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NMDC

एन एम डी सी लिमिटेड
NMDC Limited

(भारत सरकार का उद्यम) (A GOVT. OF INDIA ENTERPRISE)
पंजीकृत कार्यालय : 'खनिज भवन', 10-3-311/ए, कैसल हिल्स, मासाब टैंक, हैदराबाद - 500 028.
Regd. Office : 'Khanij Bhavan' 10-3-311/A, Castle Hills, Masab Tank, Hyderabad - 500 028.
नैगम पहचान संख्या / Corporate Identity Number : L13100TG1958 GOI 001674

NMET/CG/Diamond /2022/858 Dt. 18.08.2022

To

The Director,
National Mineral Exploration Trust,
Ministry of Mines,
F-114, Shastri Bhawan,
New Delhi-110001

Sub: - Submission of revised proposal to carry out Regional exploration (G-4 Stage) under NMET for Diamond at ***"Jheriya Block, Janjgir-Champa district, Chhattisgarh"***.

Ref: - NMDC Ltd Letter No. NMET/CG/Diamond/2022/716, dated – 06.07.2022.

Sir,

NMDC Ltd has submitted the proposal to Director, NMET, Ministry of Mines, GoI on 06-07-2022 to carry out Regional exploration (G-4 Stage) under NMET for Diamond at ***"Jheriya Block, (area- 100.31 Sq. km) Janjgir-Champa district, Chhattisgarh.*** Further it was discussed in TCC meeting held on 28th and 29th JULY-2022 where TCC suggested to revise the work elements and submit the revised proposal for the above mentioned block.

As suggested by NMET, the revised proposal as per specified proforma of NMET along with revised budgetary estimate and the map of the proposed block are attached herewith for your kind perusal and further consideration please.

Thanking You,

Yours faithfully,

18/08/22

CGM (Resource Planning)

Encl: - a/a

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Annexure-1

Revised Proposal for Jheriya Block, Janjgir-Champa District, Chhattisgarh State for Regional Exploration (G4 Stage) under NMET

(Diamond)

By

एन एम डी सी

N M D C

NMDC Limited,
(A Govt. of India Enterprise)
Khanij Bhavan, Masab Tank,
Hyderabad – 500028

Place: Hyderabad
Date: 18.08.20202

Summary of the Block for Regional Exploration (G4 Stage)

GENERAL INFORMATION ABOUT THE BLOCK

	Features	Details
	Block ID	
	Exploration Agency	NMDC Limited, Masab Tank, Hyderabad-500028.
	Commodity	Diamond
	Mineral Belt	Chhattisgarh Basin
	Completion Period with entire Time schedule to complete the project	18 months
	Objectives	To go for G-4 Stage Exploration
	Whether the work will be carried out by the proposed agency or through outsourcing and details thereof. Components to be outsourced and name of the outsource agency	The work will be carried out by NMDC Ltd. EPMA will be out sourced.
	Name/ Number of Geoscientists	3 Geoscientists and 1 Geo-physicist will be involved. 1. Santosh Anand Padhye 2. Panchanan Das 3. Dr. Partha Sarathi Jena 4. Satrughna Mishra
	Expected Field days (Geology) Geophysical Days. (Additional: Geophysics, Surveyor)	Geology - 180 Geophysicist- 60 Surveyor – 60
1.	**Location**	
	Latitude	22^0 06'43.050'', 22^0 06' 41.670'' 22^0 01' 30.961'', 22^0 01' 28.985''
	Longitude	82^0 20' 21.815'', 82^0 26' 26.560'', 82^0 26' 32.651'', 82^0 20' 29.011''
	Villages	Pondidalha, Khatola, Sankar, Pandariya, Jheriya, Katghari, Kotmi Sonar, Parsahi, Piparsatti, Madhuwa, Pachri
	Tehsil/ Taluk	Akaltara & Jaijaipur
	District	Janjgir-Champa
	State	Chhattisgarh
2.	**Area (hectares/ square kilometres)**	100.31 Sq. Km
	Block Area	100.31 Sq. Km
	Forest Area	Not Available
	Government Land Area	Not Available
	Private Land Area	Not Available

