GOEL

SHRI BAJRANG POWER & ISPAT LTD.

Regd. Office / Works : Vill. Borjhara, Urla-Guma Road, Urla, Raipur 493 221 (C.G.) Ph. : (0771) 4288019 / 29 / 39
Fax : (91-771) 2323601 / 602, 4288123, E-mail : info.bjr@goelgroup.co.in, commercial.bjr@goelgroup.co.in
CIN No. : U27106CT2002PLC015184

CONSENT LETTER

The Mining Plan in respect of **Chhotedongar Iron Ore Deposit** over an area of **57 Ha** in forest Range – Narayanpur (Chhattisgarh) applicant, M/s Shri Bajrang Power & Ispat Ltd., Raipur to fulfill the requirement of Rule 22 (4) of MCR 1960 for approval, has been prepared in lieu of the requirement of Shri Bajrang Power & Ispat Ltd.

I undertake to abide by all the contents in the Mining Plan as approved by **IBM**.

Place : Raipur

Date :

(Nominated Owner)

MINING PLAN
OF
CHHOTE DONGAR IRON ORE DEPOSIT

IN

VILLAGE- CHHOTEDONGAR, FOREST RANGE- CHHOTEDONGAR
TEHSIL & DISTRICT – NARAYANPUR (CHHATTISGARH)

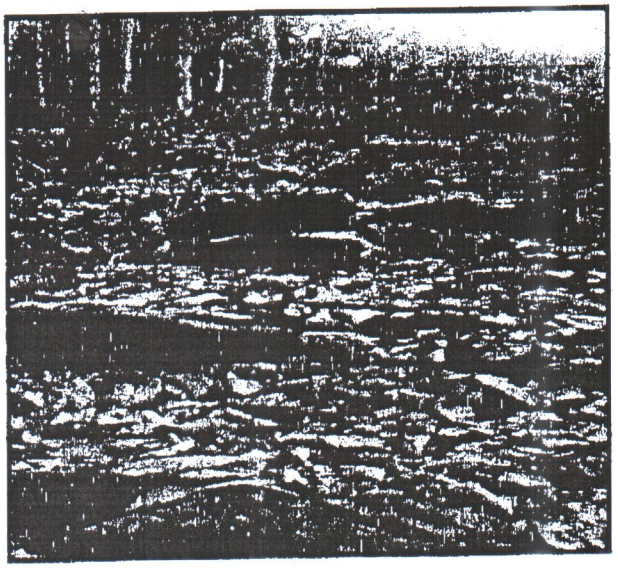
AREA 57 HA

PRIVATE LAND	-	NIL
GOVT. REVENUE LAND	-	NIL
FOREST LAND	-	57 HA
TOTAL	-	57 HA

CATEGORY "A"

SUBMITTED TO THE COMPETENT AUTHORITY
(Indian Bureau of Mines, Nagpur regional office)

UNDER RULE 22(4) OF MCR 1960



Applicant:
M/s Shri Bajrang Power & Ispat Ltd.
IBM Registration No.- IBM/4393/2011
Village- Borjhara, Urla-Guma Road,
Urla, Raipur, Chhattisgarh
PIN- 493221
Email: infro.bjr@goelgroup.co.in

RQP:
Geo Solutions (P) Ltd.
(RQP/NGP/427/2011/B)
Valid upto 2021
HIG-21, Hudco Colony, Amdi Nagar,
Bhilai, District – Durg, Chhattisgarh
PIN-490009
Email: geosolution@rediffmail.com

Shri Bajrang Power & Ispat Ltd.

Director/Authorised Signatory

MINING PLAN

OF

CHHOTE DONGAR IRON ORE DEPOSIT

IN

VILLAGE- CHHOTE DONGAR, FOREST RANGE- CHHOTE DONGAR,

FOREST DIVISION – NARAYANPUR,

TEHSIL & DISTRICT – NARAYANPUR (CHHATTISGARH)

CATEGORY "A"

Area 57 Ha

(Govt. Forest Land)

APPROVED

SUBMITTED TO THE COMPETENT AUTHORITY
(Indian Bureau of Mines)

UNDER RULE 22(4) OF MCR 1960

क्षेत्रिय खान नियंत्रक
Regional Controller of Mines
क्षेत्रीय खान ब्यूरो, नागपुर
Indian Bureau of Mines, Nagpur

APPLICANT:

M/s SHRI BAJRANG POWER & ISPAT Ltd.

IBM Registration No.- IBM/4393/2011
Village Borjhara, Urla-Guma Road,
Urla Raipur – 493221 (Chhattisgarh)
Email-Info.bjr@goelgroup.co.in

RQP:

Geo Solutions (P) Ltd.

(RQP/NGP/4m 27/2011/B)
Valid upto 2021
HIG-21, Hudco Colony, Amdinagar,
Bhilai. District – Durg (C.G.)-490009.
Email: geosolution@rediffmail.com

पत्र संख्या द्वारा
VIDE LETTER No. NPR/FF/MPLH 1159/NGP dt 21/5/2016

Shri Bajrang Power & Ispat Ltd.

Director / Authorised Signatory

10.0		*LIST OF PLANS AND SECTIONS*	
SL. NO.	*PLANS & SECTION NO.*	*PLATES*	*SCALE*
1	I	FOREST MAP SHOWING AREA UNDER M.L. (Lease Plan)	1: 15,000
2	I A	LOCATION MAP	---
3	II	KEY PLAN	1:50,000
4	III	ENVIRONMENT PLAN	1:5,000
5	IV	SURFACE PLAN	1:2,000
6	V	SURFACE GEOLOGICAL PLAN	1:2,000
7	V A	GEOLOGICAL CROSS-SECTIONS	1:2,000
8	VI	YEAR-WISE PRODUCTION & DEVELOPMENT PLAN	1:2,000
9	VI A	YEAR-WISE PRODUCTION & DEVELOPMENT SECTION	1:2,000
10	VI B	II YEAR DEVELOPMENT AND PRODUCTION PLAN	1:2,000
11	VI C	III YEAR DEVELOPMENT AND PRODUCTION PLAN	1:2,000
12	VI D	IV YEAR DEVELOPMENT AND PRODUCTION PLAN	1:2,000
13	VI E	V YEAR DEVELOPMENT AND PRODUCTION PLAN	1:2,000
14	VII	RECLAMATION PLAN	1:2,000
15	VIII	FINANCIAL AREA ASSURANCE PLAN	1:2,000
16	IX	CONCEPTUAL PLAN	1:2,000
17	IX A	CONCEPTUAL SECTIONS	1:2,000
18	X	MAPS OF THE PROSPECTING REPORT (2 nos.)	--

11.0	ANNEXURES		PAGE NO.
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Annexure	VI	Letter of Intent from State Govt.	69-73
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MINING PLAN

INTRODUCTORY NOTES

The Chhattisgarh State Govt. has issued a letter of intent for preparation of Mining Plan for Chhotedongar iron ore deposit in village Chhotedongar, Forest Range Narayanpur, District - Narayanpur over as area of 57 Ha in favour of M/s Shri Bajrang Power & Ispat Ltd, Raipur, vide letter No. F-3-23/2010/12, Naya Raipur, dated 24/12/2014.

This letter has now been renewed and extended for further 6 months i.e. upto 24/03/2016 vide letter No. F-3-23/2010/12, Naya Raipur, dated 04/03/2016 (copy of the same is enclosed as **Annexure No. VI**).

M/s Shri Bajrang Power & Ispat Ltd (formerly known as M/s Bajrang Metallics & Power Limited) is a company of Goel Group and is one of the leading producers of Iron & Steel in Chhattisgarh State and hence, this will be a captive mine of the company which will supplying iron ore to their steel plant located at Borjhara & Tilda villages in Raipur District, Chhattisgarh.

Earlier, the prospecting has been carried out by the company under prospecting agreement from 12/02/2007 to 11/02/2009 (Copy of the Prospecting Report is enclosed as **Annexure No. XI**).

The Mining Plan has been prepared on the basis of the prospecting Report and is being submitted under Rule 22 (4) of MCR 1960.

The details of other leases already held by the company are as under:

S. No.	ore	Area (Ha)	Location	Lease period
1	Iron ore	75.0	Village – Hahaladdi, Tahsil – Durgkondal, District- Kanker (Chhattisgarh)	21/11/2014 to 20/11/2044
2	Manganese ore	3.95	Village & Mandal – Garividi, District- Vizainagaram (Andhra Pradesh)	27/09/2000 to 26/09/2020

1.0 GENERAL

a) Name of applicant / lessee	**M/s Shri Bajrang Power and Ispat Ltd.**
Rule 45 registration No.	IBM/4393/2011
Address	Village – Borjhara, Urla-Guma Road Urla Industrial Area, Raipur.
District	Raipur.
State	Chhattisgarh
Pin code	493221
Phone	Phone- 0771- 4288019 / 29 / 39 Fax- 0771- 2323601 / 602
b) Status of applicant/lessee	Private limited company

List of the Board of Directors

S.N.	Name of the Directors	Designation	Address
1	Shri Suresh Goel	Director	Gharonda, Ravi Nagar, Raipur- 492001
2	Shri Narendra Goel	Managing Director	F-6, Anupam Nagar, Raipur- 492001
3	Shri Rajendra Goel	Director	Ravi Nagar, Raipur- 492001
4	Shri Kailash Chandra Thatoi	Director	Plot No. 17, AryaBhoomi Housing complex, Patia, Bhubneshwar- 751024
5	Shri Shravan Kumar Goyal	Whole time Director (Nominated owner)	Flat No. 4 C, Block C, Mallika Merlin, Jaishree Vihar, New Mandi Road, Raipur- 492001
6	Shri Hemendra Nath	Director	J-205, Shivalik Nagar, B.H.E.L., Haridwar- 249401
7	Shri Hari Anant Ghanekar	Director	13-A, Alkapuri, Habibganj, Bhopal- 462024
8	Shri Raj Kumar Yadava	Director	C-13, Staff colony, Malviya National Institute of Technology, Jaipur- 302017

9	Shri Devjyoti Jyotishi	Additional Director	B-303, Khusi Residency, Near Magneto Mall, Telibandha, Raipur- 492006
10	Smt. Prerna Singal	Additional Director	House No. 279, Urban Estate, Phase-I, Ward No. 17, Ludhiana- 141001

Certificate of Incorporation of the company is enclosed as **Annexure No. VII.**

List of Board of Director is enclosed as **Annexure No. VIII.**

Shri Shravan Kumar Goyal (Whole time Director) has been appointed as the nominate owner for the mine, the Board of Resolution for appointment for the same is enclosed as **Annexure No. IX.**

Photo ID & address proof of the nominated owner is enclosed as **Annexure No. X.**

c) Mineral(s) which is /are included in the prospecting licence (for fresh grant)	Iron ore
d) Mineral(s) which is /are included in the letter of intent / lease deed	Iron ore
e) Mineral(s) which is the applicant / lessee intends to mine	Iron ore
f) Name of Recognized person under rule 22C of MCR, 1960 or a person employed under clause (c) of sub rule (1) of rule 42 of MCDR, 1988 (applicable for Scheme of Mining only) preparing Mining Plan	**Geo Solutions (P) Limited.** Authorized signatory: **Shalabh Saha** Key Person: **Shalabh Saha** **Naveen Kumar Tamrakar**
Address	HIG-21, Amdi Nagar, HUDCO Colony, Bhilai, District- Durg (C.G.), PIN-490009
Phone	0788-3299582
Mobile	09425123191
Email	geosolution@rediffmail.com

Registration No.	RQP/NGP/427/2011/B
Date of Grant / renewal	15/12/2011
Valid upto	14/12/2021
Copy of the RQP certificate is enclosed as **Annexure No. V.**	

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2.0 LOCATION AND ACCESSIBILITY

a) Lease Details/ Existing mine	
Name of the Mine	Chhotedongar Iron ore deposit
Lat /Long of any boundary point	Latitudes 19^0 24' 43.9" N Longitudes 81^0 16' 58.6" E
Date of grant of lease	Since, this is a fresh Mining Plan, the date of grant of lease is not applicable.
Period / Expiry Date	Not applicable.
Name of lease holder/applicant	M/s Shri Bajrang Power and Ispat Ltd.
Address	Village – Borjhara, Urla-Guma Road Urla Industrial Area, Raipur.
District	Raipur.
State	Chhattisgarh
Pin code	493221
Phone	Phone- 0771- 4288019 / 29 / 39 Fax- 0771- 2323601 / 602
b) Details of applied / lease area with location map (fresh area / mine)	
Forest	Forest Division - Narayanpur Forest Range - Chhotedongar Forest compartment 267 – 20 Ha 268 – 20 Ha 269 – 14 Ha 252 – 03 Ha
Non-forest	(i) Waste land nil (ii) Grazing land nil (iii) Agriculture land nil (iv) Others(specify) nil
Total lease area / applied area	57 Ha

State	Chhattisgarh
District	Narayanpur
Taluka / Forest Division	Narayanpur / Narayanpur Protected Forest
Forest range / Village	Forest Range - Narayanpur
Wheter the area falls under Coastal Regulation Zone (CRZ) if any, details thereof	N. A.
Existing of public road / railway line, if any nearby and approximate distance	The mine is located near the village Chhotedongar and is approachable from village Chhotedongar via Dhanora and Madamnar at about 20 km. Village Chhotedongar is about 43 km from District headquarter Narayanpur on Narayanpur-Orchha road. Narayanpur is about 222 km from Raipur via Kondagaon. The nearest main Railway Station is Jagdalpur at about 130 km from the area.
Toposheet No. With latitude and longitude of al corner boundary point/ pillars	65 E / 7 The Lat/Long of all corner pillars is tabulated below.
c) Attach a general location map showing area and access routes. It is preferred that the area be marked on Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map.	
The Khasra Plan is enclosed as **Plate no. I** and Location Plan is enclosed as **Plate no. I A.** The Key plan is enclosed as location plan as **Plate no. II**	

Boundary pillars co-ordinate taken by G.P.S. (WGS/84) is as under:

BP No.	Latitudes	Longitudes
BP-A	19^0 24' 43.9"	81^0 16' 58.6"
BP-B	19^0 24' 51.4"	81^0 17' 12.5"
BP-C	19^0 24' 20.4"	81^0 17' 31.9"
BP-D	19^0 24' 12.5"	81^0 17' 17.6"

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3.0 DETAILS OF APPROVED MINING PLAN/ SCHEME OF MINING (if any)

3.1 Date and reference of earlier approved MP/SOM.

The Mining Plan is being submitted for fresh grant of mining lease, hence reference of earlier approval is not applicable.

