

**LiDAR / DGPS Survey report for Forest Diversion of
proposed OFC Cable routes in Raigarh Forest Division with
Route Length 234.660 Km.**

APPLICATION SUBMITTED BY:

Jio Digital Fibre Private Ltd.



LIDAR / DGPS SURVEY AND GIS MAPPING DONE BY:

**Genesys International Corporation Limited
Mumbai, Maharashtra**



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1 Introduction and Background

1.1 Background

This is with reference to the Order of Hon'ble National Company Law Tribunal (NCLT) Ahmedabad Bench dated; 20th March 2019 in CP (CAA) No. 13/NCLT/AHM/2019 IN, CP (CAA) No.10/NCLT/AHM/2019. As per the Order, with effect from the close of business hours of 31st March 2019 (Effective Date), M/s Reliance Jio demerged the Optic Fibre Undertaking to "Jio Digital Fibre Private Limited".

Jio Digital Fibre Private Limited is registered with Department of Telecommunication (DOT) is as infrastructure Provider Category-I (IP-I) vide Registration Certificate No. 935/2019 dated; 06th March 2019, having its Registered Office: Office No. 101, Saffron, Nr. Centre Point, Panchwati 5 Rasta, Ambawadi, Ahmedabad-380006 Gujarat, India to establish and maintain the assets such as Dark Fibres, Right of Way, Duct space and Tower.

We are planning to lay Optical Fibre Cable (OFC) through duct, adopting methodologies like HDD, Open Trench, Micro Trench, Clamping and other methods conducive on ground. The above chain age falls under your jurisdiction, as such we seek your cooperation to construct a fibre optic backbone link. Rest assured that the work will be carried out as per standards, guidelines and policies of the authority for laying the OFC, we are also earmarking on SLD-the provisioning of road bridges likely and would appreciate specific instructions wherever applicable.

In order to provide world class 4G telecom services to the remotest part of the Chhattisgarh State, Reliance Jio Digital Fiber Pvt. Ltd is investing in the telecom infrastructure. This includes installation of mobile towers and laying Optical Fibre Cables (OFC). These OFCs are being laid to fulfill dream of our Chairman to provide affordable broadband connectivity to the last user at the bottom of social pyramid. Primary objective is to ensure the mobile connectivity is extended to 95% of population and 90% of geography in the state before year 2022.

This Optical Fibre Cable system will fulfill the needs of Telecommunication circuits and Wireless Broadband Services and Other Data for the Government, Industries, Defense and Society. This telecom Infrastructure shall lead to growth in economy and hence more employment and better living conditions of the geography/state/country.

This scheme of laying OFC is most modern and state of art Technology in the field of Digital Telecommunication. Moreover, the same cable will provide most of new value-added services as well as it will cater for the needs of integrated services digital network.

1.2 Proposed Routes

Following image (Fig-1) shows the proposed routes in Raigarh Division

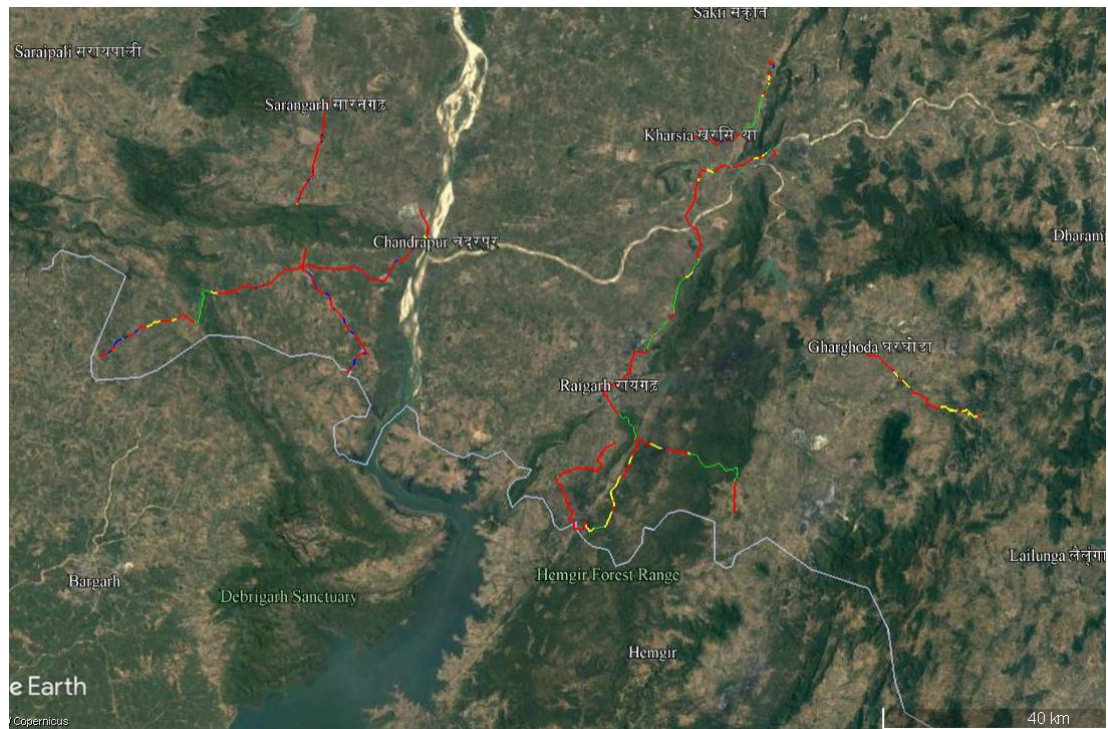


Fig-1: OFC Cable Proposed Routes on Online Map in Raigarh Division.

1.3 Work Location

The proposed OFC Cable route in Raigarh Forest Division (Tehsils covered along the route are: Gharghoda, Tamnar, Kharsiya, Baramkela, Saranggarh and Raigarh. The OFC length is approx. 234.660 km. The survey site passes through forest ranges – Gharghoda, Tamnar, Kharsiya, Raigarh and Saranggarh. The OFC Cable route is covered under Survey of India Toposheets 64 J 15, 64 J 16, 64 K 13, 64 K 15, 64 O 1, 64 O 2, 64 O 3, 64 O 5, 64 O 6, 64 O 7, 64 O 9, 64 O 19, 64 N 3, 64 N 4, 64 N 7, 64 N 8, 64 N 11, 64 N 12, 64 N 15 and 64 N 16 on RF 1:50000.

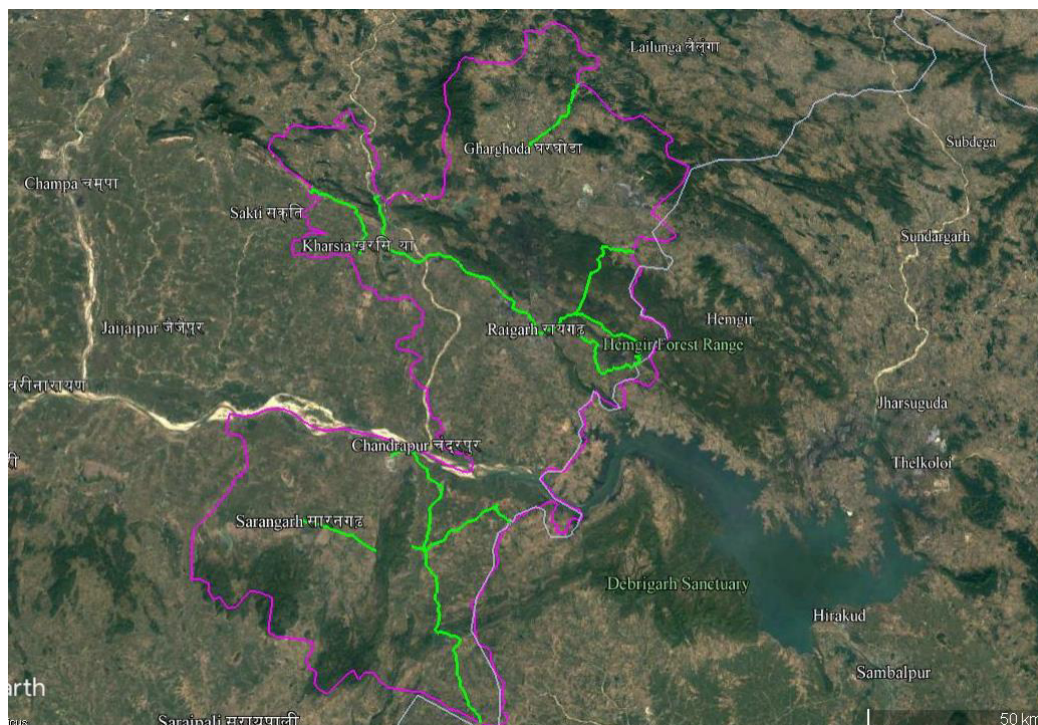


Fig-2: OFC Cable Proposed Routes on Satellite Imagery in Raigarh Division.

1.4 Objective

As per directives of Ministry of Environment & Forests (MoEF) dated 8th July 2011; all applications for Forest Diversion, under Forest Conservation Act, 1980 must be accompanied with Geo-referenced shape file, showing the boundary of the proposed area (both soft copy and hard copy maps), prepared using Differential GPS (DGPS) and the same should be uploaded to MoEF website along with the online application.

2 Scope of Work

1. Establishment of one base station with 72 Hours observation and secondary control points at every 10km along the proposed route.
2. DGPS Survey for collection of ground coordinates along the OFC Cable trench at every 50m interval and/or at every turn/bend along the proposed trench. The DGPS data is collected at forest patches only.
3. Data processing and Interpretation
 - a. Geo-referencing of SOI Toposheet (1:50000), Forest Stock map (1:15000, if available) and satellite imagery
 - b. Creation of OFC Cable trench boundary vector map using the DGPS Surveyed data
 - c. Superimposition of cable route layer on Geo-referenced forest maps, SOI Toposheet and Satellite imagery.
 - d. Computation of Forest area proposed for diversion. It includes Reserved/Protected Forest & Revenue Forest.
 - e. Preparation of Geo-referenced forest map at 1:15000 scale, and SOI Toposheet at 1:50000 scale.
 - f. Preparation of DGPS survey report along with soft copy of maps in shapefile format and kml file
4. Printing of report and Geo-referenced maps and Technical compliance.

