

CHHATTISGARH BHARATNET PHASE-II PROJECT

LIDAR/DGPS SURVEY REPORT FOR INDRAVATI TIGER RESERVES, BIJAPUR FOREST DIVISION FOR DIVERSION OF PROPOSED OFC ROUTES

Forest Division : INDRAVATI TIGER RESERVES,
BIJAPUR FOREST DIVISION

Forest Land (RF/PF/OA) : 5.777 Ha.

Rev. Forest Land : 0.103 Ha.

Total Proposed Diversion Area : 5.880 Ha.

Block : BHAIRAMGARH AND USUR

District : BIJAPUR (C.G.)

Applicant -



**Chhattisgarh Infotech Promotion Society (CHiPS)
Raipur (Chhattisgarh)**


Dy. Director
Indravati Tiger Reserve
Bijapur (C.G.)

Submitted By –



TATA PROJECTS

Tata Projects Limited, Raipur (Chhattisgarh)



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1. Introduction and Background

1.1. Background

The Government of Chhattisgarh intends to setup an Optical Fibre Cable Network from the Block Head Quarters to Gram Panchayats to provide high speed broadband connectivity by connecting the 85 Blocks, 5987 Gram Panchayats across the State. The proposed network architecture for BharatNet Phase-II project follows ring architecture with Internet Protocol – Multi Protocol Label Switching (IP-MPLS) technology. The network shall be leveraged to deliver scalable bandwidth to households, institutions and enterprises. It is planned to have an IP-MPLS ring at GP level with provisioning of 6 dedicated core of fibre as mandated by Government of India.

The Chhattisgarh Infotech Promotion Society (CHIPS), a Registered Society promoted by the Government of Chhattisgarh, is the nodal agency and prime mover for propelling IT growth and implementation of IT plans in the State.

The Chhattisgarh Infotech Promotion Society (CHIPS) has selected an implementation partner “**Tata Project Limited**” for BharatNet Phase-II Project. The project has been conceived with the ambitious vision of providing connectivity to the yet unreached blocks in Chhattisgarh and entails massive investment on the infrastructure creation across the state which would serve as the information highway for decades to come.

1.2. Proposed Routes

The proposed routes in Bhairamgarh and Usur block with in Indravati Tiger Reserves, Bijapur Forest Division.



OFC Cable Proposed Routes in Bhairamgarh and Usur Block in Indravati Tiger Reserves, Bijapur Forest Division.

1.3. Location

The proposed OFC Cable route in Bijapur Forest Division (The OFC route Bhairamgarh and Usur Block; District: Bijapur). The Proposed OFC route length is 127.993 km in Bhairamgarh Block, and 33.932 Usur Block, out of this 193.183 km covered Bijapur Forest Division (General) and 161.925 km covered Indravati Tiger Reserves. The survey site passes through forest ranges Kutru Buffer, Bijapur Buffer and Madded Buffer of Indravati Tiger Reserves, Bijapur Forest Division. The OFC Cable route is covered under Survey of India Toposheets 65 A12, 65 A16 and 65 B09, 65 B10, and 65 B13 on RF 1:50000.

1.4. Objectives

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 LiDAR/Differential GPS (DGPS) and the same should be uploaded to MoEF website along with the online application.

To meet this requirement, **Tata Project Limited** entrusted the DGPS survey work to **Genesys International Corporation Limited, Mumbai** through Mobile LiDAR Technology.

2. Scope of Work

1. Establishment of Ground Control Pointy with 72 Hours observation which covering approx. 15 km radius of the proposed route.
2. DGPS Survey for collection of ground coordinates along the proposed OFC Cable trench at every 200 m 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
 - I. Geo-referencing of SOI Toposheet (scale 1:50000).
 - II. Creation of OFC Cable trench boundary vector map using the DGPS Surveyed data
 - III. Computation of Forest area and preparation of Forest Area Statement for proposed diversion. It includes Reserved/Protected Forest/ Orange Area & Revenue Forest Land.
 - IV. Preparation of Geo-referenced map showing proposed OFC Route.
 - V. Superimposition of cable route layer on Geo-referenced SOI Toposheet (scale 1:50000).
 - VI. Preparation of DGPS survey report along with soft copy of maps including shapefile format and kml file.
4. Preparation of Desired report, Geo-referenced maps and Technical compliance in Hard copy and soft copy.

3. Deliverables

The deliverables envisaged for the assignment are described below -

1. Proposed Forest Diversion area statement as per LiDAR / DGPS Survey of proposed OFC route.
2. Geo-referenced map showing proposed OFC route in forest area and superimposed on SOI maps based on LiDAR / DGPS observations – Hard and Soft Copy (Maps in PDF format, SHP and KML formats).
3. LiDAR / DGPS Survey and Mapping Reports containing Ground Control Points report as the primary Control Points.
4. DGPS Survey and mapping report on hard copy and soft copy in CD.

4. Technical Approach

4.1. GCP Establishment for LiDAR (DGPS) Survey:

DGPS Survey with high precision equipment was used in blocks to bring mapping in to a single co-ordinates system. These Ground Control Point (GCPs) were connected to the Mobile LiDAR Mapping for accuracy purpose. The Ground Control Point required for eliminates the traditional mapping. The system can achieve millimeter accuracy of vehicle positioning, 3-D coordinates, and objects measured from the Geo-referenced image sequences. The Ground Control Point with 72 Hours of DGPS observation for Post Processing the GCP data with International GNSS Service (IGS) stations.



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- when it has to be right



GNSS Processing Report - Summary

Report created: 03/31/2019 19:07:29

Project Details

General		Customer Details		Master Coordinate System	
Project Name:	CHIPS	Customer Name:	-	Coordinate System Name:	UTM44N
Owner:	GENESYS INTERNATIONAL CORPORATION LIMITED	Contact Person:	-	Transformation Type:	Classical 3D
Lead Surveyor:	-	Number:	-	Residual Distribution:	None
Date Created:	03/31/2019 14:21:05	Email:	-	Ellipsoid:	WGS 1984
Last Accessed:	03/31/2019 14:21:05	Skype:	-	Projection Type:	UTM
Application Software:	Infinity 2.3	Website:	-	Geoid Model:	EGM_2008
				CSCS Model:	-
Path:	D:\INFINITY PROJECTS\CHIPS\CHIPS.lpx				
Size:	5,395.3 MB				
Comments:	-				

SPP Point: 9453Base_1

Processing Parameters (05/26/2019 04:43:28 - 05/26/2019 12:53:14)

Data	Selected	Used	Comments
Cut-Off Angle:	15°	15°	
Frequency:	Automatic	L1/L2/L3/L4/L5	
Sampling Rate:	Use All	1 sec	
Satellite System:	GPS/GLONASS/Belidou	GPS/GLONASS/Belidou	
Ephemeris Type:	Broadcast	Broadcast	
Antenna Calibration Set:	Leica Relative	Leica Relative	

