

**SCRUTINY COMMENTS ON EXAMINATION OF DRAFT REVIEW AND UPDATION OF MINING PLAN INCLUDING PROGRESSIVE MINE CLOSURE PLAN IN RESPECT OF RAMANADURG IRON ORE MINE (ML.NO. 2141) OF M/s. KUMARSWAMY MINERAL EXPORTS PVT. LTD., OVER AN EXTENT OF 59.36 HA SITUATED IN RAMANADURGA RANGE (YESHWANTHNAGAR VILLAGE) SANDUR TALUK, BALLARI DISTRICT KARNATAKA STATE SUBMITTED FOR APPROVAL UNDER RULE 17(1) OF MCR, 2016.**

**Chapter 1: General Information**

**1.3.4: Statutory Compliances:** The details of permissible Annual Production as per CEC approval letter may be given as section 1.3.4.5 along with the CEC approval letter number and date. The related documents to be attached as annexure and reference to be given. Reference of annexure submitted should be made at every subheadings of each chapter wherever applicable.

**1.3.4.3: Forest Clearance:** Provide the back of the extent 60.56Ha as mentioned in FC.

**1.3.5.1: Location of Boundary Pillars:** Lease cadastral Plan Plate no. may be provided at the bottom of the table.

**1.3.6: Owner/Nominated Owner Details:** PAN card of the Nominated owner may be annexed.

**1.3.7: Qualified Person Details as per M(OAHCEM)CR, 2016:** PAN number of QP may be provided and copy of PAN card may be annexed.

**Chapter 2: Geology & Exploration**

**2.1.1: Topography – Stream Order:** Highest stream order passing in the lease area may be provided.

**2.1.2: Details of Physiographic features and Infrastructures available in and around the lease/ block area:** The name of the Physiographic features such as River/nallah/reservoir, Public Road, Archaeological Monument etc may be given in the Remarks column

**2.1.3: Regional Geology:** Regional Stratigraphy of the area may be provided as an Annexure and the Annexure number may be referred in the Text or Stratigraphic table may inserted in the word file.

**2.1.4.1: Local Geological Set-up:** Meta-volcanics lithology presence is explained in para 2.1.4.2: Structure, however Meta-volcanics lithology is not explained in local geological set-up. The dyke is a later intrusion; hence it may be shown in the top in the general sequence of the formation.

**2.1.4.3:** Nature of occurrence of other lithologies along with foot wall and hanging wall rock may be described. Different type of iron ore available in the lease, their field occurrence, petrological characteristics and percentage of incidence of each type of ore may be given. Lumps and fines percentage in the iron ore may be provided.

**2.1.4.4: Mode of Occurrence & Controls of Mineralization:** This para needs to re-written. Genesis of iron formation may be explained.

**2.1.4.5: Extent of Weathering/ Alteration:** Lateral and vertical extent of weathering zone may also be provided.

**2.1.4.7: Extent of Mineralization:** This para may be deleted. Extent of mineralized zone in the lease area may be provided.

**2.2.1.1:** Geological Mapping area covered unit (km<sup>2</sup> or Hectare) may be specified.

**2.2.1.2 - 2.2.1.6:** If Geophysical, Geochemical, pitting, trenching exploration activity is not carried out, the same may be specified.

**2.2.1.10: Chemical Analysis:** At Sample ID column, total no. of samples analyzed may be specified. Different radicals analyzed for each batch of samples may be provided. Sample analysis certificate of the lab and NABL certificate may be enclosed.

The core /non-core samples information may be provided in CSV/excel file which shall normally include Five files namely (a) collar file, (b) survey file and (c) Geology log file, (d) Assay file and (e) RQD File. The file formats are as follows:

<b>(a) Collar file</b>						
Hole_id*	Latitude	Longitude	Altitude	Max_depth	Hole_path (linear/angular)	Date of drilling

<b>(b) Survey file for drill holes</b>			
Hole_id	Depth	Dip	Azimuth

<b>(c) Assay file</b>			radicals analysed				
			(specify name of radical as an example given below)				
Hole_id	Depth_from	Depth_to	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	LOI	P

<b>(d) Geology file</b>			
Hole_id	Depth_from	Depth_to	Lithological Description

<b>(e) Rock Quality Designation (RQD) File</b>			
Hole_id	Depth_from	Depth_to	RQD%

*\*Hole ID should tally with the surface geological plan as available in the latest approved mining plan.*

**2.2.1.13:** Bulk Density Study as per M(EMC) Rules, 2016 and SOP of CGPB: Bulk density study report may be Annexed and annexure no. may be provided.

