

SCRUTINY COMMENTS ON REVIEW AND UPDATION OF MINING PLAN IN RESPECT OF UTI UNDERGROUND GOLD MINE (ML.NO.2668) IN DEODURGA TALUK OF RAICHUR-DISTT, OVER AN AREA OF 6.38 HA OF M/S HUTTI GOLD MINES COMPANY LIMITED,SUBMITTED FOR APPROVAL UNDER RULE,17(1) OF MCR,2016.PROPOSED PERIOD IS FROM 2017-18 TO 2021-22.NON-FOREST, A(MECHANIZED).

**1. Cover page:** (i) The Rule under which document submitted should be checked and corrected as submitted for approval under Rule 17(1) of MCR 2016. Further, necessary correction in certificates may be made. (ii) Mine code mentioned to be corrected. (iii) The deemed extension of ML as per amended MMDR Act may also be mentioned. (iv). Category of the mine should be given A(FM-Fully mechanized.).

2. Para 1(b) : The authorization letter, undertaking etc. to be signed by nominated owner. A copy of list of board of directors of the company has not been enclosed.

3. Para 3.3: (i) The details of BHs drilled by MECL which intersected the Load No-4 of this ML to be mentioned by comparing to earlier approved document. (ii) Reasons for non-commencement of mining operations should be clearly mentioned. (iii) Review of earlier approved Mining Plan has not been carried out as per guideline.

4. In introduction Chapter, it is expected to brief in few lines about the mining operations undertaken if any, after the approval of previous document, if not, which also must be given for reference, the reasons for non-operational.

5. Para 1(f), in page-4, it is given without mentioning the rule 15 of MCR, 2016, which may be attended accordingly. In the light of the above remarks, the text and the plates may be attended in para 3.6 & other related paras.

**Part-A**

**Geology & Exploration:--**

6. Para 1(c): (i) Presence of associated minerals and their recovery if any has not been discussed. (ii) Strike length and width of ore load/body and proved depth may also be mentioned.

7. Para 1(d) (i): MECL name should be also mentioned as exploration agency.

8. Para (e) (ii): The details of BHs (11 no's) drilled by MECL which intersected the Load No-4 of this ML to mentioned by comparing to earlier approved document.

9. Para 1(i): (i) Lateral extent of area already covered under G-1, w.r.t. total mineralized area and as per Minerals (Evidence of Mineral Contents) Rules 2015 to be discussed. Proper justifications should be given for non-requirement of surface drilling with proposals of underground drilling. (iii) The proposed expenditure likely to be incurred towards exploration should also be mentioned. (iv) Summary table of proposed underground development activities should also be mentioned.

10. **Para 1(j) and (k):** (i) The earlier reserves and resources figures as per last approved mining plan document dated 19/07/2010 to be mentioned. (ii) The recovery factor and dilution factor should be considered assessment of reserves and resources. Further, Bulk density, recovery factor and dilution factor may be based on past experience & field tests and confirmed. (iv) The quantity of G-1 and G-2 level reserves (111 and 122/121) likely to be blocked at rib and crown pillars may be classified under feasibility mineral resources (211) and pre-feasibility mineral resources 222 respectively. (v) The calculation of tonnage at Block-E of Table no-1.0.6 is not matching. The same should be checked and reconciled. (vi). As stated in the text part, the calculation tables for assessment of reserves and resources in cross sectional method have not been enclosed in support.

11. Para 1(l): (i) Sub-paras (a) to(c) have not been discussed. (iii) Foot note as per universal format may also be incorporated below the Final / standard reserves and resource table.

12. Para 2(B): (i). The existing shafts, levels, winzes & raises, cross cuts, stopes, etc., and other excavations undertaken already in this mine should be updated and referred with the plate No. and plan & sections & similarly, the proposed shafts deepening, developments like levels, winzes & raises, cross cuts, stopes, etc., proposed to be carried in the ensuing period/ method adopted for U/g mining operations to be described with the mRL and the respective levels. But, the information furnished in this para is not complete and clear for understanding. (ii). The presence of adjacent U/G mine to be mentioned (iii) The proposed stope production for year 2017-18 may be revised based on completion of required U/G development in said financial year. (iv). Extraction level will be made at 210mRL, whether it is extraction level or draw point in the main shaft may be given. (v). In lode -4, it is given levels will be opened at 420, 350, 315, 281 & 223mRL as above, pertaining to the existing levels indicated in L-V sections in plate no.6, where these levels will be joining may be clarified along with that. Besides, what are the norms indicated. (vi). Para 2B(i), it is given men, materials & ore hoisting will be carried through MECL south shaft, whether all these operations will be carried out through cage system, or along with skip, tubs etc., may be specified.

13. Table-No. 2.0.1, it is noted 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, 6<sup>th</sup> & 8<sup>th</sup> level, even as per plate No. 6, in L-V section, why levels 4<sup>th</sup> & 7<sup>th</sup> not developed may be explained. Table-No.2.0.2, given in column-2, is not appropriate. This need to be attended appropriately, wherever applicable.

14. Para 2B (iv), wherein the method & sequence of stoping furnished as per the plate no.8 in conceptual sections and drawn stoping operation from 2017-18 itself, without undertaking the necessary developments and stoping block and not yet applied for Permission for stoping block permission, submitting production proposals from the stopes is not appropriate and correct. Hence, preparation of development & stoping block preparations can be carried out in the year 2017-18 and followed by seeking permission and production may be added. In the light of the above remarks, the plates and the text paragraphs may be attended and modified, wherever applicable.