3.	**Accessibility**	
	Nearest Rail Head	Akaltara
	Road	NH -200
	Airport	Raipur
4.	**Hydrography**	
	Local Surface Drainage Pattern (Channels)	Karra Nala
	Rivers/ Streams	Lilagar Nadi
5.	**Climate**	
	Mean Annual Rainfall	900-1100 mm
	Temperatures (December) (Minimum) Temperatures (June) (Maximum)	10^0C 45^0C
6.	**Topography**	Flat to undulated.
	Toposheet Number	64 J/8
	Morphology of the Area	Janjgir-Champa district forms the central part of Chhattishgarh state. Chhattisgarh super group encompasses the plains of the district. Small part of Chhota Nagpur Gneissic complex and Archeans are present in the northern part of the district.
7	**Availability of baseline geoscience data**	
	Geological Map (1:50K)	Available
	Geochemical Map	To be acquired from GSI.
	Geophysical Map (Aeromagnetic, ground geophysical, Regional as well as local scale GP maps)	If available will be acquired from GSI.
8.	**Justification for taking up Reconnaissance Survey / Regional Exploration**	Part of the proposed area falls in the part of RP area allocated to Rio-Tinto. During the Reconnaissance permit of 3 years (16.12.2010 to 15.12.2013) Rio Tinto Exploration India Private Limited carried out mapping and sampling operations over the area of 2200 Km^2. However, the Kimberlite / Lamproite rocks were not discovered. The work was concluded with findings of garnet and chromite grains which coincide with kimberlite field as well as Diamond inclusion field around parts of Bilaspur and Janjgir-districts. One grain of diamond also discovered during the exploration in the proposed area.

		In F.S. 2010-12 GSI surveyed in parts of toposheet no 64 F/11 and F/15 in search of kimberlitic rocks. The project concluded with findings of G-5 garnet in the assigned area. The area is selected on the basis of potential samples resulted during the R.P work of Rio Tinto Exploration India Private Limited. The present proposal is intended by NMDC to further explore the proposed potential area of about 100.31 km^2 for search of Kimberlites / Lamproites.

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

1. Block Summary

The block is proposed based on the positive EPMA results by the earlier exploration agency. The area is falling in parts of Survey of India Toposheet No. 64 J/8 in Janjgir Champa district, Chhattisgarh. The proposed block extends from Longitude 82^0 20' 21.815'' Latitude 22^0 06'43.050'' to Longitude 82^0 26' 32.651''and Latitude 22^0 01' 30.961''.

1.1 Physiography and Drainage:

Applied area is a part of the Chhattisgarh Basin, which represents structural plains developed on the Proterozoic rocks as well as mature pediplains with remnants of a few isolated hills and ridges in between flood plains of numerous tributaries of Mahanadi system. It is characterized by a gently undulating and flat terrain. The applied area physio graphically can be divided into valley, denudational plateau, pediment/pediplain and high-level plateau.

1.2 Background Geology

Applied area is located in the northern part of the triangular Bastar craton within the peninsular Indian Shield. The Bastar Craton occupies an area of about 130000 sq. km. largely consisting of Precambrian rock units. Archean to Paleoproterozoic granite-greenstones form the basement of Neoproterozoic Chhattisgarh Super Group and equivalent platformal sediments. Paleo-to-mesoproterozoic dyke swarms within the granite greenstone belts indicate the brittleness of cratonic nuclei. Established current heat flow (GSI,1991) data indicates a geothermal gradient between 35-50 mW/m^2. The craton is bounded by the Porterozoic Eastern Ghats Mobile Belt in the east, the Paleocene Deccan Trap volcanics in the west, the Paleo-Mesoproterozoic Satpura Mobile Belt in the north and the Paleozoic-Mesozoic- Gondwana intracratonic rift sediments in the northeast.