3 Deliverables

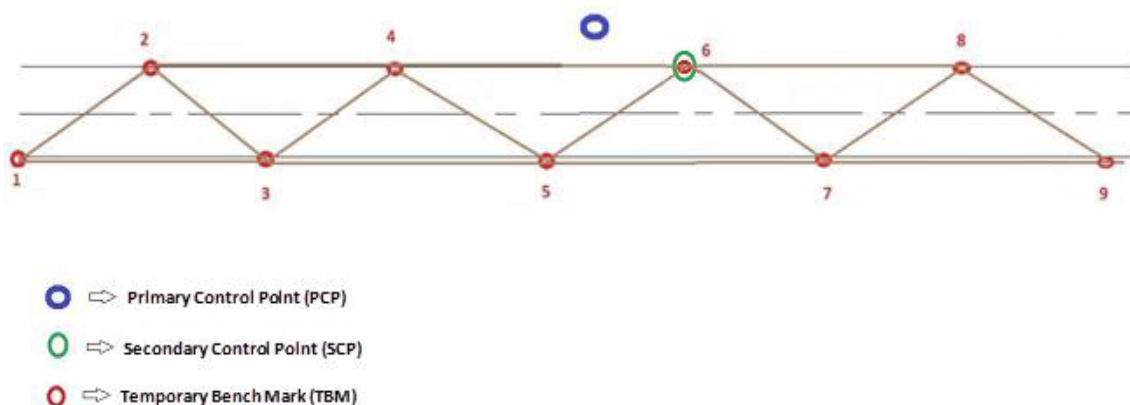
The deliverables envisaged for the assignment are described below

1. Post processed DGPS observations data as well as raw data in RINEX format.
2. DGPS Reports - Base line & network adjustment report for the primary and Secondary Control Points.
3. Geo-referenced SOI maps & forest block maps based on DGPS observations – Hard and Soft Copy (SHP and KML formats).
4. Proposed Forest Diversion area statement as per DGPS Survey
5. DGPS Survey and mapping report

4 Technical Approach (Brief Description)

4.1 GCP Establishment for LiDAR (DGPS) Survey:

Example of defined Triangular Network GCP method.



Primary Control Point: 72 Hours of DGPS observation for Post Processing the PCP data with IGS stations.

Secondary Control Point: 2 - 4 Hours of DGPS observation for Post Processing the SCP data with PCP Data.

Temporary Bench Mark: 1 Hour of DGPS observation for improving the spatial accuracy of the LiDAR point cloud data.

4.2 Mobile LiDAR (DGPS) data collection:

DGPS based Mobile LiDAR data was collected along with 360 degree panoramic view of the OFC route corridor (25 meter on each side along the center of the road).



Mobile LiDAR Van

4.3 DRS / GIS Map Creation Using LiDAR data:

All the features along the route are captured using LiDAR data and Panoramic Imagery to create the DRS / GIS Map.



Feature Extraction on LiDAR



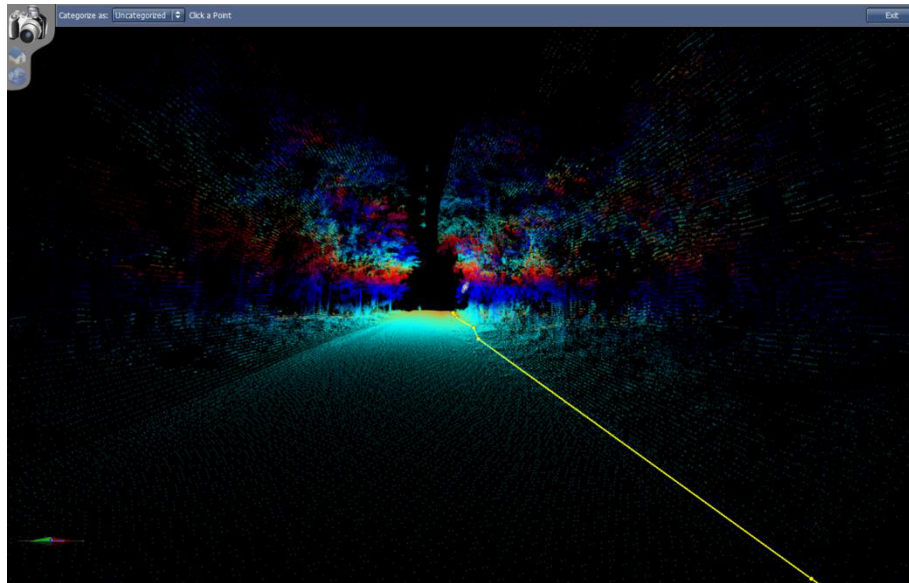
Final DRS / GIS Map

4.4 Demarcation of Proposed OFC on LiDAR data:

Proposed OFC line is demarcated based on the feasibility of trenching to be done on ground by referring the LiDAR data with the Panoramic imagery.



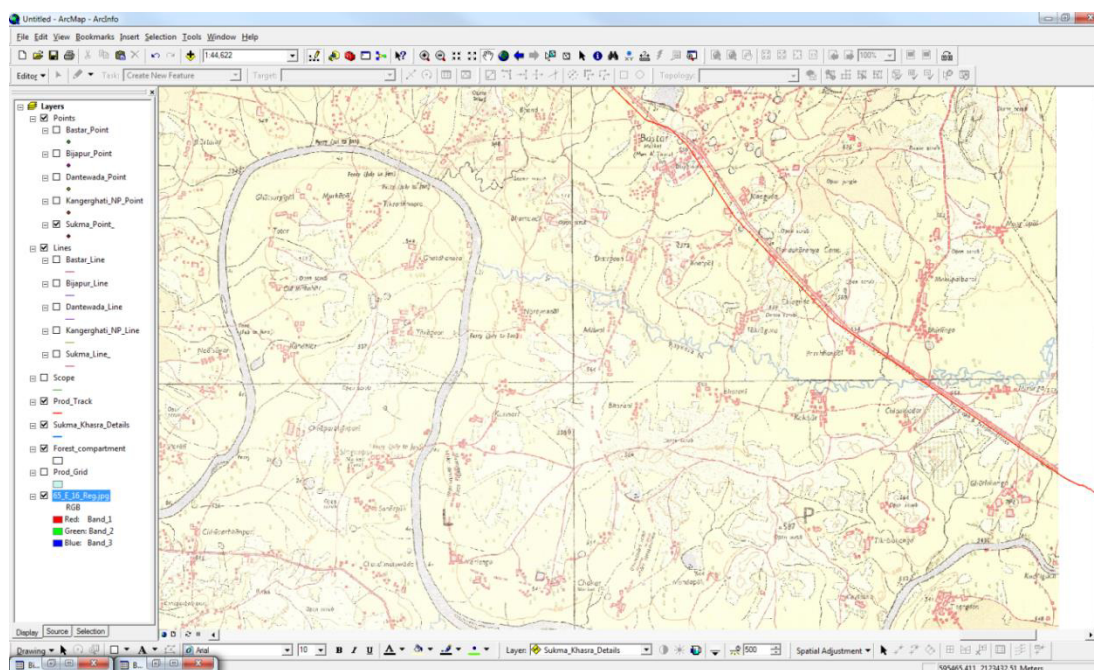
Proposed OFC Line on LiDAR Data (with Panoramic Imagery)



Proposed OFC Line on LiDAR Data only

4.5 Geo-referencing of Maps:

Geo-referencing of Revenue Village Maps, SOI Toposheets and Forest Maps are to be done. SOI Toposheets and Forest Maps would be geo-referenced based on the coordinates provided on the maps whereas Revenue Village Maps would be geo-referenced with the help of GCPs collected (at least 5 GCPs for a village having Government Forest Land are to be collected)

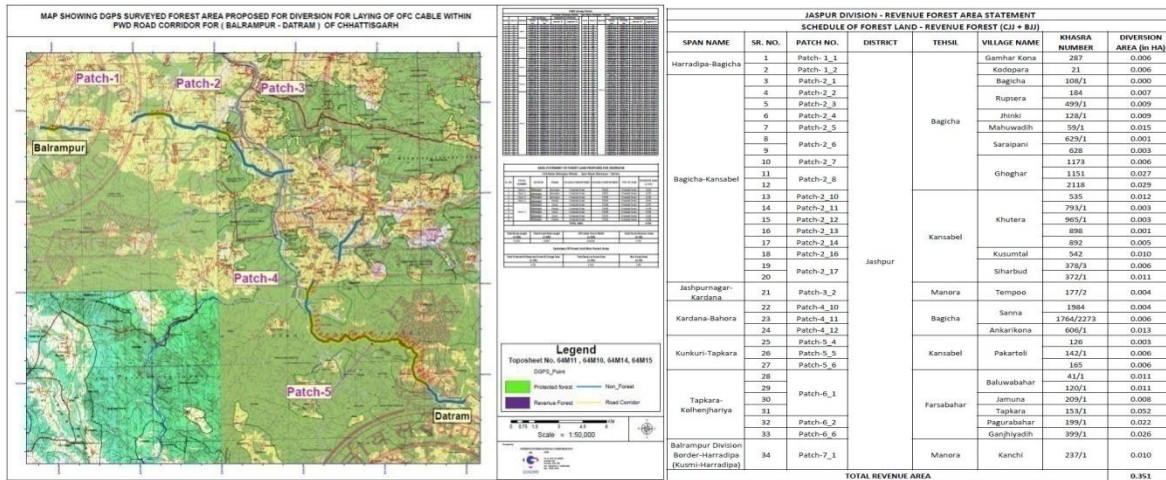


4.6 Creation of Vector Data for Forest Diversion:

Different Layers such as Polygon of Reserved/Protected Forest Patch, Centerline of Forest Trench, Non-Forest Trench line, Polygons showing Revenue Forest patches etc. are to be created using the Geo-referenced maps and the provided information by the forest department.

