Proposal for Bauxite exploration in Lakhond Block, Kachchh District, Gujarat State

Reconnaissance Survey (G4 Stage) under NMET.

(Bauxite)

By

Critical Mineral Trackers

Place: Hyderabad
Date: 11/12/2024

Proposal for Bauxite exploration in Lakhond Block,
Kachchh District, Gujarat State
Reconnaissance Survey (G4 Stage) under NMET.

Summary of the Block for Reconnaissance Survey (G4 Stage)

GENERAL INFORMATION ABOUT THE BLOCK

	Features	**Details**
	Block ID	CMT/NMET/2024/GJ/BLOCK-A
	Exploration Agency	Critical Mineral Trackers, Hyderabad
	Commodity	Bauxite
	Mineral Belt	Deccan Trap
	Completion Period with entire Time schedule to complete the project	4 months
	Objectives	Search and assessment of Bauxite resources in Lakhond Block , Kachchh district, Gujarat
	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.
	Name/ Number of Geoscientists	Geo Scientists – 4 (2 senior and 2 junior) S.Rama Murthy/Uma Maheswara Rao P. Gandhi Two Junior Geologists
	Expected Field days (Geology) Geological Party Days	Total Field Man Days (Geologist) Approximately.. 110 Man days Geological Party Days 75 Approximately
1.	**Location**	
	Latitude (DD) Northern	A-23.2440, B-23.26°, C-23.261°,D-23.264°, E-23.264°, F-23.2440 N
	Longitude(DD) Eastern	A-69.786°, B-69.784°, C-69.811°,D-69.811°, E-69.816°, F-69.816° E
	Villages	Lakhond, Padhar
	Tehsil/ Taluk	Bhuj
	District	Kachchh
	State	Gujarat
2.	**Area (hectares/ square kilometres)**	
	Block Area	6.12 sq.km
	Forest Area	NA
	Government Land Area	NA
	Private Land Area	NA
3.	**Accessibility**	
	Nearest Rail Head	Ratnal (12km towards Southeast)

	Road	Well connected by road network. Block area is connected by SH-42 which is 1 km south of the block
	Airport	Bhuj (20 km towards west)
4.	**Hydrography**	
	Local Surface Drainage Pattern (Channels)	Sub-parallel to dendritic
	Rivers/ Streams	One small tributary of Pur Nadi is passing through the block from east to west
5.	**Climate**	
	Average Annual Rainfall	Hot and semi-arid climate with Average annual rainfall: 460mm
	Temperatures (January) (Minimum) Temperatures (May) (Maximum)	8°C 47.8°C
6.	**Topography**	
	Toposheet Number	41E/15 & 41E/16
	Morphology of the Area	Gently undulating to Undulatory
7	**Availability of baseline geoscience data**	
	Geological Map (1:50K/ 25K)	**Available , source GSI Bhukosh**
	Geochemical Map	**Available , source GSI Bhukosh**
	Geophysical Map (Aeromagnetic, ground geophysical, Regional as well as local scale GP maps)	**Ground geophysical data is available , source GSI Bhukosh**
8.	**Justification for taking up Reconnaissance Survey / Regional Exploration**	● The area of the proposed block was previously investigated by CGM by means of trenching, pitting, and drilling which yielded positive results for bauxite. An estimated resource of 27.85 m.t. bauxite had been reported in the area. Chemical analysis of the samples stated about 51.29% of Al2O3 and about 4.78% of SiO2. The area was recommended by CGM for

		further investigation and thus, the block is proposed for G4 level of exploration. ● Based on the No Objection Certificate issued by the CGM, Gujarat on 11.11.2024, the geologists of CMT have undertaken reconnoitary traverses in Lakhond Block area during November,2024 and also collected few random samples from Block area. And the samples have been sent to NABL accredited labs in Hyderabad for analysis. The analytical results are encouraging and prompted us to submit this proposal. Analytical results are attached in the appendix

Detailed description on the following titles to be made in the proposal.

1. Block Summary

a) Physiography

The Lakhond block area forms an integral part of Kachchh mainland geomorphic province comprising east-west trending ridges arranged in a "step" like profile from north to south constituting the Deccan lavas. To its north, the ridge complex profile abruptly descends into vast plains underlain by Mesozoic rocks, the southern limit of the Deccan lava ridge profile flattens out where Tertiary rocks overlie the lava flows. The range of elevation in the block area varies from 126 m to 106 m MSL

b) Background Geology (Regional Geology, Geology of the Block).

Regional Geology: The proposed Lakhond block forms part of the Kachchh basin which has been an important site for the deposition of Mesozoic and Cenozoic sediments.

The Mesozoic sediments are represented by the Chari Formation of Middle to Upper Jurassic, the Katrol Formation of Upper Jurassic to Lower Cretaceous and the Bhuj Formation of Lower to Upper Cretaceous period.

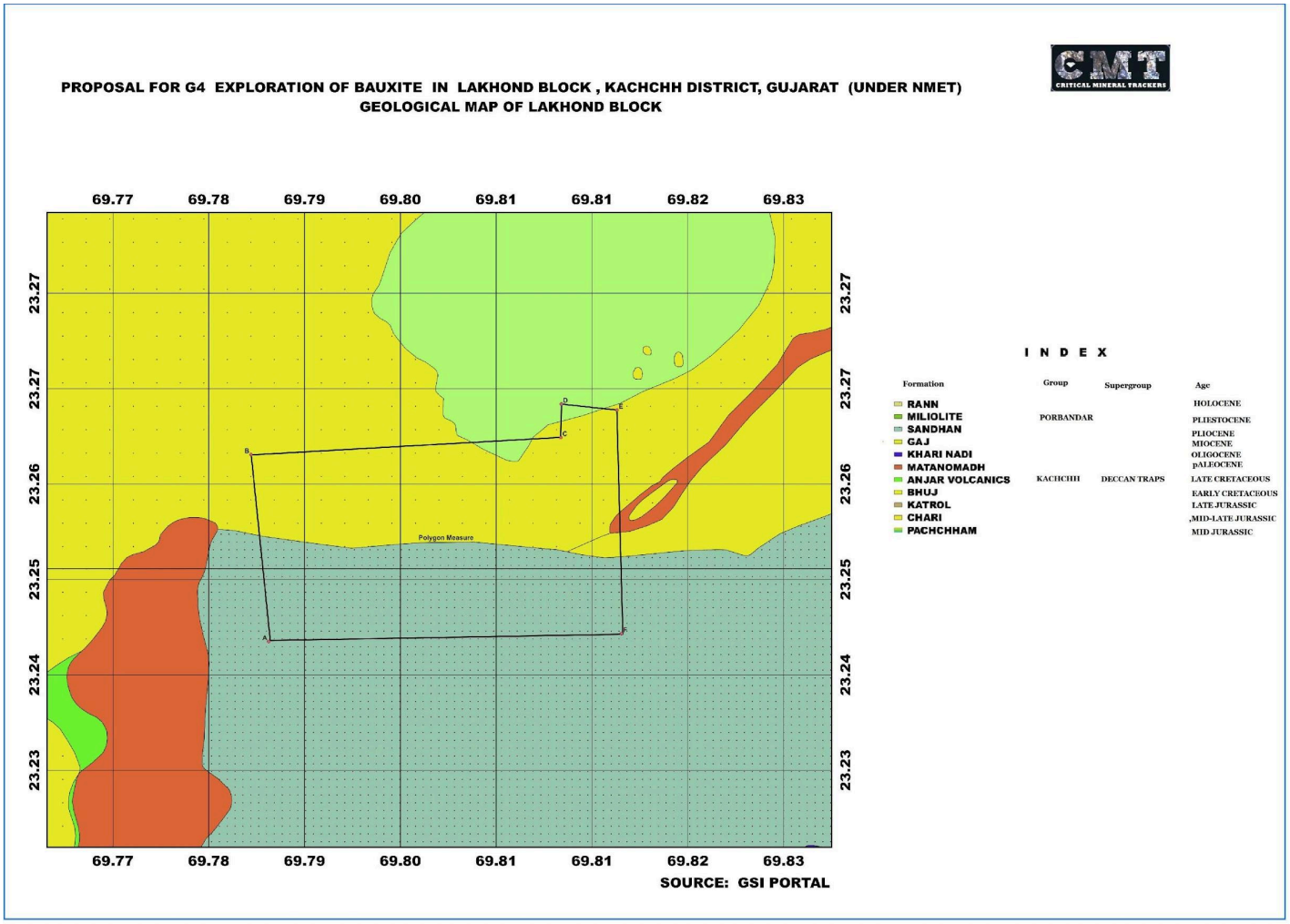
Fine- grained basalt flows belonging to the Deccan volcanics occur as capping at a number of hillocks in the area. A number of east-west trending basic dykes occur as intrusives in the area between Modsar in the east and Lodai in the west. They intrude both the Mesozoic sediments as well as the Deccan lava flows. Three intertrappean beds are recorded near Bhachau beside the Ahmedabad – Bhuj highway. Ash beds of about half meter are found exposed near the highway as well as along the railway pass near the Bhachau railway station, above the basalt lava flows.