Processing Strategy		
Solution Type:	Phase Fixed	Navigated
Solution Optimization:	Automatic	None
Frequency to use in Ionosphere:	Automatic	Automatic
Tropospheric Model:	VMF with GPT2 model	VMF with GPT2 model
Ionospheric Model:	Automatic	Computed
Allow Widelane Fix:	Automatic	No

General Settings	
Min. Distance for Ionosphere:	15 km
Possible Ambiguities Fix up to:	300 km
Min. Duration for Float Solution (static):	00:05:00

Results SPP Point: 9453Base_1

Acquisition

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Duration:	08:09:46

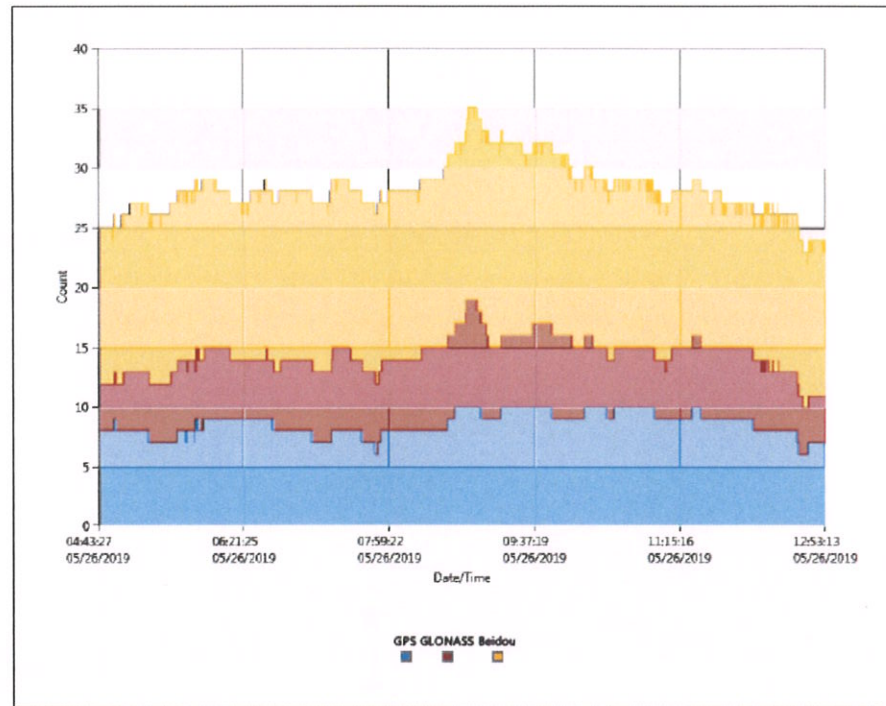
Antenna

Receiver Name / SN:	LEICA GS16 / 3031653
Antenna Name / SN:	LEICA GS16 / -
Carrier Offset:	0.3600 m
Height Reading:	1.5500 m
Antenna Height:	1.5100 m

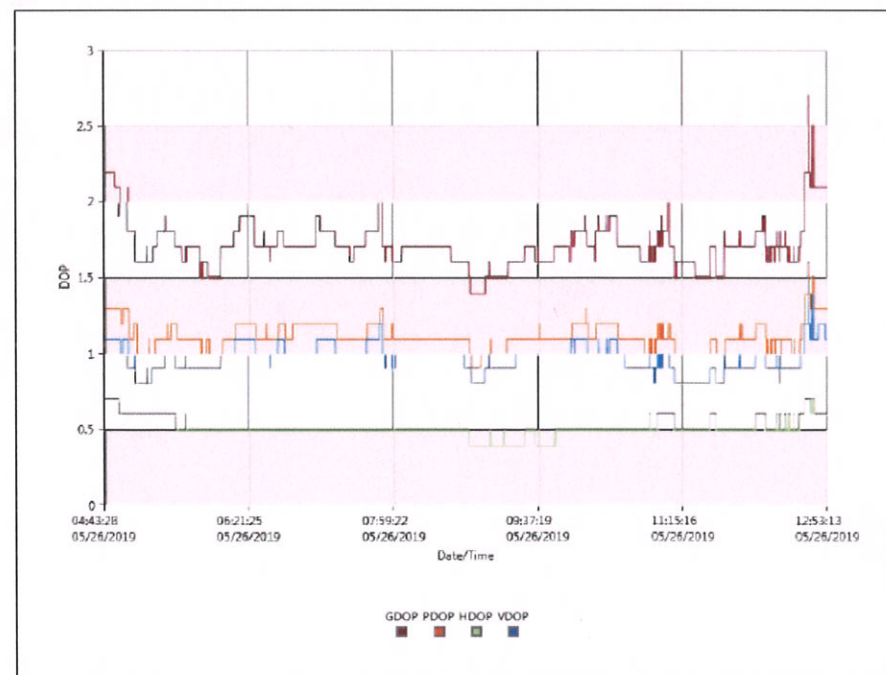
Processing Info (05/26/2019 04:43:28 - 05/26/2019 12:53:14)

Processed Date/Time: 07/31/2019 19:36:23

SVs Tracked



DOP



List of GCP's –

Sr.No	District	GCP No.	Latitude (D:M:S)	Longitude(D:M:S)	Easting	Northing
1	Bijapur	GPS-C30	N19°00'42.66891"	E81°14'26.18876"	525322.230	2102156.224
2	Bijapur	GPS-C33	N19°00'14.77503"	E81°06'18.77284"	511073.567	2101284.881
3	Bijapur	GPS-C34	N19°01'42.01550"	E80°57'50.35335"	496210.282	2103963.342
4	Bijapur	GPS-C35	N19°04'45.26491"	E80°49'49.43590"	482157.944	2109603.880
5	Bijapur	GPS-C36	N19°03'33.95907"	E80°41'37.02573"	467764.699	2107431.756
6	Bijapur	GPS-C37	N19°09'42.21290"	E80°43'31.18826"	471118.976	2118744.935

