

MACHHAKATA & MAHANADI COAL BLOCK SUMMARY

PART A

1. MACHHAKATA

Sr. No	Features	Details
1.	Location	
	Coal Block	Machhakata Coal Block
	Latitude	21° 3' 26" N - 21° 6' 29" N (provisional)
	Longitude	84° 47' 0" E - 84° 50' 16" E (provisional)
	Topo Sheet No.	F45S9
	Coalfield	Talcher
	Villages	Similipal, Sapoinala, Ghuntulipasi, Bagadia
	Tehsil/Taluka	Chhendipada
	District	Angul
	State	Orissa
2.	Connectivity with Block	
	Nearest Rail Head	Nearest Railway station at Angul on Bhubaneswar-Sambalpur line is about 42 Kms from the north eastern boundary of the block.
	Road	Nearest town Angul is at a distance of 43kms from the block. The Angul-Chhendipada-Nuagaon metalled road marks the northern boundary of the block.
	Airport	Biju Patnaik International Airport
3.	Area	
	Geological Block Area	20.33 sq. km. (As per shape file. Refer Note No. 3)
	Forest Area	Approx. 5% (As per FSI map)
	Non-Forest Area	Approx. 95% (As per FSI map)
4.	Climate and Topography	
	Average Annual Rainfall	75.8 cm and 158 cm
	Temperature (Min. — Max.)	6.7°C - 46.7°C
	Local Surface Drainage Channels	The surface topography is generally flat, the general slope is towards northeast. Highest elevation above mean sea level is about 210 meters. Baishi and Shagarhia nalas are two small but prominent nalas, one forms western boundary of the block and another is flowing almost parallel to the eastern boundary of the block.
	Rivers	Brahmani river flowing in approximately north south direction along the eastern boundary of the Talcher CF is the main drainage.

5.	Exploration				
	Status	Explored			
	Exploration Agency	CMPDI			
	Total Number of Boreholes with meterage	193 boreholes & 39602.00m			
	Borehole Density	9.5 boreholes per sq. km.			
	General Dip of Seams	Generally 3°-5° with exception towards North			
	General Strike Direction	Generally East-West			
6.	Coal Seams & Reserve				
	Coal Seams	Thickness Range (m)	Depth Range (m) (Floor)	Total Geological Reserve (MT)	Grade
	XI	0.20 – 7.27	16.37 – 139.38	10.77	E – G
	X	0.12 – 3.77	14.51 – 147.10	5.13	E – G
	IX TOP	0.10 – 4.96	14.00 – 160.87	11.70	E – G
	IX BOT	0.40 – 6.37	14.74 – 167.97	64.48	E – G
	VIII	0.49 – 13.92	16.16 – 122.68	122.71	F - G
	VII TOP	0.29 – 12.60	15.00 – 140.95	120.04	E – G
	VII BOT	0.07 – 5.37	16.81 – 143.76	7.51	E – G
	VI TOP	0.34 – 8.21	10.11 – 152.00	80.98	E – G
	VI BOT	0.20 – 12.58	17.57 – 174.51	78.46	E – G
	IV/V	0.13 – 5.85	19.75 – 176.20	56.73	D – G
	III TOP TOP	2.25 – 13.65	29.00 – 181.00	158.03	E – G
	III MID	3.98 – 10.82	41.66 – 202.90	217.16	D – G
	III BOT TOP	0.36 – 5.84	45.63 – 205.85	72.77	C – G
	III BOT BOT	0.05 – 5.91	45.00 – 199.44	10.79	F – G
	LICAL 1	0.05 – 2.62	50.30 – 233.19	19.07	D – G
	LOCAL 2	0.08 – 2.62	62.10 – 235.92	14.61	E – G
	II TOP	0.12 – 5.47	70.05 – 241.91	43.07	E – G
	II MID	0.06 – 2.31	8.95 – 247.48	8.20	E – G
	II BOT	0.07 – 2.76	89.88 – 233.72	5.96	D – G
	I A TOP	0.19 – 2.74	124.81 – 232.75	12.22	E – G
	I A BOT	0.10 – 5.17	113.57 – 239.15	38.42	D – G
	I B	1.60 – 12.15	125.17 – 250.00	180.18	C – G
	I C	0.09 – 4.86	132.87 – 258.70	9.37	C – G
	I D	0.10 – 8.77	143.00 – 271.80	52.29	B – G
	TOTAL			1400.65	
7.	Surface Constraints	-			
8.	Grade of the block	G11 (Provisional) based on weighted average grade as per data available in GR.			
9.	Decision Support System (DSS) Analysis	Wildlife info: Polygon touches wildlife habitat of Sloth Bear			
10.	Eco Sensitive Zone (ESZ) Analysis	Approx. 1 km to the Simlipal-Satkosia Tiger Corridor from the SW block boundary, 10.5 km to the Sambalpur Elephant Reserve from the Western block boundary and approx. 4 km to the Mahanadi Elephant Reserve from the South-western block boundary.			

2. MAHANADI

Sr. No	Features	Details
1.	Location	
	Coal Block	MAHANADI
	Latitude	21° 05' 11" - 21° 09' 09" N (Provisional)
	Longitude	84° 48' 26" - 84° 53' 3" E (Provisional)
	Topo Sheet No.	73 C/16
	Coalfield	Talcher
	Villages	Bagadia
	Tehsil/Taluka	Chhendipada
	District	Angul
	State	Odisha
2.	Connectivity with Block	
	Nearest Rail Head	Nearest Railway station Angul on Bhubaneswar-Sambalpur line is about 40 km from the north-eastern boundary of the block.
	Road	Angul is the nearest town at a distance of 35 km from the block. The Angul-Chhendipada-Palahara state highway no. 63 marks the eastern boundary of the block. The block is approachable by Angul-Bagadia road.
	Airport	Biju Pattanaik Airport, Bhubaneswar
3.	Area	
	Geological Block Area	31.5 sq.km. (As per shape file. Refer Note No. 3)
	Forest Area	Approx. 2% (As per FSI Plan)
	Non-Forest Area	Approx. 98% (As per FSI Plan)
4.	Climate and Topography	
	Average Annual Rainfall	126.6 cm
	Temperature (Min. — Max.)	8.4° C-46.7° C
	Local Surface Drainage Channels	Aunli Nadi, flowing approximately west to northeast direction along the northern boundary of the block, provides the main drainage of the region. Three small but prominent nalas named as Sapui, Baunsajura and Shagarhia nala flowing south to north almost parallel to each other, are discharging water to Aunli Nadi in the north.
	Rivers	Aunli Nadi
5.	Exploration	
	Status	Partly explored
	Exploration Agency	CMPDI

	Total Number of Boreholes with meterage	241 Boreholes; 74501.65 m				
	Borehole Density	Approx. 7.5 Boreholes/sq.km.				
	General Dip of Seams	Generally 3°-5° with exceptions towards north.				
	General Strike Direction	East-West				
6.	Coal Seams & Reserve					
	Coal Seams	Thickness Range (m)	Depth Range (m)	Geological Reserve (MT)		Grade
				Proved	Indicated	
	IX Top	0.10-7.06	11.40-260.10	27.144	41.366	E-G
	IX Bot	0.06-6.00	16.60-273.09	46.887	35.082	D-G
	VIII	0.14-6.06	11.32-285.65	66.261	15.123	E-G
	VII Top	0.04-8.88	12.76-292.66	57.537	19.739	E-G
	VII Bot	0.05-9.40	13.61-311.10	62.475	9.668	D-G
	VI Top	0.05-7.77	11.50-319.80	36.455	4.728	D-G
	VI Bot	0.05-12.55	15.05-335.83	76.6	24.124	E-G
	IV/V	0.19-12.48	24.72-365.92	101.023	72.926	E-G
	III Top Top	0.10-7.62	38.00-387.20	68.772	28.548	D-G
	III Top Bot	0.01-7.42	45.23-399.89	23.024	38.184	E-G
	III Mid	3.85-14.75	51.15-414.75	187.134	205.802	D-G
	III Bot Top	0.14-8.67	64.71-428.95	56.611	87.073	D-G
	III Bot Bot	0.05-6.56	68.38-444.85	10.987	7.934	E-G
	II Top	0.14-5.02	96.70-407.23	26.582	28.548	D-G
	II Mid	0.03-3.51	115.30-392.32	-	-	-
	II Bot	0.05-4.60	119.68-399.06	4.93	15.381	D-G
	IA Top	0.11-8.40	136.79-481.55	34.172	26.49	C-G
	IA Bot	0.08-5.25	140.20-513.43	19.199	4.949	D-G
	IB	0.08-12.65	146.15-516.27	77.254	56.121	B-G
	IC	0.07-9.34	156.75-427.34	30.998	10.988	B-G
	ID Top	0.10-7.98	167.62-465.30	21.999	13.641	B-G
	ID Bot	0.06-7.84	172.59-471.30	15.048	2.355	B-G
	IE	0.06-2.53	200.26-488.10	-	-	-
	IF	0.14-2.60	204.61-490.31	-	-	-
	IG	0.33-3.90	213.05-526.08	26.081	20.065	A-F
		Total		1077.173	763.272	
	Inferred Underground Reserves*				153.077	
		Grand Total		1993.522		
7.	Surface Constraints	-				
8.	Grade of the block	G11 (Provisional) based on weighted average grade as per grade-wise data available in GR.				
9.	Decision Support System (DSS) Analysis	Wildlife info: Polygon touches wildlife habitat of Sloth Bear				

