LPA/G3/12-51	0.03	0.91	98.20	0.87	Charnockite	CH
LPA/G3/12	54.00	54.40	0.40	LPA/G3/12-52	0.04	0.26	99.27	0.44	Charnockite	CH
LPA/G3/12	54.40	56.00	1.60	LPA/G3/12-53	0.04	1.86	95.79	2.31	Granite gneiss	GG
LPA/G3/12	56.00	57.00	1.00	LPA/G3/12-54	0.04	0.42	98.92	0.62	Granite gneiss	GG
LPA/G3/12	57.00	58.00	1.00	LPA/G3/12-55	1.53	4.37	92.60	1.51	Graphitic Schist	GS
LPA/G3/12	58.00	59.00	1.00	LPA/G3/12-56	1.91	3.90	92.61	1.58	Graphitic Schist	GS
LPA/G3/12	59.00	60.00	1.00	LPA/G3/12-57	1.76	4.82	91.25	2.17	Graphitic Schist	GS
LPA/G3/12	60.00	61.00	1.00	LPA/G3/12-58	1.60	3.07	93.65	1.67	Graphitic Schist	GS
LPA/G3/12	61.00	62.00	1.00	LPA/G3/12-59	0.09	0.33	98.68	0.91	Granite gneiss	GG
LPA/G3/13	0.00	3.90	3.90	LPA/G3/13-01	0.12	3.64	94.30	1.94	Soil	S
LPA/G3/13	3.90	7.50	3.60	LPA/G3/13-02	0.12	2.84	95.50	1.54	Granite gneiss	GG
LPA/G3/13	7.50	11.10	3.60	LPA/G3/13-03	0.17	5.46	91.70	2.67	Granite gneiss	GG
LPA/G3/13	11.10	14.30	3.20	LPA/G3/13-04	0.07	4.24	93.70	1.99	Granite gneiss	GG
LPA/G3/13	14.30	17.80	3.50	LPA/G3/13-05	0.10	2.22	96.60	1.08	Granite gneiss	GG
LPA/G3/13	17.80	18.80	1.00	LPA/G3/13-06	3.56	3.51	91.50	1.43	Graphite bearing granite gneiss	G+GG
LPA/G3/13	18.80	19.80	1.00	LPA/G3/13-07	5.05	5.72	87.50	1.73	Graphite bearing granite gneiss	G+GG
LPA/G3/13	19.80	20.80	1.00	LPA/G3/13-08	5.10	6.47	85.90	2.53	Graphite bearing granite gneiss	G+GG
LPA/G3/13	20.80	21.80	1.00	LPA/G3/13-09	0.46	2.37	96.00	1.17	Granite gneiss	GG
LPA/G3/13	21.80	25.30	3.50	LPA/G3/13-10	0.29	1.61	97.50	0.60	Granite gneiss	GG
LPA/G3/13	25.30	28.80	3.50	LPA/G3/13-11	0.49	1.88	96.90	0.73	Granite gneiss	GG
LPA/G3/13	28.80	29.80	1.00	LPA/G3/13-12	0.54	2.08	96.40	0.98	Granite gneiss	GG
LPA/G3/13	29.80	31.10	1.30	LPA/G3/13-13	3.48	5.16	89.30	2.06	Graphite bearing granite gneiss	G+GG
LPA/G3/13	31.10	32.10	1.00	LPA/G3/13-14	0.70	3.98	93.20	2.12	Granite gneiss	GG
LPA/G3/13	32.10	33.10	1.00	LPA/G3/13-15	1.44	4.37	91.80	2.39	Graphitic Schist	GS
LPA/G3/13	33.10	34.00	0.90	LPA/G3/13-16	0.54	3.22	94.70	1.54	Granite gneiss	GG
LPA/G3/13	34.00	35.00	1.00	LPA/G3/13-17	2.02	5.95	89.10	2.93	Graphite bearing granite gneiss	G+GG
LPA/G3/13	35.00	36.00	1.00	LPA/G3/13-18	0.22	1.81	97.00	0.97	Granite gneiss	GG
LPA/G3/13	36.00	37.00	1.00	LPA/G3/13-19	3.75	4.76	88.60	2.89	Graphite bearing granite gneiss	G+GG
LPA/G3/13	37.00	38.00	1.00	LPA/G3/13-20	1.95	4.75	90.20	3.10	Graphitic Schist	GS
LPA/G3/13	38.00	39.00	1.00	LPA/G3/13-21	1.09	3.62	93.50	1.79	Graphitic Schist	GS
LPA/G3/13	39.00	41.60	2.60	LPA/G3/13-22	1.49	2.44	94.90	1.17	Graphitic Schist	GS

