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भारतीय खान ब्यूरो
क्षेत्रीय कार्यालय, रायपुर

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Inspection Report cum Scrutiny comments on the Modified Mining Plan for Baranji Limestone Mine over an extent of 1.619 Hectors in Baranji Village, Lohandiguda, Tehsil, Bastar District of Smt. Kusum Tulshyan.

1. At a glance information before introduction at start of document in following format may be furnished.

01	MINING PLAN/REVIEW OF MINING PLAN AT GLANCE		
1	Name of the Applicant /lessee		
2	IBM Registration no		
3	Address of Applicant		
4	Name of Mine		
5	Minecode		
6	Lease area in hecets.	Forest -	Non forest - Total =
7	Forest Diverted Area if any,		
8	Name of Mineral		
9	Lease period from to		
10	Mineral Reserve (111& 112)		
11	Mineral Resources		
12	Production proposal (2017-18)		
13	Production proposal (2018-19)		
14	Production proposal (2019-20)		
15	Production proposal (2020-21)		
16	Production proposal (2021-22)		
17	Existing/valid EC permission in tonnes		
18	Plantation proposal per years in numbers		
19	Plantation proposal per years in area		
20	Back filling proposal in ha per year		
21	Bank Guarantee Amount		
22	Validity of Bank Guarantee		
23	Prohibitory order from any authority		
24	Any other important information		

2. Para no 3.10 DGPS co-ordinate and lease boundary pillars authenticated by State Government may be furnished.
3. **Mining:** In the given Para the information regarding existing mining method is not correct i.e the bench height is mentioned 4 meter whereas the existing bench height is 6-12 meter and bench is almost vertical not face slope is not 45 degree. The correction to be done and actual bench top and bottom RL should be mentioned. The hauls road position also should be mentioned as per actual position.
4. As mentioned in tentative excavation table the first bench and second bench height is two meter which is incorrect and actually the bench height is 6-12 meter and top bench cannot reduced to 2 meter as it already reached the ultimate limit. The correction to be done and also justify and spell elaborately that how with high bench of 6-12 meter manual working is systematic and scientific. The excavation proposal should be revised accordingly.

5. **Geological Reserves:** The reserves are not furnished according to proper UNFC codification thereby mentioning cut off grades and threshold values considered for the estimation. For the purpose of ascertaining the UNFC code following procedure may be adopted –
 - (i) Identify the category of your deposit as per UNFC guidelines (out of category I to IV)
 - (ii) Classify status of exploration based upon the parameters furnished under the specified table for Geological Axis i.e. G1, G2, G3, G4 etc. and also mark it on relevant plan & sections.
 - (iii) Now based on the stage of your study identify status of Feasibility Axis as per the relevant table i.e. F1, F2 or F3.
 - (iv) Based on the information contained in Prefeasibility or Feasibility study, furnish the cost benefit analysis for Economic Viability i.e. E1, E2 or E3.
 - (v) Combining EFG axis will give the relevant UNFC code for reserve and resources.
 - (vi) Few vital parameters such as depth consideration, bulk density, recovery and geological axis have not been discussed in para.
 The entire area is marked as G1 and there is no G2 area marked. The area G1 & G2 should be marked as per [Minerals \(Evidence of Mineral Contents\) Rules, 2015](#). **The G1 area delineated should be based on the grid pattern as per [Minerals \(Evidence of Mineral Contents\) Rules, 2015](#)** and for grid only one bore hole cannot fulfill the requirement therefore minimum two bore holes should be there to delineate the ore body. The exploration should be plan accordingly. The reserve calculation should be revised accordingly.
6. The reserves are calculated based on one bore hole done upto depth of 30 meter. The sample analysis enclosed shows that there is hardly any limestone in the borehole as furnished. The SiO₂ is 22% to 55% which is beyond threshold value and it cannot be considered as limestone. The reserve is for limestone and the material within threshold only to be considered. In the table the grade of the reserve is mentioned CaO 43.25% and SiO₂ 16.10% but as per analysis report enclosed the data is not matching therefore the same should be clarified and accordingly the reserved should be revised.
7. The reserves also to be revised based on actual ultimate pit limit follows systematic and scientific mining and bench width should be more or equal to bench height.
8. One nos of sample is analyse and the same is shown as limestone and contradict the report of BH1 therefore the same should be marked on geological plan and one more borehole nearby should be done to delineate the ore body.
9. Stacking of Mineral: In the given Para the proposal should be given yearwise (specific financial yearwise).
10. **Use of mineral:** In the given Para it is said that mining large boulder sent to crushing unit within lease area but during lease area no crushing unit observed and also not shown in surface plan. The requirement of end-use industry specifically in terms of physical and chemical composition not mentioned. As mentioned in Para 11.4 43% and above but the analysis report not justify it.
11. **Processing of ROM:** The information furnished in flow chart is not actual ,it is said that mineral reject is send to dump yard and soil send to afforestation site lease at 7.5 mining limit. The same should be review and accordingly the correction to be done.
12. **Others:** In the given Par the information furnished under head i. Statutory Requirement (ii) Maintenance Requirement and (iii) Administrative Requirement is al incorrect i.e it is said statutory requirement within lease area, method of mining is semi mechanised,etc. The Para should be revised.
13. **Employment Potential:** The manpower requirement suiting to excavation planning by giving the calculation against the proposed excavation. The O.M.S. should be mentioned for the excavation proposal for the given period. The manpower requirement should be mention as skilled, semiskilled, and unskilled. As per Rule 55 of MCDR, 2017 Mining Engineer to be proposed.