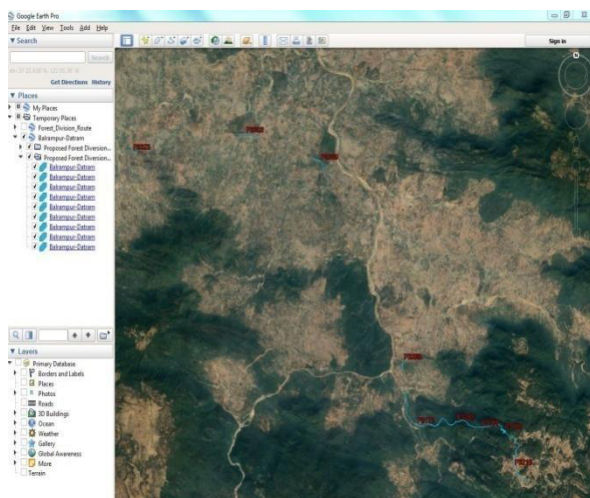
4.7 Generation of Map and Survey Reports for Forest Diversion:

A map is created by overlaying the created vector data for the forest patches on the Geo-referenced SOI Toposheets / Forest Maps. The reports are generated for DGPS Points (with Lat/long) placed at the regular intervals of 150m on the proposed OFC route in the forest area. Another report is generated having area calculation for the proposed trench area in different type of Forest Lands. Samples of these are as below.



Geo-referenced Map

Forest Area Statement 1



KML File

DGPS Survey Points						
Jaspur Division						
Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting (m)	Northing (m)	Latitude "N"	Longitude "E"
1	P1	Patch-1_1	784783.839	2563180.832	23° 9' 10.952" N	83° 46' 52.558" E
2	P2		784722.029	2563192.387	23° 9' 11.365" N	83° 46' 50.394" E
3	P3		784660.394	2563204.822	23° 9' 11.808" N	83° 46' 48.238" E
4	P4	Patch-1_2	782507.989	2563583.485	23° 9' 25.437" N	83° 45' 32.882" E
5	P5		782478.669	2563629.794	23° 9' 26.959" N	83° 45' 31.883" E
6	P6		782491.242	2563685.341	23° 9' 28.756" N	83° 45' 32.362" E
7	P7	Patch-1_3	782630.138	2564413.352	23° 9' 52.317" N	83° 45' 37.726" E
8	P8		782557.468	2564333.241	23° 9' 49.760" N	83° 45' 35.120" E
9	P9		782535.966	2564208.425	23° 9' 45.719" N	83° 45' 34.281" E
10	P10	Patch-1_4	781883.634	2562868.611	23° 9' 2.600" N	83° 45' 10.475" E
11	P11		781890.026	2562718.86	23° 8' 57.732" N	83° 45' 10.600" E
12	P12		781837.512	2562582.486	23° 8' 53.335" N	83° 45' 8.665" E
13	P13		781763.554	2562452.425	23° 8' 49.156" N	83° 45' 5.981" E
14	P14	Patch-1_5	781727.130	2562313.878	23° 8' 44.678" N	83° 45' 4.610" E
15	P15		781188.989	2558613.043	23° 6' 44.796" N	83° 44' 43.259" E
16	P16		781104.435	2558489.422	23° 6' 40.832" N	83° 44' 40.208" E
17	P17		781017.132	2558371.435	23° 6' 37.053" N	83° 44' 37.064" E
18	P18		780907.049	2558354.302	23° 6' 36.563" N	83° 44' 33.187" E
19	P19		780797.983	2558329.207	23° 6' 35.815" N	83° 44' 29.340" E
20	P20	Patch-1_6	778219.961	2556965.349	23° 5' 53.079" N	83° 42' 57.917" E
21	P21		778162.061	2556872.654	23° 5' 50.103" N	83° 42' 55.823" E
22	P22		778162.947	2556730.58	23° 5' 45.487" N	83° 42' 55.761" E
23	P23		778039.634	2556651.849	23° 5' 43.004" N	83° 42' 51.380" E
24	P24		777949.518	2556753.241	23° 5' 46.352" N	83° 42' 48.282" E
25	P25		777923.998	2556891.309	23° 5' 50.853" N	83° 42' 47.476" E
26	P26		777939.120	2557033.764	23° 5' 55.471" N	83° 42' 48.100" E
27	P27		777908.466	2557162.044	23° 5' 59.656" N	83° 42' 47.107" E
28	P28		777841.380	2557160.129	23° 5' 59.635" N	83° 42' 44.750" E
29	P29		777752.756	2557039.44	23° 5' 55.768" N	83° 42' 41.560" E
30	P30	Patch-1_7	777619.912	2557049.039	23° 5' 56.160" N	83° 42' 36.901" E
31	P31		777500.348	2557064.94	23° 5' 56.748" N	83° 42' 32.713" E
32	P32		777395.609	2556958.254	23° 5' 53.346" N	83° 42' 28.966" E
33	P33		777274.137	2556870.293	23° 5' 50.562" N	83° 42' 24.643" E
34	P34		777137.431	2556856.404	23° 5' 50.193" N	83° 42' 19.834" E
35	P35		776999.421	2556840.498	23° 5' 49.760" N	83° 42' 14.977" E
36	P36		776850.026	2556844.931	23° 5' 49.993" N	83° 42' 9.734" E
37	P37		776703.962	2556864.579	23° 5' 50.720" N	83° 42' 4.618" E
38	P38		776534.722	2556748.684	23° 5' 47.057" N	83° 41' 58.600" E
39	P39					
40	P40	Patch-1_7	774503.119	2556428.672	23° 5' 37.877" N	83° 40' 47.055" E
41	P41		774407.058	2556398.070	23° 5' 36.941" N	83° 40' 43.662" E
42	P42		774283.498	2556372.210	23° 5' 36.174" N	83° 40' 39.307" E

DGPS Survey Point Details

5 DGPS Survey Results

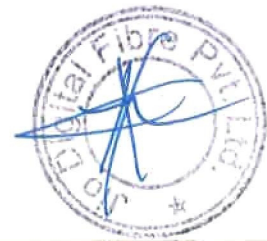
The total route length is approx. 234.660 km and the proposed forest area for diversion is 3.776 Ha. Forest Area Statement Report is in Annexure-1, and DGPS coordinates and forest patch boundary coordinates is in Annexure-2. The geo-referenced maps are in Annexure -3, and DGPS Maps of the Proposed Route (Annexure-4)

5.1 Forest Area Statement (Annexure-1):

SCHEDULE OF FOREST LAND - RESERVE & PROTECTED FOREST

RAIGARH DIVISION - FOREST AREA STATEMENT

SPAN NAME	SR. NO.	PATCH NUMBER	DIVISION	RANGE	VILLAGE NAME	COMPARTMENT	TYPE OF LAND	DIVERSION AREA (in HA)	LENGTH (KM)			
Gharghoda-Lailunga	1	Patch-1_1	Raigarh	Ghargoda	Chimtapani	P1321	Protected Forest	0.119	2.380			
	2					1320	Reserved Forest	0.015	0.300			
	3	Patch-1_3				P1337	Protected Forest	0.119	2.380			
	4	Patch-1_5		Muskura	P864	0.058		1.160				
	5	Patch-1_6		Auraimuda	863P	0.042		0.840				
Kharsia-Kosmanda	6	Patch-2_1		Kharsiya		Bargarh	1143	Reserved Forest	0.024	0.480		
	7	Patch-2_2 & Patch-2_3					1160P	Protected Forest	0.056	1.120		
	8	Patch-2_3 & Patch-2_4					1147	Reserved Forest	0.120	2.400		
	9	Patch-2_4					Botalda		1152	0.089	1.780	
	10						Chhote Deogaon		1148	0.115	2.300	
Hati-Raigarh	11	Patch-3_1 & Patch-3_2			Raigarh		Dehjari	P1155	Protected Forest	0.061	1.220	
	12	Patch-3_1						1150	Reserved Forest	0.031	0.620	
	13	Patch-3_3				Bhalunara	1153	Reserved Forest	0.019	0.380		
	14	Patch-3_4				Rajghatta	P1163		0.038	0.760		
	15	Patch-3_5				Kunkuni	P1189		Protected Forest	0.015	0.300	
	16	Patch-3_6				kerajhar	OA876	Orange Area	0.025	0.500		
	17						872	Reserved Forest	0.085	1.700		
	18						870		0.125	2.500		
	19						Ramjharna Gate		867	0.078	1.560	
	20							P874	Protected Forest	0.008	0.160	
	21	Patch-3_6 & Patch-3_7				Naharpali	886	Reserved Forest	0.104	2.080		
	22	Patch-3_6					871	0.006	0.120			
	23	Patch-3_6		kerajhar		874P	Protected Forest	0.047	0.940			
	24	Patch-3_7		Chiraipani		892	Reserved Forest	0.113	2.260			
	25	Patch-3_7		Parsada		OA 877	Orange Area	0.022	0.440			
Border-Raigarh	26	Patch-4_1		Raigarh			Sambalpuri	967	Reserved Forest	0.149	2.980	
	27	Patch-4_1 & Patch-5_1						968		0.073	1.460	
	28	Patch-4_2						949P		Protected Forest	0.067	1.340
	29					Nawagaon	927	Reserved Forest	0.02	0.400		
	30	Patch-4_3					Bagursiya	941P	Protected Forest	0.011	0.220	
	31							909	Reserved Forest	0.026	0.520	
	32							914		0.093	1.860	
	33							916		0.104	2.080	
	34							917		0.051	1.020	
	35							918		0.017	0.340	
36	919							0.184		3.680		
Tarpali-Badpali	37	Patch-5_2				Raigarh		Tilaga	960P	Protected Forest	0.051	1.020
	38	Patch-5_3							972P		0.169	3.380
	39	Patch-5_4					Bhagora	P975	0.023	0.460		
	40	Patch-5_5						Kolaibahal	981	Reserved Forest	0.063	1.260
	41								980P	Protected Forest	0.092	1.840
	42						Sapanai	P982		0.089	1.780	
	43	Patch-5_7					Mauhapali	OA1001	Orange Area	0.006	0.120	
Timarlaga-Baramkela	44	Patch-6_1		Sarangarh			Vishvaspur	P1064	Protected Forest	0.041	0.820	
Sariya-Saranggarh	45	Patch-7_7						Malda	1058P	0.007	0.140	
Sohela-Baramkela	46	Patch-9_3					Daradhara	1110	Reserved Forest	0.146	2.920	
	47					1108		0.081		1.620		
	48				Patch-9_4	Paikin	P1101	Protected Forest	0.043	0.860		
	49					Damdama	1107	Reserved Forest	0.060	1.200		
	50	Jhikipani				P1116	Protected Forest	0.029	0.580			
	51	Patch-9_5			Dongripali	P1115		0.086	1.720			
	52	Patch-9_8			Bharali	1122	Reserved Forest	0.022	0.440			
TOTAL FOREST AREA								3.337	66.740			



