

5.0 MINING

5.1 OPENCAST MINING

A. Briefly describe the existing and proposed method for excavation:

Existing Mining:

Presently the mining is closed. Previous mining was manual with simple hand tools. Hydraulic machineries were used for construction of roads and for removal of overburden time to time. The site office, rest shelters etc are available near the lease area towards NE side, outside the lease common for all leases at around 2 kms away.

Proposed Mining:

The opencast semi mechanized method of mining is proposed for excavation of mineral and waste and for loading the same. The bench height is proposed 6 metres and width will be 6 metres or more as required for transportation of machineries. Approach roads are available and will be provided as required. Blasting will be done as and when required. Excavation of mineral and waste will be manual.

B. Indicate Year-wise tentative excavation in cubic metres

The development is proposed for next five years.

1. Insitu Tentative Excavation

The lease period is up to 31.03.2020 thus this mining plan is prepared and submitted for the lease period.

| Year | Bench mRL | Excavation Area | Depth | ROM in Cu. Meter | Waste Cu. Meter | China Clay in Cu. Meter | Recovery of mineral from bench |
|---------|-----------|-----------------|-------|------------------|-----------------|-------------------------|--------------------------------|
| 2016-17 | Passed | | | | | | |
| 2017-18 | 546 | 4050 | 3 | 12150 | 12150 | - | 00 % |
| | 540 | 9100 | 3 | 27300 | 19110 | 8190 | 30% |
| | 534 | 12500 | 4 | 50000 | 25000 | 25000 | 50% |
| 2018-19 | 528 | 7480 | 6 | 44880 | 13480 | 31400 | 69.96% |
| 2019-20 | 528 | 2420 | 6 | 14520 | 4360 | 10160 | 69.97% |
| | 522 | 7000 | 6 | 42000 | 12600 | 29400 | 70% |



Year wise production in tones is as follows:

| Year | Total ROM in tonnes | Waste in tonnes | Total Minerals in tonnes |
|---------|---------------------|-----------------|--------------------------|
| 2016-17 | Passed | | |
| 2017-18 | 232570 | 146280 | 86290 |
| 2018-19 | 116690 | 35050 | 81640 |
| 2019-20 | 146960 | 44100 | 102860 |
| Total | 496220 | 225430 | 270790 |

In the above production the quarts is expected 10% of production.

II Dump rehandling (for the purpose of recovery of mineral)

The waste is of quartzite, scree and Kanti. The waste will be dumped in the lease area. Some waste will be used for construction and maintenance of 2 kms long approach road.

C. Enclose Individual year-wise development plans and sections

It will be a 'A' class mine other than fully mechanized. The development plan and year wise sections are enclosed as Plate-5 in scale 1 cm = 20 metres showing all requisite details.

D. Describe briefly giving salient features of the proposed method of workings indicating Category of Mine

The mining in this lease will be carried out by semi mechanized method by using hydraulic machineries. This method is adopted considering the nature of mineral and nature of deposit and production of mineral and generation of waste.

Considering the national, state and local holidays, around 300 working days are proposed in a year. The bench height is proposed 6 meters with 6 to 8 metres wide benches. Haul roads are available up to the faces and will be maintained in future up to the proposed workings for movements of labourers and vehicles. Face slope will be maintained 85 °, whereas ultimate pit slope is proposed 45°.

Controlled Blasting is proposed for easy excavation of rocks as per approved mining plan. The overall layout of workings and other mining activities has been illustrated on plate 6.

