

SCRUTINY COMMENTS ON DRAFT MODIFICATIONS TO THE APPROVED REVIEW AND UPDATION OF MINING PLAN INCLUDING PROGRESSIVE MINE CLOSURE PLAN IN RESPECT OF HUTTI UNDERGROUND GOLD MINE, ML No. 2671, OVER AN EXTENT OF 528.35 HA, SUBMITTED BY M/S HUTTI UNDERGROUND GOLD MINES COMPANY LIMITED, SITUATED IN LINGASUGUR TALUK, RAICHUR DISTRICT OF KARNATAKA STATE

All the headings, subheadings should be replicated as per the standard guidelines as given in “IBM Manual on Appraisal of Mining Plan 2014”

COVER PAGE

1. The heading should be changed as “Modifications to the approved Review and updation of mining plan (submitted under Rule 17(3) of MCR 2016) including progressive mine closure plan (submitted under Rule 23 of MCDR 2017).
2. The details of the Lease area under Forest and Non-Forest should also be included in the cover page.
3. The details of the Single “Qualified Person” to be given who has prepared the document.

INTRODUCTION

4. The last approved mining plan mentions “The Hutti gold mines Co. produced 92.72 tons of gold till 31st March 2017 and still the gold resources estimated are around 140.04 tons whereas the current submitted document mentions “90.61 tons of gold till 31st March 2019 and still the gold resources estimated area about 50.24 tons”. This is to be checked and corrected.
5. A General location map should be prepared and attached with plates and the reference should be given here. It is mentioned “The extent of the lease is 528.35 ha and the location of said lease is shown on the key plan along with administrative plan is enclosed vide Plate No. 1 & 2 respectively”. Only plate no 1 is key plan, plate 2 is surface plan accordingly it should be corrected and location map reference to be added.
6. The chapter should also mention the details and status of Environmental clearance (EC). The mining capacity permissible as per the EC should be mentioned here. The reference of the EC document is mentioned as Annexure-XVIII in Pg. no 3 whereas in the enclosed Annexure it is mentioned as Annexure-XVII. This should be checked and corrected

GENERAL

7. Para 1.0 (a): Name of the Nominated owner should also be given.
8. Para. 1.0(b)-Copy of Memorandum of Association of the company to be added in Annexure and the reference to be given here. The latest copy of Board Resolution about nominated owner and letter of authorization to represent the company should be enclosed in Annexure and the reference to be given here. The Photo id proof of the nominated owner may also be added in Annexure and the reference to be given here.
9. Para. 1.0(d)- It should be specifically mentioned ‘Gold, scheelite and Associated minerals’ as mentioned in the Mining Lease deed. The other portion should be deleted.
10. Para 1.0(f)- The name of only one Qualified person should be mentioned in this section who have prepared the document and the supporting Qualification and experience of the Qualified person should be added in Annexure in accordance with Rule 15(1) of MCR 2016 and the reference to be given in this section. The portion mentioning “name of the QP’s preparing Review and up-dation of Mining Plan” should be corrected as “name of the QP preparing modifications to the approved Review and up-dation of mining plan”.

LOCATION AND ACCESSIBILITY

11. Para 2(a)-i) All the information should be given as per the IBM universal format for Mine plan. “Lease details(Existing mine),Name of mine, Lat/long of any boundary point, date of grant of lease, Period/Expiry date, Name of the lease holder, Postal Address etc. details should be given in systematic manner as per the format
 ii) The Lease deed for initial grant should also be attached as annexure and reference to be given in this para.
 iii) In the “Period/Expiry Date” it should be mentioned 20 years w.e.f. 19.12.2008 and the date of expiry as 18.12.2028. The annexure reference of the lease deed should be given.
 iv) The Lat/long of all the boundary point pillars should be given in tabular format. Also, in Table 2.1: The details of the triangular stations Peg no. H2 & 7(Local co-ordinates) are differing as in the last approved RMP and the current submitted document. This should be checked and authentic co-ordinates should be given in dd mm ss (Latitude & Longitude) form. H2 & 7 should be clearly demarcated on the surface plan and the co-ordinates should also be mentioned on the surface plan. Table no 2.2- The whole circle bearing co-ordinates for GCP-1,2 & 3 as given in the document is not in (dd mm ss) form. It should be checked and corrected.

All the above triangular stations, Ground control points etc. should be clearly demarcated on the surface plan and the reference of the surface plan should be given in the text.

12. Para 2(b)- The “Taluka” and “Village” detail is not added as per the standard format. It should be added.
13. Para 2(c)- As mentioned in aforementioned scrutiny comment no 5, a general location map needs to be prepared and added in plates and reference to be given in this para. The attached key plan (Plate no-1), the contents of it are not visible. The key plan should be specifically prepared in accordance with Rule 32(5) of MCDR 2017 in scale of 1:50,000 and contour not more than 20 m intervals. Accordingly, it should be attached with plates and reference to be given in this para

DETAILS OF APPROVED MINING PLAN/SCHEME OF MINING (if any)

14. Para 3.3-Exploration-i) The Exploration detail should be reviewed as per the below mentioned table.

Surface Diamond drilling

S.I no	Year	Proposed surface diamond drilling(m)	Actual surface diamond drilling(m)	Proposed Boreholes (Nos.)	Actual Boreholes (Nos.)	Proposed Location (Co-ordinates)	Actual Location (Co-ordinate)	Reasons For deviation if any
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Underground Diamond drilling

S.I no	Year	Proposed Underground diamond drilling(m)	Actual underground diamond drilling(m)	Proposed Boreholes (Nos.)	Actual Boreholes (Nos.)	Proposed Location (Co-ordinates)	Actual Location (Co-ordinate)	Reasons For Deviation if any
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ii) The notice of commencement of exploratory boreholes in Form-I and the record of the exploratory boreholes maintained in Form-J in accordance with Rule 47 & 48 of MCDR 2017 to be enclosed as annexure and reference to be given in this Para.

iii) The Geological Plan (Plate No-3) shows proposed borehole 2018-19 to 2022-23 in index. This is to be checked and corrected. All the drilled boreholes for 2018-19 to 2019-20 should be clearly demarcated on the Geological plan with distinct colour and index to be also updated accordingly. The reference of the Geological plan should be mentioned in this para.

iv) The details of all the surface and underground drilled exploratory boreholes drilled for the year 2018-19 to 2019-20 (till 31.03.2020) as mentioned in this chapter should also be updated and attached as Annexure and reference to be given in this para. Annexure –VI(c) should be corrected accordingly.

v) The review of the excavation proposals (Production and development) for the period 2018-19 to 2019-20 as per the approved mining plan should also be reviewed in this section. The production and development proposals to be reviewed w.r.t Para 2(B) of the approved mining plan year-wise and the reasons for deviation if any should be given.

vi) The review of the reclamation proposals as per the last approved mine plan is not complete. The details of the stopes to be filled during 2018-19 to 2019-20 as proposed in Sec 8.3.2 of the approved mining plan to be reviewed and reasons for deviation if any should be given. The afforestation details as given in Table 3.3.1 are not correct. As per Para 8.3.5 of the last approved RMP, 1.20 ha in 2018-19 & 0.80 ha in 2019-20 with plantation of 3000 nos. and 2100 nos. for tailing dump management are proposed respectively. The cost incurred for watch and care for the same as per the last approved RMP are Rs. 61,00,000 & Rs. 44,73,334 respectively. All the above should be reviewed accordingly for the year 2018-19 & 2019-20 w.r.t the approved proposals and reasons for deviation if any should be given.