SCHEDULE OF FOREST LAND - REVENUE FOREST (CJJ + BJJ)

RAIGARH DIVISION - REVENUE FOREST AREA STATEMENT

SPAN NAME	SR. NO.	PATCH NUMBER	DISTRICT	TEHSIL	VILLAGE NAME	KHASRA NUMBER	TYPE OF LAND	DIVERSION AREA (in HA)	LENGTH (KM)	
Gharghoda-Lailunga	1	Patch-1_2	Raigarh	Gharghoda	Chimtapani	117	Revenue Forest	0.002	0.040	
	2	Patch-1_4			Kotarimal	380		0.005	0.100	
	3	Patch-1_6		Tamnar	Auraimuda	44		0.005	0.100	
	4	Patch-1_7				198		0.007	0.140	
Kharsia-Kosmanda	5	Patch-2_1		Kharsyia	Palgarha	203/1		0.018	0.360	
	6	Patch-2_5			Dusekela	502/3		0.003	0.060	
	7	Patch-2_6				559/1		0.015	0.300	
Border-Raigarh	8	Patch-4_2		Raigarh	Nawagaon	126		0.006	0.120	
Tarpali-Badpali	9	Patch-5_6			Kolaibahal	17/1		0.006	0.120	
Timarliaga-Baramkela	10	Patch-6_2		Baramkela	Manikpur	278/2	Revenue Forest	0.004	0.080	
	11	Patch-6_3				222		0.001	0.020	
	12	Patch-6_4				Salheona		220/2	0.003	0.060
	13	Patch-6_5						220/1	0.013	0.260
	14	Patch-6_6				Gobarsingha		668/1	0.001	0.020
Sariya-Saranggarh	15	Patch-7_1		Sarangarh	Dansara	6		0.013	0.260	
	16	Patch-7_2				735		0.011	0.220	
	17	Patch-7_3			Madhopali	260/1		0.002	0.040	
	18					260/3		0.002	0.040	
	19	Patch-7_4			Bandhapali	27/3		0.003	0.060	
	20	Patch-7_5				27/1		0.002	0.040	
	21	Patch-7_6			Malda	512		0.005	0.100	
	22	Patch-7_7				485/1		0.002	0.040	
	23	Patch-7_8		Baramkela	Sanda	194		0.018	0.360	
	24	Patch-7_9				180/1		0.007	0.140	
	25	Patch-7_10				31/7		0.007	0.140	
	26	Patch-7_11				577		0.003	0.060	
	27	Patch-7_12			Torana	674		0.010	0.200	
	28					43/1		0.014	0.280	
	29	Patch-7_13			Bar	35		0.003	0.060	
	30	Patch-7_14				1080/3		0.002	0.040	
	31	Patch-7_15			Nachanpali	10		0.004	0.080	
	32	Patch-7_16			Bar	409		0.008	0.160	
	33					580		0.024	0.480	
	34	Patch-7_17			Barpali	123/5		0.005	0.100	
	35					122/1 k		0.012	0.240	
	36					123/1K		0.004	0.080	
	37					1144/1		0.019	0.380	
Border-Sariya	38	Patch-8_1			Sariya	1144/2		0.001	0.020	
	39	Patch-8_2				341/1		0.002	0.040	
	40	Patch-8_3		Kanchanpur	328	0.025		0.500		
	41	Patch-8_4			316	0.014		0.280		
	42	Patch-8_5			290	0.008		0.160		
Sohela-Baramkela	43	Patch-9_1		Saraipal	2/1	0.002		0.040		
	44	Patch-9_2			85/5	0.005		0.100		
	45	Patch-9_6		Lendhar jori	215/2	0.001		0.020		
	46	Patch-9_7			363	0.014		0.280		
	47				218	0.009		0.180		
	48	Patch-9_8		Bharali	1/1	0.014		0.280		
	49				74	0.034		0.680		
	50	Patch-9_9		Biranipali	190/1	0.018		0.360		
	51	Patch-9_10			5	0.003		0.060		
	52	Patch-9_11			273	0.005		0.100		
	53	Patch-9_12			283/1 K	0.012		0.240		
	54	Patch-9_13			223/1	0.002		0.040		
	55	Patch-9_14			205	0.001		0.020		
TOTAL REVENUE FOREST AREA								0.439	8.780	



Total Route Length (in KM)	Total Forest Patch Length (in KM)	OFC Cable Trench Width (in KM)	Total Forest Diversion Area (in HA)
234.660	75.520	0.0005	3.776
Summary Of Forest And Non Forest Area			
Protected Forest, Reserved Forest & Orange Area (in HA)	Revenue Forest Area (in HA)	Non Forest Area (in HA)	
3.337	0.439	7.950	



Signature
वन परिक्षेत्र अधिकारी
रायगढ़ (उ.ग.)

Signature
वन परिक्षेत्र अधिकारी
रायगढ़ (सा.)

Signature
उप वनमण्डलाधिकारी
उप वनमण्डल
रायगढ़ (उ.ग.)

Signature
उप वनमण्डलाधिकारी
रायगढ़, वनमण्डल

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
1	P1	Patch-1_1	749607.1036	2467463.263	22° 17' 41.366" N	83° 25' 21.749" E
2	P2		749643.2209	2467220.092	22° 17' 33.445" N	83° 25' 22.874" E
3	P3		749615.2432	2467051.164	22° 17' 27.971" N	83° 25' 21.802" E
4	P4		749489.9312	2466876.425	22° 17' 22.358" N	83° 25' 17.329" E
5	P5		749342.0306	2466702.84	22° 17' 16.795" N	83° 25' 12.067" E
6	P6		749338.0371	2466481.67	22° 17' 9.610" N	83° 25' 11.804" E
7	P7		749264.1427	2466424.159	22° 17' 7.780" N	83° 25' 9.192" E
8	P8		749142.8667	2466455.194	22° 17' 8.851" N	83° 25' 4.975" E
9	P9		749037.257	2466339.002	22° 17' 5.131" N	83° 25' 1.222" E
10	P10		748884.8622	2466280.787	22° 17' 3.318" N	83° 24' 55.869" E
11	P11		748935.3077	2466135.707	22° 16' 58.578" N	83° 24' 57.549" E
12	P12		748966.045	2465995.949	22° 16' 54.020" N	83° 24' 58.544" E
13	P13		748977.839	2465854.562	22° 16' 49.420" N	83° 24' 58.877" E
14	P14		749043.527	2465700.751	22° 16' 44.388" N	83° 25' 1.085" E
15	P15		749115.2748	2465586.459	22° 16' 40.637" N	83° 25' 3.526" E
16	P16	Patch-1_2	748991.2901	2465182.011	22° 16' 27.559" N	83° 24' 58.971" E
17	P17		748968.903	2465156.064	22° 16' 26.727" N	83° 24' 58.175" E
18	P18	Patch-1_3	748878.5105	2465130.651	22° 16' 25.949" N	83° 24' 55.005" E
19	P19		749019.2629	2464944.748	22° 16' 19.835" N	83° 24' 59.815" E
20	P20		749009.0371	2464715.458	22° 16' 12.389" N	83° 24' 59.330" E
21	P21		748983.2712	2464484.07	22° 16' 4.884" N	83° 24' 58.302" E
22	P22		748999.1431	2464232.174	22° 15' 56.691" N	83° 24' 58.715" E
23	P23		748856.0407	2464029.589	22° 15' 50.182" N	83° 24' 53.606" E
24	P24		748734.801	2463822.43	22° 15' 43.514" N	83° 24' 49.258" E
25	P25		748575.6375	2463667.662	22° 15' 38.567" N	83° 24' 43.616" E
26	P26		748594.2861	2463480.714	22° 15' 32.483" N	83° 24' 44.162" E
27	P27		748640.0334	2463294.213	22° 15' 26.399" N	83° 24' 45.655" E
28	P28		748653.4624	2463118.124	22° 15' 20.670" N	83° 24' 46.026" E
29	P29	Patch-1_4	746604.0237	2459403.494	22° 13' 21.021" N	83° 23' 32.432" E
30	P30		746520.6931	2459344.684	22° 13' 19.153" N	83° 23' 29.491" E
31	P31	Patch-1_5	746400.7006	2459246.185	22° 13' 16.014" N	83° 23' 25.249" E
32	P32		746241.577	2459092.646	22° 13' 11.106" N	83° 23' 19.611" E
33	P33		746099.709	2458951.917	22° 13' 6.606" N	83° 23' 14.583" E
34	P34		745990.4156	2458742.262	22° 12' 59.849" N	83° 23' 10.653" E
35	P35		745813.2722	2458553.932	22° 12' 53.820" N	83° 23' 4.367" E
36	P36		745638.9907	2458375.825	22° 12' 48.121" N	83° 22' 58.187" E
37	P37	Patch-1_6	745301.9927	2457937.719	22° 12' 34.057" N	83° 22' 46.186" E
38	P38		745142.0753	2457772.534	22° 12' 28.771" N	83° 22' 40.515" E
39	P39		744969.3271	2457635.729	22° 12' 24.413" N	83° 22' 34.412" E
40	P40		744785.7632	2457488.615	22° 12' 19.726" N	83° 22' 27.925" E
41	P41		744604.9948	2457333.634	22° 12' 14.782" N	83° 22' 21.532" E
42	P42	Patch-1_7	744444.9203	2457202.518	22° 12' 10.603" N	83° 22' 15.875" E
43	P43		744337.9639	2457118.533	22° 12' 7.928" N	83° 22' 12.096" E

