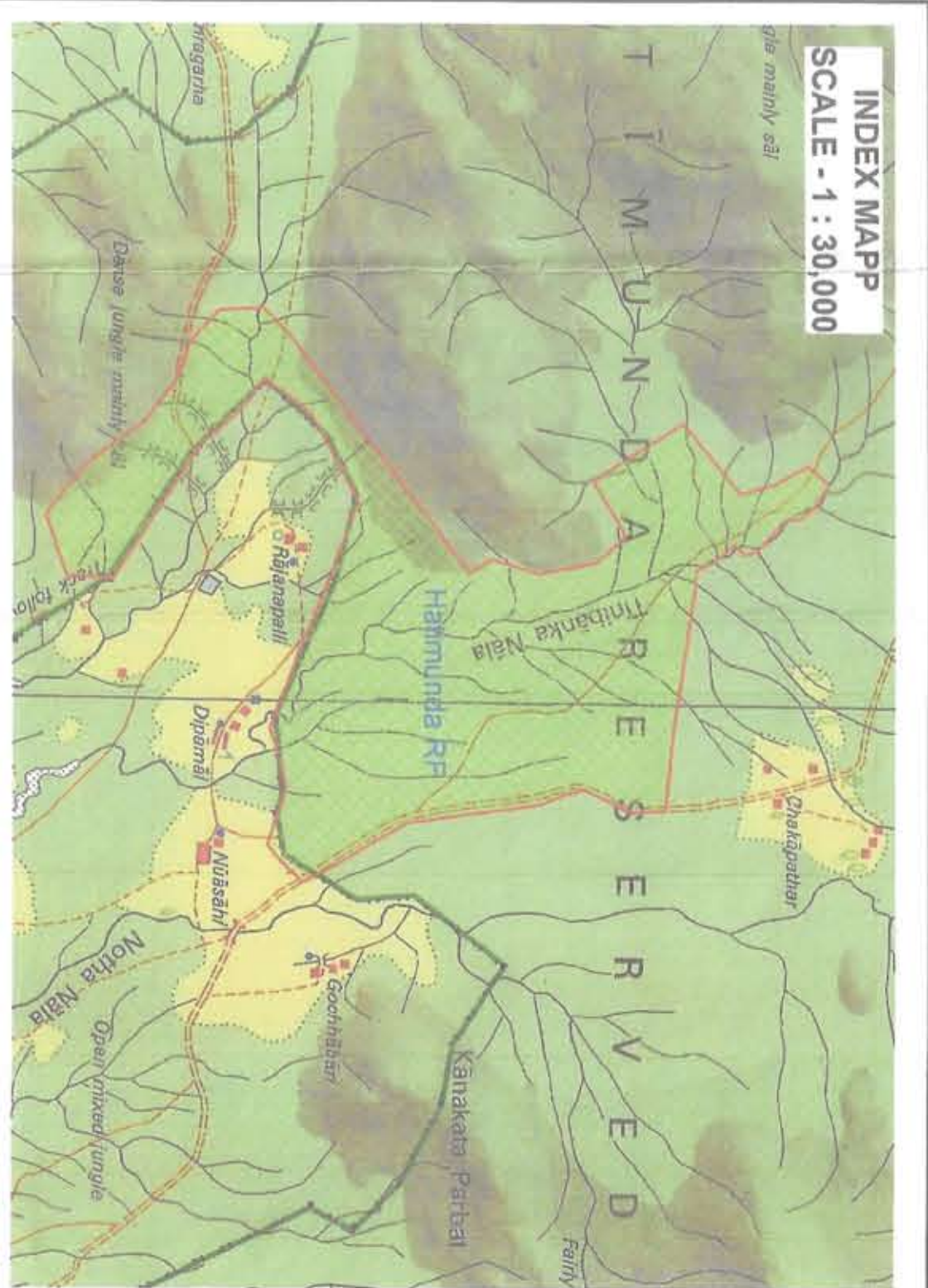


85° 4' 30" E

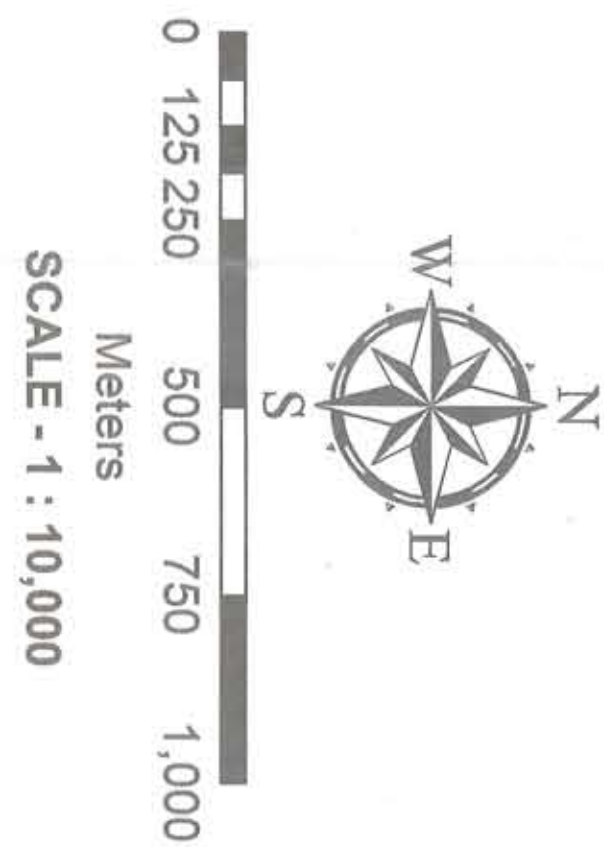


SL No.	Point Id	CA Pillar Co-ordinate Surveyed by DGPS	Eastings	Northing
1	N-01	20° 13' 17.69318° N	85° 02' 28.2156° E	2953534.475
2	N-03	20° 13' 23.67921° N	85° 02' 28.2156° E	2953534.475
3	N-05	20° 13' 23.67921° N	85° 01' 44.16120° E	2946942.484
4	N-05A	20° 13' 21.61961° N	85° 01' 40.33885° E	2939665.404
5	N-06	20° 13' 13.969078° N	85° 01' 34.36643° E	2937168.505
6	N-6A	20° 13' 13.969078° N	85° 01' 39.33729° E	2939982.401
7	N-6B	20° 13' 07.05624° N	85° 01' 42.82975° E	294032.532
8	N-06C	20° 13' 04.08526° N	85° 01' 45.91046° E	2940094.667
9	N-07	20° 13' 02.80147° N	85° 01' 46.93005° E	2941500.027
10	N-07A	20° 13' 01.23335° N	85° 01' 47.98844° E	294322.413
11	N-07B	20° 12' 56.66117° N	85° 01' 57.46584° E	2944539.620
12	N-08	20° 12' 46.98957° N	85° 02' 09.4678° E	294799.428
13	N-12	20° 12' 54.13364° N	85° 01' 42.28648° E	294012.129
14	N-12	20° 14.01.17984° N	85° 02' 06.59016° E	294012.129
15	N-22	20° 14' 08.62188° N	85° 02' 05.8032° E	294715.437
16	N-24	20° 14' 07.96848° N	85° 01' 51.22584° E	294298.424
17	N-25	20° 14' 19.96466° N	85° 01' 47.33005° E	294187.550
18	N-26	20° 14.18.46513° N	85° 01' 47.47954° E	294094.946