15. Para 3.4- The heading should be corrected as per the mine plan universal format. The details of the violations pointed out by IBM and its compliance thereof for the period 2018-19 & 2019-20 should be given in tabular format as mentioned below.

Year	IBM violation details	Compliance details
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16. Para 3.5- "Not applicable" should be replaced with "NIL" if no suspension/closure/prohibitory order issued by any Government agency under any rule or Court of law.

17. Para 3.6- The heading should be corrected as "In case the Mining Plan is submitted for modifications in the earlier approved proposal under Rule 17(3) of MCR 2016, indicate/ specify reasons and justification for modification under these rules". The reasons and justification given for modification are not proper. Point wise specific and authentic reasons should be given for modification. It was communicated during site visit that the lessee is going for enhancement of EC, ROM capacity to 0.9 million tonnes per annum. The lessee has also proposed enhancement in Reserve/Resources based on the recent 2018-19 & 2019-20 exploratory drilling and also change in the location of development and stope working is proposed w.r.t the last approved mining plan in the submitted document. Accordingly, the reasons for modification should be elaborated here in this para. As communicated during site visit, the supporting document related to the lessee going for enhancement of EC for ROM production capacity to 0.9 million tonnes per annum should be enclosed as Annexure and reference to be given in this Para.

PART-A, 1.0 GEOLOGY AND EXPLORATION

18. Para 1.0(c)-The annexure reference given under Pg. no 23- "Gold Chemistry at Hutti" as Annex-XXVI is not correct. Proper supporting document for chemical analysis of ore and waste rock should be annexed and reference to be given in this Para.

19. Para 1.0(d): The heading should be corrected as "Name of the Exploration agency".

20. Para 1.0(e)- The following headings & details should be added in this Para as per the mine plan universal format

i) *Number of pits and trenches indicating dimensions, spacing etc. along and across the strike/foliation with reference to geological plan.* - The last approved RMP mentions 3 no of trenches. The details regarding the trenches should be given as per the below mentioned tabular format.

Sl. No	Year of Exploration	Trench ID	Dimension (LXW)	Top (RL)	Bottom (RL)	Depth (m)	Spacing/ Grid interval	Area Covered	Scale of Exploration
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ii) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, inclination, collar level, depth etc with standard borehole logs duly marked on geological plan/sections- a) The details of the complete 53 nos. of boreholes drilled by GSI to be given. Also, the details of all surface and underground exploratory boreholes already drilled till 31.03.2020, should be added in tabular format as given below.

Sl. No	Year of Exploration	Borehole ID	Type of BH	Diameter	Inclination	Collar Level	Depth	Spacing/ Grid interval	Area Covered	Scale of Exploration
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Table no 1.4 should be corrected accordingly.

b) Table No 1.3-Summary of cumulative exploration carried out by GSI & M/s HGML are to be corrected as on 31.03.2020 and details to be given accordingly.

c) The details of the all the exploratory borehole lithologs both surface and underground as per Form-J should be enclosed in annexure and reference to be given here.

d) The Geological plan should show all the aforementioned trenches & boreholes. The exploratory boreholes for the year 2018-19 to 2019-20 should be demarcated with distinct colour and indexed. The reference of the Geological plan should be given in this Para.

e) The details as provided in Pg. no 28- 31- "Exploration by M/s HGML", "The evaluation of these borehole data indicated the following detail", "Underground diamond drilling" etc. are not related to this para and should be deleted.

iii) Details of samples analysis indicating type of sample (surface/sub-surface from pits/trenches/borehole etc)- The chemical analysis report for all the drilled exploratory boreholes (both surface and underground) for entire strata from NABL accredited Laboratory should be furnished in the annexure and reference to be given in this para.

iv) Expenditure incurred in various prospecting operations- The heading should be added as already mentioned above. The figures as given in Table 1.7 is not correct. The Expenditure details for year 2018-19 & 2019-20 (till 31.03.2020) should be given for the exploratory boreholes including surface and underground as per the below mentioned tabular format.

Type of Exploratory Drilling (Surface/UG)	No of Boreholes	Total drilling Meterage	Cost per meter of Core drilling	Total cost in Rs.
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21. Para 1.0(f)- The Para and the heading should be added in text as per the mine plan universal format. Surface plan shows date of survey as 31.12.2019. As per Rule 31(4) of MCDR 2017 "the plans and sections required under these rules shall be maintained up to date within three months in case of category 'A' mines as referred to in clause (a) of sub-rule (2) of rule 55. The updated surface plan should be prepared & submitted accordingly. Also, the Lease boundary with all the Boundary Pillars, Ground Control points should be clearly demarcated on the surface plan. The 7.5 m safety Zone all along the Lease area should be demarcated on surface plan and all other related plates. The proposed tailing dump for the plan period is overlapping with the 7.5 m safety zone which is not acceptable. It's should be ensured that no mining or allied activities are proposed within 7.5 m safety zone of the lease area. Also, the area of 222.41 ha which is yet to be acquired by the lessee should be demarcated on the surface plan and no mining/allied activities to be proposed in the same as per the specific conditions of EC. The specific conditions (Sec-A) of EC to be referred specifically and ensured that all the activities proposed during the plan period are as per the EC conditions.
22. Para 1.0(g) -The Para and the heading should be added as per the mine plan universal format. Geological plan also shows date of survey as 31.12.2019 & also no safety zone of 7.5 m is demarcated. Updated Geological plan should also be prepared and submitted accordingly as per aforementioned scrutiny comment. The Geological plan should show all the trenches & boreholes already drilled. The exploratory boreholes drilled for both surface and underground for the year 2018-19 to 2019-20 should be demarcated with distinct colour and indexed. It should also include locations of the proposed exploratory boreholes for the balance period with distinct colours, various litho units along with structural features, mineralized/ore zone with grade variation if any may be marked on geological plan along with all other features as indicated under Rule 32(b) of MCDR 2017. The area under different exploration limits G1, G2, G3, and G4 as per UNFC should be clearly demarcated on the Geological plan and also to be added in Tabular format in plate. All the above features should be shown on the plate index. The reference of the Geological plan should be given in the Para.
23. Para 1.0(h)- The Para and the heading should be added as per the mine plan universal format. The Geological section should be prepared w.r.t to the borehole logs for the drilled exploratory boreholes. The reference of the Geological section to be given in this Para.