3.2 Details of last modifications if any (for previous approved period) of approved MP/SOM, indicating date of approval, reason for modification.

Not applicable.

3.3 Give review of earlier approved proposal (if any) in respect of exploration, excavation, reclamations etc.

Not applicable.

3.4 Give status of compliance of violations pointed out by IBM.

Not applicable.

3.5 Indicate and give details of any suspension /closure /prohibitory order issued by any Government agency under any Rule or Court of law.

Not applicable.

3.6 In case the MP/SOM is submitted under Rules 9 and 10 of the MCDR'88 or under Rule 22(6) of the MCR'1960 for approval of modification, specify reason and justification for modification under these Rules.

Not applicable.

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PART -A

1.0 GEOLOGY AND EXPLORATION

a) Briefly describe the topography, drainage pattern, vegetation, climate, rainfall data of the area applied/ mining lease area.

Topography: Regionally, the lease area is a part of southernmost hilly terrain of Chhotedongar Reserved Forest. The entire applied lease area is on the hill, the highest contour level is 960 mRL on the center and gradually reduced in all directions having lowest contour level of 830 mRL.

The general ground level is about 540 m near the village settlements of Madamnar (far away from the lease area).

Drainage pattern: The area is drained by Madin Nadi which flows with many tributaries from hills and finally meets the Indravati River. There are many radial drainage of first order form which terminates into Dabran and Kundel nalas.

There is no potential of acid mine drainage and water is potable.

Vegetation: The local varieties of trees like available in and nearby the area are Saja, Mahua, Amla, Arjun, Tendu, Kusum, Haldu, Harra, Bahera, Babool, Palas, etc (Source: As reported by local villagers).

Climate: Climate of this area is of tropical. During peak summer the temperature rises to maximum 46^0C, while winter temperature falls down to 10^0C during Jan. & Dec (Source: Prospecting Report).

Rainfall: The rain fall is confined to the rainy season from July to September and the annual rainfall is av. 1250 mm (Source: Prospecting Report).

b) Brief description of Regional Geology with reference to location of lessee/ applied area.

Regional Geology (source: Prospecting Report):

Regionally, the iron ore is located on the top of the hills striking NNW-SSE and is located of WSW of Chhotedongar village. The hill range forms more or less the eastern boundary of "Abujhmar" area, the area of famous aboriginal tribe of Bastar.

The area is a part of Bastar Craton and stratigraphicaly it belongs to the Lower Proterozoic age represented by Bailadila Group. Banded iron ore formation of Bastar craton, grouped under the Bailadila Group, unconformabaly overlie the high grade metamorphites of Bengpal Group.

The unconformity is not pronounced everywhere but the structural discordance, lithological discontinuity and low grade metamorphism provide vital evidences to group them separately. These iron formations have close similarity in lithological association and tectonic-metamorphic history with iron formation of other belts. The important ranges are Bailadila, Chhotedongar, Rowghat, Durg Kondal and Lohattar extending northwards upto Dalli Rajhara.

The stratigraphic sequence of Bailadila Group has been described in detail by Crookshank (1963) and modified by Bandopadhyay (1977). Bailadila Group comprises quartz-sericite schist, arkosic quartzite at the base followed by Banded Iron formation on which it has been designated as Bose Iron formation composing ferruginous shale-siltstone, carbonaceous shale and interbaded tuffs intruded by Galli Nala greenstone and granites.

Bastar Craton exhibits typical Archaean shield association similar to other shield area of the world Archaean high grade complex of Bastar craton is designated as Bangpal Group- the basement horizon of Bastar craton, comprising meta-sedimentary and meta-igneous enclaves within the gneissic complex. The high grade metamorphites have undergone poly phase deformation and metamorphism and extensively migmetized.

Precambrian Banded Iron Formation of Bastar show distinct sedimentary characters, a disposed along a north-south trending linear belt and indicates similar conditions disposition and profuse basic igneous activities. Intrusive granites of post bailadila a responsible for the present disposition of Iron Formation in isolated belts.

In Chhotedongar and Rowghat areas, BIF is represented by BHQ, BMQ and Bande ferruginous chert with intercalation of ferruginous shale followed by greenstone and grani intrusion.

The first phase of deformation was more intense which developed the N-S to NE-S trending folds plunging 20^0 to 25^0 southerly. The major synclinorium with culmination ar depression of the iron formation of Chhotedongar (central part of Bailadila group) is als reported. The iron ore deposits of Chhotedongar occurs in the Proterozoic rocks grouped i Bailadila Group. The Bailadila series with or without other formations of the age compris more or less a continuous belt, about 160 km long, which starts from the Bailadila range about 100 km south of Chhotedongar and continuous past Chhotedongar as far as Rowgha and beyond in the north with a general N-S trends.

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The succession of the Archaean rocks of Bastar region is tabulated below (Source: Prospecting Report):

Age	Super Group	Group	Lithounits
Quaternary		Recent	Soil, laterite, float ore and conga
Upper Proterozoic	Indravati Group	Sabri Group	Buff calcareous shale, limestone Basal conglomerate, sandstone- green and red shale
	Pakhal Group		Arenites with intercalated shale and limestone
Middle Proterozoic	Kotri Supergroup	Abhujmar Group	Mansar Trap- grabbro – basalt Gundul Formation – sandstone – conglomerate – shale
		Sitagaon Granite	Medium to coarse grained granites
		Ainhur Group	Hammatwahi Basic suite Mahala rhyolite
		Dargarh Group	Andhawera buff shale Conglomerate and sandstone
Lower Proterozoic		**Bailladila Group**	Banded Iron Formation Gali Nala formation- greenstone sequence (Bailadila –Chhotedongar and Rowghat belts)
			Loa formation
			Iron base formation
Archaeans	Bengpal Group	Bijapur gneiss	Granite rocks, granite gneiss and migmatite; charnockite rocks metaultramafic; amphibolites; pyroxene granulite
		Chintavagu quartzite	Metapelites; calcareous and ferruginous metasediments
Basement – Not exposed			

Description of stratigraphic units:

Bengpal Group (Hanker Complex)- The rocks belonging to this group are exposed on both sides of Kotri linear belt and comprise mainly of granite gneiss, metasedimentary assemblage with ultra basic / basic intrusive, having tectonic contact with rocks of Kotri Supergroup and Bailadila Group.

Bailadila Group- Bailadila Group comprises BHQ, BHC, BMQ, BMC, chert, phyllite, quartz arenite, ferruginous shale and meta-greywacke. They form linear ridges with a regional N-S trend, often with lateral displacement due to faulting and complex folding. The main ridges where Bailadila group of rocks is exposed are the Bailadila Range, Rowghat, Sonadehi and Dalli-Rajhara hills.

Kotri Supergroup- Kotri Supergroup comprises Ainhur Group, Madanbera granite, Patkasa Formation and basic intrusive.

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c) Detailed description of geology of the lease area such as shape and size of the mineral/ ore deposit, disposition variation various litho-units indicating structural features if any etc. (applicable for Mining Plan for grant & renewal and not for Scheme of Mining/Modifications in the approved mining plan/scheme of mining).

The area around Chhotedongar is a small portion of Chhotedongar hill range and mainly comprises of quartzite, ferruginous shale and BHQ. The general trend of the hill range is NW-SE and this is the strike of the rock formation with dips varying from 58^0 to 64^0 due SE. The sequence of rocks is as under:

Bailadila Iron ore series	- Iron ore (hematite) - BHQ with shale intercalation - Banded Hematite Quartzite - Ferruginous shale - Quartzite

The lithology of the area

Banded Hematite Quartzite: Most of the lease area is covered with BHQ and the contacts between ore and BHQ is mostly characterized by a siliceous horizon of friable type of BHQ (ferruginous shaly BHQ).

Ferruginous shale: Ferruginous shale mostly occurs on hill slopes on western and SW side of the area.

Quartzite: On the western most slopes, quartzite rock is exposed which is white to grey in colour

Iron ore body: Iron ore of the area is exposed cropping out erratically throughout the core of the hill at higher elevations. The total length of the band is 838 m and width varies from 30 to 38 m as measured on outcrops. The lower horizons are occupied by float ore of workable grade of iron ore.

It is massive, hard and compact in nature, steel grey in colour having fine to medium grained texture showing metallic lusture. It is totally devoid of any layered contaminations excepting some laminations of quartzite band here and there. Occasionally the ore is found to be porous and laminated but major part of the ore band is massive.

The bulk density of the iron ore is considered as 3.2.

Structure:

The area is a very small part of Sargipalli-konkan hill range wherein at different places like Bailadila, Chhotedongar, Rowghat and Rajhara elevations are lying impregnated by different known deposit of iron ore of the country. The Chhotedongar forms the central part of the above said tract. The presently tract of the hill is the result of many orogenic activities giving rise to emergence of alternating anticline and syncline. The iron ore depositional activities have been taken place in major synclinal part of the area and the later tectonic stresses trending EW has resulted to develop alternating anticlinal and synclinal folds in the region. In

succeeding phase of orogenic cycle, stress trending NS has resulted refolding of the earlier developed anticline and synclines to develop number of small sequential overturning giving rise to anticlinorium and synclinorium. The area under present interest is the part of one isoclinals anticlinorium of which major part of higher level of topography has been denuded.

(i) Name of the prospecting agency: The prospecting work was carried out by the company itself.

Details of prospecting/ exploration already carried out:

(ii) Number of pits and trenches indicating dimensions, spacing etc along and across the strike/ foliation with reference to geological plan.

No pit or trench was dug for exploration.

(iii) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, inclination, collar level, depth etc with standard borehole logs duly marking on geological plan /sections.

Total 3 nos. of core boreholes were drilled in the area during the prospecting operations. For this, Calyx core drill machine of Nx size bit having 54 mm core diameter has been used. The distance between BH-1 and BH-2 is about 360 m and BH-2 and BH-3 is about 320 m. The summarized borehole logs are as under:

S No.	BH No. (Inclination) Direction	Collar RL	Depth drilled	OB/Waste/Iron ore (m)			Lithology	Chemical Analysis	
		m	m	From	To	Total Thickness		Av Fe%	Av SiO_2%
1	BH-1 (vertical)	964	30.90	0.00	0.40	0.40	Lateritic soil	--	--
				0.40	3.60	3.20	Lateritic iron ore	62.95	1.40
				3.60	12.60	9.00	Laminated iron ore		
				12.60	21.00	8.40	Hard massive iron ore		
				21.00	30.90	9.90	Ferruginous shaly BHQ	--	--

2	BH-2 (vertical)	916	30.20	0.00	0.65	0.65	Float ore	--	--
				0.65	1.80	1.15	Lateritic iron ore	62.91	3.27
				1.80	10.20	8.40	Laminated iron ore		
				10.20	22.50	12.30	Hard massive iron ore		
				22.50	30.20	7.70	Ferruginous shaly BHQ	--	--
3	BH-3 (60^0) $N90^0$	962	30.70	0.00	0.25	0.25	Lateritic soil	--	--
				0.25	7.87	7.62	Laminated iron ore	63.22	1.77
				7.87	18.00	10.13	Hard massive iron ore		
				18.00	30.70	12.70	Ferruginous shaly BHQ	--	--
	3 nos. of BHs		**91.80**	--			--	63.01	2.17

The borehole logs and analysis report are enclosed in the Prospecting Report as **Annexure No. XI.**

Details of samples analysis indicating type of sample (surface/ sub-surface from pits/ trenches/ borehole etc). Complete chemical analysis for entire strata for all radicals may be undertaken for selected samples from a NABL accredited laboratory or Government laboratory or equivalent. Entire mineralized area may be analysed meter wise with 10% of check samples. (At least for 10% of total samples may be analyzed in accordance to BIS and reports from NABL accredited /other Government laboratory).

Total 6 core samples from each borehole were prepared and analysed. The samples were prepared for chemical analyses by splitting half part of the core by splitter, shushed, mixing and reducing by coning and quartering method.

Some grab samples were also collected and analysed for different types of iron ore, like massive, laminated, porous laminated and lateritic iron ore. Where different types of ore are

intermixed, chips from different types were taken to form a single sample for that zone. The borehole logs and analysis report are enclosed in the Prospecting Report as **Annexure No. XI**. Recently, the core-samples have been analysed from Anacon lab and enclosed as **Annexure No. XI A.**

v) Expenditure incurred in various prospecting operations.

The expenditure incurred during drilling and analyses are as under:

Drilling expenditure	Analysis expenditure
4,500/- per meter	2,000/- per sample

f) The surface plan of the lease area may be prepared on a scale of 1:1000 or 1: 2000 with contour interval of maximum of 10 m depending upon the topography and size of the area duly marked by grid lines showing all features indicated under Rule 28(1)(a) of MCDR 1988.

The topographical survey of the area was carried out on a scale of 1:2,000 with 5m contour interval during the prospecting operations and accordingly the Surface Plan has been prepared.

g) For preparation of geological plan, surface plan prepared on a scale of 1:1000 or 1:2000 scale specified under para 1.0(f) of Part A of the format may be taken as the base plan. The details of exploration already carried out alongwith supporting data for existence of mineral, locations proposed exploration, various lithounits along with structural features, mineralized /ore zone with grade variation if any may be marked on the geological plan alongwith other features indicated under Rule 28(1)(b) of MCDR 1988.

During the prospecting work, the geological plan has also been prepared on a scale of 1:2,000 on the basis of surface exposures and considering boreholes data.