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
44	P1	Patch-2_1	708432.5586	2441707.4	22° 4' 3.922" N	83° 1' 11.806" E
45	P2		708644.109	2441689.006	22° 4' 3.233" N	83° 1' 19.175" E
46	P3		708853.2209	2441652.346	22° 4' 1.951" N	83° 1' 26.450" E
47	P4		709054.6956	2441585.989	22° 3' 59.707" N	83° 1' 33.445" E
48	P5		709245.3186	2441493.745	22° 3' 56.626" N	83° 1' 40.049" E
49	P6	Patch-2_2	709729.9398	2441127.038	22° 3' 44.497" N	83° 1' 56.778" E
50	P7		709929.5501	2441221.533	22° 3' 47.482" N	83° 2' 3.782" E
51	P8		710160.7327	2441229.759	22° 3' 47.649" N	83° 2' 11.847" E
52	P9		710392.3415	2441196.389	22° 3' 46.464" N	83° 2' 19.908" E
53	P10	Patch-2_3	710674.6636	2441147.461	22° 3' 44.751" N	83° 2' 29.730" E
54	P11		710917.1841	2441175.667	22° 3' 45.562" N	83° 2' 38.199" E
55	P12		711145.0886	2441073.198	22° 3' 42.132" N	83° 2' 46.098" E
56	P13		711373.8726	2440975.761	22° 3' 38.865" N	83° 2' 54.030" E
57	P14		711592.8387	2440863.439	22° 3' 35.119" N	83° 3' 1.613" E
58	P15	Patch-2_4	712101.6141	2440558.185	22° 3' 24.974" N	83° 3' 19.210" E
59	P16		712321.1714	2440439.941	22° 3' 21.035" N	83° 3' 26.810" E
60	P17		712565.4382	2440401.822	22° 3' 19.689" N	83° 3' 35.309" E
61	P18		712801.5631	2440319.939	22° 3' 16.924" N	83° 3' 43.503" E
62	P19		713049.7451	2440295.406	22° 3' 16.017" N	83° 3' 52.145" E
63	P20		713285.527	2440212.666	22° 3' 13.224" N	83° 4' 0.327" E
64	P21		713533.2005	2440183.33	22° 3' 12.161" N	83° 4' 8.949" E
65	P22		713782.217	2440178.512	22° 3' 11.895" N	83° 4' 17.629" E
66	P23		714031.2255	2440178.206	22° 3' 11.775" N	83° 4' 26.311" E
67	P24		714271.1311	2440109.348	22° 3' 9.431" N	83° 4' 34.643" E
68	P25		714507.4742	2440029.971	22° 3' 6.746" N	83° 4' 42.846" E
69	P26		714727.1301	2439911.294	22° 3' 2.792" N	83° 4' 50.448" E
70	P27		714946.6282	2439792.622	22° 2' 58.837" N	83° 4' 58.044" E
71	P28		715187.3557	2439731.073	22° 2' 56.730" N	83° 5' 6.408" E
72	P29		715427.2051	2439665.559	22° 2' 54.494" N	83° 5' 14.739" E
73	P30		715661.2867	2439577.8	22° 2' 51.537" N	83° 5' 22.859" E
74	P31		715891.4501	2439487.399	22° 2' 48.496" N	83° 5' 30.840" E
75	P32		716016.8113	2439278.542	22° 2' 41.652" N	83° 5' 35.111" E
76	P33		715994.4562	2439031.304	22° 2' 33.626" N	83° 5' 34.213" E
77	P34		715977.7013	2438785.879	22° 2' 25.657" N	83° 5' 33.512" E
78	P35		716063.6142	2438579.647	22° 2' 18.915" N	83° 5' 36.409" E
79	P36		716267.4089	2438434.879	22° 2' 14.119" N	83° 5' 43.444" E
80	P37		716477.6436	2438300.278	22° 2' 9.650" N	83° 5' 50.709" E
81	P38		716658.9856	2438203.341	22° 2' 6.419" N	83° 5' 56.984" E
82	P39		716813.315	2438094.833	22° 2' 2.823" N	83° 6' 2.312" E
83	P40	Patch-2_5	717623.7571	2436470.518	22° 1' 9.666" N	83° 6' 29.784" E
84	P41		717629.5355	2436414.701	22° 1' 7.849" N	83° 6' 29.958" E
85	P42	Patch-2_6	717712.5536	2435950.109	22° 0' 52.712" N	83° 6' 32.629" E
86	P43		717803.4861	2435830.434	22° 0' 48.781" N	83° 6' 35.741" E
87	P44		717896.4016	2435712.452	22° 0' 44.905" N	83° 6' 38.922" E

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
88	P1	Patch-3_1	718608.6875	2441748.302	22° 4' 0.761" N	83° 7' 6.670" E
89	P2		718714.5419	2441534.055	22° 3' 53.750" N	83° 7' 10.257" E
90	P3		718868.5662	2441340.321	22° 3' 47.384" N	83° 7' 15.534" E
91	P4		718974.239	2441191.768	22° 3' 42.508" N	83° 7' 19.146" E
92	P5		719124.0011	2441057.179	22° 3' 38.066" N	83° 7' 24.303" E
93	P6		719262.1399	2440919.193	22° 3' 33.518" N	83° 7' 29.053" E
94	P7		719366.157	2440753.788	22° 3' 28.095" N	83° 7' 32.599" E
95	P8	Patch-3_2	719687.9692	2440263.488	22° 3' 12.014" N	83° 7' 43.581" E
96	P9		719709.4016	2440098.004	22° 3' 6.626" N	83° 7' 44.248" E
97	P10		719733.2134	2439910.219	22° 3' 0.511" N	83° 7' 44.986" E
98	P11		719759.0107	2439702.605	22° 2' 53.752" N	83° 7' 45.785" E
99	P12	Patch-3_3	720838.4571	2437221.15	22° 1' 32.610" N	83° 8' 22.206" E
100	P13		720829.159	2437033.083	22° 1' 26.502" N	83° 8' 21.790" E
101	P14		720846.7892	2436844.85	22° 1' 20.376" N	83° 8' 22.313" E
102	P15	Patch-3_4	721509.3369	2434931.926	22° 0' 17.901" N	83° 8' 44.471" E
103	P16		721493.6686	2434752.195	22° 0' 12.067" N	83° 8' 43.837" E
104	P17		721405.4915	2434558.659	22° 0' 5.817" N	83° 8' 40.669" E
105	P18		721361.0965	2434360.088	21° 59' 59.383" N	83° 8' 39.025" E
106	P19		721349.4237	2434200.606	21° 59' 54.205" N	83° 8' 38.540" E
107	P20	Patch-3_5	722416.4771	2433273.074	21° 59' 23.571" N	83° 9' 15.273" E
108	P21		722556.6618	2433237.011	21° 59' 22.335" N	83° 9' 20.141" E
109	P22		722698.8962	2433200.434	21° 59' 21.081" N	83° 9' 25.080" E
110	P23	Patch-3_6	731965.626	2433512.301	21° 59' 26.881" N	83° 14' 48.166" E
111	P24		732199.2036	2433601.357	21° 59' 29.664" N	83° 14' 56.352" E
112	P25		732413.8586	2433520.682	21° 59' 26.939" N	83° 15' 3.790" E
113	P26		732608.4034	2433363.836	21° 59' 21.749" N	83° 15' 10.489" E
114	P27		732813.7423	2433221.246	21° 59' 17.016" N	83° 15' 17.571" E
115	P28		733021.2088	2433082.172	21° 59' 12.397" N	83° 15' 24.729" E
116	P29		733247.5389	2432976.001	21° 59' 8.838" N	83° 15' 32.562" E
117	P30		733484.3194	2432899.969	21° 59' 6.253" N	83° 15' 40.773" E
118	P31		733689.1726	2432759.105	21° 59' 1.577" N	83° 15' 47.839" E
119	P32		733906.0965	2432640.247	21° 58' 57.610" N	83° 15' 55.336" E
120	P33		734051.2654	2432436.76	21° 58' 50.927" N	83° 16' 0.290" E
121	P34		734177.0171	2432224.9	21° 58' 43.981" N	83° 16' 4.562" E
122	P35		734309.9098	2432015.276	21° 58' 37.104" N	83° 16' 9.084" E
123	P36		734475.9124	2431828.95	21° 58' 30.969" N	83° 16' 14.772" E
124	P37		734650.251	2431650.599	21° 58' 25.089" N	83° 16' 20.754" E
125	P38		734821.6918	2431469.634	21° 58' 19.125" N	83° 16' 26.634" E
126	P39		735046.9506	2431361.967	21° 58' 15.517" N	83° 16' 34.427" E
127	P40		735277.1223	2431264.475	21° 58' 12.237" N	83° 16' 42.396" E
128	P41		735518.5658	2431204.697	21° 58' 10.178" N	83° 16' 50.777" E
129	P42		735767.6801	2431184.139	21° 58' 9.389" N	83° 16' 59.446" E
130	P43		736014.6414	2431146.456	21° 58' 8.044" N	83° 17' 8.031" E

