

## MCDR Insp. Report

1) Name of Inspecting officer:	P.PRAKASH
2) Designation	DY.CONTROLLER OF MINES
3) Accompanying mine official with designation	A.L.SABLE, Mines Manager, M.G.Pereira, Geologist
4) Date of Inspection	13/06/2017
5) Date of Previous Inspection	01/09/2016

## PART –I GENERAL INFORMATION

1. Name of mine	SIRIGAO IRON ORE MINE-GOIGONEM ML.
a. Category of mine(A-Fully mechanized, A-Other than fully mechanized, B-Manual )	A-Fully mechanized
b. Mode of working ( OC/UG/Both o/c & u/g)	Open cast working
c. Postal address	Po.Sirigao,
d. State	Goa
e. District	North Goa
f. Tehsil/ Taluka	Bicholim
g. Police station	Bicholim
h. Village	Sirigao & Mayem
i. Post	Sirigao
j. Pin Code	403 503
k. FAX	-
l. E-mail	-
m. Phone	6532016
n. Weekly day of rest	Sunday

2. a) Lease No.	:	T.C.No.13/1949
b) Lease area in hect.	:	96.0621 Ha.
c) Period of lease	:	20 YEARS
d) Date of expiry.	:	21.11.2027

3.a) Mineral(s) included in the lease deed	:	Iron ore
b) Mineral(s) worked	:	Iron ore

4. Name and address of ( including FAX/ E-mail, if any)		
a) Lessee/ owner	:	CHOWGULE AND COMPANY PRIVATE LIMTIED
b) Nominated owner	:	Shri. Vijay V. Chowgule, Chairman & Managing Director
c) Agent with date of appointment	:	Mr. SANJAY CHAKRABORTY, 01.10.2010
d) Mining Engineer; whether full/ part time with date of appointment, qualification & Experience	:	Mr. Omkar Kunthekar, Full time, B.E.in Mining
e) geologist; whether full/ part time with date of appointment, qualification & Experience	:	Mr. M.G.PEREIRA, Full time.
f) Mine Manager with qualification and date of appointment	:	Mr. AMRUT L.SABLE, Mines Manager- Diploma in mining & Holder of Ist class Mines Manager's Certificate of competency. Full time. Date of Appointment 16.01.2017.

5. Details about Mining Plan/ Mining Scheme		
a) Letter No. and date of approval of mining plan/ mining scheme	:	No.- MMP/MECH-34/GOA/2015-16 Vol.I, dated 30.09.2016
b) Period of mining plan/ mining scheme in force :	:	Modified Mining Plan: for year 2016-17 to 2017-2018 (Block year 2013-14 to 2017-2018)

PART II-TECHNICAL DETAILS

[Following i.r.o. year (2016-17)]

Annual Return for the year 2016-17 has not been submitted by the lessee till the date of inspection, as due date of submission is 1<sup>st</sup> July of every year for preceding year. Hence, information given below is based on the Data provided by the Agent/ mines manager of the mine and information/proposal given in the Modification of Mining Plan (MMP) approved vide letter no.- MMP/MECH-34/GOA/2015-16 Vol.I dated 30.09.2016.

I. Scientific Mining (As per latest approved mining Plan/Scheme)

1. Exploration:

Item	Proposals year (2016-17)	Actual work done year (2016-17)	Remarks
1A.Backlog of previous year	NIL	Nil	
1B.Exploration over lease area for geological axis 1 or 2	NIL	NIL	
1C.Exploration agencies and expenditure in lakh during the year	NA	Nil	
1D.Balance area to be explored to bring geological axis 1 or 2	NA	NA	Some area to be explored in vertical direction.
1E.Balance reserve	As per MMP	7.356 mill te. reserve	9.183 mill. Tonnes ( Total Resources)

2. Development:

A. Location of development in lease area	In existing pit	In existing pit	
B. Separate benches in topsoil, overburden and minerals	yes	yes	
C. Stripping ratio (ore to OB ratio)	1:2.87	1:2.69	
D. Quantity of topsoil generation in m <sup>3</sup>	No proposal	NA	
E. Quantity of overburden generation in M <sup>3</sup> and in metric Tonne	500,214 M <sup>3</sup> 1,003,913 tons	176,227 M <sup>3</sup> 405,313 Tons	

3. Exploitation:

A. Number of pit proposed for production	1 no.	1 no.	
B. Quantity of ROM mineral production proposed.	350,000 Tonnes	150,572 Tonnes	
C. Recovery of sailable/usable mineral from ROM production	350,000 Tonnes	150,572 Tonnes	
D. Quantity of mineral rejects generation	NIL	NIL	
E. Grade of Mineral rejects generation and threshold value declared	NIL	NIL	
F. Quantity of Sub-grade mineral	NIL	NIL	
G. Grade of Sub-grade mineral generation	NIL	NIL	
H. Manual/Mechanical method adopted for segregating from ROM	Mechanical	Mechanical	
I. Any analysis for benefaction study proposed and carried out for sub grade mineral	NIL	NIL	
J. Provision of drilling and blasting in mineral benches.	NIL	NIL	
L. Whether height of benches in overburden and mineral suitable for method of mining proposed.	Yes	Yes	
M. Total area covered under excavation/pits	63.82 Ha.	63.82 Ha.	As mentioned in MMP
N. Ore to OB ratio for the pit/mine during the year	1:2.87	1:2.69	