3 core bore-holes have been drilled, the details have already been tabulated earlier.

Geological sections may be prepared on natural scale of geological plan at suitable interval across the lease area boundary to boundary.

During the prospecting work three numbers of Cross- Sections have been prepared on a scale of 1:2,000 considering the boreholes influence; these sections have been carried forward for this Mining Plan.

Broadly indicate the future programme of exploration with due justification (duly marked on Geological Plan year wise location in different colours) taking into consideration the future tentative excavation programme planned in next five years as in the table below:

Total 15 boreholes will be proposed; if the ore is encountered and terminated before 100 m no further drilling is required. The location of the proposed boreholes are marked on the Surface Geological Plan, **Plate No. V.**

The year-wise proposal of the exploration is as under:

BH. No.	Collar RL	Diam of core	Drilling depth	Location		Expenditure
First.Year						
PBH 1	925	57 mm	100 m	W 125	S 35	4,00,000/-
PBH 2	915	57 mm	100 m	W 80	S 10	4,00,000/-
PBH 3	953	57 mm	100 m	W 00	S 145	4,00,000/-
PBH 4	945	57 mm	100 m	E 25	S 300	4,00,000/-
PBH 5	940	57 mm	100 m	E 70	S 275	4,00,000/-
PBH 6	927	57 mm	100 m	E 100	S 430	4,00,000/-
PBH 7	925	57 mm	100 m	E 145	S 405	4,00,000/-
PBH 8	925	57 mm	100 m	E 180	S 560	4,00,000/-
PBH 9	915	57 mm	100 m	E 220	S 535	4,00,000/-

PBH 10	950	57 mm	100 m	E 255	S 690	4,00,000/-
PBH 11	940	57 mm	100 m	E 300	S 665	4,00,000/-
PBH 12	950	57 mm	100 m	E 330	S 820	4,00,000/-
PBH 13	942	57 mm	100 m	E 370	S 800	4,00,000/-
PBH 14	930	57 mm	100 m	E 380	S 910	4,00,000/-
PBH 15	923	57 mm	100 m	E 420	S 880	4,00,000/-
Total	--	--	1,500 m	--		60,00,000/-

Note: the expenditure will be depend upon the depth, hence these is only tentative figure.

Reserves and Resources as per UNFC with respect to the threshold value notified by IBM may be furnished in a tabular form as give below: (area explored under different level of exploration may be marked on the geological plan and UNFC code for area considered for different categories of reserves/ resources estimation may also be marked on geological cross-sections).

Submit a feasibility/ pre-feasibility study report along with financial analysis for economic viability of the deposit as specified under the UNFC field guidelines may be incorporated.

The iron ore of the area is a part of very well known Bailadila iron ore Series and of stratabound deposit of regular habit. The continuity of the ore zone is also proved in three dimensions by drilling 3 boreholes and geological mapping.

The maps and cross-sections given in the prospecting report have now been re-draw in AutoCAD and accordingly the cross-sectional area have been slightly corrected. The recovery and tonnage has also been re-considered as per the present regular practice.

In the prospecting report, the categories of reserves were taken proved, probable and possible, but during preparation of the Mining Plan, this has been re-categorized, considering the criteria of Minerals (Evidence of Mineral contents) Rules, 2015.

The categorization of reserve/ resources of iron ore as per the UNFC norms with following considerations:

a. The iron ore in the area falls under Stratiforms, Stratabound and tabular deposits of irregular habit.

b. The topographical mapping was carried out on a scale of 1:2,000 with 5m contour interval.

c. Total 3 bore-holes have been drilled in the area upto a depth of about 30 m each.

d. On the basis of interpretation of the borehole data, topographical mapping, and exposures of ore body, the geological plan has been prepared on a scale of 1:2,000.

e. Total length of the ore body is about 838 m (248m + 340m + 250m) and width of ore body as per outcrops is varying from 30 to 38 m.

f. The parameter considered for reserve estimation are, size, shape and depth extensions of the ore body.

g. The average grade of iron ore is 63.01 % Fe-content (minimum 60.56% - BH-2/6 to maximum 66.58% - BH2/3) and average silica is 2.17% (as per the prospecting report).

h. The ore zone, overburden thickness have been precisely demarcated as per the bore-hole logs and surface exposures.

i. For estimation of reserve and illustration of the lithologs, 3 nos. of cross-sections have been prepared.

j. Distance between BH-1 and BH-2 is about 360 m and BH-2 and BH-3 is about 320 m, but the influence considered for G-2 category is upto 100 m. For BH-1, 100 m towards BH-2 and 50 m on other side, for BH-2, 100 m on both sides and for BH-3, 100 m towards BH-2 and 50 m towards other side.

k. Beyond this upto the total length of the ore body, the resources has been considered under category G -3.

L. For insitu iron ore body, the depth of ore body upto encountered in individual boreholes (BH 1 - 945 mRL, BH 2 - 900 mRL and BH 3 – 942 mRL) has been taken under category G-2.

m. Further, 5 m depth has been taken under category G-3 (considering about 15% of the maximum width of the ore body).

n. The float ore zones have been precisely demarcated and depth has been considered as 4 to 6 m, but for preparation of this Mining Plan, the depth of iron ore zone has been taken upto 2 m and the resources have been considered under category G -2.

o. The B. D. of iron ore has been considered as 3.2 T /cum (as per the prospecting report).

p. The recovery of iron ore has been considered as 90% and remaining 10% will considered as mining losses.

q. The ferruginous shaly BHQ and BHQ are considered as overburden and separate computations for quantifying them in volume.

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The criteria and their complacence for exploration as per the Minerals (Evidence of Mineral Contents) Rules, 2015:

Guideline	Work carried out during prospecting	Consideration
1. Arial Reconnaissance: Satellite imagery / remote sensing / airborne geophysical survey, etc. using appropriate technology (applicable for G-4 level)	Not carried out	--
2. Topographical & geological survey (mapping): Mapping on a 1: 2,000 or larger scale for detailed exploration (G-1) stage.	Topographical cum geological mapping have been carried out on a scale of 1:2,000.	Considered under G-1 level of exploration
3. Ground Geophysical and Geochemical survey: Geophysical and geochemical survey using appropriate techniques as may be necessary.	Not carried out	--

4. Technological: Drilling at grid spacing of 200 m or closer	3 core boreholes have been drilled, the distance between BH-1 & BH-2 is about 360 m and BH-2 & BH-3 is about 320 m.	Considered under G-2 level of exploration.
5.Sampling & sub sampling:	Geological logging and sampling of core have been carried out.	Considered under G-2 level of exploration
6. Assay data & Laboratory test:	The iron ore-bearing samples have been analysed.	Considered under G-2 level of exploration
7. Petrolographic & Mineragraphic studies:	Not required	--
8. Bulk Density study:	Bulk density has been taken as 3.2.	Considered under G-2 level of exploration
9. Bulk Sampling for Beneficiation studies:	Not required	--
10. Environmental setting:	The information regarding environmental settings has been collected during prospecting.	Considered under G-2 level of exploration
11. Any other relevant data: Ground water, geotechnical and rock characteristics etc. that may be relevant.	Not required	--

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k) Furnished detailed calculation of reserves /resources section wise (When the mine is fully mechanized and deposit is of complex nature with variation of size, shape of mineralized zones, grade due to intrusion within ore zone etc, an attempt may be made to estimate reserves/ resources by slice plan method). In case of deposits where underground mining is proposed, reserves/ resources may be estimated by level plan method, as applicable, as per the proposed mining parameters.

Indicated Mineral Resources (332):

For insitu iron ore:

Cross-sections	Cross-sectional Area	Influence Length	Volume	Recovery (90% of the total volume)	B. D.	Resource	
	(sqm)	(m)	(cum)	(cum)	(T/cum)	(Tonnes)	(million tonnes)
X - X'	594	150	89,100	80,190	3.2	25,6608	0.2566
Y - Y'	600	200	120,000	108,000	3.2	34,5600	0.3456
Z - Z'	620	150	93,000	83,700	3.2	26,7840	0.2678
Total	--	500	302,100	271,890	3.2	**870,048**	**0.8700**

For float ore:

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Location Area		Length	Width	Depth	Volume	Recovery (25% of the total volume)	B. D.	Resource	
		(m)	(m)	(m)	(cum)	(cum)	(T/cum)	(Tonnes)	(million tonnes)
Core area	Northern part	148	28	2	8,288	2,072	3.2	6,630	0.0066
	Central part	400	80	2	64,000	16,000	3.2	51,200	0.0512
	Southern part	146	28	2	8,176	2,044	3.2	6,541	0.0065
Eastern slope		420	50	2	42,000	10,500	3.2	33,600	0.0336
Western slope		534	70	2	74,760	18,690	3.2	59,808	0.0598
Total		--	--	--	1,97,224	49,306	--	**1,57,779**	**0.1577**

Thus, total Indicated Mineral Resource under category 332 is 8,70,048 + 1,57,779 = 10,27,827 Tonnes say 1.0278 Million Tonnes.

Inferred Mineral Resources (333):

For insitu iron ore (for further 5 m depth):

Cross-sections	Cross-sectional Area	Influence Length	Volume	Recovery (90% of the total volume)	B. D.	Resource	
	(sqm)	(m)	(cum)	(cum)	(T/cum)	(Tonnes)	(million tonnes)
X - X'	190	248	47,120	42,408	3.2	1,35,706	0.1357
Y - Y'	186	340	63,240	56,916	3.2	1,82,131	0.1821
Z - Z'	160	250	40,000	36,000	3.2	1,15,200	0.1152
Total	--	838	150,360	135,324	3.2	**4,33,037**	**0.433**

For insitu iron ore (for remaining length of the ore body):

Cross-sections	Cross-sectional Area	Influence Length	Volume	Recovery (90% of the total volume)	B. D.	Resource	
	(sqm)	(m)	(cum)	(cum)	(T/cum)	(Tonnes)	(million tonnes)
X - X'	594	98	58,212	52,391	3.2	1,67,651	0.1677
Y - Y'	600	140	84,000	75,600	3.2	2,41,920	0.2419
Z - Z'	620	100	62,000	55,800	3.2	1,78,560	0.1786
Total	--	338	204,212	183,791	3.2	**5,88,131**	**0.5882**

Thus, the total resources under category G -3 is 4,33,037 + 5,88,131 = 10,21,168 tonnes (1.0211 million tonnes).

Mineral Reserves/ Resources:

Mineral Resources: (Mineral resources may be estimated purely based on level of exploration, with reference to the threshold value of minerals declared by IBM).

The total resources are as under:

Level of exploration	Resources		Av. Grade
	(tonnes)	(million tonnes)	
G -2 General exploration	10,27,827	1.0278	63.01 % Fe
G -3 prospecting	**10,21,168**	1.0211	
Total	**20,48,995**	**2.0489**	

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The Resources and Reserves within the lease may be arrived after applying results feasibility / re-feasibility study and economic evaluation of deposit based on various factors such as:

(a) Mining method, recovery factor, mining losses, processing loss etc.

(b) Cut off grade, ultimate pit depth proposed.

(c) Mineral /ore blocked due to benches, barrier, pillars, road, railway, river, nala, reservoir, electric line and other statutory barriers etc, under forest, sanctuaries etc, where necessary permissions are not available.

After the estimation of Indicated Mineral Resources (332) as above, an exercise has been done to bifurcate the Indicated Mineral Resources under **Probable Mineral Reserves – UNFC Code (122)** which forms the mineable part of the mineral resources falling within the Ultimate Pit Limit (UPL) by conducting a Feasibility Study and Economic Viability.

Before exercising the above mentioned bifurcation, a **Pre-Feasibility Study** has been done as per the guidelines given in the MCDR 1988 and circulars issued by the IBM. For, the explored part of the area a Feasibility study has done corresponding to Feasibility Axis (F2), since, the

lease area where exploration was done, the density of exploration done in the area conforms the UNFC norms.

On the basis of the geological study, considering the specific end use grade of reserves and specific knowledge of land use data, the economic viability of the mining project has been proved beyond doubt and thus the mineable part of the mineral resources which fall under the Ultimate Pit Limit (UPL) as bifurcated corresponding to the Economic Axis (E1).

The **Pre-Feasibility Report/ Project Report** has been enclosed as **Annexure No. XII.**

Since, the mining will be carried by top slicing method, entire insitu ore will be extracted, hence no ore will be blocked, but a part of float ore will be blocked within the 7.5 m of barrier zone, this has been estimated separately as under:

For float ore:

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Location Area		Length	Width	Depth	Volume	Recovery (25% of the total volume)	B. D.	Resource	
		(m)	(m)	(m)	(cum)	(cum)		(Tonnes)	(million tonnes)
Core area	Northern part	30	7.5	2	450	113	3.2	360	0.0004
	Central part	0	7.5	2	0	0	3.2	0	0.0000
	Southern part	60	7.5	2	900	225	3.2	720	0.0007
Eastern slope		600	7.5	2	9000	2250	3.2	7200	0.0072
Western slope		660	7.5	2	9900	2475	3.2	7920	0.0079
Total		--	--	--	20250	5063	--	**16200**	**0.0162**

Thus, the mineable mineral reserves under category 122 is 10,27,827 – 16,200 = 10,11,627 Tonnes say 1.0116 Million Tonnes.

UNFC CLASSIFICATION OF RESERVES:

Classification		*Code*	*Quantity (million tonnes)*	*Av. Grade*
A. Total Mineral Reserve	(1) Proved Minable Mineral Reserve	111	--	--
	(2) Probable Mineral Reserve	121	---	--
	(3) Probable Mineral Reserve	122	1.0116	63.01 % Fe
B. Total Remaining Resources	(1) Feasibility Mineral Resources	211	---	--
	(2) Prefeasibility Mineral Resources	221	---	--
	(3) Prefeasibility Mineral Resources	222	1.0162	-- do --
	(4) Measured Mineral Resources	331	---	--
	(5) Indicated Mineral Resources	332	---	--
	(6) Inferred Mineral Resources	333	1.0211	-- do --
	(7) Reconnaissance Mineral Resources	334	---	--
	Total Mineral Resources (A+B)		**2.0489**	-- do --

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Anticipated Life: The mineable reserves of iron ore is 1.0116 million tonnes, the annual maximum production rate of 0.300 million tonnes and the life of the mine will be about 6 years.

But, after completion of proposed boreholes, the reserves of iron ore will likely to increase and accordingly the life of the mine will get increased.

* * * * *

2.0 MINING

A. OPEN CAST MINING

a) **Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans/ sections.**

The mining will be carried out by opencast mechanized method consists of following operations:

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- Drilling of OB (BHQ) which is occurring on both sides on hanging and foot walls and will be blasted and thereafter transportation by shovel-dumper combination to dump sites and maintenance of haulage roads.
- The chemical analysis will be carried out for knowing the threshold value of BHQ for deciding whether this material will be dumped as reject or will be properly stacked for future use.
- The drilling will be done by 100 mm dia wagon drill for blasting.
- Blasted mass will be reduced to loadable size by hydraulic rock breaker and thereafter the ROM will be transported by excavator/dumper combination to the C & S plant.

The sequence of mining operations will be as under:

1. The production of insitu iron ore will be carried out by top slicing method.
2. The bench height of about 5 m (varying from 4 to 7 m) will be maintained in overburden and Iron ore, the bench width will be of about 8-10 m for to & fro movement of dumpers.
3. Ramps at a gradient varying from 1:10 to 1:16 having width more than three times the width of dumpers will be provided for connecting different benches at locations favorable for optimizing haul length and maximizing mineral extraction.
4. Before the extraction of ore, the overburden (soil), if encountered and waste rock (BHQ) will be removed by drilling and blasting and transported to the dump yard. The OB/BHQ will

be transported to the northwestern side of the lease area and dumped having about 25 m height with 5 tire dumping. This dump will be protected by retaining wall on slopes.

During the drilling of BHQ waste rock, a few powder samples will be collected for analyzing Fe-content which will help in deciding whether the BHQ can treated as waste or is blendable, depending upon the threshold value and accordingly the BHQ suitable for future blending will be stacked separately.

5. Drilling of insitu iron ore and hard rock will be carried out by 100 mm dia wagon drill machine for subsequent blasting.

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6. The blasted ore mass will be reduces to loadable size by hydraulic rock breaker.

7. The sized ROM will be loaded with the help of hydraulic excavator into the dumpers and transported for further processing i.e. sizing and screening.

8. A crushing and screening unit of about 1,500 TPD capacity will be installed within the mine.

9. The processed ore will be directly transported to the captive sponge iron ore plant at Raipur after processing by the screen plant.

10. The sizes produced from screening plant as per requirement of the steel plant will be, -5 mm, 5 to 10 mm, 10 to 20 mm and 20 to 40 mm.

11. During the first five years period, the production will be confined mainly in the insitu iron ore, but during the production carried out in fourth year some quantity of float ore will also be extracted.

12. The production of insitu iron ore will be carried out as per the influence area of each bore holes in three different places by top slicing method.

13. The recovery of insitu iron ore is likely to be 90% from the ROM and for float ore it will be about 25% of the ROM.

14. The bulk density of iron ore is considered as 3.2 T/cum and for BHQ /waste is 2.5 T /cum.

b) Indicate year-wise tentative excavation in cubic meters indicating development, ROM, pit wise as in the table below:

The development will be carried out for production taken from insitu iron ore body on the northern side of the lease area. The OB is mainly consists of BHQ and ferruginous shaly BHQ which is forming hanging wall as well as foot wall.

Development by removal of OB/waste (BHQ and Ferruginous shaly BHQ) material during the first five years will be as under:

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Year	Working level upto	X section line	X-section Area	Influence length	Volume	Tonnage (B.D.=2.5)
	(mRL)		(sqm)	(m)	(cum)	(T)
I Year	During this year, only construction of mine road, installation of infrastructure, etc. will be carried out					
II Year	955	X – X'	160	150	24,000	60,000
III Year	945	X – X'	290	150	43,500	1,08,750
IV Year	905	Y – Y'	230	200	46,000	1,15,000
V Year	900	Y – Y'	116	200	23,200	58,000
	947	Z – Z'	148	150	22,200	55,500
Total		--	--	--	1,58,900	3,97,250

The proposed production of Float ore will be as under:

Year	Area	Depth / thickness of float ore zone	Volume	Net volume considering 25% recovery	Tonnage (B.D.= 3.2)	Volume of waste material
	(sqm)	(m)	(cum)	(cum)	(T)	(cum)
IV Year	12,000	2.0	24,000	6,000	19,200	18,000

Proposed production rate of iron ore during the first five years is tabulated below:

Year	X section line	X-section Area	Influence length	Volume	Recovery of iron ore @90% of ROM	B.D.	Tonnage	Net production	Mining loss @ 10% of the ROM
		(sqm)	(m)	(cum)	(cum)		(T)	(T)	(cum)
I Year	No production will be carried out								
II Year	X – X'	212	150	31,800	28,620	3.2	91,584	91,584	3,180
III Year	X – X'	382	150	57,300	51,570	3.2	1,65,024	1,65,024	5,730
IV Year	Y – Y'	418	200	83,600	75,240	3.2	2,40,768	2,40,768	8,360
V Year	Y – Y'	185	200	37,000	33,300	3.2	1,06,560	3,00,960	3,700
	Z – Z'	450	150	67,500	60,750	3.2	1,94,400		6,750
Total		--	--	277,200	249,480	3.2	7,98,336	7,98,336	27,720

Production of iron ore and generation of OB/waste during the Mining Plan period will be as under:

Year	Production of iron ore				BHQ/waste generated		Ore : OB
	From insitu ore	From float ore	Total production				
	(T)	(T)	(T)	(million tonnes)	(cum)	(T)	
I Year	0	0	0	0	0	0	--
II Year	91,584	0	91,584	0.092	24,000	60,000	1 : 0.66
III Year	1,65,024	0	165,024	0.165	43,500	1,08,750	1 : 0.66
IV Year	2,40,768	19,200	259,968	0.260	46,000	1,15,000	1 : 0.44
V Year	3,00,960	0	300,960	0.300	45,400	1,13,500	1 : 0.38
Total	7,98,336	19,200	817,536	0.817	158,900	3,97,250	--

क्षेत्रिय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो, नागपुर
Indian Bureau of Mines, Nagpur

Geo Solutions (P) Ltd
RQP/NGP/427/2011/B

Shalabh Saha
Authorized signatory

पत्र संख्या द्वारा
UMR LETTER No NPR/FF/MPLN-1159/NGP dt 21/3/2016

c) **Enclosed individual year-wise development plans and sections showing pit layouts, dumps, stacks of mineral reject, if any, etc, in case of 'A' category mine. Composite development plan showing pit layouts, dumps, stacks of mineral reject, if any, etc, and year-wise sections in case of 'B' category mines.**

The development and production plans for year-wise have been prepared on a scale of 1:2,000 and enclosed as **Plate No. VI B to VI E.**

The year-wise development and production sections has been prepared on a scale of 1:2,000 and enclosed as **Plate No. VI A.**

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d) **Describe briefly giving salient features of the proposed method of working indicating category of mine.**

The method of mining will be open cast mechanized method under category 'A' by using DTH drills of 100 mm dia for drilling and sub-sequent blasting.

e) **Describe briefly the layout of mine workings, pit road layout of faces and sites for disposal of overburden/ waste alongwith ground preparation prior to disposal of waste, reject etc. A reference to the plans and sections may be given. UPL or ultimate size of pit is to be shown for identification of the suitable dumping.**

During the production of insitu ore area, the generated BHQ/ waste rocks will be dumped on the western side of the lease area with dump height of 6 m with two tire dumping.

Year	Top soil cu m	Sub-grade ore	Mineral rejects	OB (BHQ) (cum)	Net volume 20% extra as swell factor (cum)	Height of the dump (m)	Area required for dumping (sqm)

I YEAR	NIL	NIL	NIL	0	0	--	--
II YEAR	NIL	NIL	NIL	24,000	28,800	6	4,800
III YEAR	NIL	NIL	NIL	43,500	52,200	6	8,700
IV YEAR	NIL	NIL	NIL	46,000	55,200	6	9,200
V YEAR	NIL	NIL	NIL	45,400	54,480	6	9,080
Total	NIL	NIL	NIL	1,58,900	190,680	6	31,780
						Say	3.178 Ha

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During the iron ore extracted from the float ore zone, the generated waste rocks will be dumped near the haulage road and in future this will be dozed off in the mined out pit.

Year	Generated waste (cum)	Net volume 20% extra as swell factor (cum)	Height of the dump (m)	Area required for dumping (sqm)	Area required for dumping (Ha)
IV YEAR	18,000	21,600	3	7,200	0.720

Thus, total area required for dumping of waste will be 3.178 + 0.720 = 2.098 Ha.

f) **Conceptual Mine Planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections.**

The mineable reserves of iron ore is 1.0116 million tonnes, the annual maximum production rate of 0.300 million tonnes and the life of the mine will be about 6 years.

But, after completion of proposed boreholes, the reserves of iron ore will likely to increase and accordingly the life of the mine will get increased.

Presently, the conceptual plan has been prepared on the basis of this mineable reserve. Conceptual Plan is enclosed as Plate no.- VII and Its sectional plan is in Plate no.-VII A.

(i) Conceptual Exploration.

After the completion of proposed drilling during this plan period, the configuration of the ore body / zones will be precisely determined, at that time whether further drilling, if required, will be ascertained.

(ii) The conceptual mine development.

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Presently, the area is a virgin land.

During this first five years of the mining plan period, 6.73 Ha area will be required for working upto bottom RL of 900 m.

Upto conceptual period additional 0.2 Ha area will be broken, thus the ultimate pit limit will be 6.93 Ha and the maximum depth of the pit will be upto level of 900 mRL.

(iii) Final slope of the faces.

The bench height will be kept as 5 m and width will be 10 m, thus the pit slope will be below 45^0.

(iv) Conceptual OB/waste dumps management.

During this plan period, the generated BHQ/ waste rocks will be dumped on the north-western side of the lease area with dump height of 6 m, covering an area of 3.178 Ha.

Out of this, about 18,000 cum waste material will also be generated, this will be temporarily dumped near the haulage road covering an area of 0.72 Ha with 3 m height, thus totally 2.098 Ha area will be covered by waste dumps.

Thereafter upto conceptual period, the generated waste will be about 30,000 cum this will be dumped near the earlier dumps with a height of 6 m.

Year	Generated waste (cum)	Net volume 20% extra as swell factor (cum)	Height of the dump (m)	Area required for dumping (sqm)	Area required for dumping (Ha)
Conceptual	30,000	36,000	6	6,000	0.600

Thus, total dump area will be 2.098 + 0.600 = 2.698 Ha

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(v) Afforestation.

The plantation program will be taken up within the 7.5 m of non-mining zone @ of 2,500 saplings per hectares. For this, selected fast-growing types of special variety of species in consultation with Horticulture department will be planted. Year-wise plantation will be as under:

Year	Nos. of saplings	Area required (Ha)	Remarks
I Year	2,350	0.940	Within the 7.5 m zone
II Year	2,350	0.940	Within the 7.5 m zone
III Year	2,350	0.940	Within the 7.5 m zone
IV Year	2,350	0.940	Within the 7.5 m zone
V Year	2,350	0.940	Within the 7.5 m zone
Total	**11,750**	**4.700**	--

(vii) Conceptual reclamation and rehabilitation of the worked out area.

Since the mining will be carried out by top slicing method, due to mining the height of the hill will be reduced and a major pit will be converted into pit and some part will be converted as working faces and will be part of hill slopes. The mined out area cannot be reclaimed through backfilling and major pit will be converted into water reservoir.

(viii) Post mining land use envisaged.

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	Description	*Area in Hectares*			
		Present	Additional area required during this plan period	End of the 5 year	End of the conceptual period
1	Area under Pits	Nil	6.730	6.730	6.930
2	Area under roads	Nil	2.480	2.480	2.480
3	Area under infrastructure/ C&S Plant	Nil	0.31	0.31	Nil
4	Area under top soil Dump	Nil	Nil	Nil	Nil
5	Area under Storage	Nil	Nil	Nil	Nil
6	Area under BHQ Waste Dump	Nil	2.098	2.098	2.698
7	Area under Plantation	Nil	4.700	4.700	4.700
	Total	**Nil**	**16.318**	**16.318**	**17.118**

g) **Extent of mechanization: Describe briefly with calculation for adequacy and type of machinery and equipment proposed to be used in different activities of drilling, material handling in development, surface transportation and any other operation.**

Salient features of Mining:

1	Type of ore to be mined out	Iron ore
2	Method of Mining	Opencast fully mechanized
3	Machineries used	Dozer with ripper, wagon drill (100 mm dia), hydraulic rock breaker, shovel and dumpers
4	Maximum production (in a year)	3,00,000 Tonnes
5	Average working days in a year	280 days
6	Max. Production per day	1,071 Tonnes

The required mining machineries will be as follows:

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Drilling: Total requirement of drilling equipments is as under:

S. No.	Particulars	Iron ore	OB/waste
1	Maximum proposed annual production Ore 3,00,000 T OB/ waste 46,000 x 2.5 = 1,15,000 T	3,00,000 T	1,15,000 T
2	Production per day (For ore: 3,00,000/ 280 day= 1,071.43 T) (For OB/waste: 1,15,000 / 280 day = 410.71 T)	1,072 T	Say 411 T
3	Output per hole = Spacing × Burden × depth 2.8 m × 2.7 m × 5.0 m = 37.8	38 cum	38 cum
4	Output per hole in tonnes (For ore: 38 x 3.2 (B.D.) = 121.6 T) (For OB/waste: 38 x 2.5 (B.D.) = 95 T)	122 T	95 T
5	Nos. of holes required per day (For ore: 1,072 / 122 = 8.79) (For OB/waste: 411 / 95 = 4.32)	Say 9 nos.	Say 5 nos.
6	Drill meterage required day including 10% as perihole	Say 50 m	Say 28 m

	(For ore: 9 × 5.5 = 49.5 m) (For OB/waste: 5 × 5.5 = 27.5 m)		
8	Total drilling meterage required per day	78 m	
9	Drilling capacity of a wagon drill in a hour	6 m	
10	Hours per day	8 hours	
11	Availability x Utilization x Operating efficiency	50%	
12	Thus, the effective hours per day	4 hours	
13	Working capacity of drill machine per day 4 × 6 m = 24 m	24 m	
14	Therefore no. of wagon drill required (78/ 24 = 3.25)	Say 4 nos.	