Basic dykes and sills are observed intruding Mesozoic rocks and lava flows.
The Tertiary sequence commences with an unconformity marked by a polymictic boulder conglomerate. Gypseous shale, massive grey and mottled calcareous clay, marl, intraformational conglomerate, shale interbedded with thin calcareous sandstone and thick medium-grained grey micaceous sandstone completes the Tertiary sequence, though these are not consistent throughout the area.

Holocene sediments comprise alluvium, aeolian sands, and riverbed deposits.

The study of sedimentary structures in the area indicates repetitive tectonic disturbances. The autoclastic intraformational conglomerate, warping, open folds; faults and sand-dykes provide ample evidence of paleoseismicity in the area.

Geology of the Lakhond Block: The geology of the LakhonD block comprises laterite of Matanomadh Formation, conglomerate and sandstone of Sandhan Formation, and feldspathetic limestone of Bhuj Formation. Ferruginous Sandstone, China clay / white clay, laterite / bauxite and alluvium are exposed in this region. The lateritic rocks occur intervening in the Jurassic and Tertiary sediments. The laterite is capped by a thin crust of gray compact bauxite. The bauxite deposit covers an area of 8570 square meters and the average thickness of the bauxite horizon is 1.30 meters.



c) **Mineral potentiality based on geology, geophysics, ground geochemistry etc. Scope for proposed exploration.**

The area of the proposed block was previously investigated by CGM by means of trenching, pitting, and drilling which yielded positive results for **bauxite**. An estimated resource of 27.85 m.t. bauxite had been reported in the area. Chemical analysis of the samples stated about 51.29% of Al2O3 and about 4.78% of SiO2. The area was recommended by CGM for further investigation and thus, the block is proposed for G4 level of exploration.

d) **Observation and Recommendations of previous work.**

The area of the proposed block was previously investigated by CGM by means of trenching, pitting, and drilling which yielded positive results for **bauxite**. Based on the field studies the CGM, Gujarat has recommended the Lakhond block for further investigation and thus, the block is proposed for G4 level of exploration.

II. Previous Work

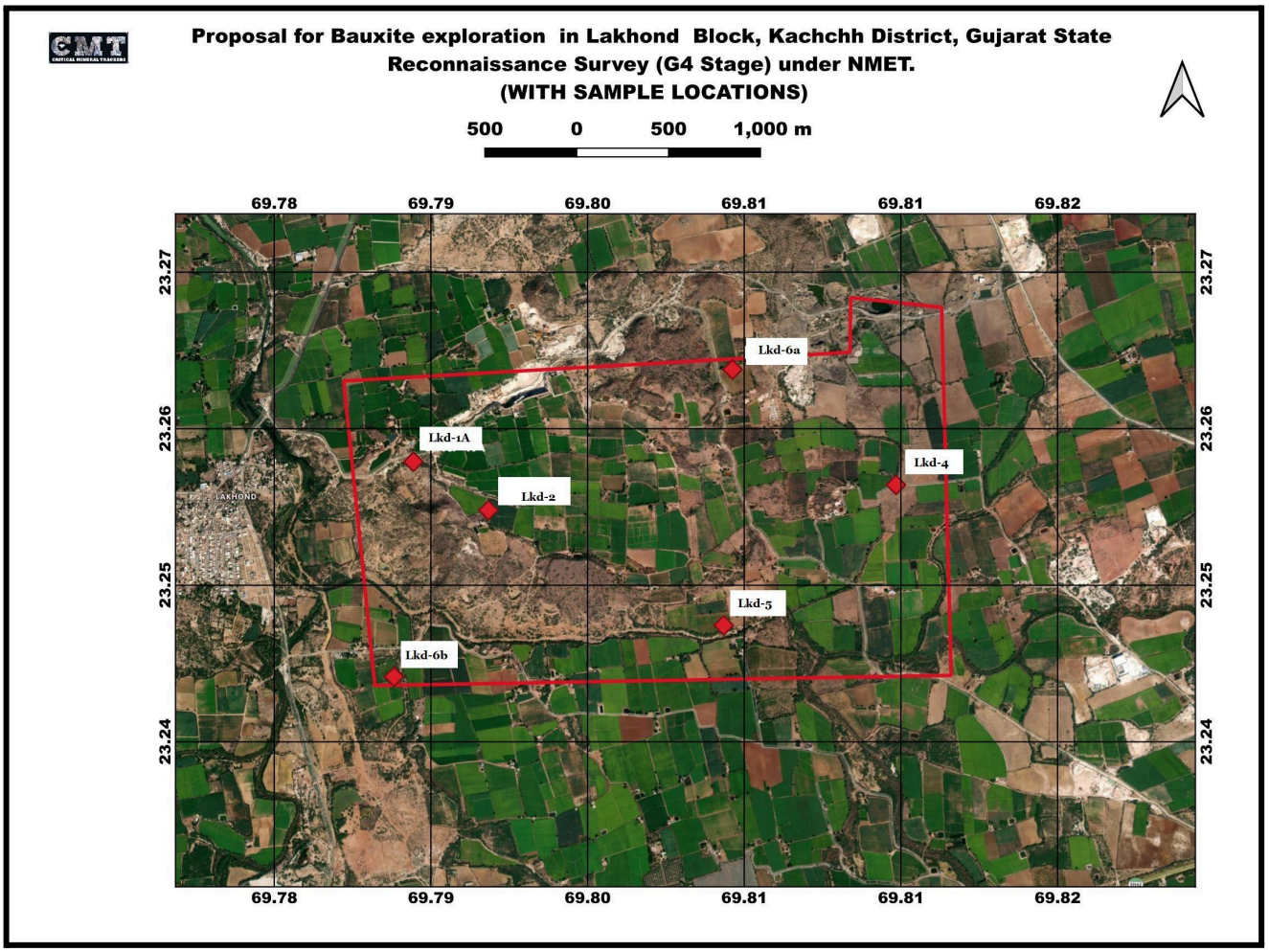
Ghevariya et al mapped the adjoining area of the Nadapa block and delineated Mesozoic rocks belonging to Chari (Jumara), Katrol (Jhuran) and Bhuj Formations. As per them , Deccan Trap is represented by interstratified volcano sedimentary sequence and lava flows; Tertiary Formations are represented by Madh, Mandaviya and Antarjal Formations and Quaternary is represented by grapestone and Miliolite limestone.