O. Total area put in use under different heads at the end of the year	91.94 ha.	91.94 ha.	As per MMP, cummulative
P. Production of ROM mineral during the last five years period as applicable	2013-14 - NIL 2014-15- NIL 2015-16: 300,000 te 2016-17 : 350,000 te	2013-14 - NIL 2014-15- NIL 2015-16: 61,325 te 2016-17: 150,572 te	Modified Mining Plan approved: for year 2016-17 to 2017-2018 (Block year 2013-14 to 2017-2018)

Q. General remarks of inspecting officers on method of mining etc.:

Mining operations have not been carried out in accordance with the Modification of Mining Plan (MMP) approved vide letter no.- MMP/MECH-34/GOA/2015-16 Vol.I dated 30.09.2016 to the extent indicated below:-

(i) As per approved MMP, excavation/development in year 2016-17 was approved to be carried out in existing Pit between co-ordinate +200(E) to +535(E)/-115(S) to -435(S) up to level (pit bottom) of -33 mRL (MSL) and to facilitate backfilling of waste in the exhausted part of pit in year 2017-18. (Ref. Mining & waste disposal chapter with Plate No.-4 & 4A).

Whereas, it was observed during inspection that, excavation/development in year 2016-17 was carried out less in the proposed area up to pit bottom of about - 21 mRL (MSL) only with very less lateral expansion. Instead, excavation/development was carried out approximately between co-ordinates +200(E) to +150(E)/-110(S) to -400(S).

(ii) As per approved MMP, in year 2016-17 temporary stacking of waste was approved to be carried near pit up to level of 54 mRL (MSL) and in year 2017-18 backfilling of waste was approved to be carried out in the exhausted part of pit up to level of -6 mRL (MSL).

Whereas, stacking of waste near pit has been carried out up around 60 mRL(MSL), which is more than the approved height without forming stages/terraces at regular interval and further stacking of waste being continued at same place in year 2017-18, instead of backfilling at the proposed area.

(iii) A huge Stack of ROM has been made approximately between co-ordinates -100(W) to +150(E)/-150(S) to -250(S), Whereas, this area was approved for temporary stacking of Waste.

(iv) Backfilling of part of pit was carried out approximately between co-ordinates 0 (E) to +200(E)/-300(S) to -400(S), at the non-approved area.

(v) As per approved MMP, excavation/development of pit was approved to be carried out by formation of regular benches of height 6 m and width more than its height (Bench width : 8 to 10 m). However, It was observed during inspection that, benches were merged in irregular manner and height & width of benches are not maintained as approved. At places, height of benches observed to be about 12 m & width of about 3 m only; and thus resulted in collapse of benches in southern side of the pit.

Hence, In this regard, Violations of rule 11(1) of MCDR,2017 being communicated to the party.

#### 4. Waste:

A. Separate dumping of top soil, OB and mineral rejects	yes	yes	
B. Location of top soil, OB and mineral rejects dumps	Not proposed for top soil, for waste near pit	NA for top soil, for waste near pit	Overburden proposed for temporary stacking.
C. Number of dumps with in lease area	1 no.	1 no.	Dead and rehabilitated.
D. Location of dumps w.r.t ultimate pit limit (Rule 16)	temporary stacking of waste near pit	temporary stacking of waste near pit	Partly within UPL
E. Number of active and alive dumps.	NIL	NIL	
F. Number of dead dumps	1 no.	1 no.	
G. Numbers of dumps established	-	-	
H. Whether retaining wall or garland drain all along dumps are there	-	YES	
I. Length of retaining wall or garland drain all along dumps	-	About 950m retaining wall & 1100 m garland drain	Old/existing

