

MCDR Report

|  |                                   |
|--|-----------------------------------|
| 1) Name of Inspecting officer:                 | Mr. Prem Prakash                  |
| 2) Designation                                 | Sr. Assistant Controller of Mines |
| 3) Accompanying mine official with designation | Mr. S.R. Behera, Mines Manager    |
| 4) Date of Inspection                          | 05.03.2016                        |
| 5) Date of Previous Inspection                 | 07.06.2015                        |

PART – I GENERAL INFORMATION

|   |                        |
|---|------------------------|
| 1. Name of mine   | Jururi Iron Mines      |
| 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)  | O/C                    |
| c. Postal address   | At - Jururi PO-Jajang  |
| d. State  | Odisha                 |
| e. District   | Keonjhar               |
| f. Tehsil/ Taluka   | Barbil                 |
| g. Police station   | Joda                   |
| h. Village  | Khandabandha, Jalahuri |
| i. Post   | Jajang                 |
| j. Pin Code   | 758052                 |
| k. FAX  | 06767-279206           |
| l. E-mail   | Kmc53@hotmail.com      |
| m. Phone  | 06767-279206           |
| n. Date of first opening  | 01.06.1957             |
| o. Weekly day of rest   | Sunday                 |

|  |   |  |
|--|---|--|
| 2. a) Lease No.                            | : | 173  |
| b) Lease area in hect.                     | : | 135.569 hecets. (RML applied over 73.228ha.)                             |
| c) Period of lease                         | : | RML of Mining lease executed on 25.06.2015, i.e 23 years from 01.04.1997 |
| d) Date of expiry.                         | : | 31.03.2020   |
| 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   | : | Kalinga Mining Corporation  |
| b) Nominated owner/ Managing Partner   | : | Ashok Kumar Mohanty   |
| c) Agent with date of appointment  | : | Tarapada pal, DOA- 11.07.1997   |
| d) Mining Engineer and geologists appointed under rule 42 of MCDR, 1988 with date of appointment and whether full/ part time with qualification. | : | Ajay Kumar Behera, DOA – 07/12/2007 ( 1999)<br>B.E in Mining with 1st Class Mines Manager Competency Certificate.<br>C.V.Tamhane Geologist - Date of appointment - 10/03/2008, M.Sc -Geology (1972) |
| e) Mine Manager with qualification and date of appointment   | : | Smruti Ranjan Behera – DOA - 08/02/2011<br>Diploma in Mining Engineering with 1 <sup>st</sup> Class Mines Manager competency certificate  |

5. Details about Mining Plan/ Mining Scheme

|  |  |
|--|--|
| a) Letter No. and date of approval of mining plan    | : Cal/KJ/Fe/MP/410 dated 14/01/1997<br>BBS/KJR/IRON/MP-239, dated 05/07/2005 |
| b) Letter No. and date of approval of mining scheme. | : Mining Scheme -314(3)2011-MCCM(CZ)/MS-58,<br>Dtd. 26/04/2012               |
| c) Period of mining plan/ mining scheme in force     | : From 2012-13 to 2016-17 ( up to March 2017)                                |

PART II-TECHNICAL DETAILS

1. Details about employment.

Maximum number of persons employed on any day during the year(i) below ground (ii) above ground and (iii) in all in the mines.- In all 250 Nos of person on 29.02.2016.

