PROPOSAL FOR ALUMINOUS LATERITE DEPOSIT OF GOVINDAGUDDE AND SUDIGUDDE BLOCK KUNDAPUR TALUK, UDIPI DISTRICT KARNATAKA STATE (FOR G3 STAGE MINERAL EXPLORATION UNDER NMET)

(ALUMINOUS LATERITE)

BY

CRITICAL MINERAL TRACKERS

HYDERABAD

2024

Place : Hyderabad

Date: 12-11-2024

Proposal For Aluminous Laterite Deposit Of
Govindagudde And Sudigudde Block
Kundapur Taluk, Udipi District
Karnataka State

Summary of the Block for G3 stage exploration

	Features	Details
	Block ID	CMT/ NMET/KA/2024/ Block –B
	Current Exploration Agency	Critical Mineral Trackers
	Previous Exploration Agency	Department of mines & Geology,Govt of Karnataka in the year 1994
	G4 stage Geological Report (Previous stage Geological Report)	G4 Stage report enclosed
	Commodity	Aluminous Laterite
	Mineral Belt	Laterite belt in western ghats
	Completion Period with entire Time schedule to complete the project	FOUR MONTHS(120 DAYS)
	Objectives	Quality, Resource estimation of aluminous laterite in Govindagudde/Sedigudde block
	Whether the work will be carried out by the proposed agency or through outsourcing and details thereof. Components to be outsourced and name of the outsource agency	Primarily, M/S Critical Mineral Trackers will carry out the work. However, CMT will outsource some specialized work like chemical analysis and drilling to MOU Partners.
	Name/ Number of Geoscientists	Dr.RAJESHAM TERALA,K.NAGESWARA RAO S.UMA MAHESWARA RAO
	Expected Field days (Geology, Geophysics, Surveyor)	Sixty (60) man days
1.	**Location**	Block boundary A,B,C,D,E,F,G,H,I,J
	Latitude(North) in Decimal Degree	A.13.804195º B.13.814857º C.13.815427º D.13.812530º E.13.813290º F.13.809392º G. 13.809835º H.13.809824º I.13.808713º J.13.802592º
	Longitude(East) in Decimal Degree	A.74.645117º B.74.652166º C. 74.655791º D. 74.657560º E.74.667075º F. 74.667612º G.74.663440º H.74.659030º I.74.653826º J.74.647662º
	Villages	Govindagudde, Sedigudde
	Tehsil/ Taluk	KUNDAPUR
	District	UDIPI
	State	KARNATAKA
2.	**Area (hectares/ square kilometers)**	
	Block Area	1.2 Sq.Km
	Forest Area	1.2 Sq.Km, Total under reserve forest
	Government Land Area	NA
	Private Land Area	NA
3	**Accessibility**	

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	Nearest Rail Head	Bijoor is the nearest railway station located at 1.5km NW of the block
	Road	Kundapur to Kollur road passes through southern part of the block.NH-66 is at about 1 km west of the block
	Airport	Mangalore is the nearest airport and is at about 120 km towards south
4.	**Hydrography**	
	Local Surface Drainage Pattern (Channels)	Parallel to dendritic in nature
	Rivers/ Streams	Yadamavinahole is the major stream located 0.5km south of the block
5.	**Climate**	
	Mean Annual Rainfall	Tropical climate with heavy annual rainfall of 3800mm
	Temperatures (Minimum) Temperatures(Maximum)	21°C During December & January 32°C During April & May
6.	**Topography**	
	Toposheet Number	48 K/9
	Morphology of the Area	Flat topped hillocks interspersed with ephemeral streams.Flat topped hillocks merge with the plain country with pediment slopes
7	**Availability of baseline geoscience data**	
	Geological Map (1:50K/ 25K)	**Available**
	Geochemical Map	**Available**
	Geophysical Map (Aerogeophysical, Ground geophysical, Regional as well as local scale GP maps)	**Not Available**

8.	**Justification for taking up G3 stage mineral exploration**	G4 studies by Department of Mines and Geology has concluded a reserve of 75,000 tons of Aluminous laterite in the Govindagudde/Sedigudde block during the Field season 1979-80, 1980-81 and 1981-82 and the Geological report was submitted in 1994.The laterite in the area is characterized by Al2o3 content ranging from 34 to 54%. The analytical results adduce that the aluminous laterite is useful in the Abrasive manufacturing industry. In Sedigudde plateau 9 nos prospecting pits admeasuring 1.5ml * 2.5m m were sunk to a depth of 1.0m to 2.0m depth. During the pitting the lateritic material obtained in each pit was sampled with an interval of 50 cm.47 samples were generated .A reserve of 53,000tons has been estimated in an area of two hectare upto a depth of 2m and with 50% recovery. DMG,Karnataka has allocated Sedigudde plateau to Critical Mineral Trackers vide proceedings of the 7th meeting of technical committee(Exploration) held on 23/09/2024 to carry out G3 investigation(Copy enclosed). Besides the DMG ,Karnataka has also provided a shape file of Sedigudde plateau measuring 1.2Sq.km area.

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1. BLOCK SUMMARY:

The studied area i.e. in and around Govindagudde and Sedigudde block areas represents a part of northwestern region of Karnataka. The area is in close vicinity to the west coast. The National highway (NH-66) and inter-regional railway track (Konkan railway line) are just west of the Govindagudde block. The topography is mostly undulatory with major plateaus capped with forest. The plateau regions are characterized by gently sloping plain grounds on top of the hills have qua-qua versal slopes.The major stream Yedamavinahole separates the Govindagudde block in the south with the Sedigudde block in the North. The stream flows from east to west and has many rivulets and streams originating from adjoining plateaus join the stream. The Yedamavinahole stream seems to have been controlled by the E-W trending fracture system. After passing Sedigudde and Govindagudde plateau areas, the Yedamavinahole stream joins the Arabian sea at about 10 km west of Govindagudde plateau.

