

Scrutiny comments on examination of Review of Mining plan with Progressive mine closure plan of Rakka Limestone mine of M/s Gaytri Minerals over an area of 4.0 hect. (Sur. No.160/1P) situated in village Rakka, Taluka Lalpur, District Jamnagar submitted under Rule 17(2) of MCR, 2016 and 23 of MCDR, 2017 for block period 2017-18 to 2021-22 & approval period 2018-19 to 2021-22.

1. Cover Page-Mine code-38GUJ07084 is not given. IBM registration No.21070/2017 was junked online; therefore new registration should be applied online in IBM website & number is to be given in further submission.

Chapter no.2- Location and Accessibility

2. KML file/google image map of lease area is not enclosed. Reconcile working with surface plan & submitted.
3. Boundary Pillar coordinate is not matching with the Surface plan/DLR map. Reconcile & furnished. The common BP co-ordinate of adjacent lease of RP Trivedi should be discussed.

Chapter no. 3-Details of approved mining plan/scheme of mining

4. The reason for excess production achieved in plan period is not discussed in remark column.
5. The dimension of existing trenches, number, location & true depth is not given. No benches were seen in field. Mining operations has been done irregular manner & deviated in Development, exploitation and environment monitoring in previous plan period. Give reason of it in remark column. It is a matter of astonishment that despite no proposal, exploration by way of 15m deep trench have been carried out without intimating to this office. No record was produced. Such exploration is false and cannot be accepted.
6. The total ROM production achieved & total excavated area in lease is to be discussed.
7. The copy of violation, Show cause letter etc. should be discussed & submitted. The online monthly & annual return to IBM website has not been submitted. The instant lease has been recommended for Suspension to State Govt. for non-submission of periodical return.

Part-A

Chapter no. 1.0 Geology & Exploration

8. Page-11, the 20m depth of mineralization without any true exploration is incorrect & not acceptable. The existing exploratory details of trenches/pits & true depth is not given correctly. There were no DTH boreholes shown in field during inspection. Description giving about local geology at page no.8 is not correct. Imagining 20m thickness of limestone without scientific exploration is not justified. It is a milliolitic limestone of marine origin and can never attain such thickness in hilly terrain .Its description has taken place along the original profile of basaltic hill/ridge. Accordingly methodology adopted for reserve estimation on page no 14 to 17 is not correct. Entire reserves/resources estimation is incorrect. Further, reserve can never be assessed without measured mineral resource (331) and indicated mineral resources (332). Mineable part of measured mineral resources is called proved reserves. Similarly mineable part of indicated mineral reserves is called probable reserves. Entire reserves estimation calculation given at pages 13,14 and 15 is to be revised.
9. It was observed during inspection that survey of lease area was not updated & correctly shown pits dimension, mRL of area on Surface Geological plan & section. The area should be re-survey & submitted. The mRL of the area needs to be corrected.
10. The location map of both the adjoining leases of Rakka mine i.e. Gayatri Mineral & RP Trivedi shown on DLR map & lease plan is not matching. Reconcile with lease plan & corrected DLR map should be submitted.
11. Page-12, The existing pit dimension of 202mx65.4mx15m depth is not correctly shown, it should be given the corrected resurvey of lease area & furnished. The broken up area existed seems more as shown on plan & section with respect to production achieved. It

- needs correction. The other details/information in tables at page-12 is not given correctly.
12. Page-15, The Re-estimate the reserves & resources & detail calculation of estimation of reserves & resources is to be taken up to true depth of mineral area i.e.4-5m in irregular manner of pit/trench, instead of 15meter depth. It needs correction in entire reserves & resources. The Geological section shown is incorrect. DTH borehole is not acceptable. The section is to be shown up to true depth of existence of mineral only (up to pit/trench depth), imaginary lithology should not be shown & acceptable.
 13. Page-15,16, Entire calculation & Tables needs correction as per above scrutiny.
 14. The 05 core bore holes up to depth of 25m each or more is to be proposed in corner of lease area in minimum 400mx400m grid as per provision of MCDR, 2017. It needs proposal in plan & section.

