

# GARE PALMA IV/1 MINE

## PART A

Sr. No.	Features	Details			
<b>1.</b>	<b>Location</b>				
	Coal Block	<b>GARE PALMA IV/1</b>			
	Coal Field	Mand Raigarh Coal Field			
	Latitude	22° 05' 26" N & 22° 08' 04" N (Provisional)	Topo Sheet No. 64 N/12		
	Longitude	83° 31' 33" E & 83° 34' 05" E (Provisional)			
	Villages	Nagaramuda, Tapranga, Dongamahua, Dhaurabanta, Janjgir and Amgaon			
	Tehsil/ Taluka	Gharghoda, Tamnar			
	District	Raigarh			
	State	Chhattisgarh			
<b>2.</b>	<b>Area</b>				
	Geological Block Area	8.35 Sq. km (As per GR 2006) and 10.15 sq.km as per Shape file [Refer Note No. 3]			
	Mining Lease Area	978.654 hectares (As per Mining Plan 2008 with proposed extension)			
	Forest Area	91.18 hectare			
	Non Forest Area	887.475 hectares			
<b>3.</b>	<b>Exploration</b>				
	Status of Exploration	Explored			
	Exploration Agency	CMPDI (GR prepared by GSI and further supplemented by GIEM (India) Consortium, Kolkata through Mining Associates, Asansol)			
	Total Number of Boreholes	75 (as per GR 2006)			
	Boreholes Meterage	7508.05 (as per GR 2006)			
	Borehole Density	8.98 per square km			
<b>4.</b>	<b>Amount of Coal</b>				
	Total Geological Reserves	As per GR 2006			
		Within Block IV/1(MT)	Extended Area(MT)	Total(MT)	
		OC	107.601	25.723	133.324
		UG	22.923	3.197	26.120
		TOTAL	130.524	28.920	159.444
		Seam-wise Reserve:			
		Seam	Geological Reserve (MT)		
		Seam X	9.015		
		Seam XA	9.044		
	Seam IX	47.155			
	Seam VIII	28.780			
	Seam VIIT	7.546			
	Seam VIIM	30.254			
	Seam VIIB	1.531			
	Seam IV	8.619			
	Seam III	17.501			
	TOTAL	159.444			
	As per GR 2006, reserves of Seam III and IV are taken as				

		underground reserves and rest are opencast reserves.	
	Total Mineable Reserves	114.16 MT (Extractable as per Mining Plan)	
	Average Stripping Ratio	3.16 cum/t	
5.	<b>Coal Seams</b>		
	Dip of Seam	2° to 6° as per Mining Plan, Feb 2008.	
	Direction of Strike	E-W as per GR 2006	
	Coal Seams	Coal Seam	Generalised Thickness (meters)
		X	2.5-2.75
		XA	1.50-2.0
		IX L2	0.50-1.20
		IX L1	0.50-1.20
		IX TOP	0.65-1.00
		IX	6.5-7.50
		VIII	2.50-3.50
		VII TOP	0.50-1.50
		VII MID	3.00-6.00
		VII BOT	1.50-2.00
	VI	0.50-0.90	
	VT	0.25-0.50	
	VB	0.50-0.60	
	IV L	0.50-0.60	
	IV	0.80-1.25	
	III L2	0.50-0.60	
	III L1	0.70-0.80	
	III	1.20-1.80	
	Partings	Average Thickness (in metres)	Usual (meters)
		Hard OB	
		Parting between X and XA	4.3-9.62
		Parting between XA and IX L2	17.71-22.87
		Parting between IX L2 and IX L1	4.13-11.37
		Parting between IX L1 and IX Top	6.18-8.24
		Parting between IX Top and IX	2.38-4.25
		Parting between IX and VIII	2.21-10.51
		Parting between VIII and VII Top	3.0-9.40
		Parting between VII Top and VII Mid	0.73-4.73
		Parting between VII Mid and VII Bot	14.72-27.42
		Parting between VII Bot and VI	14.51-20.85
		Parting between VI and V Top	20.68-34.97
	Parting between V Top and V	2.92-7.69	