Physiography:

The Govindagudde and Sedigudde plateaus are relatively gentle slopes toward the south. At places because of reactivation along the E-W joint system escarpments have been resulted along the southern slopes of the Govindagudde and Sedigudde plateau blocks. Otherwise, the escarpment areas of the Govindagudde and Sedigudde plateau areas are easily accessible with gentle slopes. The areas are drained by numerous ephemeral streams. The area experiences 3600 mm of rainfall due to SW monsoon. The precipitation is due to the SW monsoon and is heavy and as a result all the plateau areas of the area are capped with thick bushy jungles which are sheltering rabbits, snakes and

wildbores etc. Along the slopes of plateau areas and also along the plateau tops, the cashew nut plantation and rubber plantations are conspicuously cultivated. The Govindagudde and Sedigudde plateaus are almost flat-top hills with elevations ranging from 53.07m and 62.44m above msl respectively. The climate of the area is tropical and receives abundant rainfall between June and September. The annual rainfall is 3800mm.

Regional geology:

The geology in and around Kundapur is very interesting and has intricate geological history. The lithologies present are granite gneisses, laterite, soil and alluvium. In the order of disposition, the rock types found are :

Soil and alluvium

Laterite

Granite gneisses

Earth History recognises 5 Major Eras

1. Cenozoic
2. Mesozoic
3. Paleozoic
4. Proterozoic
5. Archaean

The Geological history of Karnataka is largely confined to the two oldest eras - The Archean and the Proterozoic a substantial part of northern karnataka is covered by deccan traps representing a phenomenal outburst of volcanic activity at the dawn of the cenozoic era.

The Govindagudde and sedigudde laterite is in all probability is due to leaching of intermediate gneisses which are exposed 4 km SE of Govindagudde and Sedigudde block. These gneisses are mostly granodiorite to granetic in composition and are of early Proterozoic to Archean in age.

Generalized stratigraphic sequence of the Karnataka is as given below Tertiary to Quaternary formation consisting of laterites, a variety of soils and alluvium.

Deccan Traps

Bhimas

Kaladgis

Younger Granites

younger Gneissic Complex

Granulites

Dharwar schist Belt

Gold bearing Schist Belts

Older Gneissic complex

Ancient supra crustals

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Laterite

Laterite is invariably a surfacial formation like soil and is found covering a wide variety of rocks in the form of a sheet. Typical laterite is porus in nature and is generally soft and clayey like and can be cut into blocks of different sizes for construction purposes.East of the studied block a number of laterite block cutting units have come up and the Laterite is being mined extensively. The cut blocks are mostly mottled in nature with shades of Red,Brown or yellow. It generally gives a place to lithomargic clay at depth. The Alumina rich varieties are classified as bauxites from which Aluminium metal is extracted. The name Laterite was coined by the Governor general of India in the year 1800. The Name Laterite is applied to a peculiar hardened earthy material. It is full of cavities and coarse and contains a very large amount of iron in the form of red and yellow ochre.

In broad terms the laterite can be defined as a product of intense rock weathering generally reddish in color and quartz. Laterite is found in higher elevation under semi tropical environment and the areas which are having Qua- Quaversal slopes where precipitation of water in heavy quantities gets drained out. In the process, all the delterics materials such as iron oxides, potassium, sodium calcium and magnesium gets washed off. In the process the residual rock is becomes rich in aluminious oxides and results in the formation of Bauxite/Laterite.

The NGCM data shows considerable proportion of Hafnium i.e. 2.13 to 29.08ppm against to Crustal Abundance of 3 ppm , Zr concentration is 137 ppm to 1091 ppm against to Crustal Abundance 165 ppm. Arsenic values __ from 1.26 to 18.9 ppm

against Crustal Abundance of 1.80 ppm. The Geochemical analytical data of NGCM 53 elements are enclosed here along with NGCM contour maps for Gallium, Yittrum, Arsenic , Neodymium.

Keeping in view of the concentrations of Critical minerals like Hf/Zr/As,it is proposed to know their concentration in depth by way of drilling up to 50 mts 3 coring boreholes. The generated samples at 01 meter intervals are to be analyzed for all the critical minerals. Locations of Borehole are given in the shape file map of the block.

The granite gneisses are the principle rock types of the area and are well exposed 4-5 km SE of Sedigudde plateau.The granite gneisses are medium grained and show foliation trends of NNW-SSE. The constituent minerals present are potash feldspar, quartz, plagioclase feldspar and the mafic minerals present are hornblende, biotite, chlorite and iron oxides. These mafic minerals because of their longer dimension orientation, they impart gneissic fabric to the granite. At Places the granite gneiss shows orthogonal and conjugate joint systems development. Their spacing is 30-50 cm in width. Intersection of joints at places imparts rhombus mosaic structure. These joints must have helped in draining out the highly precipitated rain water. Such draining must have led to removal of deleterious materials like potassium, sodium, silica, Calcium, Magnesium and iron oxides from the parent rock granite gneiss which in turn lead to the enrichment of alumina, resulting the formation of laterite.

The laterite occupies sheet-like masses on the plateau region. The laterite ranges in thickness from 3 to 4.6m, which is underlined by white clayey material of 2m thickness. The sequence of clay horizons is overlain by laterite is very much

observed along the southeastern slopes of Sedugudde plateau area where steep escarpment zones are present along the southern slopes of the plateau. These escarpments are characteristically present along the northern parts of connecting road between Kambadakona with Kollur. Below the clayey horizon altered country rock granite gneiss is present. The altered country rock granite gneiss is represented by reddish-brown soil which in turn is underlained by morram derived from granite gneiss, It is further underlained by granite gneiss. The clays are mostly variegated in nature and are mostly represent lithomarge. The lithomarge clays are varying in thickness from less than 1m to 2.5m. The lithomarge clays are off-white to white in color, fine grained and invariably show variegated nature. The contact between the laterites and underlying clays is gradational. However the contact between clays and the granite gneiss are not exposed in the field of study.

Field Observations :

2. Samples were collected from the Govindagudde laterite block, including two samples specifically gathered from a cross-sectional view of the laterite horizon.
3. The stratigraphy observed in the escarpment reveals that 3.6-meter-thick Laterite clay-rich horizon overlying a 1.5-meter-thick clay layer, indicating significant leaching resulting laterite and clay.
4. Below the ferruginous laterite, the presence of country rock, expected to be approximately 15 meters depth of granitic basement.

5. Laterite is ferruginous in nature and has assorted lumps of iron rich clay material. Sample is mostly of powdered nature with gravel material intermix. Gravel is characterized by concentric structure defined by iron and clay rich minerals core is occupied by segregation of iron rich material hematite.
6. The observed ferruginous laterite sheet rocks exhibit a distinctive red coloration due to ferruginous coating intermixed , limonite and minor occurrence of silty material.
7. Suspected the presence of weathered ferruginous kaolinitised granite at the old workings of laterite deposits indicates extensive weathering processes resulted in the formation of laterite/bauxite from granite gneiss.
8. There are conjugate and orthogonal joint sets , with spaced 5 to 15 cm spacing , which in turn suggests extensive stress activity at least in two prominent directions.
9. On top of the hill, numerous laterite outcrops are present, displaying a variety of minerals, including red hematite, black manganese oxide, and light yellow to white limonite and clay Minerals..

Mineral potentiality: DMG, Karnataka has investigated Govindagudde/Sedigudde block by mapping the area on 1:2000 scale and estimated 77000 tonnes.

Scope of the present exploration:

1. **Village :** Kambodakone , Kundapur Taluk, Udipi District, Karnataka.
2. **Quantum of Work** : Core drilling of laterite capping at 200mts internal. Each Borehole penetrating upto 25mts depth are planned, coring bore holes 35 in Nos with 200 mts spacing.
3. Core log Samples at 1 mt interval are to be collected and to be processed by coning & Quarterly to get them analyzed for major oxides of laterite.
4. Type of Drilling : Core drilling by Hydraulic Drilling Rigs
5. Borehole size : The holes shall be derived in NQ sizes
6. The core recovery in all the formation should be at least 90% except in fault zone, weathered zone, soil,sand and structurally disturbed area.
7. CGM will provide a proposed borehole location plan of all the areas to be covered under exploration.
8. Sampling: There will be one mineral/rock sample for every 1-meter run. Each sample should be cut by a core splitter. Each run shall be marked properly by plastic cards and the core boxes shall be numbered properly. Each sample shall be reduced to an approximate quantity by following the standard sampling procedures such as homogenizing,coning,quartering and pulverizing into 100/200 mesh and be prepared into two packets of 100-200 gm each. The final sample pockets shall be properly labelled with Borehole number, sample run.

II. Previous Work

1. The rock formations found in the area are:
    - Soil and Aluminum
    - Laterite
    - Granitic gneisses.
2. Granitic gneisses form the principal rocks of the area, and are well exposed to the east of Sedigudde plateaux. They are medium to fined grained and shows foliation trend of NNW-SSE.
3. Laterite occurs as sheet-like masses on the plateau top and it varies in thickness from 4.0m to 6.0 m .The laterite is dark brown to pale pink on a weathered surface and are characterized by vertical tubes filled with gray to pinkish brown clayey material. The laterite is cut by joints well seen along the edges of the plateau giving rise to large blocky outcrops; the central portion is massive.
4. The different types of lithomerges and variegated clays are seen below the laterites.Their thickness are variable.The contact between the laterites and the underlying granites are not clear.

The Aluminous laterite deposits occurring in the area are confined to the laterites occurring over the flat tapped hills. The color of the aluminous laterite is pale brown to brown. Sub-oolite to oolite and concretionary structures are seen. The aluminous laterite is massive, vesicular, compact and amorphous. The aluminous layer gradually passes downwards on to various types of lithomerge and variegated clay. Silica is in the free state and occurs as quartz in the aluminous laterite. Quartz is generally granulated and crumbles easily.

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As a preliminary to prospecting Govindagudde and Seddigudde plateaux were mapped in detail on 1:2000 scale with 50m grid interval, and boundaries of the laterite were delineated. An area of 35 hectares and 25 hectares were mapped respectively. At every grid intersection point a test hole of 150 mm dia was sunk to 1.00 meter depth. Two samples at 50 cm interval were drawn from each trial hole one . The L.O.I values were determined in the field and subsequently, the samples analyzing moisture content greater than 20% were selected for full chemical analysis .Based on the chemical analysis results the aluminous laterite patches were delineated.

The aluminous laterite of Govindagudde plateau the Al203 varies from 40.92 to 54.42%; Si02 3.76 to 9.22% and Fe203%, S102 3.76 to 9.22% and Fe203 5.66 to 25.45%.

In sedigudde the Al203 vary from 34.71% to 46.46% and Si02 from 5.76 to 12.08%. The Fe203 context ranges from 16.02 to 32.05%.

The detailed investigation has proved a total reserve of 75000 tonnes of aluminous laterite in the Govindagudde and Sedigudde plateau.

The Al203 content ranges from 34 to 54%. The laterite is suitable for use in the abrassive manufacture.

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Objectives of the proposed study:

1. To identify the aerial extent of the laterite block.
2. To calculate the area of the laterite block.
3. To decide the grade of the laterite deposit.
4. To decide the grade of the laterite deposit.
5. Resource potential estimation of the laterite block studied.

III. Block Coordinates

Point	Coordinates(In Decimal Degree)
A	13.804195º 74.645117º
B	13.814857º 74.652166º
C	13.815427º 74.655791º
D	13.812530º 74.657560º
E	13.813290º 74.667075º
F	13.809392º 74.667612º
G	13.809835º 74.663440º
H	13.809824º 74.659030º
I	13.808713º 74.653826º
J	13.802592º 74.647662º

IV. Planned Methodology and Broad Exploration Approach:

1. Collection of the previous data pertaining to Geological, Geochemical & Geophysical studies etc..
2. Reconnaitory traverses – to understand major lithologies exposed in the block area.
3. Detailed Geological Mapping of the identical block on 1:2000
4. Pitting and trenching of the block upto a depth of 2mts by collecting samples at 1 mtr capacity.
5. Systematic sampling of the block with a spacing of 5mts to understand major elemental variations in the Laterite Block.
6. Sample collection in pits & trenches with one meter spacing.
7. The sample generated in the field are powdered homozonised and are sent to a chemical laboratory for analysis.
8. After identification of the laterite formation in depth - Boreholes/Auger holes are to be executed.Samples derived from such drilling shall be collected at 1mt interval and shall be sent to the chemical laboratory for analysis.
9. So as to understand the basement configuration below the laterite deeper core drilling boreholes 3 in Number with 50mts Depth are to be executed.
10. The analysis are to be carried out in NABL accredited Laboratory.
11. On the basis of chemical analysis of the samples elemental contour map shall be prepared.

12. On the basis of laterite present in depth its resource potential estimation shall be made.

13. After completing the investigation borehole pillars are to be erected.

V. Nature Quantum and Target

Components	**G3**
Geological Mapping	Area 1.20 sq.km
No.of Coring Boreholes due to be put at mt	13 No's Shallow Bore holes(10m Depth)
Deeper coring boreholes in number with 50 mt penetration	3 No for collecting samples for finding of associated critical minerals
Pitting & trenching samples with 1mt spacing and to be collected and analyzed	120 No's

Borehole spacing (As per MEMC,2015)

Type of deposit	**Bedded stratiform and Tabular deposit of regular habit(Minerals to be identified)**	**Bedded straitform and tabular deposits of irregular habit(Minerals to be identified)**	**Lenticular bodies occuring en echelon Lenses,Pockets.(Different minerals)**
G3 Stage	Not Applicable	100 to 200m	Not Applicable

VI. Manpower Deployment and Time line

S.No.	Activities	Unit	MONTHS				Remarks
			1	2	3	4	
1	Camp Setting	5					
2	Surface Drilling(3 rigs)	60					
3	Survey Party days (1 party)	20					10 days in 1st Month and 10 Days in 3rd Month
4	Geologist Party days in field (1Party)	90					
5	Sampling Party days, Core Sampling(1 Party)	70					
6	Laboratory Studies	30					
7	Camp Winding	5					
8	Geologist Party days in HQ (1 Party)	25					1st Month 10 days 4th month 15 Days

VII. Summary of Expenditure

COST ESTIMATE FOR G3 Stage OF GOVINDAGUDDE / SEDIGUDDE BLOCK UDIPI DISTRICT OF KARNATAKA		
S.no.	**ITEM**	**COST ESTIMATE(in Rupees)**
A.	Geological Work	11,63,040
B.	Survey Work	3,53,480
C.	Core Drilling(4 Bore Holes) 40m Depth Each	32,29,340
D.	Laboratory Studies & Petro logical Studies	20,45,300
E.	Surface Geophysical Survey (Magnetic Surveys and Resistivity imaging)	-
F.	Preparation of Project Proposal	1,44,943
G.	Preparation of Final Geological Report 5 Additional Copies	14,01,202
	Total	91,85,655

VIII. Break up of expenditure

Estimate Cost for G3 Exploration for Aluminous Laterite and Associated Critical Elements in Govindagudde and Sedigudde Block, Udipi District, Karnataka
Total Area - 1.20 Sq. Km; Drilling- 10bh Shallow + 3bh Deep , Pitting: 120, Completion Time - 120 days , Review: 60 days

S.NO	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC-Item -Sl No.	Rates as per SoC	Qty.	Total Amount (Rs)	
A	Geological Mapping + Topographical mapping , Other Geological Work & Surveying						
	Geological mapping, (1:2,000 scale)						
i	a. Charges for Geologist per day (Field) for geological mapping, Pitting/trenching & drilling work	day	1.3	11,000	60	6,60,000	
ii	b. Labours Charges; Base rate	day	5.7	522	120	62,640	
	c. Charges for Geologist per day (HQ)	day	1.3	9000	25	2,25,000	
	d. Charges for one Sampler per day (1 Party)	one sampler per day	1.52	5,100	30	1,53,000	
	Labours Charges for sampler work(4 labourers)		5.7	522	120	62,400	
	Sub Total -A	**11,63,040**					
C	**Survey work**						

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a	Surveyor for topographic survey/DGPS Survey and for BH fixation & RL determination(18pts+ 7 boundary)	Per Point of observation	1.6.2	19,200	13	249600	10 Boundary points 3 Borehole points
b	Charges of Surveyor (1 party) for topographic mapping in 1:2000 scale	one surveyor per day	1.6.1a	8,300	10	83,000	
c	Labours Charges for survey work(2 labourers)	day	5.7	522	40	20,880	
	Sub-Total C					**3,53,400**	
D	**Piiting(30@2=60m+ 60@1= 60m = 120m PIT upto 1m approx)**	CU M	2.1.2	3,800	120	4,56,000	100m interval by leaving Shallow BH Points
E	**DRILLING**						
1	Core Drilling (soft rock & shallow)	m	2.2.3	7,168	130	9,31,840	13 no. @ 10m depth
	Core Drilling (soft rock & Hard rock deeper)		2.2.3 & 2.2.1.3	10,100	150	12,95,100	25mt 537600 25mt 757500
2	Land / Crop Compensation (in case the BH falls in agricultural Land)	per BH	-	-	-	-	-
3	Transportation of Drill Rig & Truck associated per drill (1 rigs)	Km	2.2.8	36	200	7200	To & from Mangalore
4	Monthly Accomodation Charges for drilling Camp (up to 2 Rigs)	month	2.2.9	50,000	1	50,000	
5	Drilling Camp Setting Cost	Nos	2.2.9a	2,50,000	1	2,50,000	
6	Drilling Camp Winding up Cost	Nos	2.2.9b	2,50,000	1	2,50,000	

7	Drill Core preservation	m	5.3	1,590	280	4,45,200	
	SubTotal E					**32,29,340**	
G	**LABORATORY STUDIES**						
1	**Chemical Analysis**						
V)	**BH Core samples**						
	Primary + 10 % Check Sample for major oxides and LOI by XRF technique	Nos	4.1.15a	4,200	275	11,55,000	120+130=250 + 25(10% check samples) = 275
	b.Primary +check samples For REE ,Ga,V and other Trace elements : by ICPMS	Nos	4.1.13	5,380	150	8,07,000	
2	**Physical & Petrological Studies**						
i	Preparation of thin section	Nos	4.3.1	2,353	10	23,530	
ii	Preparation of polished section	Nos	4.3.3	1,185	10	11,850	
iii	petrographic/ore microscopic study	Nos	4.3.4	4,232	10	42,320	
iv	Digital Photographs	Nos	4.3.7	280	20	5600	
	SubTotal G					20,45,300	
H	**Total A to H**					72,47,160	
I	**Geological Report Preparation**	**5 Hard copies with a soft copy**	5.2	Exploration cost exceeding 50 lakh but less than 150 lakh :A Minimum of 2.5 lakh or 5% of the work whichever is more.		3,62,350/-	
J	**Peer review Charges**					30,000/-	
K	**Preparation of Exploration**	**5 Hard copies with a soft copy**	5.1	2% of the Cost or Rs. 5.0		1,44,943/-	

	Proposal (5 Hard copies with a soft copy)			Lakhs whichever is less			
L	**Total Estimated Cost without GST**					77,84,453/-	
M	**Provision for GST (18% of J)**					14,01,202/-	
N	**Total Estimated Cost with GST**					**91,85,655**	
	In Lakhs	**91,85,655**					

IX. References:

1. Geological studies No.191 by Nazeer Ahmed and Madhu R. in Department of Mines and Geology, Bangalore ,1994.
2. Geology of Karnataka by B.P Radha krishna & R.Vaidyanathan, Geological Society of India, Bangalore 1997.

List of plates

1. Proposed Block boundary over Topographic Map.
2. Proposed block boundary over existing geological Map.
3. Proposed borehole location Map.

Annexures

1. Proceedings Copy - DMG & Chairman Technical Committee(Exp).
2. Previous work report - No : 191/ 1994 . Dept of Nazeer Ahmed & R Madhu.
3. Lab Analysis Reports.
4. Stream Sediments Data sheet - Toposheet No.48 K/9 and elements contour maps.