**2.2.1.14: Area Covered under Exploration:** From the litho log sheets it is observed that, most of the bore holes are ended in the mineralized zone i.e. Fe > 35%. Hence the mineralized area is not completely explored under G1 level. This para may be revived w.r.t. borehole data and corrected suitably.

**2.2.2.2 - 2.2.2.6:** If Geophysical, Geochemical, pitting, trenching exploration activity is not carried out, the same may be specified.

**2.2.2.13: Bulk Density:** The Results of the study is already given in para 2.2.1.13. Hence, details given may be deleted.

**2.2.4.1: Resource / Reserve Estimation Method:** If Reserve/Resources estimated by block model method using the software, the details and percentage of variance may be given in Annexure.

**2.2.4.1: Methodology:** Recovery percentage taken for various types of ore may also to be specified.

**2.2.4.2: Resource Calculation:** Mentioned as given in Annexure. All the calculation details as per the format may be provided in this para.

**2.2.4.4: Threshold value & Cut off Parameters:**

As per IBM notification, Threshold value of hematitic iron ore is Fe 45% and above and for High Silicious Iron ore Fe 35% and above. Accordingly given information in this para may be revised. Cut of parameter is not specified. If cut off parameter is same as threshold value, the same may be specified.

**2.2.4.11: Calculation of blocked resources:** Mentioned as given in Annexure. All the calculation details as per the format may be provided in this para.

**2.2.4.12: Calculation of Reserves:** Mentioned as given in Annexure. All the calculation details as per the format may be provided in this para. As per EC ultimate working depth should be 116m at 900 mRL. However, Reserves are calculated beyond 900 mRL. The same may reviewed and suitably modified in calculation and respective plans/sections.

**2.2.4.13:** (i) Reserves/Resources calculation should be as on 01/04/2021. The quantity produced from 01/04/2021 to 30/09/2021 may be provided in foot note of the table. (ii) Reserve/Resources as per UNFC code should be provided separately for Hematatic Iron Ore and Hematatic silicious Iron ore. (iii) Low grade BHQ with Fe content 25-35% has also been included in the Resources. The Fe content in BHQ is below threshold value. Since the BHQ resources are in 333 UNFC categories, the same has to be converted into 331 UNFC categories by carrying out exploration. The same may be reviewed and suitably modified.

2.2.5.7: Sampling: Mentioned as 'Sampling will be done as per Auctions and ROM on Weekly basis'. In this para, tentative no. of samples going to be generated (Year-wise) while carrying out the exploration may be provided.

### **Chapter 3: Mineral Beneficiation / Processing**

**3.9: Overall water requirement of mining and mineral processing:** Mentioned as 'Not applicable'. The quantity of water required in Cum/day for mining & allied activities like dust suppression, drilling, plantation, domestic purpose like washing, drinking etc., details to be given under this para. Also indicate source of supply, disposal of water and extent of recycling and chemical analysis of water. Accordingly water balance chart is to be prepared and enclosed as annexure. Reference should be made and ensured that the water requirement should be within the EC & CFO permissible limits.

**4.2.1.2.1: Dump Details:** As per the information given, the active waste dump no. 'Dump D2' height is 40m. However, as per EC condition the maximum height of the dump shall not exceed 30m. It is advised to take a slope stability study of the waste dumps. Further, it is also advised not have any dumping proposals exceeding the maximum height prescribed in the EC.

**4.2.1.2.2: Stack Details:** Grade of the sub-grade ore may be provided at foot note of the table.

**4.2.2.1: Bench Parameters:** Depth of water table not mentioned, the same may be provided.

**4.2.2.2: Year-wise Opencast Development:** The proposed ROM quantity should not exceed the Capping fixed by CEC, accordingly the Production proposals may be modified, also same has to be modified in para 4.3.3 & para 4.3.4.