B.K. Sahu et al mapped the area during 2004-2005 to study the structural set up, paleoseismicity and geomorphic changes due to 2001 Bhuj earthquake in the area, strip mapping along KMF with a widh of 5 km was done for 300 sq km on 1:25000 scale

Of late the Commissioner of Geology and Mines, Gujarat, have compiled on Mineral resources of the Gujarat, the proposed block comprises of Deccan traps and the analysis of the satellite imagery of the proposed block indicates the presence of laterite/bauxite deposits.

Present work: Based on the No Objection Certificate issued by the CGM, Gujarat on 11.11.2024, the geologists of CMT have undertaken reconnoitary traverses in Lakhond Block area and also collected few random samples from Block area. And the samples have been sent to NABL accredited labs in Hyderabad for analysis. The analytical results are encouraging and prompted us to submit this proposal. Analytical results are attached in the appendix .

Field Sample locations with description:



Location: LKD-6b: Lat: 23.244211 Long: 69.786911 ele: 113m.
Pisolitic bauxite with concretions is found within a fenced land where a small trench was made by the owner. Sample LKD-6 is collected from here and sent for analysis.

Location- LKD-1A: Lat: 23.255648, Long: 69.787946 elev: 124m

There is big elevated area composed of ferruginous sandstone/gritty,clay with laterite on the top followed by white clay. Laterite sample LKD-1A is collected and sent for analysis

Location: LKD-: 6a

It is located in the NE part of the block where basic rocks were shown on the geological map in a small area. But very small scattered pebbles of basic rocks (Deccan traps) found within the agricultural land. The mound composed of variegated clays/white clays with laterite on the top is exposed in the nearby area and the coordinates are given below. Sample LKD-1 is collected and sent for analysis

Lat: 23.260 N, Long: 69.804E, elevation: 107m

Table-1: Analytical results of Samples collected during fieldwork

Sl.No	Parameters	Sample id		
		LKD-6b	LKD-6a	LKD-1A
1	Silica as Sio2	26.72	31.08	4.23
2	Alumina as Al2O3	44.98	43.78	48.06
3	Ferric Oxide as Fe2O3	3.88	1.69	17.04
4	Titanium TiO2	2.40	1.93	3.49
5	Loss of Ignition	20.78	20.21	26.14

Analyzed at NABL accredited Lucid laboratories Pvt Ltd, Hyderabad

III. Block description

Block Corner points Cardinal Points	Latitude	Longitude
A	23.244	69.786
B	23.26	69.784
C	23.261	69.811
D	23.264	69.811
E	23.264	69.816
F	23.244	69.816

B.S. ENVI - TECH PVT. LTD.

Recognized by MoEF & CC, GoI: Valid upto November, 2025

TC-5233

TEST REPORT

ULR : TC523324000001175F

Name & Address of the Customers : **M/s. Critical Mineral Trackers** Concourse, No.406, 7-1-58/CC/406 Opp. Lalbunglow, Greenlands, Hyderabad- 500016, TS- India	**Test Report No.** : BSET/2024/9E-05106 **Lab Code No.** : 240538511 **Issue Date** : 05/12/2024 **Your Ref.** : LETTER : Dt.29/11/2024 **Date of Receipt** : 29/11/2024

Sample Description	: **BAUXITE**	**Date of Registration**	29/11/2024
Quantity	: 500 g	**Date of commencement of testing**	29/11/2024
Packing	: sealed cover	**Date of completion of testing**	05/12/2024
Tests Required	: As mentioned below	**Sample Condition of receipt**	Found Ok

Sampling Details

Date of Sampling : -
Environment conditions : Normal
Sampling Method : Sample Collected & Submitted by the Customer, SAMPLE TESTED AS RECEIVED.
Location of Sampling/Sample ID : LKD-6 (b)

Discipline : chemical
Group : ores & minerals

TEST RESULTS

S.No.	Test Parameter	Units	Test Method	Results
1	Loss on Ignition	%	IS: 2000 (P 1) - 1985	20.78
2	Silica as SiO2	%	IS: 2000 (P 2) - 1985	26.72
3	Alumina as Al2O3	%	IS: 2000 (P 3) - 1985	44.98
4	Ferric Oxide as Fe2O3	%	IS: 2000 (P 4) - 1985	3.88
5	Titanium as TiO2	%	IS: 2000 (P 5) - 1985	2.40

End of Report

05.12.2024

Reviewed By
GOUTHAMI GANGULA
Technical Manager

B.S. ENVI-TECH PVT. LTD. SECUNDERABAD

05.12.2024

Authorized Signatory
BADRI VENUGOPAL
Quality Manager

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

Doc No.: BSET/CI.7.8/Form -01	Issue No / Date : 01 / 02.01.2020	Amend. No. / Date : 00 / ---	Page No. 1/1

*Complaints Register is available at Laboratory.

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B.S. ENVI - TECH PVT. LTD.

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TC-5233

TEST REPORT

ULR : TC523324000001176F

Name & Address of the Customers : **M/s. Critical Mineral Trackers** Concourse, No.406, 7-1-58/CC/406 Opp. Lalbunglow, Greenlands, Hyderabad- 500016, TS- India	**Test Report No.** : BSET/2024/BE-05106 **Lab Code No.** : 240639411 **Issue Date** : 05/12/2024 **Your Ref.** : LETTER : Dt.29/11/2024 **Date of Receipt** : 29/11/2024

Sample Description	: **BAUXITE**	**Date of Registration**	29/11/2024
Quantity	: 500 g	**Date of commencement of testing**	29/11/2024
Packing	: sealed cover	**Date of completion of testing**	05/12/2024
Tests Required	: As mentioned below	**Sample Condition of receipt**	Found Ok

Sampling Details

Date of Sampling : -
Environment conditions : Normal
Sampling Method : Sample Collected & Submitted by the Customer, SAMPLE TESTED AS RECEIVED.
Location of Sampling/Sample ID : LKD - 1 (A)

Discipline : chemical
Group : ores & minerals

TEST RESULTS

S.No.	Test Parameter	Units	Test Method	Results
1	Loss on Ignition	%	IS: 2000 (P 1) - 1985	26.14
2	Silica as SiO2	%	IS: 2000 (P 2) - 1985	4.23
3	Alumina as Al2O3	%	IS: 2000 (P 3) - 1985	48.06
4	Ferric Oxide as Fe2O3	%	IS: 2000 (P 4) - 1985	17.04
5	Titanium as TiO2	%	IS: 2000 (P 5) - 1985	3.49

End of Report

05.12.2024

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Technical Manager

B.S. ENVI-TECH PVT. LTD. SEC'BAD

05.12.2024

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CIN No. : U74210TG1999PTC032358

B.S. ENVI - TECH PVT. LTD.