24. Para 1.0(i)-The Para and the heading should be corrected as per the mine plan universal format. The area mentioned in the current submitted document under G-1,G-2 & G-3 is 227.96 Ha, 147.72 Ha, 118.23 Ha respectively. Accordingly, the exploration program should be proposed for the plan period(2020-21) to (2022-23) so that the entire potentially mineralized area covers detailed exploration under G-1 level, in accordance with Rule 12(4) of MCDR 2017. The future exploration program should be proposed in details as per the below mentioned table.

Year	No of boreholes (Core/RC/DTH)	Grid interval	Total meterage	No of pits, Dimensions And volume	No of Trenches, Dimensions and Volume.
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Location of the proposed boreholes

Proposed year	Proposed bore-hole(BH-ID)	Sections	Northing	Easting
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Table No 1.8 in the text should be corrected accordingly and the detailed justification should be given in this Para for converting the entire potentially mineralized area under G-1 level of exploration. All the above exploratory boreholes should also be demarcated on Geological plan and to be given in tabular format year-wise on plate also.

25. Para 1.0 (j): i) Area explored under different level of exploration should be marked on Geological plan and UNFC code for area considered for different categories of reserve/resources estimation should be marked on Geological cross sections. The reference of the Geological plan and crosssection should be given in this Para.
ii)The details of the area explored under different level of exploration is to be given in below-mentioned tabular format.

G-Axis	Area in Ha	Depth in Meter
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iii) The Reserve & Resources estimation as per UNFC should be given as on **1.04.2020** in the tabular form. Table no 1.9 & the text should be corrected accordingly.

iii) The entire feasibility report as attached in Annexure-XII should be corrected w.r.t to the aforementioned scrutiny comments for Reserve/Resource estimation. The economic evaluation of the feasibility report is not proper. It should be corrected as per the Minerals (Evidence of Minerals Contents) Rules 2015. UNFC format. The report should include Geographical conditions, Geology, Legal matters, operations, Environment, Processing, Infrastructure and services construction activities, Costing, Marketing, Economic viability and other factors like statutory provisions related to labour, land, mining etc. There is completely no costing and Economic evaluation done. Detailed Economic Evaluation should be done. Costing should also include Royalty & taxes (DMF, NMET) etc. The feasibility report as attached in Annexure-XII should be corrected accordingly and also should be signed by QP. Also, proper Annexure reference should be given.

26. Para 1.0 (k)- The heading should be corrected as per the mine plan universal format. As already mentioned above the Reserve/Resource should be estimated as on 1.04.2020. The detailed calculation of reserves/resources section wise needs to be given. The calculation in Table 1.11, Annexure-IX and the plate reference given in the text are not correct. The Reserve/Resource estimation is attached as Annexure-XI. However, the calculation for the Reserve/Resource estimate for Annexure-XI is not correct.
- The Reserve/Resource to be estimated as on 1.04.2020 in Annexure-XI.
 - The individual break-up of the Reserve tonnage for strike reef footwall, strike reef hanging wall, Main Reef, village reef, Zone-I reef, Middle Reef, Oakley's reef should be calculated. The calculation as given in the annexure-XI for the above is not correct and also the basis of estimation is not clear. All the factors considered for Reserve estimation like Bulk density, Recovery factor etc. and the formula adopted for estimation of tonnage to be specifically mentioned.
 - Similarly, the individual break-up of the Resource tonnage for Strike Reef, Zone-I Reef, Middle Reef, Oakley's Reef should also be calculated. The calculation as given in the annexure-XI for the above is not correct and also the basis of estimation is not clear. All the factors considered for Resource estimation like Bulk density, Recovery factor etc. and the formula adopted for estimation of tonnage to be specifically mentioned.
 - The Reserve/Resource estimation under different UNFC code to be recalculated accordingly. Annexure-XI should be corrected accordingly and reference to be given in this para.

27. Para 1.0(l)- i)The Resources as estimated under different level of Exploration needs to be corrected as per the aforementioned scrutiny comment and details to be given as on 1.04.2020.
ii)In Pg-37, the recovery factor is given as 85 % and dilution factor considered as 15 %. The dilution factor of 15 % is on higher side. The reasons for consideration of above recovery factor and dilution factor should be justified. The SpecificDetails should be given in this para for the Cut-off grade, underground depth proposed based on the economic evaluation/feasibility study report.
iii) Reserve/Resource details should be re-examined w.r.t all the scrutiny comments for aforementioned Geology and Exploration chapter(1.0) and should be given accordingly in tabular format specifically as per the mine plan universal

format. Table 1.9 should be corrected accordingly. The Reserve/Resource estimated under different UNFC code in this section and Resources estimated under different level of Exploration (G1, G2, G3 etc.) should be exactly similar. The portion "Justification for various category of Reserves" should mention the detailed Reserve/Resource calculation under different UNFC code as already mentioned in above scrutiny comment no 26. The corrections to be incorporated in all relevant portion of text, plates and annexures.

2.0 MINING

28. Para 2.0(i): Mode of entry- The depth of Mallappa shaft is mentioned as 937.30 as on 1.12.2019. Plate 5F shows depth as 933.7 m. This should be checked and authentic data to be provided as on 31.03.2020. The development and the stoping method in brief should also be described in this Para.
29. Para 2.0(ii): Underground layout-a) A brief description should be given in the text describing the underground layout with reference to the level plans & longitudinal sections. The related level plans and longitudinal sections should be attached with plates and reference to be given in this Para.
- b)- *Sizes and intervals of levels and raises/winzes with proper reasoning*- The heading should be added as per the mine plan universal format. The size of all the development headings like drive, drift, raises/winzes, (Ore/waste)cross cuts etc. should be given in tabular format and the technical reasons for selection of the aforementioned size should be elaborated in details. Also, the size of the stoping blocks, crown & sill pillar, Rib pillar etc. should be given in tabular format and the technical reasons for selection of the aforementioned size be elaborated in details.
- c)- *Proposed year-wise level wise extent of development for five years along with the support system*- The heading should be added as per the mine plan universal format. -i) The total ore production is given as 818632 for the year 2021-22 and 921636 for the year 2022-23 in Table 2.1. The EC capacity as per MOEF letter no. J-11015/13/2003.IA.II (M) dated 17/11/2004 mentions 0.6 MTPA for gold ore. The year-wise production capacity should be kept within EC limit unless it is mentioned in the reasons for modification that "the lessee will be going for enhancement of EC based on this modification to the approved mining plan". This should be checked and necessary corrections to be incorporated in all relevant portions of the text, tables, annexures and plates. It is communicated during site visit that the lessee will be going for enhancement of EC ROM production capacity to 0.9 MTPA. Accordingly, the year-wise total ROM production capacity should not be more than 0.9 MTPA.
- ii) Also, the primary development meterage for the year 2022-23 is given as 4226 m in Table 2.1 whereas in Annexure-IX (E) it is mentioned as 4266m. All the figures in Table no 2.1, 2.2, 2.3, 2.4 should be specifically checked w.r.t the calculations given in Annexure IX, IX-A, IX-B, IX-C, IX-D, IX-E, IX-F, IX-G, IX-H, IX-I & IX-J. The calculations in all the aforementioned Annexures should also be checked and the necessary corrections to be incorporated in all relevant portion of text, tables, Annexures & plates.
- iii) In Annexure-IX- the detailed calculation should be given for the stope tonnage given for each block in the table considering the dimension (L*B*H) of the stope block, bulk density and the recovery factor assumed for calculation of tonnage. Additional details should be added in the table of Annexure-IX accordingly.
- iv) The bulk density for ore & waste and the recovery factor considered for calculation should be mentioned in the text and also in aforementioned annexures.
- v) The summary for Primary development in ore, Stope development year-wise should be given in text as per the below mentioned table. The bulk density and the Recovery factor considered should be specifically mentioned.