As per para 4.2.1.1, there are 03 Active pits (A, B & C) in the lease area, details of Top soil, OB given combined, the same may be provided Pit-wise.

**4.3.1:** Studies Undertaken for Blast Vibration Study, Slope Stability Study Report, Recovery Study Report, Hydrological Study Report, Bulk Density Study Report, Any Other Study Report under taken may be Annexed and Annexure no. may be provided. Further as per the Specific conditions no. vii to xii of EC, lessee has to undertake the Ground water harvesting scheme and regularly monitor the ground water level and quality. The details of work undertaken for ground water harvesting and latest ground water monitoring results may be enclosed as Annexure and referred in this para.

**4.4.1: Machine Requirement Summary:** As per the working days provided, proposed Material Handling Required per Day is not matching with the quantity of highest material to be handled in a year.

**4.5.2 Blasting & Explosive Requirement in Mineral / Ore:** Total ROM proposed to be handled per day and per annum is exceeding the ROM quantity proposed, hence the ROM proposed volume may be corrected accordingly explosive requirement may be reviewed and corrected suitably.

**4.6.7: No of Persons Engaged per Day:** Average Daily Employment per Shift calculated is wrong; the same may be corrected as per the formula given. Material to be Handled per Shift ((C) = Machine Requirement Summary (E)) is left blank. Details should be given.

**4.6.8: Supervision:** No information provided in this section, all details may be provided as per the format need to be given.

**4.7.1: Existing Dump:** Details under Proposed Area (ha) is to be given in Hectares as per the format. Accordingly necessary corrections may be made.

**4.7.3: Existing Stack** –under this heading it is said BHQ is Stored as waste at present. However no details are given of this stack.

**4.9: Use of Minerals:** under Proposed Use of Mineral, it is stated as direct selling. Instead it may be said as Direct selling through e-auction process by the respective government agencies as per the existing system for selling of Iron ore in the state of Karnataka

## **CHAPTER-5-SUSTAINABLE MINING**

**Para 5.1-** It should be specifically mentioned under this Para “ Sustainable Mining and SDF implementations during the plan period will be carried out in accordance with Rule 35 of MCDR 2017”.

**Para 5.2:** Under cumulative work done for the proposed years, “Nil” may be mentioned.

**5.2.1.1 to 5.2.1.11:** Where ever applicable the details of number of beneficiaries be mentioned in the box prescribed in the format for all the years which needs to be given in the financial year and not as year 1 year 2 etc.

**Chapter 6: Progressive Mine Closure Plan:** Under this chapter and wherever applicable in the document, all the years needs to be mentioned in financial year and not as year 1, year 2 etc.,

**6.2.2.2.3: Garland Drains:** The proposals for construction of garland drains may be given in financial year and from and to co-ordinates be given as required in the format instead of sections.

### **6.2.3: Green Belt Development:**

**6.2.3.1: Cumulative work done:** Cumulative work done up to the previous block of five years is not given. Since this is a working mine the necessary details may be given under.

**6.2.6: Recreational Facility:** No information is provided under this chapter. If the same is not applicable or nil, it should be mentioned accordingly or the details needs to be provided.

**6.2.7: Dump Area Stabilization & Development:** Any details provided in this chapter should be in line with the comments given under 4.2.1.2.1.

**6.2.9.1: Cummulative Work done as on Date:** Details of Top soil generated and utilized in the past in this mine needs to be given.

**6.2.11: LAND USE OF LEASE AREA AT THE EXPIRY OF LEASE PERIOD (CONCEPTUAL STAGE):** Area undisturbed/virgin, Virgin area under Green Belt (in hect) is mentioned as 0 is not correct.

The 7.5 m green belt extent all along the lease boundary except where common boundary workings are proposed and approved needs to be calculated and given under respective columns.

**CHAPTER-7- FINANCIAL ASSURANCE/PERFORMANCE SURETY :** Year wise proposals should be given in the financial year and under other areas to specify is not properly understood and is reducing every financial year. For better understanding details may be given by adding rows with particular sub headings. All the details including uploading of the copy of bank guarantee may be given.