Requirement of shovel / excavator for removal of ore and OB/waste. अनुमोदित APPROVED

		Iron ore	OB /waste
1	Annually excavated (in cum)	94,000	46,000
2	Total excavation (in cum)	1,40,000	
3	No. of working days per year	280 days	
4	Production/ development in a day (1,40,000/ 280 = 500)	500 cum	
5	Bucket capacity	1.6 cum	
6	Hourly production of a shovel (Ah) = (Capacity x Fill Factor x Passes/hr x Cycle time in seconds Ah = (1.6 x 0.8 x 60) = 76.8 cum	76.8 cum	
7	Effective working hours in a day	4 hours	
8	Working capacity of a excavator in a day 76.8 X 4 = 307.2 cum	307 cum	
9	Nos. of excavator required (500 / 460 = 1.63)	Say 2 nos.	

Haulage and Transporting: For transportation of loadable sized ore from pithead to C & S plant and BHQ/ waste to the dump yard, 20 tonner dumpers will be utilized.

		ROM	OB/waste
1	production / excavation during a year	3,00,000 T	1,15,000 T
2	Production per day (For ore: 3,00,000/ 280 day= 1,071.43 T) (For OB/waste: 1,15,000 / 280 day = 410.71 T)	1,072 T	Say 411 T
3	Total material to be transport per day	1,483 T	
4	Dumper capacity	20 T	
5	One dumper can carry (as safety measures)	18 T	
6	Dumper placement time at loading point	1 minute	
7	Loading time per dumper	2 minute	
8	Average haul distance (to & fro) per trip	2.5 km	
9	Unloading time at crusher / OB dump	2 minutes	
10	Average hauling time (to & fro) per trip	30 minutes	
12	Per hour capacity of dumper (18 x 2 = 36 T)	36 T/hours	
13	Working time in a day	8 hours	
14	Utilization, availability & operating efficiency of equipment	75%, 90% & 90%	
15	Hours available per dumper in a year (8 x 0.75 x 0.90 x 0.90 = 4.86)	Say 5 hours	
16	One tipper can transport material in a day 36 x 5 = 180 T	180 T	
17	Total requirement of dumpers (1,483 / 180 = 8.23 nos.+ 2 nos. as standby)	Say 10 nos.	

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Total equipments required for the mine are as under:

S. No.	Name	Capacity/ make	Nos.	Purpose	Motive Power
1	Wagon drill	100 mm	04	For drilling of ore and OB(BHQ)	Diesel engine
2	Hydraulic excavator	PC 300	02	For excavation of ore and OB(BHQ) and loading into dumpers	Diesel engine
3	Hydraulic rock breaker	Attached with PC 200	02	For breaking oversized boulders to loadable size	Diesel engine
4	Dozer (small)	BEML-80	02	For dozing of loose material and levelling of mining site before drilling	Diesel engine
5	Dumper	20 tonne	10	For transportation of ore and OB(BHQ)	Diesel Engine
6	Diesel Tanker	2000 liters	1	For filling diesel to different equipments	Diesel Engine
7	Water Tanker	10000 ltr	1	For sprinkling water on quarry road	Diesel Engine
8	Service-Van (well-equipped)	-	1	For repairs / maintenance of machines.	Diesel Engine

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BLASTING.

During the blasting, all Rules, Regulations and Precautionary measures will be taken. The blasting area will be covered by red flags at appropriate safety distance. Operators and workers will be removed to safety distance and blasting will be conducted by a qualified /certified blaster. Blasting will be preferably carried out in early morning or in the afternoon at lunch break. The mining lease area is much away from the village abadi and unauthorized entry will not be permitted during the blasting period.

Broad Blasting Parameters is as under:

(i) The blasting will be done twice/thrice in a week with delay detonators.

(ii) The blasting will be carried out around 7 AM or during the rest hours of 2 to 2.30 PM for safety.

(iii) Preferably wet drilling will be carried out for suppressing dust and muffle blasting for suppression of noise.

(iv) All precautions for blasting and safety measures will be taken at the time of blasting and will be carried out by qualified/certified blaster.

(v) During blasting, the safety zone of 750 m will be barricaded by red flags so that unauthorized entry in the blasting zone is checked.

(vi) During blasting, all the workers will be take shelter in safety shed and blasting will be carried out by qualified blaster.

(vii) All safety measures as stipulated in MMR 1961 will be strictly adhered to during blasting.

Broad blasting parameters like charge per hole, blasting pattern, charge per delay, maximum number of holes blasted in a round, manner and sequence of firing, etc.

Blasting will be carried out by contractual agency in accordance with the Explosive Act and MMR, 1961. Drilling is proposed to be done by wagon drill. The drilling parameter will be as under:

Diameter of the hole	100 mm
Average depth of the hole	5.5 m
Spacing	2.8 m
Burden	2.7 m
Volume of ROM = 2.8 x 2.7 x 5 = 37.8 cum x 3.2 (B.D.) = 120.96 say 121 T	121 T
No. of holes per day	14 nos.
Charge per hole	16.68 kg
Max. charge per day (16.68 × 27 = 233.52 kg)	Say 234 kg
Powder Factor = quantity per hole / charge per hole = 121 / 16.68 = 7.25	7.25 T / Kg

The blasting will be carried out by 80% special gelatin.

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OR

If the cartridges are used for blasting 100 mm dia hole, the specification of cartridge for blasting will have the following parameters:

Diameter of cartridge	83 mm
Length of the cartridge	515 mm
Weight of the cartridge	2.78 kg
No. of cartridges required per hole 16.68 / 2.78 = 6	6 nos.

Type of explosives used / to be used.

For blasting gelatin 80% strength with safety fuse and detonator will be used as per requirement OR explosive cartridge as mentioned above will also be used with safety fuse and detonator.

Whether secondary blasting is needed, If so describe it briefly.

No secondary blasting will be required. The large sized boulders will be broken to loadable size by hydraulic rock breaker.

Blasting Block and commutation Pattern.

Blasting will be carried out in single /multi row blasting pattern.

Storage of explosive (like capacity and type of explosives (like capacity and type of explosive magazine)

The blasting will be done by contractual agency, hence, storage of explosive is not required.

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3. MINE DRAINAGE

a) **Minimum and maximum depth of water table based on observations from nearby wells and water bodies.**

The lease area is on the top of the hill, the lowest altitude of the mining lease is 830 mRL and the highest altitude is 960 mRL above mean sea level. The general ground level is about 540 m near the village settlements of Madamnar (far away from the lease area).

As observed from nearby wells, the water table is about 10 m below from the general surface level.

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b) **Indicate maximum and minimum depth of working.**

The working expected to be upto a level of 905 m during this first five years and 900 m upto conceptual period, which will be much above from the general surface level as well as ground water level.

c) **Quantity and quality of water likely to be encountered, the pumping arrangement and places where the mine water id finally proposed to be discharge.**

During the rainy season, the rain water accumulated in mining pit will be pumped out by deploying 5 HP water pump. This rain water will be accumulated in sump and analysed before pumped out.

d) **Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.**

There is no local water source of importance passing through the area or nearby the area except seasonal nalas which are activated only during the rainy seasons and remain dry in other seasons.

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4. STACKING OF MINERAL REJECT/ SUB-GRADE MATERIAL AND DISPOSAL OF WASTE

a) **Indicate briefly the nature and quantity of top soil, overburden/ waste and Mineral reject to be disposed off.**

During the mining of insitu iron ore zone: The nature of overburden material includes BHQ and ferruginous shaly BHQ rocks, it is occurring on the both the sides of the ore body which has to be drilled and blasted separately.

The Fe-content of BHQ will be determined by taking representative samples during drilling. If the Fe-content is +45% and above (threshold value), the same will be stacked separately for future blending and if Fe-content in BHQ is much below the threshold value, it can be treated as waste rock.

During the extraction of float ore: The generated waste will be about 75% of the total excavation.

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Total generation of BHQ/waste during the Mining plan period will be as under:

Year	Top soil	Sub-grade ore	Mineral rejects	OB/ Waste from insitu ore zone (cum)	Waste from float ore zone (cum)
I YEAR	NIL	NIL	NIL	0	0
II YEAR	NIL	NIL	NIL	24,000	0
III YEAR	NIL	NIL	NIL	43,500	0
IV YEAR	NIL	NIL	NIL	46,000	18,000
V YEAR	NIL	NIL	NIL	45,400	0
Total	NIL	NIL	NIL	158,900	18,000

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

In insitu ore zone: During this Mining plan period, the generated BHQ (waste) will be dumped near the western lease boundary on the non-mineralized zone upto a height of 6 m. These dumps will be covered by fast-growing grass and shrubs and protected by retaining wall & garland drain, if required. The year-wise dumping is as under:

Year	Top soil cu m	Sub-grade ore	Mineral rejects	OB (BHQ) (cum)	Net volume 20% extra as swell factor (cum)	Height of the dump (m)	Area required for dumping (sqm)
I YEAR	NIL	NIL	NIL	0	0	--	--
II YEAR	NIL	NIL	NIL	24,000	28,800	6	4,800
III YEAR	NIL	NIL	NIL	43,500	52,200	6	8,700
IV YEAR	NIL	NIL	NIL	46,000	55,200	6	9,200
V YEAR	NIL	NIL	NIL	45,400	54,480	6	9,080
Total	NIL	NIL	NIL	1,58,900	190,680	6	31,780
						Say	3.178 Ha

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During the iron ore extracted from the float ore zone, the generated waste rocks will be dumped near the haulage road and in future this will be dozed off in the mined out pit.

Year	Generated waste (cum)	Net volume 20% extra as swell factor (cum)	Height of the dump (m)	Area required for dumping (sqm)	Area required for dumping (Ha)
IV YEAR	18,000	21,600	3	7,200	0.720

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Thus, total area required for dumping of waste will be 3.178 + 0.720 = 2.098 Ha.

c) **Attach a note indicating the manner of disposal of waste, configuration and sequence of year-wise buildup of dumps alongwith the proposals for protective measures.**

These dumps will be covered by grass and shrubs and protected by retaining wall & garland drain.

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5. USE OF MINERAL AND MINERAL REJECT

The following are to be furnished in the interest of mineral conservation.

a) **Describe briefly the requirement of end-use industry specifically in terms of physical and chemical composition.**

The iron ore of the mine is for captive use in the steel plant of the company located at Urla, Raipur. There is no change in use of mineral.

The specification for iron ore is given below.

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Constituent	Grade			
			Lumps	Fines
(i) Size Range	0-100 mm	-6 mm		
(ii) Principal Constituents	Fe - +45.00%	Fe – +45.00%	Fe 55% to 65%	-60%
(iii)Subsidiary Constituents	SiO_2, - 1 to 10% Al_2O_3 –0.9 to 1.2 %	SiO_2, - 1 to 10% Al_2O_3 – 0.9 to 1.2%	SiO_2 - 1-4%	SiO_2-0.8-1.2%

The ore available in the captive mine meets the chemical and physical requirements and will be used in their steel plant.

b) **Give brief requirement of intermediate industries involved in up-gradation of mineral before its end-use.**

There is no sub-grade material in the mine, if some sub-grade material will be encountered above the threshold value of +45% Fe-content (sub-grade ore) will be blended with high grade ore.

The BHQ which is occurring on the both the sides of the ore body will require to be removed for mining the ore, the BHQ being hard need drilling and blasting, during drilling a few random samples will be collected for analyzing Fe-content. The BHQ below the threshold

value of 45% Fe will be treated as waste and BHQ above the threshold value will be considered for future blending and will be stacked separately.

c) **Give detail requirements for other industries, captive consumption, export, associated industrial use etc.**

The iron ore produced from the mine will be captive use at Steel Plant at Urla, Raipur.

d) **Indicate precise physical and chemical specification stipulated by buyers.**

No physical specification stipulated by industries. The chemical specification is given earlier.

e) **Give details of processes adopted to upgrade the ROM to suit the user requirements.**

Not applicable.

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6. PROCESSING OF ROM AND MINERAL REJECT

If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing/ beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc.

There is no mineral rejects or sub-grade mineral, hence beneficiation will not be required. Only sizing will be carried out in C & S plant, The sizes produced from screening plant as per requirement of the steel plant are, -5 mm, 5 to 10 mm, 10 to 20 mm and 20 to 40 mm.

Give a material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery, and its grade at each stage of processing.

Not applicable, since there will no processing of material.

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Explain the disposal method for tailing or reject from the processing plant.

Not applicable, since there will no tailing pond.

Quantity and quality of tailing /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam.

Not applicable, since there will no tailing pond.

Specify quantity and type of chemicals if any to be used in the processing plant.

Not applicable, since there will no processing plant.

Specify quantity and type of chemicals to be stored on site / plant.

Not applicable.

g) Indicate quantity (cum per day) of water requirement for mining and processing and sources of supply of water, disposal of water and extent of recycling. Water balance chart may be given.

The quantity of water requirement per day is tabulated below as water balance chart.

Water balance chart

Water sources		
water tank (53 KL/D)		
Dust suppression	Green Belt	Domestic use
40 KL/D	5 KL/D	8 KL/D

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7.0 OTHER

Describe briefly the following:

a) Site services:

A temporally office, maintenance room, chemical laboratory and other temporally infrastructure facilities will be provided within the mine.