19	N-28	20° 14' 21.66590° N	85° 01' 47.51277° E	294197.966
20	N-29	20° 14' 32.16286° N	85° 01' 53.28367° E	294665.510
21	N-30	20° 14' 37.81162° N	85° 01' 51.52745° E	294318.077
22	N-31	20° 14' 43.28200° N	85° 01' 48.31171° E	294223.950
23	N-32	20° 14' 46.70849° N	85° 01' 51.48199° E	294320.143
24	N-35	20° 14' 36.66848° N	85° 01' 57.63921° E	294469.728
25	N-37	20° 14' 33.90398° N	85° 02' 05.99321° E	294672.121
26	N-40	20° 14' 25.25147° N	85° 02' 06.49370° E	294748.019
27	N-41	20° 14' 23.53573° N	85° 02' 48.30835° E	295134.725
28	N-43	20° 14' 20.50157° N	85° 02' 48.98981° E	2950660.010
29	N-44	20° 14' 15.03836° N	85° 02' 45.02202° E	2950727.920
30	N-45	20° 14' 07.16672° N	85° 02' 45.01030° E	2950589.445
31	N-46	20° 14' 05.64040° N	85° 02' 46.12782° E	2950950.582
32	N-47	20° 14' 02.12373° N	85° 02' 47.70225° E	2950935.007
33	N-48	20° 13' 49.91031° N	85° 02' 50.28128° E	2950603.989
34	N-50	20° 13' 33.35452° N	85° 02' 54.18445° E	296113.465
35	N-53	20° 13' 11.59679° N	85° 02' 58.11255° E	2962621.786
36	N-54	20° 13' 15.26721° N	85° 02' 55.25678° E	2961638.041
37	N-55	20° 13' 16.62680° N	85° 02' 38.46168° E	2955050.789
38	N-56	20° 13' 16.62265° N	85° 02' 38.46168° E	2955050.990
39	N-57	20° 13' 15.44373° N	85° 02' 35.20166° E	2955555.922