## **CHAPTER-8- REVIEW OF PREVIOUS PROPOSALS**

**Para 8.1.2:** Since the last approved document didn't have SDF proposals, accordingly it should be mentioned "Not applicable" under this para.

**8.2.2.2: Excavation:** No details are given for proposed and achieved extent of excavation. This needs to be given.

**8.2.6: Production of Mineral(s):** The details of percentage of deviation and reasons for the same should be given under the columns specified.

**8.2.8: Environment Compliances-** Information given as Nil is correct. Afforestation details carried out in green belt, over waste dumps financial year wise may be reviewed and furnish the details.

**Para 8.3:** Since there were no proposals in the last approved plan period under Socio-Economic, accordingly under para 8.3.1, 8.3.2, 8.3.3.1, 8.3.3.2, 8.3.3.3, 8.3.3.4 & 8.3.3.5 it should be mentioned "Not applicable".

## **CHAPTER-9- IMPACT ASSESSEMENT**

This chapter may be furnished as a part of the text document. Though this chapter is applicable only for fresh grant, all the headings & sub headings may be furnished with "Not Applicable" against each of the same as given in the format.

### **PLANS & SECTIONS:**

- a) Hard copies of all the plans may be submitted in .dwg format with UTM grids (WGS 84 datum) only. Soft copies of the same may be submitted in KML/SHP format.
- b) The plan submitted in SHP format does not contain any attribute data. Line, polygon & point feature should be in separate file with all the necessary information.
- c) The numbering of plates has not been sequentially maintained as per the format. Numbering of plates to be specifically maintained as per the format. Any additional plates enclosed may be followed after plate no 11 with corresponding details.

- d) All plans and sections should be signed with date by certified surveyor, Qualified Person, Geologist, Mining Engineer as per provisions of MCDR 2017.
- e) **Surface Plan (Plate No.2):** (i) An updated surface plan showing the updated position of faces, OB dumps, mineral stacks, Nallah & public road passing through the ML area may be shown & indexed accordingly along with the date of survey.
- f) **Surface Geological Plan (Plate No.3):** In this plate all the necessary corrections may be done as per the comments placed under Para 2.2.4.11. 2.2.4.12 & 2.2.4.13.
- g) **Conceptual Plan & section (Plate No.9 & 9A):** This plans needs to redrawn as per the information furnished in the text showing all the proposed activities at the conceptual stage of mining including fencing, plantation, construction of retaining wall, garland drain & re-grassification of the degraded land. The same may be attended as per the comments placed under para Para 6.2.11.
- h) **Financial Assurance Plan (Plate No.12):** (i) only the outline with solid fill colours may be marked for different land particulars and indexed. (ii) All the land particulars to be shown prominently in this plate.
- i) Key Plan showing distinctly Natural drainage system such as rivers, nallahs, stream etc., roadways, boundary of all villages and towns with their population, places of historical & archaeological importance, forest with tree density, predominant wind direction etc. as per the provision of rule 32(5) of MCDR 2017.
- j) Dump management Plan & section: Separate plate of OB dump management plan & sections may be given.
- k) Litho logs of the previously drilled boreholes may be given in a separate sheet.

#### **ANNEXURE:**

The numbering of annexures has not been sequentially maintained as per the format. Numbering of annexures to be specifically maintained as per the format. Any additional annexures enclosed may be followed after annexure no 18 with corresponding details. All the annexures as mentioned in above scrutiny comments of different chapters to be enclosed. Also, corrections in the annexures, as mentioned above in scrutiny comments of different chapters to be incorporated and corrected annexure to be enclosed.

Letter of lease grant may be enclosed.

Undertaking/Consent letter from the lessee may be digitally signed by the lessee.

Bulk density test report of each of the material handled in the mine may be enclosed.

Exploration details may be enclosed as per comments.

Copy of Valid Bank Guarantee for the entire plan period may be enclosed.

The 106(2)(b) permission from DGMS for working with Deep hole drilling and blasting with use of heavy machineries under MMR 1961 as mentioned above in scrutiny comment no 25 may be enclosed.

All the annexure to be properly numbered/ paged and relevant annexure to be signed by QP. The Page no range should be accordingly given in list of Annexure. All the annexure should be legible.

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