| Classification         | Average daily employment |          |       | Average No. of days worked in a year | Remarks                   |
|------------------------|--------------------------|----------|-------|--------------------------------------|---------------------------|
|                        | Direct                   | Contract | Total |                                      |                           |
| <b>OPENCAST</b>        |                          |          |       |                                      |                           |
| a) Managerial person   |                          |          |       |                                      |                           |
| b) Supervisory persons | 4                        | 11       | 15    | 282                                  |                           |
| c) Workers             | 6                        | 15       | 21    | 282                                  |                           |
| d) Ministerial persons | 130                      | 45       | 175   | 282                                  |                           |
| c) Employment in plant |                          |          |       |                                      |                           |
| f) Others              |                          |          |       |                                      |                           |
| <b>UNDERGROUND</b>     | 4                        | 104      | 108   | 282                                  |                           |
| a) Managerial person*  |                          |          |       |                                      |                           |
| b) Supervisory persons |                          |          |       |                                      |                           |
| c) Workers             |                          |          |       |                                      |                           |
| d) Ministerial persons |                          |          |       |                                      |                           |
| c) Employment in plant |                          |          |       |                                      |                           |
| f) Others              |                          |          |       |                                      |                           |
|                        |                          |          |       |                                      | * If common, please state |

2. Community Development Plan (in and around the mines)

| Sl. No. | Parameters                          | Particulars of work done                           | Proposed Expenditure during previous year 2014-15(in lakhs) | Expenditure incurred during previous year 2014-15(in lakhs) | Proposed Expenditure during year 2015-16(in lakhs) | Actual. Expenditure year 2015-16 (up to June 2015) (in lakhs) | Remarks   |
|---------|-------------------------------------|--|---|---|--|---|---|
| 1.      | Housing                             | Camp   | 2.00  | -   | 2.00   | -   |   |
| 2.      | Water supply                        | Drinking / Sprinkling                              | 3.00  | 8.21  | 3.00   | 2.89  |   |
| 3.      | Sanitation                          | Sanitation works                                   | 0.0000  | 0.000   | 0.0000   | 0.000   | Expenditures given is as reported by the mine manager. Not verified by the undersigned. |
| 4.      | Health, safety & medical facilities | Ambulance dispensary , Free medical facilities for | 3.00  | 1.26  | 3.00   | 0.30  |   |

|    |   |  |      |      |        |      |  |
|----|---|--|------|------|--------|------|--|
|    |   | local peoples  |      |      |        |      |  |
| 5. | Education & training                    | Teachers Payment & School Bag & Water Bottle distribution, providing afternoon lunch for school children       | 2.00 | 0.57 | 2.00   | 5.01 |  |
| 6. | Employment to local inhabitants         | Employed in the mines  | 2.5  | 0.80 | 2.50   | ...  |  |
| 7. | Public transportation and communication | Providing vehicle to local peoples to local people in emergency  | 3.00 | 0.30 | 300000 | 0.30 | Expenditures given is as reported by the mine manager. Not verified by the undersigned |
| 8. | Recreation                              | Organizing Sports, Competition and giving to sports club in the surrounding localities                         | 2.00 | -    | 2.00   | -    |  |
| 9. | Others (specify)                        | 1. Dustbin (Brick Construction) 2 No's,<br>2. Electrification Work at Jurudi.<br>3. Antramantra drainage Work. | -    | -    | -      | -    |  |

### 3. Status of compliance of MCDR, 88 including therewith the rectification of outstanding violation of the rules.

After last inspection on 07.06.2015, Violation of rule 13(1) was pointed out vide this office letter of even no. dtd. 31.08.2015, regarding non-disposal of huge stock of fines available in the mine. No major improvement is observed in disposal of fines in this inspection also.

Hence, Violation of rule 13(1) as observed during this inspection including the above violation being communicated to the party.

### 4. A note on justification in case of suspension of mining operations under rule 13(2) or prohibition of development of any person under rule 56 of MCDR-1988 if recommended.

Not being recommended at present.

