

SCRUTINY COMMENTS ON MODIFICATION TO THE REVIEW AND UPDAION OF MINING PLAN IN RESPECT OF HUTTI UNDERGROUND GOLD MINE (ML.NO.2671) IN LINGASUGUR TALUK OF RAICHUR-DISTRICT OVER AN AREA OF 528.35 HA OF M/S HUTTI GOLD MINES COMPANY LIMITED ,SUBMITTED FOR APPROVAL UNDER RULE,17(3) OF MCR,2016.THE PERIOD OF MODIFICATION PROPOSAL IS FOR 2016-17 TO 2017-18.(ORIGINAL APPROVED PERIOD IS FROM 2013-14 TO 2017-18.

**1. Modification proposals should be prospectively. Hence, proposals should be 2017-18 only.**

2. Cover page: (i) RQP should be replaced as “Qualified Persons”. (ii) Name of document to be checked and corrected as “Modified review and updatation of Mining Plan”. (iii) Category of mine should be corrected as “Category-A (Mechanized) underground Mine”. (iv). The ML period indicated should be in reference to new MMDR Act, amended, 2015 need to be indicated.

3. Certificates of QP and Lessee: (i) The certificates may be appended at end of the text part as per ‘Universal format’. (ii) The qualifications and experiences of Qualified Persons (QP) should be as per 15(1) of MCR 2016 with necessary documentary proof. The mentioning of RQP/ in certificates, Plates and text part should be replaced as Qualified Person (QP). (iii) Name of document to be checked and corrected as “Modified review and up-dation of Mining Plan”. (iv) In-incorporation of the point of compliance of CCOM circular NO-2/2010 may be checked and reviewed with enclosing relevant plans in support. In the light of the above remarks, the text and the plates may be attended, wherever applicable. (v). Declaration/ understanding in prescribed format should be signed by the nominated owner( Nominated as per section 76 of Mines Act,52).

4. Introduction: The status of EC and other statuary clearance to be discussed with appending the photocopies. A decline was proposed to be developed as trackless mining/ to be carried out during the year 2015-16, which was not undertaken due to various reasons and now the same need to be implemented in the current modification period. Besides, what are the other aim in developing decline, away from the existing shafts need to be specified. Further, the reasons indicated as encouraging results, through exploration data, but the encouraging results are not mentioned for reference. Also, the point no.3, wherein the developments and the stopes also need to be specified, instead of vague proposals.

5. Para 1(a): The registration Number under Rule 45 of MCDR 1988 has not been mentioned. Instead of lessee, applicant is indicated in this para and other text part, which should be corrected. Again in para 1(d), applied area is given, instead of Mining lease. In the light of the above remarks, the text and the plates may be attended, wherever applicable.

6. Para 1(b) : The authorization letter for singing of Mining Plan document to be issued by the Managing Director of Company **or** by the nominated owner nominated as per Board of resolution of the Company in compliance to Section 76 of Mines Act,1952.

7. Para 1(f) : The details of QP (qualified person) should be modified as per rule 15(1) of MCR 2016. RQP certificate number furnished need to be deleted and based on the same, wherever such certificate number given in the text may be deleted.

8. Para 2(b): The area of ML may be in-corporated in relevant Column of the table.

9. Para 3. 3: (i). Review of exploration, production and development etc., up to Dec 2016 should be made for year 2016-17. (ii) **Modified proposals for two months period of year 2016-17 (Feb-17 to March -17) and 2017-18 need not to be discussed in this para to avoid repetition.** (iii) Surface Diamond Drilling carried out after last approved Mining Plan document should be supported by Form-J submitted to IBM. Further, enclosed borehole logs should be signed by Geologist/QP and may be enclosed as **Annexure**. (iv) Page No- 15: The cut-off range of Au to be mentioned at column 2 and 3 of table of Summary of Drill resources. (v) Page No: 21: The actual achieved, ore production figures to be checked and reconciled as per submitted Returns / quarterly returns to IBM and enclosed your letter No-78/Min/43 IBM/2016 dated 14-7-16 with clarifications.

10. Para 3.3.1, (i) Proposed exploration & the achieved may be given in a single table format itself, instead of giving in a descriptive paragraph. (ii) In the same manner, for production, development both level, winzes, raises & shaft deepening and the afforestation may be given, for clarity, .i.e. up to 31.12.2016., in the related tables. (iii) Some of the table's numbers and the heading are hidden due to bindings, which need to be arranged, so that the information furnished need to be readable. (iv). The reasons furnished for non-production as practical difficulties is not appropriate justifications. (v). Reasons furnished for deviation in mine development work also not satisfied.