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TC-5233

TEST REPORT

ULR : TC523324000001174F

Name & Address of the Customers : **M/s. Critical Mineral Trackers** Concourse, No.406, 7-1-58/CC/406 Opp. Labunglow, Greenlands, Hyderabad- 500016, TS- India	**Test Report No.** : BSET/2024/BE-05104 **Lab Code No.** : 240539611 **Issue Date** : 05/12/2024 **Your Ref.** : LETTER : Dt.29/11/2024 **Date of Receipt** : 29/11/2024

Sample Description	: **BAUXITE**	**Date of Registration**	29/11/2024
Quantity	: 500 g	**Date of commencement of testing**	29/11/2024
Packing	: sealed cover	**Date of completion of testing**	05/12/2024
Tests Required	: As mentioned below	**Sample Condition of receipt**	Found Ok

Sampling Details

Date of Sampling : -
Environment conditions : Normal
Sampling Method : Sample Collected & Submitted by the Customer, SAMPLE TESTED AS RECEIVED.
Location of Sampling/Sample ID : LKD - 6 (a)
Discipline : chemical
Group : ores & minerals

TEST RESULTS

S.No.	Test Parameter	Units	Test Method	Results
1	Loss on Ignition	%	IS: 2000 (P 1) - 1985	20.21
2	Silica as SiO2	%	IS: 2000 (P 2) - 1985	31.08
3	Alumina as Al2O3	%	IS: 2000 (P 3) - 1985	43.78
4	Ferric Oxide as Fe2O3	%	IIS: 2000 (P 4) - 1985	1.69
5	Titanium as TiO2	%	IS: 2000 (P 5) - 1985	1.93

End of Report

05.12.2024
Reviewed By
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Technical Manager

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05.12.2024
Authorized Signatory
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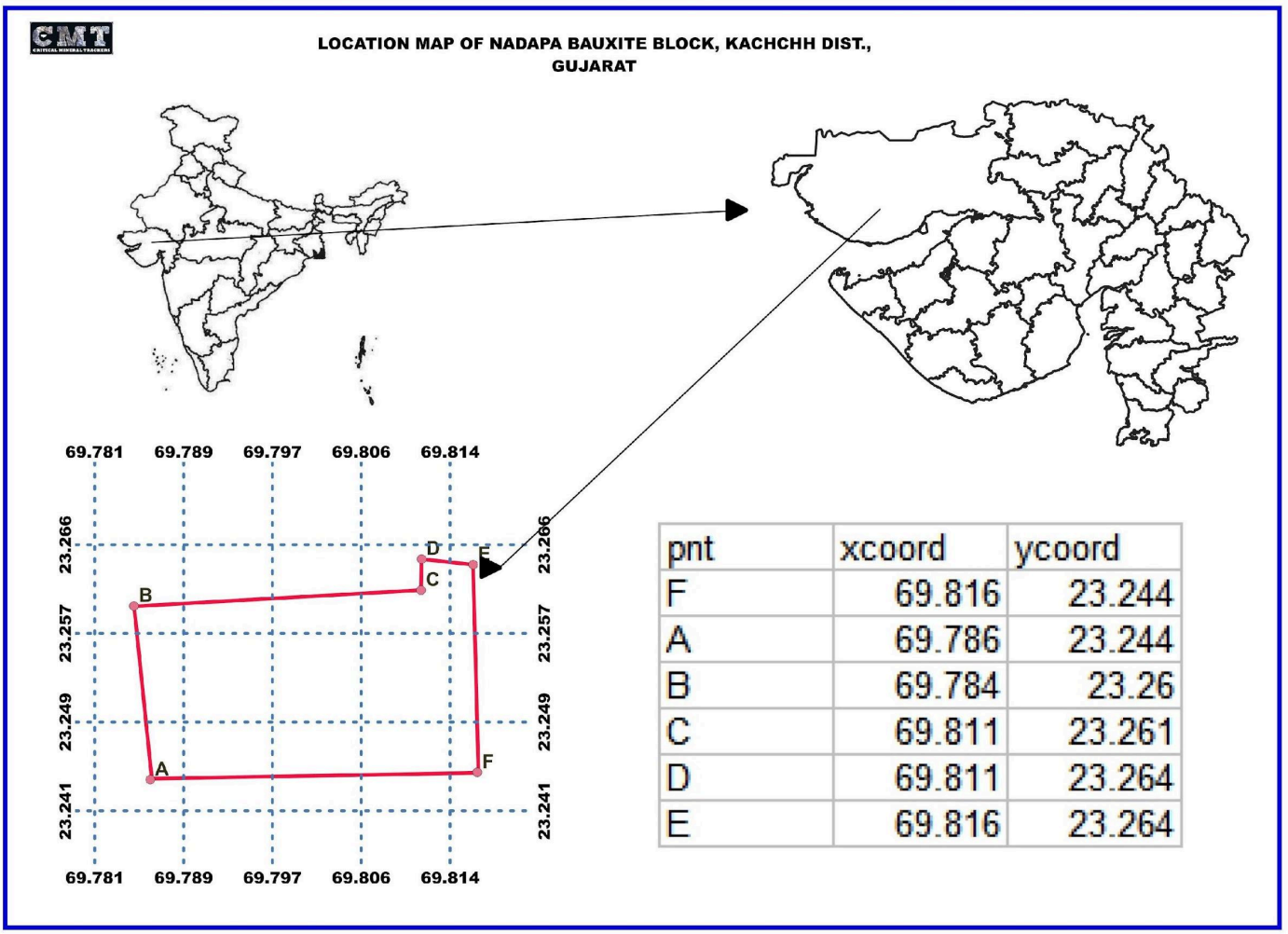
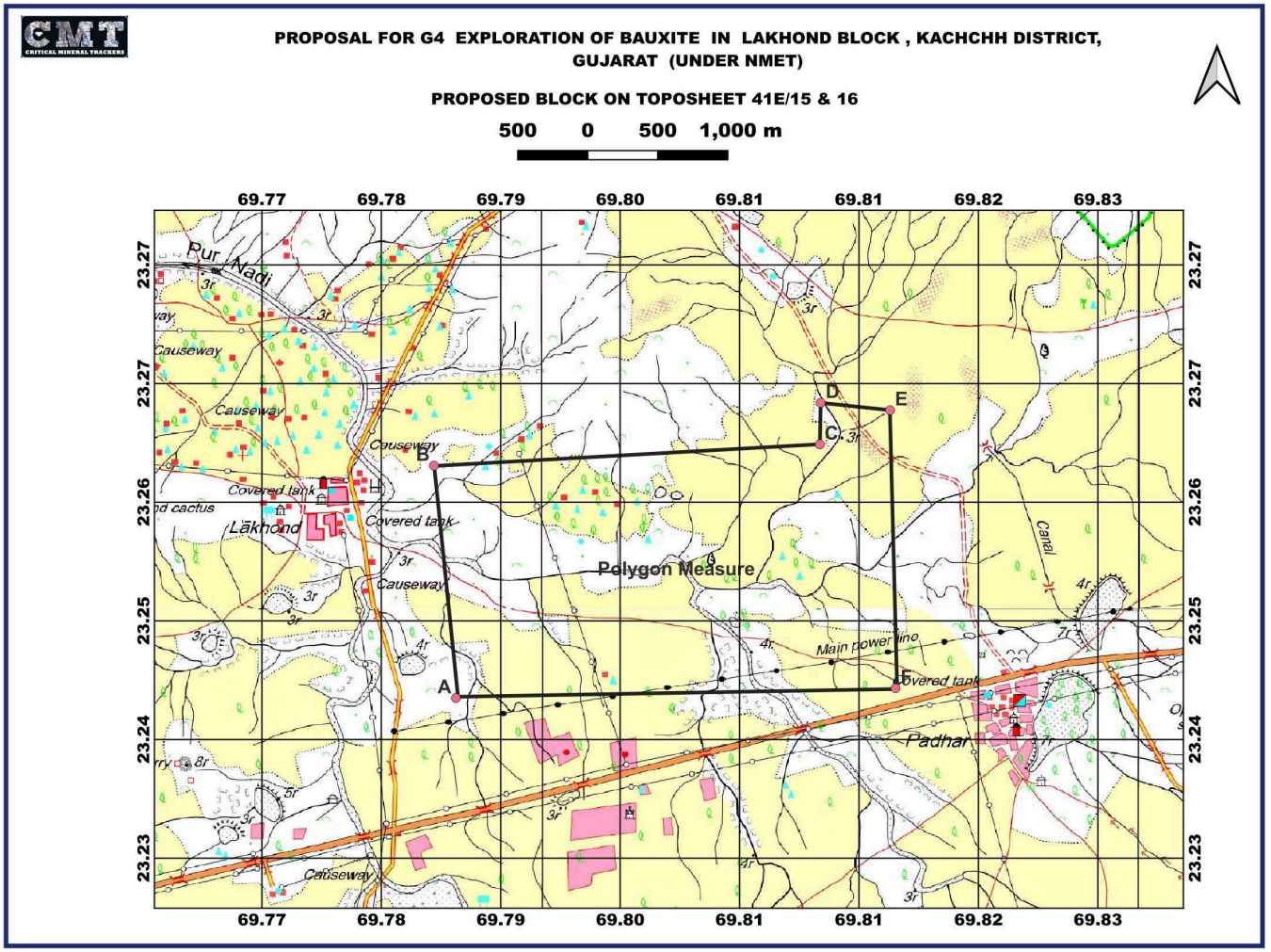
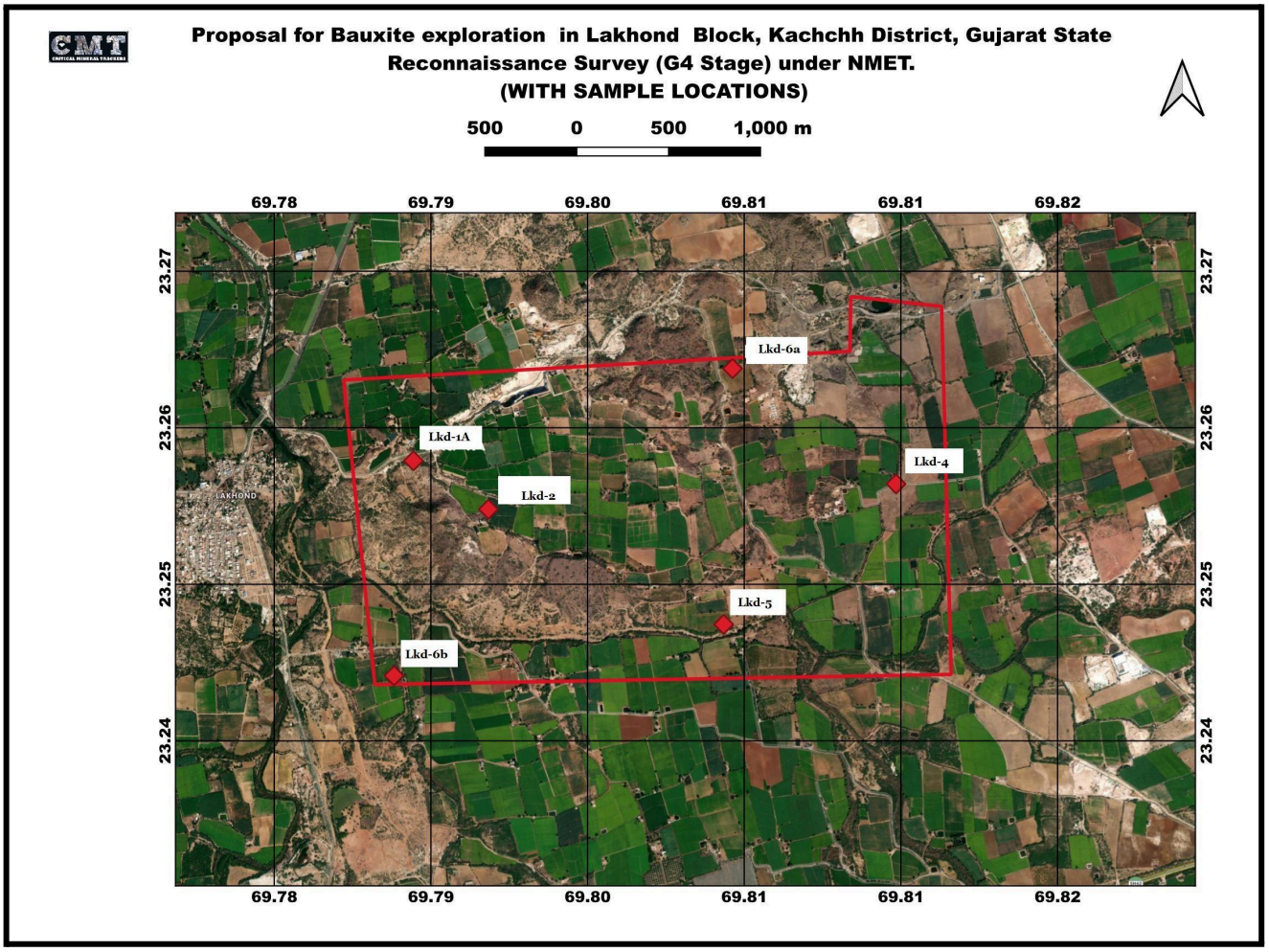