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



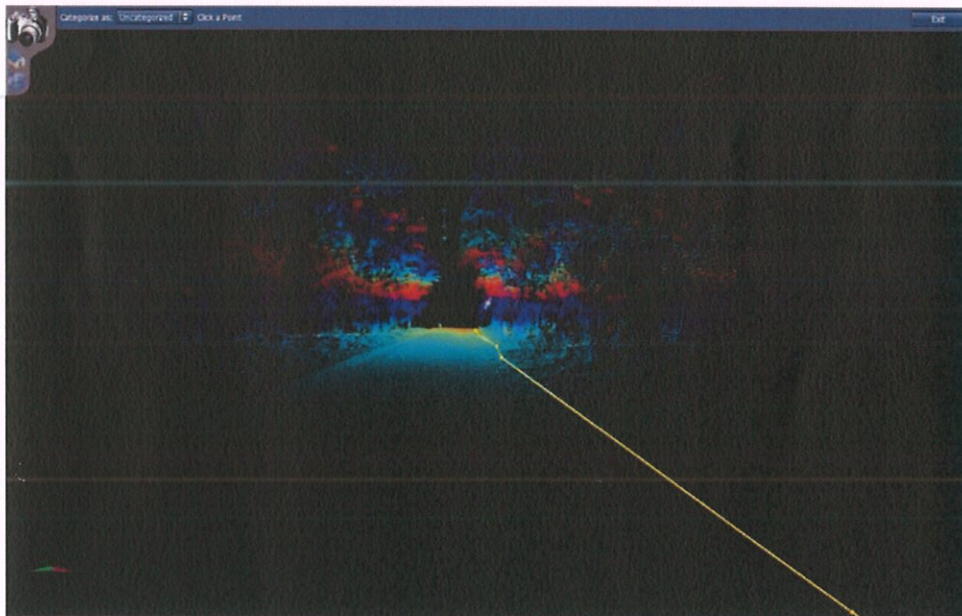
Final DRS / GIS Map

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.



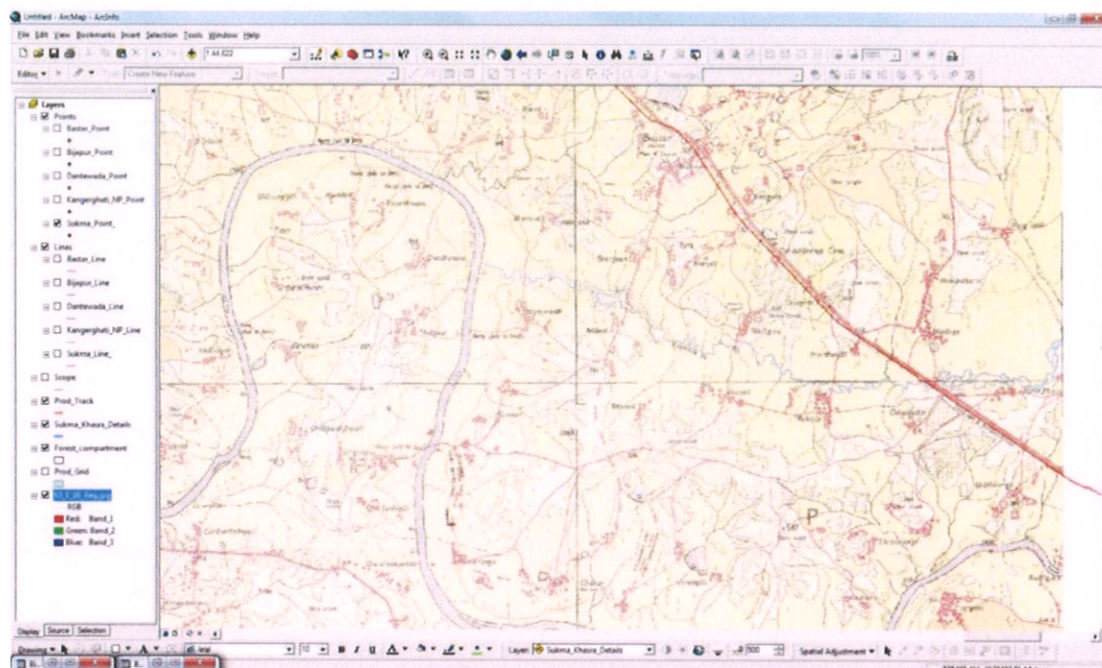
Proposed OFC Line on LiDAR Data (with Panoramic Imagery)



Proposed OFC Line on LiDAR Data only

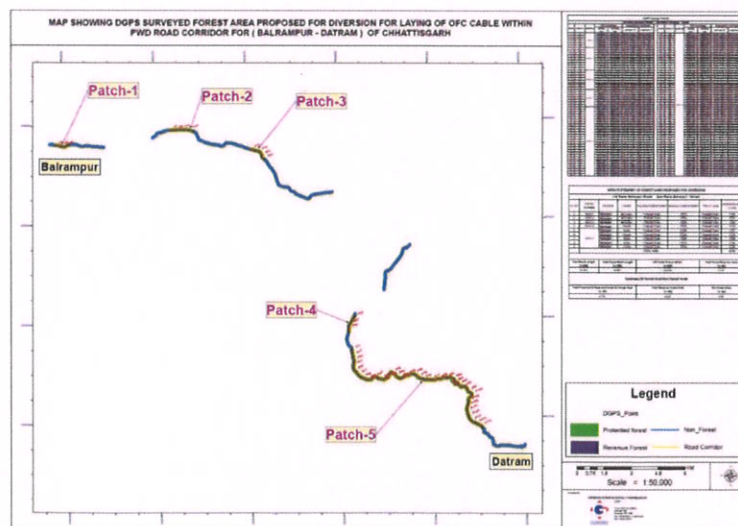
4.5. Geo-referencing of Maps:

Geo-referencing of Revenue Village Maps and SOI Toposheets are to be done. SOI Toposheets 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 on field. (At least 5 GCPs for a village having Government Forest Land are to be collected)



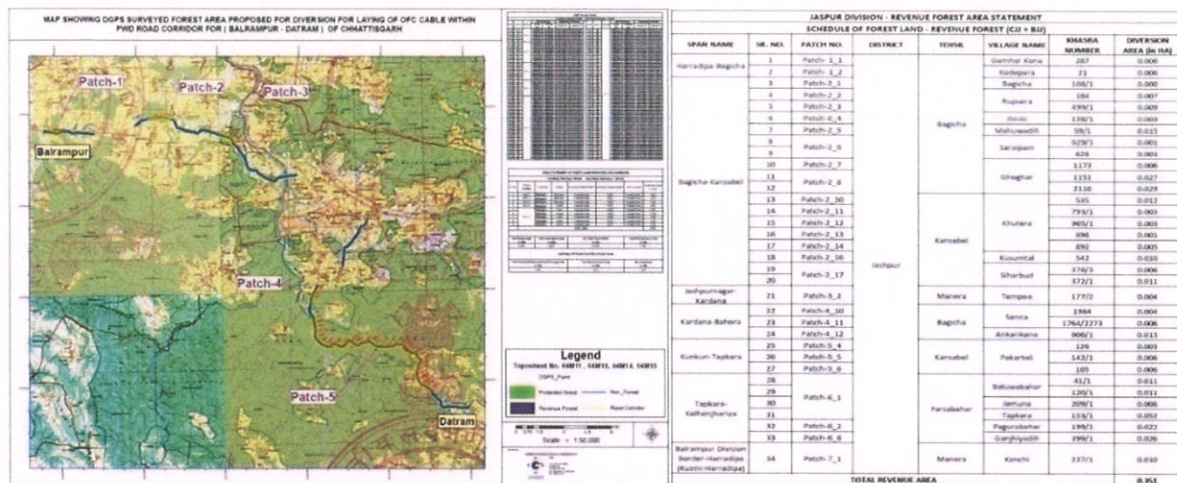
4.6. Creation of Vector Data for Forest Diversion:

Different Layers such as Polygon of Reserved Forest /Protected Forest /Orange Area Patch, Centerline of Proposed OFC Trench, Non-Forest Trench line, Polygons showing Revenue Forest patches etc. are to be created using the Lidar based GPS Observation, Geo-referenced maps and the information provided by the forest department and Revenue 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. The reports are generated for DGPS Points (with Lat/long) placed at the regular intervals of 100 m 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

5. DGPS Survey Results

The total OFC route length is approx. 161.925 km. covered Bhairamgarh and Usur Block of Bijapur District. Out of this 44.332 km OFC route length is passing through Non Forest Land and 117.593 km OFC route length is passing through Forest Patches hence the proposed forest area for diversion 5.880 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

5.1. Forest Area Statement (Annexure-1)

Forest Area Statement – Bhairamgarh and Usur Block with in Indravati Tiger Reserves Bijapur Forest Division, District - Bijapur, C.G						
Total Route Length (in km.)	Length of Non Forest Land (in km)	Width of Non Forest Land (in km)	Area of Non-Forest Land (in Ha.)	Length of Forest Land (in km.)	Width of Forest Land (in km.)	Area of Proposed Forest Land (in Ha.)
161.925	44.332	0.0005	2.216	117.593	0.0005	5.880

Indravati Tiger Reserves Bijapur Forest Division – Total Forest Area for Diversion Proposal						
Sl. No.	Forest Division	Forest range	No of Compartment	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
1	Indravati Tiger Reserves Bijapur	Kutru Buffer	49	107145.972	0.5	5.357
1	Indravati Tiger Reserves Bijapur	Bijapur Buffer	3	6750.379	0.5	0.338
1	Indravati Tiger Reserves Bijapur	Madded Buffer	1	1637.066	0.5	0.082
Total of Table A						
			53	115533.417	0.5	5.777
Sl. No.	District	Block	No of Khasra	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
	Bijapur	Bhairamgarh	3	2059.123		0.103
Total of Table B						
			3	2059.123	0.5	0.103
Total Diversion Area (Table A+TableB)						
				117592.540	0.5	5.880



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Table A - Area statement for proposed forest Patches - Protected /Reserve/Orange Area

Sl. No.	Patch	Block	Forest Division	Route Name	Forest Range	Type	Comp. No	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
1	1	Bhairamgarh	Bijapur	Ambeli To Uskapatnam	Kutru Buffer	OA	OA 1061	225.559	0.5	0.012
2	1	Bhairamgarh	Bijapur	Ambeli To Uskapatnam	Kutru Buffer	RF	47	962.268	0.5	0.048
3	1	Bhairamgarh	Bijapur	Ambeli To Uskapatnam	Kutru Buffer	RF	52	1710.776	0.5	0.085
4	1	Bhairamgarh	Bijapur	Karkeli To Uskapatnam	Kutru Buffer	OA	OA 1061	1718.099	0.5	0.086
5	1	Bhairamgarh	Bijapur	Karkeli To Uskapatnam	Kutru Buffer	OA	OA 1060	11550.327	0.5	0.578
6	1	Bhairamgarh	Bijapur	Kutru To Ambeli	Kutru Buffer	OA	OA 1073	1978.054	0.5	0.099
7	1	Bhairamgarh	Bijapur	Kutru To Ambeli	Kutru Buffer	OA	OA 1072	2605.237	0.5	0.130
8	1	Bhairamgarh	Bijapur	Kutru To Ambeli	Kutru Buffer	RF	52	3210.281	0.5	0.160
9	1	Bhairamgarh	Bijapur	Kutru To Uskapatnam	Kutru Buffer	OA	OA 1061	314.708	0.5	0.016
10	1	Bhairamgarh	Bijapur	Kutru To Uskapatnam	Kutru Buffer	OA	OA 1073	1978.967	0.5	0.098
11	1	Bhairamgarh	Bijapur	Kutru To Uskapatnam	Kutru Buffer	OA	OA 1072	2602.409	0.5	0.130
12	1	Bhairamgarh	Bijapur	Kutru To Uskapatnam	Kutru Buffer	RF	47	951.818	0.5	0.048
13	1	Bhairamgarh	Bijapur	Kutru To Uskapatnam	Kutru Buffer	RF	52	1906.592	0.5	0.095
14	1	Bhairamgarh	Bijapur	Painkram To Somanpalli	Kutru Buffer	OA	OA 1108	3614.552	0.5	0.182
15	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	OA	OA 1070	761.965	0.5	0.038
16	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	OA	OA 1073	1334.583	0.5	0.067
17	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	OA	OA 1069	1417.794	0.5	0.071
18	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	RF	50	2597.698	0.5	0.130
19	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	OA	OA 1108	4434.542	0.5	0.222
20	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	PF	P99	403.363	0.5	0.020
21	1	Bhairamgarh	Bijapur	Somanpalli To Kutru	Kutru Buffer	PF	P98	1526.809	0.5	0.076
22	1	Bhairamgarh	Bijapur	Toynar To Painkram	Kutru Buffer	OA	OA 1108	3538.889	0.5	0.177
23	1	Bhairamgarh	Bijapur	Toynar To Painkram	Kutru Buffer	OA	OA 1113	3133.526	0.5	0.157

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Table A - Area statement for proposed forest Patches - Protected / Reserve / Orange Area

