

**SALIENT FEATURES OF GEOLOGICAL REPORT
ON COAL EXPLORATION, GONDALPARA BLOCK
NORTH KARANPURA COALFIELD**

1. Location: Located in north-eastern part of North Karanpura Coalfield in Hazaribagh District of the Bihar State. It is bounded by $23^{\circ}50'30''$ & $23^{\circ}51'30''$ N and longitude $85^{\circ}18'30''$ & $85^{\circ}20'30''$ E.
2. Accessibility/Communication
The block can be approach from Hazaribagh town by road. The distance is 35Km. of which 3 Km. through kutcha road. The block becomes cut off during rainy season due to non-existence of bridge at Badmahi river.
3. Objective: Geological investigation for possible opencast exploitation.
4. Period of Investigation : 1996-98.
5. Status of Mining : Virgin.
6. Area of the Block: 4 Sq.Km. (Effective area excluding burnt/heat affected zone 1.59 Sq.Km.).
7. Details of Drilling:

Agency	Period of Drilling	No. of Boreholes	Megerage
CMPDI	1996-98	55	8,473
GSI	1962-64	4	1,394
Total		59	9,867

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Location of GSI boreholes could not be traced on ground and hence not considered for interpretation.

8. Borehole Density: 14 boreholes/Sq.Km.
9. Other Investigations: Surface geophysical survey (HRSS, Resistivity & magnetic).
10. Geological Formations: Karharbari, Barakar and Barren Measures.
11. Geological Structure: Strike - Northeast - Southwest
Dip - 8° to 16° due west.
12. Faults: Seven numbers. 170m is maximum throw.
13. Intrusives: ~~Dolerite and micaceous~~ About 30% of the area affected by intrusives.

14. Coal seams and Quality:

Coal Seams/ Partings	Thickness (m)	No of Intersection	Depth of Occurrence (m)	(Including dirt bands -I-100)							
				Proximate Analysis (on 60% RH & 40°C)			CV (K Cal/Kg)	UHH K Cal/Kg	Grade	Ci	Si
				M%	Ash%	VM% (UVM%)					
1	2	3	4	5	6	7	8	9	10	11	12
V	3.91	10	Incrop-150	23.35	38.4-41.3	20.5-22.4	4220-4795	2800-3560	E-F	A	O
Parting	4193-59.68										
IVD	4.30-15.44	17	Incrop-200	16-4.3	29.2-36.6	21.2-25.4	4675-5610	3270-4400	D-F	B-C	O.1
Parting	1.67-3.97										
IVC	Nil-4.11	11					5180-5990		C-D	B	O
Parting	Nil-4.90										
IVB	Nil-2.53	2	Not available						B-D	C	



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1	2	3	4	5	6	7	8	9	10	11	12
Parting	Nit-10 63										
IVA	Nit-2 88	13					5455-6820		B-D	C	1
Parting	2 93-15 12										
IV	3 25-5 48	16	Incrop-200	1 8-4 3	20 9-30 4	23 4-28 2	5010-5690 (8165)	4290-5645	B-D	-	-
Parting	1 97-25 11										
III Top	2 45-4 80	12	Incrop-210	1 7-4 7	26 0-42 6	21 1-27 4	4370-5555 (6275-8355)	2767-5010	C-F	B-D	1/2-1
Parting	Nit-5 04										
III Bot	4 15-6 82	16	Incrop-220	1 8-4 4	30 8-35 1	23 4-26 9	3885-5890 (8210)	3545-5645	B-E	C	1
III (Comb)	6 67-11 34	6	Incrop-240	1 2-2 5	33 3-36 6	21 3-25 5	4615-5055	3560-3960	E	-	-
Parting	2 87-32 24										
II	7 39-18 10	19	Incrop-250	1 9-3 5	29 3-35 6	22 7-26 5	4520-5380 (6340)	3575-4430	D-E	C	1
Parting	3 78-33 08										
I	11 07-20 43		Incrop-250	1 2-2 9	34 8-44 0	19 9-25 0	3990-5105 (6235-8825)	2510-3780	E-F	C-D	1/2-1
Parting	20 43-29 46										
K5	Nit-2 07	33		1 7-2 9	36 1-44 4	21 2-39 9	4375-4745	2540-3571	E-F	C-D	1/2-1
Parting	7 70-8 43										
K4	Nit-0 54	2	Not available								
Parting	-										
K3	Nit-1 42	9		2 8	40 0	18 5	4460	2995	F		
Parting	4 99-17 20										
K2	Nit-2 70	15		2 8	33 2	20 6		3,930	E		
Parting	2 68-10 26										
K1	Nit-3 40	13		1 0	43 0	20 3	4030	2660	F		
K2 & K1 (Comb)	2 34-11 81	3	Not available								



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**DEPTHWISE SECTORWISE RESERVE OF COAL SEAMS IN
GONDALPARA BLOCK, NORTH KARANPURA COALFIELD ..**