10.	Eco Sensitive Zone (ESZ) Analysis	Approx. 5 km to the Simlipal-Satkosia Tiger Corridor from the Northern block boundary, approx. 9 km to the Sambalpur Elephant Reserve from the Western block boundary and approx. 8.6 km to the Mahanadi Elephant Reserve from the South-western block boundary.
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PART B

Sr. No.	Features	Details
1.	Previous Allocation	
	Name and Address of Allocatee	Maharashtra State Electrical Board (MSEB) and Gujarat State Electricity Corporation Ltd. (GSECL) Prakashgarh, A.K. Marg Bandra (E), Mumbai-400051
2.	Target Capacity as per Mining Plan	<i>30 MTY (Mining Plan Phase-I for Machhakata & Mahanadi)</i>
3.	Status of Clearances/Approvals	
	Mining Plan/ Mine Closure Plan	<i>Approved</i>
	Forest Clearance	<i>No</i>
	Environmental Clearance	<i>No</i>
	Mining Lease	<i>No</i>
	Land Acquisition	<i>----</i>
	No. of PAFs as per Mining Plan/ Mine Closure Plan	<i>3973</i>
4.	Surface Infrastructure already built, if any.	<i>Nil</i>

Note:

1. The above data is compiled from Geological Report, Mining Plan and the data furnished by the prior allottee in Annexure-I/II, 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 may be a difference in area in the shape file and GR. Area in the shape file is based on feature mapped plan of the block as given in the GR. So, the area is tentative and field DGPS survey is required to ascertain the exact area.
4. The summary sheet has been prepared based on the available GR data and may change with the additional Geological Information as and when revised/updated. Geological Grades as available in GRs has been provided.

Disclaimer:

1. The analysis is done on Beta-version (Trial Version) of Decision Support System (DSS) of FSI / MOEF.
2. The Decision Rules for various parameters of this DSS System are controlled by FSI.
3. CMPDI only runs this DSS to obtain the status of any block based on these Decision Rules.
4. The database of the Decision Rules is updated by FSI from time to time.
5. CMPDI does not own any responsibility for variation in the results which are based on the Decision Rules of the FSI DSS in case of any updation of the database at FSI end.
6. ESZ analysis and tiger habitat/ corridor given here is based on the information available in public domain. Bidders are encouraged to verify this information and any other information additionally available.

21°30'N 21°40'N 21°50'N 21°60'N 21°70'N

84°46'0"E

84°47'0"E

84°48'0"E

84°49'0"E

84°50'0"E

84°51'0"E

84°46'0"E

84°47'0"E

84°48'0"E

84°49'0"E

84°50'0"E

84°51'0"E

Machhakata Block, Talcher Coalfield

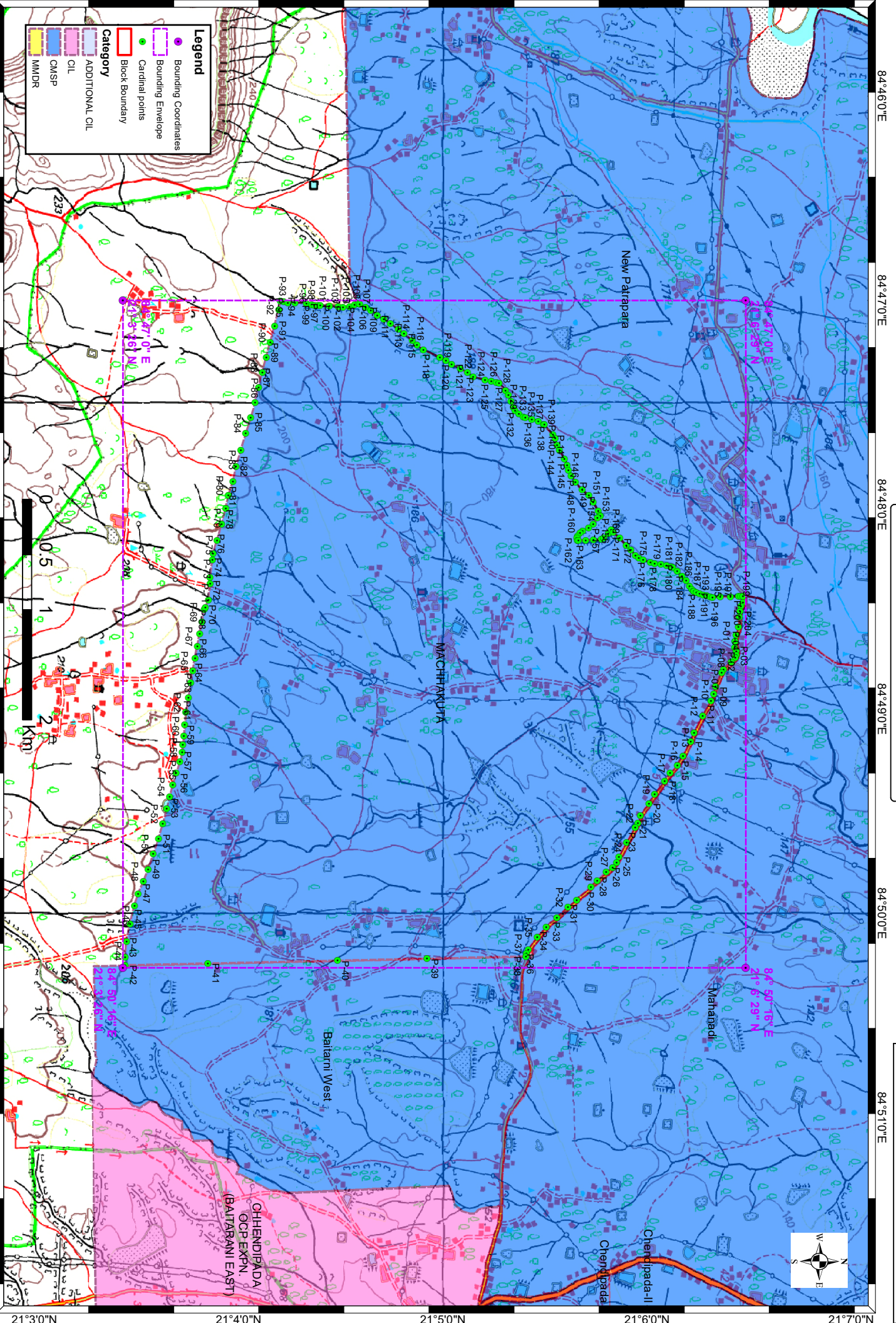
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Legend