A crushing and screening plant will also be installed within the mine area.

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b) Employment potential:

Man power deployed for mining operations at the mine will be as under:

Category	Qualification	Nos.
Mine Manager	First class cert. holder	1
Mining Engineer	B.E. Mining	1
Geologist (inchange for chemical lab and quality control)	M.Sc./M.Tech. Geology	2
Mining Foreman	Forman-certificate holder	3
Safety and Environment officer	Experienced	1
Mining Mate	Mining mate with first aider certificate holder	3
Surveyor	Surveyor certificate holder	2
Blaster	Blaster certificate holder	1
Mechanical engineer	Qualified	1
Forman Mechanical	Experienced	1
Asst. chemist (for chemical lab.)	Qualified	1
Lab attended	Experienced	2

Mechanic / electrician	Experienced	3
Fitter (Mechanical / electrical)	Experienced	3
Shovel operator	Experienced	2
Dozer operator	Experienced	2
Wagon drill operator	Experienced	4
Hydraulic rock breaker operator	Experienced	2
Dumper driver	Experienced	10
Helpers	Experienced	10
Watchman /Guards	Experienced	6
Office staff (Clerical, Accounts, Stores)	Experienced	5
Semiskilled/ Unskilled labours (mining & allied activities)	-- अनुमोदित APPROVED	75
Total	--	141

Note: The mining will be carried out by mechanized method, hence the semiskilled/unskilled labours will be employed for mining of float ore and allied activities, like reclamation of mined out land after float ore mining, plantation, road-making and maintenance, office peon, store-hand, etc.

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8.0 PROGRESSIVE MINE CLOSURE PLAN UNDER RULE 23 OF MCDR'1988

8.1 Environment Base line information: Attach a note on the status of baseline information with regard to the following.

Baseline Information: (Source: field observation during prospecting).

(i)	**Existing Land use Pattern indicating area already degraded due to quarrying / pitting, dumping, roads, Processing plant, work-shop, township etc.**	Area cover under pits - nil Area cover under dumps - nil Area cover under roads - nil Area cover under buildings - nil
(ii).	**Water regime**	There is no water regime in and nearby the lease area. The water table is about 10 m below from the general surface level (as observed in the nearby wells) and mining will be restricted very much above from the general surface level, hence no ground water will be encountered during mining. Prior permission will be obtained from the competent authority for drawl of ground water, if any.
(iii)	**Flora and Fauna**	The Flora and Fauna available in the forest and villages are as under (As reported by local villagers): Flora: Sal, Teak, Tendu, Bamboo, Girchi, Char, Dhaura, Karra, Saja, Bija, etc. Fauna: Jackal, Fox, Monkey, Crow, Rat, Langoor, Snake, Neola, etc.

		During the process of Forest clearance, if required the proposal for restoring of fauna and flora will be made as per the guidelines of MoEF and Forest conservation Act.
(iv)	**Quality of air**	Since the area is a virgin land, there is no ambient air quality change and all pollutant parameters is within the stipulated standards of CPCB.
(v)	**Ambient Noise level**	The ambient noise level is very well within the limit. The noise level will get increased through operation of dozer, dumpers, shovel, drilling, blasting and transportation.
(vi)	**Quality of Water**	The area has no perennial nala and the ground water will not be encountered during mining, hence, there will be no impact on water regime due to mining operation.
(vii)	**Climatic condition**	Climate of this area is tropical. During peak summer the temperature rises to Maximum 46^{0}C during May, while winter temperature falls down to 10^{0}C during Jan. & Dec. The rain fall is confined to the rainy season from July to September and the annual rainfall is av. 1250 mm.
(viii)	**Human settlements**	The area is moderately populated and average density per km is also low. The main source of income of the local people is from agriculture or forest seed collection. The mining activity will provide employment to local people to some extent. Their main source of entertainment is local festival, folk songs and dances.
(ix)	**Public buildings, places of workshop & monuments.**	None.

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(x)	Indicate any sanctuary is located in the vicinity of leasehold.	None.

8.2 Impact Assessment: Attach an Environmental Impact Assessment Statement describing the impact of mining and beneficiation on environment on the following:

(i) Land area indicating the area likely to be degraded due to quarrying / pitting, dumping, roads workshop, processing plan, township etc.

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The land use upto life of the mine will be as under:

	Description	Area in Hectares			
		Present	Additional area required during this plan period	End of the 5 year	End of the conceptual period
1	Area under Pits	Nil	6.730	6.730	6.930
2	Area under roads	Nil	2.480	2.480	2.480
3	Area under infrastructure/ C&S Plant	Nil	0.31	0.31	Nil
4	Area under top soil Dump	Nil	Nil	Nil	Nil
5	Area under Storage	Nil	Nil	Nil	Nil
6	Area under BHQ Waste Dump	Nil	2.098	2.098	2.698
7	Area under Plantation	Nil	4.700	4.700	4.700
	Total	**Nil**	**16.318**	**16.318**	**17.118**

(ii) Air Quality	Due to various activities of mining operations, like drilling, blasting, loading and transportation, emission of some amount of noxious gases are likely to be generated. All existing dust control measures will be taken like wet drilling, water spraying on haul roads and on blasted mass and plantation of trees along 7.5 m of non-mining zone and hence, the air quality will likely be well within prescribed limits.
(iii) Water Quality	The area has no perennial nala, hence, there will be no impact on water regime due to mining operations. The ultimate pit depth will be much above from the general ground level, as such there will be no adverse effect in ground water regime.
(iv) Noise levels	The noise level will get increased during the operations of dozer, dumpers, shovel, drilling, blasting, excavation and transportation of the ore and OB. All necessary precautions will be undertaken to minimize the noise level. However, the noise level will be controlled by using muffle blasting and by using delay detonator. The periodical maintenance of the equipments will be carried out to minimize the noise level. However, a green belt will be constructed within the 7.5 m of non-mining zone by plantation so as to further reduce the noise level.
(v) Vibration level (due to blasting)	By using muffle blasting, the ground vibration level will have no adverse effect in the neighboring villages.
(vi) Water regime	Except during the rainy season, there will be no accumulation of water. During the rainy season the accumulated water will be pumped out for further mining.
(vii) Acid Mine drainage	There is no acid mine drainage
(viii) Surface subsidence	After exhaustion of entire mineable iron ore, the mined out pit will be converted into water reservoir.
(ix)Socio-Economics	There will be no adverse impact on socio- economics and demography. On the other hand, mining activities will give the employment opportunities to local villagers thus, improving their socio-economic condition.
(x) Historical-Monuments	None.

8.3 Progressive reclamation Plan:

To mitigate the impacts and ameliorate the condition, describe year wise steps proposed for phased restoration, reclamation of lands already/to be degraded in respect of following items separately for 5 years period.

8.3.1. Mined-Out Land: Describe the proposals to be implemented for reclamation and rehabilitation of mined-out land including the manner in which the actual site of the pit will be restored for future use. The proposals may be supported with yearly plans and sections depicting yearly progress in the activities for land restoration/ reclamation/rehabilitation, afforestation etc, called "Reclamation Plan".

The question of reclamation and rehabilitation of mined out land does not arise at this stage. After the exhaustion of iron ore upto economic depth the pit will be converted into for water tank for irrigation. The worked out pit will be properly fenced by barbed wire as a safety measure.

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Plantation Programme- The plantation program will be taken up within the 7.5 m of non-mining zone @ of 2,500 saplings per hectares. For this, selected fast-growing types of special variety of species in consultation with Horticulture department will be planted. Year-wise plantation will be as under:

Year	Nos. of saplings	Area required (Ha)	Remarks
I Year	2,350	0.940	Within the 7.5 m zone
II Year	2,350	0.940	Within the 7.5 m zone
III Year	2,350	0.940	Within the 7.5 m zone
IV Year	2,350	0.940	Within the 7.5 m zone
V Year	2,350	0.940	Within the 7.5 m zone
Total	**11,750**	**4.700**	--

Shalabh Saha
Authorized signatory

8.3.2 Topsoil Management: The topsoil available at the site and its utilization may be described.

The occurrence of the topsoil/lateritic soil in the mine is very insignificant and is encountered very thinly in between rocks and boulders. However, during mining this soil will be preserved and utilized for plantation purpose.

8.3.3 Tailings Dam Management: The steps to be taken for protection and stability of tailing dam, stabilization of tailing material and its utilization, periodic desilting measures to prevent water pollution from tailings etc, arrangement for surplus water overflow along with detail design, structural stability studies, the embankment seepage loss into the receiving environment and ground water contaminant if any may be described.

Since there will be no beneficiation plant, the question of tailing dam management does not arise.

8.3.4 Acid mine drainage, if any and its mitigative measures.

There is no potential acid mine drainage, since the water is potable.

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8.3.5 Surface subsidence mitigation measures through backfilling of mine voids or by any other means and its monitoring mechanism.

The information on protective measures for reclamation and rehabilitation works year wise may be provided as per the following table.

SUMMARY OF YEARWISE PROPOSAL FOR ITEM NO. 8.3

Items	Details	Proposed	Actual	Remarks
Dump management	Area afforested (ha)			
	No of saplings planted			
	Cumulative no of plants			
	Cost including watch and care during the year			
Management of worked out benches	Area available for rehabilitation (ha)			
	Afforestation done(ha)			
	No of saplings planted in the year			

	Cumulative no of plants			
	Any other method of rehabilitation (specify)			
	Cost including watch and care during the year			
Reclamation and Rehabilitation by backfilling	Void available for Backfilling (L x B x D) pit wise /stope wise			
	Void filled by waste /tailings			
	Afforestaion on the backfilled area			
	Rehabilitation by making water reservoir			
	Any other means (specify)			
Rehabilitation of waste land within lease	Area available (ha)			
	Area rehabilitated			
	Method of rehabilitation			
Others (specify)				

अनुमोदित
APPROVED

8.4 Disaster Management and Risk Assessment: This may deal with action plan for high risk accidents like landslides, subsidence flood, inundation in underground mines, fire, seismic activities, tailing dam failure etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authority may also be described.

The applicant company is capable of taking all the necessary measures to meet any eventually & assistance required from the local authorities.

The Iron ore mining will be done on the hill. Seismically this area is in-active and not prone to earth quakes.

However, due to sudden unforeseen eventualities, immediate information will be passed to District Administration, Police, Fire Brigade and Media for necessary assistance and relief measure to mitigate the situation. Adequate communication facilities will be developed by providing Mobile phones. Mock rehearsal for emergency preparedness will be carried out at regular intervals.

8.5 Care and maintenance during temporary discontinuance: An emergency plan for the situation of temporary discontinuance due to court order or due to statutory requirements or any other unforeseen circumstances may indicate measures of care, maintenance and monitoring of status of discontinued mining operations expected to re-open in near future.

An emergency plan for temporary discontinuation or incomplete programme due to court order or due to statutory requirement will be drawn up and executed depending upon the situation. Since the mining is not hazardous, the situation for emergency plan is evinced.

However, in case of any unforeseen circumstances, causing temporary discontinuance, the machineries will be withdrawn to a safer place and the working and other facilities would be protected by deploying adequate number of security guards.

However following steps will be taken during temporary discontinuance of the mine.

1. Fencing all around the dangerous pit if any.
2. Security Guards will be posted at strategic locations.
3. Proper care of plantation area will be taken.
4. Periodical inspection by competent person will be done.

अनुमोदित
APPROVED

Notices and Returns will be submitted as per Rules, Regulations and Act.

8.6 Financial Assurance: The financial assurance can be submitted in any encashable form preferably a Bank Guarantee from a Scheduled Bank as stated in Rule 23(F)(2) of Mineral Conservation and DevelopmentRules,1988 for five years period expiring at the end of validity of the document. The amount calculated for the purpose of Financial Assurance is based on the CCOM's Circular no. 4 dated 2006 as below.

The Financial Assurance in the form of Bank Guarantee of ₹ 4,07,950/- in favor of the Regional Controller of Mines, Indian Bureau of Mines, Nagpur region will be submitted before the execution of the mining lease.

Table showing the area "put to use" area to be reclaimed and financial assurance to be paid

S. No.	Head	Area put On use at the start of the plan (Ha)	Additional Requirement during plan Period (Ha)	Total (Ha)	Area considered As fully reclaimed & Rehabilitated (Ha)	Net area Considered for Calculation (Ha)
		A	B	C=(A+B)	D	E=(C-D)
1	Area under mining	Nil	6.730	6.730	Nil	6.730
2	Storage for top soil dump	---	---	---	---	---
3	OB/waste dump site	Nil	2.098	2.098	Nil	2.098
4	Mineral storage	---	---	---	---	---
5	Infrastructure, workshop, administrative building etc.	Nil	0.310	0.310	Nil	0.310
6	Roads	Nil	2.480	2.480	Nil	2.480
7	Railways	---	---	---	---	---
8	Tailing pond	---	---	---	---	---
9	Effluent treatment plant	---	---	---	---	---
10	Mineral separation plant	---	---	---	---	---
11	Township area	---	---	---	---	---
12	Green Belt	Nil	4.700	4.700	Nil	4.700
13	Others to specify	---	---	---	---	---
	Grand Total	**Nil**	**16.318**	**16.318**	**Nil**	**16.318**

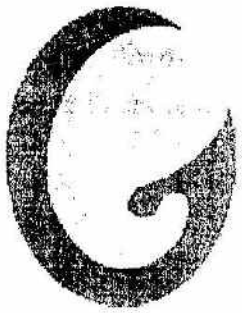
APPROVED

Amount of Financial Assurance will be 16.318 Ha × ₹ 25,000/- = ₹ 4,07,950/-.