CA Pillar Co-ordinate Surveyed by ETS				
Sl No	Point Id	Latitude	Longitude	Easting
1	N-02	20°13'20.02800"	85°02'21.87600"	295171.072
2	N-04	20°13'29.60400"	85°01'55.48800"	294408.171
3	N-05B	20°13'18.51600"	85°01'37.77600"	293890.511
4	N-09	20°12'11.79600"	85°02'09.09600"	294785.971
5	N-10	20°12'28.30400"	85°01'58.62000"	294480.371
6	N-11	20°12'44.17200"	85°01'50.19600"	294238.271
7	N-13	20°12'59.36400"	85°01'35.40000"	293813.632
8	N-14	20°13'10.74000"	85°01'28.33600"	293607.245
9	N-15	20°13'06.31200"	85°01'12.58400"	293444.531
10	N-16	20°13'13.65600"	85°01'12.08000"	293423.631
11	N-17	20°13'17.88400"	85°01'26.54400"	293563.619
12	N-17A	20°13'27.80200"	85°01'40.22400"	293964.417
13	N-17B	20°13'39.00000"	85°01'55.56000"	294413.955
14	N-18	20°13'47.89200"	85°02'07.76000"	294770.777
15	N-19	20°13'51.38400"	85°02'05.12400"	294697.452
16	N-20	20°13'59.44800"	85°02'07.65600"	294771.555
17	N-23	20°14'13.41600"	85°02'00.81600"	294579.246
18	N-27	20°14'42.70400"	85°01'44.19600"	294015.585
19	N-33	20°14'44.01600"	85°01'55.63200"	294439.587
20	N-34	20°14'42.10800"	85°01'57.46800"	294492.401
21	N-36	20°14'34.98000"	85°02'03.28000"	294657.135
22	N-38	20°14'31.30800"	85°02'02.04000"	294650.473
23	N-39	20°14'27.88800"	85°02'05.20800"	294711.781
24	N-42	20°14'21.45200"	85°02'35.14000"	295577.194
25	N-49	20°13'38.46000"	85°02'51.14400"	296027.477
26	N-51	20°13'27.44400"	85°02'48.09200"	296224.514
27	N-52	20°13'21.21600"	85°03'01.72800"	296328.076

