



REVIEW OF MINING PLAN
of

DONGRI BUZURG MINE

**At Village: DONGRI BUZURG, Tahsil: TUMSAR,
Dist; BHANDARA- Maharashtra State
OVER AN AREA OF 53.98 Ha**

Submitted Under Rule 17 (1) of MCR 2016

Category – ‘A’ –FM

(Opencast)

अनुमोदित द्वारा
APPROVED No. **BHD/MN/MRLW 621(B)/N&P-2017 dated 16/08/2017**
Lease Period – 20 YEARS (01.07.2002 to 30.06.2022)

Proposal Period – 2017-18 to 2021-22

Registration No. of MOIL under Rule 45: IBM/5711/2011

Mine Code: 40MSH05002

MOIL LIMITED

(A Government Undertaking)

**MOIL Bhavan, 1-A, Katol Road,
NAGPUR – 440 013**

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Type of lease area	Lease Ha
FOREST	34.43
NON FOREST	19.55
Total lease area	53.98 Ha.

अनुमोदित
Regional Controller of Mines (N. & S.)
भारतीय खान ब्यूरो नागपुर
Indian Bureau of Mines, Nagpur

PREPARED BY: Dr.G. G. Manekar,

Qualified Person & Sr. Dy. General Manager (Mines)
MOIL Limited, Nagpur - 440013

Dr. G. G. MANEKAR

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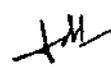
REVIEW OF MINING PLAN (SOM) OF DONGRI BUZURG MINE OVER

**AN AREA OF 53.98 HA, AT VILLAGE : BALAPUR HAMESHA,
TAHSIL:TUMSAR, DIST:BHANDARA- MAHARASHTRA STATE**

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DONGRI BUZURG MINE OVER AN AREA OF 53.98 HA.

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DONGRI BZURG MINE OVER AN AREA OF 53.98 HA.
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**DONGRI MINE OVER AS AREA OF 53.98 Ha, TAHSIL : TUMSAR DISTT:
NAGPUR, MAHARASTRA STATE**

INTRODUCTORY NOTE

Dongri Buzurg area, which extends upto 24 km. north of Tumsar town, is part of the Tumsar tahsil of Bhandara district, except for the portion lying to the north and east of the Bawanteri River which forms part of the Katangi tahsil of the adjoining Balaghat district. Dongri Buzurg Mine (Longitude: 79° 42' East: Latitude: 21° 33' North) is located in the north eastern part of Bhandara district, Maharashtra state and falls in the Survey of India toposheet no 55 O/10. The boundary between Maharashtra and Madhya Pradesh states is marked by the Bawanthadi River though north of the deposits at a distance of 3 kms.

Dongri-Buzurg Mine lease was originally acquired by Central Provinces Prospecting Syndicate at the herald of twentieth century. This syndicate was then converted into a limited liability company in 1908 and in April 1924 its name was changed to the Central Provinces Manganese Ore Company Limited (CPMO). In July 1962 Govt of India took control of the Company renamed it as Manganese Ore (India) Limited with its H.O. at Nagpur. This mine was handed over to MOIL in the year 1977.

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Dongri Buzurg Mine is situated in village Dongri Buzurg, Balapur Hamesha & Kurmuda, Tahsil- Tumsar, Dist.- Bhandara, and consists Four leases which are contiguous

Type of lease area	Lease no.I	Lease no.II	Lease no.III	Lease no.IV
	(46.25Ha.)	(53.98Ha.)	(69.50Ha.)	(4.07Ha.)
Forest land	6.81	34.43	59.21	1.71
Revenue land	39.44	18.86	10.12	2.36
Private land	-	0.69	0.17	-----
Total lease area	46.25 Ha.	53.98 Ha.	69.50 Ha.	4.07 Ha.
Name of Village	Balapur Hamesha	Dongri Buzurg	Dongri Buzurg, Balapur, & Kurmuda	Dongri Buzurg, Balapur Hamesha

The present scheme is in relation to 53.98 ha area. Exploitation of mineral from old mineral dump is the principal mining activity in area. The area of 53.98ha also