Lithostratigraphy of the Proposed Area/Block (based on District Resource Map of GSI):

<table>
<tr><th>Formation</th><th>Group</th><th>Supergroup</th><th>Lithology</th><th>Age</th></tr>
<tr><td></td><td>-</td><td>-</td><td>Soil/alluvium</td><td>Recent</td></tr>
<tr><td>-</td><td></td><td></td><td>Laterite/ Bauxite</td><td>Cainozoic</td></tr>
<tr><td>Kodwa</td><td rowspan="4">Raipur</td><td rowspan="5">Chhattisgarh Super Group</td><td>Dolomite</td><td rowspan="5">Meso to Neo proterozoic</td></tr>
<tr><td>Tarenga</td><td>Dolomite and Shale</td></tr>
<tr><td>Chandi</td><td>Dolomite, Limestone and Shale</td></tr>
<tr><td>Gunderdehi</td><td>Shale</td></tr>
<tr><td>Chandrapur</td><td>Chandrapur</td><td>Sandstone</td></tr>
<tr><td colspan="5">----------Unconformity----------</td></tr>
<tr><td colspan="3">Chhota Nagpur Gneissic Complex</td><td>Unclassified metamorphics</td><td>Archaean</td></tr>
</table>

1.3 Mineral potentiality based on geology, geophysics, ground geochemistry etc.

Stratigraphically the proposed area ranges from Archean to Meso-neo Proterozoic with an unconformity between Bastar Gneiss (Archean), unclassified Metamorphics (Mid-Proterozoic) and the Chhattisgarh Super group. The proposed area is located within the Hirri sub-basin which is an integral part of the Chhattisgarh Super group. As per previous literature many Kimberite/Lamproite are discovered in the Chhattisgarh basin. Therefore, the proposed area may have potentiality for the occurrence of Kimberlite Clan rocks. In the proposed area few Geo-chemical samples suggested that the area has high probability for the occurrence of Kimberlite. Due to sedimentary basin the ground magnetic survey will be a best tool for differentiating the Kimberlite from the Country rock.

1.4 Scope for proposed exploration

Based on the review of previous works of Rio Tinto Exploration India Limited; the proposed area seems to be potential for Kimberlite (diamond) / Lamproite prospecting. Various locations had been identified in previous works for **kimberlite indicator minerals; some of them observed under DIF (ilmenite, Chromite, G-9 (Lherzolite) Garnet etc. and diamond itself)** in the proposed area.

In the process of micro-probe studies many samples showed presence of probable garnet and chromite grains related to KCR. The current data set on microprobe analysis is insufficient to arrive at tangible results and further detailed studies are required in these areas. Accordingly, regional exploration (G-4 level) is proposed including stream sediment sampling, ground geophysical survey, pitting, trenching and scout boreholes in the potential areas to identify / discover kimberlite/lamproite body/bodies.

2. Previous Work

1. Mapping of stratigraphy and structures in parts of Mungeli and Pendra tehsils of Bilaspur in F.S. 1982-83 by Kallol Guha, A. Natrajan and P.K. Thorat of GSI. Systematic mapping of 1080 km^2 area is carried out during the project in parts of toposheet no. 64 F/10, F/11 and 64 F/14.

2. Geotechnical Studies for polymetallic mineralization in Lormi-Pandaria area of Bilaspur and Kawardha district in F.S. 2000-2002 by D.Mainkar, S. Kankane and U.P. Singh of D.G.M. Chhattisgarh. A total area of 3000 km^2 is surveyed during the project.