Sl. No.	Patch	Block	Forest Division	Route Name	Forest Range	Type	Comp. No	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
24	1	Bhairamgarh	Bijapur	Toynar To Painkram	Kutru Buffer	RF	120	2102.056	0.5	0.105
25	1	Bhairamgarh	Bijapur	Toynar To Painkram	Kutru Buffer	PF	P125	2480.066	0.5	0.124
26	2	Bhairamgarh	Bijapur	Darbha To Kutru	Kutru Buffer	RF	58	1541.523	0.5	0.077
27	2	Bhairamgarh	Bijapur	Darbha To Kutru	Kutru Buffer	RF	60	1847.662	0.5	0.093
28	2	Bhairamgarh	Bijapur	Darbha To Kutru	Kutru Buffer	RF	63	3033.997	0.5	0.152
29	2	Bhairamgarh	Bijapur	Darbha To Kutru	Kutru Buffer	OA	OA 1105	2435.234	0.5	0.122
30	2	Bhairamgarh	Bijapur	Ketulnar To Darbha	Kutru Buffer	RF	63	1165.044	0.5	0.058
31	3	Bhairamgarh	Bijapur	Gudma To Ketulnar	Kutru Buffer	OA	OA 1104	1206.502	0.5	0.060
32	3	Bhairamgarh	Bijapur	Gudma To Ketulnar	Kutru Buffer	PF	P92	2591.495	0.5	0.130
33	4	Bhairamgarh	Bijapur	Gadamali To Eeramnar	Kutru Buffer	OA	OA 1096	930.875	0.5	0.047
34	4	Bhairamgarh	Bijapur	Gadamali To Eeramnar	Kutru Buffer	OA	OA 1095	1419.910	0.5	0.071
35	4	Bhairamgarh	Bijapur	Gadamali To Gudma	Kutru Buffer	OA	OA 1095	1363.313	0.5	0.068
36	4	Bhairamgarh	Bijapur	Gadamali To Gudma	Kutru Buffer	OA	OA 1097	1942.780	0.5	0.097
37	4	Bhairamgarh	Bijapur	Gadamali To Gudma	Kutru Buffer	OA	OA 1100	1413.326	0.5	0.071
38	4	Bhairamgarh	Bijapur	Gadamali To Gudma	Kutru Buffer	PF	P70	2628.810	0.5	0.131
39	4	Bhairamgarh	Bijapur	Gudma To Ketulnar	Kutru Buffer	OA	OA 1100	1184.115	0.5	0.059
40	4	Bhairamgarh	Bijapur	Gudma To Ketulnar	Kutru Buffer	OA	OA 1099	1536.691	0.5	0.077
41	4	Bhairamgarh	Bijapur	Kompalli To Gudma	Kutru Buffer	OA	OA 1100	3869.551	0.5	0.193
42	4	Bhairamgarh	Bijapur	Kompalli To Gudma	Kutru Buffer	PF	P81	2108.172	0.5	0.105
43	5	Bhairamgarh	Bijapur	Eeramnar To Toynar	Kutru Buffer	PF	P74	1116.251	0.5	0.055
44	5	Bhairamgarh	Bijapur	Eeramnar To Toynar	Kutru Buffer	PF	P73	2745.135	0.5	0.136
45	5	Bhairamgarh	Bijapur	Gadamali To Eeramnar	Kutru Buffer	PF	P73	150.850	0.5	0.008
46	6	Bhairamgarh	Bijapur	Gadamali To Eeramnar	Kutru Buffer	OA	OA 1094	3231.153	0.5	0.162

Chhattisgarh BharatNet Phase-II Project

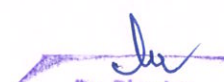
Table A - Area statement for proposed forest Patches – Protected /Reserve/Orange Area										
Sl. No.	Patch	Block	Forest Division	Route Name	Forest Range	Type	Comp. No	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
47	6	Bhairamgarh	Bijapur	Gadamali To Gudma	Kutru Buffer	OA	OA 1094	3221.219	0.5	0.161
48	6	Bhairamgarh	Bijapur	Jaiwaram To Gadamali	Kutru Buffer	OA	OA 1093	1662.918	0.5	0.083
49	6	Bhairamgarh	Bijapur	Jaiwaram To Gadamali	Kutru Buffer	PF	P69	3738.508	0.5	0.187
				Total-			49	107145.972	0.5	5.357
51	1	Bhairamgarh	Bijapur	Toynar To Painkram	Bijapur Buffer	OA	OA 1114	870.517	0.5	0.044
50	6	Bhairamgarh	Bijapur	Eeramnar To Toynar	Bijapur Buffer	OA	OA 1131	2134.284	0.5	0.107
52	7	Usur	Bijapur	Murkinar To Sankanpalli	Bijapur Buffer	PF	P184	3745.578	0.5	0.187
				Total-			3	6750.379	0.5	0.338
53	8	Usur	Bijapur	Murkinar To Sankanpalli	Madded Buffer	PF	P714	1637.066	0.5	0.082
				Total-			1	1637.066	0.5	0.082
				Grand Total-			53	115533.417	0.5	5.777

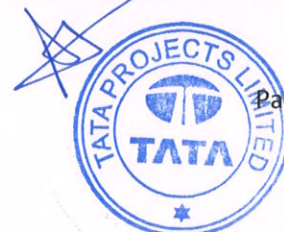
Table B - Area statement ent for proposed forest Patches – Revenue Forest land (Chhote / Bade Jhad ka Jangal)										
Sl No.	Patch	District	Block	Route Name	Village	Type	Khasra No	Length (in m.)	Width (in m.)	Proposed Area (In Ha.)
1	1	Bijapur	Bhairamgarh	Karkeli To Uskapatnam	Karkeli	BJJ	194	1490.731	0.5	0.075
2	1	Bijapur	Bhairamgarh	Karkeli To Bedre	Karkeli	BJJ	37	489.510	0.5	0.024
3	2	Bijapur	Bhairamgarh	Ketulnar To Sankanpalli	Ketulnar	BJJ	202	78.882	0.5	0.004
Total-							3	2059.123	0.5	0.103