LPA/G3/13	41.60	42.60	1.00	LPA/G3/13-23	1.27	2.19	95.40	1.14	Graphitic Schist	GS
LPA/G3/13	42.60	43.60	1.00	LPA/G3/13-24	1.55	3.99	92.60	1.86	Graphitic Schist	GS
LPA/G3/13	43.60	44.60	1.00	LPA/G3/13-25	1.71	5.63	90.30	2.36	Graphitic Schist	GS
LPA/G3/13	44.60	45.60	1.00	LPA/G3/13-26	2.28	6.18	89.50	2.04	Graphite bearing granite gneiss	G+GG
LPA/G3/13	45.60	46.60	1.00	LPA/G3/13-27	1.72	5.07	91.70	1.51	Graphitic Schist	GS
LPA/G3/13	46.60	47.50	0.90	LPA/G3/13-28	2.16	4.86	91.80	1.18	Graphite bearing granite gneiss	G+GG
LPA/G3/13	47.50	48.40	0.90	LPA/G3/13-29	0.90	4.19	91.90	3.01	Granite gneiss	GG
LPA/G3/13	48.40	49.40	1.00	LPA/G3/13-30	1.09	7.52	87.40	3.99	Graphitic Schist	GS
LPA/G3/13	49.40	50.40	1.00	LPA/G3/13-31	10.12	4.07	83.80	2.01	Graphite bearing granite gneiss	G+GG
LPA/G3/13	50.40	51.40	1.00	LPA/G3/13-32	5.94	6.69	85.00	2.37	Graphite bearing granite gneiss	G+GG
LPA/G3/13	51.40	52.40	1.00	LPA/G3/13-33	6.06	7.11	84.10	2.73	Graphite bearing granite gneiss	G+GG
LPA/G3/13	52.40	53.40	1.00	LPA/G3/13-34	8.03	5.84	83.90	2.23	Graphite bearing granite gneiss	G+GG
LPA/G3/13	53.40	53.80	0.40	LPA/G3/13-35	3.42	5.95	88.30	2.33	Graphite bearing granite gneiss	G+GG
LPA/G3/13	53.80	55.00	1.20	LPA/G3/13-36	0.75	5.47	90.80	2.98	Granite gneiss	GG
LPA/G3/13	55.00	56.00	1.00	LPA/G3/13-37	4.84	5.51	87.50	2.15	Graphite bearing granite gneiss	G+GG
LPA/G3/13	56.00	57.00	1.00	LPA/G3/13-38	6.50	5.93	84.90	2.67	Graphite bearing granite gneiss	G+GG
LPA/G3/13	57.00	58.00	1.00	LPA/G3/13-39	5.60	6.16	85.80	2.44	Graphite bearing granite gneiss	G+GG
LPA/G3/13	58.00	58.60	0.60	LPA/G3/13-40	0.54	4.42	92.60	2.44	Granite gneiss	GG
LPA/G3/13	58.60	59.60	1.00	LPA/G3/13-41	1.25	4.38	91.30	3.07	Graphitic Schist	GS
LPA/G3/13	59.60	60.60	1.00	LPA/G3/13-42	2.31	5.19	89.90	2.60	Graphite bearing quartzite	G+QTZ
LPA/G3/13	60.60	61.60	1.00	LPA/G3/13-43	5.21	4.79	87.70	2.30	Graphite bearing quartzite	G+QTZ
LPA/G3/13	61.60	62.00	0.40	LPA/G3/13-44	6.37	5.32	85.90	2.41	Graphite bearing quartzite	G+QTZ
LPA/G3/13	62.00	63.00	1.00	LPA/G3/13-45	1.15	5.64	90.40	2.81	Graphitic Schist	GS
LPA/G3/13	63.00	64.00	1.00	LPA/G3/13-46	1.47	4.57	91.50	2.46	Graphitic Schist	GS
LPA/G3/13	64.00	65.00	1.00	LPA/G3/13-47	0.68	5.11	91.80	2.41	Granite gneiss	GG
LPA/G3/13	65.00	66.00	1.00	LPA/G3/13-48	1.86	5.37	89.10	3.67	Graphitic Schist	GS
LPA/G3/13	66.00	67.00	1.00	LPA/G3/13-49	0.72	4.26	92.20	2.82	Granite gneiss	GG
LPA/G3/13	67.00	68.00	1.00	LPA/G3/13-50	1.46	5.95	89.50	3.09	Graphitic Schist	GS
LPA/G3/13	68.00	69.00	1.00	LPA/G3/13-51	2.51	6.61	88.20	2.68	Graphite bearing granite gneiss	G+GG
LPA/G3/13	69.00	71.00	2.00	LPA/G3/13-52	2.27	5.81	89.30	2.62	Graphite bearing granite gneiss	G+GG
LPA/G3/14	0.00	3.75	3.75	LPA/G3/14-01	0.24	5.60	91.80	2.36	Soil	S
LPA/G3/14	3.75	7.35	3.60	LPA/G3/14-02	0.29	6.59	86.90	6.22	Soil	S
LPA/G3/14	7.35	11.30	3.95	LPA/G3/14-03	0.09	5.06	89.65	5.20	Soil	S
LPA/G3/14	11.30	14.80	3.50	LPA/G3/14-04	0.05	2.48	94.90	2.57	Granite gneiss	GG
LPA/G3/14	14.80	15.80	1.00	LPA/G3/14-05	0.27	3.31	92.80	3.62	Granite gneiss	GG
LPA/G3/14	15.80	16.80	1.00	LPA/G3/14-06	1.65	4.35	89.40	4.60	Graphitic Schist	GS
LPA/G3/14	16.80	17.80	1.00	LPA/G3/14-07	1.42	5.66	86.90	6.02	Graphitic Schist	GS
LPA/G3/14	17.80	18.80	1.00	LPA/G3/14-08	3.21	5.14	87.20	4.45	Graphite bearing granite gneiss	G+GG
LPA/G3/14	18.80	19.80	1.00	LPA/G3/14-09	2.89	4.88	87.40	4.83	Graphite bearing granite gneiss	G+GG
LPA/G3/14	19.80	21.30	1.50	LPA/G3/14-10	0.22	5.63	90.50	3.65	Granite gneiss	GG
LPA/G3/14	21.30	22.30	1.00	LPA/G3/14-11	2.17	6.83	88.80	2.20	Graphite bearing granite gneiss	G+GG
LPA/G3/14	22.30	22.80	0.50	LPA/G3/14-12	2.07	6.60	89.40	1.93	Graphite bearing granite gneiss	G+GG
LPA/G3/14	22.80	23.80	1.00	LPA/G3/14-13	1.32	6.25	89.70	2.73	Graphitic Schist	GS
LPA/G3/14	23.80	24.80	1.00	LPA/G3/14-14	2.62	6.42	88.80	2.16	Graphite bearing granite gneiss	G+GG
LPA/G3/14	24.80	25.80	1.00	LPA/G3/14-15	1.80	6.21	89.80	2.19	Graphitic Schist	GS
LPA/G3/14	25.80	26.80	1.00	LPA/G3/14-16	1.68	5.99	90.30	2.03	Graphitic Schist	GS
LPA/G3/14	26.80	27.80	1.00	LPA/G3/14-17	2.36	5.55	89.67	2.41	Graphite bearing granite gneiss	G+GG
LPA/G3/14	27.80	28.80	1.00	LPA/G3/14-18	3.17	5.13	89.85	1.85	Graphite bearing granite gneiss	G+GG
LPA/G3/14	28.80	29.80	1.00	LPA/G3/14-19	2.44	5.44	90.02	2.10	Graphite bearing granite gneiss	G+GG
LPA/G3/14	29.80	30.80	1.00	LPA/G3/14-20	2.59	5.65	89.53	2.22	Graphite bearing granite gneiss	G+GG
LPA/G3/14	30.80	31.80	1.00	LPA/G3/14-21	3.58	5.76	88.77	1.89	Graphite bearing granite gneiss	G+GG
LPA/G3/14	31.80	32.80	1.00	LPA/G3/14-22	1.88	5.85	89.09	3.18	Graphitic Schist	GS
LPA/G3/14	32.80	33.80	1.00	LPA/G3/14-23	1.89	4.67	91.87	1.57	Graphitic Schist	GS
LPA/G3/14	33.80	34.80	1.00	LPA/G3/14-24	3.95	4.03	90.57	1.45	Graphite bearing granite gneiss	G+GG
LPA/G3/14	34.80	35.80	1.00	LPA/G3/14-25	2.92	3.76	91.45	1.87	Graphite bearing granite gneiss	G+GG
LPA/G3/14	35.80	36.90	1.10	LPA/G3/14-26	3.77	3.66	91.55	1.02	Graphite bearing granite gneiss	G+GG