Sl. No.	PILLAR No.	Co-ordinates		Distance Between	Distance in Meter	Fore Bearing			Back Bearing				
		X (Easting)	Y (Northing)			Deg.	d	m	Deg.	d	m	s	
1	N-01	229534.947	2237217.459	N-01-N-02	0.000	290.306	280	18	52.558	110.866	11	22.588	
2	N-02	229471.072	2237281.320	N-02-N-03	198.557	292.648	292	18	22.588	110.866	11	52.539	
3	N-03	229472.442	2237381.645	N-03-N-04	245.292	291.220	291	13	18.676	111.420	11	13.486	
4	N-04	229408.174	2237358.605	N-04-N-05	376.155	316.389	61	23	18.972	241.389	24	18.872	
5	N-05	229407.444	2237368.695	N-05-N-06	376.155	316.389	61	23	18.972	241.389	24	18.872	
6	N-06	229365.407	2237348.554	N-06-N-07	127.127	61.771	61	46	14.851	241.741	24	14.851	
7	N-07	229365.407	2237348.554	N-07-N-08	127.127	61.771	61	46	14.851	241.741	24	14.851	
8	N-08	229365.407	2237348.554	N-08-N-09	127.127	61.771	61	46	14.851	241.741	24	14.851	
9	N-09	229365.407	2237348.554	N-09-N-10	127.127	61.771	61	46	14.851	241.741	24	14.851	
10	N-10	229365.407	2237348.554	N-10-N-11	127.127	61.771	61	46	14.851	241.741	24	14.851	
11	N-11	229365.407	2237348.554	N-11-N-12	127.127	61.771	61	46	14.851	241.741	24	14.851	
12	N-12	229365.407	2237348.554	N-12-N-13	127.127	61.771	61	46	14.851	241.741	24	14.851	
13	N-13	229365.407	2237348.554	N-13-N-14	127.127	61.771	61	46	14.851	241.741	24	14.851	
14	N-14	229365.407	2237348.554	N-14-N-15	127.127	61.771	61	46	14.851	241.741	24	14.851	
15	N-15	229365.407	2237348.554	N-15-N-16	127.127	61.771	61	46	14.851	241.741	24	14.851	
16	N-16	229365.407	2237348.554	N-16-N-17	127.127	61.771	61	46	14.851	241.741	24	14.851	
17	N-17	229365.407	2237348.554	N-17-N-18	127.127	61.771	61	46	14.851	241.741	24	14.851	
18	N-18	229365.407	2237348.554	N-18-N-19	127.127	61.771	61	46	14.851	241.741	24	14.851	
19	N-19	229365.407	2237348.554	N-19-N-20	127.127	61.771	61	46	14.851	241.741	24	14.851	
20	N-20	229365.407	2237348.554	N-20-N-21	127.127	61.771	61	46	14.851	241.741	24	14.851	
21	N-21	229365.407	2237348.554	N-21-N-22	127.127	61.771	61	46	14.851	241.741	24	14.851	
22	N-22	229365.407	2237348.554	N-22-N-23	127.127	61.771	61	46	14.851	241.741	24	14.851	
23	N-23	229365.407	2237348.554	N-23-N-24	127.127	61.771	61	46	14.851	241.741	24	14.851	
24	N-24	229365.407	2237348.554	N-24-N-25	127.127	61.771	61	46	14.851	241.741	24	14.851	
25	N-25	229365.407	2237348.554	N-25-N-26	127.127	61.771	61	46	14.851	241.741	24	14.851	
26	N-26	229365.407	2237348.554	N-26-N-27	127.127	61.771	61	46	14.851	241.741	24	14.851	
27	N-27	229365.407	2237348.554	N-27-N-28	127.127	61.771	61	46	14.851	241.741	24	14.851	
28	N-28	229365.407	2237348.554	N-28-N-29	127.127	61.771	61	46	14.851	241.741	24	14.851	
29	N-29	229365.407	2237348.554	N-29-N-30	127.127	61.771	61	46	14.851	241.741	24	14.851	
30	N-30	229423.970	2239587.869	N-30-N-31	190.611	334.671	344	49	0.685	164.817	164	49	0.685
31	N-31	229423.970	2239587.869	N-31-N-32	190.611	334.671	344	49	0.685	164.817	164	49	0.685
32	N-32	229430.567	2239961.965	N-32-N-33	146.312	305.292	302	14	22.248	122.248	122	14	22.248
33	N-33	229430.567	2239961.965	N-33-N-34	146.312	305.292	302	14	22.248	122.248	122	14	22.248
34	N-34	229430.567	2239961.965	N-34-N-35	146.312	305.292	302	14	22.248	122.248	122	14	22.248
35	N-35	229430.567	2239961.965	N-35-N-36	146.312	305.292	302	14	22.248	122.248	122	14	22.248
