

BARWATOLI COAL BLOCK SUMMARY

PART A

Sr. No.	Features	Details
1.	Location	
	Coal Block	Barwatoli
	Latitude	23° 44' 20" N - 23° 48' 34" N (Provisional)
	Longitude	84° 53' 56" E - 85° 0' 33" E (Provisional)
	Topo Sheet No.	F45A13
	Coalfield	North Karanpura
	Villages	Barwatoli, Nawada, Bishrampur, Bargaon, Semratanr, Khuntitoli, Bangatiya, Nawatanr, Ulatu, Parsatoli, Dudhmatiya, Dahu, Keri
	Tehsil/Taluka	Tandwa
	District	Chatra
	State	Jharkhand
2.	Connectivity with Block	
	Nearest Rail Head	Mccluskieganj Railway station at about 12 km from the southern boundary of the block. Proposed rail line passes from the north of the block at about 6 km from the northern boundary.
	Road	Road connecting Khalari to Balumath passes from the west of the block.
	Airport	Birsa Munda Airport, Ranchi at about 65 km.
3.	Area	
	Geological Block Area	33.23 Sq. Km. (As per shape file. Refer Note below)
	Green Cover	Approx. 5 % (As per FSI Map)
	Area excluding green cover	Approx. 95 % (As per FSI Map)
4.	Climate and Topography	
	Average Annual Rainfall	152cm
	Temperature (Min. — Max.)	4°C-42°C
	Local Surface Drainage Channels	Keri Nadi and Haharo Nadi flows through the block. Several small tributaries of these rivers are also present throughout the area.
	Rivers	Keri and Haharo Nadi
5.	Exploration	
	Status	Regionally Explored
	Exploration Agency	CMPDI
	Total Number of Boreholes with meterage	2 Boreholes; 527.60m
	Borehole Density	Approx. 0.06 Bhs per Sq.Km.

	General Dip of Seams	Beds are dipping at about 10°-15° towards south in the northern part and about 6°-10° towards east in the western part of the block.			
	General Strike Direction	NE-SW			
	Faults	Numerous Minor faults.			
6.	Coal Seams & Reserve (As per GSI Report)				
	Coal Seam	Thickness Range (m)*	Depth Range (m)	Resources (mt)	Grade
	V	5.00-25.00			
	IV	2.00-12.00			
	III	2.00-30.00			
	II	10.00-54.00			
	I	5.00-25.00			
	Seam-K	2.00-10.00			
	TOTAL			1900	
	*-General sequence of coal seams of the North Karanpura Coalfield.				
7.	Surface Constraints	Keri and Haharo Nadi			
8.	Grade of coal	G12 (Provisional) Based on quality data of adjacent blocks. Hence, the average grade is highly tentative.			
9.	Decision Support System (DSS) Analysis	Hydrological info: Polygon touches/intersects Keri Nadi & Haharo Nadi.			
10.	Eco Sensitive Zone (ESZ)	The block is 36.40 kms S-W from Hazaribagh ESZ, 24 kms S-E of Lawalong ESZ, 45.70 kms east of Palamau ESZ and 110 kms west of Parasnath ESZ.			

Note:

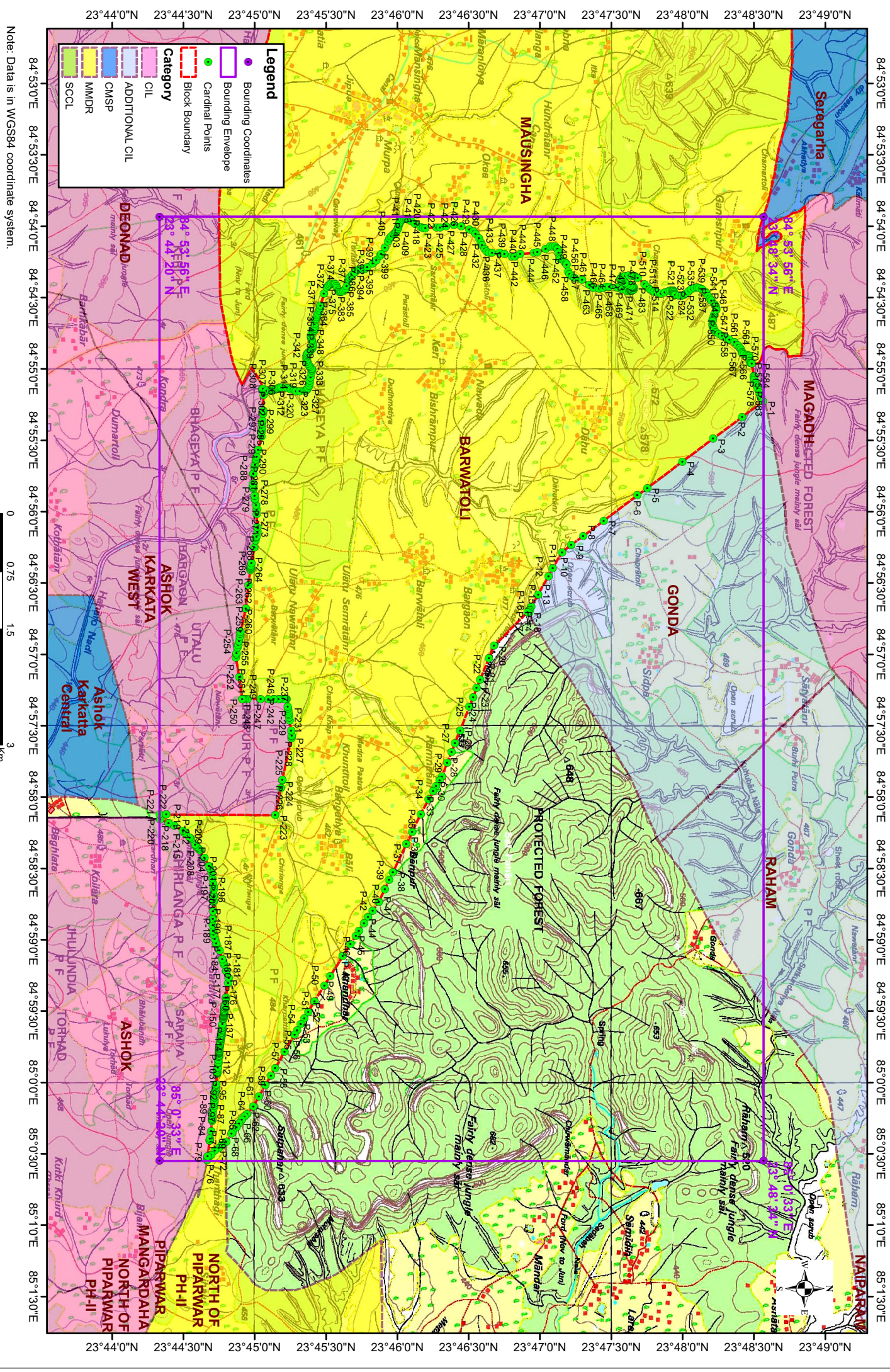
1. The data is compiled from “**Geology and Coal Resources of Badam, Rautpara, Ronhe, Rikba, Pakribarwadih, Kerendari, Tandwa, Dhadu-Mahuamilan, Piparwar and Bundu Areas, North Karanpura Coalfield, Hazaribagh and Palamau Districts, Bihar-1972**”.
2. The block boundary is provisional and the cardinal points, bounding co-ordinates are approximate. Field DGPS survey is required to ascertain the exact area.

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.

Barwatolii Block, North Karanpura Coalfield

FOR INTERNAL/RESTRICTED USE ONLY



Note: Data is in WGS84 coordinate system.

Provisional Cardinal Points for BARWATOLI Block

POINT NO	Longitude (WGS84)	Latitude (WGS84)
P-1	84° 55' 13.632" E	23° 48' 33.759" N
P-2	84° 55' 20.189" E	23° 48' 25.011" N
P-3	84° 55' 29.364" E	23° 48' 12.770" N
P-4	84° 55' 39.024" E	23° 47' 59.880" N
P-5	84° 55' 50.074" E	23° 47' 45.135" N
P-6	84° 55' 53.192" E	23° 47' 40.973" N
P-7	84° 56' 3.836" E	23° 47' 26.768" N
P-8	84° 56' 10.331" E	23° 47' 18.099" N
P-9	84° 56' 14.068" E	23° 47' 13.112" N
P-10	84° 56' 16.970" E	23° 47' 9.238" N
P-11	84° 56' 23.837" E	23° 47' 5.384" N
P-12	84° 56' 27.158" E	23° 47' 3.520" N
P-13	84° 56' 34.929" E	23° 46' 59.159" N
P-14	84° 56' 39.897" E	23° 46' 56.370" N
P-15	84° 56' 41.142" E	23° 46' 55.672" N
P-16	84° 56' 41.465" E	23° 46' 55.741" N
P-17	84° 56' 42.058" E	23° 46' 55.414" N
P-18	84° 56' 42.588" E	23° 46' 55.332" N
P-19	84° 56' 42.267" E	23° 46' 54.748" N
P-20	84° 56' 56.435" E	23° 46' 40.662" N
P-21	84° 57' 1.575" E	23° 46' 38.527" N
P-22	84° 57' 10.563" E	23° 46' 34.793" N
P-23	84° 57' 14.079" E	23° 46' 33.379" N
P-24	84° 57' 17.983" E	23° 46' 31.861" N
P-25	84° 57' 22.118" E	23° 46' 30.253" N
P-26	84° 57' 31.992" E	23° 46' 26.412" N
P-27	84° 57' 37.456" E	23° 46' 24.239" N
P-28	84° 57' 41.117" E	23° 46' 22.846" N
P-29	84° 57' 45.546" E	23° 46' 21.038" N
P-30	84° 57' 51.274" E	23° 46' 18.698" N
P-31	84° 57' 52.962" E	23° 46' 17.703" N
P-32	84° 57' 55.319" E	23° 46' 16.315" N
P-33	84° 57' 57.546" E	23° 46' 15.004" N
P-34	84° 58' 1.042" E	23° 46' 13.066" N
P-35	84° 58' 7.169" E	23° 46' 9.884" N
P-36	84° 58' 14.569" E	23° 46' 6.262" N
P-37	84° 58' 19.766" E	23° 46' 3.783" N
P-38	84° 58' 31.636" E	23° 45' 58.118" N
P-39	84° 58' 34.833" E	23° 45' 56.593" N
P-40	84° 58' 38.731" E	23° 45' 54.733" N
P-41	84° 58' 43.937" E	23° 45' 52.248" N
P-42	84° 58' 47.861" E	23° 45' 49.537" N
P-43	84° 58' 50.494" E	23° 45' 47.718" N
P-44	84° 58' 53.097" E	23° 45' 46.021" N
P-45	84° 58' 56.177" E	23° 45' 43.791" N
P-46	84° 58' 58.438" E	23° 45' 42.539" N
P-47	84° 59' 1.754" E	23° 45' 40.271" N

Provisional Cardinal Points for BARWATOLI Block

P-48	84° 59' 6.910" E	23° 45' 37.016" N
P-49	84° 59' 15.198" E	23° 45' 31.783" N
P-50	84° 59' 19.153" E	23° 45' 29.286" N
P-51	84° 59' 25.791" E	23° 45' 25.095" N
P-52	84° 59' 30.389" E	23° 45' 22.453" N
P-53	84° 59' 33.070" E	23° 45' 20.839" N
P-54	84° 59' 35.489" E	23° 45' 19.380" N
P-55	84° 59' 37.990" E	23° 45' 17.871" N
P-56	84° 59' 39.960" E	23° 45' 16.705" N
P-57	84° 59' 47.052" E	23° 45' 12.533" N
P-58	84° 59' 54.051" E	23° 45' 8.555" N
P-59	84° 59' 57.178" E	23° 45' 6.767" N
P-60	85° 0' 1.261" E	23° 45' 4.440" N
P-61	85° 0' 5.856" E	23° 45' 1.823" N
P-62	85° 0' 10.192" E	23° 44' 59.354" N
P-63	85° 0' 13.378" E	23° 44' 56.752" N
P-64	85° 0' 14.344" E	23° 44' 55.695" N
P-65	85° 0' 15.789" E	23° 44' 54.579" N
P-66	85° 0' 17.207" E	23° 44' 53.418" N
P-67	85° 0' 18.748" E	23° 44' 52.262" N
P-68	85° 0' 20.762" E	23° 44' 50.802" N
P-69	85° 0' 21.602" E	23° 44' 50.234" N
P-70	85° 0' 25.014" E	23° 44' 47.968" N
P-71	85° 0' 26.329" E	23° 44' 46.261" N
P-72	85° 0' 26.594" E	23° 44' 45.916" N
P-73	85° 0' 27.429" E	23° 44' 44.832" N
P-74	85° 0' 28.658" E	23° 44' 43.236" N
P-75	85° 0' 30.582" E	23° 44' 41.649" N
P-76	85° 0' 32.090" E	23° 44' 40.404" N
P-77	85° 0' 32.641" E	23° 44' 39.949" N
P-78	85° 0' 32.563" E	23° 44' 39.961" N
P-79	85° 0' 31.358" E	23° 44' 40.152" N
P-80	85° 0' 31.012" E	23° 44' 40.207" N
P-81	85° 0' 24.392" E	23° 44' 41.080" N
P-82	85° 0' 24.388" E	23° 44' 41.081" N
P-83	85° 0' 23.671" E	23° 44' 41.173" N
P-84	85° 0' 20.467" E	23° 44' 41.587" N
P-85	85° 0' 16.236" E	23° 44' 42.076" N
P-86	85° 0' 15.557" E	23° 44' 42.139" N
P-87	85° 0' 15.557" E	23° 44' 42.139" N
P-88	85° 0' 15.097" E	23° 44' 42.174" N
P-89	85° 0' 13.437" E	23° 44' 42.301" N
P-90	85° 0' 12.409" E	23° 44' 42.371" N
P-91	85° 0' 10.791" E	23° 44' 42.643" N
P-92	85° 0' 9.718" E	23° 44' 42.823" N
P-93	85° 0' 8.675" E	23° 44' 42.955" N
P-94	85° 0' 7.964" E	23° 44' 43.044" N
P-95	85° 0' 7.588" E	23° 44' 43.050" N

Provisional Cardinal Points for BARWATOLI Block

P-96	85° 0' 6.503" E	23° 44' 43.067" N
P-97	85° 0' 6.185" E	23° 44' 43.120" N
P-98	85° 0' 5.328" E	23° 44' 43.263" N
P-99	85° 0' 3.954" E	23° 44' 43.437" N
P-100	85° 0' 3.477" E	23° 44' 43.497" N
P-101	85° 0' 2.406" E	23° 44' 43.601" N
P-102	85° 0' 1.376" E	23° 44' 43.702" N
P-103	85° 0' 0.814" E	23° 44' 43.751" N
P-104	84° 59' 56.347" E	23° 44' 44.147" N
P-105	84° 59' 56.049" E	23° 44' 44.175" N
P-106	84° 59' 55.740" E	23° 44' 44.201" N
P-107	84° 59' 55.705" E	23° 44' 44.206" N
P-108	84° 59' 55.650" E	23° 44' 44.211" N
P-109	84° 59' 54.508" E	23° 44' 44.380" N
P-110	84° 59' 53.528" E	23° 44' 44.523" N
P-111	84° 59' 51.925" E	23° 44' 44.738" N
P-112	84° 59' 51.698" E	23° 44' 44.755" N
P-113	84° 59' 50.601" E	23° 44' 44.820" N
P-114	84° 59' 49.299" E	23° 44' 44.926" N
P-115	84° 59' 49.146" E	23° 44' 44.940" N
P-116	84° 59' 48.478" E	23° 44' 45.005" N
P-117	84° 59' 47.955" E	23° 44' 45.055" N
P-118	84° 59' 47.732" E	23° 44' 45.077" N
P-119	84° 59' 47.425" E	23° 44' 45.106" N
P-120	84° 59' 47.187" E	23° 44' 45.126" N
P-121	84° 59' 47.043" E	23° 44' 45.127" N
P-122	84° 59' 46.851" E	23° 44' 45.129" N
P-123	84° 59' 46.598" E	23° 44' 45.131" N
P-124	84° 59' 46.051" E	23° 44' 45.136" N
P-125	84° 59' 45.692" E	23° 44' 45.139" N
P-126	84° 59' 45.345" E	23° 44' 45.183" N
P-127	84° 59' 45.210" E	23° 44' 45.199" N
P-128	84° 59' 44.661" E	23° 44' 45.267" N
P-129	84° 59' 44.277" E	23° 44' 45.315" N
P-130	84° 59' 44.260" E	23° 44' 45.317" N
P-131	84° 59' 43.991" E	23° 44' 45.361" N
P-132	84° 59' 43.991" E	23° 44' 45.361" N
P-133	84° 59' 43.341" E	23° 44' 45.468" N
P-134	84° 59' 42.818" E	23° 44' 45.552" N
P-135	84° 59' 42.053" E	23° 44' 45.674" N
P-136	84° 59' 41.737" E	23° 44' 45.724" N
P-137	84° 59' 41.421" E	23° 44' 45.774" N
P-138	84° 59' 41.102" E	23° 44' 45.817" N
P-139	84° 59' 41.102" E	23° 44' 45.817" N
P-140	84° 59' 40.416" E	23° 44' 45.904" N
P-141	84° 59' 40.340" E	23° 44' 45.912" N
P-142	84° 59' 40.296" E	23° 44' 45.917" N
P-143	84° 59' 40.093" E	23° 44' 45.936" N

Provisional Cardinal Points for BARWATOLI Block

P-144	84° 59' 39.634" E	23° 44' 45.978" N
P-145	84° 59' 39.096" E	23° 44' 46.027" N
P-146	84° 59' 38.975" E	23° 44' 46.039" N
P-147	84° 59' 38.244" E	23° 44' 46.123" N
P-148	84° 59' 37.904" E	23° 44' 46.162" N
P-149	84° 59' 36.919" E	23° 44' 46.276" N
P-150	84° 59' 36.642" E	23° 44' 46.308" N
P-151	84° 59' 35.821" E	23° 44' 46.414" N
P-152	84° 59' 35.359" E	23° 44' 46.474" N
P-153	84° 59' 33.334" E	23° 44' 46.738" N
P-154	84° 59' 33.315" E	23° 44' 46.740" N
P-155	84° 59' 33.058" E	23° 44' 46.773" N
P-156	84° 59' 32.974" E	23° 44' 46.784" N
P-157	84° 59' 32.581" E	23° 44' 46.834" N
P-158	84° 59' 32.202" E	23° 44' 46.883" N
P-159	84° 59' 32.122" E	23° 44' 46.893" N
P-160	84° 59' 32.032" E	23° 44' 46.910" N
P-161	84° 59' 31.584" E	23° 44' 46.993" N
P-162	84° 59' 31.552" E	23° 44' 46.999" N
P-163	84° 59' 31.000" E	23° 44' 47.102" N
P-164	84° 59' 30.846" E	23° 44' 47.127" N
P-165	84° 59' 30.732" E	23° 44' 47.133" N
P-166	84° 59' 30.485" E	23° 44' 47.145" N
P-167	84° 59' 30.285" E	23° 44' 47.155" N
P-168	84° 59' 30.263" E	23° 44' 47.156" N
P-169	84° 59' 30.107" E	23° 44' 47.173" N
P-170	84° 59' 29.874" E	23° 44' 47.198" N
P-171	84° 59' 29.495" E	23° 44' 47.240" N
P-172	84° 59' 29.078" E	23° 44' 47.285" N
P-173	84° 59' 28.538" E	23° 44' 47.344" N
P-174	84° 59' 28.311" E	23° 44' 47.376" N
P-175	84° 59' 28.309" E	23° 44' 47.376" N
P-176	84° 59' 27.296" E	23° 44' 47.518" N
P-177	84° 59' 24.772" E	23° 44' 47.826" N
P-178	84° 59' 24.413" E	23° 44' 47.878" N
P-179	84° 59' 24.313" E	23° 44' 47.891" N
P-180	84° 59' 18.055" E	23° 44' 48.777" N
P-181	84° 59' 16.198" E	23° 44' 49.076" N
P-182	84° 59' 13.181" E	23° 44' 48.088" N
P-183	84° 59' 13.139" E	23° 44' 48.035" N
P-184	84° 59' 10.576" E	23° 44' 47.175" N
P-185	84° 59' 9.580" E	23° 44' 46.840" N
P-186	84° 59' 8.049" E	23° 44' 46.298" N
P-187	84° 59' 4.388" E	23° 44' 45.215" N
P-188	84° 59' 1.937" E	23° 44' 43.968" N
P-189	84° 59' 1.458" E	23° 44' 43.766" N
P-190	84° 58' 59.715" E	23° 44' 43.206" N
P-191	84° 58' 57.889" E	23° 44' 42.619" N

Provisional Cardinal Points for BARWATOLI Block

P-192	84° 58' 56.192" E	23° 44' 42.452" N
P-193	84° 58' 53.762" E	23° 44' 42.358" N
P-194	84° 58' 51.142" E	23° 44' 42.387" N
P-195	84° 58' 48.035" E	23° 44' 42.479" N
P-196	84° 58' 44.117" E	23° 44' 42.642" N
P-197	84° 58' 43.416" E	23° 44' 42.666" N
P-198	84° 58' 41.759" E	23° 44' 42.724" N
P-199	84° 58' 41.758" E	23° 44' 42.724" N
P-200	84° 58' 39.047" E	23° 44' 42.776" N
P-201	84° 58' 37.548" E	23° 44' 42.690" N
P-202	84° 58' 36.427" E	23° 44' 42.534" N
P-203	84° 58' 34.365" E	23° 44' 42.249" N
P-204	84° 58' 31.556" E	23° 44' 41.793" N
P-205	84° 58' 30.111" E	23° 44' 41.206" N
P-206	84° 58' 28.966" E	23° 44' 40.741" N
P-207	84° 58' 25.524" E	23° 44' 38.907" N
P-208	84° 58' 22.524" E	23° 44' 36.924" N
P-209	84° 58' 21.921" E	23° 44' 36.448" N
P-210	84° 58' 21.380" E	23° 44' 36.021" N
P-211	84° 58' 20.667" E	23° 44' 35.458" N
P-212	84° 58' 19.961" E	23° 44' 34.925" N
P-213	84° 58' 17.564" E	23° 44' 33.112" N
P-214	84° 58' 17.149" E	23° 44' 32.701" N
P-215	84° 58' 15.476" E	23° 44' 31.047" N
P-216	84° 58' 14.860" E	23° 44' 30.439" N
P-217	84° 58' 14.215" E	23° 44' 29.800" N
P-218	84° 58' 12.097" E	23° 44' 26.148" N
P-219	84° 58' 10.870" E	23° 44' 23.805" N
P-220	84° 58' 9.282" E	23° 44' 20.235" N
P-221	84° 58' 7.363" E	23° 44' 20.033" N
P-222	84° 58' 7.383" E	23° 44' 22.784" N
P-223	84° 58' 7.633" E	23° 45' 8.630" N
P-224	84° 57' 56.118" E	23° 45' 10.962" N
P-225	84° 57' 53.021" E	23° 45' 11.589" N
P-226	84° 57' 52.693" E	23° 45' 11.656" N
P-227	84° 57' 35.122" E	23° 45' 15.448" N
P-228	84° 57' 34.336" E	23° 45' 15.617" N
P-229	84° 57' 34.117" E	23° 45' 15.587" N
P-230	84° 57' 32.139" E	23° 45' 15.311" N
P-231	84° 57' 27.807" E	23° 45' 14.707" N
P-232	84° 57' 26.417" E	23° 45' 14.513" N
P-233	84° 57' 25.604" E	23° 45' 14.399" N
P-234	84° 57' 24.846" E	23° 45' 14.294" N
P-235	84° 57' 23.891" E	23° 45' 14.160" N
P-236	84° 57' 22.849" E	23° 45' 14.015" N
P-237	84° 57' 22.127" E	23° 45' 13.914" N
P-238	84° 57' 18.676" E	23° 45' 13.433" N
P-239	84° 57' 18.677" E	23° 45' 13.183" N

Provisional Cardinal Points for BARWATOLI Block

P-240	84° 57' 18.679" E	23° 45' 12.955" N
P-241	84° 57' 18.681" E	23° 45' 12.594" N
P-242	84° 57' 18.695" E	23° 45' 10.479" N
P-243	84° 57' 18.698" E	23° 45' 10.056" N
P-244	84° 57' 18.711" E	23° 45' 8.106" N
P-245	84° 57' 18.711" E	23° 45' 8.044" N
P-246	84° 57' 18.727" E	23° 45' 5.701" N
P-247	84° 57' 18.748" E	23° 45' 2.461" N
P-248	84° 57' 18.784" E	23° 44' 56.971" N
P-249	84° 57' 18.792" E	23° 44' 55.798" N
P-250	84° 57' 18.797" E	23° 44' 55.014" N
P-251	84° 57' 18.799" E	23° 44' 54.738" N
P-252	84° 57' 9.561" E	23° 44' 53.553" N
P-253	84° 57' 1.324" E	23° 44' 52.042" N
P-254	84° 56' 59.885" E	23° 44' 52.311" N
P-255	84° 56' 59.577" E	23° 44' 52.369" N
P-256	84° 56' 57.171" E	23° 44' 52.818" N
P-257	84° 56' 56.126" E	23° 44' 53.014" N
P-258	84° 56' 54.413" E	23° 44' 53.334" N
P-259	84° 56' 52.474" E	23° 44' 53.696" N
P-260	84° 56' 51.351" E	23° 44' 53.906" N
P-261	84° 56' 50.614" E	23° 44' 54.043" N
P-262	84° 56' 40.592" E	23° 44' 56.237" N
P-263	84° 56' 30.884" E	23° 44' 57.289" N
P-264	84° 56' 24.528" E	23° 44' 58.216" N
P-265	84° 56' 23.915" E	23° 44' 58.305" N
P-266	84° 56' 23.607" E	23° 44' 58.350" N
P-267	84° 56' 23.074" E	23° 44' 58.428" N
P-268	84° 56' 22.811" E	23° 44' 58.466" N
P-269	84° 56' 21.682" E	23° 44' 58.667" N
P-270	84° 56' 15.108" E	23° 44' 59.838" N
P-271	84° 56' 11.971" E	23° 45' 0.397" N
P-272	84° 56' 10.896" E	23° 45' 0.588" N
P-273	84° 56' 10.607" E	23° 45' 0.640" N
P-274	84° 56' 8.367" E	23° 45' 1.132" N
P-275	84° 56' 6.530" E	23° 45' 1.066" N
P-276	84° 56' 0.916" E	23° 45' 0.862" N
P-277	84° 55' 59.104" E	23° 45' 0.796" N
P-278	84° 55' 57.297" E	23° 45' 0.525" N
P-279	84° 55' 54.817" E	23° 45' 0.152" N
P-280	84° 55' 54.686" E	23° 45' 0.132" N
P-281	84° 55' 53.410" E	23° 44' 59.941" N
P-282	84° 55' 50.262" E	23° 44' 59.468" N
P-283	84° 55' 49.918" E	23° 44' 59.416" N
P-284	84° 55' 49.504" E	23° 44' 59.354" N
P-285	84° 55' 49.343" E	23° 44' 59.330" N
P-286	84° 55' 49.234" E	23° 44' 59.313" N
P-287	84° 55' 48.240" E	23° 44' 59.305" N

Provisional Cardinal Points for BARWATOLI Block

P-288	84° 55' 44.330" E	23° 44' 59.273" N
P-289	84° 55' 44.066" E	23° 44' 59.327" N
P-290	84° 55' 41.465" E	23° 44' 59.857" N
P-291	84° 55' 40.171" E	23° 45' 0.121" N
P-292	84° 55' 38.322" E	23° 45' 0.498" N
P-293	84° 55' 37.919" E	23° 45' 0.580" N
P-294	84° 55' 36.966" E	23° 45' 0.804" N
P-295	84° 55' 34.102" E	23° 45' 1.477" N
P-296	84° 55' 28.400" E	23° 45' 2.815" N
P-297	84° 55' 26.523" E	23° 45' 2.914" N
P-298	84° 55' 25.528" E	23° 45' 2.967" N
P-299	84° 55' 24.699" E	23° 45' 3.010" N
P-300	84° 55' 23.112" E	23° 45' 3.094" N
P-301	84° 55' 22.379" E	23° 45' 3.132" N
P-302	84° 55' 21.911" E	23° 45' 3.178" N
P-303	84° 55' 19.074" E	23° 45' 3.453" N
P-304	84° 55' 17.944" E	23° 45' 3.563" N
P-305	84° 55' 17.667" E	23° 45' 3.568" N
P-306	84° 55' 10.994" E	23° 45' 3.685" N
P-307	84° 55' 8.802" E	23° 45' 3.312" N
P-308	84° 55' 8.260" E	23° 45' 3.220" N
P-309	84° 55' 8.372" E	23° 45' 3.477" N
P-310	84° 55' 9.050" E	23° 45' 5.029" N
P-311	84° 55' 9.237" E	23° 45' 6.668" N
P-312	84° 55' 9.132" E	23° 45' 7.423" N
P-313	84° 55' 8.955" E	23° 45' 7.971" N
P-314	84° 55' 8.531" E	23° 45' 8.791" N
P-315	84° 55' 8.300" E	23° 45' 9.235" N
P-316	84° 55' 7.971" E	23° 45' 9.918" N
P-317	84° 55' 7.850" E	23° 45' 10.502" N
P-318	84° 55' 7.761" E	23° 45' 11.412" N
P-319	84° 55' 7.891" E	23° 45' 12.618" N
P-320	84° 55' 8.094" E	23° 45' 13.928" N
P-321	84° 55' 8.448" E	23° 45' 15.154" N
P-322	84° 55' 8.988" E	23° 45' 16.485" N
P-323	84° 55' 9.273" E	23° 45' 17.349" N
P-324	84° 55' 9.416" E	23° 45' 18.933" N
P-325	84° 55' 9.217" E	23° 45' 20.891" N
P-326	84° 55' 9.038" E	23° 45' 21.542" N
P-327	84° 55' 8.620" E	23° 45' 21.984" N
P-328	84° 55' 7.997" E	23° 45' 22.423" N
P-329	84° 55' 6.886" E	23° 45' 22.924" N
P-330	84° 55' 5.987" E	23° 45' 23.066" N
P-331	84° 55' 4.771" E	23° 45' 23.153" N
P-332	84° 55' 3.440" E	23° 45' 23.411" N
P-333	84° 55' 1.808" E	23° 45' 23.836" N
P-334	84° 55' 0.683" E	23° 45' 24.044" N
P-335	84° 55' 0.123" E	23° 45' 24.037" N

Provisional Cardinal Points for BARWATOLI Block

P-336	84° 54' 59.808" E	23° 45' 23.843" N
P-337	84° 54' 59.126" E	23° 45' 23.266" N
P-338	84° 54' 58.405" E	23° 45' 22.758" N
P-339	84° 54' 57.776" E	23° 45' 22.388" N
P-340	84° 54' 56.903" E	23° 45' 22.050" N
P-341	84° 54' 56.196" E	23° 45' 21.834" N
P-342	84° 54' 55.227" E	23° 45' 21.683" N
P-343	84° 54' 54.460" E	23° 45' 21.759" N
P-344	84° 54' 53.971" E	23° 45' 21.907" N
P-345	84° 54' 53.575" E	23° 45' 22.159" N
P-346	84° 54' 52.836" E	23° 45' 22.803" N
P-347	84° 54' 52.040" E	23° 45' 23.532" N
P-348	84° 54' 51.320" E	23° 45' 24.141" N
P-349	84° 54' 50.568" E	23° 45' 24.406" N
P-350	84° 54' 49.968" E	23° 45' 24.536" N
P-351	84° 54' 49.147" E	23° 45' 24.473" N
P-352	84° 54' 48.237" E	23° 45' 24.100" N
P-353	84° 54' 47.623" E	23° 45' 23.954" N
P-354	84° 54' 46.617" E	23° 45' 23.734" N
P-355	84° 54' 46.020" E	23° 45' 23.726" N
P-356	84° 54' 45.382" E	23° 45' 23.889" N
P-357	84° 54' 44.455" E	23° 45' 24.599" N
P-358	84° 54' 43.999" E	23° 45' 25.023" N
P-359	84° 54' 43.678" E	23° 45' 25.259" N
P-360	84° 54' 43.098" E	23° 45' 25.313" N
P-361	84° 54' 42.873" E	23° 45' 25.334" N
P-362	84° 54' 41.977" E	23° 45' 25.271" N
P-363	84° 54' 41.203" E	23° 45' 25.268" N
P-364	84° 54' 39.465" E	23° 45' 25.561" N
P-365	84° 54' 38.932" E	23° 45' 25.698" N
P-366	84° 54' 38.052" E	23° 45' 26.044" N
P-367	84° 54' 37.360" E	23° 45' 26.282" N
P-368	84° 54' 36.488" E	23° 45' 26.635" N
P-369	84° 54' 35.350" E	23° 45' 27.191" N
P-370	84° 54' 34.412" E	23° 45' 27.398" N
P-371	84° 54' 33.189" E	23° 45' 27.712" N
P-372	84° 54' 28.495" E	23° 45' 29.089" N
P-373	84° 54' 25.719" E	23° 45' 30.341" N
P-374	84° 54' 24.820" E	23° 45' 31.060" N
P-375	84° 54' 24.273" E	23° 45' 31.676" N
P-376	84° 54' 24.006" E	23° 45' 32.317" N
P-377	84° 54' 23.992" E	23° 45' 33.156" N
P-378	84° 54' 24.171" E	23° 45' 33.674" N
P-379	84° 54' 24.446" E	23° 45' 34.022" N
P-380	84° 54' 25.117" E	23° 45' 34.396" N
P-381	84° 54' 26.047" E	23° 45' 34.667" N
P-382	84° 54' 27.137" E	23° 45' 35.155" N
P-383	84° 54' 27.459" E	23° 45' 35.481" N

Provisional Cardinal Points for BARWATOLI Block

P-384	84° 54' 27.520" E	23° 45' 36.063" N
P-385	84° 54' 27.488" E	23° 45' 36.578" N
P-386	84° 54' 27.324" E	23° 45' 37.300" N
P-387	84° 54' 26.802" E	23° 45' 37.809" N
P-388	84° 54' 26.168" E	23° 45' 38.290" N
P-389	84° 54' 25.162" E	23° 45' 38.672" N
P-390	84° 54' 22.298" E	23° 45' 39.579" N
P-391	84° 54' 21.366" E	23° 45' 40.057" N
P-392	84° 54' 20.285" E	23° 45' 41.023" N
P-393	84° 54' 19.267" E	23° 45' 42.127" N
P-394	84° 54' 18.377" E	23° 45' 43.474" N
P-395	84° 54' 18.161" E	23° 45' 44.726" N
P-396	84° 54' 17.931" E	23° 45' 46.245" N
P-397	84° 54' 17.315" E	23° 45' 47.329" N
P-398	84° 54' 15.664" E	23° 45' 49.534" N
P-399	84° 54' 14.208" E	23° 45' 51.191" N
P-400	84° 54' 12.390" E	23° 45' 52.697" N
P-401	84° 54' 11.737" E	23° 45' 53.196" N
P-402	84° 54' 8.964" E	23° 45' 54.783" N
P-403	84° 54' 6.243" E	23° 45' 56.088" N
P-404	84° 54' 5.056" E	23° 45' 56.708" N
P-405	84° 54' 4.157" E	23° 45' 57.375" N
P-406	84° 54' 3.213" E	23° 45' 58.575" N
P-407	84° 54' 2.841" E	23° 45' 59.043" N
P-408	84° 54' 2.490" E	23° 45' 59.373" N
P-409	84° 54' 1.971" E	23° 45' 59.702" N
P-410	84° 54' 1.114" E	23° 46' 0.120" N
P-411	84° 54' 0.334" E	23° 46' 0.410" N
P-412	84° 53' 59.358" E	23° 46' 0.655" N
P-413	84° 53' 58.692" E	23° 46' 0.853" N
P-414	84° 53' 57.897" E	23° 46' 1.469" N
P-415	84° 53' 57.184" E	23° 46' 2.217" N
P-416	84° 53' 56.937" E	23° 46' 3.047" N
P-417	84° 53' 56.972" E	23° 46' 3.762" N
P-418	84° 53' 57.168" E	23° 46' 4.392" N
P-419	84° 53' 57.825" E	23° 46' 5.914" N
P-420	84° 53' 58.971" E	23° 46' 7.332" N
P-421	84° 54' 0.390" E	23° 46' 9.725" N
P-422	84° 54' 0.737" E	23° 46' 10.821" N
P-423	84° 54' 0.768" E	23° 46' 11.802" N
P-424	84° 54' 0.646" E	23° 46' 16.457" N
P-425	84° 54' 0.575" E	23° 46' 17.983" N
P-426	84° 54' 0.090" E	23° 46' 20.535" N
P-427	84° 53' 59.524" E	23° 46' 23.773" N
P-428	84° 54' 0.035" E	23° 46' 26.897" N
P-429	84° 54' 1.337" E	23° 46' 30.162" N
P-430	84° 54' 2.125" E	23° 46' 32.000" N
P-431	84° 54' 3.263" E	23° 46' 32.873" N

Provisional Cardinal Points for BARWATOLI Block

P-432	84° 54' 5.073" E	23° 46' 34.253" N
P-433	84° 54' 7.016" E	23° 46' 35.174" N
P-434	84° 54' 8.093" E	23° 46' 35.629" N
P-435	84° 54' 9.616" E	23° 46' 36.675" N
P-436	84° 54' 10.456" E	23° 46' 37.477" N
P-437	84° 54' 11.028" E	23° 46' 38.627" N
P-438	84° 54' 11.158" E	23° 46' 39.812" N
P-439	84° 54' 11.164" E	23° 46' 43.023" N
P-440	84° 54' 11.645" E	23° 46' 45.029" N
P-441	84° 54' 12.625" E	23° 46' 48.031" N
P-442	84° 54' 12.580" E	23° 46' 49.406" N
P-443	84° 54' 11.750" E	23° 46' 51.609" N
P-444	84° 54' 11.166" E	23° 46' 57.449" N
P-445	84° 54' 11.002" E	23° 46' 58.909" N
P-446	84° 54' 9.639" E	23° 47' 2.352" N
P-447	84° 54' 8.603" E	23° 47' 4.294" N
P-448	84° 54' 8.447" E	23° 47' 5.302" N
P-449	84° 54' 8.592" E	23° 47' 6.401" N
P-450	84° 54' 9.096" E	23° 47' 7.074" N
P-451	84° 54' 9.465" E	23° 47' 7.358" N
P-452	84° 54' 11.232" E	23° 47' 7.855" N
P-453	84° 54' 13.235" E	23° 47' 8.248" N
P-454	84° 54' 13.837" E	23° 47' 8.622" N
P-455	84° 54' 15.070" E	23° 47' 10.380" N
P-456	84° 54' 15.574" E	23° 47' 11.010" N
P-457	84° 54' 16.086" E	23° 47' 11.168" N
P-458	84° 54' 18.973" E	23° 47' 11.787" N
P-459	84° 54' 20.108" E	23° 47' 12.383" N
P-460	84° 54' 21.279" E	23° 47' 13.646" N
P-461	84° 54' 21.591" E	23° 47' 14.575" N
P-462	84° 54' 22.430" E	23° 47' 17.618" N
P-463	84° 54' 24.648" E	23° 47' 20.679" N
P-464	84° 54' 26.091" E	23° 47' 22.440" N
P-465	84° 54' 26.287" E	23° 47' 24.829" N
P-466	84° 54' 25.980" E	23° 47' 26.437" N
P-467	84° 54' 25.374" E	23° 47' 27.848" N
P-468	84° 54' 25.283" E	23° 47' 29.115" N
P-469	84° 54' 25.770" E	23° 47' 32.282" N
P-470	84° 54' 26.460" E	23° 47' 34.441" N
P-471	84° 54' 27.199" E	23° 47' 36.451" N
P-472	84° 54' 27.251" E	23° 47' 37.527" N
P-473	84° 54' 27.188" E	23° 47' 38.004" N
P-474	84° 54' 27.163" E	23° 47' 38.190" N
P-475	84° 54' 27.145" E	23° 47' 38.321" N
P-476	84° 54' 27.056" E	23° 47' 38.521" N
P-477	84° 54' 26.981" E	23° 47' 38.691" N
P-478	84° 54' 26.908" E	23° 47' 38.857" N
P-479	84° 54' 26.687" E	23° 47' 39.198" N