S.I No	Year	Ore Development Nomenclature	Development Size (L*W*H)	Level	Co-ordinates Latitude Longitude	Reef Particulars	Region	Total meterage	Ore Tonnage (MT)
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The summary of the waste development (off lode) year-wise should also be given as per the below mentioned table.

S.I No	Year	Waste Development Nomenclature	Development Size (L*W*H)	Level	Co-ordinates Latitude Longitude	Reef Particulars	Region	Total meterage	Ore Tonnage (MT)
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The summary of the stope production year-wise should a be given as per the below mentioned table.

S.I No	Year	Stope Nomenclature	Stope block Size (L*W*H)	Level (From To)	Co-ordinates Latitude Longitude	Reef Particulars	Region	Ore Tonnage (MT)
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All the figures in aforementioned table should be exactly similar with the details given in the annexure.

- vi) It should be ensured that the blocks for which stoping notice has been given to IBM (ZI-24th- 26th level, BE 35-36 region) and OR (24th to 26th level, CW 37-39 region) have been proposed in the modified mining plan with same extent, dimension etc. as in the stoping notice. Further a table should be attached as Annexure which should mention the List of stoping blocks permitted by IBM with all details like stoping permission no & date, Reef, Block, Level(From-To), Region(From-To) & Reserve & stoping status till date as on 1.4.2020.
- vii) The details of the support system for all the development heading, etc should be given as per NIRM recommendation & Systematic Support Rule(SSR) of the mine. The SSR may be attached as Annexure and reference to be given in this Para.
- v) The Year-wise Production (stopping) and development plan & section should be prepared incorporating all the aforementioned scrutiny comments of the Mining Chapter and reference to be given in this para.
30. Para 2.0(iii): System of drilling and blasting- The table to be corrected as per the universal mine plan format. The Powder factor(Norms) & Powder factor(Actual) to be calculated and added in table 2.5.
31. Para 2.0(iv): Method and sequence of stoping- a) The Sl. no. of the para should be corrected as per the mine plan universal format to 2.0(iv)

b) The reference of the NIRM Report is given as XXVII, whereas it is placed at annexure-XXII. This should be checked and corrected. The summary of the Recommendations of the NIRM report w.r.t the length, width & height of Stope block, size of crown pillar, size of Rib pillar recommendations, support system recommendation etc for different Reefs should be summarized here in this Para.

c) The details of the proposed stope blocks for the period 2020-21 to 2022-23 should be given in tabular format. Table no 2.6 is not as per the universal mine plan format. The thickness of crown pillar, Thickness of Sill pillar is to be included. Also, the no of working stopes for the period 2020-21 to 2022-23 should be checked as per the aforementioned scrutiny comment no 29 and corrections to be incorporated in all relevant portion of text, tables, annexures and plates. The reference of the year-wise production (stopping) and development plan & section should be given in this Para.

d) The stope filling method should also be detailed in this Para. In Table 2.6, Hydraulic stowing/BR Filling is mentioned as method of stowing/backfilling. Both the method should be described in detail with technical applicability conditions for the same. The Year-wise stowing/backfilling stopes should also be checked w.r.t the aforementioned scrutiny comment no 29 and corrections to be incorporated in all relevant portion of text, tables, annexures and plates. The year-wise proposals for stope backfilling should be given in tabular format as mentioned below.

S.I No	Year	Filling Stope Nomenclature	Filling Stope block Size (L*W*H)	Level (From To)	Co-ordinates Latitude Longitude	Reef Particulars	Region	Tailings Qty. (MT)	B/R Qty (MT)
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Pg. no 52 of the submitted document mentions "Generation of waste rock will be around 437414 tonnes during the period from 2020-21 to 2022-23, out of which 30 % will be used as road metal, building construction jobs and remaining 70 % as filling materials in completely depleted stopes". Further in Pg-55 it is mentioned "Presently of the generated waste 60 % is being used to backfill the old stopes and 40 % of which is brought to the surface and used for civil constructions". The ratio of waste(B/R) to be used for stope filling should be clearly specified whether 60 % or 70 % and the percentage should be mentioned accordingly in all relevant portion of the text and annexures. Accordingly, as per the percentage proposed and the year wise waste rock generated as per the aforementioned Scrutiny comment no 29, the Year-wise B/R Quantity for stope filling should be given.

32. Para 2.0(v): System of Underground transportation- The S.I. No should be corrected as per the mine plan universal format to 2.0(v)
33. Para 2.0(vi): System of winding/hoisting- The S.I. no. should be corrected as per mine plan universal format to 2.0(vi).The adequacy for the winding system to handle the desired rate of material and man handling should be described in details in this Para. A detailed calculation to be included for requirement of quantity of ore and waste to be handled per shift w.r.t the maximum annual ore & waste quantity proposed for the plan period as per the aforementioned comment no 29 & 31. Also, the manpower requirement per shift to be calculated and adequacy of the winding/hoisting system to cater the above ore & waste tonnage handling and manpower hoisting should be justified with detailed calculation.
34. Para 2.0(vii): Subsidence management may be described as below:-The S.I. no and Para heading should be corrected as per the mine plan universal formatThe subsidence management details given in the Para are not correct. As discussed during site visit, the details of the ground movement monitoring in underground should be given in this para as per the format. The related underground monitoring reports to be attached in annexure and reference to be given in this Para.
35. **Conceptual mine planning**-i) The heading should be corrected as per the mine plan universal format. As already aforementioned above in the Geology chapter the Reserve estimation is to be done as on 1/4/2020. The maximum ore production quantity to be arrived after incorporating all the corrections as mentioned in the Mining Chapter and the life of the mine should be calculated accordingly. The related text under this Para (Pg. no 49 & 50) should be checked and corrected accordingly.
- ii) Proposed Exploration (Pg. 51)- It is mentioned "In next 5-year period.....G-1 level by exploratory mine development" which is not correct and should be deleted. As already mentioned in Scrutiny comment no 24, the exploration program should be proposed for the balance period (2020-21) to (2022-23), so that the entire potentially mineralized area covers detailed exploration under G-1 level. The text should be corrected accordingly.
- iii) Mine development (ultimate pit limit) optimum exploitation and utilization of minerals- The production capacity is mentioned as 2000 TPD which is not correct. This should be checked and calculated w.r.t the aforementioned scrutiny comment no 29(Mining Chapter) and corrections to be incorporated in all relevant portion of the text, tables, annexures and plates.
- iv) Waste and subgrade mineral management- The generation of waste rock quantity , the percentage of waste rock to be hoisted for construction jobs and the percentage to be used for stope filling should be checked and corrected w.r.t the aforementioned scrutiny comment no 29 & 31 of Mining chapter and corrections to be incorporated.