3. Systematic thematic mapping of Khuriya-Ratanpur metamorphic belt of Bilaspur district in F.S. 2000-04 by N.K. Sahu, I.D. Ashiya, K. Patel, S.C. Kesari of GSI. An area of 1180 km2 is mapped in parts of toposheet no 64 J/3 and 64 F/15

4. GSI surveyed part of Bilaspur and Kabirdham district from 2010-12 for Kimberlite rocks. The area falls in toposheet no 64 F/11 and 64 F/15. The applied area lies in eastern part of the surveyed area. GSI project concluded with presence of G-5 garnets in the area. (Praveer Pankaj, B.K. Mishra and D.K. Thawait)

5. Rio Tinto Exploration India Private Limited surveyed the 2200 km^2 area of R.P. which falls in Bilaspur and Janjgir-Champa from 2010-13. A number of minerals susceptible to kimberlite are reported in the work. On the basis of R.P. two PLs were applied in the area. (***Report Attached***)

3. Block description

Block corner points / Cardinal Points	Latitude	Longitude
A	22^0 06'43.050''	82^0 20' 21.815''
B	22^0 06' 41.670''	82^0 26' 26.560''
C	22^0 01' 30.961''	82^0 26' 32.651''
D	22^0 01' 28.985''	82^0 20' 29.011''

4. Planned Methodology

4.1 Remote sensing studies:

Not recommended by TCC, NMET.

4.2 Large Scale Mapping (LSM) (1: 12,500):

Not recommended by TCC, NMET.

4.3 Ground Geophysical Survey:

In total proposed block about 10–30-line km geophysical survey is proposed to target Kimberlite/Lamproite rocks which may be concealed under soil/alluvium, hence after locating the positive catchment sites of diamond and other Heavy Indicator Minerals, ground magnetic survey will be carried out.

4.4 Geochemical Mapping:

4.4.1 Surface Sampling:

A total no. of 15 bed rock samples shall be collected for identifying various litho units.

4.4.2 Stream Sediment Sampling:

In the 2nd order and 1st order streams, **40** number of Stream Sediments Samples will be collected. Based upon the positive primary sampling results another **10** follow-up samples will be planned in the positive catchment in the 1st order stream.

4.4.3 Grid Loam Sampling:

In the anomalous areas based on the positive geophysical results, a cross pattern Grid Loam sampling shall be carried out. Around **200 Nos.** of Geochemical loam samples will be collected.

4.5 Pitting/Trenching

Not recommended by TCC, NMET.

4.6 Scout Drilling:

Based on the findings of mapping, sampling and Geophysical survey, around 10 no of scout boreholes will be planned accordingly. A total of 500 m of drilling will be carried out to intersect the lamproite or kimberlite body.

4.7 Core logging and Sampling

Both Lithological and Structural logging will be carried out. Core samples will be collected to study the presence of kimberlite / lamproite body.

4.8 Laboratory studies (Petrography/Geochemical/Petrology)

All the stream sediment samples collected will be studied for occurrences of heavy mineral with affinity to kimberlite/lamproite rocks. All the samples will be processed as per the standard procedure to recover Heavy Indicator Minerals followed by EPMA.

5. Nature Quantum and Target (G-4 Stage)

S. NO.	Components	QUANTITY
1.	**Aerial reconnaissance** (Remote Sensing study)	Not Recommended
2.	**Geological Survey**	
(i)	Large Scale Mapping @ 1:12,500	Not Recommended
(ii)	Topographical survey (5m contour interval)	As per the requirement
3	**Geochemical Survey**	
(i)	**Regional Grab / chip / Stream Sediment / Soil Sampling**	
	Grab/Chip Sampling (Surface)	15 Nos.
	Stream sediment sampling	50 Nos. (40 Primary samples + 10 follow-up samples)
	Soil /Grid-loam sampling	200 Nos.
(ii)	**Recording of broad geomorphology, drainage, etc.**	All geomorphological features within the project area.
4.	**Geophysical Survey (Aero-geophysical / Regional ground geophysical survey)**	
	Regional ground geophysical survey	
(i)	Ground Magnetic Survey	10–30-line Kms (500 points)
5	**Pitting/ Trenching– (to expose mineralised zone)**	
(i)	Pitting	Not Recommended
	No. of Pit Samples	---