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supports the opencast development of main pit. It is proposed to exploit 25,000 Tonnes of dump ore & 5000 Tonnes of fines with present scheme period.. **The retrieval of black mineral dump is subjected to market conditions.**

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The environment clearance granted for Dongri Group of Mines (Four Leases) is 4,20,000 Tonnes per annum. The anticipated production proposal does not exceed the present capacity of Environment clearance of Dongri Buzurg Mine

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1.0 GENERAL

1. General:

Name of the mine and address:

Dongri Buzurg Mine

MOIL Limited,

P.O. Dongri Buzurg,

Dist.-Bhandara – 441907

Tel: 07183 – 220230

Email ID: mm.db@moil.nic.in

Rule 45 registration no. of MOIL:

IBM/5711/2011

Mine Code:

40MSH05002

Name and address of applicant

M/s MOIL Limited,

MOIL Bhawan, 1A, Katol Road.,

Chhaoni,

Nagpur – 440 013

Name and address of nominated owner:

DipankarShome,

Executive Director (Technical),

(Nominated Owner)

Address:

MOIL Limited,

MOIL Bhawan, 1A, Katol Road.,

Chhaoni,

Nagpur – 440 013

Phone: 0712-2589746

Email: dshome61@gmail.com

Nomination certificate (Copy of Board Resolution is enclosed as Annexure – XVII

a) Status of the lessee:

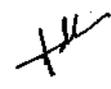
A Government of India Enterprise

Under the Ministry of Steel,

Government of India,

UdyogBhawan, New Delhi

Registration certificate of MOIL is enclosed as Annexure –XVIII


Dr. G.G. MANEKAR
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Sr.Dy.General Manager (Mines)
MOIL Limited, Nagpur.

a. (i) List of Directors AS ON 01.03.2017

Sr. No	LIST OF DIRECTORS	Nationality	Telephone No.	
			Office	Residence
1.	Shri M.P. Chaudhari Chairman cum Managing Director, MOIL Ltd, MOIL Bhawan, 1-A, Katol Road, Nagpur- 440 013	Indian	2592070 2592071	2570887
2.	Shri T.K. Pattnaik, Director (Commercial), MOIL Ltd., MOIL Bhawan, 1-A, Katol Road, Nagpur- 440 013	Indian	2592272	
3.	Shri D. S. Ahuwalia Director (Finance) I/C MOIL Ltd., MOIL Bhawan, 1-A, Katol Road, Nagpur- 440 013	Indian	2592072	अनुमोदित APPROVED
4	Smt Urvilla Khati, Jt. Secretary to Govt. of India Ministry of Steel Udhyog Bhavan New Delhi 110 011	Indian	011-24675500	
5.	Shri Manoharlal Dubey Secretary (Mineral Resources Department), Govt. of Madhya Pradesh , Bhopal – M.P.	Indian		
6.	Ms. Sunanda Prasad, 12, Usman Enclave, Sector – o, Aliganj, Lucknow – 226024 (UP)	Indian		

Certificated of Incorporation of MOIL is enclosed as Annexure - XVI

- b) Mineral which is included in the prospecting license: NA
- c) Mineral which is mined: Manganese Ore
- d) Mineral included in lease deed : Manganese Ore
- e) Grant of Lease: MMN-1004/CR686/IND-9 Dated:-16/09/2004
- f) Execution: Dated – 12/09/2005
- h) Area : 53.98 Ha
- i) MP approved letter no. date: 314(3)/2003-MCCM(C)/MP-20 Dated 15-10-2003

j) Lease period from : 1/07/2002 to 30/06/2022 (20 Years)

k) Name, Address & Registration No:-

Dr. G.G. Manekar,

Of recognized (key) person

Sr. Dy. General Manager (Mines)

MOIL Limited,

Reg No.QP/NGP/206/98/B

1A, Katol Road., Chhaoni, Nagpur

Valid up to 14 July 2020

Tel.No.0712-25806243

Under Rule 22 (c) of MCR 1960

Fax: 0712-2590774

Email ID: g.manekar@rediffmail.com

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Copy of the QP certificate is enclosed as Annexure -XVI

The environment clearance obtained vide letter no. J-11015/232/2007-IA.II (M), MoEF dated 20th July, 2007 was pertaining to production capacity of 35000 TPM (420000 TPA) manganese ore. MOIL proposes to produce 400000 TPA from the lease area adjoining to this lease. MOEF Clearance is as shown in Annexure XII. The review of mining plan up to the 2021-22 is submitted for approval.