pnt	xcoord	ycoord
F	69.816	23.244
A	69.786	23.244
B	69.784	23.26
C	69.811	23.261
D	69.811	23.264
E	69.816	23.264


PROPOSAL FOR G4 EXPLORATION OF BAUXITE IN LAKHOND BLOCK , KACHCHH DISTRICT, GUJARAT (UNDER NMET)
PROPOSED BLOCK ON TOPOSHEET 41E/15 & 16
500 0 500 1,000 m
69.77
69.78
69.79
69.80
69.81
69.82
69.83
23.27
23.26
23.25
23.24
23.23
A
B
C
D
E
Polygon Measure
Lākhond
Padhar
Causeway
Covered tank
Canal
Main power line


Proposal for Bauxite exploration in Lakhond Block, Kachchh District, Gujarat State
Reconnaissance Survey (G4 Stage) under NMET.
(WITH SAMPLE LOCATIONS)
500 0 500 1,000 m
69.78
69.79
69.80
69.81
69.81
69.82
23.27
23.26
23.25
23.24
Lkd-1A
Lkd-2
Lkd-4
Lkd-5
Lkd-6a
Lkd-6b
LAKHOND

IV. Planned Methodology

1. Collection of the previous data pertaining to Geological, Geochemical and Geophysical etc..
2. Reconnoitory traverses – to understand major lithologies exposed in the block area.
3. Systematic Geological Mapping of the block area on 1:25000
   - Systematic sampling of bedrock samples
   - Pitting and Trenching would be carried out in a grid pattern in the block area to identify the mineralised zones of Bauxite
   - Sample Collection in pits will be collected at an interval of 200m
   - Samples within the trenches will be at one meter interval.
   - The samples generated in field are sent to chemical, petrological & Ore microscopy studies.
   - Analysis of the samples in NABL accredited laboratories for REE minerals/elements.
   - Preparation of elemental contour diagram and variation diagrams for associated elements
   - Resource Estimation