5.2. LiDAR/DGPS Surveyed coordinates of Forest Patches (Annexure-2)

Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-1	1	19°08'22.25163"	80°44'42.31959"	P-51	1	19°09'32.77187"	80°43'38.91449"
P-2	1	19°08'19.00695"	80°44'48.25419"	P-52	1	19°09'27.22261"	80°43'42.45339"
P-3	1	19°08'18.59211"	80°44'49.01249"	P-53	1	19°09'21.49731"	80°43'45.69420"
P-4	1	19°08'35.25831"	80°44'19.44676"	P-54	1	19°09'16.36205"	80°43'49.88826"
P-5	1	19°08'41.06999"	80°44'16.37860"	P-55	1	19°09'11.77712"	80°43'54.74460"
P-6	1	19°08'46.50549"	80°44'12.62419"	P-56	1	19°09'06.68091"	80°43'58.99769"
P-7	1	19°08'52.52760"	80°44'10.10655"	P-57	1	19°09'02.21035"	80°44'03.95818"
P-8	1	19°08'58.32541"	80°44'07.04896"	P-58	1	19°08'56.88037"	80°44'07.79407"
P-9	1	19°09'03.35642"	80°44'02.82886"	P-59	1	19°08'50.90998"	80°44'10.42142"
P-10	1	19°09'08.04118"	80°43'58.10076"	P-60	1	19°08'45.08218"	80°44'13.40721"
P-11	1	19°09'13.00233"	80°43'53.68683"	P-61	1	19°08'39.59316"	80°44'17.05638"
P-12	1	19°09'17.67138"	80°43'48.92565"	P-62	1	19°08'35.22774"	80°44'19.37349"
P-13	1	19°09'22.92161"	80°43'44.90972"	P-63	1	19°08'25.09242"	80°44'43.69908"
P-14	1	19°09'28.70308"	80°43'41.77741"	P-64	1	19°08'23.90673"	80°44'39.27865"
P-15	1	19°09'34.10864"	80°43'38.00791"	P-65	1	19°08'26.50645"	80°44'33.00822"
P-16	1	19°09'39.20862"	80°43'33.76039"	P-66	1	19°08'28.21360"	80°44'26.40938"
P-17	1	19°09'44.35345"	80°43'29.57100"	P-67	1	19°08'32.26103"	80°44'21.28430"
P-18	1	19°09'49.61429"	80°43'25.60345"	P-68	1	19°08'32.57242"	80°44'20.91770"
P-19	1	19°09'55.90849"	80°43'24.19667"	P-69	1	19°08'28.28993"	80°44'25.85983"
P-20	1	19°10'02.39195"	80°43'24.64570"	P-70	1	19°08'26.60288"	80°44'32.46522"
P-21	1	19°10'08.87446"	80°43'24.68198"	P-71	1	19°08'23.97533"	80°44'38.72074"
P-22	1	19°10'15.31979"	80°43'23.75260"	P-72	1	19°08'22.23011"	80°44'42.31963"
P-23	1	19°10'21.81567"	80°43'23.58343"	P-73	1	19°06'25.73660"	80°47'00.44191"
P-24	1	19°10'27.92302"	80°43'25.89960"	P-74	1	19°06'20.34220"	80°47'04.25697"
P-25	1	19°10'34.10262"	80°43'28.03592"	P-75	1	19°06'14.02571"	80°47'05.77032"
P-26	1	19°10'40.45381"	80°43'29.36317"	P-76	1	19°06'07.63349"	80°47'06.98873"
P-27	1	19°10'46.88278"	80°43'28.65731"	P-77	1	19°06'01.75694"	80°47'09.85652"
P-28	1	19°10'53.04927"	80°43'26.47511"	P-78	1	19°05'56.60651"	80°47'13.98997"
P-29	1	19°10'59.01840"	80°43'23.75480"	P-79	1	19°05'51.55680"	80°47'18.28236"
P-30	1	19°11'04.63220"	80°43'20.31897"	P-80	1	19°05'46.16662"	80°47'22.11618"
P-31	1	19°11'09.61061"	80°43'15.92706"	P-81	1	19°05'40.72770"	80°47'25.85808"


 Dy. Director
 Indrawati Tiger Reserve
 Bijapur (C.G.)