* * * * *

Regional Controller
Indian Bureau of Mines

ANNEXURES



SHRI BAJRANG
POWER & ISPAT LTD.
GOEL

Regd. Office / Works : Vill. Borjhara, Urla-Guma Road, Urla, Raipur 493 221 (C.G.) Ph. : (0771) 4288019 / 29 / 39
Fax : (91-771) 2323601 / 602, 4288123, E-mail : info.bjr@goelgroup.co.in, commercial.bjr@goelgroup.co.in
CIN No. : U27106CT2002PLC015184

APPROVED

CONSENT LETTER

The **Mining Plan** in respect of **Chhotedongar Iron Ore Deposit** over an area of 57 **Ha** in Forest Range – Chhotedongar, Tehsil & District – Narayanpur (Chhattisgarh) applicant M/s Shri Bajrang Power & Ispat Ltd., Raipur to fulfill the requirement of Rule 22 (4) of MCR 1960 for approval, has been prepared by ***Geo Solutions (P) Ltd.,*** RQP/NGP/427/2011/B.

This is to request the Regional Controller of Mines, Indian Bureau of Mines, Nagpur Regional Office, to make any further correspondence regarding any correction of the Mining Plan with the said recognized firm at the address below.

Geo Solutions (P) Ltd.
HIG – 21, HUDCO Colony, Amdi Nagar
Bhilai, District – Durg (C.G.) 490009

I hereby undertake that all the modifications/ updating as made in the said Mining Plan by the said recognized person may be deemed to have been made with my knowledge and consent and shall be acceptable to me on binding in all respects.

Place: Raipur

Date: 30/03/15

(Nominated Owner)

SHRI BAJRANG
POWER & ISPAT LTD.
GOEL
Regd. Office / Works : Vill. Borjhara, Urla-Guma Road, Urla, Raipur 493 221 (C.G.) Ph. : (0771) 4288019 / 29 / 39
Fax : (91-771) 2323601 / 602, 4288123, E-mail : info.bjr@goelgroup.co.in, commercial.bjr@goelgroup.co.in
CIN No. : U27106CT2002PLC015184

अनुमोदित
APPROVED

UNDERTAKING/ CERTIFICATES

"It is certified that the **CCOM Circular No – 2/2010** will be implemented and complied within the 6 months of opening of Mine.

It is certified that the " Progressive Mine Closure Plan" of **Chhotedongar Iron Ore Deposit** of M/s Shri Bajrang Power and Ispat Ltd, over an area of 57 hectare in Forest Range – Narayanpur, Tehsil & District – Narayanpur (Chhattisgarh) complies with all statutory rules, regulations, orders made by the Central or State Government, Statutory organizations, Court etc. which have been taken into consideration and wherever any specific permission is required I will approach the concerned authorities.

The information furnished in the **Progressive Mine Closure Plan** is true and correct to the best of my knowledge and records.

"The provisions of **Mines Act, Rules and Regulations**" made there under have been observed in the Mining Plan over an area of 57 hectare in District – Narayanpur in Chhattisgarh State belonging to **Chhotedongar Iron Ore Deposit** and where specific permissions are required, the applicant will approach the **D.G.M.S.** further, standards prescribed by **D.G.M.S.** in respect of **Miners Health** will be strictly implemented".

Shravan Kumar Goyal
(Nominated Owner)

Place: Raipur
Date: 30/03/15

Geo Solutions (
HIG-21, Hudco Colony, Amdi Nagar, Bhilai 490009 (C.G.)
☎ 0788-3299582, 3209099, 094251-23191
Email : geosolution@rediffmail.com

Annexure-III

CERTIFICATE FROM RQP

APPROVED

The provisions of the **Mineral Conservation and Development Rules 1988** have been observed in the preparation of the **Mining Plan for Chhotedongar Iron Ore Deposit** over an **area of *57* Ha**, of applicant **M/s Shri Bajrang Power & Ispat Limited,** Raipur (C.G.)- 493221, and whenever specific permissions are required, the lessee will approach the concerned authorities of **Indian Bureau of Mines.**

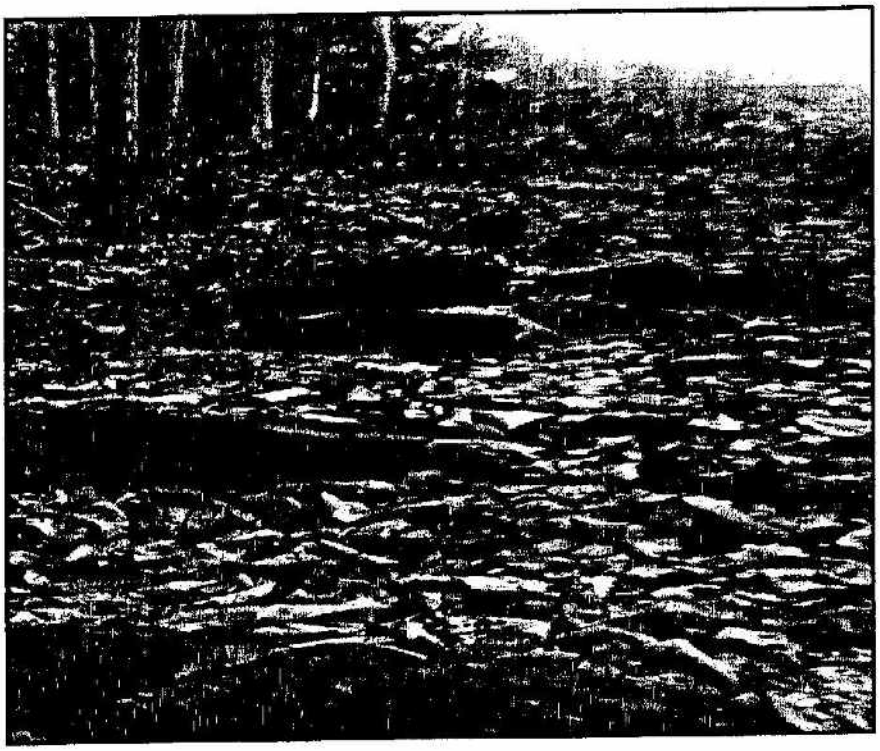
The information furnished in the Mining Plan is true and correct to the best of our knowledge.

Place: Bhilai, (C.G.)

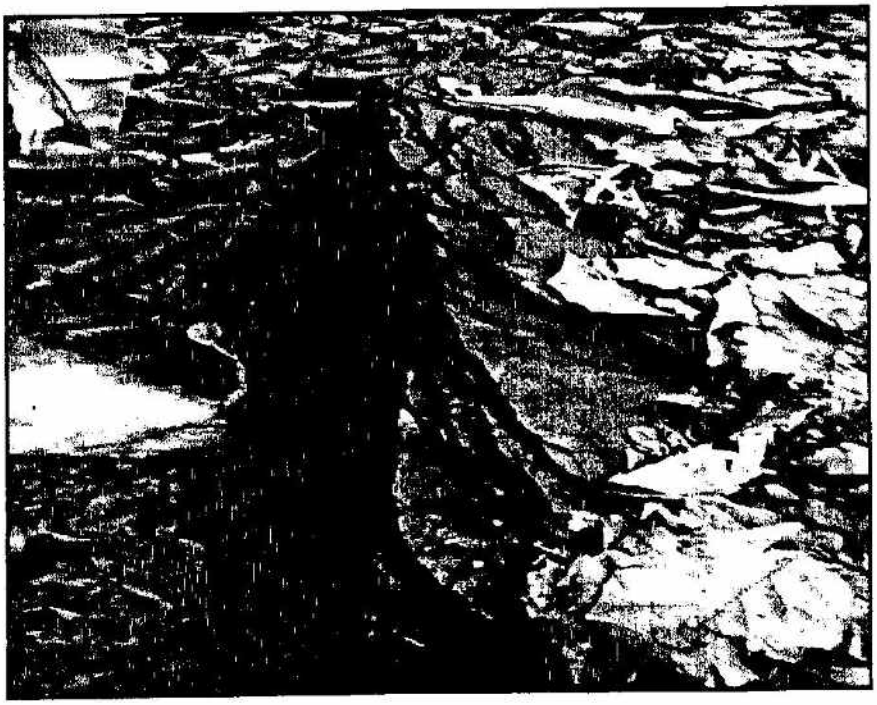
Date:05.03.2016

Shalabh Saha
Geo Solutions P Ltd.
RQP/NGP/427/2011/B

PHOTOGRAPH SHOWING OUTCROPS OF IRON ORE



PHOTOGRAPH SHOWING OUTCROPS OF IRON ORE



Annexure-V

CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE MINING PLANS

(Under Rule 22C of Mineral Concession Rules, 1960)

M/s GEOSOLUTIONS(P) LTD. *having* registered office at HIG - 21, HUDCO COLONY, AMDINAGAR, BHILAI - 490 009, DIST: DURG and *having given satisfactory evidence of the qualifications & experience of their key persons is hereby granted* RECOGNITION *under Rule 22 (C) of the Mineral Concession Rules, 1960 as a Qualified Person to prepare Mining Plans.*

The registration number is **RQP / NGP / 427/ 2011 / B**

This recognition is valid for a period of ten years ending on 14.12.2021.

Furnishing any wrong/false information in the Mining Plan/Scheme of Mining/ Progressive Mine Closure Plan may lead to withdrawal of this certificate.

Authorised Signatory

15.12.11

Regional Controller of Mines
Indian Bureau of Mines
Nagpur

Place : Nagpur
Date : 15.12.2011

Valid Key Person with effect from 15.12.2011

Name of Key Person	Qualification
1. Dr. Manoj Kumar	M.Sc. (Geology)
2. Shri Naveen Tamrakar	M.Sc. (Geology)

Valid key person with effect from05/08/ 2015

	Name of key persons	Qualifications
1)	Shri Naveen Tamrakar	M. Sc. (Geology)
2)	Shri Shalabh Saha	M. Sc. (Geology)

छत्तीसगढ़ शासन
खनिज साधन विभाग,
मंत्रालय
महानदी भवन, नया रायपुर–492 002

क्रमांक एफ 3–23/2010/12 नया रायपुर, दिनांक

प्रति,

कलेक्टर,
जिला–नारायणपुर,
छत्तीसगढ।

विषय:–जिला व तहसील नारायणपुर, ग्राम छोटेडोंगर स्थित वन कक्ष क्रमांक 252, 267, 268 एवं 269 का कुल रकबा 57.00 हेक्टर (वन भूमि) क्षेत्र पर खनिज लौह अयस्क का खनिपट्टा स्वीकृति हेतु–मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमिटेड।

संदर्भ:– इस विभाग का समसंख्यक पत्र दिनांक 24.12.2014.

—:0:—

कृपया संदर्भित पत्र का अवलोकन करें। विभागीय समसंख्यक पत्र दिनांक 24.12.2014 द्वारा जिला व तहसील नारायणपुर, ग्राम छोटेडोंगर स्थित वन कक्ष क्रमांक 252, 267, 268 एवं 269 का कुल रकबा 57.00 हेक्टर (वन भूमि) क्षेत्र पर मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमिटेड के पक्ष में खनिज लौह अयस्क का खनिपट्टा स्वीकृति का सैद्धांतिक निर्णय लेते हुए भारतीय खान ब्यूरों, नागपुर से अनुमोदित मायनिंग प्लान 06 माह के भीतर प्रस्तुत करने हेतु लेख किया गया है।

2/ श्री बजरंग पावर एण्ड इस्पात लिमिटेड ने अपने पत्र दिनांक 06.02.2016 द्वारा अवगत कराया गया है कि उनके पक्ष मे प्रश्नाधीन क्षेत्र पर 30 वर्ष के लिए खनिज आयरन ओर के स्वीकृत खनिपट्टा क्षेत्र के लिए विभागीय समसंख्यक पत्र दिनांक 24.12.2014 में उल्लेखित प्रश्नाधीन क्षेत्र के रकबा, वन कक्ष क्रमांक में तथा उक्त आदेश के साथ सलग्न नक्शे में उल्लेखित प्रश्नाधीन क्षेत्र के. रकबा, वन कक्ष क्रमांक में भिन्नता है। जिसके कारण आई.बी.एम. से माइनिंग प्लान के अनुमोदन हेतु अग्रिम आवश्यक कार्यवाही में कठिनाईयों का सामना करना पड़ रहा है। तत्संबध मे आवेदक कंपनी द्वारा विभागीय पत्र दिनांक 24.12.2014 में उल्लेखित प्रश्नाधीन क्षेत्र के रकबा, वन कक्ष क्रमांक को सलग्न नक्शे में उल्लेखित प्रश्नाधीन क्षेत्र के रकबा, वन कक्ष क्रमांक अनुसार संशोधन किये जाने हेतु अनुरोध किया गया है।

2.1 विभागीय समसंख्यक पत्र दिनांक 24.12.2014 में आवेदित क्षेत्र के वन कक्ष क्रमांक का विवरण निम्नानुसार उल्लेखित है:–

आवेदित क्षेत्र का विवरण	
वन कक्ष क्रमांक	आवेदित रकबा (हेक्टर)
1	2
252	20.00
267	20.00
268	14.00
269	3.00
	57.00

2.2 आवेदक द्वारा प्रस्तुत खनिपट्टा आवेदन दिनांक 08.04.2009 तथा विभागीय पत्र दिनांक 24.12.2014 के साथ सलग्न नक्शे में वन कक्ष क्रमांक का विवरण निम्नानुसार उल्लेखित है:–

आवेदित क्षेत्र का विवरण	
वन कक्ष क्रमांक	आवेदित रकबा (हेक्टर)
1	2
267	20.00
268	20.00
269	14.00
252	3.00
	57.00

.....2

3. यहा यह उल्लेखनीय है कि आवेदक कंपनी श्री बजरंग पावर एण्ड इस्पात लिमिटेड के पक्ष में खनिज आयरन ओर का खनिपट्टा प्रश्नाधीन क्षेत्र पर 30 वर्षो हेतु स्वीकृत करने का सैद्धांतिक निर्णय लिया गया है तथा दिनांक 24.12.2014 से 06 माह की अवधि के भीतर आई.बी.एम. से अनुमोदित माइनिंग प्लान जमा करने हेतु निर्देशित किया गया है। आवेदक कंपनी के द्वारा माइनिंग प्लान जमा नहीं कर पाने के कारण इस विभाग के समसंख्यक पत्र दिनांक 06.07.2015 द्वारा **03 माह (दिनांक 25.06.2015 से 24.09.2015 तक)** एवं पत्र दिनांक 26.09.2015 द्वारा पुनः 06 माह (दिनांक **25.09.2015 से 24.03.2016 तक)** की अतिरिक्त समय वृद्धि प्रदान किया गया है।

4. एम.सी.आर., 1960 के नियम 56 में संशोधन किये जाने हेतु निम्नानुसार प्रावधान किये गये हैं :–

56. **Power to rectify apparent mistakes: -** Any clerical or arithmetical mistake in any order passed by the Government or any other authority or officer under these rules and any error arising therein from accidental slip or omission, may, within two years from the date of the order, be corrected by the Government, authority or officer, as the case may be

Provided that no order prejudicial to any person shall be passed unless he has been given a reasonable opportunity for stating his case.