v) Environmental aspects with specific reference to Reclamation measures—(a) The heading should be changed as “Reclamation and Rehabilitation”. (b) The portion mentioning “HGML will be in touch with IBM in maintaining the environment and ecology of the area” to be deleted. (c) It is mentioned “ Environmental monitoring cell of the company.....keeping in view IBM’s Circular no 3/92 season wise every year, preferably by engaging the services of any Environmental laboratory approved by MOEF/CPCB”. This should be corrected as “*Environmental monitoring cell of the company shall continue to monitor ambient air quality, dust fall rate, water quality, soil sample analysis and noise level measurements on various station established for the purpose both in the core zone and buffer zone as per the guidelines of MOEF/CPCB/KSPCB norms and keeping in view IBM’s circular no 3/92 season wise every year, preferably by engaging the services of any Environmental laboratory approved by MOEF/CPCB*”.

(d) The following “With regard to.....as per guidelines of IBM & DGMS officials” should be corrected as “*Utmost care is taken for control of dust, noise & ground vibration both in surface and underground and will be monitored as per the guidelines of DGMS/IBM/MOEF/CPCB and other related statutory bodies*” .

Afforestation Programme (Pg. 53-54)- a) It is mentioned “As stated in the approved mining plan afforestation is beinglease area”. This should be corrected as “Afforestation is being carried out within and outside lease area”. b) It is mentioned “An updated Environmental Management plan is enclosed as Annexure-XVII”. This is not relevant and should be deleted from this Para. (e) The table as given in the submitted document, in Pg. 55-56 are not having correct figures. The present depth of underground mine, Proposed depth of mine till the end of lease period, Reserve estimated as on 1/4/2020, Resources estimated as on 1/4/2020, Estimated Resources up to the end of the lease period, rate of ROM up to the end of lease period, disposal of waste, stowing/backfilling should be thoroughly checked and corrected w.r.t the aforementioned scrutiny comments for Geology and Mining chapters and the figures should be corrected accordingly. All the details should be given

-For Surface subsidence, the reference of NIRM report should be mentioned.

-The reclamation & rehabilitation measures should include the steps & measures proposed to be taken to reclaim the mining lease area. The reclamation & rehabilitation details proposed for the plan period (2020-21) to (2022-23) should be detailed here. The reclamation & rehabilitation plan should be prepared and added in plates and reference to be given here in this Para.

-The Conceptual mine plan & section for both surface and underground up to the end of the lease period should be prepared separately. The conceptual plan & section for surface should also include undertaking of re-grassing of the mining area and any other area which may have been disturbed due to mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. in accordance with the order of Hon’ble Supreme Court dated 08.01.2020. The other Reclamation & Rehabilitation measures as planned for the conceptual period may also be detailed and included. The complete Green belt plantation in Safety Zone of 7.5 m should be completed by the end of lease period. The conceptual plans & sections should be prepared accordingly as mentioned above and attached as plates and reference to be given in this Para. The Land use pattern for mining and allied mining activities during this plan period as well as during the conceptual period should be given as per the below-mentioned table. The land use should also be shown accordingly in conceptual plan & section. Item in “particulars” column should be vis a vis as in the Financial assurance table of the mine plan universal format. The area details should be updated as per the latest survey as already mentioned in aforementioned Scrutiny comment no 21.

Sl. No	Particulars	Existing (ha)	Plan period(ha)	Conceptual Period(ha)
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36. Para 2.0(viii): Mine Ventilation: - The total air requirement inside the mine as per the statute to be mentioned. The type of ventilation system, total Intake air Quantity, total Return air Quantity should be specifically mentioned. All air quantities to be given in (m³/sec). The details of the main mechanical ventilators including capacity should also be included. The ventilation plan & section to be enclosed as plates and reference to be given in this Para. Also, the latest ventilation survey report may be added as annexure and reference to be given in this Para.

37. Para 2.0(ix): Extent of mechanization: - The text & table 2.10,2.11,2.12,2.13,2.14,2.15 from Pg-59-63 should be checked w.r.t the aforementioned scrutiny comments no 29,31 & 33(Mining Chapter) and corrections to be incorporated in all relevant portion of text and annexures. The machinery, equipment etc. should be calculated as per the maximum quantity of ore and waste tonnage to be handled in the plan period, max development meterage for ore and waste to be handled during the plan period etc.

3.0 MINE DRAINAGE

38. Para: 3(b)-The present depth of working & proposed depth up to conceptual period should be checked w.r.t the aforementioned scrutiny-comment no 29 & 35 of Mining chapter and corrections to be incorporated.

4.0 STACKING OF MINERAL REJECT/SUB GRADE MATERIAL AND DISPOSAL OF WASTE

39. Para 4.0 (a): It should be specifically mentioned “No top soil, and subgrade/Mineral reject will be generated during the Plan period” as indicated in the submitted document in the Mining Chapter. The portion “*During the*

course..... during the plan period is given below.” should be deleted from this Para. It should be mentioned “the waste rock will be generated from off lode development and the year-wise waste generation during the plan period is given below”. Table 4.1 should be checked w.r.t the aforementioned scrutiny comments related to mining chapter and corrections to be incorporated. The percentage of waste rock for underground filling and forroad ballast should also be checked w.r.t the aforementioned scrutiny comment in Mining chapter. As communicated during site visit, It is to be specifically mentioned that the waste quantity used for civil constructions at surface, will be used directly and will not be stored at an area on the surface. Accordingly, details should be given in tabular format as mentioned below.

Year	Top Soil (Cum)		Overburden/Waste(cum)			Mineral Rejects (Cum)		
	Reuse/spreading	Storage	Backfilling	Civil Constructions (Direct use)	Storage	Blending	Storage	Beneficiation

Para 4.0 (b): This section of the Para requires detail of waste dumping area proposed if any, whether it is in mineralized or non-mineralized area. Since no waste-storage dump is proposed and the material will be used directly for Civil constructions, it should be mentioned accordingly in this section. The details given as “Tailing dump Management” from Pg. 67-70 is not related to this Para and should be deleted.