Chhattisgarh BharatNet Phase-II Project

Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-32	1	19°11'14.25095"	80°43'11.12633"	P-82	1	19°05'34.53771"	80°47'24.37802"
P-33	1	19°11'17.67898"	80°43'07.41875"	P-83	1	19°05'29.02701"	80°47'22.50396"
P-34	1	19°11'13.04078"	80°43'12.22112"	P-84	1	19°07'32.64645"	80°46'12.02568"
P-35	1	19°11'08.35938"	80°43'16.97666"	P-85	1	19°07'29.41508"	80°46'16.97352"
P-36	1	19°11'03.22144"	80°43'21.16244"	P-86	1	19°07'27.18014"	80°46'23.36040"
P-37	1	19°10'57.47599"	80°43'24.34902"	P-87	1	19°07'22.87298"	80°46'28.34710"
P-38	1	19°10'51.39832"	80°43'26.78232"	P-88	1	19°07'17.61540"	80°46'32.37870"
P-39	1	19°10'45.22260"	80°43'28.91275"	P-89	1	19°07'12.34522"	80°46'36.39332"
P-40	1	19°10'38.74832"	80°43'29.09304"	P-90	1	19°07'06.69669"	80°46'39.77837"
P-41	1	19°10'32.46540"	80°43'27.32477"	P-91	1	19°07'00.80432"	80°46'42.68093"
P-42	1	19°10'26.34939"	80°43'24.99413"	P-92	1	19°06'54.84471"	80°46'45.42218"
P-43	1	19°10'20.11252"	80°43'23.31758"	P-93	1	19°06'48.77726"	80°46'47.87725"
P-44	1	19°10'13.63022"	80°43'23.76030"	P-94	1	19°06'43.09402"	80°46'51.20648"
P-45	1	19°10'07.19192"	80°43'24.70811"	P-95	1	19°06'36.91746"	80°46'53.30835"
P-46	1	19°10'00.71948"	80°43'24.25041"	P-96	1	19°06'31.10731"	80°46'56.27372"
P-47	1	19°09'54.22699"	80°43'24.03318"	P-97	1	19°06'25.87686"	80°47'00.34015"
P-48	1	19°09'48.13414"	80°43'26.24478"	P-98	1	19°06'25.73660"	80°47'00.44191"
P-49	1	19°09'43.01876"	80°43'30.47638"	P-99	1	19°05'29.01850"	80°47'22.88396"
P-50	1	19°09'37.82854"	80°43'34.60563"	P-100	1	19°05'35.25050"	80°47'24.85272"
P-101	1	19°05'41.42959"	80°47'25.71541"	P-151	1	19°08'14.95161"	80°44'54.67781"
P-102	1	19°05'46.76516"	80°47'21.81606"	P-152	1	19°08'11.23793"	80°45'00.28180"
P-103	1	19°05'52.19438"	80°47'18.04369"	P-153	1	19°08'07.95358"	80°45'05.88282"
P-104	1	19°05'57.20686"	80°47'13.68543"	P-154	1	19°08'04.44515"	80°45'11.64626"
P-105	1	19°06'02.36780"	80°47'09.54174"	P-155	1	19°08'02.20598"	80°45'16.65954"
P-106	1	19°06'08.35483"	80°47'06.93557"	P-156	1	19°08'02.20598"	80°45'16.65954"
P-107	1	19°06'14.75739"	80°47'05.73536"	P-157	1	19°08'00.15034"	80°45'23.15410"
P-108	1	19°06'20.98828"	80°47'03.97976"	P-158	1	19°07'54.52963"	80°45'20.10164"
P-109	1	19°06'25.79608"	80°47'00.52573"	P-159	1	19°07'48.11623"	80°45'20.67383"
P-110	1	19°08'18.69723"	80°44'49.11695"	P-160	1	19°07'41.71623"	80°45'21.26385"
P-111	1	19°08'21.92509"	80°44'43.17297"	P-161	1	19°07'35.26451"	80°45'21.65312"
P-112	1	19°08'25.11394"	80°44'43.69905"	P-162	1	19°07'29.68164"	80°45'18.33932"
P-113	1	19°06'25.79608"	80°47'00.52573"	P-163	1	19°07'23.23614"	80°45'18.69941"
P-114	1	19°06'31.06715"	80°46'56.51413"	P-164	1	19°07'16.93561"	80°45'18.98058"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-115	1	19°06'36.86817"	80°46'53.48972"	P-165	1	19°07'14.36396"	80°45'20.24566"
P-116	1	19°06'43.04827"	80°46'51.42328"	P-166	1	19°07'14.36396"	80°45'20.24566"
P-117	1	19°06'48.71726"	80°46'48.06673"	P-167	1	19°07'19.24889"	80°45'19.32635"
P-118	1	19°06'54.80341"	80°46'45.65411"	P-168	1	19°07'25.69250"	80°45'18.53689"
P-119	1	19°07'00.72197"	80°46'42.81301"	P-169	1	19°07'31.89144"	80°45'19.58177"
P-120	1	19°07'06.62351"	80°46'39.92969"	P-170	1	19°07'37.66295"	80°45'21.88694"
P-121	1	19°07'12.29184"	80°46'36.57668"	P-171	1	19°07'44.06509"	80°45'20.88072"
P-122	1	19°07'17.56819"	80°46'32.57240"	P-172	1	19°07'50.45435"	80°45'20.20936"
P-123	1	19°07'22.88120"	80°46'28.62013"	P-173	1	19°07'56.70395"	80°45'21.33187"
P-124	1	19°07'27.20745"	80°46'23.63233"	P-174	1	19°07'59.63102"	80°45'26.11482"
P-125	1	19°07'29.46028"	80°46'17.24949"	P-175	1	19°07'58.51200"	80°45'32.85098"
P-126	1	19°07'32.64600"	80°46'12.29418"	P-176	1	19°07'54.91473"	80°45'38.47403"
P-127	1	19°07'32.70841"	80°46'12.24429"	P-177	1	19°07'50.17415"	80°45'43.14537"
P-128	1	19°05'28.56454"	80°47'23.92509"	P-178	1	19°07'45.90318"	80°45'48.31022"
P-129	1	19°05'29.40257"	80°47'17.49213"	P-179	1	19°07'42.77662"	80°45'54.27234"
P-130	1	19°05'23.21586"	80°47'15.37866"	P-180	1	19°07'39.90469"	80°46'00.39791"
P-131	1	19°05'18.03221"	80°47'11.69419"	P-181	1	19°07'36.00999"	80°46'05.84364"
P-132	1	19°05'15.79750"	80°47'05.28186"	P-182	1	19°07'32.87405"	80°46'11.76668"
P-133	1	19°05'14.33003"	80°46'58.61566"	P-183	1	19°07'32.64645"	80°46'12.02568"
P-134	1	19°05'12.90955"	80°46'51.93870"	P-184	1	19°08'02.30644"	80°45'16.64062"
P-135	1	19°05'11.84222"	80°46'47.47968"	P-185	1	19°08'05.24194"	80°45'10.56071"
P-136	1	19°05'18.89321"	80°45'43.87687"	P-186	1	19°08'08.73828"	80°45'04.79037"
P-137	1	19°05'18.08856"	80°45'37.12970"	P-187	1	19°08'12.27282"	80°44'59.05382"
P-138	1	19°05'18.16878"	80°45'30.28986"	P-188	1	19°08'15.91799"	80°44'53.41240"
P-139	1	19°05'20.00487"	80°45'23.78694"	P-189	1	19°08'18.69723"	80°44'49.11695"
P-140	1	19°05'19.15495"	80°45'18.34440"	P-190	1	19°07'32.70841"	80°46'12.24429"
P-141	1	19°05'20.72125"	80°43'56.90994"	P-191	1	19°07'35.78169"	80°46'06.37642"
P-142	1	19°05'17.88872"	80°43'50.78213"	P-192	1	19°07'39.77743"	80°46'00.98540"
P-143	1	19°05'16.24721"	80°43'44.16901"	P-193	1	19°07'42.57508"	80°45'54.82629"
P-144	1	19°05'14.50382"	80°43'37.58071"	P-194	1	19°07'45.63555"	80°45'48.80890"
P-145	1	19°05'11.95144"	80°43'31.32144"	P-195	1	19°07'49.92108"	80°45'43.66094"
P-146	1	19°05'08.85848"	80°43'25.36651"	P-196	1	19°07'54.61249"	80°45'38.94895"
P-147	1	19°05'03.71557"	80°43'21.54755"	P-197	1	19°07'58.44510"	80°45'33.44947"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-148	1	19°04'59.51045"	80°43'16.49395"	P-198	1	19°07'59.66723"	80°45'26.73833"