V. Nature Quantum and Target

Nature and Quantum of work proposed

Geological Survey	i) 1.25K/ 12.5K ii) Assessment of lithology, structure, surface mineralization.
Geochemical Survey	i) Regional Grab / chip / Stream Sediment / Soil Sampling Recording of broad geomorphology, drainage, etc.
Pitting/ Trenching	Planned 20 Pits and 5 Trenches to expose mineralized zone. The location of Pitting and trenching will be judiciously planned to cover the entire mineralized body, to delineate the strike extension and also for planning scout boreholes. Sample length to be specified
Scout drilling / Systematic drilling	Four Scout boreholes will be drilled if required along the positive profiles delineated by surface sampling/pitting trenching, if necessary
Grab and Chip sampling	A few samples from bed rock (few representative samples from all the exposed rocks in the area for first-hand information and more samplesfrom rocks which host the mineralization).
Petrographic and mineragraphic studies	Principal rock types, mineral assemblage, identification of minerals of interest
Synthesis of all available data	Integration of regional geophysical, geological and Integration of regional geophysical, geological and

VI. Manpower Deployment:

Two senior Geologists

Two junior geologists

Two labour for each team (4 labour)

One sampler +2 labour for sample collection & preparation.

VII. Summary of Expenditure:

COST ESTIMATE FOR RECONNAISSANCE SURVEY (G4) OF LOKHAND BLOCK KACHCHH District ,GUJARAT State		
S.NO.	**ITEM**	**COST ESTIMATE(in Rupees)**
A.	Geological Work	**22,28,740/-**
B.	Survey Work	**1,92,000/-**
C.	Core Drilling(4 Bore Holes) 40m Depth Each	**9,37,840/-**
D.	Laboratory Studies & Petro logical Studies	**8,83,417/-**
E.	Preparation of Project Proposal	**84,840/-**
F.	Preparation of Final Geological Report 5 Additional Copies	**2,21,100/-** **5,000/-**
	Total(Excluding GST)	**45,43,937/-**

VIII. **Breakup of Expenditure:**

Title of Project – PROPOSAL FOR BAUXITE EXPLORATION IN "LAKHOND BLOCK" IN PARTS OF KACHCHH DISTRICT,GUJARAT STATE (G4 STUDY) Name of the Exploration Agency – Critical Mineral Trackers, Hyderabad Total Area -6.12sq.km ; No of Boreholes- 4 ; Completion Time -4 months							
S.No	**Item of Work**	**Unit**	**Rates as per NMET SoC**		**Estimated Cost of the Proposal**		**Remarks**
			SoC-Item -Sl No.	**Rates as per SOC**	**Qtm**	**Total Amount(Rs)**	
	Geological Work						
	Geological Mapping(1:25,000) & sampling – Geologist field-days	6.12	1.2	11000	110	1,210,000	man days
2	Geologists(HQ)days, pre & post field interpretation 15 +20 days	One Geologist Per Day	1.2	9000	35	315,000	man days(icluding Remote sensing studies
3	Pitting-20nos each one size 1*1*1m(1 Cu.m each)	Per Cu.m	2.1.2	3800	20	76,000	20 cu.m
4	Trenching-5 nos, each one size 10*1*1(10 cu.m each)	Per Cu.m	2.1.1	3300	50	165,000	50 cu.m
5	sampler	45 days	1.5.2	5100	45	229,500	man days
6	Labour(2 labour) attached to sampler	90 labour days	1.5.2	476	90	42,840	labour days
7	Labour (100Field days) per team:2 workers : 100*4 for two geoglist teams	Per Team of 2 Geologists (2*2=4) Labour/Field workers	5.7	476	400	190,400	labour days
	Sub-Total -A					**2,228,740**	
B	**Survey Work:**						
1	Surveyor: Fixation & connection of boundary points(6 nos),4 Bh by Total station/DGPS	One surveyor	1.6.2	19,200	10	192,000	Total 10 points
	Sub-total-B					**192,000**	
C	**Core Drilling**						
1	Scout drilling(coring) :4 points(each 30m deep) 4*30	Per meter	2.2.1.1b	5,242	120	629,040	120m,soft rock
2	Construction of BH pillar(12”*12”*30”)	Per pillar	2.2.2a	2000	4	8,000	4 pillars

3	**Mob & demob drilling machine & iner BH shifting	Per shifting	lumpsum			30,000	lumpsum
4	Compensation for 4 Bhs		5.6	20,000	4	80,000	4 BHs
5	Drill core preservation in GI boxes	Per meter	5.3	1590	120	190,800	120m core
	Subtotal-C					**937,840**	
D	**Laboratory Studies**						
1	Trench Samples (5*5=25 nos):by AAS method	First five radicals+2	4.1.7a &7b	2841	25	71,025	25 samples
2	Pitting Sample: (20*1=20 nos)-AAS method	First five radicals+2	4.1.7a &7b	2841	20	56,820	20 samples
3	Core drilling Samples-4*60=240 Total depth 30m each, samples will be collected at every 0.5m interval. AAS method	First five radicals+2	4.1.7a &7b	2841	240	681,840	240 samples
4	Analysis for REE(14 elements/radicals) by ICP-MS	14 elements/radicals	4.1.13	5380	4	21,520	4 samples
5	Combined determination of THA,MHA and Reactive silica		4.1.17a	6700	4	26,800	4 samples
6	Preparation of standard thin section	Per sample	4.3.1	2353	4	9,412	4 sections
7	Complete petrographic/oremicroscopic/mineragraphic studies		Not recommended				
8	XRD analysis for identification of minerals(random)	Per sample	4.5.1	4000	4	16,000	4 samples
	Subtotal-D					**883,417**	
E	**Surface Geophysical Survey**		**Not recommended**				
1	Electrical resistivity	Per Station					
2	gravity surveys	Per station					
3	Geophysicist Man days (Field Man-days)						
4	Geophysicist Man days (HQ)						
	Subtotal-E						
	TOTAL (A+B+C+D)					**4,241,997**	

F	**Preparation of Exploration Proposal** (5 Hard copies with a soft copy)		5.1	2% of the project cost subject to a maximum of 5 lakhs	1	84,840	2% of the Project cost.
G	**Geological Report** (5 Hard copies with a soft copy)		5.2	5% of the Project cost		212,100	5% of the Project Cost.
	Additional Copy			1000	5	5000	
	Project Cost without GST					**4,543,937**	
	18% GST					**817,909**	
	Total Project Cost					**5,361,845**	

