

**JUSTIFICATION
FOR USE OF FOREST LAND
AT KATAMATI IRON MINES
IN THE DISTRICT OF KEONJHAR**

Introduction

The Operation in Katamati Iron Mine was started in 1934 to supply Iron ore to Jamshedpur works. The lease covers an area of 403.3238 hectares and is adjacent to Noamundi Iron Mine and it is along the boundary of Odisha and Jharkhand. Currently the mine is being worked by mechanised means in the eastern pit with a production capacity of 5 million tonnes per annum and planned for expansion to 8 million tons.

The present level of production from this mine, through mechanised operation, is 5.0 mtpa in the Eastern pit over Non-Forest land only. The Mining operation in broken up forest area has been discontinued with effect from 19.01.1997 as per the general directives of the Supreme Court and the same communicated by the Divisional Forest Officer, Keonjhar.

Katamati Iron Mine is situated over 403.3238 ha, of which 199.1720 ha. The forest diversion proposal was submitted on 17.04.2007 over 199.1720 ha forest land (31.1791 ha broken up prior to 1980 and 165.7928 ha fresh –virgin forest area) and 2.2001 ha Forest area as Safety Zone.

Subsequently, MoEF & CC, GoI vide circulars F. No. 8-78/1996-FC (pt.) dated 10.03.2015 & F. No. 8-78/1996-FC (pt.) dated 09.03.2016 directed to submit forest diversion proposal for the Sabik Kisam Forest Land within the lease hold area. Accordingly this proposal has been formulated for diversion of Sabik forest land over 160.838 ha. falling within the mining lease hold area which is in compliance with the above mentioned circulars. Mining operation is already been carried out over the Sabik Forest area which is nonforest as per the present RoR. Further, it is essential to extend ancillary support to facilitate un-interrupted mining operation into this area to cater to the level of production in order to meet the increased raw material requirement of Company's steel plants.

Based on geological exploration, it has been established that the total mineable reserve is 84.26 million tonnes out of which approximately 55.78 million tonnes of reserve was established into Reserve and Khesra Forest of 199.172 ha for which diversion proposal has already in process. Out of 84.26 million tonnes, balance reserves is falling within non-forest land. However, as per the recent establishment of Sabik forest of 160.838 ha, entire balance reserve is reported into Sabik forest where mining operation is continuing at present. Therefore entire Sabik Forest of 160.838 ha is required to be diverted for mining and ancillary activities.

The iron ore bodies generally occupy the top portions of the hills and are elongated in the north-south direction. The ore body has a strike of NNE-SSW and dip varying between 20° – 40° due west. The structural data of the lease area shows that it is congruous with the regional trend and there are a number of minor structural feature such as folds, joints and fissures on local scale, there are also many generations of folds superposed over the other.

The iron ore body in the lease area can be considered to be having two ore zones, one to the east and other to the west. The eastern ore zone is the major ore body and has scattered out crops of hard ore at the cliff sections and patches of laterite with float ore. It is mostly covered into Khesera Forest and presently established Sabik Forest. The western ore zone which is in the lower elevation and small compared to the eastern ore zone is composed of

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laminated soft ore with isolated patches of hard ore and covered into reserve forest and Khesra forest. The eastern and the western portion is separated by low lying valley area where mostly BHJ are exposed. These area is prominently non-mineralized and preferred for waste disposal and ancillary activities.

The mine planning has been done taking into account availability of mineralization, get the blended output from the deposit and to minimize use of forest land. Hence, as such till date mining operation was concentrated within non-forest area only. On the basis of detailed planning following land utilization would be required to sustain mining operation at Katamati.

Sl. No.	Pattern of Utilisation	Forest land (in Ha)			Non-forest land (in Ha)			Grand Total
		R.F.	K.F.	Total forest land	Non-Forest Land identified as Forest in Sabik RoR	Balance non-forest land	Total non-forest	
1	Mining	51.8699	119.7481	171.6180	121.2235	5.0420	126.2655	297.8835
2	Storing of mineral/ore				1.7500	0.2500	2.0000	2.0000
3	Dumping OB/Subgrade/ Slime disposal		11.1434	11.1434	19.2468	28.2673	47.5141	58.6575
4	Storing Tools and Machinery							
5	Construction of Buildings, power station, Plant, Workshop etc.		5.7770	5.7770	8.4596	8.5779	17.0375	22.8145
6	Township/Colony							
7	Construction of Road, Rope way, Railway line, conveyor, Pipeline, Power line etc.	4.7674	3.6661	8.4335	7.4499	0.7500	8.1999	16.6334
8	Total	56.6373	140.3346	196.9719	158.1298	42.8872	201.0170	397.9889
9	Safety Zone	0.9147	1.2854	2.2001	2.7082	0.4266	3.1348	5.3349
10	Total	57.5520	141.6200	199.1720	160.8380	43.3138	204.1518	403.3238

Details justification for requirement of forest land for different activities are as below:

Mining: It is evident from the Geological Exploration and Geological data that Iron Ore Concentration occurs on hill capping and prominently within forest area only. Non-forest lands are located at the base of hillocks and therefore having very less optional of iron ore.