Para 4.0(c)- The S.I. no and heading for this para should be added as per the mine plan universal format- It should be mentioned in this para that there is no proposal for disposal of waste in waste dump. Accordingly, it is “not applicable”.

6.0- PROCESSING OF ROM AND MINERAL REJECT

40. The subheadings should be corrected as per the mine plan universal format and the specific description should be given under the respective subheading.
- Brief description to be provided regarding nature of processing. The Size and grade of feed material and concentrate (finished marketable product), recovery etc. should be specifically mentioned in this section of para. In Pg. no. 73, plate no 13 reference is mentioned, whereas there is no plate no 13 in list of plates. Accordingly, all required details as mentioned in the Para should be provided & proper reference should be given.
 - A material balance chart with flow sheet of the processing procedure indicating feed, product, recovery and its grade at each stage of processing to be added in this subheading portion of the text. In Pg. 72 it mentions “A case study of material budget chart and flow sheet for the month of Dec-19 is enclosed as Annex-XXIV” which is not correct. The portion should be deleted and updated flow sheet should be given in text with all aforementioned information and also related Annexures should be corrected accordingly.
 - Explain the disposal method of tailings or reject from the processing plant-* The disposal method of tailings from the processing plant should be specifically given in this section. The portion “Disposal methods being practised.....used for stope filling” including table no 6.1 should only be given (Pg. 76). Table no 6.1 as mentioned in the text is not clear. It should give specific details for the Old Tailing dump, Active Tailing Dump and the Proposed Tailing dump with proper nomenclature D-1, D-2 & D-3 respectively, Area in Ha, Capacity (million tonnes) & tailings dumped respectively in each till 31.03.2020. For the proposed tailing dump(D-3) the quantity of tailings proposed to be disposed in the tailing dump for the plan period (2020-21 to 2022-23) is to be given. As already mentioned above in scrutiny comment no. 21, the proposed tailing dam(D-3) area is overlapping with the safety zone of the lease area which is not permissible. It should be ensured that the proposed tailing dump is beyond 7.5 m safety zone from the mine Lease area. This should be corrected accordingly in all the relevant portion of text, annexures & plates. The proposed tailings quantity should also be checked w.r.t the above scrutiny comment 29 & 31 of Mining chapter and corrections to be incorporated in all related portion of text, table, annexures and plates. The aforementioned details of the Tailing dump for both existing and proposed with nomenclature should be clearly demarcated on the relevant plan & sections.
 - This section of Para. Should specifically describe the Quantity and quality of tailings proposed to be disposed in the plan period, size and capacity of tailing pond, toxic effect of such tailings if any with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailing dam- The tailing dump details as given in Pg. 67-70 of the submitted document, should be given in this Para. It should be ensured that specific information as mentioned above should be given in the text. The Quantity of tailing proposed to be disposed year-wise, size and capacity of the proposed tailing dump should be given in tabular format. Also, the toxic effect of such tailings with process adopted to neutralize before disposal and dealing with excess water from the tailing dam should be described in this section (Pg. 75, 76-77(Tailings Detoxification plant)).
 - The specific quantity and type of chemicals used in the processing plant to be described in this section.
 - The specific quantity and type of chemicals to be stored on site/plant to be described in this section,
 - The quantity of water required in Cum/day for mining, processing & allied activities process & like dust suppression, plantation, domestic purpose like washing, drinking etc. details to be given as per the tabular format mentioned. Also, the sources of supply of water, disposal of water and extent of recycling details to be given

Item	Water Requirement (in Cum/day)
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The Water balance chart is to be furnished.

7.0-OTHER-

41. a) Site services- The site services should be clearly demarcated on all the relevant plan and indexed.
 b) Employment Potential-This should be reviewed w.r.t all the aforementioned scrutiny comments related to mining chapter and modifications/corrections if any to be incorporated. "MCDR 88" as mentioned in the text to be corrected as "MCDR 2017. The Statutory requirement of Mining engineer should also be included as per the provision of MCDR, 2017

8.0- PROGRESSIVE MINE CLOSURE PLAN-

42. a) Para 8.1- Existing land use pattern-Table 8.1.1& the area put on use at start of plan(ha) is not matching and also the format of table is not correct. It should be corrected as per the below mentioned tabular format and the items under particular column should be similar as in Financial assurance table of the mine plan universal format. The table should also be checked as per the latest survey data as mentioned in aforementioned scrutiny comment no 21.

S.I. No.	Particulars	Area put on use at start of plan (Present land use) in Ha
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ii) In the "Flora & Fauna" the existing conditions are to be described. The text mentioning " It is proposed.....during the scheme period (2020-21 to 2022-23)" and table no 8.1.2 mentioning year-wise afforestation proposal is not relevant to this Para and should be removed.

iii) Quality of air, ambient noise level and water- These should be discussed w.r.t the latest environmental monitoring Report for water, Quality of air, Ambient noise level etc. for core & buffer zone. The environmental monitoring report to be attached as annexure and reference should be given in this Para.

iv) Settlements to be corrected as "Human settlements". The details regarding Human settlements for core and buffer zone of the lease area to be described in the text.

v) Public buildings, places of worship and monuments- The details regarding the public building, places of work-ship and monuments for core and buffer zone to be given. All corrections to be incorporated accordingly.

vi) Indicate any sanctuary is located in the vicinity of leasehold is to be added as per the mine plan universal format and details to be furnished accordingly in this Para.

- b) Para 8.2: The details as given in this Para (Pg. 83-85) and table 8.2.1 are incomplete. The entire contents in this Para should be corrected as per the mine plan universal format. The following sections to be added

i) *Land area indicating the area likely to be degraded due to quarrying, dumping, roads, workshop, processing plan, tailing pond/dam, township etc-* Details to be given in tabular format as mentioned below. Table 8.2.1 to be corrected accordingly.

S.L No.	Particulars	Area put on use at start of Plan period (Present Land use) (in Ha)	Additional requirement during plan period (in Ha)	Total (in Ha)
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As already mentioned, the items under particular column should be similar as in financial assurance table of the mine plan universal format. The land use details should be as per the latest survey data as already mentioned in aforementioned scrutiny comment no 21.

ii) *Air quality*-The control measures proposed may be discussed. The Ambient air quality monitoring as per the statutory norms to be elaborated and the details of Air monitoring stations to be given as per the below-mentioned format. The reference of the Environmental Management plate should be given which would be showing all the Air monitoring stations in Buffer and core zone.

S.I. no.	Location	Zone	Code
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iii) *Water quality*-The control measures proposed may be discussed. The process for monitoring of water quality may be discussed. The parameters for monitoring of water quality and the locations as per statutory norms may be discussed here. The details of the water monitoring stations should be given as per the below mentioned tabular format. The reference of the Environmental Management plate should be given which would be showing all the water quality monitoring stations.