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2.0 LOCATION AND ACCESSIBILITY-

a) Lease Details

Name of mine- DONGRI BUZURG
Lat/long of any boundary point:- .. Lat: 21°32'46.06"
Long: 79°41'12.2"
Date of grant of lease: - 16/09/2004
Period/Expiry Date: 20 Years (01/07/2002 to 30.06.2022)
Name of leaseholder: MOIL LIMITED,

Postal Address: MOIL Limited,
Dongri Buzurg Mine,
P.O. Dongri Buzurg, Tah: - Tumsar
District- Bhandara – 441907
State-MAHARASHTRA
Phone : (07183) 220230
Fax : (07183)220515

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b) Details of lease area with location map:

Forest		Non-forest	
Forest (specify)	Area (ha)	1. Revenue land,	18.86ha
Forest land	34.43	2. Private land Status of acquisition of surface right under process Kh.No.187	0.69ha

Total lease area /applied area – 53.98 Ha. (Lease grant order is as shown in Annexure X)

District & State –Bhandara of Maharashtra state

Taluka – Tumsar

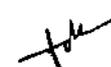
Village – Balapur Hamesha

Whether the area falls under Coastal Regulation Zone(CRZ)-- No

Existence of public road/railway line, if any nearby and approximate distance-

Tumsar–Tirodi railway line (which is approximately 2 K.M from mine).

Toposheet No. with latitude & longitude of all corner boundary point/pillar-


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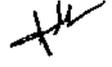
Toposheet no -55 O/10

Boundary Pillar no	Latitude	Longitude
BP33	21°33'12.9"	79°41'04.9"
BP34	21°33'15.6"	79°41'04.4"
BP51	21°33'07.4"	79°41'29.9"
BP52	21°33'06.7"	79°41'30.7"

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DGPS survey plan is enclosed as plate no.--III with lat: long of all boundary pillars

c) Attach a general location map showing area and access routes. It is preferred that the area be marked on a 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 - Survey of India Toposheet is enclosed as key plan (location Plan) plate no - I.


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3.0 DETAILS OF APPROVED MINING PLAN / SCHEME OF MINING

3.1 Date and reference of earlier approved MP/SOM-

Lease area in ha	Mining Plan/ scheme of mining	Under Rule	Approval no and date	Period
53.98	Mining Plan	Rule 22 of MCR, 1960 and Under rule 23B (1) of MCDR - 1988	314(3)/2003-MCCM(C)/MP-20 Dated 15-10-2003	2002-03 To 2021-22 land hand over to MOIL LIMITED by State Government authority – Copy enclosed as an Annexure- A
53.98	Mining Scheme	Rule 24(A) of MCR, 1960	314(3)/2003-MCCM(C)/MP-20 Dated 15-10-2003	2002-03 To 2007-08 APPROVED
	Mining Scheme	Rule 12 of MCDR, 1988	314(3)/2007-MCCM(C)/S-31 Dated 28-03-2008	2007-08 To 2011-12
	Mining Scheme	Rule 12 of MCDR, 1988 & Under rule 23B of MCDR, 1988	BHD/MN/MPLN-621(B/NGP) Dated 13-05-2013	2012-13 To 2016-17
	Review of Mining Plan	Rule 17 of MCR, 2016	Submitted for approval	2017-18 to 2021-2022

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

No modification has been done in approved mining plan and SOM.

3.3 Give status of earlier approved proposals (if any) in respect of exploration, excavation, reclamation etc.

3.3.1 Exploration:

No proposals were proposed during the previous scheme period as the area is lying within footwall Zone.