11. Para 3.4: **Page no-25**:-- The review of compliance of violation pointed out should be properly presented.

12. Para 3.6, the rule 22(6) of MCR,1960, need to be changed to 17(3) of MCR, 2016.

#### **Part-A**

#### **Geology & Exploration:--**

13. Para 1(c): Presence of associated minerals ( Scheelite & silver) and their recovery if any has not been discussed.

14. Para 1(e): Summary of cumulative exploration carried out by HGML to be also mentioned.

15. Para (g): The Geological plans should be in 1:2000 scales.

16. 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. (ii) The proposed expenditure likely to be incurred towards exploration should also be mentioned. (iii) Exploration proposals to be re revised as 2 months period left for the year 2016-17. Further, briefly discuss the proposed exploration shall meet the requirement of Minerals (Evidence of Mineral Contents) Rules 2015. (iv) Summary table of proposed underground development activities should also be mentioned.

17. Para 1(j): (i) The earlier reserves and resources figures (as on 1/4/2013) as per last approved mining plan/SOM document dated 20/2/2014 to be mentioned. (ii) Bulk density, recovery factor and dilution factor considered assessment of reserves and resources for may be based on past experience & field tests and confirmed. (iii) The quantity of G-1 level reserves (111) likely to be blocked at rib and crown pillars may be classified under feasibility mineral resources (211) (iv) the economic cut-off grade for estimation should also be mentioned. (v) A **separate feasibility study report** as per existing procedure has not been enclosed. Economic Evaluation chapter should be discussed in detail with NPV & IRR. Proposed operation cost should also include royalty and payment to NMET (2 % of Royalty) & DMF (30 % of royalty). Accordingly, economic viability may be made w.r.t. present sale value of Gold.

18. Para 1(k): Calculation tables for assessment of reserves and resources have not been enclosed in support.

19. Para 1(l): (i) Sub-paras (a) to (c) have not been discussed. (ii) Summary of Drill resources mentioned at page no-48 may be removed. (iii) Final / standard reserves and resource table as per universal format to be incorporated end of this para. Foot note as per universal format may also be incorporated below the table. (iv) Presence of associated minerals in Gold ore, assessment of the same and their recovery if any have not been discussed.

20. Para 2(B): (i). The description given with respect to each shaft, must be added with the other activities carried out in each shaft, like shaft sinking, drives, cross cuts, raises, winzes, stopings under preparations, under production, stoped out area under stowing, stowing completed, etc., need to be described as on date i.e. up to 31.12.2016. (ii). In the light of the above remarks, the other shafts may be described for the clarity of the work, undertaken and also in progress for future reference for the remaining years. (iii) The reasons for modifications for remaining periods should be properly justify and reflected including decline sinking and additional stoping location. (iv) List of stoping permission already granted has not been discussed. (v) Page no-53: The method of stowing and drainage/ pumping of stowed water have not been discussed. (vi) Para 2(B) (vii): Subsidence Management to be discussed with proper justification. Further, conceptual mine planning up to lease period to be discussed as per Universal format giving reference to enclosed plan and sections as per universal format. (vii) Summary table of proposed development and production (both incidental ore from development and stope) for remaining period has not been incorporated.

21. Para 3(a): The conclusion and recommendation part of hydro-geological report referred has not enclosed.

22. Para 3(b): the depths of present and proposed underground development have not been indicated.

23. Para 4: (i) The proposals of waste rock generation during remaining period of mining plan and their utilization should be discussed and earlier financial years need not discussed. (ii) Year-wise generation tailings for remaining period of MP and their disposal should also be discussed. Tailing dams management have not been discussed under sub-para 4(c).

24. Para 5: (i) Economic cut-off grade of Au and generation/recovery of associated mineral/metal have not been discussed. (ii) Heading of all sub-paras of this para to be indicated.

25. Para 6: Recovery of associated mineral/metals in metallurgical plant, average feed grade of Au ore and Au content in tailings have not been mentioned.

26. Para 8.1: Page no.77: Presence of colony within ML to be mentioned under Human settlements.

27. Para 8.2 (Page No-82) the grand total of cost of environmental instruments to be checked and corrected.

28. Para 8.3.1: The proposed year-wise quantity of stope filling of tailing in remaining period of mining plan should be discussed and in the past number of stopes completed and filled/ back filled with stowing and the waste materials may be numbered.

29. **Para 8.3.5:** The proposed year-wise summary of the protective measure for reclamation and rehabilitation works should be furnished for remaining period of mining plan (instead of actual). Proposed development of 13 Ha green belt areas, season-wise environmental monitoring and Management of tailing dams for remaining period of mining plan should to properly reflected. Further, stope filling may be reflected properly under “**others**”.

30. **Para 8.3.5:** The care and maintenance during temp. Discontinuance proposed to be undertaken as per statutory provisions may be discussed.

31. **Para 8.3.5:** The reflection of beneficiation/ metallurgical plant under which item to be clearly mentioned at table.