S.I. no.	Location	Code
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iv) *Noise levels*- The control measures proposed may be discussed. The details of noise monitoring stations should be given as per the below mentioned format. The reference of the Environmental Management plate should be given which would be showing all the noise monitoring stations.

S.I. no.	Location	Code
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v) Vibration levels (due to blasting) vi) Water Regime vii) Acid mine drainage viii) Surface subsidence ix) Socio-economics x) Historical monuments etc.- All these sections should be added in this Para and information to be provided accordingly. The information in this Para to be furnished as mentioned above & sec 8.3 & Table No 8.3(85-86) should be deleted from the text.

c) Para 8.3.- Progressive Reclamation Plan: The text “Since it is an underground mine.....to assess the quality of water” i.e. from Pg. 87-88 should be deleted. Specific description to be given in this para as per the mine plan universal format.

i) 8.3.1 (Mined out Land)- The figures and the referred Annexure to be checked w.r.t the aforementioned scrutiny comment no 31(d) and corrections to be incorporated. Table 8.3.1.3 should be modified as per the below mentioned table and information to be furnished year-wise for the plan period accordingly.

S.I. no	Year	Filling Stope Nomenclature	Filling Stope block Size (L*W*H)	Level (From To)	Co-ordinates Latitude Longitude	Reef Particulars	Region	Tailings Qty. (MT)	B/R Qty (MT)
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As discussed during site visit Retaining/bund wall, garland drain, coir matting, afforestation etc for the Old Tailing dump, Active Tailing dump etc should be worked out in details and proposed for the plan period (2020-21 to 2022-23) as per below mentioned tabular formats. In line with the specific conditions (Sec A-xiv) of EC, Green belt plantation all around the ML area is to be done. This was also pointed and discussed during the site visit. Accordingly, proposals to be worked out for Green belt plantation all along the lease area in 7.5 m safety Zone for the plan period. The afforestation proposal should be given as 2000 plant species/ha as mentioned in the EC condition.

Year	Retaining Wall			Garland drain			Coir Matting		Remarks
	Dimension (LXWXH)	Location (Co-ordinates)	Area (Ha)	Dimension (LXWXH)	Location (Co-ordinates)	Area (Ha)	Location (Co-ordinates)	Area (ha)	

Year	Location	Area in Ha	No of Saplings	Survival rate	Remarks
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A reclamation plan is to be prepared accordingly mentioning the year-wise activities for land restoration/reclamation/rehabilitation, afforestation etc and reference of the plate to be given in this Para.

ii) 8.3.5-Surface subsidence mitigation measures through backfilling of mine voids or by any other means and its monitoring mechanism. -a) The Para is to be added as per the mine plan universal format. The information on protective measures for Reclamation and Rehabilitation works year-wise should be provided as per the table of mine plan universal format. The table given in Pg. 93-94 is not as per the format. It should be corrected as per the format with all details and to be added in this Para.

b) The portion 8.3.5- “Emergency plan proposed for quick evacuation at the time of tailing dam failure”- Pg. 91-92- “Tailing dump is situated 2 kms.....Mine manager and Executive Director” should be removed from this Para as it is not relevant to this Para.

c) Table no 8.3.5.1, the text “the proposed year.....discontinuance of the mine” & the table for summary of year wise proposal for item no 8.3 (Pg. 92-94) should also be deleted. The specific details should be given in this Para as per the mine plan format elaborated above.

d) Para 8.4-Disaster Management and Risk assessment- The Emergency plan proposed for quick evacuation at the time of tailing dam failure which is given in Pg. (91-92), “Tailing dump is situated..... information to Mine Manager and Executive Director” may be included in this Para. Also, the details of the person (Name, address along with contact no) to be given who will be contacted in case of any emergency in mine.

e) Para 8.5-Care and maintenance during temporary discontinuance: - The text in this Para to be corrected as “All safety and environmental protective measures will be taken up as per the guidelines from all related Statutory bodies”

f) Para 8.6- Financial Assurance-Table No 65-Financial assurance- As discussed during site visit the area under different headings of Financial assurance table are not calculated correctly. The area under Green belt, Tailing pond, Effluent treatment plant/STP, Area remain untouched, total area under different headings as given in the submitted document and the last approved RMP are not matching and also there are errors in total Lease area calculation. Green belt area is the total area of 7.5 m safety zone all along the Mine Lease area and the area should be calculated accordingly. The 222.41 ha area which is not acquired should be specifically mentioned under the heading (Area which remain untouched). The area put on use at start, additional area requirement during plan period, Total Area, Area considered as fully reclaimed & rehabilitated & Net area considered for calculation, should be recalculated as per the aforementioned scrutiny comment related to Geology(1.0), Mining(2.0), Disposal of Waste(4.0), use of mineral & mineral reject(5.0), processing of rom and mineral reject(6.0), other (7.0) & Progressive mine closure plan(8.0) chapters & Financial assurance table should be corrected accordingly and as discussed

during site visit. The Financial amount calculation should be done based on the aforementioned corrected financial assurance table. The corrections also need to be incorporated in all relevant portions of the document & plates.

PART-B

Para 9.0- CERTIFICATES/UNDERTAKINGS/CONSENTS.