Chapter no. 2-Mining

15. It was observed during inspection that boundary pillar of lease area were not available in field nor erected as per statutes. The mining operation has been carried out and appears to be with in 7.5m of statutory barrier or outside lease area. It needs clarification.
16. The existing pit dimension & correct excavated area as per resurvey needs to be given.
17. The mine lease area is hilly terrain & surrounding agriculture field. Therefore no drilling & blasting proposed, only rock breaker/excavator of required capacity with tipper combination should be proposed.
18. Proposed scale of production is on higher side. It cannot be accepted for an area of 4.0 hect. with limited thickness based upon trench/pits. In last approved plan period, limestone production target was about 8000 to 9000 tonnes/Annum but in present plan, proposal of limestone target is about 1,95,000T without any true exploration data/reserves is not acceptable. Entire mining proposal is to be revised.
19. Reduce the annual targeted production based upon the true potential area up to 4-5m depth only & actual reserves available. It needs correction.
20. There is no OB generated, therefore stripping ratio shown 19.8:1 is incorrect. it needs correction & should be 1:0.0.
21. Plantation survival rate is very poor; therefore more plantations (100Plants/year) is to be proposed in present Review of mining plan.
22. Page-18,20, 21 annual planning & reduced optimum annual ROM targets & modified based upon the above scrutiny.
23. Page-22,23-The calculation of drilling & blasting is not required. It needs correction. Para no. (f), Conceptual mining: There is no OB/waste generation, therefore conceptual stage of mine may be water reservoir only after mineral exhausted. The instant lease area in hilly terrain & not fully explored till date. No reclamation is required except afforestation/embankment in 7.5m barrier.

Chapter no. 3 Mine Drainage

24. The water table shown at 105-110mRL without any study is incorrect. Same should be based upon the field observation.

Chapter no. 4 Stacking of Mineral Reject

25. It was observed during inspection that OB generation in present plan period is almost NIL whereas quantity proposed in yearly table is incorrect.(Page-29) It needs correction.

Chapter no.8-PMCP

26. The present land used pattern is to be given as on 01.4.2018. The table is to be modified by re-survey the lease area. Excavated area of 1.3228Ha shown is incorrect.
27. Page-38, No of plants should be proposed 100 instead of 20 & survival should be about 80%. It needs correction.
28. Page-39-44, The plantation proposal should be given in “others” column instead of “Rehabilitation in waste land” column. Other environment protective measure of embankment wall is to be given.

29. Page-46, FA-Table & present land used details & area to be utilized in plan period needs to be corrected. Reconcile the table in PMCP & existing pit dimension & furnished. The detail calculation should be modified based upon above scrutiny.

Plan & Section:-

30. **Surface Plan:** It was observed during inspection that in surface plan, excavation of lease area is not matching with field & further BP were not available in field. Re-survey the area & submitted in further submission. The adjacent lease of RP Trivedi & common BP should also be discussed. The surface plan & DLR map co-ordinates is mis-matching.
31. **Surface Geological Plan:** The BP co-ordinates reconcile with DLR, the instant lease area is mostly rocky exposure, therefore entire area top soil given is incorrect. Resurvey & furnished correctly. The existing pit, trenches with mRL, proposed core boreholes etc should be shown with correct index/legend. The contour interval & field reality should be corrected since there was up & down in hillock in east-west direction & whereas contour shown continuously down contouring is not correct. Resurvey the area & submitted. The geological axis of G1/G2 level of area is not marked. The section should be corrected by not showing litho below depth of pit/trench without any exploration. Geological section is imaginary and arbitrary. Limestone occurrence has been show from 170mRL to 115mRL. It is a milliolitic limestone of marine origin. Such massive thickness is just not possible. Geological plan & section are to be re-shown afresh after recent survey.
32. **Production & Development Plan:** yearly proposal should be shown in G1/G2 level of area only & environment protective measures should be shown. Litho below depth of pit/trench should not given.
33. **Environment Plan:** plan has not been prepared & submitted. The position(s) of the adjacent leases are not shown on the Environment Plan; Land use in 60m/500m beyond the ML area is to be shown including human settlement etc.
34. **Reclamation plan:** The title of plate "Environment Management Plan" should be replaced as reclamation Plan.
35. **Conceptual Plan:** Pit configuration at the ultimate stage not marked, benching pattern not indicated in section, ultimate depth of working not marked, approach to faces at conceptual stage not marked.
36. **Financial Area Assurance Plan:** Plan should be updated & modified as per above scrutiny.

Annexures-

37. The corrected copy of DLR map of instant & adjacent lease of RP Trivedi & common BP co-ordinates should be given.
38. The copy of field photographs of present mine workings, exploratory pit/trenches with dimension, location, Boundary Pillars with no; Lat & Longitude, mRL etc. should be submitted.
39. Latest few more chemical analyses of pit/trench samples from NABL should be submitted.
40. Quarterly monitoring of Air, Water, Noise, land etc. in last quarter has not been enclosed.
41. The copy of common boundary working permission in adjacent lease of RP Trivedi with in 7.5m of statutory barrier under MMR 1961 should be submitted.
42. The copy of valid BG/Original BG of extended period of lease should be submitted.
43. The further submission of document should be properly binding having sufficient strength and the plates are properly folded so that they can be accessed easily.