The forest area has been proposed for diversion to work the mine in a systematic and scientific manner until complete exhaustion of the deposit. The mining operation in open cast mine advances by exposure of upper benches and advancing towards tower benches. It is technically not feasible to open an opencast mine from lower elevation to higher elevation because of the following:

1. Due to high slope gradient, a limited amount of excavation will lead to full bench height of 12 m with in-sufficient bench width resulting in unsafe operations. Mining large volumes of ore with smaller equipments will make the operation unsafe.
2. Drilling has to be done on sloping ground which is highly unproductive and unsafe.
3. Exploitation of the total ore body will also not be economical with blockage of ore in forest area and mine development will be difficult as per the conceptual mine plan. If the mining operation starts from the top there will not be any blockage of ore and mining operation will be highly efficient and scientific because of the large width of bench, which will facilitate free and safe movement of heavy earth moving machineries and drills will be placed on the

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level ground for drilling the benches, which is very safe and efficient drill operation. Mining from the top/ ultimate pit limits will also help in quicker maturity of land for reclamation, as well as conservation of minerals. For the above reasons, the method of mining operation mentioned in the mining plan i.e. top downwards has been approved by IBM.

The supporting mining activities like weighbridge, storage of spares, tools and tackles can be placed conveniently without loss of ore in the lower elevation i.e. in the non-forest area.

Out of the total mineable reserve of 84.26 million tones, the distribution of mineable reserve in forest area is 55.78 million tons (within Reserve and Khesra Forest) and 28.48 million tons in Non-Forest area (prior to identification of Sabik Forest land) has also been reported to forest. The mineable reserves exists at higher elevations in the forest area whereas the reserves of the non-forest area (now Sabik forest) exist in lower elevation. As the mining operations have to be done from top downwards, diversion of the required forest land is unavoidable.

The present production of this mine with scientific operation is 5million tons per annum and subsequently the mine will be capable of supporting operation upto 8million tons. The applied diversion of forest land of 160.838 ha is mainly for mining and ancillary activities covering over an area of 121.2235ha. Mining in this area is already under progress.

Storing Mineral/Ore: 01.75 Ha

The excavated iron ore (ROM) is required to be processed by crushing and screening in stages. Storing of mineral/ore is essential to ensure continuous supply of finished iron ore products ore to Steel Plants. The area for storing of mineral needs to be located in close proximity of the mining face and the Ore processing plant. The area selected for this purpose comprises of 1.75 ha. was in non-forest and subsequently identified as forest and presently under use. Hence the area is sought for diversion as per Sabik Forest proposal.

Dumping Overburden/ Slime Disposal: 19.2468 Ha

For production of Iron ore, the overburden, other inter-related rejects area expected to be about 10% of the ROM excavation. Therefore, it can be well appreciated that large quantity of overburden/ slime is to be handled and for this area required was 24.2 Ha (6.00 ha forest land & 18.2 ha .Non-Forest land) which was already applied for diversion. Now as per Sabik RoR, 19.248 ha area identified as Sabik forest, Hence an area of 19.248ha. of Non-forest land is sought for diversion as per Sabik Forest proposal.

Construction Of Building/Workshop/ Power Station Etc: 8.4569 Ha

The requirement of building / workshop/ power station etc. is associated with any mechanized mining activity. The total land required for this purpose comprises of 15.4846 ha. out of which 5.7770 ha. of forest land & 9.7076 ha of Non-Forest land has already been applied. Now as per Sabik RoR, 8.4569 ha area identified as Sabik forest. Hence an area of 8.4569 ha. of Non-forest land is sought for diversion as per Sabik Forest proposal.

CONSTRUCTION OF ROAD, ROPEWAY ETC.: Haulage roads need to be laid in the mining area for safe transport of men and material. The area applied for this was 5.1999 ha in Non-Forest Land. Now as per Sabik RoR, 7.4499 ha area identified as Sabik forest, Hence an area of 7.4499 ha. of Non-forest land is sought for diversion as per Sabik Forest proposal.

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