		Bot	
		Parting between V Bot and IV L	16.27-23.05
		Parting between IV L and IV	17.26-23.55
		Parting between IV and III L2	19.91-23.33
		Parting between III L2 and III L1	2.48-7.30
		Parting between III L1 and III	24.44-33.83
	Faults	No Major Faults indicated in Mining Plan	
<b>6.</b>	<b>Grade</b>		
	Grade	Seam	Range
		Top Section	Unworkable thickness
		X	F-G
		XA	F-G
		IX	F-G
		VIII	F-G
		VII TOP	F-G
		VII MID	F-G
		VII BOT	F-G
		IV	E-G
		III	D-F
<b>7.</b>	<b>Accessibility</b>		
	Nearest Rail Head Distance	Raigarh Station, 50 km	
	Road	Raigarh Ambikapur State Highway ,25 Km	
	Airport Distance	Raipur, 300km	
<b>8.</b>	<b>Hydrography</b>		
	Local Surface Drainage Channels	Bendra Nala, traversing upto middle of the block, provides drainage to the area.	
	Rivers/ Nala	Kelo River	
<b>9.</b>	<b>Climate</b>		
	Average Annual Rainfall	1315 mm	
	Temperatures (Winter)	5 °c (min)	
	Temperatures (Summer)	46.5°c (max)	
<b>10.</b>	<b>Topography</b>		
	Topo Sheet Number	F44 L12 (Old No 64 N/12)	
	Nature of Surface Land	Partly Hilly	

<b>11.</b>	<b>Other Infrastructure</b>	<b>(Refer Annexure-I)</b>
	Coal Handling Plant Capacity	2 Nos. of CHP of total 1000 TPH capacity to be retained by company
	Coal Washery Capacity	2 Nos. with total capacity of 1000 TPH to be retained by company
	Transport from Mine	
	Power Supply	Mine Site Substation to Jindal Steel and Power Plant in Raigarh through 220KV HTL

**PART B (for Schedule II Mines only)**

<b>Sr. No.</b>	<b>Features</b>	<b>Details</b>
<b>1.</b>	<b>Previous Allocation</b>	
	Name of Allocatee	M/s. Jindal Steel & Power Ltd.
	Address	M/s. Jindal Steel & Power Ltd. Post Box. No.16 Kharsia Road Raigarh Chhattisgarh
	Nature of End Use	Sponge Iron (DRI/process)
<b>2.</b>	<b>Status of Mineral Exploitation</b>	<b>(As per Annexure-I)</b>
	Method of Mining	Opencast Mining
	Coal Extracted	64.595 MT till 31.03.2014 (as per Letter No. JSPL/Coal Mines/2014-15/I.V. MOC/001; Dated: 25.11.2014)
	Mine Plan Extraction Rate	6 MTPA
	Mining Agency	Third Party Contract
<b>3.</b>	<b>Status of Clearances/Approvals</b>	
	Mining Plan(Reference to Grant)	No.13016/5/2004-CA-I dated 16.05.2008
	Forest Clearance(Reference to Grant)	Obtained vide Letter No. 8-60/2009-FC; dated: 02.02.2011
	Environmental Clearance(Reference to Grant)	No. J-11015/81/2008-IA.II(M); dated: 21-05-2012
	Mining Lease (Reference to Grant)	No. 3-174/96/12/2 dt. 23/09/97 Lease deed on 19/12/1997
	Land Required	978.67 Ha, as per EC
	Land Acquired	744.03 Ha (as per Letter No. JSPL/Coal Mines/2014-15/I.V. MOC/001; Dated: 25.11.2014)
	R&R Plan details	

**Note:**

1. The above data is compiled from Geological Report, Mining Plan, Mine Closure Plan, Environmental Clearance and Forest Clearance and the data furnished by the prior allottee in Annexure-I, as available. For clarifications with regard to above data, please refer aforesaid source documents.
2. The boundary of the block has been taken from GR after conversion to WGS84 system by feature matching. The block boundary is provisional and the cardinal points, bounding co-ordinates are approximate.
3. There is a difference in area in the shape file [based on feature mapped plan of the block as given in the GR (10.15 sq.km)] and GR got prepared by the prior allottee M/s Jindal Steel &

Power Ltd. in Oct 2006 (8.35 sq.km). This is as per notice No. 104/28/2015/NA dated 13.10.2015 issued by the Nominated Authority regarding settlement of boundary in Gare Palma Sector.