- Bounding Coordinates
- Bounding Envelope
- Cardinal points
- Block Boundary

Category

- ADDITIONAL CIL
- CIL
- CMSP
- MMDR



21°30'N 21°40'N 21°50'N 21°60'N 21°70'N

21°5'0"N 21°6'0"N 21°7'0"N 21°8'0"N 21°9'0"N

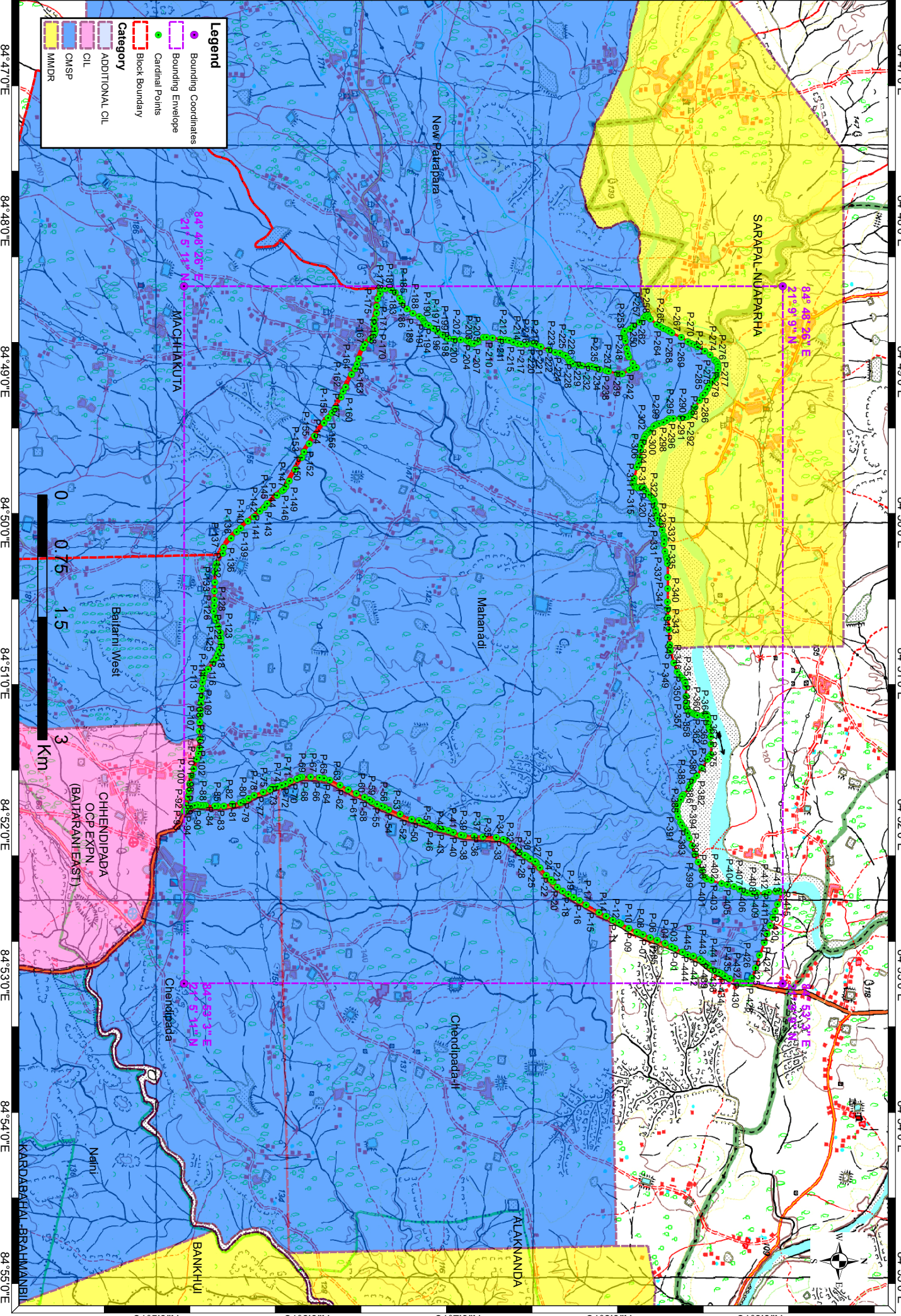
84°47'0"E 84°48'0"E 84°49'0"E 84°50'0"E 84°51'0"E 84°52'0"E 84°53'0"E 84°54'0"E 84°55'0"E

Mahanadi Block, Talcher Coalfield

FOR INTERNAL/RESTRICTED USE ONLY

Legend

- Bounding Coordinates
- Bounding Envelope
- Cardinal Points
- Block Boundary
- Category
- ADDITIONAL CIL
- CIL
- CMSP
- MMDR



84°47'0"E 84°48'0"E 84°49'0"E 84°50'0"E 84°51'0"E 84°52'0"E 84°53'0"E 84°54'0"E 84°55'0"E

21°5'0"N 21°6'0"N 21°7'0"N 21°8'0"N 21°9'0"N

Provisional cardinal points of Machhakata Block

Points	Longitude	Latitude
P-01	84° 48' 40.136" E	21° 6' 25.796" N
P-02	84° 48' 41.924" E	21° 6' 25.710" N
P-03	84° 48' 43.055" E	21° 6' 26.272" N
P-04	84° 48' 44.237" E	21° 6' 26.214" N
P-05	84° 48' 45.006" E	21° 6' 25.926" N
P-06	84° 48' 46.198" E	21° 6' 24.784" N
P-07	84° 48' 48.439" E	21° 6' 22.475" N
P-08	84° 48' 49.234" E	21° 6' 21.929" N
P-09	84° 48' 53.414" E	21° 6' 20.161" N
P-10	84° 48' 55.657" E	21° 6' 19.547" N
P-11	84° 48' 57.624" E	21° 6' 18.848" N
P-12	84° 49' 2.001" E	21° 6' 16.347" N
P-13	84° 49' 7.001" E	21° 6' 13.826" N
P-14	84° 49' 9.617" E	21° 6' 12.797" N
P-15	84° 49' 13.857" E	21° 6' 10.547" N
P-16	84° 49' 16.529" E	21° 6' 8.898" N
P-17	84° 49' 18.868" E	21° 6' 6.709" N
P-18	84° 49' 21.169" E	21° 6' 5.122" N
P-19	84° 49' 25.085" E	21° 6' 2.237" N
P-20	84° 49' 27.807" E	21° 6' 0.575" N
P-21	84° 49' 31.299" E	21° 5' 58.061" N
P-22	84° 49' 33.563" E	21° 5' 57.361" N
P-23	84° 49' 34.869" E	21° 5' 56.485" N
P-24	84° 49' 39.283" E	21° 5' 54.010" N
P-25	84° 49' 43.449" E	21° 5' 51.716" N
P-26	84° 49' 45.068" E	21° 5' 51.088" N
P-27	84° 49' 46.547" E	21° 5' 49.945" N
P-28	84° 49' 47.928" E	21° 5' 48.027" N
P-29	84° 49' 50.525" E	21° 5' 45.329" N
P-30	84° 49' 52.357" E	21° 5' 43.487" N
P-31	84° 49' 56.113" E	21° 5' 39.324" N
P-32	84° 49' 58.275" E	21° 5' 36.753" N
P-33	84° 50' 1.244" E	21° 5' 33.451" N
P-34	84° 50' 4.049" E	21° 5' 30.408" N
P-35	84° 50' 7.039" E	21° 5' 27.724" N
P-36	84° 50' 10.708" E	21° 5' 25.046" N
P-37	84° 50' 11.833" E	21° 5' 24.602" N
P-38	84° 50' 12.728" E	21° 5' 24.371" N
P-39	84° 50' 13.358" E	21° 4' 55.286" N
P-40	84° 50' 13.931" E	21° 4' 29.032" N
P-41	84° 50' 14.755" E	21° 3' 50.969" N
P-42	84° 50' 15.308" E	21° 3' 26.681" N
P-43	84° 50' 13.013" E	21° 3' 26.658" N
P-44	84° 50' 8.289" E	21° 3' 27.066" N