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
131	P44	Patch-3_6	736259.7211	2431097.116	21° 58' 6.322" N	83° 17' 16.544" E
132	P45		736503.1913	2431040.394	21° 58' 4.360" N	83° 17' 24.997" E
133	P46		736747.0453	2430985.423	21° 58' 2.455" N	83° 17' 33.464" E
134	P47		736991.4918	2430933.065	21° 58' 0.635" N	83° 17' 41.954" E
135	P48		737234.7338	2430876.721	21° 57' 58.685" N	83° 17' 50.399" E
136	P49		737484.2456	2430861.577	21° 57' 58.071" N	83° 17' 59.084" E
137	P50		737733.7866	2430847.894	21° 57' 57.504" N	83° 18' 7.771" E
138	P51		737880.2585	2430861.702	21° 57' 57.882" N	83° 18' 12.881" E
139	P52		738050.8581	2430881.289	21° 57' 58.435" N	83° 18' 18.835" E
140	P53		738211.044	2430892.928	21° 57' 58.734" N	83° 18' 24.422" E
141	P54		738388.7084	2430866.224	21° 57' 57.780" N	83° 18' 30.598" E
142	P55		738521.5403	2430836.156	21° 57' 56.737" N	83° 18' 35.210" E
143	P56		738641.7353	2430788.183	21° 57' 55.119" N	83° 18' 39.372" E
144	P57	Patch-3_7	739401.9816	2430311.18	21° 57' 39.244" N	83° 19' 5.607" E
145	P58		739482.7708	2430180.388	21° 57' 34.954" N	83° 19' 8.353" E
146	P59		739618.8679	2429971.004	21° 57' 28.083" N	83° 19' 12.984" E
147	P60		739804.5826	2429807.025	21° 57' 22.662" N	83° 19' 19.367" E
148	P61		740029.662	2429701.235	21° 57' 19.113" N	83° 19' 27.152" E
149	P62		740231.5829	2429560.749	21° 57' 14.448" N	83° 19' 34.112" E
150	P63		740406.9747	2429382.689	21° 57' 8.575" N	83° 19' 40.128" E
151	P64		740596.9489	2429220.279	21° 57' 3.203" N	83° 19' 46.660" E
152	P65		740788.4384	2429059.77	21° 56' 57.892" N	83° 19' 53.246" E
153	P66		740961.637	2428879.911	21° 56' 51.962" N	83° 19' 59.184" E
154	P67		741111.4863	2428679.881	21° 56' 45.387" N	83° 20' 4.297" E
155	P68		741283.5726	2428502.22	21° 56' 39.528" N	83° 20' 10.198" E
156	P69		741504.2949	2428385	21° 56' 35.609" N	83° 20' 17.824" E
157	P70		741722.2128	2428262.496	21° 56' 31.520" N	83° 20' 25.350" E
158	P71		741941.8743	2428143.145	21° 56' 27.533" N	83° 20' 32.938" E
159	P72		742159.8181	2428020.825	21° 56' 23.449" N	83° 20' 40.464" E
160	P73		742394.4236	2427937.687	21° 56' 20.631" N	83° 20' 48.592" E
161	P74		742574.6938	2427894.636	21° 56' 19.142" N	83° 20' 54.848" E
162	P75		742777.1142	2427849.03	21° 56' 17.559" N	83° 21' 1.874" E
163	P76		743027.4448	2427818.756	21° 56' 16.451" N	83° 21' 10.578" E
164	P1	Patch-4_1	750852.443	2424713.903	21° 54' 31.591" N	83° 25' 41.417" E
165	P2		750990.2098	2424918.22	21° 54' 38.159" N	83° 25' 46.327" E
166	P3		751209.0344	2425027.486	21° 54' 41.597" N	83° 25' 54.008" E
167	P4		751269.0138	2425247.736	21° 54' 48.723" N	83° 25' 56.218" E
168	P5		751246.3744	2425496.622	21° 54' 56.823" N	83° 25' 55.567" E
169	P6		751253.8518	2425742.773	21° 55' 4.818" N	83° 25' 55.963" E
170	P7		751449.3108	2425893.171	21° 55' 9.604" N	83° 26' 2.853" E
171	P8		751699.1822	2425899.395	21° 55' 9.677" N	83° 26' 11.559" E
172	P9		751932.6659	2425951.507	21° 55' 11.250" N	83° 26' 19.719" E
173	P10		752078.2719	2426154.719	21° 55' 17.778" N	83° 26' 24.902" E
174	P11		752223.6132	2426358.112	21° 55' 24.313" N	83° 26' 30.076" E
175	P12		752390.0519	2426536.899	21° 55' 30.036" N	83° 26' 35.972" E
176	P13		752627.4681	2426599.634	21° 55' 31.952" N	83° 26' 44.275" E
177	P14		752877.1894	2426611.269	21° 55' 32.200" N	83° 26' 52.979" E

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
178	P15	Patch-4_1	753093.6507	2426720.455	21° 55' 35.636" N	83° 27' 0.578" E
179	P16		753312.6542	2426840.707	21° 55' 39.430" N	83° 27' 8.272" E
180	P17		753449.9334	2426987.669	21° 55' 44.134" N	83° 27' 13.135" E
181	P18	Patch-4_2	754279.2317	2428602.756	21° 56' 36.183" N	83° 27' 42.920" E
182	P19		754349.9541	2428841.924	21° 56' 43.918" N	83° 27' 45.518" E
183	P20		754444.1218	2429073.489	21° 56' 51.394" N	83° 27' 48.927" E
184	P21		754542.5459	2429303.294	21° 56' 58.809" N	83° 27' 52.484" E
185	P22		754639.8553	2429533.515	21° 57' 6.239" N	83° 27' 56.003" E
186	P23		754710.1955	2429771.324	21° 57' 13.930" N	83° 27' 58.586" E
187	P24		754730.5417	2430020.451	21° 57' 22.015" N	83° 27' 59.435" E
188	P25		754757.6165	2430211.282	21° 57' 28.201" N	83° 28' 0.485" E
189	P26		754785.0201	2430378.264	21° 57' 33.613" N	83° 28' 1.533" E
190	P27	Patch-4_3	755223.3994	2433086.288	21° 59' 1.378" N	83° 28' 18.327" E
191	P28		755261.0784	2433333.398	21° 59' 9.388" N	83° 28' 19.779" E
192	P29		755302.5531	2433579.931	21° 59' 17.377" N	83° 28' 21.363" E
193	P30		755336.4065	2433827.49	21° 59' 25.404" N	83° 28' 22.682" E
194	P31		755358.7298	2434076.464	21° 59' 33.482" N	83° 28' 23.600" E
195	P32		755530.9781	2434237.816	21° 59' 38.634" N	83° 28' 29.693" E
196	P33		755741.8262	2434372.138	21° 59' 42.888" N	83° 28' 37.115" E
197	P34		755951.3375	2434508.521	21° 59' 47.209" N	83° 28' 44.492" E
198	P35		756167.1727	2434634.675	21° 59' 51.195" N	83° 28' 52.084" E
199	P36		756376.0777	2434768.798	21° 59' 55.443" N	83° 28' 59.439" E
200	P37		756533.0261	2434963.385	22° 0' 1.683" N	83° 29' 5.017" E
201	P38		756682.7348	2435163.603	22° 0' 8.110" N	83° 29' 10.347" E
202	P39		756765.0296	2435389.349	22° 0' 15.401" N	83° 29' 13.343" E
203	P40		756757.8964	2435639.244	22° 0' 23.525" N	83° 29' 13.236" E
204	P41		756651.3154	2435861.531	22° 0' 30.804" N	83° 29' 9.648" E
205	P42		756616.6243	2436108.414	22° 0' 38.845" N	83° 29' 8.579" E
206	P43		756586.398	2436356.118	22° 0' 46.910" N	83° 29' 7.666" E
207	P44		756399.8607	2436520.468	22° 0' 52.349" N	83° 29' 1.259" E
208	P45		756313.3157	2436743.681	22° 0' 59.647" N	83° 28' 58.370" E
209	P46		756396.3852	2436942.586	22° 1' 6.067" N	83° 29' 1.377" E
210	P47		756543.5634	2437135.862	22° 1' 12.269" N	83° 29' 6.616" E
211	P48		756702.2834	2437322.179	22° 1' 18.239" N	83° 29' 12.253" E
212	P49		756918.2022	2437417.015	22° 1' 21.206" N	83° 29' 19.831" E
213	P50		757078.8864	2437581.598	22° 1' 26.469" N	83° 29' 25.524" E
214	P51		757123.301	2437820.51	22° 1' 34.209" N	83° 29' 27.208" E
215	P52		757114.5227	2437994.62	22° 1' 39.871" N	83° 29' 27.001" E
216	P53		757037.2413	2438174.402	22° 1' 45.753" N	83° 29' 24.410" E
217	P54		757049.4107	2438424.065	22° 1' 53.859" N	83° 29' 24.976" E
218	P55		756897.112	2438607.509	22° 1' 59.901" N	83° 29' 19.773" E
219	P56		756738.6584	2438792.879	22° 2' 6.008" N	83° 29' 14.355" E
220	P57		756755.1473	2439015.692	22° 2' 13.239" N	83° 29' 15.057" E
221	P58		756985.0377	2439083.16	22° 2' 15.310" N	83° 29' 23.107" E
222	P59		757197.2742	2439042.569	22° 2' 13.878" N	83° 29' 30.481" E
223	P60		757389.8658	2439093.47	22° 2' 15.430" N	83° 29' 37.223" E
224	P61		757554.4088	2439021.944	22° 2' 13.019" N	83° 29' 42.917" E

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Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
225	P62	Patch-4_3	757788.6172	2439105.198	22° 2' 15.599" N	83° 29' 51.127" E
226	P63		757946.717	2438940.839	22° 2' 10.175" N	83° 29' 56.543" E
227	P64		758131.1882	2438873.796	22° 2' 7.898" N	83° 30' 2.934" E
228	P65		758297.4725	2438741.446	22° 2' 3.509" N	83° 30' 8.654" E
229	P66		758402.5259	2438907.784	22° 2' 8.858" N	83° 30' 12.410" E
230	P1	Patch-5_1	753371.7395	2426878.056	21° 55' 40.613" N	83° 27' 10.351" E
231	P2		753586.1243	2426760.516	21° 55' 36.682" N	83° 27' 17.751" E
232	P3		753815.7543	2426734.204	21° 55' 35.707" N	83° 27' 25.734" E
233	P4	Patch-5_2	755792.0292	2426491.575	21° 55' 26.790" N	83° 28' 34.424" E
234	P5		755941.6737	2426423.426	21° 55' 24.497" N	83° 28' 39.597" E
235	P6		756092.9309	2426356.784	21° 55' 22.252" N	83° 28' 44.827" E
236	P7		756288.0972	2426277.8	21° 55' 19.583" N	83° 28' 51.579" E
237	P8		756523.7146	2426186.411	21° 55' 16.490" N	83° 28' 59.733" E
238	P9		756733.2554	2426102.837	21° 55' 13.664" N	83° 29' 6.983" E
239	P10	Patch-5_3	758264.2275	2425225.645	21° 54' 44.352" N	83° 29' 59.800" E
240	P11		758341.7803	2425074.232	21° 54' 39.391" N	83° 30' 2.414" E
241	P12		758574.1538	2424984.92	21° 54' 36.366" N	83° 30' 10.455" E
242	P13		758807.4218	2424895.009	21° 54' 33.321" N	83° 30' 18.527" E
243	P14		759045.1482	2424818.359	21° 54' 30.704" N	83° 30' 26.761" E
244	P15		759275.5676	2424729.906	21° 54' 27.707" N	83° 30' 34.734" E
245	P16		759479.5088	2424585.473	21° 54' 22.906" N	83° 30' 41.753" E
246	P17		759679.7928	2424436.036	21° 54' 17.944" N	83° 30' 48.642" E
247	P18		759874.6902	2424279.515	21° 54' 12.754" N	83° 30' 55.339" E
248	P19		760072.4567	2424126.585	21° 54' 7.679" N	83° 31' 2.138" E
249	P20		760310.0063	2424063.491	21° 54' 5.503" N	83° 31' 10.373" E
250	P21		760545.624	2424145.823	21° 54' 8.052" N	83° 31' 18.624" E
251	P22		760778.5819	2424236.507	21° 54' 10.874" N	83° 31' 26.787" E
252	P23		761008.1907	2424335.392	21° 54' 13.965" N	83° 31' 34.839" E
253	P24		761203.6447	2424409.142	21° 54' 16.256" N	83° 31' 41.686" E
254	P25	Patch-5_4	761333.5778	2424450.62	21° 54' 17.535" N	83° 31' 46.234" E
255	P26		761577.0475	2424497.185	21° 54' 18.917" N	83° 31' 54.739" E
256	P27		761780.9691	2424494.59	21° 54' 18.724" N	83° 32' 1.838" E
257	P28	Patch-5_5	762568.9682	2424282.307	21° 54' 11.403" N	83° 32' 29.153" E
258	P29		762803.088	2424194.662	21° 54' 8.429" N	83° 32' 37.254" E
259	P30		763036.3198	2424104.703	21° 54' 5.380" N	83° 32' 45.323" E
260	P31		763267.2909	2424009.037	21° 54' 2.147" N	83° 32' 53.309" E
261	P32		763500.2366	2423918.311	21° 53' 59.073" N	83° 33' 1.367" E
262	P33		763663.0789	2423851.636	21° 53' 56.819" N	83° 33' 6.999" E
263	P34		763840.7964	2423785.945	21° 53' 54.589" N	83° 33' 13.148" E
264	P35		764045.9963	2423710.663	21° 53' 52.032" N	83° 33' 20.249" E
265	P36		764227.9903	2423636.319	21° 53' 49.518" N	83° 33' 26.542" E
266	P37		764304.5158	2423413.454	21° 53' 42.235" N	83° 33' 29.077" E
267	P38		764355.5977	2423254.583	21° 53' 37.045" N	83° 33' 30.764" E