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

| Item  | Proposal (2014-15)          | Actual work done (2014-15) or cumulative as applicable | Remarks                      |
|---|-----------------------------|--|------------------------------|
| <b>i) Exploration (Rule 13)</b>   |                             |  |                              |
| a) Type of prospecting and exploration i.e. pitting, drilling etc.      | 6 nos                       | NIL  | violation being communicated |
| b) Total area covered   | 6.0 Ha.                     | Nil  |                              |
| <b>ii) Workings (Rule 13)</b>   |                             |  |                              |
| a) Opencast/ underground  | Opencast                    | Opencast   |                              |
| b) Manual/ mechanized   | mechanized                  | mechanized   |                              |
| c) No. and size of each pit (L x W x H)                                 | 02 pits                     | 02 pits  |                              |
| d) Bench size (l x w x h) length can be defined as regular or irregular | Height : 6m<br>Width : 12m; | Bench height of about 10 m to 12m and bench            | In other area Benches formed |

/Bel/  
Effor/  
and s  
iv) Eff

|   |           |   |                                      |
|---|-----------|---|--------------------------------------|
|   | Regular   | width less than its height observed formed in irregular manner in the western & northern side of Top pit. | in regular                           |
| e) Ore to waste ratio pit wise if possible otherwise for mine. (Ton/ Cum) | 1:0.07    | 1 : 0.16  |                                      |
| f) Total area covered under excavation/ pits                              | 31.103 Ha | About 31.103 ha   | Negligible Lateral expansion of mine |

|  |  |  |   |
|--|--|--|---|
| iii) Waste disposal (Rule 13)                                      |  |  |   |
| a) Location of dumps   | No proposal of external dump, the waste materials was proposed for reclamation of village pit area | Back-filling/reclamation of village pit area               |   |
| b) Method of dumping whether advancing/ retreat                    | Advancing  | Advancing  | Back filling in process   |
| c) Total area covered under waste dump                             | No proposal of external dump   | Back filling in progress                                   | About 0.880 Ha. existing dump   |
| d) No. & size of each waste dump with number of steps lift/ bench. | No proposal of external dump during year   | No : 1 , Location : Village pit, Size : 110 x 80 m approx. | Mining operations reported discontinued /suspended from 17 May 2014 due to pending RML, abiding the order of State Govt. wrt. Hon'ble Supreme Court order. Mining lease executed on 25.06.2015 and then mining operation resumed. |
| e) Yearly generation of waste quantity.                            | 163178.00MT  | 22000.000 MT   |   |
| f) Year-wise quantity of top soil removed, utilized & stacked.     | NIL  | NIL  |   |

6. Conservation of mineral- both quantitative and qualitative.

|   |  |               |
|---|--|---------------|
| i) Mineral (Rule 15)  |  |               |
| a) No of benches in ore and waste   | Top pit : Bench in ore – 6 no & OB bench – 2 No<br>Tata Pit : Bench in ore – 4 & No OB bench   |               |
| b) Percentage of recovery of ore pit-wise w.r.t. ROM and total  | 80 % w.r.t. total material   |               |
| ii) Sub-grade mineral/fines (Rule 16)   |  |               |
| Separate staking from waste   | Yes  |               |
| Location of staking   | Near ML Pillar C1 TO C2 – S-G Stack No-1<br>Near ML Pillar No J - S-G Stack No-2<br>Near ML Pillar No I3 Western side - S-G Stack No-3<br>Near ML Pillar No I3 North-Eastern side-- S-G Stack No-4 |               |
| c) Total area covered for stacking  | 7.234 Ha. approx..   |               |
| d) No. and size of each stack   | SG 1 – 5.883 Ha<br>SG 2 – 1.150 Ha<br>SG 3 – 0.124 Ha<br>SG 4 – 0.077 Ha. approx..   |               |
| e) Quantity of yearly generation, utilisation and total quantity available during inspection with grade | Year   | Sub Grade Qty |
|   | 2014-2015  | Nil           |
|   | 2015-16  | Nil           |
|   | Cumulative as on 29.02.2016  | 2415280.00    |

|   |   |
|---|---|
| Beneficiation (Rule 20)                                 |   |
| Efforts for improving low grade and sub grade mineral   | Beneficiation plant installation is in process for up gradation of sub grade Ore. |
| iv) Efforts for improving percentage of recovery of ore | Blending  |