Provisional cardinal points of Machhakata Block

Points	Longitude	Latitude
P-45	84° 50' 3.215" E	21° 3' 28.110" N
P-46	84° 49' 57.788" E	21° 3' 29.361" N
P-47	84° 49' 54.264" E	21° 3' 30.506" N
P-48	84° 49' 50.696" E	21° 3' 31.935" N
P-49	84° 49' 47.128" E	21° 3' 33.364" N
P-50	84° 49' 42.629" E	21° 3' 34.929" N
P-51	84° 49' 38.130" E	21° 3' 36.493" N
P-52	84° 49' 33.692" E	21° 3' 37.692" N
P-53	84° 49' 29.254" E	21° 3' 38.890" N
P-54	84° 49' 25.775" E	21° 3' 39.750" N
P-55	84° 49' 22.295" E	21° 3' 40.610" N
P-56	84° 49' 18.872" E	21° 3' 41.660" N
P-57	84° 49' 15.449" E	21° 3' 42.710" N
P-58	84° 49' 12.772" E	21° 3' 43.372" N
P-59	84° 49' 10.639" E	21° 3' 43.545" N
P-60	84° 49' 7.968" E	21° 3' 43.921" N
P-61	84° 49' 4.693" E	21° 3' 44.144" N
P-62	84° 49' 1.034" E	21° 3' 44.501" N
P-63	84° 48' 56.683" E	21° 3' 45.202" N
P-64	84° 48' 52.332" E	21° 3' 45.902" N
P-65	84° 48' 48.749" E	21° 3' 46.573" N
P-66	84° 48' 45.165" E	21° 3' 47.244" N
P-67	84° 48' 41.582" E	21° 3' 47.914" N
P-68	84° 48' 37.999" E	21° 3' 48.585" N
P-69	84° 48' 34.416" E	21° 3' 49.256" N
P-70	84° 48' 30.833" E	21° 3' 49.927" N
P-71	84° 48' 30.237" E	21° 3' 50.235" N
P-72	84° 48' 27.979" E	21° 3' 51.176" N
P-73	84° 48' 23.222" E	21° 3' 51.635" N
P-74	84° 48' 21.325" E	21° 3' 51.599" N
P-75	84° 48' 16.156" E	21° 3' 52.304" N
P-76	84° 48' 14.341" E	21° 3' 52.469" N
P-77	84° 48' 10.467" E	21° 3' 53.643" N
P-78	84° 48' 5.777" E	21° 3' 54.940" N
P-79	84° 48' 1.086" E	21° 3' 56.236" N
P-80	84° 47' 57.369" E	21° 3' 56.996" N
P-81	84° 47' 53.196" E	21° 3' 58.303" N
P-82	84° 47' 48.737" E	21° 3' 59.188" N
P-83	84° 47' 43.913" E	21° 4' 0.641" N
P-84	84° 47' 39.089" E	21° 4' 2.094" N
P-85	84° 47' 34.321" E	21° 4' 3.528" N
P-86	84° 47' 30.001" E	21° 4' 4.831" N
P-87	84° 47' 25.686" E	21° 4' 5.857" N
P-88	84° 47' 21.269" E	21° 4' 7.020" N

Provisional cardinal points of Machhakata Block

Points	Longitude	Latitude
P-89	84° 47' 16.852" E	21° 4' 8.183" N
P-90	84° 47' 12.436" E	21° 4' 9.345" N
P-91	84° 47' 7.598" E	21° 4' 10.569" N
P-92	84° 47' 2.761" E	21° 4' 11.793" N
P-93	84° 47' 0.169" E	21° 4' 12.199" N
P-94	84° 47' 0.356" E	21° 4' 13.231" N
P-95	84° 47' 0.652" E	21° 4' 14.441" N
P-96	84° 47' 0.710" E	21° 4' 16.564" N
P-97	84° 47' 0.829" E	21° 4' 19.860" N
P-98	84° 47' 1.229" E	21° 4' 21.513" N
P-99	84° 47' 1.379" E	21° 4' 22.245" N
P-100	84° 47' 1.436" E	21° 4' 23.280" N
P-101	84° 47' 1.476" E	21° 4' 23.994" N
P-102	84° 47' 1.657" E	21° 4' 26.660" N
P-103	84° 47' 1.946" E	21° 4' 29.222" N
P-104	84° 47' 1.991" E	21° 4' 30.659" N
P-105	84° 47' 1.800" E	21° 4' 32.570" N
P-106	84° 47' 1.369" E	21° 4' 34.103" N
P-107	84° 47' 0.946" E	21° 4' 35.266" N
P-108	84° 47' 1.046" E	21° 4' 35.597" N
P-109	84° 47' 2.018" E	21° 4' 37.302" N
P-110	84° 47' 2.947" E	21° 4' 38.821" N
P-111	84° 47' 4.361" E	21° 4' 40.728" N
P-112	84° 47' 5.585" E	21° 4' 42.679" N
P-113	84° 47' 6.727" E	21° 4' 44.533" N
P-114	84° 47' 8.420" E	21° 4' 46.883" N
P-115	84° 47' 9.768" E	21° 4' 48.549" N
P-116	84° 47' 11.815" E	21° 4' 51.048" N
P-117	84° 47' 13.060" E	21° 4' 52.420" N
P-118	84° 47' 14.474" E	21° 4' 54.305" N
P-119	84° 47' 16.760" E	21° 4' 59.115" N
P-120	84° 47' 17.584" E	21° 5' 0.890" N
P-121	84° 47' 18.745" E	21° 5' 2.532" N
P-122	84° 47' 20.092" E	21° 5' 5.115" N
P-123	84° 47' 21.226" E	21° 5' 7.277" N
P-124	84° 47' 22.421" E	21° 5' 8.939" N
P-125	84° 47' 23.335" E	21° 5' 12.388" N
P-126	84° 47' 23.796" E	21° 5' 14.269" N
P-127	84° 47' 24.077" E	21° 5' 15.729" N
P-128	84° 47' 24.341" E	21° 5' 16.458" N
P-129	84° 47' 26.481" E	21° 5' 18.434" N
P-130	84° 47' 27.792" E	21° 5' 19.223" N
P-131	84° 47' 29.676" E	21° 5' 19.988" N
P-132	84° 47' 31.468" E	21° 5' 20.710" N

Provisional cardinal points of Machhakata Block

Points	Longitude	Latitude
P-133	84° 47' 32.296" E	21° 5' 21.244" N
P-134	84° 47' 33.333" E	21° 5' 22.357" N
P-135	84° 47' 34.156" E	21° 5' 23.657" N
P-136	84° 47' 34.383" E	21° 5' 24.248" N
P-137	84° 47' 34.942" E	21° 5' 26.161" N
P-138	84° 47' 35.502" E	21° 5' 28.050" N
P-139	84° 47' 36.383" E	21° 5' 29.611" N
P-140	84° 47' 36.535" E	21° 5' 29.799" N
P-141	84° 47' 39.396" E	21° 5' 32.287" N
P-142	84° 47' 40.615" E	21° 5' 33.012" N
P-143	84° 47' 42.475" E	21° 5' 33.541" N
P-144	84° 47' 44.015" E	21° 5' 34.264" N
P-145	84° 47' 46.567" E	21° 5' 35.714" N
P-146	84° 47' 48.336" E	21° 5' 36.522" N
P-147	84° 47' 49.943" E	21° 5' 36.922" N
P-148	84° 47' 51.515" E	21° 5' 37.624" N
P-149	84° 47' 53.379" E	21° 5' 38.970" N
P-150	84° 47' 55.494" E	21° 5' 40.933" N
P-151	84° 47' 57.284" E	21° 5' 42.873" N
P-152	84° 47' 59.286" E	21° 5' 44.192" N
P-153	84° 48' 1.937" E	21° 5' 45.632" N
P-154	84° 48' 3.054" E	21° 5' 46.130" N
P-155	84° 48' 3.277" E	21° 5' 46.223" N
P-156	84° 48' 3.966" E	21° 5' 45.424" N
P-157	84° 48' 5.683" E	21° 5' 44.159" N
P-158	84° 48' 6.867" E	21° 5' 42.811" N
P-159	84° 48' 7.718" E	21° 5' 41.103" N
P-160	84° 48' 8.255" E	21° 5' 40.343" N
P-161	84° 48' 9.144" E	21° 5' 39.538" N
P-162	84° 48' 9.735" E	21° 5' 39.419" N
P-163	84° 48' 10.478" E	21° 5' 39.506" N
P-164	84° 48' 10.509" E	21° 5' 39.838" N
P-165	84° 48' 10.439" E	21° 5' 41.967" N
P-166	84° 48' 10.292" E	21° 5' 44.226" N
P-167	84° 48' 10.077" E	21° 5' 46.571" N
P-168	84° 48' 9.851" E	21° 5' 47.282" N
P-169	84° 48' 8.530" E	21° 5' 48.601" N
P-170	84° 48' 7.430" E	21° 5' 49.498" N
P-171	84° 48' 8.140" E	21° 5' 50.074" N
P-172	84° 48' 9.819" E	21° 5' 51.993" N
P-173	84° 48' 11.903" E	21° 5' 53.909" N
P-174	84° 48' 13.359" E	21° 5' 55.261" N
P-175	84° 48' 14.888" E	21° 5' 56.561" N
P-176	84° 48' 15.573" E	21° 5' 57.607" N

