

Scrutiny comments on examination of Review of Modified Mining Plan with PMCP in respect of Borga Dongrachim Fall Mine (T.C.No. 29 of 1952) of Shri. Pramod P.Timblo, Legal Heir of Late Shri. Panduronga Timblo, over an area of 71.2014 Ha. situated in Rivona Village, Sanguem Taluka, South Goa District of Goa State submitted under Rule 17(2) of MCR'2016.

**Cover page-** The approval period should be financial year as corrected as 2017-18 to 2021-22. The name of lessee & technical qualified person along with address should be given in optimum font size.

**Page-4,** The provision & name of qualified person should be given under rule 15(1) of MCR, 2016. It needs correction. The name & contact details of recognized agency, who had been conducted the DGPS, is not given in text.

**Details of approved MP/SOM-Para-3.3-** The production & development quantity, sub-grade; mineral rejects & dumps recovery if any achieved up to Dec., 2016 or till date in financial year 2016-17 should be given based upon monthly return submitted to IBM only & it should be discussed in brief regarding remaining cap production quantity is to be achieved up to March, 2017 in the financial year 2016-17.

The proposed & achievement should be mentioned as per approved scheme proposal i.e. Latitude & Longitude /RL etc. & actual workings done should be discussed in tabular form with proper justification.

The para-3.4, the copy of latest violation pointed out & their compliance should be discussed for the change of place of working, exploration etc with justified reason. It should be discussed in brief.

The quality & quantity of lifting of excavated ore by way of auctioning by state Govt. should be discussed in brief with supporting document. The remaining grade wise stock of auctioned ore available in mining lease area as on 01.4.16 or till date should be discussed with supporting document.

**Mining-** The production & development proposal in the year 2016-17 i.e. (Jan.17 to march, 17) should be discussed & justified. It was observed during inspection that mine workings proposed on hill top & old collapsed benches, height & width of benches are not in order, therefore it should be time bound commitment for rectification of benches in order & mine workings should be proposed & started from top to bottom. All safety & precautionary measure should be proposed to divert/embankment for wash off the material in slope of dumping area.

The status of approval & period of common boundary working permission with adjoining TC No.34/50 should be discussed in mining chapter. The proposed mine workings/ dump recovery should be 100m from existing pit/dump edge as per DGMS guideline if any.

It should be discussed in brief regarding existing dumps with quantity & grade, number of benches in ore & waste, nearest distance from WLS/NP etc. should be given. Width of benches proposed needs to be indicated.

The annual ROM production quantity with tentative grade of excavation should be given as per manual of appraisal of mining plan 2014, based on IBM threshold value of hematite ore is +45%Fe & +35%Fe for siliceous ore. Here in table, cut of grade is proposed & taken as +55%Fe only whereas mineral rejects (-55%Fe to +45%Fe) column left blank, which is incorrect. The quantity of mineral rejects which is above threshold value & below cutoff grade should be given in mineral rejects column.

The dumping on mineralized ground should be temporary in nature only. The method of dumping with terrace height should be given. The recovery of ore calculation should be discussed and justified in plan & conceptual period. The 100% recovery is not possible.

The proposed location of protective & safety measures in plan & conceptual period should be discussed in details since mine workings is on hill top & surrounding area is paddy fields and human settlement are there. Safe Operating Procedure as per DGMS guidelines should be discussed.

Page-58,61, Stacking/Use of mineral & mineral rejects- It should be discussed in brief regarding utilization of mineral reject ore, (+45%Fe to -55%Fe for Hematite ore & +35%Fe for siliceous ore) because as per buyers requirement +55%Fe is salable. The year-wise tentative quantity of generation of mineral reject should be given in tabular form.

Page-72, financial assurance- The original valid BG of extended period should be submitted in the form of annexure.

All plan and section, text & tables should be modified based upon above scrutiny points.