14. **Khasra plan:** The khasra plan submitted is not properly visible and it is copy taken from last approved document. The copy to be replaced and it should be taken from original one for more clear vision.
15. **Surface Plan:** During the mine visit it was observed the survey was not proper and pit position is not shown as per actual ground condition. In all direction of ML the pit is shown inside lease boundary but in actual it is extending 7.5 meter of ML. The RL is shown and bench position is not proper, the bench between BP-1 & BP-4 is 10-12 meter height and between BP-2 & BP-3 is 6 meter height. In between BH-2 & BP-1 two benches shown but actually 4 benches are the haul road shown also not as per field condition. The area to be resurveyed accordingly correction to be done.
In the plan co-ordinates of boundary pillars given and as discussed that the DGPS report already submitted to DGM therefore the same should be furnished that co-ordinates yet to be authenticated by DGM.
16. **Yearwise production and development plan:** As mentioned above in other point that the pit position shows is not correct therefore the production proposal is also to be revised based on actual pit position. The proposal should be furnished based on bottom and top RL of benches and hauls roads and dump. In the text dump location is said southern lease boundary (**Processing of ROM Para**) whereas in plate it is shown in northern direction. The correction to be done.
The proposal for afforestation given in the area where there is no scope as the bench extended 7.5 meter and there bench height is 10-12 meter. The proposal should be revised.
17. **Geological plan & Section:** The geological plan the entire area is shown G1 but the UNFC codification mentioned is not correct i.e. geological axis G1 but code is 222(7.5 meter safety barrier). The ultimate pit to be shown in the section as per systematic and scientific mining. In section for ultimate pit level bench height is shown more than width. The correction to be done and section should be as per revised plan
18. In section upto 30 meter it is shown limestone but the borehole data shows it is mostly waste as Cao and SiO₂ is beyond threshold therefore correction to be done accordingly.
19. **Financial Assurance:** The calculation for financial assurance should be as per Rule 27 of MCDR, 2017. The table to be revised as per Rule and the area proposed for green belt not considered for FA and calculation is also not correct. The correction to be done.
20. In list of documents in annexure IX it is mentioned copy of last approval letter of mining plan where as it is copy of last approved scheme of mining. The correction to be done.

Rajesh Kumar Das
Sr. Assistant Controller of Mines