36	N-36	229430.567	2239961.965	N-36-N-37	146.312	305.292	302	14	22.248	122.248	122	14	22.248
37	N-37	229430.567	2239961.965	N-37-N-38	146.312	305.292	302	14	22.248	122.248	122	14	22.248
38	N-38	229430.567	2239961.965	N-38-N-39	146.312	305.292	302	14	22.248	122.248	122	14	22.248
39	N-39	229430.567	2239961.965	N-39-N-40	146.312	305.292	302	14	22.248	122.248	122	14	22.248
40	N-40	229430.567	2239961.965	N-40-N-41	146.312	305.292	302	14	22.248	122.248	122	14	22.248
41	N-41	229430.567	2239961.965	N-41-N-42	146.312	305.292	302	14	22.248	122.248	122	14	22.248
42	N-42	229430.567	2239961.965	N-42-N-43	146.312	305.292	302	14	22.248	122.248	122	14	22.248
43	N-43	229430.567	2239961.965	N-43-N-44	146.312	305.292	302	14	22.248	122.248	122	14	22.248
44	N-44	229430.567	2239961.965	N-44-N-45	146.312	305.292	302	14	22.248	122.248	122	14	22.248
45	N-45	229430.567	2239961.965	N-45-N-46	146.312	305.292	302	14	22.248	122.248	122	14	22.248
46	N-46	229430.567	2239961.965	N-46-N-47	146.312	305.292	302	14	22.248	122.248	122	14	22.248
47	N-47	229430.567	2239961.965	N-47-N-48	146.312	305.292	302	14	22.248	122.248	122	14	22.248
48	N-48	229430.567	2239961.965	N-48-N-49	146.312	305.292	302	14	22.248	122.248	122	14	22.248
49	N-49	229430.567	2239961.965	N-49-N-50	146.312	305.292	302	14	22.248	122.248	122	14	22.248
50	N-50	229430.567	2239961.965	N-50-N-51	146.312	305.292	302	14	22.248	122.248	122	14	22.248
51	N-51	229430.567	2239961.965	N-51-N-52	146.312	305.292	302	14	22.248	122.248	122	14	22.248
52	N-52	229430.567	2239961.965	N-52-N-53	146.312	305.292	302	14	22.248	122.248	122	14	22.248
53	N-53	229430.567	2239961.965	N-53-N-54	146.312	305.292	302	14	22.248	122.248	122	14	22.248
54	N-54	229430.567	2239961.965	N-54-N-55	146.312	305.292	302	14	22.248	122.248	122	14	22.248
55	N-55	229430.567	2239961.965	N-55-N-56	146.312	305.292	302	14	22.248	122.248	122	14	22.248
56	N-56	229430.567	2239961.965	N-56-N-57	146.312	305.292	302	14	22.248	122.248	122	14	22.248
57	N-57	229430.567	2239961.965	N-57-N-58	146.312	305.292	302	14	22.248	122.248	122	14	22.248
58	N-58	229430.567	2239961.965	N-58-N-59	146.312	305.292	302	14	22.248	122.248	122	14	22.248
59	N-59	229430.567	2239961.965	N-59-N-60	146.312	305.292	302	14	22.248	122.248	122	14	22.248
60	N-60	229430.567	2239961.965	N-60-N-61	146.312	305.292	302	14	22.248	122.248	122	14	22.248
61	N-61	229430.567	2239961.965	N-61-N-62	146.312	305.292	302	14	22.248	122.248	122	14	22.248
62	N-62	229430.567	2239961.965	N-62-N-63	146.312	305.292	302	14	22.248	122.248	122	14	22.248
63	N-63	229430.567	2239961.965	N-63-N-64	146.312	305.292	302	14	22.248	122.248	122	14	22.248
64	N-64	229430.567	2239961.965	N-64-N-65	146.312	305.292	302	14	22.248	122.248	122	14	22.248
65	N-65	229430.567	2239961.965	N-65-N-66	146.312	305.292	302	14	22.248	122.248	122	14	22.248
66	N-66	229430.567	2239961.965	N-66-N-67	146.312	305.292	302	14	22.248	122.248	122	14	22.248
67	N-67	229430.567	2239961.965	N-67-N-68	146.312	305.292	302	14	22.248	122.248	122	14	22.248
Total		229534.947 2237217.459		N-57-N-01	146.312	305.292	302	14	22.248	122.248	122	14	22.248
14810.202		229534.947 2237217.459		N-57-N-01	146.312	305.292	302	14	22.248	122.248	122	14	22.248



