

Justification for locating OB Dump area in forest land

Gondulpara Coal Mine project is covered by Survey of India Toposheet No. 73 E/5 on R.F 1:50,000. It is located in the northeastern part of North Karanpura Coalfields and falls under Hazaribagh district of Jharkhand state.

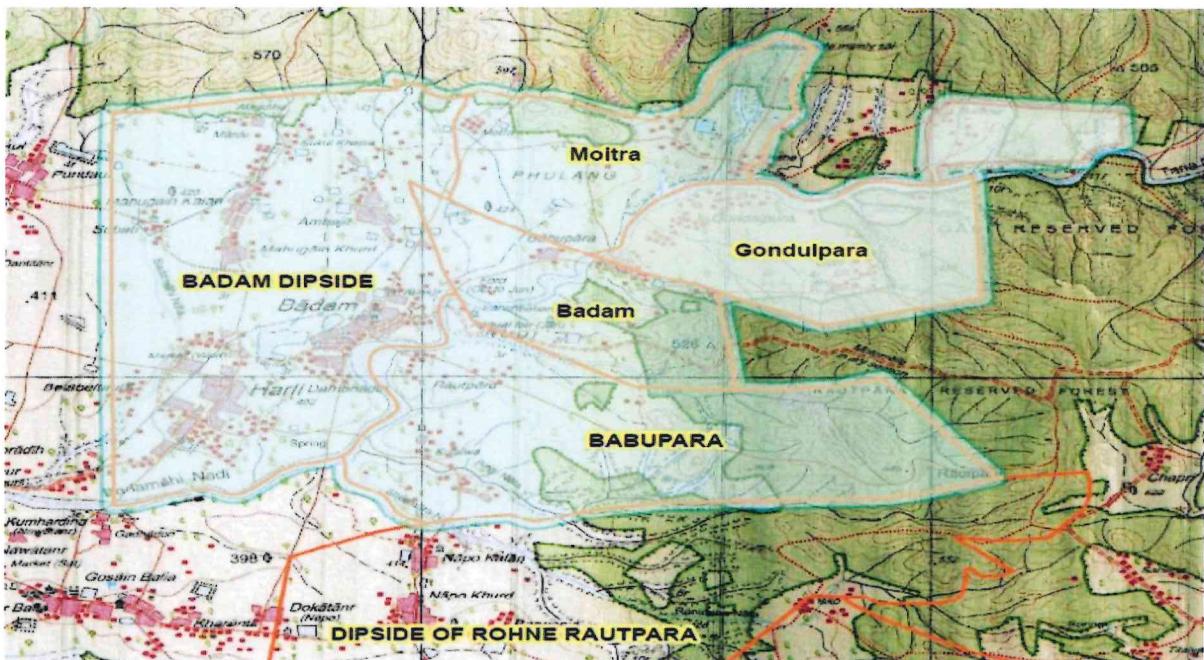


Fig 1: Map showing location of the coal block in respect of other coal blocks

The geographical location of Gondulpara Coal Block is as mentioned below,

- **Western Boundary-** The entire area on the western side is coal bearing area. Badam and Moitra Coal blocks are located on the western side of the blocks. These coal blocks are in an advanced stage of development.

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- **Eastern Boundary** – The entire Eastern Boundary of the coal block is covered by Forest land. As per the regional geological report prepared by CMPDIL, this area is a non-coal bearing area.
- **Southern Boundary** – The southern boundary of the coal block is covered by Badam Opencast Mine and forest land.
- **Northern Boundary** – On the western side of the northern boundary Moitra Coal block is located and on the extreme eastern side of the northern boundary, the land is under forest land. In the central zone, between forest land and Moitra coal block, part of the area is coal bearing.

OB Management Scenario

During the course of mining, 221.28 MBCM Overburden (OB) would be generated. Out of this, 176.18 MBCM OB can be accommodated within the coal block area. There is no room for further accommodating the balance 45.10 MBCM of the OB within the coal block area. To extract the entire extractable coal reserve of 116.69 MT, external OB dumping is inevitable. The external area required to accommodate balance of OB volume of 45.10 MBCM is 103.26 Ha. This estimation is also as per the approved Mining Plan.

Options for external OB dumping

As is evident from the location, OB dumping is not possible on three sides of the coal block, namely, East, South and West and as either other coal blocks are located, or it is entirely covered by forest area with highly rugged topography.

The only option available is on the Northern side. Even on the northern side, Moitra coal block is located on the western side and on the eastern side is forest land. On the central portion of the northern boundary, towards the east of the Moitra coal block, the area is partly coal bearing. It thus leaves us with a very narrow patch of land on the eastern side of the northern boundary covering part of the revenue land and part of forest land.



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The proposed external OB dump can't be located towards the western part from the currently proposed area as it is coal bearing. As per the CMPDIL report about 30% of the proposed OB dump area is coal bearing but mining is not viable/economical.

With external dumping, out of 166.18 MT of geological reserves, 116.69 MT can be extracted but in case no external dumping area is available, only 75 MT can be extracted reducing the overall extraction by 33%. Further, the coal left will be sterilized forever which will be a huge loss of natural resources for the country.