Provisional cardinal points of Machhakata Block

Points	Longitude	Latitude
P-177	84° 48' 16.240" E	21° 5' 58.826" N
P-178	84° 48' 16.887" E	21° 6' 1.036" N
P-179	84° 48' 17.248" E	21° 6' 2.252" N
P-180	84° 48' 17.612" E	21° 6' 4.048" N
P-181	84° 48' 17.943" E	21° 6' 5.781" N
P-182	84° 48' 18.219" E	21° 6' 7.039" N
P-183	84° 48' 18.393" E	21° 6' 7.473" N
P-184	84° 48' 19.492" E	21° 6' 8.823" N
P-185	84° 48' 20.931" E	21° 6' 10.210" N
P-186	84° 48' 22.368" E	21° 6' 11.493" N
P-187	84° 48' 24.025" E	21° 6' 12.517" N
P-188	84° 48' 24.964" E	21° 6' 13.183" N
P-189	84° 48' 25.325" E	21° 6' 13.693" N
P-190	84° 48' 25.355" E	21° 6' 13.715" N
P-191	84° 48' 25.812" E	21° 6' 14.457" N
P-192	84° 48' 26.215" E	21° 6' 15.434" N
P-193	84° 48' 26.520" E	21° 6' 16.486" N
P-194	84° 48' 26.744" E	21° 6' 17.464" N
P-195	84° 48' 27.010" E	21° 6' 18.603" N
P-196	84° 48' 27.141" E	21° 6' 19.217" N
P-197	84° 48' 27.060" E	21° 6' 21.480" N
P-198	84° 48' 27.001" E	21° 6' 24.493" N
P-199	84° 48' 26.883" E	21° 6' 26.876" N
P-200	84° 48' 26.829" E	21° 6' 27.487" N
P-201	84° 48' 26.850" E	21° 6' 28.149" N
P-202	84° 48' 28.726" E	21° 6' 28.140" N
P-203	84° 48' 29.947" E	21° 6' 27.566" N
P-204	84° 48' 31.297" E	21° 6' 27.300" N
P-205	84° 48' 32.947" E	21° 6' 27.098" N
P-206	84° 48' 35.833" E	21° 6' 26.804" N
P-207	84° 48' 38.351" E	21° 6' 26.193" N
P-208	84° 48' 40.136" E	21° 6' 25.796" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-01	84° 52' 50.586" E	21° 8' 29.150" N
P-02	84° 52' 49.260" E	21° 8' 26.276" N
P-03	84° 52' 48.391" E	21° 8' 24.804" N
P-04	84° 52' 47.320" E	21° 8' 22.237" N
P-05	84° 52' 45.966" E	21° 8' 19.118" N
P-06	84° 52' 44.841" E	21° 8' 16.342" N
P-07	84° 52' 43.745" E	21° 8' 13.423" N
P-08	84° 52' 42.999" E	21° 8' 11.555" N
P-09	84° 52' 42.707" E	21° 8' 10.922" N
P-10	84° 52' 41.076" E	21° 8' 7.811" N
P-11	84° 52' 39.446" E	21° 8' 4.701" N
P-12	84° 52' 39.012" E	21° 8' 3.928" N
P-13	84° 52' 37.877" E	21° 8' 1.535" N
P-14	84° 52' 36.448" E	21° 7' 58.833" N
P-15	84° 52' 34.852" E	21° 7' 55.934" N
P-16	84° 52' 31.878" E	21° 7' 50.865" N
P-17	84° 52' 30.092" E	21° 7' 48.257" N
P-18	84° 52' 28.831" E	21° 7' 45.979" N
P-19	84° 52' 27.693" E	21° 7' 43.791" N
P-20	84° 52' 26.275" E	21° 7' 41.528" N
P-21	84° 52' 24.876" E	21° 7' 39.414" N
P-22	84° 52' 22.698" E	21° 7' 37.741" N
P-23	84° 52' 21.856" E	21° 7' 36.889" N
P-24	84° 52' 20.056" E	21° 7' 34.985" N
P-25	84° 52' 17.152" E	21° 7' 32.549" N
P-26	84° 52' 15.057" E	21° 7' 31.098" N
P-27	84° 52' 14.661" E	21° 7' 30.583" N
P-28	84° 52' 13.501" E	21° 7' 28.676" N
P-29	84° 52' 12.571" E	21° 7' 27.326" N
P-30	84° 52' 12.103" E	21° 7' 26.486" N
P-31	84° 52' 10.737" E	21° 7' 24.493" N
P-32	84° 52' 8.658" E	21° 7' 21.880" N
P-33	84° 52' 6.285" E	21° 7' 19.140" N
P-34	84° 52' 5.810" E	21° 7' 17.933" N
P-35	84° 52' 5.101" E	21° 7' 15.172" N
P-36	84° 52' 4.738" E	21° 7' 9.943" N
P-37	84° 52' 4.532" E	21° 7' 6.400" N
P-38	84° 52' 4.322" E	21° 7' 2.202" N
P-39	84° 52' 4.164" E	21° 7' 1.115" N
P-40	84° 52' 3.119" E	21° 6' 58.175" N
P-41	84° 52' 3.061" E	21° 6' 58.050" N
P-42	84° 52' 2.439" E	21° 6' 56.226" N
P-43	84° 52' 1.952" E	21° 6' 54.151" N
P-44	84° 52' 1.625" E	21° 6' 52.595" N
P-45	84° 52' 1.162" E	21° 6' 50.674" N
P-46	84° 52' 0.747" E	21° 6' 49.807" N
P-47	84° 52' 0.335" E	21° 6' 49.195" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-48	84° 51' 59.948" E	21° 6' 48.404" N
P-49	84° 51' 59.533" E	21° 6' 47.563" N
P-50	84° 51' 59.005" E	21° 6' 45.980" N
P-51	84° 51' 58.408" E	21° 6' 44.481" N
P-52	84° 51' 57.857" E	21° 6' 41.442" N
P-53	84° 51' 55.928" E	21° 6' 36.945" N
P-54	84° 51' 54.000" E	21° 6' 32.448" N
P-55	84° 51' 53.102" E	21° 6' 30.723" N
P-56	84° 51' 52.642" E	21° 6' 29.454" N
P-57	84° 51' 51.812" E	21° 6' 27.815" N
P-58	84° 51' 50.895" E	21° 6' 25.727" N
P-59	84° 51' 50.173" E	21° 6' 24.734" N
P-60	84° 51' 49.142" E	21° 6' 22.826" N
P-61	84° 51' 47.673" E	21° 6' 19.577" N
P-62	84° 51' 45.956" E	21° 6' 16.300" N
P-63	84° 51' 44.413" E	21° 6' 13.042" N
P-64	84° 51' 42.228" E	21° 6' 8.947" N
P-65	84° 51' 41.637" E	21° 6' 6.714" N
P-66	84° 51' 41.234" E	21° 6' 4.847" N
P-67	84° 51' 41.131" E	21° 6' 1.400" N
P-68	84° 51' 41.028" E	21° 5' 57.954" N
P-69	84° 51' 41.169" E	21° 5' 57.024" N
P-70	84° 51' 41.895" E	21° 5' 55.954" N
P-71	84° 51' 42.686" E	21° 5' 53.334" N
P-72	84° 51' 43.700" E	21° 5' 51.366" N
P-73	84° 51' 44.333" E	21° 5' 49.948" N
P-74	84° 51' 44.850" E	21° 5' 48.267" N
P-75	84° 51' 45.180" E	21° 5' 46.136" N
P-76	84° 51' 45.940" E	21° 5' 45.164" N
P-77	84° 51' 46.940" E	21° 5' 42.500" N
P-78	84° 51' 48.211" E	21° 5' 38.905" N
P-79	84° 51' 49.490" E	21° 5' 36.730" N
P-80	84° 51' 50.741" E	21° 5' 34.589" N
P-81	84° 51' 51.258" E	21° 5' 33.631" N
P-82	84° 51' 51.814" E	21° 5' 30.247" N
P-83	84° 51' 52.508" E	21° 5' 26.940" N
P-84	84° 51' 52.677" E	21° 5' 24.564" N
P-85	84° 51' 52.669" E	21° 5' 23.325" N
P-86	84° 51' 52.466" E	21° 5' 19.573" N
P-87	84° 51' 52.369" E	21° 5' 18.608" N
P-88	84° 51' 52.319" E	21° 5' 17.610" N
P-89	84° 51' 52.252" E	21° 5' 16.516" N
P-90	84° 51' 52.291" E	21° 5' 15.376" N
P-91	84° 51' 52.923" E	21° 5' 13.807" N
P-92	84° 51' 53.629" E	21° 5' 12.409" N
P-93	84° 51' 54.347" E	21° 5' 11.646" N
P-94	84° 51' 54.567" E	21° 5' 11.382" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-95	84° 51' 54.658" E	21° 5' 11.230" N
P-96	84° 51' 54.749" E	21° 5' 11.165" N
P-97	84° 51' 52.300" E	21° 5' 11.738" N
P-98	84° 51' 49.006" E	21° 5' 12.595" N
P-99	84° 51' 46.671" E	21° 5' 13.060" N
P-100	84° 51' 43.693" E	21° 5' 13.257" N
P-101	84° 51' 40.581" E	21° 5' 14.135" N
P-102	84° 51' 37.905" E	21° 5' 14.945" N
P-103	84° 51' 34.107" E	21° 5' 15.977" N
P-104	84° 51' 31.934" E	21° 5' 16.720" N
P-105	84° 51' 29.876" E	21° 5' 17.168" N
P-106	84° 51' 26.142" E	21° 5' 17.246" N
P-107	84° 51' 22.705" E	21° 5' 17.152" N
P-108	84° 51' 19.188" E	21° 5' 17.311" N
P-109	84° 51' 16.484" E	21° 5' 17.512" N
P-110	84° 51' 14.520" E	21° 5' 17.604" N
P-111	84° 51' 11.763" E	21° 5' 17.859" N
P-112	84° 51' 9.468" E	21° 5' 18.020" N
P-113	84° 51' 6.167" E	21° 5' 18.214" N
P-114	84° 51' 3.451" E	21° 5' 18.429" N
P-115	84° 51' 1.665" E	21° 5' 18.847" N
P-116	84° 50' 59.822" E	21° 5' 19.201" N
P-117	84° 50' 58.081" E	21° 5' 20.659" N
P-118	84° 50' 55.242" E	21° 5' 22.654" N
P-119	84° 50' 53.830" E	21° 5' 23.820" N
P-120	84° 50' 52.250" E	21° 5' 24.520" N