SL No	Point Id	CA Pillar Co-ordinate Surveyed by DGPS	Eastings	Northing
1	N-01	20° 13' 17.69318° N	85° 02' 28.23156° E	2953534.475
2	N-03	20° 13' 23.67521° N	85° 02' 28.23156° E	2953717.459
3	N-05	20° 13' 23.07925° N	85° 01' 44.16120° E	2949692.484
4	N-05A	20° 13' 21.61961° N	85° 01' 44.16120° E	2946077.414
5	N-06	20° 13' 13.96978° N	85° 01' 34.33634° E	2939665.404
6	N-6A	20° 13' 13.05670° N	85° 01' 39.33729° E	2939788.501
7	N-6B	20° 13' 07.05624° N	85° 01' 42.82975° E	294032.532
8	N-06C	20° 13' 04.08526° N	85° 01' 45.91046° E	2940094.667
9	N-07	20° 13' 02.80147° N	85° 01' 46.93005° E	2941500.027
10	N-07A	20° 13' 01.23335° N	85° 01' 47.98844° E	2943232.413
11	N-07B	20° 12' 56.66117° N	85° 01' 57.46584° E	2944535.620
12	N-08	20° 12' 46.98957° N	85° 02' 09.46758° E	294799.628
13	N-12	20° 12' 54.13364° N	85° 01' 42.28648° E	294012.129
14	N-12	20° 14.017984° N	85° 02' 06.59016° E	294012.129
15	N-22	20° 14' 08.62188° N	85° 02' 05.8032° E	294715.437
16	N-24	20° 14' 07.96838° N	85° 01' 51.22584° E	294298.424
17	N-25	20° 14' 19.6646° N	85° 01' 47.33005° E	294187.550
18	N-26	20° 14.46513° N	85° 01' 47.02954° E	294094.946
19	N-28	20° 14' 21.6659° N	85° 01' 47.51277° E	294197.966
20	N-29	20° 14' 32.1628° N	85° 01' 53.2836° E	294665.510
21	N-30	20° 14' 37.81162° N	85° 01' 51.52745° E	294318.077
22	N-31	20° 14' 43.28200° N	85° 01' 48.31171° E	294223.950
23	N-32	20° 14' 46.70849° N	85° 01' 51.48199° E	294320.143
24	N-35	20° 14' 36.66848° N	85° 01' 57.63921° E	294696.728
25	N-37	20° 14' 33.90398° N	85° 02' 03.69321° E	294674.121
26	N-40	20° 14' 25.25147° N	85° 02' 06.49370° E	294748.019
27	N-41	20° 14' 23.5357° N	85° 02' 48.30835° E	295134.725
28	N-43	20° 14' 20.50157° N	85° 02' 48.98981° E	2950660.010
29	N-44	20° 14' 15.0836° N	85° 02' 45.02202° E	2950772.920
30	N-45	20° 14' 07.16672° N	85° 02' 45.01030° E	2950593.445
31	N-46	20° 14' 05.64040° N	85° 02' 46.12782° E	2950950.582
32	N-47	20° 14' 02.12373° N	85° 02' 47.70225° E	2950933.007
33	N-48	20° 13' 49.91031° N	85° 02' 50.28128° E	2950603.989
34	N-50	20° 13' 33.35452° N	85° 02' 54.18445° E	296113.465
35	N-53	20° 13' 15.79679° N	85° 02' 58.11255° E	2962621.786
36	N-54	20° 13' 11.26291° N	85° 02' 55.25678° E	2961638.041
37	N-55	20° 13' 16.62680° N	85° 02' 38.46168° E	2955050.789
38	N-56	20° 13' 16.62265° N	85° 02' 38.46168° E	2955050.990
39	N-57	20° 13' 15.44373° N	85° 02' 35.20166° E	2955555.922



User Agency :

भारतीय रेलवे
INDIAN RAILWAYS

भारत सरकार
Govt. of India

पूर्व तट रेलवे

निर्माण संगठन, भुवनेश्वर
EAST COAST RAILWAY
CONSTRUCTION ORGANISATION

Rail Vikas, Annex Building, Chandrareshtapurur
Bhubaneswar - 751 023, ODISHA


E.C.R.
Uttarakhand
Railways

ISO 9001:2008 Certified Organisation

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AN ISO 9001 : 2008 Certified Organisation

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