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Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
268	P39	Patch-5_5	764417.2486	2423033.383	21° 53' 29.824" N	83° 33' 32.782" E
269	P40		764464.1088	2422822.027	21° 53' 22.932" N	83° 33' 34.291" E
270	P41		764523.4732	2422575.42	21° 53' 14.887" N	83° 33' 36.214" E
271	P42		764575.2354	2422331.703	21° 53' 6.940" N	83° 33' 37.875" E
272	P43		764688.9733	2422129.733	21° 53' 0.316" N	83° 33' 41.717" E
273	P44		764810.1754	2421948.14	21° 52' 54.349" N	83° 33' 45.831" E
274	P45		764936.3083	2421772.458	21° 52' 48.573" N	83° 33' 50.120" E
275	P46		764861.5384	2421653.048	21° 52' 44.733" N	83° 33' 47.448" E
276	P47		764668.3997	2421574.844	21° 52' 42.297" N	83° 33' 40.679" E
277	P48		764574.9469	2421378.145	21° 52' 35.956" N	83° 33' 37.312" E
278	P49		764377.2673	2421264.549	21° 52' 32.372" N	83° 33' 30.364" E
279	P50		764160.5335	2421272.1	21° 52' 32.735" N	83° 33' 22.824" E
280	P51	Patch-5_6	764588.1956	2421014.702	21° 52' 24.140" N	83° 33' 37.562" E
281	P52		764670.8839	2420922.887	21° 52' 21.112" N	83° 33' 40.387" E
282	P53	Patch-5_7	758738.2129	2417637.426	21° 50' 37.531" N	83° 30' 12.000" E
283	P54		758615.773	2417657.479	21° 50' 38.248" N	83° 30' 7.750" E
284	P1	Patch-6_1	730345.3438	2400941.451	21° 41' 49.088" N	83° 13' 35.284" E
285	P2		730513.2554	2400898.116	21° 41' 47.601" N	83° 13' 41.102" E
286	P3		730749.0285	2400939.427	21° 41' 48.834" N	83° 13' 49.322" E
287	P4		730924.2066	2400881.439	21° 41' 46.867" N	83° 13' 55.385" E
288	P5		731078.7779	2400798.859	21° 41' 44.111" N	83° 14' 0.719" E
289	P6	Patch-6_2	731938.4703	2399456.358	21° 41' 0.075" N	83° 14' 29.940" E
290	P7		731968.9733	2399435.128	21° 40' 59.371" N	83° 14' 30.990" E
291	P8		731999.4283	2399413.83	21° 40' 58.664" N	83° 14' 32.038" E
292	P9	Patch-6_3	733349.399	2398170.943	21° 40' 17.633" N	83° 15' 18.352" E
293	P10		733351.5287	2398162.157	21° 40' 17.347" N	83° 15' 18.422" E
294	P11	Patch-6_4	733458.0537	2397710.715	21° 40' 2.624" N	83° 15' 21.897" E
295	P12		733464.7497	2397680.943	21° 40' 1.654" N	83° 15' 22.115" E
296	P13		733471.0806	2397651.085	21° 40' 0.680" N	83° 15' 22.320" E
297	P14	Patch-6_5	733491.3859	2397571.439	21° 39' 58.082" N	83° 15' 22.986" E
298	P15		733528.7663	2397457.733	21° 39' 54.369" N	83° 15' 24.228" E
299	P16		733625.2598	2397370.917	21° 39' 51.502" N	83° 15' 27.539" E
300	P17	Patch-6_6	734643.8747	2393287.044	21° 37' 38.292" N	83° 16' 0.881" E
301	P18		734637.9211	2393272.834	21° 37' 37.833" N	83° 16' 0.667" E
302	P1	Patch-7_1	718582.9626	2388291.642	21° 35' 3.278" N	83° 6' 40.227" E
303	P2		718704.1946	2388233.073	21° 35' 1.321" N	83° 6' 44.412" E
304	P3		718809.4317	2388149.294	21° 34' 58.551" N	83° 6' 48.030" E
305	P4	Patch-7_2	719411.1739	2388222.219	21° 35' 0.656" N	83° 7' 8.976" E
306	P5		719501.4158	2388185.558	21° 34' 59.424" N	83° 7' 12.095" E
307	P6		719583.849	2388118.374	21° 34' 57.204" N	83° 7' 14.928" E

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Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
208	P7	Patch-7_3	723160.3217	2387281.104	21° 34' 28.394" N	83° 9' 18.813" E
209	P8		723204.821	2387288.985	21° 34' 28.630" N	83° 9' 20.363" E
210	P9		723249.8211	2387288.454	21° 34' 28.593" N	83° 9' 21.926" E
211	P10	Patch-7_4	724080.2859	2386854.691	21° 34' 14.120" N	83° 9' 50.575" E
212	P11		724140.5959	2386821.845	21° 34' 13.025" N	83° 9' 52.654" E
213	P12	Patch-7_5	724206.3573	2386785.687	21° 34' 11.820" N	83° 9' 54.922" E
214	P13		724248.6315	2386762.443	21° 34' 11.045" N	83° 9' 56.380" E
215	P14	Patch-7_6	726370.9551	2385717.714	21° 33' 36.126" N	83° 11' 9.616" E
216	P15		726414.1541	2385698.263	21° 33' 35.474" N	83° 11' 11.107" E
217	P16		726457.3531	2385678.812	21° 33' 34.822" N	83° 11' 12.599" E
218	P17	Patch-7_7	726993.5627	2385533.386	21° 33' 29.850" N	83° 11' 31.158" E
219	P18		727083.0254	2385514.067	21° 33' 29.182" N	83° 11' 34.257" E
220	P19		727172.1861	2385493.303	21° 33' 28.466" N	83° 11' 37.345" E
221	P20	Patch-7_8	735339.8855	2387214.053	21° 34' 20.587" N	83° 16' 21.990" E
222	P21		735393.1413	2387321.195	21° 34' 24.044" N	83° 16' 23.894" E
223	P22		735477.6081	2387401.415	21° 34' 26.611" N	83° 16' 26.870" E
224	P23		735585.6514	2387452.833	21° 34' 28.231" N	83° 16' 30.650" E
225	P24	Patch-7_9	736192.5126	2387736.582	21° 34' 37.165" N	83° 16' 51.881" E
226	P25		736260.8451	2387767.374	21° 34' 38.133" N	83° 16' 54.271" E
227	P26		736329.2249	2387798.063	21° 34' 39.098" N	83° 16' 56.662" E
228	P27	Patch-7_10	736603.078	2387932.863	21° 34' 43.348" N	83° 17' 6.247" E
229	P28		736666.5368	2387964.114	21° 34' 44.334" N	83° 17' 8.468" E
230	P29		736730.0735	2387995.21	21° 34' 45.314" N	83° 17' 10.691" E
231	P30	Patch-7_11	737104.4892	2388178.36	21° 34' 51.087" N	83° 17' 23.795" E
232	P31		737154.1831	2388203.111	21° 34' 51.868" N	83° 17' 25.534" E
233	P32	Patch-7_12	737649.3233	2389258.86	21° 35' 25.943" N	83° 17' 43.280" E
234	P33		737707.9581	2389407.715	21° 35' 30.752" N	83° 17' 45.394" E
235	P34		737763.3617	2389557.804	21° 35' 35.604" N	83° 17' 47.396" E
236	P35		737839.0333	2389697.149	21° 35' 40.096" N	83° 17' 50.097" E
237	P36	Patch-7_13	738188.2956	2389822.473	21° 35' 44.001" N	83° 18' 2.298" E
238	P37		738248.7715	2389837.921	21° 35' 44.474" N	83° 18' 4.408" E
339	P38	Patch-7_14	738297.2946	2389849.972	21° 35' 44.843" N	83° 18' 6.100" E
340	P39		738345.302	2389862.793	21° 35' 45.236" N	83° 18' 7.775" E
341	P40	Patch-7_15	739503.7287	2390378.35	21° 36' 1.433" N	83° 18' 48.298" E
342	P41		739545.3241	2390434.651	21° 36' 3.243" N	83° 18' 49.772" E
343	P42	Patch-7_16	740570.907	2391502.521	21° 36' 37.451" N	83° 19' 25.968" E
344	P43		740767.8296	2391590.002	21° 36' 40.198" N	83° 19' 32.857" E
345	P44		740968.8237	2391668.501	21° 36' 42.651" N	83° 19' 39.883" E
346	P45		741168.891	2391749.241	21° 36' 45.178" N	83° 19' 46.878" E