P-121	84° 50' 50.558" E	21° 5' 25.107" N
P-122	84° 50' 48.305" E	21° 5' 25.741" N
P-123	84° 50' 45.903" E	21° 5' 25.793" N
P-124	84° 50' 43.622" E	21° 5' 25.494" N
P-125	84° 50' 41.099" E	21° 5' 24.688" N
P-126	84° 50' 38.627" E	21° 5' 23.689" N
P-127	84° 50' 37.440" E	21° 5' 23.342" N
P-128	84° 50' 35.238" E	21° 5' 22.968" N
P-129	84° 50' 33.052" E	21° 5' 23.021" N
P-130	84° 50' 30.842" E	21° 5' 23.170" N
P-131	84° 50' 27.303" E	21° 5' 23.156" N
P-132	84° 50' 23.686" E	21° 5' 23.253" N
P-133	84° 50' 19.862" E	21° 5' 23.355" N
P-134	84° 50' 17.219" E	21° 5' 23.584" N
P-135	84° 50' 16.352" E	21° 5' 23.934" N
P-136	84° 50' 12.191" E	21° 5' 26.423" N
P-137	84° 50' 9.814" E	21° 5' 26.764" N
P-138	84° 50' 6.128" E	21° 5' 29.726" N
P-139	84° 50' 3.575" E	21° 5' 31.908" N
P-140	84° 50' 2.219" E	21° 5' 33.601" N
P-141	84° 49' 59.458" E	21° 5' 36.429" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-142	84° 49' 57.658" E	21° 5' 38.943" N
P-143	84° 49' 55.444" E	21° 5' 41.226" N
P-144	84° 49' 53.970" E	21° 5' 43.015" N
P-145	84° 49' 52.547" E	21° 5' 44.132" N
P-146	84° 49' 49.077" E	21° 5' 47.970" N
P-147	84° 49' 47.567" E	21° 5' 50.026" N
P-148	84° 49' 46.884" E	21° 5' 50.675" N
P-149	84° 49' 45.652" E	21° 5' 51.628" N
P-150	84° 49' 43.413" E	21° 5' 52.844" N
P-151	84° 49' 38.752" E	21° 5' 55.278" N
P-152	84° 49' 34.046" E	21° 5' 57.884" N
P-153	84° 49' 31.759" E	21° 5' 58.714" N
P-154	84° 49' 28.711" E	21° 6' 0.762" N
P-155	84° 49' 25.664" E	21° 6' 2.811" N
P-156	84° 49' 20.278" E	21° 6' 6.668" N
P-157	84° 49' 18.408" E	21° 6' 8.312" N
P-158	84° 49' 16.401" E	21° 6' 9.915" N
P-159	84° 49' 14.620" E	21° 6' 11.085" N
P-160	84° 49' 10.096" E	21° 6' 13.518" N
P-161	84° 49' 7.946" E	21° 6' 14.304" N
P-162	84° 49' 5.981" E	21° 6' 15.261" N
P-163	84° 49' 0.999" E	21° 6' 17.739" N
P-164	84° 48' 58.861" E	21° 6' 19.066" N
P-165	84° 48' 56.995" E	21° 6' 19.876" N
P-166	84° 48' 54.634" E	21° 6' 20.508" N
P-167	84° 48' 50.491" E	21° 6' 22.233" N
P-168	84° 48' 49.064" E	21° 6' 22.937" N
P-169	84° 48' 47.014" E	21° 6' 25.118" N
P-170	84° 48' 45.007" E	21° 6' 26.720" N
P-171	84° 48' 43.863" E	21° 6' 27.113" N
P-172	84° 48' 42.670" E	21° 6' 26.905" N
P-173	84° 48' 41.109" E	21° 6' 26.482" N
P-174	84° 48' 39.322" E	21° 6' 26.707" N
P-175	84° 48' 36.851" E	21° 6' 27.494" N
P-176	84° 48' 34.010" E	21° 6' 27.681" N
P-177	84° 48' 31.124" E	21° 6' 28.040" N
P-178	84° 48' 29.067" E	21° 6' 28.997" N
P-179	84° 48' 26.873" E	21° 6' 28.982" N
P-180	84° 48' 26.894" E	21° 6' 29.528" N
P-181	84° 48' 26.894" E	21° 6' 29.528" N
P-182	84° 48' 26.912" E	21° 6' 29.803" N
P-183	84° 48' 27.097" E	21° 6' 30.940" N
P-184	84° 48' 27.624" E	21° 6' 33.315" N
P-185	84° 48' 28.668" E	21° 6' 35.080" N
P-186	84° 48' 30.638" E	21° 6' 36.673" N
P-187	84° 48' 32.569" E	21° 6' 37.799" N
P-188	84° 48' 34.969" E	21° 6' 39.713" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-189	84° 48' 36.815" E	21° 6' 42.010" N
P-190	84° 48' 38.076" E	21° 6' 44.566" N
P-191	84° 48' 39.057" E	21° 6' 45.805" N
P-192	84° 48' 39.977" E	21° 6' 46.403" N
P-193	84° 48' 40.620" E	21° 6' 46.623" N
P-194	84° 48' 40.896" E	21° 6' 46.708" N
P-195	84° 48' 41.049" E	21° 6' 47.134" N
P-196	84° 48' 41.564" E	21° 6' 48.241" N
P-197	84° 48' 42.673" E	21° 6' 50.060" N
P-198	84° 48' 44.053" E	21° 6' 51.782" N
P-199	84° 48' 45.406" E	21° 6' 53.803" N
P-200	84° 48' 46.459" E	21° 6' 55.103" N
P-201	84° 48' 46.772" E	21° 6' 56.158" N
P-202	84° 48' 46.944" E	21° 6' 58.353" N
P-203	84° 48' 47.317" E	21° 7' 1.032" N
P-204	84° 48' 47.443" E	21° 7' 3.491" N
P-205	84° 48' 48.024" E	21° 7' 4.263" N
P-206	84° 48' 48.925" E	21° 7' 5.257" N
P-207	84° 48' 48.907" E	21° 7' 6.355" N
P-208	84° 48' 48.137" E	21° 7' 7.951" N
P-209	84° 48' 46.407" E	21° 7' 10.025" N
P-210	84° 48' 46.419" E	21° 7' 11.287" N
P-211	84° 48' 46.635" E	21° 7' 13.695" N
P-212	84° 48' 46.965" E	21° 7' 16.876" N
P-213	84° 48' 47.362" E	21° 7' 18.853" N
P-214	84° 48' 47.595" E	21° 7' 20.241" N
P-215	84° 48' 48.262" E	21° 7' 21.982" N
P-216	84° 48' 48.844" E	21° 7' 23.639" N
P-217	84° 48' 49.035" E	21° 7' 24.972" N
P-218	84° 48' 49.174" E	21° 7' 27.311" N
P-219	84° 48' 48.720" E	21° 7' 29.637" N
P-220	84° 48' 48.949" E	21° 7' 30.302" N
P-221	84° 48' 49.296" E	21° 7' 31.148" N
P-222	84° 48' 50.113" E	21° 7' 32.840" N
P-223	84° 48' 51.396" E	21° 7' 36.129" N
P-224	84° 48' 52.240" E	21° 7' 38.503" N
P-225	84° 48' 52.642" E	21° 7' 40.468" N
P-226	84° 48' 53.166" E	21° 7' 41.931" N
P-227	84° 48' 53.645" E	21° 7' 42.735" N
P-228	84° 48' 54.732" E	21° 7' 43.678" N
P-229	84° 48' 55.698" E	21° 7' 44.163" N
P-230	84° 48' 56.129" E	21° 7' 44.653" N
P-231	84° 48' 56.694" E	21° 7' 45.631" N
P-232	84° 48' 57.451" E	21° 7' 47.910" N
P-233	84° 48' 57.550" E	21° 7' 49.176" N
P-234	84° 48' 57.657" E	21° 7' 51.921" N
P-235	84° 48' 57.878" E	21° 7' 53.114" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-236	84° 48' 58.478" E	21° 7' 54.630" N
P-237	84° 48' 59.032" E	21° 7' 56.132" N
P-238	84° 48' 59.539" E	21° 7' 58.798" N
P-239	84° 48' 59.738" E	21° 7' 59.861" N
P-240	84° 49' 0.902" E	21° 8' 3.341" N
P-241	84° 49' 0.951" E	21° 8' 3.523" N
P-242	84° 49' 0.939" E	21° 8' 5.146" N
P-243	84° 48' 59.269" E	21° 8' 8.114" N
P-244	84° 48' 58.544" E	21° 8' 9.495" N
P-245	84° 48' 58.149" E	21° 8' 10.814" N
P-246	84° 48' 56.526" E	21° 8' 9.402" N
P-247	84° 48' 54.059" E	21° 8' 7.900" N
P-248	84° 48' 52.773" E	21° 8' 7.425" N
P-249	84° 48' 50.752" E	21° 8' 6.954" N
P-250	84° 48' 47.778" E	21° 8' 6.488" N
P-251	84° 48' 46.309" E	21° 8' 6.151" N
P-252	84° 48' 45.463" E	21° 8' 5.777" N
P-253	84° 48' 44.473" E	21° 8' 5.817" N
P-254	84° 48' 43.668" E	21° 8' 6.131" N
P-255	84° 48' 42.984" E	21° 8' 8.268" N
P-256	84° 48' 42.112" E	21° 8' 9.718" N
P-257	84° 48' 40.134" E	21° 8' 12.017" N
P-258	84° 48' 38.493" E	21° 8' 13.755" N
P-259	84° 48' 37.480" E	21° 8' 14.560" N
P-260	84° 48' 37.400" E	21° 8' 15.356" N
P-261	84° 48' 38.225" E	21° 8' 15.657" N
P-262	84° 48' 39.149" E	21° 8' 16.316" N
P-263	84° 48' 41.159" E	21° 8' 19.016" N
P-264	84° 48' 41.993" E	21° 8' 20.431" N
P-265	84° 48' 42.622" E	21° 8' 21.599" N
P-266	84° 48' 43.356" E	21° 8' 22.891" N
P-267	84° 48' 43.969" E	21° 8' 23.712" N
P-268	84° 48' 44.612" E	21° 8' 24.986" N
P-269	84° 48' 46.408" E	21° 8' 28.730" N
P-270	84° 48' 47.949" E	21° 8' 31.303" N
P-271	84° 48' 48.636" E	21° 8' 32.691" N
P-272	84° 48' 49.407" E	21° 8' 34.057" N