(ii)	Trenching	---
	No. of Channel/ Trench Samples	---
6.	**Scout drilling / Systematic drilling** (*if required along the positive profiles delineated by surface sampling/pitting trenching*)	500 m
8.	**Core sample**	
(i)	Core logging	500 m.
9	**Laboratory studies**	
A	**Petrographic and Mineral graphic studies** *(Principal rock types, mineral assemblage, identification of minerals of interest)*	
(i)	Preparation of thin section	20 Nos.
(ii)	Study of thin section for petrography	20 Nos.
(iii)	Age dating of Kimberlite Rock (if any)	05 Nos.
B	**Chemical Analysis**	
(i)	Separation of heavy minerals from stream sediments samples of -2 mm size through gravity and magnetic separation ✓ Stream Sediment Samples (50) ✓ Soil Samples (200) ✓ Borehole samples (100)	350 Nos.
	Heavy Mineral Separation by liquid ✓ Stream Sediment Samples (50) ✓ Soil Samples (200) ✓ Borehole samples (100)	350 Nos.
	EPMA studies	100 Hrs.
(ii)	Soil samples analysis (Elemental Analysis for Nb, Zr, Na, K & Mg) (Not recommended by TCC, NMET)	200 Nos
(iii)	Whole Rock Analysis (major oxides) ✓ Surface Sample (15 Nos.) ✓ BH Sample (10 Nos)	25 Nos.
(iii)	Pit samples with associated trace elements	-----
(iv)	Core Sample analysis	----
10.	**Synthesis of all available data**	

(i)	Integration of regional geophysical, geological and geochemical data.	To delineate Potential mineralized area
(ii)	Synthesis of all available data and Report writing.	1 No. (5 copies)

Note: During the work progress review meeting, the additional requirement of geophysical survey or any other work element will be appraised to TCC, NMET if required. Based on the approval, the additional work would be taken up.

ANNEXURE-2

Tentative Cost Estimate of Diamond Exploration to identify Kimberlite in Jheriyai Block Janjgir-Champa District, Chhattisgarh							
S. No	Item of Work	Unit	Rates as per NMET SoC 2020-21		Estimated Cost of the Proposal		Remarks
			SoC- Item-S. No.	Rates as per SoC	Qty.	Total Amount (Rs)	
1	**Geological, Sampling & Survey Days**						
	Large scale (LSM 1: 12500) Geological mapping/ Detailed Mapping/Trenching/ Drilling						
1.1	Geologist man days (2 party Field)	days	1.2	11,000	180	19,80,000	
1.2	Labour Charges for Mapping work Base rate - Rs. 479/ per day	per worker	5.7	479	360	1,72,440	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
1.3	Geologist man days (HQ)	days	1.3	9,000	90	8,10,000	(mineral identification days by 2 geologists included)
1.4	Labour Charges for Drilling/Logging (Field) Base rate - Rs. 479/ per day	per worker	5.7	479	0	-	
1.5	Sampling Charges (Geochemical /Trenching/Pitting/Drilling)	day	1.5.2	5,100	60	3,06,000	
1.6	Labour Charges for Sampling Work Base rate - Rs. 479/ per day	day	5.7	479	240	1,14,960	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
	Sub-Total 1					**33,83,400**	
2	**Geophysical Surveys***						
2.1	Magnetic Surveys (10-30 line km)	per station	3.2a	1,800	500	9,00,000	
2.2	Electromagnetic Survey (Profiling/Sounding)	sounding	3.7a	21,197	0	-	
2.3	Geophysicist man days- Field	days	3.18	11,000	60	6,60,000	
2.4	Surveyor Charges	days	1.6.1.a	8,300	60	4,98,000	
2.5	Llabours Charges for Survey Work Base rate - Rs. 479/ per day	per worker	5.7	479	240	1,14,960	Amount will be reimburse as per the notified rates by the Central Labour Commissioner or respective State Govt. - whichever is higher
	Sub-Total 2					**21,72,960**	
3	**Drilling****						
3.1	a) Drilling up to 300m Rigs) (Medium Hard Rock)	per m	2.2.1.4 a	10,100	500	50,50,000	After review of geological survey and geophysical survey work
3.2	Borehole deviation survey	per m	2.2.6	330	500	1,65,000	
3.3	Borehole pillaring					-	
	a) construction of concrete pillar (12"x12"x30")	per bh	2.2.7.a	2,000	10	20,000	
3.4	Transportation of drill rigs & truckassociated per drill (To & Fro from HQ)	per km	2.2.8	36	2500	90,000	Certification in this regard is required to be provided