SEAMS	DEPTHWISE & SECTORWISE RESERVES					TOTAL
	< 50 M.	50-100 M.	100-150 M.	150-200 M.	200-250 M.	
SEAM -I						
SECTOR-A	2.818	-	-	-	-	2.818
SECTOR-B	0.031	1.169	0.434	0.270	-	1.904
SECTOR-C	5.472	9.380	7.378	7.367	4.790	34.387
TOTAL	8.321	10.549	7.812	7.637	4.790	39.109
SEAM -II						
SECTOR-A	0.260	-	-	-	-	0.260
SECTOR-B	-	0.258	0.277	0.128	-	0.663
SECTOR-C	0.016	4.321	5.718	3.474	2.070	15.599
TOTAL	0.276	4.579	5.995	3.602	2.070	16.522
SEAM -III BOT.						
SECTOR-A	-	-	-	-	-	-
SECTOR-B	-	0.150	0.144	0.072	-	0.366
SECTOR-C	-	0.296	1.830	1.012	0.477	3.615
TOTAL	-	0.446	1.974	1.084	0.477	3.981
SEAM -III COMB.						
SECTOR-A	-	-	-	-	-	-
SECTOR-B	-	-	-	-	-	-
SECTOR-C	-	-	0.452	0.543	1.048	2.043
TOTAL	-	-	0.452	0.543	1.048	2.043
SEAM -III TOP						
SECTOR-A	-	-	-	-	-	-
SECTOR-B	-	0.078	0.144	0.074	-	0.296
SECTOR-C	-	0.053	1.080	0.742	0.334	2.209
TOTAL	-	0.131	1.224	0.816	0.334	2.505
SEAM -IV						
SECTOR-B	-	-	0.106	0.038	-	0.144
SECTOR-C	-	0.003	1.459	1.294	0.641	3.397
TOTAL	-	0.003	1.565	1.332	0.641	3.541
SEAM -IV D						
SECTOR-B	-	-	0.134	0.185	-	0.319
SECTOR-C	-	-	1.331	2.911	1.327	5.569
TOTAL	-	-	1.465	3.096	1.327	5.888
SEAM -V						
SECTOR-B	-	-	0.018	-	-	0.018
SECTOR-C	-	-	-	0.354	0.916	1.270
TOTAL	-	-	0.018	0.354	0.916	1.288
G.TOTAL	8.597	15.708	20.505	18.464	11.603	74.877



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**RATIOWISE, SECTORWISE RESERVE OF COAL SEAM
NORTH KARANPURA COALFIELD ..**

SEAMS	RATIOWISE & SECTORWISE RESERVES			
	1:1 - 1:2	1:2 - 1:3	> 1:3	TOTAL
SEAM -I				
SECTOR-A	0.341	2.477	-	2.818
SECTOR-B	1.904	-	-	1.904
SECTOR-C	19.378	11.389	3.620	34.387
TOTAL	21.623	13.866	3.620	39.109
SEAM -II				
SECTOR-A	0.054	0.206	-	0.260
SECTOR-B	0.663	-	-	0.663
SECTOR-C	9.516	4.187	1.896	15.599
TOTAL	10.233	4.393	1.896	16.522
SEAM -III BOT.				
SECTOR-B	0.366	-	-	0.366
SECTOR-C	2.113	1.049	0.453	3.615
TOTAL	2.479	1.049	0.453	3.981
SEAM -III COMB.				
SECTOR-C	0.547	0.606	0.890	2.043
TOTAL	0.547	0.606	0.890	2.043
SEAM -III TOP				
SECTOR-B	0.296	-	-	0.296
SECTOR-C	1.215	0.689	0.305	2.209
TOTAL	1.511	0.689	0.305	2.505
SEAM -IV				
SECTOR-B	0.144	-	-	0.144
SECTOR-C	1.706	1.141	0.550	3.397
TOTAL	1.850	1.141	0.550	3.541
SEAM -IV D				
SECTOR-B	0.319	-	-	0.319
SECTOR-C	1.940	2.554	1.075	5.569
TOTAL	2.259	2.554	1.075	5.888
SEAM -V				
SECTOR-B	0.018	-	-	0.018
SECTOR-C	-	0.560	0.710	1.270
TOTAL	0.018	0.560	0.710	1.288
G. TOTAL	40.520	24.858	9.499	74.877



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**GRADEWISE, SECTORWISE RESERVES OF COAL SEAM IN
GONDALPARA BLOCK, NORTH KARANPURA COALFIELD ..**

SEAMS/ SECTOR	G C	R D	A E	D F	E G	TOTAL
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SEAM -I

SECTOR-A	-	-	-	2.818	-	2.818
SECTOR-B	-	-	0.499	1.405	-	1.904
SECTOR-C	-	-	5.158	29.229	-	34.387
TOTAL	-	-	5.657	33.452	-	39.109

SEAM -II

SECTOR-A	-	-	0.259	-	-	0.259
SECTOR-B	-	-	0.663	-	-	0.663
SECTOR-C	-	2.411	13.186	-	-	15.597
TOTAL	-	2.411	14.108	-	-	16.519

SEAM -III BOT.

SECTOR-B	-	-	0.366	-	-	0.366
SECTOR-C	-	0.153	3.462	-	-	3.615
TOTAL	-	0.153	3.828	-	-	3.981

SEAM -III COMB.

SECTOR-C	-	-	2.042	-	-	2.042
TOTAL	-	-	2.042	-	-	2.042

SEAM -III TOP

SECTOR-B	-	0.151	0.050	0.094	-	0.295
SECTOR-C	0.149	1.383	0.529	0.148	-	2.209
TOTAL	0.149	1.534	0.579	0.242	-	2.504

SEAM -IV

SECTOR-B	0.038	0.041	0.065	-	-	0.144
SECTOR-C	0.254	3.143	-	-	-	3.397
TOTAL	0.292	3.184	0.065	-	-	3.541

SEAM -IV D

SECTOR-B	-	-	0.319	-	-	0.319
SECTOR-C	-	0.206	5.363	-	-	5.569
TOTAL	-	0.206	5.682	-	-	5.888

SEAM -V

SECTOR-B	-	-	-	0.018	-	0.018
SECTOR-C	-	-	0.313	0.958	-	1.271
TOTAL	-	-	0.313	0.976	-	1.289
G.TOTAL	0.441	7.488	32.274	34.670	-	74.873



17/07/2023
 GENERAL MANAGER
 GONDALPARA COAL PROJECT
 ADANI ENTERPRISES LIMITED