### Annexures:

32. Few photographs of boundary pillars and decline have not been enclosed. Further copy of approval letter of last SOM document has not been enclosed. (ii). All the photographs of the mine, shafts, mill tailings, underground workings, level developments, LHD & LPDT latest mining machineries operations, including single boom jumbo drill machines, etc., must be presented in the text/ annexures at appropriate places for reference, including decline workings.

33. Affidavit from the lessee regarding that no matter is pending against the lease area on the following issues. (i) Issues relating to illegal mining with the State Government. (ii) Royalty and Revision matters with the State Government. (iii) Safety and Environment issues of General Public Concern. (iv) Public Interest Litigation (PIL) and other Court cases etc, has not been enclosed. (v). Bank guarantee enclosed reveals validity up to 31.03.2018, but the present document is submitted for upto 31.03.2020, hence the present BG should be extended up to the present review and the up-dation of mining plan and the modification period. (vi). RQP certificates of all qualified persons must be removed and replaced with M.sc qualification certificates along with the minimum five years professional experience certificates of all the QP's.

### Plates:

34. Plans and sections enclosed should be with clarity & properly indexed. Non-submission of plans and sections in auto-cad format or other software output to be justified.

35. The plans in support of compliance of CCOM circular NO-2/2010 have not been enclosed.

36. Typical assay plan has not been enclosed.

***37. All plans should be based on latest survey data and Date of survey should be mentioned in plans. In all plans and sections, it should be written as review & up dation of mining plan and modification, under rule 17(3) of MCR, 2016. Further, the statutory plans should be signed by the mine surveyors. From the plans and sections, it reveals, that the last updations up to 31.03.2016 only, it should be updated up to 31.12.2016.***

38. Plate No. 1(**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.

39. Plate II a: (Surface Plan): (i) Date of survey should be mentioned (ii) The plan should be prepared as per rule 28(1) (a) of MCDR 1988. (iii) Co-ordinates of corner boundary pillars have not been mentioned. (iii) Location of decline has not been marked.

40. Plate II b :( Geological Plan): (i) The plan should be on 1: 2000 scale (ii)The Drilled Surface borehole location and **proposed boreholes location** should properly reflected with easily recognizable color code. Drilled boreholes location should be checked and corrected considering ML area. Litho-unit projections should be restricted to ML area. (iii) The LV sections of middle reef showing the reserves need to be given with clarity, plate No. III (g). In the light of the above remarks, the other plates, related with the reserves projection must be attended and presented with clarity. (iv). the plan should be prepared as per rule 28(1) (b) of MCDR 1988.

41. Plate II C to e: (Geo. Cross Sections/TS):--- (i) The drilled BHs have not been projected (ii) The depth projection of different categories of reserves (111) and resources (211 and 333) should also be mentioned. (iii)The plan should be prepared as per rule 28(1)(c) of MCDR 1988. (iv) Proposed surface boreholes may also be reflected by dotted lines.

42. Plates No. III (e) to (k) (LV sections): The different categories of reserves (111) and resources (211 and 333) considered for assessment should also be mentioned. The plan should be prepared as per rule 28(1) (d) & (e) of MCDR 1988.

43. Plates No. III (h) (LV sections of Zone-I, below 20<sup>th</sup> level): The sections presented for the year 2016-17 is not with clarity. Further in plate No. III(h), under vertical sections, the details of stoping permission obtained in the past is given, which need to be added, out of which, how many are under operation & how many stopings which are already mined out and filled may be marked in the table & in the plate for more clarity.

44. Stoping proposals (Middle Reef, Zone-1Reef, Okleys Reef, Strike Reef in F/w & H/w, -2016-17 to 2017-18): From the proposals, it is observed that, total 28 stopes were proposed for the period indicated above, which must be strictly adhered/ restricted to the stoping permission already obtained and if anything found no permission, which must be deleted. For the whole modification period, only one stope is considered for sand stowing, which is not appropriate and correct. Minimum of 50-60% sand stowing should be followed based on the total extraction from the stopes. No additional stopes should be undertaken without obtaining the stoping permissions for the the above said period.

45. Plate No-V (Environmental plan): (i) Water monitoring station at water discharge point of ML area should also be proposed. (ii) The plan should be prepared as per rule 28(5) (b) of MCDR 1988. (iii) Plan should also cover the adjoining area within **500 m** of the boundary of ML.

46. Plate No. VI©: The folding of the plates need to be done appropriately to reveal the Plate Number and the name of the plate. In the light of the above remarks, all the plates must be attended.

47. Reclamation Plan on 1:2000 scale as per Universal Format (showing proposed year-wise afforestation, proposed monitoring station and other protective measures of tailing dams etc.) has not been enclosed.

48. Financial Assurance Plan on 1:2000 scales as per Universal Format has not been enclosed. F.A table may also be incorporated in the plan.

49. **Plate IX:** Index of plan has not been mentioned. Decline should also be projected in **3D sketch** for better projection of connection to lower levels and for easy understanding.