Date:

Place

44. In previous approved plan limestone production target was about 8100 tonnes. But at present plan proposal of limestone target is more than about 20 times, i.e. 164870 tonnes. On which ground increase limestone target. Justify it.
45. Para no. (f), Conceptual mining: Minable reserve estimated about 1281940 tonne- from where it comes? Justify it. In proposed reclamation table given: 2.4903 hect area to be reclaimed & rehabilitated proposed. How it possible till the full thickness of limestone to extracted. Vital detail pertaining to life of the mine, ultimate pit size and post mining scenario and reclamation- rehabilitation aspect have not been discussed.

Chapter no. 3 Mine Drainage

46. Maximum & minimum depth of working are given in table. But in mining chapter no mRL is discussed. How to correlate it. From where 142mRL is comes or what to mean 142mRL. Describe it also in mining chapter.

Chapter no. 4 Stacking of Mineral Reject

47. Proposal of Storage of Mineral rejects are given in table. But nothing to be discussed where to dump mineral reject or store top soil. Nothing to be discussed it in mining chapter nor it to be plotted in any plan.

Chapter no.5- Uses of mineral

48. What is the planning of Owner regarding sell of cement grade & under size limestone? Give in detail how much cement grade limestone to sell.
49. Analysis report of limestone is too old & not supported by the certificate NABL (National Accreditation Board of laboratories) laboratory. Analysis report of limestone should be of active working pit.

Chapter no.7-Other

50. During inspection Geologist at mine is not present. Give information about employment of Geologist.

Chapter no.8-PMC

51. In para 8.1, Information of 20 tree is earlier planted & survived. Give type of species of tree.

52. Entire proposal for PMCP is not correct. No proposal is given for rehabilitation of worked out benches, water management, plantation, fencing etc. Safety, security, disaster management plan is also incorrect.
53. In para no. 8.2, Impact Assessment: In given table area for dumping is 0.0925 hect given. But nothing to be discussed in previous chapter. Describe it at proper place.
54. In PMCP, para no. 8.6-In financial table given proposal has not matched with FMCP plan. F A table is also not correct nor show the total area. There is no information of virgin area.
55. Financial assurance has not been computed in terms of rule 27(1) of MCDR 2017.
56. **Key Plan:** is not submitted.
57. **Surface Plan:** Surface plan is not submitted with all the information/prominent features as required under Rule 32(5) (a) of MCDR, 2017. In whole area Contour lines are not given. Mining Lease boundary not marked as per the standard conventions. Other permanent features like temple, buildings, hutments, etc. exist in the ML area may also be marked.
58. **Surface Geological Plan:** is not submitted as per the relevant details as required under rule 32(1) (b) of MCDR 2017 because depth persistence & horizontal for different category of reserves not marked, strike & dip of the formation not shown, lithological contacts not marked distinctly, other adjoining ML area marked on sections but not shown on plan. Proposed bore hole numbering is not correct. Pit no is not there. In index symbol SBZ line given. But what is represent by SBZ. Give detail. This is Geological plan. So did not show feature of Surface plan? In the same way did not show geological feature in Surface plan.
59. **Year wise Plan:** Plan is not prepared as per guide line. Area marked under the year wise excavation appears to be incorrect & need to be reviewed, Ultimate pit limit not marked, advancement of excavation, approach to the faces are not marked, proposed protective works have not been marked correctly.
60. **Environment Plan:** The plan has not been prepared incorporating all details as per rule 32(5)(b) of MCDR'2017 because monitoring stations of Air, Water & noise quality Survey not marked, position(s) of the adjacent leases are not shown on the Environment Management Plan. Land use, contour value 60m beyond the proposed ML area has not been prepared and all the surface features including human settlement may also be shown.
61. **Reclamation plan:** Para 8.3: the details of progressive mine closure plan is not depicted distinctly on plan. The year wise completion status of proposed protective works should be incorporated in this plate. Index is not given.
62. **Conceptual Plan:** Pit configuration at the ultimate stage not marked, benching pattern not indicated in section, ultimate depth of working not marked, approach to faces at conceptual stage not marked.
63. **Financial Area Assurance Plan:** Area reclaimed and considered as fully reclaimed and rehabilitated if any may be shown clearly. Area marked under FA table must should be matched with the broken up areas as marked on plan. FA table should be available at FMCP plan for ready reference.
64. Copy Environmental Clearance obtained from MOEF should be enclosed. Adequate water harvesting measures should be proposed towards protection of environment. Further consent to operate mine obtained from State Pollution control Board should be enclosed.
65. In document old rule are given. It should be updated by new rule.
66. Numbering of annexure & plate is not in chronological order in text & index. Many annexures are not clear & nor readable.
67. List of plate and annexure should be enclosed after content.

68. Some of the mine photo such as pillar, working and old pit etc. should be enclosed.
69. There are certain omissions, deficiencies in the text and plates. Some of them are marked in the text & plates. QPs should ensure thorough editing before preparing the final copies.

Place:

Date: