BRAHMANBIL-KARDABAHAL COMBINED COAL BLOCK

PART A

Sl. No.	Features	Details
1.	**Location**	
	Coal Block	**Brahmanbil-Kardabahal combined**
	Latitude	21°2'54" - 21°4'26"N (Approximate)
	Longitude	84°53'10" - 84°57'14"E (Approximate)
	Topo Sheet No.	F45M16 (Old 73C/16)
	Coalfield	Talcher
	Villages	Kardabahal, Brahmanibil, Guthasahi, Thaliposi, (As per Survey of India Toposheet)
	Tehsil/Taluka	Chhendipada
	District	Angul
	State	Odisha
2.	**Connectivity with Block**	
	Nearest Rail Head	Nearest railway station Angul, located on the NH-42 (Bhubaneswar-Cuttack-Sambalpur route) is at a distance of about 34 km from the block.
	Road	The approach to the block is through State Highway No. 63, from Angul to Deogarh via Chhendipada, runs along south-west boundary of the combined block. All weather road also exists within the block
	Airport	The Biju Pattanaik International Airport, located at state capital Bhubaneswar, is nearest airport at a distance of about 170 km from block.
3.	**Area**	
	Geological Block Area	9.87 sq.km.
	Forest Area	2 % (Approximately)
	Non-Forest Area	98% (Approximately)
4.	**Climate and Topography**	
	Average Annual Rainfall	1317 mm (As per IMD from 1980-2003)
	Temperature (Min. — Max.)	6.7 – 38.1°C
	Local Surface Drainage Channels	Kudopasi nala flowing from south to north in north-western part of the block and Atandi nala flowing from south to north in east-central part of block mainly control the drainage and topographical pattern of the block. Ullani nala and its tributaries are traversing in central part of the block. Seasonal small nalas are also present in the block area and discharging in Gauduni nalla which then meets Tikra river in north. Tikra river finally meets Brahmani river in the east of the block. The surface topography is generally rugged and undulating with a general northerly slope.
	Rivers	Nearest river, Tikra flows from west to east in far north of the block.

Sl. No.	Features	Details
5.	**Exploration**	
	Status	Explored
	Borehole Density	9.0 BHs/sq.km.
	General Dip of Seams	5°-9° Northerly
	General Strike Direction	E-W in general

6. Coal Seams & Reserve

Number of Coal Seams	Thickness Range (m)	Floor Depth Range (m)	Geological Reserve (Mt)			Grade
			Proved	Indicated	Total	
XVII	0.35-6.71	23.73-221.87	14.673	15.856	30.529	UG-G12
XVI	0.12-5.97	42.11-244.07	12.476	10.9	23.376	UG-G13
XV	0.15-4.16	44.9-257.72	4.151	6.151	10.302	G15-G13
XIV	0.1-3.86	62-266.55	6.749	6.156	12.905	G17-G12
XIII	0.17-3.52	77.42-279.09				
XII	0.3-8.5	100.85-288	19.626	14.439	34.065	G17-G13
XIT	0.12-3.47	11.37-300.55	1.295	1.795	3.09	UG-G15
XIM	0.16-2.5	117.15-305				
XIB	0.15-2.85	125-307.6				
X	0.1-2.97	140-359.47	1.234	4.841	6.075	UG-G15
IX	5.35-14.38	160.05-	59.812	48.576	108.388	G16-G13
VIII	1.4-9.52	69.4-391.75	15.603	4.294	19.897	G15-G10
VII	0.55-16.57	75-407.76	19.784	3.573	23.357	G13-G9
VII/VIII	12.21-20.23	259.22-	11.282	12.122	23.404	G14-G12
VI	1.38-9.68	48.8-414.43	15.317	4.436	19.753	G15-G10
VI/VII/VIII	22.05-29.74	237.67-311	31.797	66.499	98.296	G12-G10
IV/V	0.07-10.03	68-433.7	22.345	5.798	28.143	G14-G10
III Top	9.6-21.94	95.7-455.5	96.562	81.684	178.246	G12-G9
III Mid Top	1.25-5.92	104-404.5	14.356	9.663	24.019	G13-G9
III Mid Bot	0.84-6.25	23-408.5	11.045	5.738	16.783	G15-G10
III Mid	3.8-11.03	277.29-	14.326	19.544	33.87	G13-G11
III Bot Top	6.49-20	39.75-414.5	26.638	3.243	29.881	G14-G11
III Bot Bot	0.8-6.9	46.2-419	3.819	0.52	4.339	G17-G13
III Bot	2-21.8	15.5-500	73.566	60.904	134.47	G14-G12
II Top	0.35-2.88	9.85-434.27	7.922	9.007	16.929	G15-G9
II Bot	0.17-5.91	15.7-445.35	9.588	5.401	14.989	G12-G9
I A	0.9-11.35	27-528.35	43.025	22.775	65.8	G13-G9
I B	0.4-9.93	39.95-537.98	20.06	17.2	37.26	G8-G3

	Number of Coal Seams	Thickness Range (m)	Floor Depth Range (m)	Geological Reserve (Mt)			Grade
				Proved	Indicated	Total	
	I C	0.2-6.79	44.95-489.7	12.464	13.745	26.209	G13-G7
	I D	0.05-4.62	57.1-569.28	7.754	9.426	17.18	G10-G4
	I E	0.37-4	67.65-463.63	14.929	10.156	25.085	G12-G5
	I F	0.15-2.6	84.95-465.22				
	I G	0.28-1.35	96.84-474.25				
	I H	0.16-1.55	114.32-				
			Total	**592.195**	**474.444**	**1066.64**	
7.	Surface Constraints	Presence of village and high tension power line.					

PART B

Sr. No.	Features	Details
1.	**Mining Plan**	Not prepared
2.	**Tentative Peak Rated Mine Capacity**	**25.0 MTY**

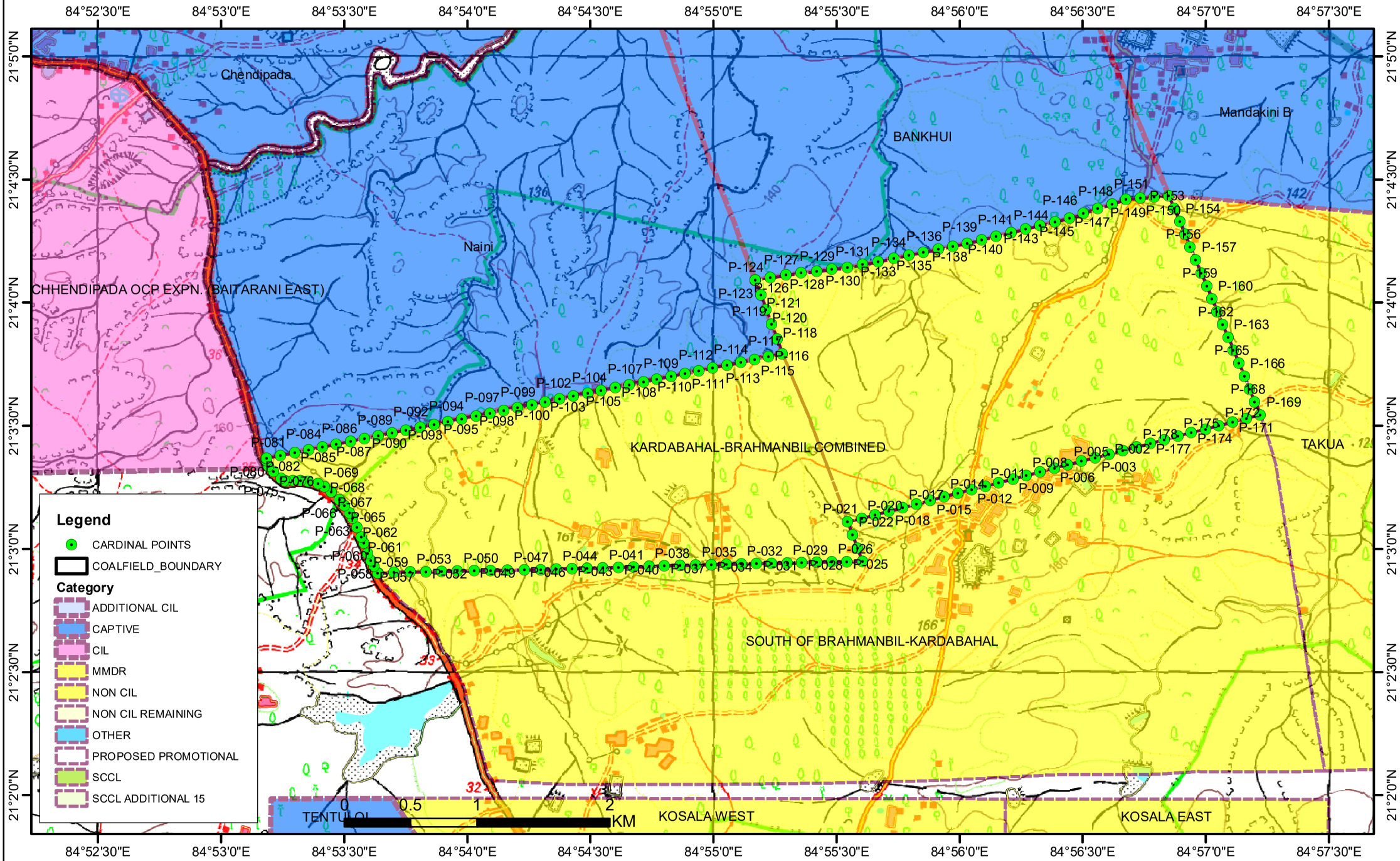
Note:

1. The above data in Part-A is compiled from Geological Report.

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 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.

KARDABAHAL-BRAHMANBIL COMBINED



NOTE: Coordinates are approximate in WGS84 System

Co-ordinates (in WGS 84 System) of cardinal points of Brahmanbil-Kardabahal Combined Coal Block

Sl. No.	Point ID	Longitude	Latitude
1	P-01	84° 53' 10.800" E	21° 3' 22.000" N
2	P-02	84° 53' 11.100" E	21° 3' 22.000" N
3	P-03	84° 53' 14.497" E	21° 3' 22.690" N
4	P-04	84° 53' 17.894" E	21° 3' 23.379" N
5	P-05	84° 53' 21.291" E	21° 3' 24.069" N
6	P-06	84° 53' 24.688" E	21° 3' 24.758" N
7	P-07	84° 53' 28.086" E	21° 3' 25.447" N
8	P-08	84° 53' 31.483" E	21° 3' 26.137" N
9	P-09	84° 53' 34.880" E	21° 3' 26.826" N
10	P-10	84° 53' 38.277" E	21° 3' 27.516" N
11	P-11	84° 53' 41.674" E	21° 3' 28.205" N
12	P-12	84° 53' 45.072" E	21° 3' 28.894" N
13	P-13	84° 53' 48.469" E	21° 3' 29.584" N
14	P-14	84° 53' 51.866" E	21° 3' 30.273" N
15	P-15	84° 53' 55.263" E	21° 3' 30.962" N
16	P-16	84° 53' 58.660" E	21° 3' 31.652" N
17	P-17	84° 54' 2.058" E	21° 3' 32.341" N
18	P-18	84° 54' 5.455" E	21° 3' 33.030" N
19	P-19	84° 54' 8.852" E	21° 3' 33.719" N
20	P-20	84° 54' 12.250" E	21° 3' 34.409" N
21	P-21	84° 54' 15.647" E	21° 3' 35.098" N
22	P-22	84° 54' 19.044" E	21° 3' 35.787" N
23	P-23	84° 54' 22.441" E	21° 3' 36.476" N
24	P-24	84° 54' 25.839" E	21° 3' 37.165" N
25	P-25	84° 54' 29.236" E	21° 3' 37.854" N
26	P-26	84° 54' 32.633" E	21° 3' 38.543" N
27	P-27	84° 54' 36.031" E	21° 3' 39.232" N
28	P-28	84° 54' 39.428" E	21° 3' 39.922" N
29	P-29	84° 54' 42.826" E	21° 3' 40.611" N
30	P-30	84° 54' 46.223" E	21° 3' 41.300" N
31	P-31	84° 54' 49.620" E	21° 3' 41.989" N
32	P-32	84° 54' 53.018" E	21° 3' 42.678" N
33	P-33	84° 54' 56.415" E	21° 3' 43.367" N
34	P-34	84° 54' 59.813" E	21° 3' 44.056" N
35	P-35	84° 55' 3.210" E	21° 3' 44.744" N
36	P-36	84° 55' 6.608" E	21° 3' 45.433" N
37	P-37	84° 55' 10.005" E	21° 3' 46.122" N
38	P-38	84° 55' 13.402" E	21° 3' 46.811" N
39	P-39	84° 55' 16.800" E	21° 3' 47.500" N

Sl. No.	Point ID	Longitude	Latitude
40	P-40	84° 55' 15.472" E	21° 3' 51.084" N
41	P-41	84° 55' 14.145" E	21° 3' 54.668" N
42	P-42	84° 55' 12.817" E	21° 3' 58.252" N
43	P-43	84° 55' 11.489" E	21° 4' 1.836" N
44	P-44	84° 55' 10.162" E	21° 4' 5.420" N
45	P-45	84° 55' 10.156" E	21° 4' 5.435" N
46	P-46	84° 55' 10.179" E	21° 4' 5.439" N
47	P-47	84° 55' 13.860" E	21° 4' 6.102" N
48	P-48	84° 55' 17.542" E	21° 4' 6.765" N
49	P-49	84° 55' 21.313" E	21° 4' 7.200" N
50	P-50	84° 55' 25.084" E	21° 4' 7.635" N
51	P-51	84° 55' 28.855" E	21° 4' 8.070" N
52	P-52	84° 55' 32.626" E	21° 4' 8.505" N
53	P-53	84° 55' 36.364" E	21° 4' 9.258" N
54	P-54	84° 55' 40.103" E	21° 4' 10.011" N
55	P-55	84° 55' 43.841" E	21° 4' 10.764" N
56	P-56	84° 55' 47.580" E	21° 4' 11.517" N
57	P-57	84° 55' 51.139" E	21° 4' 12.235" N
58	P-58	84° 55' 54.699" E	21° 4' 12.954" N
59	P-59	84° 55' 58.258" E	21° 4' 13.672" N
60	P-60	84° 56' 1.818" E	21° 4' 14.391" N
61	P-61	84° 56' 5.378" E	21° 4' 15.273" N
62	P-62	84° 56' 8.938" E	21° 4' 16.155" N
63	P-63	84° 56' 12.498" E	21° 4' 17.038" N
64	P-64	84° 56' 16.058" E	21° 4' 17.920" N
65	P-65	84° 56' 19.618" E	21° 4' 18.802" N
66	P-66	84° 56' 23.178" E	21° 4' 19.684" N
67	P-67	84° 56' 26.738" E	21° 4' 20.567" N
68	P-68	84° 56' 30.188" E	21° 4' 21.702" N
69	P-69	84° 56' 33.638" E	21° 4' 22.838" N
70	P-70	84° 56' 37.088" E	21° 4' 23.974" N
71	P-71	84° 56' 40.538" E	21° 4' 25.110" N
72	P-72	84° 56' 44.006" E	21° 4' 25.419" N
73	P-73	84° 56' 47.473" E	21° 4' 25.728" N
74	P-74	84° 56' 50.900" E	21° 4' 26.000" N
75	P-75	84° 56' 52.253" E	21° 4' 22.894" N
76	P-76	84° 56' 53.565" E	21° 4' 19.751" N
77	P-77	84° 56' 54.878" E	21° 4' 16.609" N
78	P-78	84° 56' 56.190" E	21° 4' 13.466" N

Sl. No.	Point ID	Longitude	Latitude
79	P-79	84° 56' 57.502" E	21° 4' 10.323" N
80	P-80	84° 56' 58.814" E	21° 4' 7.180" N
81	P-81	84° 57' 0.126" E	21° 4' 4.037" N
82	P-82	84° 57' 1.439" E	21° 4' 0.894" N
83	P-83	84° 57' 2.751" E	21° 3' 57.752" N
84	P-84	84° 57' 4.063" E	21° 3' 54.609" N
85	P-85	84° 57' 5.375" E	21° 3' 51.466" N
86	P-86	84° 57' 6.687" E	21° 3' 48.323" N
87	P-87	84° 57' 7.999" E	21° 3' 45.180" N
88	P-88	84° 57' 9.312" E	21° 3' 42.037" N
89	P-89	84° 57' 10.624" E	21° 3' 38.894" N
90	P-90	84° 57' 11.936" E	21° 3' 35.752" N
91	P-91	84° 57' 13.248" E	21° 3' 32.609" N
92	P-92	84° 57' 9.895" E	21° 3' 31.741" N
93	P-93	84° 57' 6.543" E	21° 3' 30.872" N
94	P-94	84° 57' 3.190" E	21° 3' 30.004" N
95	P-95	84° 56' 59.837" E	21° 3' 29.136" N
96	P-96	84° 56' 56.485" E	21° 3' 28.268" N
97	P-97	84° 56' 53.132" E	21° 3' 27.400" N
98	P-98	84° 56' 49.780" E	21° 3' 26.532" N
99	P-99	84° 56' 46.427" E	21° 3' 25.663" N
100	P-100	84° 56' 43.075" E	21° 3' 24.795" N
101	P-101	84° 56' 39.723" E	21° 3' 23.927" N
102	P-102	84° 56' 36.370" E	21° 3' 23.059" N
103	P-103	84° 56' 33.018" E	21° 3' 22.190" N
104	P-104	84° 56' 29.665" E	21° 3' 21.322" N
105	P-105	84° 56' 26.313" E	21° 3' 20.454" N
106	P-106	84° 56' 22.960" E	21° 3' 19.585" N
107	P-107	84° 56' 19.608" E	21° 3' 18.717" N
108	P-108	84° 56' 16.256" E	21° 3' 17.849" N
109	P-109	84° 56' 12.903" E	21° 3' 16.980" N
110	P-110	84° 56' 9.551" E	21° 3' 16.112" N
111	P-111	84° 56' 6.199" E	21° 3' 15.243" N
112	P-112	84° 56' 2.846" E	21° 3' 14.375" N
113	P-113	84° 55' 59.494" E	21° 3' 13.506" N
114	P-114	84° 55' 56.142" E	21° 3' 12.638" N
115	P-115	84° 55' 52.789" E	21° 3' 11.769" N
116	P-116	84° 55' 49.437" E	21° 3' 10.901" N
117	P-117	84° 55' 46.085" E	21° 3' 10.032" N
118	P-118	84° 55' 42.733" E	21° 3' 9.164" N
119	P-119	84° 55' 39.380" E	21° 3' 8.295" N
120	P-120	84° 55' 36.028" E	21° 3' 7.426" N

Sl. No.	Point ID	Longitude	Latitude
121	P-121	84° 55' 32.676" E	21° 3' 6.558" N
122	P-122	84° 55' 33.863" E	21° 3' 3.350" N
123	P-123	84° 55' 35.050" E	21° 3' 0.142" N
124	P-124	84° 55' 36.237" E	21° 2' 56.935" N
125	P-125	84° 55' 32.554" E	21° 2' 56.858" N
126	P-126	84° 55' 28.871" E	21° 2' 56.780" N
127	P-127	84° 55' 25.189" E	21° 2' 56.703" N
128	P-128	84° 55' 21.506" E	21° 2' 56.626" N
129	P-129	84° 55' 17.824" E	21° 2' 56.549" N
130	P-130	84° 55' 14.141" E	21° 2' 56.472" N
131	P-131	84° 55' 10.458" E	21° 2' 56.394" N
132	P-132	84° 55' 6.776" E	21° 2' 56.317" N
133	P-133	84° 55' 3.093" E	21° 2' 56.240" N
134	P-134	84° 54' 59.411" E	21° 2' 56.162" N
135	P-135	84° 54' 55.636" E	21° 2' 56.048" N
136	P-136	84° 54' 51.860" E	21° 2' 55.935" N
137	P-137	84° 54' 48.085" E	21° 2' 55.821" N
138	P-138	84° 54' 44.310" E	21° 2' 55.707" N
139	P-139	84° 54' 40.534" E	21° 2' 55.593" N
140	P-140	84° 54' 36.759" E	21° 2' 55.479" N
141	P-141	84° 54' 32.984" E	21° 2' 55.365" N
142	P-142	84° 54' 29.209" E	21° 2' 55.251" N
143	P-143	84° 54' 25.433" E	21° 2' 55.137" N
144	P-144	84° 54' 21.658" E	21° 2' 55.023" N
145	P-145	84° 54' 17.883" E	21° 2' 54.909" N
146	P-146	84° 54' 13.817" E	21° 2' 54.837" N
147	P-147	84° 54' 9.751" E	21° 2' 54.766" N
148	P-148	84° 54' 5.685" E	21° 2' 54.694" N
149	P-149	84° 54' 1.619" E	21° 2' 54.623" N
150	P-150	84° 53' 57.553" E	21° 2' 54.551" N
151	P-151	84° 53' 53.722" E	21° 2' 54.484" N
152	P-152	84° 53' 49.891" E	21° 2' 54.418" N
153	P-153	84° 53' 46.060" E	21° 2' 54.351" N
154	P-154	84° 53' 42.119" E	21° 2' 54.225" N
155	P-155	84° 53' 38.312" E	21° 2' 54.116" N
156	P-156	84° 53' 38.081" E	21° 2' 54.103" N
157	P-157	84° 53' 37.097" E	21° 2' 55.766" N
158	P-158	84° 53' 36.427" E	21° 2' 57.095" N
159	P-159	84° 53' 35.651" E	21° 2' 58.855" N
160	P-160	84° 53' 34.824" E	21° 3' 1.458" N
161	P-161	84° 53' 34.206" E	21° 3' 2.911" N
162	P-162	84° 53' 33.007" E	21° 3' 5.198" N

Sl. No.	Point ID	Longitude	Latitude
163	P-163	84° 53' 31.991" E	21° 3' 7.505" N
164	P-164	84° 53' 31.242" E	21° 3' 8.735" N
165	P-165	84° 53' 30.017" E	21° 3' 10.506" N
166	P-166	84° 53' 28.816" E	21° 3' 11.937" N
167	P-167	84° 53' 26.821" E	21° 3' 13.832" N
168	P-168	84° 53' 25.097" E	21° 3' 15.132" N
169	P-169	84° 53' 23.508" E	21° 3' 15.890" N
170	P-170	84° 53' 21.091" E	21° 3' 16.368" N

Sl. No.	Point ID	Longitude	Latitude
171	P-171	84° 53' 19.360" E	21° 3' 16.585" N
172	P-172	84° 53' 17.463" E	21° 3' 16.596" N
173	P-173	84° 53' 15.758" E	21° 3' 16.450" N
174	P-174	84° 53' 15.319" E	21° 3' 16.608" N
175	P-175	84° 53' 14.525" E	21° 3' 17.180" N
176	P-176	84° 53' 12.666" E	21° 3' 18.791" N
177	P-177	84° 53' 11.514" E	21° 3' 20.049" N
178	P-178	84° 53' 11.019" E	21° 3' 21.450" N

NOTE:

1. From Point 1 to 45 is common boundary with Naini block; From point 45 to 74 is common boundary with Bankhui block; From point 74 to 91 is common boundary with Takua (revised) block; From point 91 to 156 common boundary with South of Kardabahal-Brahmanbil block; From point 156 to 1 Angul-Deogarh-Chhendipada State Highway No-63.

2. Cardinal points are generated from boundary and require actual ground survey for confirmation.