LPA/G3/14	36.90	38.00	1.10	LPA/G3/14-27	1.25	2.99	94.41	1.36	Graphitic Schist	GS
LPA/G3/14	38.00	42.00	4.00	LPA/G3/14-28	0.15	1.20	97.88	0.77	Quartzite	QTZ
LPA/G3/15	1.00	4.10	3.10	LPA/G3/15-01	0.33	4.61	93.43	1.63	Soil	S
LPA/G3/15	4.10	6.80	2.70	LPA/G3/15-02	0.47	4.94	92.55	2.04	Granite gneiss	GG
LPA/G3/15	6.80	7.80	1.00	LPA/G3/15-03	0.95	5.62	91.24	2.19	Granite gneiss	GG
LPA/G3/15	7.80	8.80	1.00	LPA/G3/15-04	3.52	4.51	89.72	2.25	Graphite bearing granite gneiss	G+GG
LPA/G3/15	8.80	9.30	0.50	LPA/G3/15-05	3.38	4.45	90.51	1.67	Graphite bearing granite gneiss	G+GG
LPA/G3/15	9.30	10.80	1.50	LPA/G3/15-06	1.28	5.35	90.04	3.32	Graphitic Schist	GS
LPA/G3/15	10.80	11.80	1.00	LPA/G3/15-07	2.29	4.34	91.45	1.93	Graphite bearing granite gneiss	G+GG
LPA/G3/15	11.80	12.80	1.00	LPA/G3/15-08	1.12	6.29	90.46	2.12	Graphitic Schist	GS
LPA/G3/15	12.80	13.80	1.00	LPA/G3/15-09	2.26	6.09	89.48	2.16	Graphite bearing granite gneiss	G+GG
LPA/G3/15	13.80	14.80	1.00	LPA/G3/15-10	2.39	5.47	90.65	1.50	Graphite bearing granite gneiss	G+GG
LPA/G3/15	14.80	15.80	1.00	LPA/G3/15-11	2.54	4.76	91.21	1.49	Graphite bearing granite gneiss	G+GG
LPA/G3/15	15.80	16.80	1.00	LPA/G3/15-12	3.11	5.41	90.24	1.24	Graphite bearing granite gneiss	G+GG
LPA/G3/15	16.80	17.80	1.00	LPA/G3/15-13	1.83	6.29	89.77	2.11	Graphitic Schist	GS
LPA/G3/15	17.80	18.80	1.00	LPA/G3/15-14	2.55	6.66	88.84	1.95	Graphite bearing granite gneiss	G+GG
LPA/G3/15	18.80	19.80	1.00	LPA/G3/15-15	2.50	8.46	86.58	2.47	Graphite bearing granite gneiss	G+GG
LPA/G3/15	19.80	20.80	1.00	LPA/G3/15-16	2.84	7.19	88.05	1.92	Graphite bearing granite gneiss	G+GG
LPA/G3/15	20.80	21.80	1.00	LPA/G3/15-17	2.74	6.14	88.87	2.25	Graphite bearing granite gneiss	G+GG
LPA/G3/15	21.80	22.80	1.00	LPA/G3/15-18	2.43	5.57	89.63	2.38	Graphite bearing granite gneiss	G+GG
LPA/G3/15	22.80	23.80	1.00	LPA/G3/15-19	3.45	5.46	89.39	1.70	Graphite bearing granite gneiss	G+GG
LPA/G3/15	23.80	24.80	1.00	LPA/G3/15-20	1.53	4.09	92.06	2.32	Graphitic Schist	GS
LPA/G3/15	24.80	25.80	1.00	LPA/G3/15-21	0.08	0.27	99.26	0.39	Granite gneiss	GG
LPA/G3/15	25.80	28.00	2.20	LPA/G3/15-22	0.06	0.62	98.44	0.87	Granite gneiss	GG
LPA/G3/15	28.00	29.00	1.00	LPA/G3/15-23	0.05	0.45	98.64	0.87	Granite gneiss	GG
LPA/G3/15	29.00	30.00	1.00	LPA/G3/15-24	2.53	2.17	94.36	0.94	Graphite bearing granite gneiss	G+GG
LPA/G3/15	30.00	31.00	1.00	LPA/G3/15-25	5.50	2.89	91.00	0.61	Graphite bearing granite gneiss	G+GG
LPA/G3/15	31.00	32.00	1.00	LPA/G3/15-26	4.47	3.11	91.03	1.38	Graphite bearing granite gneiss	G+GG
LPA/G3/15	32.00	33.00	1.00	LPA/G3/15-27	1.46	1.53	95.82	1.18	Graphitic Schist	GS
LPA/G3/15	33.00	33.50	0.50	LPA/G3/15-28	1.47	1.55	96.17	0.81	Graphitic Schist	GS
LPA/G3/15	33.50	34.50	1.00	LPA/G3/15-29	2.15	3.66	91.50	2.68	Graphite bearing granite gneiss	G+GG
LPA/G3/15	34.50	35.50	1.00	LPA/G3/15-30	6.18	5.78	84.89	3.16	Graphite bearing granite gneiss	G+GG
LPA/G3/15	35.50	36.50	1.00	LPA/G3/15-31	3.45	4.65	89.18	2.72	Graphite bearing granite gneiss	G+GG
LPA/G3/15	36.50	37.00	0.50	LPA/G3/15-32	3.03	5.55	86.64	4.78	Graphite bearing granite gneiss	G+GG
LPA/G3/15	37.00	38.00	1.00	LPA/G3/15-33	2.04	3.66	90.47	3.84	Graphite bearing granite gneiss	G+GG
LPA/G3/15	38.00	39.00	1.00	LPA/G3/15-34	1.70	2.89	93.41	1.99	Graphitic Schist	GS
LPA/G3/15	39.00	40.00	1.00	LPA/G3/15-35	3.22	3.61	91.44	1.73	Graphite bearing granite gneiss	G+GG
LPA/G3/15	40.00	41.00	1.00	LPA/G3/15-36	5.01	5.71	86.90	2.38	Graphite bearing granite gneiss	G+GG
LPA/G3/15	41.00	41.50	0.50	LPA/G3/15-37	3.30	7.56	86.03	3.11	Graphite bearing granite gneiss	G+GG
LPA/G3/15	41.50	42.00	0.50	LPA/G3/15-38	4.63	6.02	85.06	4.29	Graphite bearing granite gneiss	G+GG
LPA/G3/15	42.00	43.00	1.00	LPA/G3/15-39	6.46	5.51	85.21	2.81	Graphite bearing granite gneiss	G+GG
LPA/G3/15	43.00	44.00	1.00	LPA/G3/15-40	7.94	5.16	84.57	2.33	Graphite bearing granite gneiss	G+GG
LPA/G3/15	44.00	44.50	0.50	LPA/G3/15-41	5.36	5.12	87.13	2.39	Graphite bearing granite gneiss	G+GG
LPA/G3/15	44.50	45.00	0.50	LPA/G3/15-42	3.09	7.95	85.39	3.57	Graphite bearing granite gneiss	G+GG
LPA/G3/15	45.00	46.00	1.00	LPA/G3/15-43	3.35	6.30	86.40	3.95	Graphite bearing granite gneiss	G+GG
LPA/G3/15	46.00	47.00	1.00	LPA/G3/15-44	5.38	6.43	86.10	2.09	Graphite bearing granite gneiss	G+GG
LPA/G3/15	47.00	48.00	1.00	LPA/G3/15-45	5.54	4.36	88.10	2.00	Graphite bearing granite gneiss	G+GG
LPA/G3/15	48.00	49.00	1.00	LPA/G3/15-46	7.46	4.32	86.60	1.62	Graphite bearing granite gneiss	G+GG
LPA/G3/15	49.00	50.00	1.00	LPA/G3/15-47	6.46	6.31	84.30	2.93	Graphite bearing granite gneiss	G+GG
LPA/G3/15	50.00	51.00	1.00	LPA/G3/15-48	6.29	7.11	84.60	2.00	Graphite bearing granite gneiss	G+GG
LPA/G3/15	51.00	51.50	0.50	LPA/G3/15-49	6.44	4.95	86.60	2.01	Graphite bearing granite gneiss	G+GG
LPA/G3/15	51.50	52.50	1.00	LPA/G3/15-50	2.25	5.74	89.70	2.31	Graphite bearing granite gneiss	G+GG
LPA/G3/15	52.50	53.50	1.00	LPA/G3/15-51	7.07	3.11	88.20	1.62	Graphite bearing granite gneiss	G+GG
LPA/G3/15	53.50	54.00	0.50	LPA/G3/15-52	2.26	4.13	92.40	1.21	Graphite bearing granite gneiss	G+GG
LPA/G3/15	54.00	55.00	1.00	LPA/G3/15-53	1.10	5.79	90.80	2.31	Graphitic Schist	GS
LPA/G3/15	55.00	59.00	4.00	LPA/G3/15-54	0.12	2.59	95.30	1.99	Granite gneiss	GG

