

2. Benti block

- (i) The upper Bachra seam has not developed over the entire proposed mining area, except a small part near to Damodar River.
- (ii) Lower Bachra seam splits in two parts. Top (TLB) & Bottom (BLB) sections. Top section further splits in two parts, i.e Upper (UTLB) & Lower (LTLB) sections. The splits of Top section combines (CTLB) in some part of the property.

Splitting / merging of the seam/section over the proposed mining area is observed in Benti block. The property shows presence of irregular banding of seam/sections. Therefore, it is essential to ensure exact working over the entire property in the proposed mining area

- (iii) The parting between the seam/section mainly comprises of shale/ carb. Shale/ sandy shale, which may not be self-supporting and may require leaving of 0.3-0.5m of coal in roof.
- (iv) Grade of the coal for bottom split (BLB) varies from B – E and top section (UTLB) varies from D-F.
- (v) The parting between BLB & LTLB/CTLB varies from 0.30-5.0m. In major part of the area, it is generally less than 1.0m. The parting between LTLB and UTLB in major part of the area is also less than 1.0m. Hence, entire middle section may be lost either in maintaining statutory parting of 3.0m between two workable sections or due to its unworkable thickness.

9.2 GEO-MINING CHARACTERISTICS

The geo-mining parameters of the workable seams/sections in Churi & Benti block have been summarized in the tables below :

Table 9.1 : Geo-mining Characteristics of mining area under Churi block

Sl. No.	Parameters	Upper Bachra Seam (UBS)	Lower Bachra seam (LBS)
1	Area within mine boundary	5.89 sq. km	
2	Mining area considered for CM deployment	2.03 sq. km	
3	No. of borehole intersections within mine boundary	56	
4	Boreholes density (BHs/sq.km)	9.5	
5	General Thickness range (m)	0.13-4.84	1.71-11.24
6	Depth range (m)	26.21 - 91.00	21.59 - 93.65
7	Parting (m)	0.47-20.27	
8	Grade of Coal (inband)	C – E	B – E
9	Present declared grade	Grade 'B' Long Flame	
10	Immediate roof	Grey shale, sandy shale, conglomerate, medium to coarse grained sand stone	Carb. Shale / grey shale / fine to medium grained sandstone
11	Immediate floor	Carbonaceous shale, grey shale	Grey shale, intercalations of shale & sandstone, carbonaceous shale, sandy shale
12	Present Status of mining	Manual B&P development being carried out	Development almost completed. Standing on pillars

Table 9.2: Geo-mining Characteristics of mining area under Benti block

Sl. No.	Parameters	Upper section of Top Lower Bachra (UTLB) / Combined Top Lower Bachra (CTLB)	Bottom Lower Bachra (BLB)
1	Area within proposed mine boundary Existing area Additional area beyond existing boundary (not considered for this report)	2.1sq. km 1.79sq. km 0.31sq. km	
2	Mining area considered for CM deployment	0.41 sq. km	
3	No. of borehole intersections within proposed mine boundary	23	
4	Boreholes density (BHs /sq. km)	12.7	
5	General Thickness range (m)	0.45 – 4.15 (UTLB) 1.10 – 5.10 (CTLB)	0.24 - 4.25
6	Depth range (m)	73.10 – 109.19 (UTLB) 74.06 – 106.75 (CTLB)	76.27 – 121.68
7	Parting (m)	0.30 – 5.17 (parting between BLB & CTLB/LTLB)	
8	Grade of Coal (inband)	C – F (UTLB) D – F (CTLB)	A – E
9	Present declared grade	Grade 'B' Long Flame (BLB)	
10	Immediate roof	Medium to coarse grained sandstone, carbonaceous shale grey shale & conglomerate	Coarse to very coarse grained sandstone carbonaceous shale, grey shale & sandy shale
11	Immediate floor	Carbonaceous shale, sandy shale, grey shale, grey wacks, medium to coarse grained sandstone & alternate band of shale & sandstone	Sandy shale, alternate bands of shale & sandstone, carbonaceous shale, grey wacks, coarse to very coarse grained sandstone
12	Present Status of mining	Virgin	Initial B&P development by LHD being done

9.3 SELECTION OF MINING AREA

The entire property in Churi UG project is almost developed along the floor in both Upper Bachra & Lower Bachra seams except few virgin patches in UBS. The parting thickness over the entire property of Churi UG mine varies from 0.47m to 20.27m. The property lying between the parting ranges of 0.47m to 9.0m falls under the contiguous condition. Therefore, the entire property of the mine has been classified into two categories i.e. contiguous property & Non-contiguous property.

In the discussions held at CMPDI HQ, it was decided to deploy Continuous Miner in the areas where upper seam (UBS) has unworkable thickness. This area lies west to the main dip in the CRO and few panels of eastern section of CRO.

Handwritten signature
18/3/17

Handwritten signature