IX. Timeline: Four months(120 days)

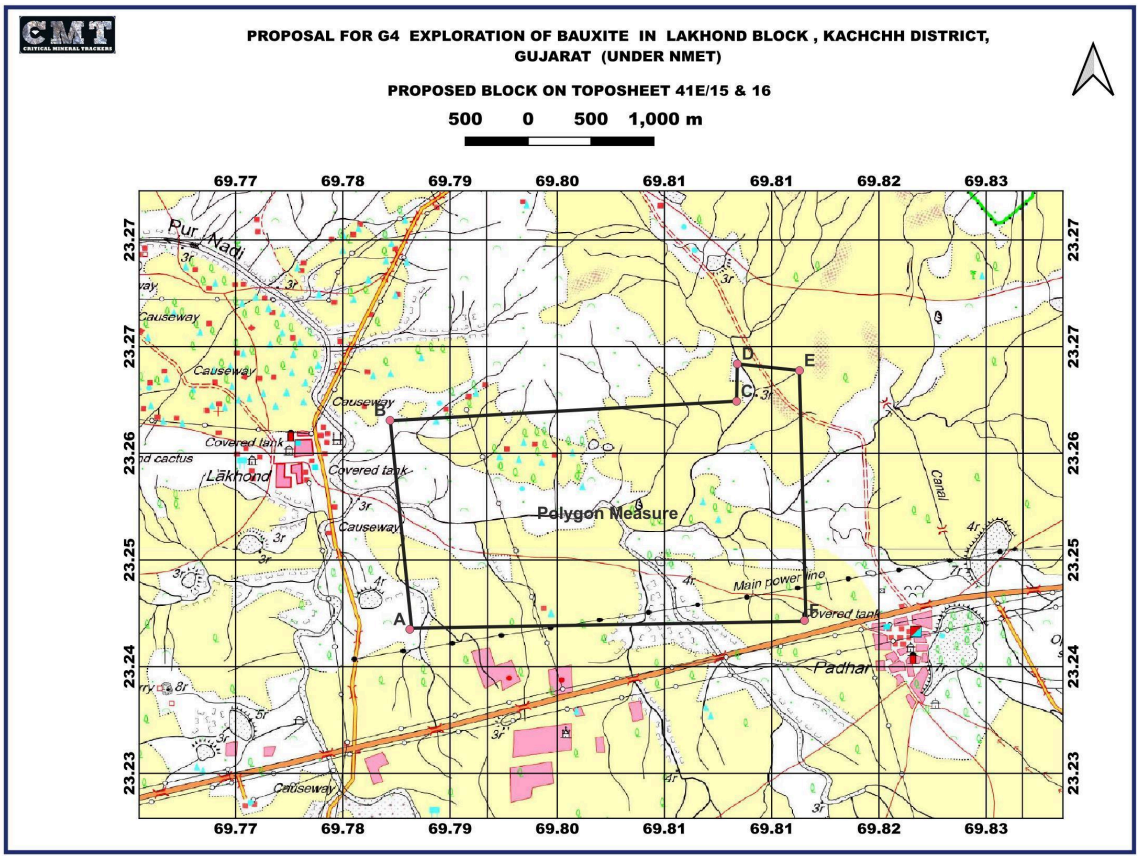
Sno	Activity	Unit	Months				
			1	2	3	4	
1	Geologist Party Days HQ	Days					35 days
2	Geologist Party Days Field	Days					75 days
3	Sampling (Pitting & Trenching)	Days					40 days
4	Laboratory Studies	Days					90 days
5	Core Drilling	Days					30 days
6	Survey Party Days	Days					15 days
8	Post Field Interpretation	Days					15 days
9	Report Compilation & Submission	Days					10 days

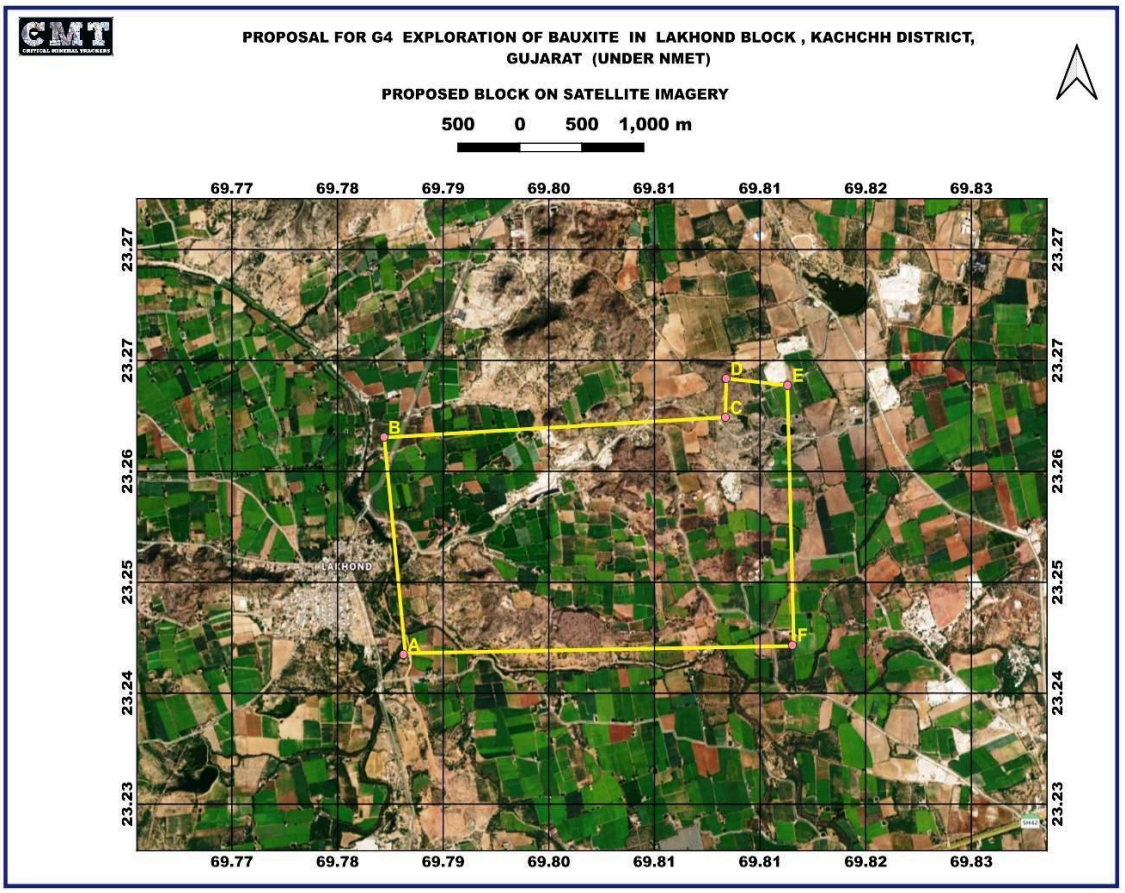
(Please fill the blocks with color as above)