LPA/G3/16	0.00	2.00	2.00	LPA/G3/16-01	0.06	5.88	91.40	2.66	Soil	S
LPA/G3/16	2.00	3.40	1.40	LPA/G3/16-02	0.08	3.24	94.99	1.69	Granite gneiss	GG
LPA/G3/16	3.40	4.40	1.00	LPA/G3/16-03	0.05	2.71	95.30	1.94	Granite gneiss	GG
LPA/G3/16	4.40	5.40	1.00	LPA/G3/16-04	2.30	4.28	90.80	2.62	Graphite bearing granite gneiss	G+GG
LPA/G3/16	5.40	6.40	1.00	LPA/G3/16-05	1.21	5.35	89.30	4.14	Graphitic Schist	GS
LPA/G3/16	6.40	7.40	1.00	LPA/G3/16-06	2.48	4.82	90.50	2.20	Graphite bearing granite gneiss	G+GG
LPA/G3/16	7.40	8.40	1.00	LPA/G3/16-07	4.69	4.02	89.70	1.59	Graphite bearing granite gneiss	G+GG
LPA/G3/16	8.40	9.40	1.00	LPA/G3/16-08	1.78	3.68	92.90	1.64	Graphitic Schist	GS
LPA/G3/16	9.40	10.40	1.00	LPA/G3/16-09	4.40	5.85	87.10	2.65	Graphite bearing granite gneiss	G+GG
LPA/G3/16	10.40	11.10	0.70	LPA/G3/16-10	0.38	3.73	93.60	2.29	Granite gneiss	GG
LPA/G3/16	11.10	12.10	1.00	LPA/G3/16-11	0.17	1.37	98.10	0.36	Granite gneiss	GG
LPA/G3/16	12.10	15.40	3.30	LPA/G3/16-12	0.16	2.34	96.10	1.40	Granite gneiss	GG
LPA/G3/16	15.40	19.10	3.70	LPA/G3/16-13	0.20	2.65	95.90	1.25	Granite gneiss	GG
LPA/G3/16	19.10	20.60	1.50	LPA/G3/16-14	0.57	2.69	96.00	0.74	Granite gneiss	GG
LPA/G3/16	20.60	21.60	1.00	LPA/G3/16-15	0.77	5.71	90.00	3.52	Granite gneiss	GG
LPA/G3/16	21.60	22.60	1.00	LPA/G3/16-16	1.42	3.94	93.30	1.34	Graphitic Schist	GS
LPA/G3/16	22.60	23.60	1.00	LPA/G3/16-17	4.07	4.14	90.40	1.39	Graphite bearing granite gneiss	G+GG
LPA/G3/16	23.60	24.60	1.00	LPA/G3/16-18	3.67	5.28	89.50	1.55	Graphite bearing granite gneiss	G+GG
LPA/G3/16	24.60	25.60	1.00	LPA/G3/16-19	2.79	4.62	90.80	1.79	Graphite bearing granite gneiss	G+GG
LPA/G3/16	25.60	26.50	0.90	LPA/G3/16-20	1.39	3.27	93.90	1.44	Graphitic Schist	GS
LPA/G3/16	26.50	27.50	1.00	LPA/G3/16-21	1.06	2.49	94.60	1.85	Graphitic Schist	GS
LPA/G3/16	27.50	29.00	1.50	LPA/G3/16-22	1.61	3.21	93.50	1.68	Graphitic Schist	GS
LPA/G3/16	29.00	30.00	1.00	LPA/G3/16-23	0.42	3.37	95.70	0.51	Granite gneiss	GG
LPA/G3/16	30.00	31.00	1.00	LPA/G3/16-24	1.57	5.98	91.60	0.85	Graphitic Schist	GS
LPA/G3/16	31.00	32.00	1.00	LPA/G3/16-25	3.98	4.89	89.50	1.63	Graphite bearing granite gneiss	G+GG
LPA/G3/16	32.00	33.00	1.00	LPA/G3/16-26	0.88	3.57	94.60	0.95	Granite gneiss	GG
LPA/G3/16	33.00	34.00	1.00	LPA/G3/16-27	1.12	2.87	94.70	1.31	Graphitic Schist	GS
LPA/G3/16	34.00	35.00	1.00	LPA/G3/16-28	3.41	4.07	91.30	1.22	Graphite bearing granite gneiss	G+GG
LPA/G3/16	35.00	36.00	1.00	LPA/G3/16-29	4.90	4.56	88.90	1.64	Graphite bearing granite gneiss	G+GG
LPA/G3/16	36.00	37.00	1.00	LPA/G3/16-30	4.32	4.89	89.60	1.19	Graphite bearing granite gneiss	G+GG
LPA/G3/16	37.00	38.00	1.00	LPA/G3/16-31	0.37	3.88	94.70	1.05	Granite gneiss	GG
LPA/G3/16	38.00	42.00	4.00	LPA/G3/16-32	0.29	1.53	97.60	0.58	Granite gneiss	GG
LPA/G3/17	0.40	1.80	1.40	LPA/G3/17-01	0.19	6.92	90.00	2.89	Soil	S
LPA/G3/17	1.80	4.30	2.50	LPA/G3/17-02	0.11	7.13	90.30	2.46	Soil	S
LPA/G3/17	4.30	6.80	2.50	LPA/G3/17-03	0.20	7.07	87.40	5.33	Soil	S
LPA/G3/17	6.80	10.80	4.00	LPA/G3/17-04	0.35	4.48	93.90	1.27	Granite gneiss	GG
LPA/G3/17	10.80	14.80	4.00	LPA/G3/17-05	1.21	6.41	87.90	4.48	Graphitic Schist	GS
LPA/G3/17	14.80	18.80	4.00	LPA/G3/17-06	0.20	3.64	94.10	2.06	Granite gneiss	GG
LPA/G3/17	18.80	22.80	4.00	LPA/G3/17-07	0.29	2.60	95.20	1.91	Granite gneiss	GG
LPA/G3/17	22.80	26.80	4.00	LPA/G3/17-08	0.69	5.03	92.10	2.18	Granite gneiss	GG
LPA/G3/17	26.80	29.80	3.00	LPA/G3/17-09	0.75	5.36	91.50	2.39	Granite gneiss	GG
LPA/G3/17	29.80	32.80	3.00	LPA/G3/17-10	0.52	4.76	91.70	3.02	Granite gneiss	GG
LPA/G3/17	32.80	35.00	2.20	LPA/G3/17-11	0.04	2.90	94.75	2.31	Granite gneiss	GG