Provisional Cardinal Points for BARWATOLI Block

P-480	84° 54' 26.433" E	23° 47' 39.306" N
P-481	84° 54' 26.077" E	23° 47' 39.362" N
P-482	84° 54' 26.023" E	23° 47' 39.344" N
P-483	84° 54' 25.950" E	23° 47' 39.321" N
P-484	84° 54' 25.866" E	23° 47' 39.294" N
P-485	84° 54' 25.770" E	23° 47' 39.263" N
P-486	84° 54' 25.657" E	23° 47' 39.185" N
P-487	84° 54' 25.571" E	23° 47' 39.127" N
P-488	84° 54' 25.535" E	23° 47' 39.103" N
P-489	84° 54' 25.510" E	23° 47' 39.085" N
P-490	84° 54' 25.487" E	23° 47' 39.069" N
P-491	84° 54' 25.474" E	23° 47' 39.061" N
P-492	84° 54' 25.471" E	23° 47' 39.056" N
P-493	84° 54' 25.434" E	23° 47' 39.007" N
P-494	84° 54' 25.359" E	23° 47' 38.905" N
P-495	84° 54' 25.237" E	23° 47' 38.740" N
P-496	84° 54' 25.205" E	23° 47' 38.669" N
P-497	84° 54' 24.839" E	23° 47' 37.866" N
P-498	84° 54' 24.232" E	23° 47' 36.714" N
P-499	84° 54' 23.865" E	23° 47' 35.711" N
P-500	84° 54' 23.223" E	23° 47' 34.370" N
P-501	84° 54' 22.752" E	23° 47' 33.993" N
P-502	84° 54' 22.380" E	23° 47' 33.859" N
P-503	84° 54' 21.950" E	23° 47' 33.888" N
P-504	84° 54' 21.569" E	23° 47' 34.304" N
P-505	84° 54' 21.290" E	23° 47' 34.825" N
P-506	84° 54' 21.012" E	23° 47' 35.836" N
P-507	84° 54' 20.736" E	23° 47' 37.311" N
P-508	84° 54' 20.863" E	23° 47' 38.732" N
P-509	84° 54' 21.001" E	23° 47' 39.424" N
P-510	84° 54' 21.062" E	23° 47' 39.732" N
P-511	84° 54' 21.329" E	23° 47' 40.587" N
P-512	84° 54' 21.583" E	23° 47' 41.038" N
P-513	84° 54' 24.387" E	23° 47' 43.948" N
P-514	84° 54' 25.379" E	23° 47' 44.994" N
P-515	84° 54' 26.584" E	23° 47' 46.248" N
P-516	84° 54' 27.178" E	23° 47' 47.082" N
P-517	84° 54' 27.547" E	23° 47' 47.973" N
P-518	84° 54' 27.882" E	23° 47' 49.224" N
P-519	84° 54' 28.166" E	23° 47' 50.724" N
P-520	84° 54' 27.690" E	23° 47' 52.472" N
P-521	84° 54' 27.215" E	23° 47' 54.108" N
P-522	84° 54' 26.989" E	23° 47' 54.776" N
P-523	84° 54' 26.882" E	23° 47' 55.600" N
P-524	84° 54' 27.100" E	23° 47' 56.016" N
P-525	84° 54' 27.331" E	23° 47' 56.182" N
P-526	84° 54' 27.863" E	23° 47' 56.241" N
P-527	84° 54' 28.292" E	23° 47' 56.264" N

Provisional Cardinal Points for BARWATOLI Block

P-528	84° 54' 28.600" E	23° 47' 56.329" N
P-529	84° 54' 28.801" E	23° 47' 56.615" N
P-530	84° 54' 28.843" E	23° 47' 56.874" N
P-531	84° 54' 29.042" E	23° 47' 58.467" N
P-532	84° 54' 29.021" E	23° 47' 59.766" N
P-533	84° 54' 28.868" E	23° 48' 0.555" N
P-534	84° 54' 28.398" E	23° 48' 1.331" N
P-535	84° 54' 27.276" E	23° 48' 2.511" N
P-536	84° 54' 26.427" E	23° 48' 3.574" N
P-537	84° 54' 25.921" E	23° 48' 4.883" N
P-538	84° 54' 25.826" E	23° 48' 6.137" N
P-539	84° 54' 26.017" E	23° 48' 7.034" N
P-540	84° 54' 26.560" E	23° 48' 8.151" N
P-541	84° 54' 27.632" E	23° 48' 9.464" N
P-542	84° 54' 27.979" E	23° 48' 9.968" N
P-543	84° 54' 29.377" E	23° 48' 10.795" N
P-544	84° 54' 30.369" E	23° 48' 11.481" N
P-545	84° 54' 31.152" E	23° 48' 12.023" N
P-546	84° 54' 32.849" E	23° 48' 13.439" N
P-547	84° 54' 33.627" E	23° 48' 13.897" N
P-548	84° 54' 34.651" E	23° 48' 14.152" N
P-549	84° 54' 35.333" E	23° 48' 14.072" N
P-550	84° 54' 37.147" E	23° 48' 13.312" N
P-551	84° 54' 38.569" E	23° 48' 12.761" N
P-552	84° 54' 39.335" E	23° 48' 12.565" N
P-553	84° 54' 40.009" E	23° 48' 12.505" N
P-554	84° 54' 41.518" E	23° 48' 12.539" N
P-555	84° 54' 41.971" E	23° 48' 12.666" N
P-556	84° 54' 42.657" E	23° 48' 12.857" N
P-557	84° 54' 43.825" E	23° 48' 13.258" N
P-558	84° 54' 44.509" E	23° 48' 13.942" N
P-559	84° 54' 45.186" E	23° 48' 15.141" N
P-560	84° 54' 46.075" E	23° 48' 16.591" N
P-561	84° 54' 46.931" E	23° 48' 18.178" N
P-562	84° 54' 47.612" E	23° 48' 19.605" N
P-563	84° 54' 48.869" E	23° 48' 21.844" N
P-564	84° 54' 49.964" E	23° 48' 23.062" N
P-565	84° 54' 50.943" E	23° 48' 24.046" N
P-566	84° 54' 51.757" E	23° 48' 24.573" N
P-567	84° 54' 52.916" E	23° 48' 25.029" N
P-568	84° 54' 53.579" E	23° 48' 25.182" N
P-569	84° 54' 53.910" E	23° 48' 25.879" N
P-570	84° 54' 54.033" E	23° 48' 26.912" N
P-571	84° 54' 54.170" E	23° 48' 27.688" N
P-572	84° 54' 54.446" E	23° 48' 27.984" N
P-573	84° 54' 55.368" E	23° 48' 28.177" N
P-574	84° 54' 56.705" E	23° 48' 28.144" N
P-575	84° 54' 57.309" E	23° 48' 28.384" N

Provisional Cardinal Points for BARWATOLI Block

P-576	84° 54' 57.611" E	23° 48' 28.801" N
P-577	84° 54' 57.782" E	23° 48' 29.152" N
P-578	84° 55' 2.920" E	23° 48' 29.876" N
P-579	84° 55' 3.326" E	23° 48' 29.939" N
P-580	84° 55' 4.058" E	23° 48' 30.054" N
P-581	84° 55' 4.486" E	23° 48' 30.121" N
P-582	84° 55' 6.010" E	23° 48' 30.671" N
P-583	84° 55' 7.076" E	23° 48' 31.074" N
P-584	84° 55' 8.287" E	23° 48' 31.533" N
P-585	84° 55' 9.783" E	23° 48' 32.175" N
P-586	84° 55' 11.141" E	23° 48' 32.751" N
P-587	84° 55' 11.742" E	23° 48' 33.006" N

Note: The provisional cardinal points are in WGS84 coordinate system. These points are extracted through ArcGIS software after georeferencing of block boundary and onground DGPS survey is required to ascertain the exact location of the points.