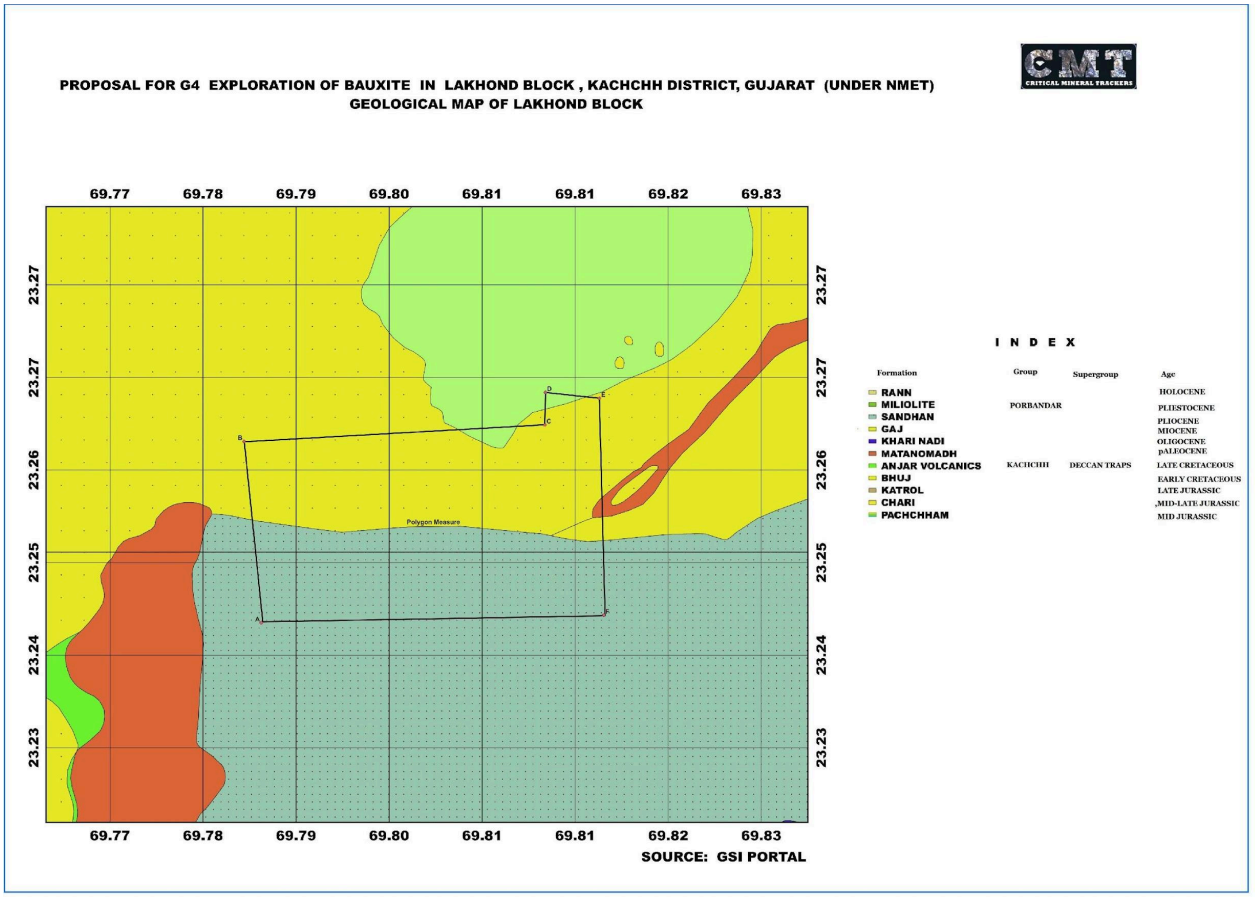
X. References:

- Systematic Geological Mapping Of The Area West And South Of Anjar, Kachchh District, Gujarat Ghevariya,Z.G, 1984-85
- Report On The Systematic Geological Mapping Of The Area West Of Anjar ,Kachchh District, Gujarat by Srikarni,C, Ghevariya,Z.G, 1986-87
- Special Thematic Mapping In The Area Along Kachchh Mainland Fault, Gujarat Sahu,B.K, Singh,P.K 2004-2005
- Gujarat's Mineral Wealth: A Responsible Exploration Paradigm by the Commissioner of Geology and Mines, Gujarat, 2024

List of Plates




PROPOSAL FOR G4 EXPLORATION OF BAUXITE IN LAKHOND BLOCK , KACHCHH DISTRICT, GUJARAT (UNDER NMET)
PROPOSED BLOCK ON SATELLITE IMAGERY
500 0 500 1,000 m
69.77
69.78
69.79
69.80
69.81
69.81
69.82
69.83
23.27
23.26
23.25
23.24
23.23
A
B
C
D
E
F
LAKHOND


PROPOSAL FOR G4 EXPLORATION OF BAUXITE IN LAKHOND BLOCK , KACHCHH DISTRICT, GUJARAT (UNDER NMET)
GEOLOGICAL MAP OF LAKHOND BLOCK
69.77
69.78
69.79
69.80
69.81
69.81
69.82
69.83
23.27
23.26
23.25
23.24
23.23
Polygon Measure
A
B
C
D
E
F
INDEX
Formation
Group
Supergroup
Age
RANN
MILIOLITE
SANDHAN
GAJ
KHARI NADI
MATANOMADH
ANJAR VOLCANICS
BHUJ
KATROL
CHARI
PACHCHHAM
PORBANDAR
KACHCHH
DECCAN TRAPS
HOLOCENE
PLIESTOCENE
PLIOCENE
MIOCENE
OLIGOCENE
PALEOCENE
LATE CRETACEOUS
EARLY CRETACEOUS
LATE JURASSIC
,MID-LATE JURASSIC
MID JURASSIC
SOURCE: GSI PORTAL

Gmail CMT <criticalmineraltrackers@gmail.com>

NOC Approval for interested Exploration Blocks

7 messages

Ad-tech-cgm(GoG-CGM Dept.) <ad-tech-cgm@gujarat.gov.in> Mon, Nov 11, 2024 at 4:59 PM

To: "criticalmineraltrackers@gmail.com" <criticalmineraltrackers@gmail.com>

Dear,

The Commissioner of Geology & Mining, Gandhinagar, Gujarat, organized a one-day workshop titled *Gujarat's Mineral Wealth: A Responsible Exploration and Development Paradigm* on 17.08.2024. Based on this workshop, you expressed interest in certain blocks for exploration. We are pleased to inform you that No Objection Certificate has been granted for the following blocks:

1. Lakhond Bauxite Block (G4 level)
2. Nadapa Bauxite Block (G4 level)
3. Botad Picrite Basalt Block (G4 level)
4. Reldi Moti Bauxite Block (G4 level)

Regards

Additional Director (Exploration)

Commissioner of Geology and Mining

Gujarat State

Gandhinagar

Critical Mineral Trackers

Mineral Exploration & Geo-solutions

To,
Additional Director (Exploration)
Commissioner of Geology and Mining
Gujarat State
Gandhinagar

Greetings for the Day

Respected Sir

Sub: Technical Team Allocation for Gujarat Projects

Ref: 1.Allocation of Projects (NOC Granted) mail received Nov 11,2024 from Additional Director(Exploration)
2.Telephonic Conversation by Director- Operations CMT with the authorities

Gujarat Projects

1. Lakhond Bauxite Block - 094(G4 level)
2. Nadapa Bauxite Block -104 (G4 level)
3. Reldi Moti Bauxite Block - 110 (G4 level)
4. Botad Picrite Basalt Block - 346 (G4 level) (Ni-Co-PGE)

Soma . Rama Murthy	Rtd.Director GSI	Team Leader	+91 94906 85131
S.Uma Maheswara Rao	Rtd. from MECL	Team Member	+91 79939 35619
K.Y Vikram	IIT DELHI	Director Operations	+91 98495 74333
GUJARAT STATE INCHARGE			
P.Gandhi	Rtd. DyDirector General GSI	Local Coordination & Operations	+91 98248 06386
HEAD OFFICE COORDINATION			
K.Nageswara Rao	Rtd. AD Mines	HO Coordination	+91 78938 47742
A.Sonika	Admin	HO Coordination	+91 96669 75499

TEAM

We Propose to conduct a pre-field investigation & Collection of samples in this week i.e. 18-11-2024 to 25-11-2024.

Received
Geology and Mining Department,
Block No.15, Dr. Jivraj Mehta Bhavan,
Old Sachivalaya, Sector-10,
Gandhinagar.

Sincerely
Thanks and Regards

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