Notes: On the basis of the containing of FC% the graphite bearing rocks are divided into two ranges i.e. (2 -5)% and above 5% FC.

ANNEXURE-VIII

Lamer-Panga Block-A (G3) Graphite Block Details of primary and check sample analysis for 04 radicals viz. F.C, V.M, Ash, & Moisture																	
SL NO.	Sample 'ID' No.	From (m)	To (m)	Sample Length (m)	Primary Sample Results (%)				Check Sample Results (%)					Primary vs Check Sample Analysis Difference			
					Fixed Carbon (%)	Volatile matter (%)	Ash (%)	Moisture (%)	Check Sample 'ID'	Fixed Carbon %	Volatile Matter %	Ash %	Moisture %	Fixed Carbon %	Volatile Matter %	Ash %	Moisture %
1	LPA/G3/01	17.10	17.70	0.60	1.98	6.16	89.00	2.86	GP/G3/300-1	1.86	5.92	88.80	3.42	-0.12	-0.24	-0.20	0.56
2	LPA/G3/01	23.60	24.60	1.00	9.48	3.80	85.48	1.24	GP/G3/300-2	9.00	5.03	84.00	1.97	-0.48	1.23	-1.48	0.73
3	LPA/G3/01	31.80	33.00	1.20	2.08	2.12	95.34	0.46	GP/G3/300-3	1.89	2.77	94.60	0.74	-0.19	0.65	-0.74	0.28
4	LPA/G3/01	49.40	50	0.60	7.10	3.70	88.79	0.41	GP/G3/300-4	6.62	4.96	87.50	0.92	-0.48	1.26	-1.29	0.51
5	LPA/G3/02	8.20	9.70	1.50	4.72	4.81	87.14	3.33	GP/G3/300-5	4.29	4.73	86.80	4.18	-0.43	-0.08	-0.34	0.85
6	LPA/G3/02	22.30	23.30	1.00	10.00	4.82	83.60	1.58	GP/G3/300-6	9.66	4.94	83.40	2.00	-0.34	0.12	-0.20	0.42
7	LPA/G3/02	32.10	32.80	0.70	3.73	9.35	83.70	3.22	GP/G3/300-7	3.80	8.58	83.40	4.22	0.07	-0.77	-0.30	1.00
8	LPA/G3/02	46.60	47.60	1.00	3.10	5.13	89.90	1.87	GP/G3/300-8	3.15	4.96	89.60	2.29	0.05	-0.17	-0.30	0.42
9	LPA/G3/04	21.00	24.00	3.00	0.02	0.10	99.80	0.08	GP/G3/300-9	0.06	0.06	99.80	0.08	0.04	-0.04	0.00	0.00
10	LPA/G3/05	2.10	3.10	1.00	16.54	3.44	79.40	0.62	GP/G3/300-10	16.84	2.93	79.40	0.83	0.30	-0.51	0.00	0.21
11	LPA/G3/05	8.10	9.10	1.00	2.52	3.12	92.60	1.76	GP/G3/300-11	2.55	2.88	92.50	2.07	0.03	-0.24	-0.10	0.31
12	LPA/G3/05	35.60	36.60	1.00	9.69	4.88	84.09	1.34	GP/G3/300-12	9.29	5.41	83.30	2.00	-0.40	0.53	-0.79	0.66
13	LPA/G3/05	48.00	49.00	1.00	13.89	2.80	82.14	1.17	GP/G3/300-13	13.32	3.61	81.80	1.27	-0.57	0.81	-0.34	0.10
14	LPA/G3/05	59.00	60.00	1.00	10.61	2.27	86.37	0.75	GP/G3/300-14	10.14	2.92	86.00	0.94	-0.47	0.65	-0.37	0.19
15	LPA/G3/06	3.60	4.30	0.70	0.86	4.66	93.22	1.26	GP/G3/300-15	0.60	4.84	92.90	1.66	-0.26	0.18	-0.32	0.40
16	LPA/G3/06	24.10	25.10	1.00	0.24	2.74	95.23	1.79	GP/G3/300-16	0.15	2.63	95.10	2.12	-0.09	-0.11	-0.13	0.33
17	LPA/G3/06	31.00	32.00	1.00	1.81	3.93	92.21	2.05	GP/G3/300-17	1.40	4.17	91.80	2.63	-0.41	0.24	-0.41	0.58
18	LPA/G3/06	42.85	43.60	0.75	5.88	4.19	88.70	1.23	GP/G3/300-18	5.72	4.21	88.60	1.47	-0.16	0.02	-0.10	0.24
19	LPA/G3/07	8.00	9.00	1.00	1.93	3.89	90.27	3.91	GP/G3/300-19	1.80	3.78	90.98	3.44	-0.13	-0.11	0.71	-0.47
20	LPA/G3/07	14.10	15.20	1.10	4.54	5.07	87.60	2.79	GP/G3/300-20	4.85	4.37	87.50	3.28	0.31	-0.70	-0.10	0.49
21	LPA/G3/07	30.50	31.00	0.50	0.75	4.58	92.75	1.93	GP/G3/300-21	0.55	4.58	93.03	1.84	-0.20	0.00	0.28	-0.09
22	LPA/G3/09	14.40	15.40	1.00	0.65	2.53	95.78	1.04	GP/G3/300-22	0.49	2.65	95.67	1.19	-0.16	0.12	-0.11	0.15