## 7. Environment Management both quantitative and qualitative

|   |  |
|---|--|
| i) Land Environment   |  |
| a) Landscape & Aesthetic environment  | The M.L area has an undulating topography with a prominent hillock in the central part of the lease.   |
| b) Soil and land use pattern  | The soil is of red color derived from in situ weathering of Iron Ore formations. The reddish tint is retained by the soils due to leaching of iron from the host rocks.  |
| c) Agriculture  | Some agricultural land exists in & near to the lease area. To prevent degradation of the agriculture land, precautionary measures to prevent mines surface run-off viz. retaining wall with garland drains, settling pits, loose boulders check weirs, guard walls, check dams etc.at strategic locations are provided. However, some more preventive measure needs to be done.    |
| d) Forest (flora & fauna)   | Common species. The existing working area has got EC from MoEF. Beside, a site specific wild life conservation plan has also got approved by PCCF wild life.   |
| e) Vegetation   | The hillocks are covered by thick vegetation with several native trees. Waste lands are occupied by shrubs and bushes.   |
| f) Public building, places & monuments (protected monument and historical monument), place of worship and place of tourist interest | Not available  |
| ii) Water environment   | Quarterly monitoring of ground water and surface water is reported being carried out and the parameters are within the permissible norms specified.  |
| a)Surface water   |  |
| b)Ground water  |  |
| c)Quality of water  |  |
| iii)Air environment   | The following measures are in practice to control air pollution in mining areas :<br>i) Haulage & mineral dispatch road are maintained by regular water sprinkling.<br>ii. Dry – fogging to suppress the dust generation at crushing & screening plants & mineral handling roads.<br>iii) The drilling machine is equipped with dust extractor system & water – wetting at source. |
| a) Noise & Vibration  | Monitoring reported done regularly. The noise level and the ground vibration due to blasting are within they prescribed limit.   |
| b)Air   | The frequency of monitoring reported twice a week per each monitoring station. The air quality parameters are within the norms.  |
| c)Climatic condition  | The climate of the area is classified under semi arid condition .The average annual rainfall is 1269 mm with bulk of precipitation between July to September.<br>The temperature in the area ranges from 8° to 46° C, while the relative humidity varies between 38 to 75%.  |
| iv) Socio-economic environment  |  |

|                                   |   |
|-----------------------------------|---|
| a) Socio and demographic profile  | The people of the area were depending on the agriculture. After the advent of mining industry, the social trend changed and most of the people are engaged in mines directly or indirectly. |
| b) Recommending health and safety | As reported, all the employees are undergoing IME & PME on regular basis and safety appliances like shoes, helmets, nose mask, gloves etc. are provided to all.                             |
| c) Human settlement               | No human settlement in the core zone.   |
| d) Recreational facility          | Not observed  |

8. Scrutiny of annual returns on cost of operation, reserves, production, pit mouth value, stock, etc. for the year 2014-15.

|  |   |
|--|---|
| 1) Cost of operation                               | Rs.1685.24 per metric ton   |
| 2) Reserve/resource as on 1 <sup>st</sup> April 15 | 13013766.00 +45% Fe   |
| 3) Production 2014-15                              | 64756.000 Tons  |
| 4) Pit's Mouth Value (in Rs. Per te)               | Lumps 62% to 65% : 3578.00<br>Fines : Below 55% : 874.00<br>Fines: 62 to 65 % : 1804.00 |
| 5) Stock   | Lumps : 113372.648, Fines : 2703619 MT  |

9. PROPOSAL FOR FURTHER ACTION:

|    |  |   |
|----|--|---|
| a) | Indian Bureau of Mines (any issue related to CGPB, SGPB, assistance, consultancy, annual programme and studies etc.  | Nil   |
| b) | The State Government (illegal mining, mining dispute, infrastructure, mineral based industry, mineral policy & etc.) | A copy of violation letter being endorsed to Director of mines, Odisha. |
| c) | The Central Government (infrastructure development, mineral policy and legislation, mineral based industry & etc.)   | Nil   |

  
 15.4.16  
 P. Prakash  
 Dy. Controller of Mines