5. अतएव उपर्युक्त के परिप्रेक्ष्य में राज्य शासन, एतद्द्वारा, एम.सी.आर., 1960 के नियम 56 के प्रावधातर्गत विभागीय समसंख्यक पत्र दिनांक 24.12.2014 में उल्लेखित पैरा–2 की तालिका के कॉलम क्रमांक 2, 3 एव 4 मे संशोधन करते हुए निम्नानुसार प्रतिस्थापित करता है :–

आवेदित क्षेत्र का विवरण		आवेदित क्षेत्र में से खनिपटटा स्वीकति हेतु उपलब्ध रकबा (हेक्टर में)
वन कक्ष क्रमांक	आवेदित रकबा (हेक्टर में)	
2	3	4
267	20.00	20.00
268	20.00	20.00
269	14.00	14.00
252	3.00	3.00
	57.00	57.00

छत्तीसगढ़ के राज्यपाल के नाम से
तथा आदेशानुसार,

(संजय कनकने)
अवर सचिव
छत्तीसगढ़ शासन
खनिज साधन विभाग
नया रायपुर, दिनांक – 4 MAR 201

पृ0क्रमांक एफ 3–23/2010/12

प्रतिलिपि –

1. कट्रोलर जनरल, इंडियन ब्यूरों आफ माईन्स, सेकेण्ड फ्लोर ए ब्लॉक, इंदिरा भवन, सिविल लाईन्स, नागपुर(महाराष्ट्र)
2. डायरेक्टर आफ माईन्स एण्ड सेफ्टी, सीपत रोड़, एसईसीएल लिमिटेड परिसर, बिलासपुर
3. सचालक, संचालनालय भौमिकी तथा खनिकर्म छत्तीसगढ़, इन्द्रावती भवन, ब्लॉक–डी, द्वितीय तल, नया रायपुर (छत्तीसगढ़)
4. मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमि0, खसरा क्रमांक 2/3, ग्राम गोंदवारा, उरला इण्डस्ट्रीयल काम्पलेक्स, रायपुर, छत्तीसगढ़।

की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

5. गार्ड फाईल रजिस्टर।

अवर सचिव
छत्तीसगढ़ शासन
खनिज साधन विभाग

पंजीकृत डाक द्वारा

छत्तीसगढ़ शासन
खनिज साधन विभाग
मंत्रालय
महानदी भवन, नया रायपुर–492002

24 DEC 2014

नया रायपुर, दिनांक

क्रमांक एफ 3–23/2010/12

प्रति,

आवेदक मेसर्स श्री बजरंग,
पावर एण्ड इस्पात लिमिटेड,
खसरा क्रमांक 2/3, ग्राम गोंदवारा,
उरला इण्डस्ट्रीयल काम्पलेक्स,
रायपुर, छत्तीसगढ।

विषयः– जिला व तहसील नारायणपुर, ग्राम छोटेडोंगर स्थित वन कक्ष क. 252, 267, 268 एवं 269 का कुल रकबा 57.00 हेक्टर (वन भूमि) क्षेत्र पर खनिज लौह अयस्क का खनिपट्टा स्वीकृति हेतु अनुमोदित मायनिंग प्लान तथा वन संरक्षण अधिनियम, 1980 के तहत अनुमति प्रस्तुत करने बाबत्।

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मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमिटेड (पूर्व में श्री बजरंग मेटालिक्स एण्ड पावर लिमिटेड) के पक्ष में जिला व तहसील नारायणपुर, ग्राम छोटेडोंगर स्थित वन कक्ष क. 252, 267, 268 एवं 269 का कुल रकबा 57.00 हेक्टर (वन भूमि) क्षेत्र पर खनिज लौह अयस्क का खनिपट्टा स्वीकृति हेतु 30 वर्ष की अवधि के लिए भारत सरकार, खान मंत्रालय के पत्र कमांक 5/96/2010–M.IV, नई दिल्ली, दिनाक 13.4.2011 द्वारा खान एवं खनिज (विकास एवं विनियमन) अधिनियम, 1957 की धारा 5(1) के तहत पूर्वानुमोदन प्रदाय किया गया है।

2/ आवेदित क्षेत्र जिसके अक्षांश–देशांश एवं वन कक्ष कमांक का विवरण निम्नानुसार हैः–

जिला, वनमण्डल, वनरेंज तथा ग्राम	आवेदित क्षेत्र का विवरण					
	वन कक्ष कमांक	आवेदित रकबा (हेक्टर)	आवेदित क्षेत्र में से खनिपटटा स्वीकृति हेतु उपलब्ध रकबा (हेक्टर)	आवेदित क्षेत्र के कोआर्डिनेट्स टोपोशीट क. 65 E/7		
				बिंदु	देशांश	अक्षांश
1	2	3	4	5	6	7
नारायणपुर, नारायणपुर, छोटेडोंगर	252	20.00	20.00	A	81° 16' 58.6"	19° 24' 43.9"
	267	20.00	20.00	B	81° 17' 12.5"	19° 24' 51.4"
	268	14.00	14.00	C	81° 17' 31.9"	19° 24' 20.4"
	269	3.00	3.00	D	81° 17' 17.6"	19° 24' 12.5"
		57.00	57.00			

3/ आवेदित क्षेत्र राजस्व वन भूमि है। अतः उपर्युक्त उपलब्ध क्षेत्र पर खनिपट्टा स्वीकृत किये जाने के पूर्व भारत सरकार, पर्यावरण एवं वन मंत्रालय से वन संरक्षण अधिनियम, 1980 के तहत आवश्यक अनुमति प्राप्त की जानी होगी तथा पूर्वेक्षित क्षेत्र का अनुमोदित मायनिंग प्लान प्रस्तुत किया जाना होगा।

4/ आवेदित क्षेत्र संविधान की पांचवी अनुसूची के तहत अधिसूचित अनुसूचित क्षेत्र के अंतर्गत आता है। अतएव प्रकरण को "समथा निर्णय" के परिप्रेक्ष्य में सचिव स्तरीय समिति की बैठक दिनांक 15.10.2014 में तथा मंत्रिमंडलीय उपसमिति की बैठक दिनांक 25.11.2014 में अनुशंसा/अभिमत हेतु रखा गया था।

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SHRI BAJRANG POWER AND ISPAT LTD. RAIPUR (C.G.)

समिति द्वारा अनुशंसा की गई कि यदि आवेदक द्वारा खनिपट्टा के अनुबंध में निम्नानुसार अतिरिक्त शर्त/कंडिका जोड़े जाने बाबत् स्वैच्छिक सहमति दी जाती है तो उसके पक्ष में खनिपट्टा स्वीकृत किए जाने हेतु विचार किया जाए :–

खनिपट्टाधारी द्वारा अकुशल गैर तकनीकी प्रकृति के कार्य हेतु स्वीकृत खनिपट्टा क्षेत्र के भीतर प्रभावित आदिवासी निवासियों अथवा गरीबी रेखा के नीचे आने वाले निवासियों के परिवार के एक सदस्य को रोजगार उपलब्ध कराने में प्राथमिकता प्रदान की जाएगी, यदि खान में उपलब्ध रोजगार अधिक है तो खान क्षेत्र के आस–पास के ग्रामों की बढ़ती दूरी के क्रम में प्रभावित निवासियों को रोजगार उपलब्धतानुसार प्रदाय किया जाएगा।

खनिपट्टा क्षेत्र के अंतर्गत आवेदित वन क्षेत्र में उत्पादित होने वाले वनोपज का कलेक्टर द्वारा निर्धारित अनुमानित मूल्य के आधार पर प्रोरेटा प्रति परिवार वार्षिक आय की राशि जिला कलेक्टर के पास जमा की जायेगी। तत्पश्चात यह राशि प्रभावित परिवार के मुखिया (कर्ता) के नाम पर ट्रांसफर की जाएगी। इस राशि में प्रतिवर्ष 10 प्रतिशत की वृद्धि की जाएगी।

खनिपट्टा की स्वीकृति से सीधे तौर पर प्रभावित ग्राम/ग्राम पंचायत तथा पट्टा क्षेत्र में मायनिंग से प्राप्त खनिज की रायल्टी के 20 प्रतिशत के बराबर राशि का व्यय सामुदायिक विकास के कार्यो यथा पर्यावरण सुधार, सड़क, शिक्षा, स्वास्थ्य, पेयजल आदि–आदि पर कलेक्टर की अध्यक्षता में गठित समिति के अनुमोदन पर किया जायेगा। उक्त राशि कंपनी के व्दारा कंपनी अधिनियम में प्रावधानित CSR में व्यय की जाने वाली राशि के अतिरिक्त होगी।

खनिपट्टाधारी पर्यावरण संरक्षण हेतु मायनिंग लीज के क्षेत्र में किए जाने वाले वृक्षारोपण में किस प्रजाति के वृक्ष रोपित किए जाए, इसके लिए संबंधित ग्राम पंचायत/ग्राम सभा से राय प्राप्त की जाएगी।

खनिपट्टाधारी द्वारा मायनिंग लीज क्षेत्र से खनन किए जाने वाले खनिज आयरन ओर का उपयोग आवेदक कंपनी के लौह अयस्क आधारित संयंत्र में कैप्टिव यूज में किये जाने बाबत् निम्नानुसार कंडिका खनिपट्टा अनुबंध में जोड़ी जाएगी:–

" The entire ore produced in the mining operation shall be used exclusively for own consumption in iron or steel making and cannot be either sold in India or exported to other countries."

मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमिटेड (पूर्व में श्री बजरंग मेटालिक्स एण्ड पावर लिमिटेड) के पक्ष में जिला व तहसील नारायणपुर, ग्राम छोटेडोंगर के पैरा–2 की तालिका में उल्लेखित क्षेत्र पर स्वीकृत किए जाने वाले मायनिंग लीज के अनुबंध में पैरा–4 अनुसार अतिरिक्त शर्ते/कंडिकाएं जोड़े जाने हेतु सहमति देने के लिए आवेदक कंपनी को विभागीय पत्र दिनांक 10.12.2014 द्वारा लेख किया गया, जिसके परिप्रेक्ष्य में आवेदक कंपनी मेसर्स श्री बजरंग पावर एण्ड इस्पात लिमिटेड ने अपने पत्र दिनांक 11.12.2014 द्वारा अपनी स्वैच्छिक सहमति उपलब्ध कराई है।

6/ आवेदित क्षेत्र हेतु वन संरक्षण अधिनियम, 1980 के तहत वन विभाग से आवश्यक अनुमति प्राप्त करने में असफल रहने के फलस्वरूप यदि कंपनी द्वारा तैयार कराया गया मायनिंग प्लान निष्फल हो जाता है तो इसका कोई उत्तरदायित्व राज्य शासन पर नहीं होगा एवं इस संबंध में कंपनी द्वारा राज्य शासन के विरूद्ध कोई दावा (Claim) मान्य नहीं किया जाएगा।

7/ वन संरक्षण अधिनियम, 1980 के तहत आवश्यक अनुमति प्राप्त करने तथा मायनिंग प्लान तैयार कराये जाने के लिए जारी की जा रही इस अनुमति से आपको उपर्युक्त आवेदित क्षेत्र पर प्रवेश करने या खनन कार्य करने का कोई अधिकार प्राप्त नहीं होगा।

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8/ यदि आवेदक कंपनी को उपर्युक्त शर्तें मान्य हो तो पैरा–2 की तालिका में दर्शित क्षेत्र के लिए इस पत्र के जारी होने की दिनांक से 06 माह की अवधि के भीतर इंडियन ब्यूरो ऑफ माईन्स से माइनिंग प्लान अनुमोदित कराकर इस विभाग को प्रस्तुत करें एवं साथ ही वन संरक्षण अधिनियम, 1980 के तहत आवश्यक अनुमति एवं खनन कार्य के लिए नियमानुसार पर्यावरण अनुमति प्राप्त करने हेतु अग्रिम कार्यवाही करें।

सलग्न –मानचित्र

(के0डी0 कुंजाम)
संयुक्त सचिव
छत्तीसगढ़ शासन,
खनिज साधन विभाग
नया रायपुर, दिनांक

पृ0क्रमाक एफ 3–23/2010/12

प्रतिलिपि:–

1. सचिव, भारत सरकार, खान मंत्रालय, शास्त्री भवन, नई दिल्ली।
2. कन्ट्रोलर जनरल, भारतीय खान ब्यूरो, सेकेण्ड फ्लोर, ए ब्लॉक, इंदिरा भवन, सिविल लाईन, नागपुर, (महाराष्ट्र)।
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7. नोडल आफिसर, मुख्य वन संरक्षक (भू–प्रबंध) वन संरक्षण अधिनियम, 1980 अरण्य भवन, मेडिकल कॉलेज रोड, रायपुर ,(छ.ग.)।
8. वन मंडलाधिकारी, वन मंडल नारायणपुर, जिला नारायणपुर, (छ.ग.)।

की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित।

9. गार्ड फाईल रजिस्टर

संयुक्त सचिव
छत्तीसगढ़ शासन,
खनिज साधन विभाग

SHRI BAJRANG POWER AND ISPAT LTD. RAIPUR (C.G.)