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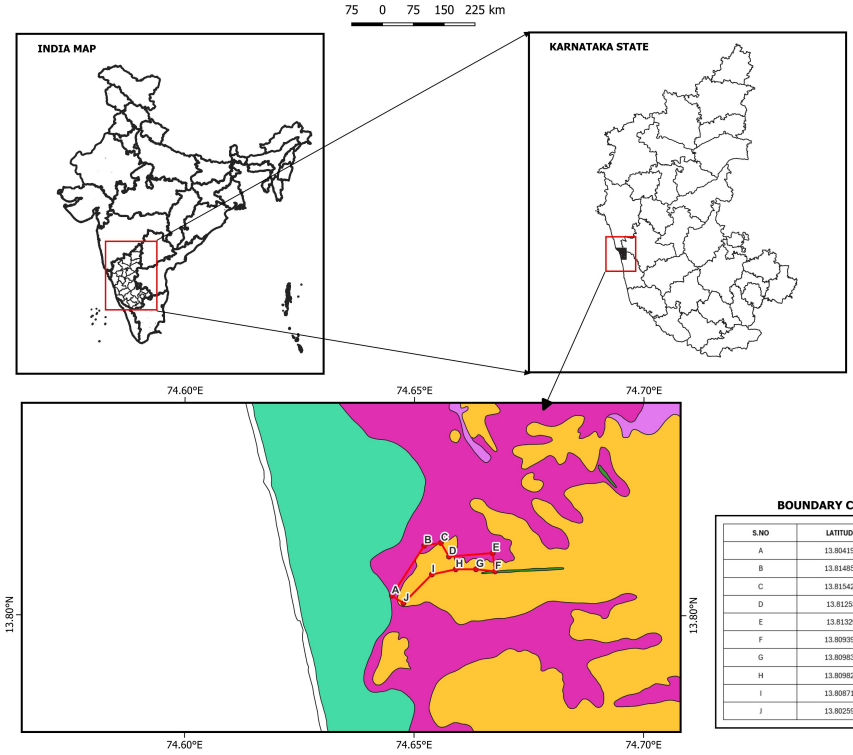
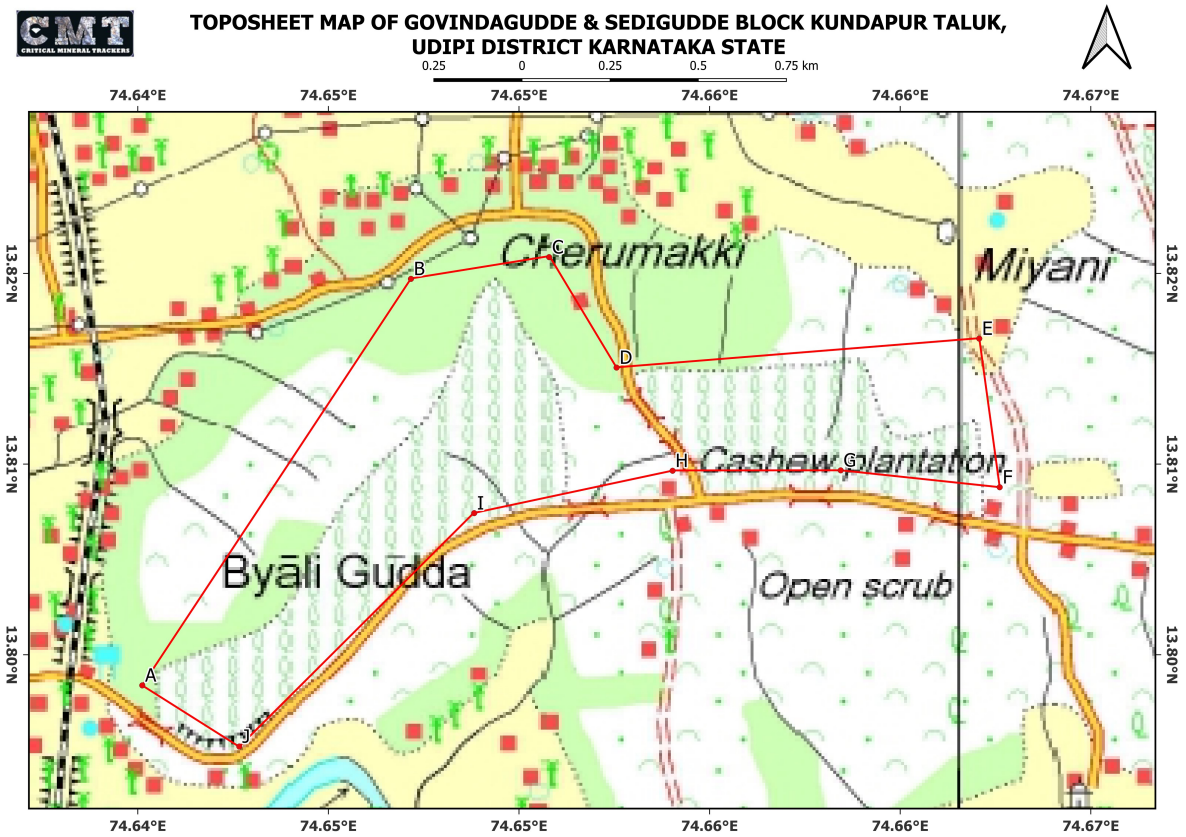
LOCATION MAP OF GOVINDAGUDDE & SEDIGUDDE BLOCK
KUNDAPUR TALUK, UDUPI DISTRICT
KARNATAKA STATE