15. **Conceptual Mining Plan:** (i) to increasing the life of mine, future additional exploration may be mentioned. (ii) The quantity of excavation of Black-rock / waste during conceptual period in U/G development and their disposal including stope filling during conceptual period has not been discussed.

16. Para 3(b): The depth of present of the shaft and the proposed underground development has not been indicated.

17. Para 3(c): Annual rainfall of the area has not been mentioned.

18. **Para 4(a):** Table of Year-wise generation of waste/black rocks due to underground development has not been incorporated.

19. Para 5(e): Economic cut-off grade of Au-ore and generation/recovery of associated mineral/metal have not been discussed.

20. Para 8.1: Page no 45: Presence of any surface water body and nala within ML if any to be mentioned under “Water regime”.

21. Table No-8.0.8 (**Page No-51**): The grand total of cost of environmental instruments to be checked and corrected.

22. Para 8.3.5: Proposed development of 3.00 Ha green belt areas with nos., of proposed plantation, season-wise, environmental monitoring and management of Black/ waste rock dumps etc., should to properly reflected.

#### **Annexures:**

23. Few photographs of boundary pillars have not been enclosed.

24. Qualification and experience certificates under rule 15(1) of MCR 2016 of all QP’s, who were signed the documents should be enclosed. Annexure-8 needs to be deleted from the text.

25. Affidavit from the lessee regarding that no matter is pending against the lease area on the following issues. (1) Issues relating to illegal mining with the State Government. (2) Royalty and Revision matters with the State Government. (3) Safety and Environment issues of General Public Concern. (4) Public Interest Litigation (PIL) and other Court cases etc, has not been enclosed.

26. The enclosed environment monitoring data should be by an Environmental Laboratory approved by MOEF/CPCB. Annexure-VII should be obtained from the Managing Director, instead of ED.

27. **Feasibility study report** :( i) Necessary modifications should be made as per scrutiny comments in reserves, production and mining chapters. (ii) **Economic Evaluation:** (a) Break-up of proposed cost of production should also be given which also include royalty and payment to NMET (2 % of Royalty) & DMF (30 % of royalty) (b) Project is economically viable based on NPV and IRR may also be mentioned.

28. Copy of the valid Bank guarantee need to be submitted for the five years period.

#### **Plates:**

29. All plates should be signed by QPs.

30. Typical assay plan of level-2 has not been enclosed.

31. Plate No. 1A (**key Plan**): The proposed environmental monitoring stations should be properly marked in core and buffer zone. Further, wind rose diagram has not been incorporated. Table showing list of villages in buffer zone, distance from mine and population etc has not been incorporated. The plan should be as per rule 28(5) (a) of MCDR 1988.

32. Plate 3: (Surface Plan): (i) the plan should be prepared as per rule 28(1) (a) of MCDR 1988. (ii) Coordinates of corner boundary pillars as per state DMG sketch should also be mentioned in table. Difference of the same may be clarified.

33. Plate 4 : ( Geological Plan): (i) Strike and dip of the ore load/body has not been shown. (ii) BHs (11 nos.) drilled by MECL which intersected the Load No-4 should be shown by dotted lines. (iii) The plan should be prepared as per rule 28(1) (b) of MCDR 1988. Surface bore holes should be proposed to find out the extension of the strike length towards southern end to assess the geometry of the ore body.

34. Underground working plan Plate No.3A: The underground workings depicted with respect to this area/ mine must be shown along with the ore body/ strike length for more clarity of the existing and the future proposed developments and the workings, including the stoping proposals.

35. Plates No. 6(LV sections): The depth projection of different categories of reserves (111 and 121/122) and resources (211 and 222) should also be mentioned with all blocks and drilled BHs projections. The plan should be prepared as per rule 28(1) (d) & (e) of MCDR 1988. The ore body/ strike should be projected in this section to reveal the category of the reserves/ resources.

36. Development & production sections (Plate No.7): The proposals drawn in the sections should be indicated for 2017-18 to 2021-22. Besides, the development and the stoping proposals for the year 2017-18 reveals that, development is possible as per the index, but the stoping proposals in the same year 2017-18 given, how this is possible, when the stope block is not yet prepared, this may be reconciled.

37. Conceptual Sections (Plate No.8): the sections should be attended in line with the above remarks.

38. Plate 10: ( Geo. Cross Sections/TS): (i) The drilled BHs have not been projected (ii) the depth projection of different categories of reserves (111 and 121/122) and resources (211 and 222) should also be mentioned. (iii) Few more TS to be enclosed. (iii)The plan should be prepared as per rule 28(1) (c) of MCDR 1988. (iv). The calculation shown as 41,014 tonnes is not appropriate. The dip of the ore body/ strike shown is not correct, since the strike is from north to south and dipping towards east. Hence, the correction should be made.

39. Plate No-11 (Environmental plan): (i) Proposed environmental monitoring stations are not marked (ii) the plan should be prepared as per rule 28(5) (b) of MCDR 1988. (iii) Pit and dumps of adjacent mine should be properly reflected.

40. Reclamation Plan on 1:1000 scale as per Universal Format (showing proposed year-wise afforestation, proposed monitoring station and other protective measures of dumps etc.) has not been enclosed.

41. Financial Assurance Plan (Plate No 12): -- Proposed location of ventilation shaft has not been reflected.