23	LPA/G3/09	20.40	21.40	1.00	1.63	4.93	90.48	2.96	GP/G3/300-23	1.56	4.81	90.56	3.07	-0.07	-0.12	0.08	0.11
24	LPA/G3/10	10.80	11.80	1.00	2.02	2.70	94.10	1.18	GP/G3/300-24	2.08	2.30	94.37	1.25	0.06	-0.40	0.27	0.07
25	LPA/G3/10	15.80	16.80	1.00	2.33	2.72	93.90	1.05	GP/G3/300-25	2.72	2.28	93.94	1.06	0.39	-0.44	0.04	0.01
26	LPA/G3/10	22.80	23.80	1.00	2.43	2.79	93.46	1.32	GP/G3/300-26	2.54	2.79	93.23	1.44	0.11	0.00	-0.23	0.12
27	LPA/G3/10	26.50	27.50	1.00	5.81	3.34	89.62	1.22	GP/G3/300-27	5.38	4.17	88.79	1.66	-0.43	0.83	-0.83	0.44
28	LPA/G3/10	31.50	32.50	1.00	1.66	7.00	89.07	2.27	GP/G3/300-28	1.74	6.85	88.87	2.54	0.08	-0.15	-0.20	0.27
29	LPA/G3/10	33.50	34.50	1.00	1.58	1.87	95.96	0.60	GP/G3/300-29	1.42	2.11	95.76	0.71	-0.16	0.24	-0.20	0.11
30	LPA/G3/10	55.10	56.10	1.00	2.76	3.21	92.90	1.13	GP/G3/300-30	2.97	3.02	92.90	1.11	0.21	-0.19	0.00	-0.02
31	LPA/G3/10	73.50	74.50	1.00	13.10	3.55	81.52	1.83	GP/G3/300-31	12.74	3.78	81.38	2.10	-0.36	0.23	-0.14	0.27
32	LPA/G3/10	96.50	97.50	1.00	4.47	3.27	91.50	0.76	GP/G3/300-32	4.68	2.94	91.56	0.82	0.21	-0.33	0.06	0.06
33	LPA/G3/10	112.20	115.00	2.80	2.31	3.00	93.80	0.89	GP/G3/300-33	2.36	2.48	94.31	0.85	0.05	-0.52	0.51	-0.04
34	LPA/G3/11	48.80	49.80	1.00	0.88	1.16	97.50	0.46	GP/G3/300-34	0.88	0.74	98.20	0.18	0.00	-0.42	0.70	-0.28
35	LPA/G3/11	52.80	53.40	0.60	1.45	1.33	96.59	0.62	GP/G3/300-35	1.28	1.46	96.47	0.79	-0.17	0.13	-0.12	0.17
36	LPA/G3/11	57.40	58.40	1.00	1.67	1.93	95.30	1.10	GP/G3/300-36	1.29	1.62	96.17	0.92	-0.38	-0.31	0.87	-0.18
37	LPA/G3/11	61.40	62.40	1.00	0.96	2.65	95.60	0.79	GP/G3/300-37	1.12	2.66	95.30	0.92	0.16	0.01	-0.30	0.13
38	LPA/G3/11	67.40	68.10	0.70	1.36	3.43	93.80	1.41	GP/G3/300-38	1.60	3.24	93.60	1.56	0.24	-0.19	-0.20	0.15
39	LPA/G3/11	68.70	69.70	1.00	0.67	2.06	96.30	0.97	GP/G3/300-39	0.82	1.93	96.20	1.05	0.15	-0.13	-0.10	0.08
40	LPA/G3/11	76.00	77.00	1.00	2.76	5.79	89.50	1.95	GP/G3/300-40	2.53	6.02	89.10	2.35	-0.23	0.23	-0.40	0.40
41	LPA/G3/12	11.50	12.50	1.00	13.29	2.40	83.20	1.11	GP/G3/300-41	13.24	2.32	83.10	1.34	-0.05	-0.08	-0.10	0.23
42	LPA/G3/12	18.10	18.60	0.50	1.09	3.29	94.00	1.62	GP/G3/300-42	1.62	2.71	93.80	1.87	0.53	-0.58	-0.20	0.25
43	LPA/G3/12	26.60	27.60	1.00	3.88	4.37	89.29	2.46	GP/G3/300-43	3.65	4.49	89.00	2.86	-0.23	0.12	-0.29	0.40
44	LPA/G3/12	38.30	40.00	1.70	1.10	3.78	92.81	2.31	GP/G3/300-44	1.30	3.34	92.60	2.76	0.20	-0.44	-0.21	0.45