BOUNDARY COORDINATES

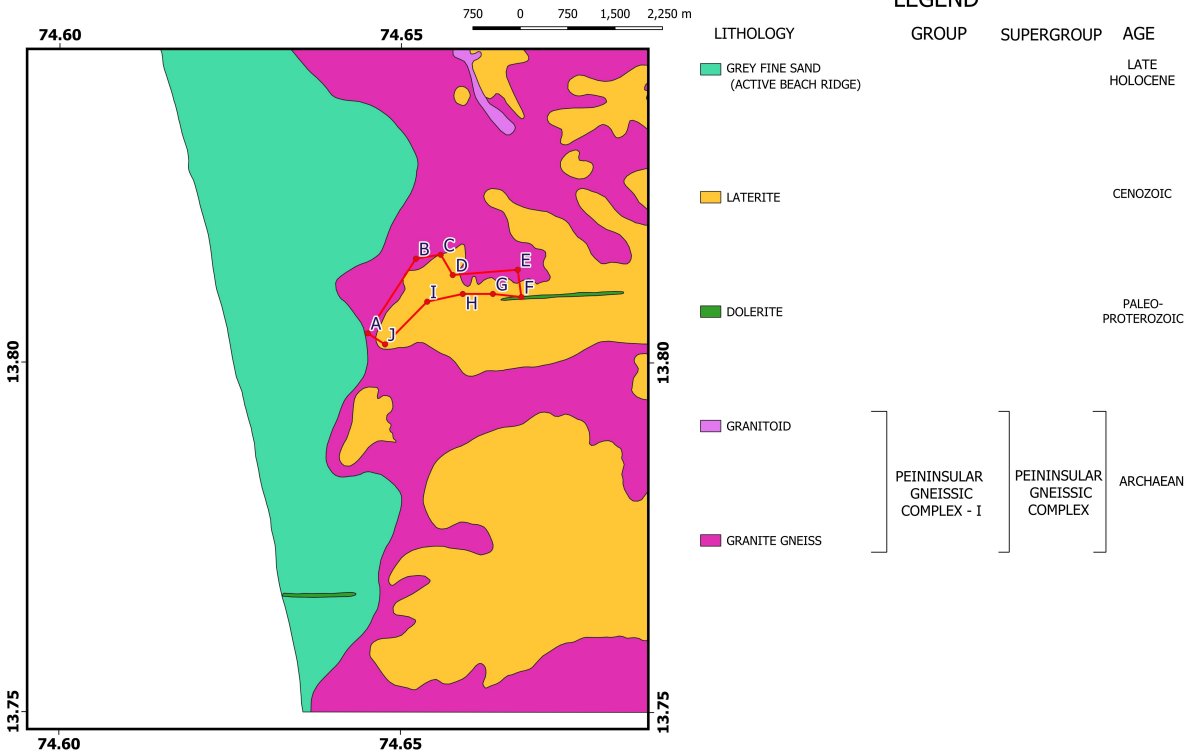
S.NO	LATITUDE	LONGITUDE
A	13.804195	74.645117
B	13.814857	74.652166
C	13.815427	74.655791
D	13.81253	74.65756
E	13.81329	74.667075
F	13.809392	74.667612
G	13.809835	74.66344
H	13.809824	74.809824
I	13.808713	74.653826
J	13.802592	74.647662

Proposal For Aluminous Laterite Deposit Of
Govindagudde And Sudigudde Block
Kundapur Taluk, Udipi District
Karnataka State



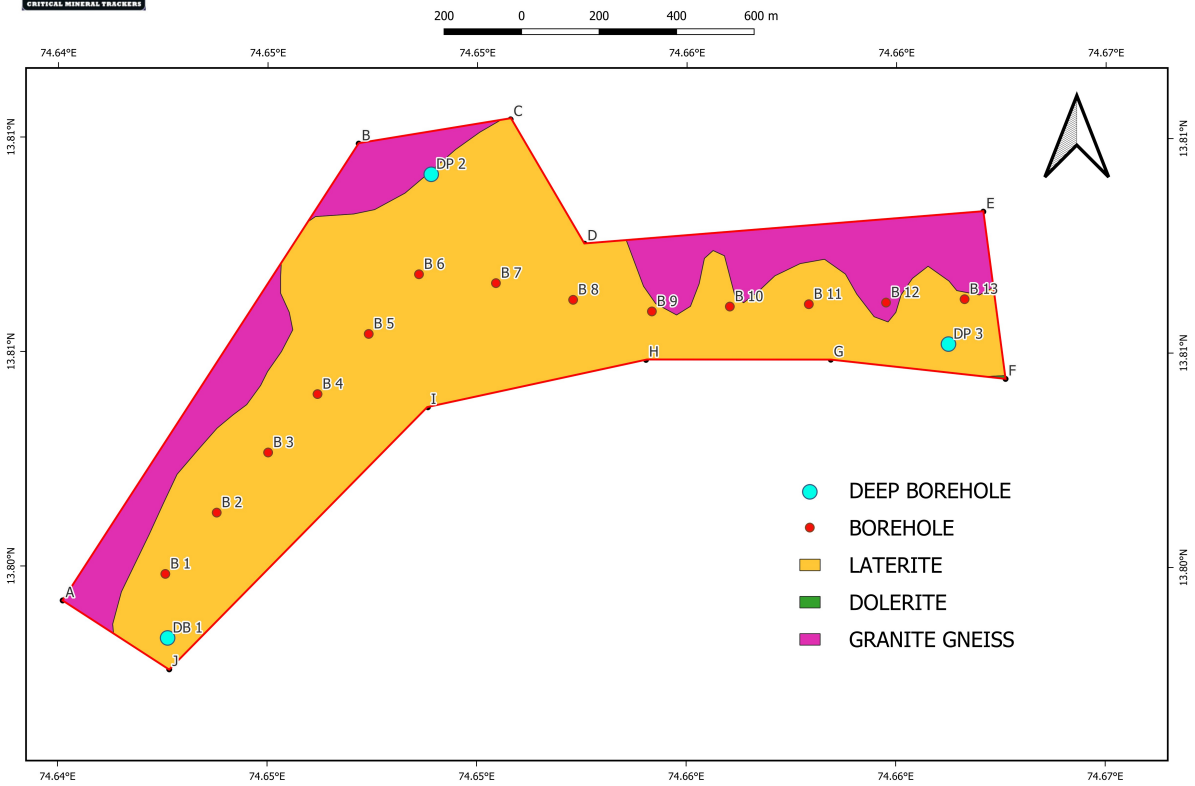
Proposal For Aluminous Laterite Deposit Of
Govindagudde And Sudigudde Block
Kundapur Taluk, Udipi District
Karnataka State