3.5	Monthly accommodation charges for drilling camp	monthly	2.2.9	50,000	3	1,50,000	
3.6	a) Drilling camp setting (1 rigs)	per drill	2.2.9a	2,50,000	1	2,50,000	
3.7	b) Drilling camp winding (1 rigs)	per drill	2.2.9b	2,50,000	1	2,50,000	
3.8	Approach road making in rugged- hilly terrain (Flat terrain)	per km	2.2.10	22,020	5	1,10,100	Road Making will be considered as per the requirement and Road Making Charges will be
3.9	Drill core preservation	per m	5.3	1590	250	3,97,500	This amount will be reimbursed after successful delivery of the cores to concerned libraries/authorities
3.10	Land/crop compensation	per borehole	5.6	20000	10	2,00,000	Amount will be reimburse as per actuals or max. Rs. 20000 per BH with certification from local authorities
3.11	Demarcation Fixation of borehole and determination of co-ordinates & Reduced Level (RL)	Per point of observation	1.6.2	19,200	10	1,92,000	
	Sub-Total 3					**68,74,600**	
4	**Laboratory Studies**						
4.1	Chemical Analysis						
	i) Surface sampling (Bed Rock Samples)						
	a) Whole rock analysis (Major oxides)	per sample	4.1.15a	4,200	15	63,000	
	ii) Stream/Soil/Loam Samples						
	a. Separation of heavy minerals from stream sediment samples of - 2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820	50+ 200 = 250	34,55,000	200 follow up samples, will be reimbursed as per actual nos of sample, Max. - 50+200 =250 samples
	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380	50+ 200 = 250	5,95,000	200 follow up samples, will be reimbursed as per actual nos of sample, Max. - 50+200 =250 samples
	c. EPMA studies for suspected Heavy Mineral grains	Per hour	4.4.1	8,540	100	8,54,000	As per actual
4.2	**i) BH Sampling (Primary)**						
	a. Separation of heavy minerals from drill samples of - 2mm size through gravity and magnetic separation	per sample	4.3.6b	13,820	100	13,82,000	Amount will be reimbursed as per actual nos of sample; Max. 200 samples
	b. Heavy mineral separation by liquid	per sample	4.3.6a	2,380	100	2,38,000	Amount will be reimbursed as per actual nos of sample; Max. 200 samples
	c. Whole Rock analysis	per sample	4.1.15a	4,200	10	42,000	