3.3.2 Excavation -

The area is contiguous to lease I (46.25ha) and Lease III (69.50 Ha).

Year wise comparative statement of proposed & actual development

Review of O/c Development		Lease no. II (53.98) Ha-Quantity in M ³
2012-13	Proposed (M ³)	2,41,371
	Actual (M ³)	2,30,502
2013-14	Proposed (M ³)	3,63,000
	Actual (M ³)	3,16,154
2014-15	Proposed (M ³)	3,84,150
	Actual (M ³)	3,58,050
2015-16	Proposed (M ³)	3,50,400
	Actual (M ³)	2,98,000
2016-17	Proposed (M ³)	4,40,050
	Actual (M ³)	5,04,000
Total	Proposed (M ³)	17,78,971
	Actual (M ³)	17,06,706

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Above development was proposed between Ch16 -Ch42, from 370MRL to 300MRL. For the safety of man and machines, haul road for two way entry and exit of HEMM was been carried out.

3.3.2 Production :

Clean Ore Production – Quantity in Tonnes

The Grade wise production for previous scheme period is as below-(Lease-II-53.98 Hectare)-

Dump cleaned ore Production		Lease no. II (53.98 Ha.)
2012-13	Proposed (Tonns)	30,000
	Actual (Tonns)	3800
2013-14	Proposed (Tonns)	30,000
	Actual (Tonns)	1710
2014-15	Proposed (Tonns)	30,000
	Actual (Tonns)	7802
2015-16	Proposed (Tonns)	30,000
	Actual (Tonns)	1563
2016-17	Proposed (Tonns)	30,000
	Actual (Tonns)	0
TOTAL	Proposed (Tonns)	1,50,000
	Actual (Tonns)	14,875


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As such no proposal was submitted with approved scheme of mining. However the plantation carried out in area is summaries below-

Sr. No.	Year	No. of sapling Planted	Area Covered in Ha.
1	2012-13	2000	1.00
2	2013-14	2000	1.00
3	2014-15	2000	1.00
4	2015-16	1000	0.5
5	2016-17	Nil	-
	TOTAL	7000	3.50

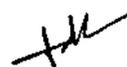
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In spite of nil proposal, considering the sustainable development, mine with its responsibility towards the environment has planted 7,000 plant species during 2012-13-08 to 2016-17. During the the SOM period-mine has done plantation at waste dump premises located towards the North of lease area is carried out. The year wise area afforested & no of species planted is mentioned in above table, where as the area occupied by plantation is shown on plate XIV

3.4 No violations were issued by IBM during the SOM period.

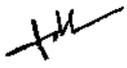
3.5 No violations were issued, which can be referred here.