### **Plan & sections:**

**Surface Plan:** The adjoining lease of TC No.34/50 & mineral stacks outside the lease area/surface features outside lease should not be shown on plan. The mineral reject/subgrade & waste dump and iron ore pit & Mn pits should be shown by different colour code to distinguish properly. The FC area, forest & non-forest area should be shown effectively. The similar colour code of collapsed bench & dump should be shown different to distinguish properly. The surface plan should be certified by mine manager also with name & date.

**Production & Development Plan & Section/Reclamation Plan/Financial Assurance Area Plan-** The yearly advancement of approach road should be shown on proposed workings & dump area. The 50m of statutory barrier from HT line /nalan/roads etc.& proposed dump site should be shown 100m away from pit edge as per DGMS guidelines. The environmental protective measures as mentioned in text should be match with reclamation plan & shown effectively.

- Para 1.e: Earlier exploration carried out so far in the lease area should be summarized as per table below and given in the text.

<b>Total Lease area:</b>						
Item of information	Lease area explored as per UNFC norms (in Ha) as on dt...					Remarks/Comments including reasons for not carrying out the exploration as per UNFC norms.
	<b>Total Lease area = A+B+C+D+E</b>					
	G1 Level	G2 Level	G3 Level	Explored and found non-mineralized with level of exploration (Remarks)	Unexplored lease area	
	A	B	C	D	E	
Area as per level of exploration						
No. of BH Drilled						
No. of BH considered for Resource Estimation.						
Meterage Drilled						
Grid Interval						
Scale of Mapping						
<b>Reserve estimated after above exploration as on dated :</b>						
<b>Remaining Resource after above exploration as on dated:</b>						
<b>Total Reserve/Resource after above exploration as on dated:</b>						

- Para 3.3:- Two Boreholes has been drilled in the lease area, but intimation through Form-J has not submitted to this office till date.
- Page-19:- Details given in exploration table is not matching with Form-J submitted to this office and previous approved mining plan. During 2004-2005, 3 boreholes have been drilled but not mentioned in exploration table.
- The lease area has been explored with 45 bore holes in the past and was drilled on irregular grid interval, as shown on geological plan. But geological sections are having only eight bore holes for estimation of reserves & resources. Further, total extent of lease area explored and balance area yet to explore for existence of the iron ore has to be given.
- The complete lease area should be proposed to cover under exploration to quantify reserves/ resources with cutoff grade corresponding to threshold value suggested by IBM within this plan period.
- Additional exploration has to be proposed in proposed working area of lease area to know the existence of mineral as well as its UNFC compliance. There is no proposal of Boreholes in working area and core boreholes have to be planned based on type of deposit and various intrusions etc.

- With single borehole in Section-A, the ore has been derived as G-1 is not considered, hence reserves has to be re-estimated

**Plates:-**

- Contours are not in uniform intervals i.e, there is no 155m Contour line in between 150 & 160.
- Sections are not drawn at regular interval of 50m interval to cover complete lease area and all the boreholes have to be plotted. Both sides the RL scaling to be shown.
- All boreholes should be marked with type, diameter, inclination, collar level and depth. Boreholes above pit bottom must be shown by hatched lines in sections and old boreholes hanging in air above the pit bottom are not required.
- An attempt may be made to prepare slice plans for estimation of reserves & resources due to complex deposit with intrusion and shape of the mineralised zone etc. Refer sub-para-k of Part-A Geology & Exploration of universal format for Mining Plan.
- Proposed exploration has to be shown in both plan & sections. Additional Exploration has to propose for clear understanding about deposit & reserves estimation.
- Lateral and vertical extrapolation of maximum 25% beyond the borehole is allowed for G-1/G-2 category; accordingly all the sections may be modified for showing category of UNFC reserves.
- Year wise production plan has proposed in G-3 area, which needs to be change.
- When compare to previous approved plan stack No-8 has been advance for 50m length and entire lease boundary has shifted for 10-20m in Northern side. New benches have formed nearer to BP-9. Hence Lease boundary has to be checked.