45	LPA/G3/12	49.80	51.00	1.20	1.40	4.06	91.70	2.84	GP/G3/300-45	1.20	4.20	90.90	3.70	-0.20	0.14	-0.80	0.86
46	LPA/G3/12	59.00	60.00	1.00	1.76	4.82	91.25	2.17	GP/G3/300-46	2.09	5.00	90.50	2.41	0.33	0.18	-0.75	0.24
47	LPA/G3/13	17.80	18.80	1.00	3.56	3.51	91.50	1.43	GP/G3/300-47	3.33	3.56	91.00	2.11	-0.23	0.05	-0.50	0.68
48	LPA/G3/13	42.60	43.60	1.00	1.55	3.99	92.60	1.86	GP/G3/300-48	1.72	3.60	92.30	2.38	0.17	-0.39	-0.30	0.52
49	LPA/G3/13	45.60	46.60	1.00	1.72	5.07	91.70	1.51	GP/G3/300-49	1.84	4.74	91.50	1.92	0.12	-0.33	-0.20	0.41

50	LPA/G3/13	53.80	55.00	1.20	0.75	5.47	90.80	2.98	GP/G3/300-50	0.74	5.08	90.60	3.58	-0.01	-0.39	-0.20	0.60
51	LPA/G3/13	58.60	59.60	1.00	1.25	4.38	91.30	3.07	GP/G3/300-51	1.23	4.14	91.10	3.53	-0.02	-0.24	-0.20	0.46
52	LPA/G3/13	69.00	71.00	2.00	2.27	5.81	89.30	2.62	GP/G3/300-52	2.14	5.91	88.90	3.05	-0.13	0.10	-0.40	0.43
53	LPA/G3/14	16.80	17.80	1.00	1.42	5.66	86.90	6.02	GP/G3/300-53	1.40	4.89	85.90	7.81	-0.02	-0.77	-1.00	1.79
54	LPA/G3/14	25.80	26.80	1.00	1.68	5.99	90.30	2.03	GP/G3/300-54	1.93	5.63	89.70	2.74	0.25	-0.36	-0.60	0.71
55	LPA/G3/14	32.80	33.80	1.00	1.89	4.67	91.87	1.57	GP/G3/300-55	2.24	5.00	90.80	1.96	0.35	0.33	-1.07	0.39
56	LPA/G3/15	13.80	14.80	1.00	2.39	5.47	90.65	1.50	GP/G3/300-56	2.35	5.81	89.60	2.24	-0.04	0.34	-1.05	0.74
57	LPA/G3/15	23.80	24.80	1.00	1.53	4.09	92.06	2.32	GP/G3/300-57	1.55	4.27	91.50	2.68	0.02	0.18	-0.56	0.36
58	LPA/G3/15	33.00	33.50	0.50	1.47	1.55	96.17	0.81	GP/G3/300-58	1.38	1.95	95.90	0.77	-0.09	0.40	-0.27	-0.04
59	LPA/G3/15	37.00	38.00	1.00	2.04	3.66	90.47	3.84	GP/G3/300-59	1.83	3.58	89.60	4.99	-0.21	-0.08	-0.87	1.15
60	LPA/G3/15	41.50	42.00	0.50	4.63	6.02	85.06	4.29	GP/G3/300-60	4.05	5.88	84.50	5.57	-0.58	-0.14	-0.56	1.28
61	LPA/G3/15	52.50	53.50	1.00	7.07	3.11	88.20	1.62	GP/G3/300-61	7.20	2.83	88.20	1.77	0.13	-0.28	0.00	0.15
62	LPA/G3/16	5.40	6.40	1.00	1.21	5.35	89.30	4.14	GP/G3/300-62	1.59	4.61	88.60	5.20	0.38	-0.74	-0.70	1.06
63	LPA/G3/16	10.40	11.10	0.70	0.38	3.73	93.60	2.29	GP/G3/300-63	0.26	3.46	93.10	3.18	-0.12	-0.27	-0.50	0.89
64	LPA/G3/16	25.60	26.50	0.90	1.39	3.27	93.90	1.44	GP/G3/300-64	1.67	3.10	93.40	1.83	0.28	-0.17	-0.50	0.39
65	LPA/G3/16	32.00	33.00	1.00	0.88	3.57	94.60	0.95	GP/G3/300-65	1.02	3.23	94.20	1.55	0.14	-0.34	-0.40	0.60
66	LPA/G3/17	14.80	18.80	4.00	0.20	3.64	94.10	2.06	GP/G3/300-66	0.18	3.46	93.51	2.85	-0.02	-0.18	-0.59	0.79