3.6 No modification has been done in the Mining Plan or Scheme of Mining.


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PART -A

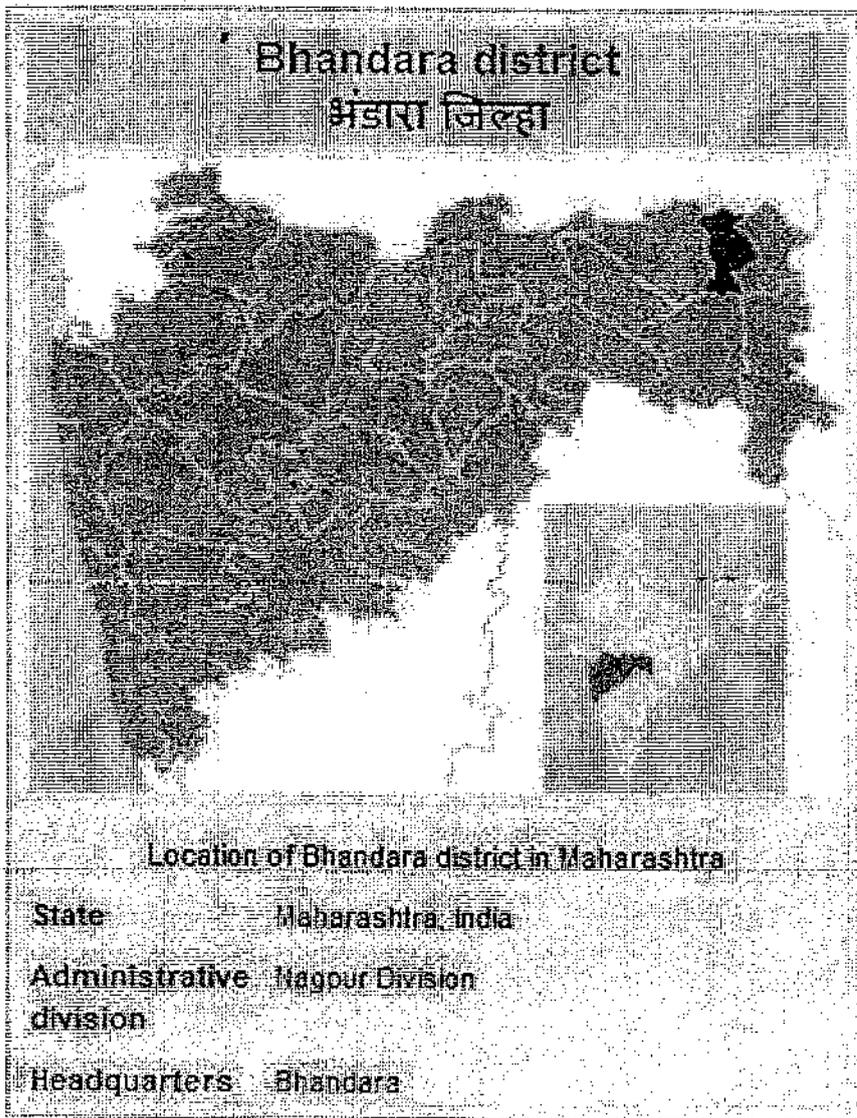
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1.0 GEOLOGY AND EXPLORATION:

a) Location:

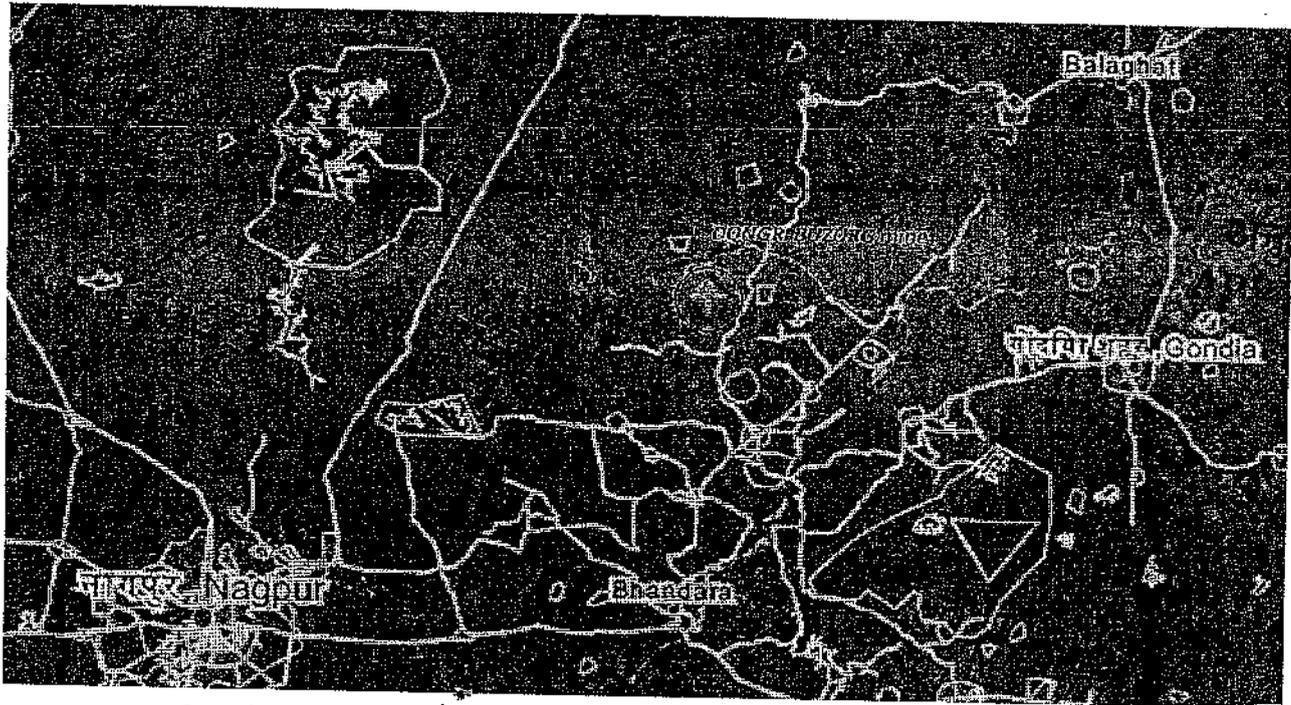
Mining leases of Dongri Buzurg mine are located in the village Dongri Buzurg, Balapur Hamesha and Kurmuda in Tumsar Tahsil under Bhandara district of Maharashtra state. Dongri Buzurg mine is located in the North Eastern part of Bhandara district, in the state of Maharashtra and is about 120Kms from Nagpur.



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The mine can be approached from Nagpur by NH- 6 up to Bhandara; the district headquarter and then by SH – 88 linking with Katangi. Alternatively, the mine can be reached by NH – 7 up to Munsar & then by SH.– 84 via Ramtek & Tumsar.



Location of Dongri Buzurg mine (indicated by a green cross on the map)

The mine can also be approached by Rail from Nagpur up to Tumsar Road railway station on Nagpur – Howrah line and then up to Goberwahi railway station on the branch line of Tumsar Road – Tirodi. The Goberwahi railway station is situated near SH – 88 and it is only 4 kms from Dongri Buzurg mine. The nearest airport is at Nagpur.

Topography & Physiography

Regionally the area forms an undulating terrain marked by two ENE-WSE trending liner ridges namely, Ambagad range in the south and Dongri Buzurg Mine is located on a EW trending ride (Dongri-Buzurg hill) rising to +395 M.R.L. Chandpur range in the southern part supported by Chorbaoli quartzite, which forms a prominent physiographic feature. These hill ranges rise to an elevation of 530 m on south east of Chikla Mine. North of these hills with the exception of a small linear ridge (46 m), the terrain is flat, undulating and underlain by Munsar formation near Goberwahi Railway Station rising to about 60 M above ground level.

Drainage Pattern

The area is drained by Bawanthadi River which flows about 4 Km North of Dongri Buzurg ridge, in the easterly direction. The streams originating in the southern slope also circumvent the Dongri Buzurg ridge and join Bawanthadi River in the North.

Vegetation

The different types of natural vegetation in these area are reflects the topography and under lying lithology. The area around Dongri is largely cultivated, a major part of hills are covered by afforestation.

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The common trees found to the vicinity of villages are "Neem" (Azadirachata), Tamarind (Tamarindus Indica), Pipal, Teak (Shira Taberxa) grows and in new wide spread planted forests contain mixed growth of Sal (Terminatia Sanentora) Bija (Prsocaspus Marasupum) Bamboo, Dhawra, Lendia (Lagers Troemia Paruflora), Trefdu (Diospyros Melan Pxylan) etc. with scattered 'Harra' Mahrea (Bassia Latifolia), Cheer (Buch a namialitiafolia) and Amla which bear edible fruits.

Climate

The climate of the area is moderately dry tropical with well-marked dry and wet seasons. The average maximum temperature during summer ranges from 44-46° C while in winter the average temperature ranges from 6-8° C. Monsoon sets in the area by middle of the June. The average yearly rainfall in the area ranges from 800 mm.

b) Brief descriptions of Regional Geology with reference to location of lease/area.