J. Number of settling ponds	-	6 NOS.	
5. Backfilling:			
A. Status of part or full extraction of mineral from mined out area before starting backfilling	-	NIL	Not proposed during the year 2016-17
B. Area under backfilling of mined out area	NIL	NIL	
C. Concurrent use of topsoil for restoration or rehabilitation of mineral out area	NIL	NIL	
D. Total area fully reclaimed and rehabilitated.	NIL	NIL	
6. PMCP:			
A. Whether annual report on PMCP submitted on time and correctly	-	Not submitted for 2016-17 till the date of inspection. Due date 1st July.	
B. Area available for rehabilitation (Ha)	NIL	NIL	
C. Afforestation done (Ha)	Gap plantation	Gap plantation	
D. No. of sapling planted during the year.	1500 nos.	1500 nos.	
E. Cumulative no. of plants.	-	About 412,000 nos.	
F. Any other method of rehabilitation	NIL	NIL	
G. Cost incurred on watch and care during the year	-	About 30,000/-	
H. Compliance on reclamation and rehabilitation by backfilling (i) voids available for backfilling L*B*W	NIL	NIL	
I. Compliance on reclamation and rehabilitation by backfilling (ii) voids filled by waste/tailings.	NIL	NIL	
J. Compliance on reclamation and rehabilitation by backfilling (iii) afforestation on backfilling area	NIL	NIL	
K. Compliance on reclamation and rehabilitation by backfilling( iv) rehabilitation by making water reservoir	NIL	NIL	
L. Compliance on reclamation and rehabilitation by backfilling (V) any other specific means.	NIL	NIL	
M. Compliance on rehabilitation of waste land within lease (i) afforestation :	NIL	NIL	
N. Compliance on rehabilitation of waste land within lease (ii) area rehabilitation (Ha) :	NIL	NIL	
O. Compliance on rehabilitation of waste land within lease (iii) method of rehabilitation :	NIL	NIL	
P. Compliance of environmental monitoring (core zone & buffer zone)	Monitoring in core and buffer zone	Monitoring being carried out season wise.	
II. Conservation:			
A. ROM mineral dispatch or grade wise sorting within lease area.	ROM mineral for processing	ROM mineral for processing	
B. Method of grade wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
C. Different grade of mineral sorted out of mines	Yes	Yes	
D. Any beneficiation process at mines	Yes	Yes	
III. Environment:			
A. Separate removal and utilization of topsoil	Not Proposed	NA	
B. Separate removal and utilization of topsoil	Not Proposed	NA	
C. Separate dumps for overburden, waste rock, rejects and fines	yes	yes	OB/waste stacked temporarily
D. Use overburden, waste rock, rejects and fines dumps for restoring the lands to its original use.	NIL	NIL	
E. Phased restoration, reclamation and rehabilitation of lands affected by mining operation (pits, dumps etc.)	-	Dump afforested	

F. Baseline information on existence of plantation and additional plantation done	-	About 412,000 nos.	
G. Survival rate	-	65%	
H. Water sprinkling on roads to control airborne dust :	Water tankers – for Water sprinkling on roads	Water tankers are used for roads to control airborne dust	

#### IV. Compliance on Rule 45:

A. Status of submission of monthly & annual returns	<p>Monthly returns Submitted.</p> <p>Annual Return for the year 2016-17 has not been submitted till the date of inspection; since due date of submission is 1<sup>st</sup> July of every year for preceding year.</p> <p>Sample scrutiny of Monthly Returns from April'2016 onwards were carried out and given below.</p>
B. Scrutiny of annual return for information on Mining Engineer, Geologist and Manager :	
C. Scrutiny of annual return on land use pattern for area under pits, reclaimed area, dumps etc.	
D. Scrutiny of annual return on afforestation	
E. Scrutiny of annual return on mineral rejects generation (grade and quantity)	
F. Scrutiny of annual return on ROM stock and /graded ore	
G. Scrutiny of annual return on sale value, Ex. Mines price and production cost	
H. Scrutiny of annual return on fixed assets	
I. Scrutiny of annual return on mining machineries.	

Sample scrutiny of Monthly Returns from April'2016 onwards were carried out and discrepancies observed being communicated to the party in terms of violation of Rule 45 of Mineral Conservation and Development Rules'2017 as below:

45	<p><b>(i)</b> In Monthly return of April'2017, Closing stock of processed iron ore Fines of 55 % to below 58% grade reported as 20321 Tonnes. Whereas, in subsequent Monthly return of May'2017, Opening stock of processed iron ore Fines of 55 % to below 58% grade reported as 30775 Tonnes.</p> <p><b>(ii)</b> In Monthly return of April'2017, Closing stock of processed iron ore Lumps of 55 % to below 58% grade reported as "zero". Whereas, in subsequent Monthly return of May'2017, Opening stock of processed iron ore Lumps of 55 % to below 58% grade reported as 6694 Tonnes.</p> <p><b>(iii)</b> In Monthly return of April'2017, Opening stock of ROM reported as 188435 Tonnes, production of ROM reported as 60456 Tonnes and grade-wise production of different grades of processed iron ore reported as "zero". Whereas, Closing stock of ROM reported as 204383 Tonnes; which is ought to be 248891 Tonnes.</p> <p><b>(iv)</b> In Monthly return of May'2017, Closing stock of processed iron ore Lumps reported as 14075 Tonnes and Fines reported as 8661 Tonnes. However, no processed iron ore Lumps and Fines being kept within the lease area. The same reported to be kept at adjacent processing plant outside lease area; even at this processing plant stack yard, only around 400 tonnes Fines were kept against the reported 8661 Tonnes fines.</p> <p>The above discrepancies may construed as misrepresentation or suppression of information as per Rule 45(7) of the Mineral Conservation and Development Rules'2017.</p>
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#### V. Status of compliance of MCDR, 2017 including therewith the rectification of outstanding violation of the rules.

Date of last inspection	Violation pointed out	Compliance reported
01/09/2016	Nil	NA

During current inspection, Violation of rules 11(1) & 45 of MCDR, 2017 are observed and being communicated to the party.

(P. PRAKASH)  
DCOM