GEOLOGICAL MAP OF GOVINDAGUDDE & SEDIGUDDE BLOCK
KUNDAPUR TALUK,UDIPI DISTRICT
KARNATAKA STATE



Proposal For Aluminous Laterite Deposit Of
Govindagudde And Sudigudde Block
Kundapur Taluk, Udipi District
Karnataka State

PROPOSED BOREHOLE LAOCATION MAP OF GIVINDAGUDDE/SEDIGUDDE BLOCK
UDIPI DISTRICT, KARNATAKA



F-01-MSP7.8-TRP

LUCID Laboratories Pvt. Ltd.
Testing to the Core

Plot No. 3, IDA, Balanagar,
Hyderabad - 500 037, Telangana.
Ph: 040-6904 2222/10 Lines
E-mail: info@lucidlabsindia.com
Web: www.lucidlabsindia.com

TEST REPORT

Issued to:
Critical Mineral Trackers
H No. 7-1-58/CC/406, 'Concourse', Opp. Lal Bungalow
Greenlands, Begumpet
Hyderabad - 500 016
Kind Attn.:Mr. K Nageswara Rao, 78938-47742

Report No. : LL/24-25/007229-7234
Issue Date : 05/11/2024
Customer Ref.: Mail
Ref.Date : 28/10/2024

Sample Particulars : Rock Samples

Sample description : Rock Samples

Qty. Received : 6no's x ~1KG No. Polythene Cover

Test Parameters : Silica as SiO2,Aluminium as Al2O3,Iron as Fe2O3,Magnesium as MgO,Calcium as CaO,Phosphrous as P2O5,Sodium as Na2O,Potassium as K2O,Titanium as TiO2,Manganese as MnO,Loss on Ignition(LOI)

Date of Receipt of Sample : 29/10/2024
Date of Starting of Analysis : 29/10/2024
Date of completion of analysis : 05/11/2024

SAMPLE TESTED AS RECEIVED

TEST RESULTS

S. No	Registration No	Sample ID	SiO2 (%)	Fe2O3 (%)	Al2O3 (%)	CaO (%)	MgO (%)	Na2O (%)	K2O (%)	P2O5 (%)	MnO (%)	TiO2 (%)	LOI (%)
1	LL/24-25/007229	GGE-1	40.36	24.36	21.85	0.19	0.37	0.12	0.71	0.42	0.07	0.88	9.58
2	LL/24-25/007230	GGE-3	36.14	13.58	32.25	0.15	0.36	0.11	0.75	0.20	0.04	0.59	14.79
3	LL/24-25/007231	GGE-5	44.76	19.17	21.33	0.20	0.77	0.14	0.80	0.31	0.15	0.86	10.63
4	LL/24-25/007232	GG-V	40.38	16.77	27.05	0.18	0.47	0.14	0.90	0.12	0.05	0.76	12.48
5	LL/24-25/007233	GGE-A	25.62	15.97	35.37	0.18	0.40	0.12	0.96	0.22	0.02	1.55	18.79
6	LL/24-25/007234	GG-VI	32.52	23.16	25.49	0.21	0.91	0.17	0.74	0.18	0.16	1.12	14.27

Test Method:IS-2000 & SOP OM-03.
Note : The above results are expressed as on dry basis.
NOTE : This report and results relate only to the sample / items tested.

End of Report

A.L.Kanta Rao
Authorized Signatory

Reviewed by

113381

Note: This report is subject to the terms and conditions mentioned overleaf

Proceedings of the 7th Meeting of Technical Committee (Exploration) held on 23.09.2024 at Conference hall, 5th Floor, Khanija Bhavan, Bengaluru.

Members Present in the Meeting; As per list enclosed

With the permission of the Chairman, Deputy Director (Plan) extended warm welcome to all the members and participants present physically and through VC to the meeting and also briefed about the agenda points listed for the discussion. After detailed deliberation, it was decided as below;

Agenda 1: Allocation of 5 GR/GM Blocks to NPEAs.

Deputy Director (Plan), DMG briefed the members about the 5 Exploration blocks viz Kanivehalli Gold Block, Bhagavati Gold Block, Govindagadde & Sedigudde Aluminous Laterite Block, Mundalli Aluminous Laterite Block and Nittadagi Aluminous Laterite Block which needs to be taken up for further exploration by NPEA's through NMET funds.

It is informed that out of 21 NPEA's to whom the details of these 5 blocks were shared seeking their interest in taking up exploration only 8 NPEAs have shown their interest and have tabulated the agencies v/s block name as per their choice of priority.

The committee decided to go through the formal presentations/ introduction about their strength and capacity to take up exploration of these blocks under NMET funding. Except M/s Kartikeya Exploration & Mining Services Pvt Ltd., all other agencies made their presentations. Since all being Notified Private Exploration agencies it was decided to allocate the block through lottery system and blocks were allotted as below;

Sl No.	Name of the Block	Name of the NPEA Selected
1	Kanivehalli Gold Block	M/s Geovale Services Pvt ltd
2	Bhagavati Gold Block	M/s Kartikeya Exploration & Mining Services Pvt Ltd.
3	Govindagadde & Sedigudde Aluminous Laterite Block,	M/s Critical Mineral Trackers
4	Mundalli Aluminous Laterite Block	M/s Geomarine Solutions Pvt Ltd.,
5	Nittadagi Aluminous Laterite Block	M/s PRB Infraprojects Pvt Ltd