43. i)A. CONSENT LETTER/UNDERTAKING/CERTIFICATE FROM APPLICANT- The Para no. to be included and the heading should be corrected as per the mine plan universal format. In Para 01 it should be corrected as "The Modifications to the approved Review and updation of Mining Planhas been prepared by.....". The name of only one Qualified person should be mentioned in this section who have prepared the document and the supporting Qualification and experience of the Qualified person should be added in Annexure in accordance with Rule 15(1) of MCR 2016. Also further it should be corrected as "This is to request.....any correction of the modifications to the approved Review and updation of Mining Plan with the said Qualified person at his address below:-". The full name of QP and address is to be given.
- In Para 04 it should be corrected as "The provisions of the Mines Actobserved in the Modifications to the approved Review and updation of the mining plan....."
 - It should be signed by the Nominated owner mentioning Designation and name of the Company as per the format.
- ii) CERTIFICATE FROM QP- The text should be corrected as " The provisions of the Mineral Conservation and Development Rules 2017 have been observed in preparation of the Modifications to the approved Review and updation of Mining Plan...". As already mentioned above the name of only one Qualified person should be mentioned with signature and date.
44. **Para 10- PLATES:**
- a) As already mentioned in above scrutiny comment no. 29, the current EC capacity is 0.6 MTPA for gold ore. The year-wise production capacity should be kept within EC limit unless it is mentioned in the reasons for modification that "the lessee will be going for enhancement of EC based on this modifications to the approved mining plan". It is communicated during site visit that the lessee will be going for enhancement of EC ROM production capacity to 0.9 MTPA. Accordingly, the year-wise total ROM production capacity should not be more than 0.9 MTPA. All the working proposals and related plans & sections should be made accordingly.
 - b) The Safety Zone of 7.5 m should be demarcated all along the Lease boundary in all related plans & section and should be ensured that no mining/allied activities are proposed in the safety zone except Greenbelt plantation.
 - c) The date of survey in all plates is given as 31.12.2019 and the plans & sections prepared accordingly. As per Rule 31(4) of MCDR 2017 "the plans and sections required under these rules shall be maintained up to date within three months in case of category 'A' mines as referred to in clause (a) of sub-rule (2) of rule 55. Accordingly, all the plates should be prepared and furnished.
 - d) The Grid (Northing & Easting) to be given in all underground plan.
 - e) It should be ensured that all attached plates are prepared as per the content & scale specifications, of Rule 31(**General requirement about plan & sections**)& 32(**Type of Plan & sections**) of MCDR 2017. All plans and sections should be signed with date by certified surveyor, Qualified person, Mining Engineer and Mining Geologist as per provisions of MCDR 2017.
 - f) A General location map may be added as already mentioned in above scrutiny comment no 5.
 - g) Key Plan (Plate No. 1):The contents of the plate are not visible and also it is not prepared as per rule 32(5) of MCDR 2017. The Contour interval should not be more than 20 metres and the boundary of the mining lease should be clearly demarcated with distinct colour. All requirements as per rule 32(5) of MCDR 2017 should be specifically incorporated and the plate should be corrected accordingly.
 - h) Surface Plan (Plate no. 2): All the corrections mentioned above in this para along with the corrections mentioned in scrutiny comment no. 11,21, 40(c) & 41 should be incorporated and updated surface plan should be furnished. The plate should incorporate all the details as per Rule 32(1)(a) of MCDR 2017. The index of the plate should have all the features demarcated on the plan. The plate should have countersignature of authorized surveyor.
 - i) Geological Plan (Plate no 3,): The plates should be checked and all corrections to be specifically incorporated w.r.t aforementioned scrutiny comment related to Geology and Exploration chapter (1.0). The plate should incorporate all the details as per Rule 32(1)(b) of MCDR 2017 like all lithological units in the area, location of all trenches, already drilled boreholes and proposed boreholes in the plan period with distinct colours and indexed, structural details like dip, fold, fault etc, Mining, tailing dump & infrastructural details, contour interval not more than 10m, the area covered under different explorations limits G1,G2 ,G3 to be clearly demarcated and area to be mentioned in tabular format in plate.
 - j) Geological Sections (Plate 4A to 4E)- The Geological sections prepared are not proper. The Geological section to be given reef-wise individually with all the surface and underground drilled boreholes for the particular reef shown on the section. The Geological section should indicate the mineral reserve and Resource under different UNFC code. The section should be in-line with the Reserve/Resource estimation done for individual Reef under different UNFC category. The lithology of the borehole logs and sections should be matching.

- k) A transverse section/sections of the workings through the shaft/shafts indicating clearly the strike and dip of the reef at different points & such sections of the strata sunk or driven through in the mine or proved by borehole as available in accordance with Rule 32(1) (c) of MCDR 2017. This should be prepared and added with plates
- l) A longitudinal mine section/sections showing a vertical projection of the mine workings including outline of all the stoped out areas in accordance with Rule 32(1)(d) of MCDR 2017. This should be prepared and added with plates.
- m) An underground plan prepared in accordance with Rule 32(1) (e) of MCDR 2017. This should be prepared and attached with plates.
- n) Year-wise Production & Development Plan(6A-6D)- The production & development plan should be prepared year-wise for each reef showing extent of both off lode and on lode development proposed. Each year to be marked with separate colours and the colour code should remain same for the particular year for each reef. The index should mention all proposed features. The details for the development should also be given in tabular format in plates as given above in scrutiny comment no 29.
- o) Year-wise Production & Development section(5A-5I)- The Production & development section should be prepared year-wise for each Reef showing the blocks proposed under stoping year-wise, blocks proposed for filling year-wise, proposed underground exploratory boreholes etc. Each year to be marked with separate colours and the colour code should remain same for the particular year for each reef. The details for stoping should also be given in tabular format in plates as given above in scrutiny comment no 29.
- p) Reclamation plan(Plate no 11)– The Reclamation plan prepared is not proper. This should be prepared with all details as mentioned above in scrutiny comment no. 42(c). The year wise proposal for reclamation & rehabilitation measures should be shown and indexed. All the tables as mentioned in scrutiny comment no 42(c) should also be given on plate and should be clearly demarcated year-wise with distinct colors.
- q) Environment Plan(Plate-9)- The environmental plan should be prepared of the mining lease inclusive of the adjoining area within 500 m of the boundary of a lease with contour interval on 1:5000 scale and contour lines at 5m interval in accordance with rule 32(5) b of MCDR 2017. All features to be included as mentioned in Rule 32(5) (b) of MCDR 2017. All the Air, Noise, Water monitoring station as mentioned above in Scrutiny comment no 42(b) should be demarcated clearly and indexed.
- r) Conceptual plan & sections (6A-6D & 7A-7F): The surface conceptual plan & section along with Underground conceptual plan & section reef wise as mentioned above in scrutiny comment no 35 should be prepared and attached with plates. The land-use pattern for mining & allied activities during plan period as well as during conceptual period to be given in tabular format as mentioned above in scrutiny comment no 35(c) in the surface conceptual plan The steps & measures proposed to be taken to reclaim the mining lease area including re-grassing at conceptual stage of mine should also be given in conceptual surface plan.
- s) Financial Area Assurance Plan (Plate no. 12): All the corrections in the plate to be incorporated as mentioned above in Scrutiny comment no. 42(f) (Para 8.6). The Financial assurance table should be given in plate and all the area shown in the table should be clearly demarcated on plate and indexed.
- t) All the plates should be placed serially in a folder. The list of plates should be checked and mentioned accordingly in the text and the cover page of the folder.

Para 11-ANNEXURES:

- a) Copy of Lease deed of initial execution should also be annexed.
- b) Copy of QP Qualification & Experience certificate in accordance with Rule 15(1) of MCR 2016.
- c) Copy of Memorandum of Association of the company to be added in Annexure as per aforementioned Scrutiny comment no 8.
- d) The latest copy of Board Resolution about nominated owner and letter of authorization to represent the company should be enclosed.
- e) Photo identity card of the nominated owner with permanent address proof.
- f) The details of the all the exploratory borehole lithologs both surface and underground as per Form-J. The chemical analysis report for all the drilled exploratory boreholes (both surface and underground) for entire strata for all radicals from NABL accredited Laboratory should be furnished in the annexure.
- g) The photographs are not legible. Good quality photographs should be enclosed showing land use of the lease area, environmental status of the area, Mine Lease all Boundary pillars etc.
- h) All the annexure to be properly numbered/paged and relevant annexure to be signed by Geologist/Surveyor/QP etc. All the annexures should be legible. The list of annexures to be checked and mentioned accordingly in the text.
- i) All the other annexures as mentioned in aforementioned scrutiny comments and communicated during site visit should also be added/corrected.