4.3	**Petrological / Mineralographic studies**					-	
	a) Preparation of thin section (Surface & BH)	per sample	4.3.1	2,353	20	47,060	
	b) Study of thin section for petrography	per sample	4.3.4	4,232	20	84,640	
	c) Digital photomicrograph of thin section	per sample	4.3.7	280	20	5,600	
	d) Age Dating (tentative price)	Rs.96,200/- per day NGRI rate		96200	5	4,81,000	Age Dating will be done for Kinberlite Rock discovered in block area.
	Sub-Total 4					**72,47,300**	
5	**Total (1 to 4)**					**1,96,78,260**	
6	**Geological Report Preparation**	Nos	5.2	A Minimum of Rs. 7.5 lakhs or 3% of the work	1	**7,50,000**	For the projects having cost exceeding Rs. 150 Lakhs but less than 300 Lakhs: A Minimum of Rs.7.5 lakhs or 3% of the value of work whichever is more and Rs. 3000/- per each additional copy.
7	**Preparation of Exploration Proposal**	**Nos**	**5.1**	**380000**	**1**	**3,80,000**	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.
8	**Report Peer Review Charges**	**lumpsum**	**As per EC decision**	**10000**	**1**	**10,000**	
9	**Total Estimated Cost without GST (5+6+7+8)**					**2,08,18,260**	
11	**Provision for GST (18%)**					**37,47,287**	GST will be reimburse as per actual and as per notified prescribed rate
12	**Total Estimated Cost with GST**					**2,45,65,547**	**or say Rs. 245.65 Lakhs**

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.

QUANTUM OF WORK WITH PROPOSED TIME SCHEDULE

S. No.	Activities	MONTHS																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Pre field preparation																		
2	Large scale mapping																		
3	Sampling days																		
4	Sample preparation days																		
5	Analytical work																		
6	Geophysical survey days																		
7	Drilling																		
8	Bore hole logging																		
9	Sample preparation- Drill samples																		
10	Camp winding																		
11	Analytical work- drill core samples																		
12	Geologist at HQ																		
13	Geological report																		
14	Peer Review																		
	*Commencement of project will be reckoned from the day the exploration acreage is available along with all statutory clearances																		
	*Time loss on account of monsoon/agricultural activity/forest clearance/ local law & order problems will be addition to above time line.																		

Review

OPEN SERIES MAP

No. F44K8

Scale 1:50,000

F44K3 (64J/3)	F44K7 (64J/7)	F44K11 (64J/11) Korba CHHATTISGARH
F44K4 (64J/4)	Bilāspur CHHATTISGARH **F44K8 (64J/8)**	F44K12 (64J/12)
F44Q1 (64K/1) Raipur CHHATTISGARH	F44Q5 (64K/5)	Jānjgīr - Chāmpa CHHATTISGARH F44Q9 (64K/9)

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

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CONVENTIONAL SYMBOLS

Express highway: with toll; with bridge; with distance stone
Roads, metalled: according to importance
Roads, double carriageway: according to importance
Unmetalled road. Cart-track. Pack-track with pass. Foot-path
Streams: with track in bed; undefined. Canal
Dams: masonry or rock-filled; earthwork. Weir
River: dry with water channel; with island & rocks. Tidal river
Submerged rocks. Shoal. Swamp. Reeds
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry
Embankments: road or rail; tank. Broken ground
Railways, broad gauge: double; single with station; under constrn
Railways, other gauges: double; single with distance stone; do.
Mineral line or tramway. Kiln. Cutting with tunnel
Contours with sub-features. Rocky slopes. Cliffs
Sand features:(1)flat. (2)sand-hills(permanent). (3)dunes(shifting)
Towns or Villages: inhabited, deserted. Fort
Huts: permanent; temporary. Tower. Antiquities
Temple. Chhatri. Church. Mosque. Idgāh. Tomb. Graves
Lighthouse. Lightship. Buoys: lighted; unlighted. Anchorage
Mine. Vine on trellis. Grass. Scrub
Palms: palmyra; other. Plantain. Conifer. Bamboo. Other trees
Areas: cultivated; wooded. Surveyed tree
Boundary, international
.. state: demarcated; undemarcated
.. district; subdivision; tahsil or tāluk; forest
Boundary pillars: surveyed; unlocated
Heights, triangulated: station; point; approximate
Bench-mark: geodetic; tertiary; canal
Post office. Telegraph office. Overhead tank
Rest house or Inspection bungalow. Circuit house. Police station
Camping ground. Forest: reserved; protected
Spaced names: administrative; locality or tribal
Hospital. Dispensary. Veterinary: Hospital / Dispensary
Aerodrome. Helipad. Tourist site
Power line: with pylons surveyed; with poles unsurveyed

REFERENCES

NH 200 National Highway No.200. *PWD* Public Works Department.