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Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
347	P46	Patch-7_17	742102.569	2392463.128	21° 37' 7.923" N	83° 20' 19.700" E
348	P47		742217.0322	2392637.535	21° 37' 13.535" N	83° 20' 23.770" E
349	P48		742330.5344	2392812.59	21° 37' 19.168" N	83° 20' 27.806" E
350	P1	Patch-8_1	744462.6132	2394371.83	21° 38' 8.792" N	83° 21' 42.732" E
351	P2		744588.0673	2394211.17	21° 38' 3.509" N	83° 21' 47.008" E
352	P3		744675.1102	2394026.227	21° 37' 57.456" N	83° 21' 49.936" E
353	P4	Patch-8_2	745314.6729	2393116.353	21° 37' 27.570" N	83° 22' 11.683" E
354	P5		745350.3267	2393082.538	21° 37' 26.454" N	83° 22' 12.904" E
355	P6	Patch-8_3	745362.6687	2393069.412	21° 37' 26.021" N	83° 22' 13.326" E
356	P7		745603.2569	2393040.436	21° 37' 24.960" N	83° 22' 21.673" E
357	P8		745847.6209	2393014.093	21° 37' 23.982" N	83° 22' 30.152" E
358	P9	Patch-8_4	745899.9115	2392998.721	21° 37' 23.457" N	83° 22' 31.961" E
359	P10		746036.1891	2392951.431	21° 37' 21.852" N	83° 22' 36.672" E
360	P11		746155.1771	2392876.927	21° 37' 19.372" N	83° 22' 40.768" E
361	P12	Patch-8_5	746357.2887	2392654.61	21° 37' 12.047" N	83° 22' 47.674" E
362	P13		746424.784	2392613.932	21° 37' 10.691" N	83° 22' 49.998" E
363	P14		746482.9611	2392560.303	21° 37' 8.919" N	83° 22' 51.992" E
364	P1	Patch-9_1	736998.0521	2381829.303	21° 31' 24.793" N	83° 17' 16.858" E
365	P2		737019.1298	2381797.975	21° 31' 23.765" N	83° 17' 17.574" E
366	P3	Patch-9_2	737236.0339	2381017.466	21° 30' 58.295" N	83° 17' 24.710" E
367	P4		737238.2858	2380963.144	21° 30' 56.528" N	83° 17' 24.761" E
368	P5		737239.4064	2380908.786	21° 30' 54.761" N	83° 17' 24.772" E
369	P6	Patch-9_3	738047.7441	2376409.087	21° 28' 28.134" N	83° 17' 50.550" E
370	P7		738044.7394	2376159.118	21° 28' 20.012" N	83° 17' 50.318" E
371	P8		738024.3053	2375910.105	21° 28' 11.928" N	83° 17' 49.482" E
372	P9		737992.6056	2375662.157	21° 28' 3.885" N	83° 17' 48.255" E
373	P10		737951.6302	2375416.268	21° 27' 55.913" N	83° 17' 46.707" E
374	P11		737804.8113	2375214.007	21° 27' 49.410" N	83° 17' 41.506" E
375	P12		737743.559	2374984.455	21° 27' 41.978" N	83° 17' 39.263" E
376	P13		737884.0306	2374792.795	21° 27' 35.682" N	83° 17' 44.042" E
377	P14		738070.7504	2374629.424	21° 27' 30.284" N	83° 17' 50.441" E
378	P15		738194.1309	2374457.928	21° 27' 24.651" N	83° 17' 54.638" E
379	P16		738346.6388	2374637.581	21° 27' 30.417" N	83° 18' 0.024" E
380	P17		738486.8803	2374781.194	21° 27' 35.018" N	83° 18' 4.966" E
381	P18		738680.7434	2374771.934	21° 27' 34.624" N	83° 18' 11.692" E
382	P19		738831.9109	2374712.601	21° 27' 32.623" N	83° 18' 16.910" E
383	P20		739059.5211	2374617.15	21° 27' 29.412" N	83° 18' 24.763" E
384	P21		739309.2027	2374612.56	21° 27' 29.143" N	83° 18' 33.429" E
385	P22		739556.7571	2374629.591	21° 27' 29.578" N	83° 18' 42.033" E
386	P23		739795.7382	2374591.02	21° 27' 28.210" N	83° 18' 50.310" E
387	P24		739957.9438	2374406.945	21° 27' 22.149" N	83° 18' 55.847" E
388	P25		740193.8088	2374359.372	21° 27' 20.490" N	83° 19' 4.011" E
389	P26		740422.7222	2374458.412	21° 27' 23.598" N	83° 19' 12.009" E
390	P27		740665.1325	2374405.491	21° 27' 21.762" N	83° 19' 20.398" E

DGPS Survey Points


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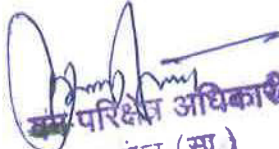
Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
391	P28	Patch-9_3	740907.1522	2374342.962	21° 27' 19.613" N	83° 19' 28.768" E
392	P29		741103.5541	2374294.72	21° 27' 17.950" N	83° 19' 35.561" E
393	P30		741339.7122	2374230.93	21° 27' 15.763" N	83° 19' 43.727" E
394	P31		741565.2596	2374145.621	21° 27' 12.881" N	83° 19' 51.513" E
395	P32		741662.7984	2373957.12	21° 27' 6.708" N	83° 19' 54.802" E
396	P33		741605.7545	2373781.703	21° 27' 1.034" N	83° 19' 52.731" E
397	P34	Patch-9_4	741317.4847	2371576.418	21° 25' 49.503" N	83° 19' 41.585" E
398	P35		741393.5261	2371407.166	21° 25' 43.966" N	83° 19' 44.138" E
399	P36		741442.8074	2371212.045	21° 25' 37.600" N	83° 19' 45.748" E
400	P37		741445.8274	2371013.149	21° 25' 31.135" N	83° 19' 45.750" E
401	P38	Patch-9_5	741705.489	2369608.91	21° 24' 45.372" N	83° 19' 54.038" E
402	P39		741737.7629	2369361.012	21° 24' 37.300" N	83° 19' 55.030" E
403	P40		741767.3357	2369112.773	21° 24' 29.218" N	83° 19' 55.928" E
404	P41		741858.669	2368885.77	21° 24' 21.796" N	83° 19' 58.981" E
405	P42		742012.821	2368689.858	21° 24' 15.355" N	83° 20' 4.229" E
406	P43		742173.3349	2368500.603	21° 24' 9.126" N	83° 20' 9.702" E
407	P44		742284.7153	2368277.016	21° 24' 1.806" N	83° 20' 13.452" E
408	P45		742336.6427	2368063.136	21° 23' 54.830" N	83° 20' 15.144" E
409	P46	Patch-9_6	742562.8817	2367195.519	21° 23' 26.523" N	83° 20' 22.546" E
410	P47		742580.6527	2367175.38	21° 23' 25.860" N	83° 20' 23.152" E
411	P48	Patch-9_7	742793.5986	2367041.945	21° 23' 21.420" N	83° 20' 30.473" E
412	P49		742964.6104	2366861.49	21° 23' 15.473" N	83° 20' 36.313" E
413	P50		743098.6999	2366697.021	21° 23' 10.062" N	83° 20' 40.881" E
414	P51	Patch-9_8	743631.9076	2365755.271	21° 22' 39.197" N	83° 20' 58.895" E
415	P52		743772.2681	2365548.396	21° 22' 32.405" N	83° 21' 3.657" E
416	P53		743907.4969	2365338.398	21° 22' 25.515" N	83° 21' 8.240" E
417	P54		743973.8565	2365158.891	21° 22' 19.649" N	83° 21' 10.450" E
418	P55		744014.997	2364954.62	21° 22' 12.990" N	83° 21' 11.771" E
419	P56		744124.0278	2364720.087	21° 22' 5.315" N	83° 21' 15.432" E
420	P57		744288.4209	2364550.817	21° 21' 59.734" N	83° 21' 21.048" E
421	P58	Patch-9_9	744455.4129	2364477.953	21° 21' 57.284" N	83° 21' 26.803" E
422	P59		744594.2044	2364372.575	21° 21' 53.792" N	83° 21' 31.564" E
423	P60		744723.6056	2364261.313	21° 21' 50.113" N	83° 21' 35.995" E
424	P61	Patch-9_10	745095.2591	2364113.765	21° 21' 45.136" N	83° 21' 48.813" E
425	P62		745091.8602	2364079.415	21° 21' 44.021" N	83° 21' 48.677" E
426	P63		745091.3537	2364045.144	21° 21' 42.908" N	83° 21' 48.641" E
427	P64	Patch-9_11	745337.476	2363846.81	21° 21' 36.342" N	83° 21' 57.077" E
428	P65		745374.3208	2363820.11	21° 21' 35.456" N	83° 21' 58.341" E
429	P66		745411.2796	2363793.569	21° 21' 34.576" N	83° 21' 59.610" E
430	P67	Patch-9_12	745446.067	2363768.334	21° 21' 33.738" N	83° 22' 0.803" E
431	P68		745547.6845	2363695.614	21° 21' 31.325" N	83° 22' 4.291" E
432	P69		745649.8541	2363623.672	21° 21' 28.937" N	83° 22' 7.798" E

DGPS Survey Points

RAIGARH DIVISION

Sr.No.	Point ID	Patch No	UTM Coordinates		Geographical Coordinates	
			Easting(m)	Northing(m)	Latitude "N"	Longitude "E"
433	P70	Patch-9_13	746152.678	2362627.429	21° 20' 56.314" N	83° 22' 24.720" E
434	P71		746165.7354	2362598.573	21° 20' 55.370" N	83° 22' 25.158" E
435	P72	Patch-9_14	746181.3051	2362565.561	21° 20' 54.289" N	83° 22' 25.681" E
436	P73		746184.6383	2362558.692	21° 20' 54.064" N	83° 22' 25.793" E


उप निरीक्षक अधिकारी
रायगढ़ (उ.ग.)


उप निरीक्षक अधिकारी
सारंगढ़ (स.ग.)


उप वनमण्डलाधिकारी
रायगढ़ उप वनमण्डल


उप वनमण्डलाधिकारी
रायगढ़ उप वनमण्डल