P-273	84° 48' 50.027" E	21° 8' 35.236" N
P-274	84° 48' 51.772" E	21° 8' 38.009" N
P-275	84° 48' 53.261" E	21° 8' 40.137" N
P-276	84° 48' 55.234" E	21° 8' 41.884" N
P-277	84° 48' 56.065" E	21° 8' 42.719" N
P-278	84° 48' 57.191" E	21° 8' 43.272" N
P-279	84° 48' 58.155" E	21° 8' 43.375" N
P-280	84° 48' 59.255" E	21° 8' 43.261" N
P-281	84° 49' 1.407" E	21° 8' 42.798" N
P-282	84° 49' 2.505" E	21° 8' 42.319" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-283	84° 49' 3.781" E	21° 8' 41.065" N
P-284	84° 49' 5.561" E	21° 8' 39.636" N
P-285	84° 49' 6.883" E	21° 8' 39.014" N
P-286	84° 49' 8.368" E	21° 8' 38.232" N
P-287	84° 49' 9.394" E	21° 8' 37.216" N
P-288	84° 49' 11.267" E	21° 8' 35.937" N
P-289	84° 49' 14.213" E	21° 8' 34.115" N
P-290	84° 49' 16.360" E	21° 8' 32.641" N
P-291	84° 49' 17.258" E	21° 8' 32.120" N
P-292	84° 49' 17.781" E	21° 8' 31.343" N
P-293	84° 49' 18.050" E	21° 8' 30.223" N
P-294	84° 49' 18.337" E	21° 8' 28.371" N
P-295	84° 49' 18.503" E	21° 8' 25.510" N
P-296	84° 49' 18.663" E	21° 8' 23.887" N
P-297	84° 49' 19.445" E	21° 8' 22.885" N
P-298	84° 49' 20.080" E	21° 8' 21.608" N
P-299	84° 49' 20.647" E	21° 8' 19.807" N
P-300	84° 49' 21.203" E	21° 8' 18.462" N
P-301	84° 49' 21.639" E	21° 8' 17.763" N
P-302	84° 49' 23.029" E	21° 8' 16.353" N
P-303	84° 49' 24.097" E	21° 8' 15.625" N
P-304	84° 49' 24.835" E	21° 8' 14.666" N
P-305	84° 49' 26.005" E	21° 8' 14.126" N
P-306	84° 49' 27.139" E	21° 8' 13.656" N
P-307	84° 49' 28.071" E	21° 8' 13.066" N
P-308	84° 49' 29.536" E	21° 8' 12.697" N
P-309	84° 49' 31.186" E	21° 8' 12.481" N
P-310	84° 49' 34.173" E	21° 8' 12.018" N
P-311	84° 49' 36.262" E	21° 8' 11.766" N
P-312	84° 49' 38.000" E	21° 8' 11.017" N
P-313	84° 49' 42.432" E	21° 8' 9.961" N
P-314	84° 49' 44.026" E	21° 8' 9.626" N
P-315	84° 49' 44.613" E	21° 8' 9.691" N
P-316	84° 49' 45.570" E	21° 8' 10.263" N
P-317	84° 49' 45.851" E	21° 8' 10.778" N
P-318	84° 49' 46.055" E	21° 8' 11.257" N
P-319	84° 49' 46.061" E	21° 8' 12.228" N
P-320	84° 49' 46.095" E	21° 8' 13.351" N
P-321	84° 49' 46.252" E	21° 8' 13.791" N
P-322	84° 49' 47.347" E	21° 8' 14.691" N
P-323	84° 49' 48.981" E	21° 8' 15.822" N
P-324	84° 49' 50.249" E	21° 8' 16.955" N
P-325	84° 49' 51.056" E	21° 8' 17.682" N
P-326	84° 49' 52.021" E	21° 8' 18.086" N
P-327	84° 49' 54.637" E	21° 8' 18.373" N
P-328	84° 49' 56.243" E	21° 8' 18.579" N
P-329	84° 49' 58.104" E	21° 8' 19.236" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-330	84° 50' 0.139" E	21° 8' 19.892" N
P-331	84° 50' 3.021" E	21° 8' 21.077" N
P-332	84° 50' 5.065" E	21° 8' 21.703" N
P-333	84° 50' 6.084" E	21° 8' 21.917" N
P-334	84° 50' 6.555" E	21° 8' 21.910" N
P-335	84° 50' 8.439" E	21° 8' 21.758" N
P-336	84° 50' 11.371" E	21° 8' 22.104" N
P-337	84° 50' 13.424" E	21° 8' 22.764" N
P-338	84° 50' 14.540" E	21° 8' 23.042" N
P-339	84° 50' 16.201" E	21° 8' 23.209" N
P-340	84° 50' 21.722" E	21° 8' 23.248" N
P-341	84° 50' 26.143" E	21° 8' 23.328" N
P-342	84° 50' 31.525" E	21° 8' 23.153" N
P-343	84° 50' 34.112" E	21° 8' 23.311" N
P-344	84° 50' 37.726" E	21° 8' 23.291" N
P-345	84° 50' 42.506" E	21° 8' 23.751" N
P-346	84° 50' 48.400" E	21° 8' 24.042" N
P-347	84° 50' 49.941" E	21° 8' 24.222" N
P-348	84° 50' 50.970" E	21° 8' 24.342" N
P-349	84° 50' 55.770" E	21° 8' 25.714" N
P-350	84° 50' 59.126" E	21° 8' 27.073" N
P-351	84° 51' 0.621" E	21° 8' 27.882" N
P-352	84° 51' 1.646" E	21° 8' 29.042" N
P-353	84° 51' 2.642" E	21° 8' 29.845" N
P-354	84° 51' 3.690" E	21° 8' 30.304" N
P-355	84° 51' 5.287" E	21° 8' 30.450" N
P-356	84° 51' 8.974" E	21° 8' 30.516" N
P-357	84° 51' 11.822" E	21° 8' 30.617" N
P-358	84° 51' 13.323" E	21° 8' 30.802" N
P-359	84° 51' 14.371" E	21° 8' 31.197" N
P-360	84° 51' 14.978" E	21° 8' 31.594" N
P-361	84° 51' 15.521" E	21° 8' 32.636" N
P-362	84° 51' 15.976" E	21° 8' 33.714" N
P-363	84° 51' 16.228" E	21° 8' 34.229" N
P-364	84° 51' 16.538" E	21° 8' 34.943" N
P-365	84° 51' 16.592" E	21° 8' 35.083" N
P-366	84° 51' 16.607" E	21° 8' 37.266" N
P-367	84° 51' 16.283" E	21° 8' 38.300" N
P-368	84° 51' 16.207" E	21° 8' 38.586" N
P-369	84° 51' 16.335" E	21° 8' 38.904" N
P-370	84° 51' 17.117" E	21° 8' 39.259" N
P-371	84° 51' 18.757" E	21° 8' 39.390" N
P-372	84° 51' 20.316" E	21° 8' 39.435" N
P-373	84° 51' 21.465" E	21° 8' 39.859" N
P-374	84° 51' 22.384" E	21° 8' 40.133" N
P-375	84° 51' 25.086" E	21° 8' 40.387" N
P-376	84° 51' 28.100" E	21° 8' 40.513" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-377	84° 51' 32.021" E	21° 8' 40.504" N
P-378	84° 51' 33.089" E	21° 8' 39.763" N
P-379	84° 51' 34.144" E	21° 8' 39.163" N
P-380	84° 51' 37.582" E	21° 8' 36.783" N
P-381	84° 51' 40.569" E	21° 8' 34.856" N
P-382	84° 51' 42.326" E	21° 8' 33.405" N
P-383	84° 51' 43.992" E	21° 8' 32.256" N
P-384	84° 51' 45.341" E	21° 8' 31.625" N
P-385	84° 51' 47.965" E	21° 8' 29.567" N
P-386	84° 51' 48.850" E	21° 8' 28.973" N
P-387	84° 51' 50.062" E	21° 8' 28.471" N
P-388	84° 51' 51.729" E	21° 8' 27.387" N
P-389	84° 51' 52.530" E	21° 8' 27.124" N
P-390	84° 51' 54.868" E	21° 8' 27.090" N
P-391	84° 51' 56.797" E	21° 8' 27.509" N
P-392	84° 51' 59.003" E	21° 8' 28.379" N
P-393	84° 52' 0.281" E	21° 8' 29.013" N
P-394	84° 52' 1.866" E	21° 8' 30.208" N
P-395	84° 52' 3.284" E	21° 8' 31.113" N
P-396	84° 52' 5.362" E	21° 8' 31.944" N
P-397	84° 52' 8.394" E	21° 8' 32.857" N
P-398	84° 52' 11.663" E	21° 8' 34.107" N
P-399	84° 52' 14.932" E	21° 8' 35.357" N
P-400	84° 52' 18.196" E	21° 8' 36.726" N
P-401	84° 52' 20.924" E	21° 8' 38.096" N
P-402	84° 52' 21.592" E	21° 8' 38.751" N
P-403	84° 52' 22.196" E	21° 8' 40.652" N
P-404	84° 52' 23.351" E	21° 8' 44.680" N
P-405	84° 52' 23.895" E	21° 8' 46.959" N
P-406	84° 52' 24.689" E	21° 8' 49.634" N
P-407	84° 52' 25.744" E	21° 8' 51.843" N
P-408	84° 52' 26.747" E	21° 8' 53.890" N
P-409	84° 52' 27.174" E	21° 8' 54.815" N
P-410	84° 52' 27.447" E	21° 8' 56.811" N
P-411	84° 52' 27.239" E	21° 8' 58.748" N
P-412	84° 52' 27.342" E	21° 9' 1.948" N
P-413	84° 52' 26.719" E	21° 9' 3.449" N
P-414	84° 52' 26.525" E	21° 9' 6.194" N
P-415	84° 52' 26.478" E	21° 9' 7.468" N
P-416	84° 52' 26.578" E	21° 9' 8.724" N
P-417	84° 52' 26.762" E	21° 9' 8.687" N
P-418	84° 52' 26.823" E	21° 9' 8.669" N
P-419	84° 52' 31.616" E	21° 9' 6.975" N
P-420	84° 52' 34.335" E	21° 9' 6.048" N
P-421	84° 52' 36.971" E	21° 9' 5.101" N
P-422	84° 52' 40.160" E	21° 9' 3.977" N
P-423	84° 52' 43.491" E	21° 9' 2.828" N