NOTES :-

Heights are in metres and above Indian mean sea level.
Contours are approximate.
A relative height, e.g., *8r*, represents the approximate height, in metres, between the top and bottom of a steep slope.
The triangulated and traverse heights and contours in this sheet have not been adjusted to the heights of the spirit- levelled bench-marks and may not be strictly in accordance with them.
Permission to use the road along Kurung Left Bank Canal is required from the Irrigation authority.
A relative height, e.g., *5r*, marked along a canal, indicates the height of the top of the canal embankment above the adjacent country.

COMPILATION INDEX

A. Surveyed during 1976-77. Updated for major details during 2004-05.

Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1° West in 2005.
(Decreasing by about 1' annually)

500 m to 1 cm 1:50,000 2 cm to 1 km

Metres 1000 500 0 1 2 3 Kilometres

CONTOUR INTERVAL 20 METRES

For further details about this map, please contact
Director
Chhattisgarh Geo-Spatial Data Centre
Survey of India, Pachpedi Naka
Raipur.

WEBSITE - www.surveyofindia.gov.in

NMDC Limited (Proposed NMET Block Coordinates in WGS84 Projection)		
Points	Longitude	Latitude
A	82° 20' 21.815"	22° 06' 43.050"
B	82° 26' 26.560"	22° 06' 41.670"
C	82° 26' 32.651"	22° 01' 30.961"
D	82° 20' 29.011"	22° 01' 28.985"

PROPOSED JHERIYA BLOCK (100.31 Sq.Km) AREA PLOTTED ON (TOPOSHEET NO 64 J/8) FOR EXPLORATION OF DIAMOND IN JANJGIR-CHAMPA DISTRICT OF CHHATTISGARH UNDER SECTION 9C OF MMDR ACT, 1957.

DRAWING NO. INV/NMET/CG/002

ANNEXURE - 4

एनएमडीसी

NMDC

एन एम डी सी लिमिटेड
NMDC Limited

(भारत सरकार का उद्यम) (A GOVT. OF INDIA ENTERPRISE)
पंजीकृत कार्यालय : 'खनिज भवन', 10-3-311/ए, कैसल हिल्स, मासाब टैंक, हैदराबाद - 500 028.
Regd. Office : 'Khanij Bhavan' 10-3-311/A, Castle Hills, Masab Tank, Hyderabad - 500 028.
नैगम पहचान संख्या / Corporate Identity Number : L13100TG1958 GOI 001674

To
The Director & HoD
National Mineral Exploration Trust (NMET)
Ministry of Mines
F-114, Shastri Bhavan
New Delhi- 110001

It is certified that:

1. Project titled "***Regional Diamond Exploration (G-4 Stage) proposal for Jheriya Block, Janjgir Champa District, Chhattisgarh***" along with estimated cost Rs. ***4.29*** Crores is submitted for consideration of NMET funding.

2. The project proposal is prepared following the guidelines prescribed in Minerals (Evidence of Mineral Contents) Rules, 2015 in case of mineral exploration project proposals.

3. The proposal has been duly examined and concurred by associate finance in accordance with canons of financial propriety.

4. The same project proposal or project proposal with similar objectives has not been submitted to any other funding agency by this organisation and the project proposal bears no duplication with existing work / ongoing project undertaken by this agency.

Yours faithfully,

(Sumit Deb)
CMD, NMDC Limited

Date: - 06- 07- 2022
Place: - Hyderabad

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ई-मेल / E-mail : hois@nmdc.co.in वेबसाइट / Website : www.nmdc.co.in