The manganese ore horizon occurs in the lower part of the sequence of meta sedimentary rocks of Sausar Group of Pre- Cambrian age. The Sausar group extends broadly in ENE-WSW direction from Balaghat district, M.P. in the east, through Bhandara district to Nagpur district, in the west, comprising within it the famous manganese belt of Central India.

This belt stretches over a length of 200 km and is about 25 km wide in the Central part. In the central part, within an area of about 1,000 sq.km. bounded by latitude 21°21' to 21°36' and longitude 79°30' to 80°00' included in topopsheet nos. 55 O/10, the manganese belt comprises of number of Mn ore deposits, of which Dongri Buzurg is one of the largest deposits. Rocks representing the lower part of the Sausar Group sequence viz. Tirodi gneisses, Sitasaongi and Munsar formation occur in and around Dongri Buzurg Mine. Lohangi formation is absent from the area.

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The Manganese horizon occurs at the stratigraphic contact of the Sitasaongi and Munsar Formations. Manganese ore is associated with gondite a regionally metamorphosed manganiferous and non-calcareous rock, characterized by spessartite (a manganese almandine garnet) and quartz with or without manganese silicates showing essentially bedded characteristics of enclosed peliticmetasedimentary rocks.

REGIONAL GEOLOGICAL SET UP

The generalized sequence of Sausar group is as follows:

Geological Age	Stratigraphically nomenclature	Rock types
Recent and Sub-recent Tertiary	-----	Soil and Laterite
	Magmatic intrusive	Pegmatite & vein quartz. Medium to coarse grained leucocratic granites
	Ortho genesis (?)	Ortho-gneisses, biotitic muscovite gneisses
	Bichua	Dolomitic marble, calc silicate rock
	Junewani	Quartz-biotite granulite and biotite schist, biotite gneisses
	Chorbaoli	Quartzites-micaceous quartzite & quartz muscovite schist
	Munsar	Muscovite schist, garnetiferous schist, sericite schiste
MANGANSE ORE HORIZON		
	Lohangi/Sitasaongi	Calcitic marble / quartzite and mica schist, quartz Schist Feldspathic mica schist.
	TirodiGneisses	Streaky Biotite gneiss, banded and foliated amphibolites.

The regional strike of formations is E-W varying to ENE-WSE locally, with moderate to steep southerly dips (45° to 70°). Bedding and foliation are parallel as observed in the well

bedded quartzite and manganese ore horizon and the enclosing schist. Structurally the formations are isoclinally folded, with axial plane tilting towards south at 45° to 70°. Dongri Buzurg ridge represents an inverted northern limb of a regional anticline, pitching towards east and closing about 8 km east of the area near Chikla mines of MOIL. As a consequence of this inversion, the older formations like Tirodi gneisses and Sitasaongi formation constitute the hanging wall of the manganese ore horizon and younger Munsar schist from the footwall.

c) Detailed description of geology of the lease area

GEOLOGY OF DONGRI BUZURG MINE

The geology of the area is described below.

TIRODI FORMATION:

Tirodi Gneisses comprise of streaky, banded, augen gneisses and granitoid gneisses with small lenticular bodies of granitic rock.

These rocks occupy southern gentle slope of the Dongri Buzurg hill. These exposures are now been covered by dumps. Some prominent exposures are however seen on high ground south east of mine office.

The gneisses exposed in south eastern corner of the area are mostly well foliated, streaky and banded with alternating dark bands rich in biotite and light band comprising of quartzofeldspathic material.

The gneisses intersected in bore holes are of crudely foliated granitoid type in addition to the usual streaky, banded and foliated variety.

SITASAONGI FORMATION:

Quartz-mica Schist and quartzite exposed on the southern slope of the Dongri Buzurg ridge and apparently underlying the (Tirodi) gneisses mostly with a gradational contact, belong to the Sitasaongi formation. These rocks are mostly medium to fine grained.

There is considerable variation in the thickness of Sitasaongi formation. At both the ends the Tirodi gneisses have grown at the expense of Sitasaongi formation. In the central thick portion the quartz-mica-schist and quartzite's are seen to be felspathised to a considerable extent.