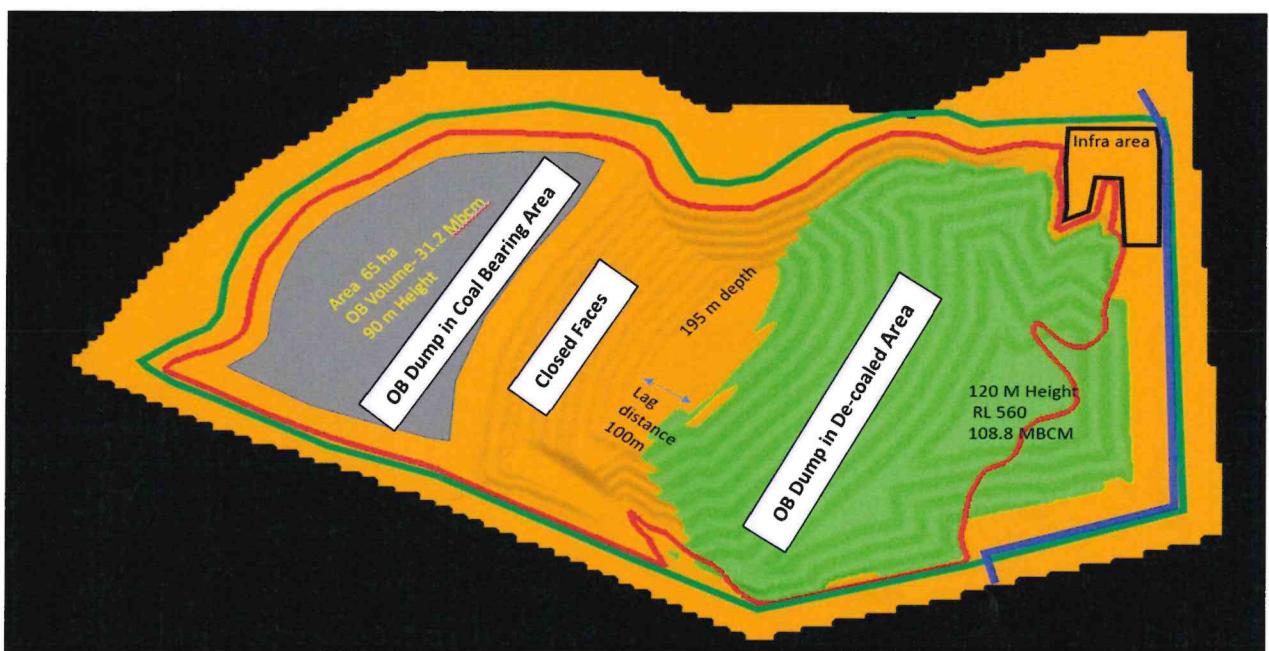


Fig 2: Map showing limitation of OB dumping for entire OB

A comparative statement with and without external OB dumping

Particulars	With External Dump	Without External Dump
Geological Reserve (Million T)	166.18	166.18
Extractable reserve (Million T)	116.69	75
Life of Mine (years)	32	20

1. Cost Benefit Analysis for Forest Land involved in OB Dump

Basic parameters used for the assessment.

Without external OB dumping: 41.69 MT coal shall be sterilized which otherwise could have been extracted.

Total Coal Loss: 41.69 million tons

Grade of the coal: G10

NCI price the G10 grade coal: Rs 3099/Ton

Cost of mining: Rs 1985/Ton

Estimation of deemed Natural resource of forest.

SN	Item	Description	Value (in Rs Cr)
C1	Project Costs	Ecosystem services losses due to forest land involved in OB dumping	8.01
C2		Loss of animal Husbandry	0.80
C3		Cost of human settlement	0.00
C4		Loss of public facilities and administrative infrastructure on forest land which would be required to be diverted because of OB dumping on forest land	0.00
C5		Possession of value on forest land diverted	4.336
C6		Cost of suffering to outsees	0.00
C7		Habitation fragmentation cost	4.01

C8		Compensatory afforestation and Soil & Moisture conservation cost	8.21
		Total Cost	25.366
B1		Increased productivity because of additional coal been able to mine [tonnage*(Revenue -Cost)]	4644.266
B2		Revenue sharing with Govt (20.75%* Sale Value *Tonnage)	2680.84
B3		Royalty payment (14% * Sale Value *Tonnage)	1808.76
B4		Forest Transit Fee (Rs 57 * Tonnage)	237.63
B5		Jharkhand Covid Cess (Rs 10/T)	41.69
B6		District Mineral Fund (10% of Royalty)	180.88
B7		NMET (2% of Royalty)	36.18
B8		Compensatory Cess (Rs 400/T)	1667.60
B9		GST @5%	893.20
		Total Benefits	12191.05

Cost benefit Ratio: (Total Benefits/Total Cost)

$$= 12191.05/25.366$$

$$= 480.61$$



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