Provisional Cardinal Points of Mahanadi Block

Points	Longitude	Latitude
P-424	84° 52' 46.822" E	21° 9' 1.679" N
P-425	84° 52' 52.016" E	21° 8' 59.820" N
P-426	84° 52' 56.836" E	21° 8' 58.184" N
P-427	84° 53' 0.978" E	21° 8' 56.709" N
P-428	84° 53' 2.874" E	21° 8' 56.018" N
P-429	84° 53' 2.924" E	21° 8' 55.344" N
P-430	84° 53' 2.908" E	21° 8' 53.595" N
P-431	84° 53' 2.828" E	21° 8' 53.222" N
P-432	84° 53' 2.638" E	21° 8' 51.977" N
P-433	84° 53' 2.621" E	21° 8' 50.983" N
P-434	84° 53' 1.115" E	21° 8' 47.920" N
P-435	84° 53' 0.223" E	21° 8' 46.067" N
P-436	84° 52' 59.251" E	21° 8' 44.704" N
P-437	84° 52' 58.703" E	21° 8' 43.628" N
P-438	84° 52' 58.180" E	21° 8' 42.082" N
P-439	84° 52' 57.587" E	21° 8' 41.225" N
P-440	84° 52' 56.017" E	21° 8' 39.444" N
P-441	84° 52' 55.092" E	21° 8' 38.310" N
P-442	84° 52' 54.122" E	21° 8' 37.132" N
P-443	84° 52' 53.455" E	21° 8' 36.235" N
P-444	84° 52' 52.242" E	21° 8' 33.484" N
P-445	84° 52' 51.654" E	21° 8' 31.252" N
P-446	84° 52' 50.586" E	21° 8' 29.150" N