ANNEXURE-IX

Sl. No	Borehole ID	Sample ID	From (m)	To (m)	Thickness (m)	Lithology	Bulk Density (gm/cm ³)
1	LPA/G3/06	LPA/BD/06-01	38.3	38.4	0.1	Graphite bearing granite gneiss	2.19
2	LPA/G3/10	LPA/BD/10-02	53.3	53.4	0.1	Graphite bearing granite gneiss	2.31
3	LPA/G3/11	LPA/BD/11-03	67	67.1	0.1	Graphite bearing granite gneiss	2.54
4	LPA/G3/12	LPA/BD/12-04	11.7	11.8	0.1	Graphite bearing granite gneiss	2.33
5	LPA/G3/14	LPA/BD/14-05	31.1	31.2	0.1	Graphite bearing granite gneiss	2.34



ANNEXURE-X

DEVIATION TEST REPORT OF LAMER-PANGA BLOCK-A (G3)					
SL. NO.	BH No.	BH DEPTH (meter)	READING DEPTH (meter)	AZIMUTH (Degree)	BH INCLINATION ANGLE (Degree)
1	LPA/G3/01	50	8	317.00	44.00
			14	317.00	44.10
			20	317.30	44.00
			26	317.40	44.20
			32	317.80	44.30
			38	317.70	44.40
			44	317.40	44.60
			50	317.80	44.90
2	LPA/G3/02	50	8	317.90	44.70
			14	320.00	45.40
			20	320.70	44.60
			26	320.10	45.00
			32	319.70	44.70
			38	320.70	44.40
			44	321.40	44.40
			50	322.10	44.40
3	LPA/G3/03	35	5	312.40	50.20
			11	312.00	50.30
			17	312.40	50.20
			23	311.30	50.10
			29	311.00	49.80
			35	312.20	49.40
4	LPA/G3/04	35	5	311.40	44.30
			11	311.10	44.90
			17	311.30	44.10
			23	311.60	44.10
			29	311.80	44.20
			35	311.60	44.30
5	LPA/G3/05	60	6	307.70	49.30
			12	307.70	49.40
			18	308.50	49.50
			24	308.10	49.80
			30	307.80	50.00
			36	307.20	50.30
			42	308.40	50.50
			48	307.20	50.50
			54	307.50	50.60
			60	308.40	50.80

6	LPA/G3/06	45	9	312.00	49.00
			15	311.30	49.50
			21	310.10	49.60
			27	311.40	49.50
			33	311.60	49.70
			39	310.20	49.90
			45	311.00	49.70
7	LPA/G3/07	35	5	312.10	45.90
			11	312.20	44.40
			17	311.30	44.60
			23	311.50	44.40
			29	311.30	44.90
			35	312.10	44.80
8	LPA/G3/08	35	5	311.5	46
			11	310.3	44.9
			17	310.6	44.6
			23	310.9	44.8
			29	310.8	44.6
			35	310.4	44.7
9	LPA/G3/09	35	5	313	44.94
			11	310.5	44.94
			17	310.2	45.32
			23	309.8	45.49
			29	310.5	45.03
			35	310.3	45.05
10	LPA/G3/10	115	1	310.2	49.27
			7	310	49.83
			13	308.8	49.09
			19	308.75	50.84
			25	308.6	50.61
			31	308.47	50.59
			37	308.4	50.3
			43	307.8	50.56
			49	307.2	50.94
			55	307.9	50.14
			61	307	50.17
			67	307.4	50.78
			73	307.8	50.54
			79	307.9	50.95
			85	307.8	50.24
			91	307.4	50.94
			97	308.1	50.39

			103	308.9	50.78
			109	308.7	50.16
			115	308.9	50.7
11	LPA/G3/11	77	5	310	55
			11	312.34	54.85
			17	311.5	54.62
			23	311	54.5
			29	310.91	54.41
			35	311.3	54.31
			41	311.1	54.45
			47	312.3	54.23
			53	311.7	54.55
			59	311.9	54.11
			65	310.9	54.22
			71	310.8	54.22
			77	310.7	54.4
12	LPA/G3/12	62	6	307	59.46
			12	309	59.31
			18	310	59.38
			24	313	59.71
			30	312	59.7
			36	311	59.65
			42	311	59.91
			48	313	59.65
			54	310	59.69
			60	311	59.65
			62	312	60.1
13	LPA/G3/13	71	5	310.2	55.5
			11	310	55.04
			17	310	55.5
			23	312.2	55.48
			29	312.8	55.38
			35	312.82	55.35
			41	312.67	55.31
			47	312.15	55.31
			53	311	55.25
			59	310.9	55.17
			65	311.3	54.89
			71	311.1	54.47

14	LPA/G3/14	42	6	310	45
			12	310.54	45
			18	310.15	44.81
			24	311	44.65
			30	310.9	44.87
			36	309.3	44.89
			42	309.1	44.87
15	LPA/G3/15	59	5	313	49
			11	311	49.1
			17	311.2	49.15
			23	310.5	49.6
			29	307	49.6
			35	311.2	49.7
			41	312.3	49.18
			47	310.9	49.13
			53	310.5	49.2
			59	312.2	49.14
16	LPA/G3/16	42	6	310	45.12
			12	310.13	45.22
			18	310.25	45.04
			24	311.89	45.82
			30	310.78	45.65
			36	309.56	45.59
			42	309.57	44.55
17	LPA/G3/17	35	5	311.7	44.85
			11	311.5	44.93
			17	311.6	44.99
			23	312	45.11
			29	312.6	45.14
			35	312.5	45.03