P-149	1	19°04'59.14676"	80°43'16.04117"	P-199	1	19°08'01.22644"	80°45'20.10742"
P-150	1	19°08'18.59211"	80°44'49.01249"	P-200	1	19°08'02.30644"	80°45'16.64062"
P-201	1	19°03'27.73475"	80°41'36.35432"	P-251	1	19°00'59.80672"	80°41'17.76346"
P-202	1	19°03'22.68629"	80°41'33.86683"	P-252	1	19°00'53.46196"	80°41'16.25179"
P-203	1	19°03'16.65560"	80°41'31.35330"	P-253	1	19°00'47.14279"	80°41'14.63054"
P-204	1	19°03'10.71748"	80°41'28.55996"	P-254	1	19°00'40.85541"	80°41'12.90426"
P-205	1	19°03'04.79502"	80°41'25.76822"	P-255	1	19°00'34.51441"	80°41'11.39469"
P-206	1	19°02'58.39067"	80°41'24.75167"	P-256	1	19°00'28.12319"	80°41'10.11900"
P-207	1	19°02'51.88850"	80°41'24.97140"	P-257	1	19°00'21.78135"	80°41'08.62709"
P-208	1	19°02'45.39806"	80°41'25.45950"	P-258	1	19°00'15.68195"	80°41'06.27196"
P-209	1	19°02'38.89747"	80°41'25.33790"	P-259	1	19°00'09.55088"	80°41'04.02718"
P-210	1	19°02'32.83065"	80°41'22.89279"	P-260	1	19°00'03.92885"	80°41'00.79491"
P-211	1	19°02'26.47079"	80°41'21.49610"	P-261	1	18°59'57.62496"	80°40'59.12180"
P-212	1	19°02'20.00680"	80°41'20.79182"	P-262	1	18°59'51.17648"	80°40'59.76500"
P-213	1	19°02'13.63632"	80°41'19.44031"	P-263	1	18°59'46.75969"	80°41'00.76484"
P-214	1	19°02'07.76792"	80°41'16.68372"	P-264	1	18°59'46.75969"	80°41'00.76484"
P-215	1	19°02'01.73186"	80°41'14.21108"	P-265	1	18°59'40.63972"	80°41'03.04829"
P-216	1	19°01'55.29826"	80°41'13.77907"	P-266	1	18°59'34.41854"	80°41'04.99964"
P-217	1	19°01'49.35691"	80°41'16.51225"	P-267	1	18°59'29.07783"	80°41'08.83858"
P-218	1	19°01'43.26734"	80°41'18.71820"	P-268	1	18°59'24.32725"	80°41'13.50585"
P-219	1	19°01'37.80556"	80°41'19.91201"	P-269	1	18°59'18.92409"	80°41'17.28590"
P-220	1	19°01'37.73168"	80°41'20.04196"	P-270	1	18°59'12.78869"	80°41'19.50643"
P-221	1	19°04'59.14676"	80°43'16.04117"	P-271	1	18°59'06.37762"	80°41'20.18573"
P-222	1	19°04'55.57065"	80°43'10.33890"	P-272	1	18°58'59.90363"	80°41'19.53245"
P-223	1	19°04'52.92979"	80°43'04.34692"	P-273	1	18°58'53.47999"	80°41'18.45197"
P-224	1	19°04'49.68054"	80°42'58.45755"	P-274	1	18°58'47.13952"	80°41'16.93742"
P-225	1	19°04'46.08323"	80°42'52.99830"	P-275	1	18°58'40.65212"	80°41'16.54050"
P-226	1	19°04'43.28154"	80°42'46.93827"	P-276	1	18°58'34.35380"	80°41'18.18613"
P-227	1	19°04'43.28853"	80°42'40.10876"	P-277	1	18°58'28.18803"	80°41'20.36884"
P-228	1	19°04'42.52773"	80°42'33.34712"	P-278	1	18°58'22.10476"	80°41'22.77001"
P-229	1	19°04'39.63557"	80°42'27.58380"	P-279	1	18°58'15.93093"	80°41'24.92165"
P-230	1	19°04'36.19055"	80°42'21.93168"	P-280	1	18°58'11.76943"	80°41'26.23233"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-231	1	19°04'31.04948"	80°42'17.86545"	P-281	1	18°57'26.06664"	80°42'17.05844"
P-232	1	19°04'25.88291"	80°42'13.76225"	P-282	1	18°57'21.75747"	80°42'22.18126"
P-233	1	19°04'20.31046"	80°42'10.45170"	P-283	1	18°57'17.62251"	80°42'27.45425"
P-234	1	19°04'14.17661"	80°42'09.99159"	P-284	1	18°57'13.99104"	80°42'33.11224"
P-235	1	19°04'07.96671"	80°42'08.17120"	P-285	1	18°57'08.88230"	80°42'37.06867"
P-236	1	19°04'02.89823"	80°42'03.99172"	P-286	1	18°57'06.65389"	80°42'37.63603"
P-237	1	19°03'57.98040"	80°41'59.52353"	P-287	1	18°58'11.76943"	80°41'26.23233"
P-238	1	19°03'53.39391"	80°41'54.80914"	P-288	1	18°58'05.94423"	80°41'29.11573"
P-239	1	19°03'48.86467"	80°41'50.25938"	P-289	1	18°58'02.30633"	80°41'34.74099"
P-240	1	19°03'44.66292"	80°41'45.05793"	P-290	1	18°57'59.03108"	80°41'40.65080"
P-241	1	19°03'40.00206"	80°41'40.30112"	P-291	1	18°57'55.63634"	80°41'46.46198"
P-242	1	19°03'34.22340"	80°41'37.34459"	P-292	1	18°57'51.18970"	80°41'51.45072"
P-243	1	19°03'28.10393"	80°41'35.47829"	P-293	1	18°57'46.27367"	80°41'55.85275"
P-244	1	19°03'27.73475"	80°41'36.35432"	P-294	1	18°57'40.69804"	80°41'59.37514"
P-245	1	19°01'37.73168"	80°41'20.04196"	P-295	1	18°57'35.34029"	80°42'03.24261"
P-246	1	19°01'32.03093"	80°41'19.05579"	P-296	1	18°57'31.15915"	80°42'08.45552"
P-247	1	19°01'25.52681"	80°41'19.18541"	P-297	1	18°57'28.38058"	80°42'14.55936"
P-248	1	19°01'19.01991"	80°41'19.14350"	P-298	1	18°57'26.06664"	80°42'17.05844"
P-249	1	19°01'12.51290"	80°41'19.13470"	P-299	1	18°57'06.65389"	80°42'37.63603"
P-250	1	19°01'06.04208"	80°41'19.59401"	P-300	1	18°57'00.25752"	80°42'38.88202"
P-301	1	18°56'54.51854"	80°42'41.87927"	P-351	2	19°04'36.33188"	80°50'00.76967"
P-302	1	18°56'49.00518"	80°42'45.51034"	P-352	2	19°04'40.24927"	80°49'55.49882"
P-303	1	18°56'43.53173"	80°42'49.20494"	P-353	2	19°04'44.64192"	80°49'50.92566"
P-304	1	18°56'38.00073"	80°42'52.80420"	P-354	2	19°04'47.02711"	80°49'44.55814"
P-305	1	18°56'32.38225"	80°42'56.25194"	P-355	2	19°04'49.41841"	80°49'38.19297"
P-306	1	18°56'26.75640"	80°42'59.68831"	P-356	2	19°04'51.75821"	80°49'31.80665"
P-307	1	18°56'21.08103"	80°43'03.03323"	P-357	2	19°04'54.13132"	80°49'25.43387"
P-308	1	18°56'15.54397"	80°43'06.61641"	P-358	2	19°04'55.92179"	80°49'18.91241"
P-309	1	18°56'10.16638"	80°43'10.46671"	P-359	2	19°04'56.02669"	80°49'14.07112"
P-310	1	18°56'05.00116"	80°43'14.61449"	P-360	2	19°03'20.40079"	80°51'22.45108"
P-311	1	18°55'59.97879"	80°43'18.96238"	P-361	2	19°03'25.26924"	80°51'25.58985"
P-312	1	18°55'57.91842"	80°43'20.65653"	P-362	2	19°03'29.21690"	80°51'30.91399"
P-313	1	19°05'19.15495"	80°45'18.34440"	P-363	2	19°03'31.20588"	80°51'37.25976"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-314	1	19°05'22.20877"	80°45'12.39490"	P-364	2	19°03'36.30018"	80°51'41.27798"
P-315	1	19°05'24.68552"	80°45'06.13600"	P-365	2	19°03'42.01347"	80°51'44.11086"
P-316	1	19°05'25.49148"	80°44'59.34815"	P-366	2	19°03'48.45047"	80°51'45.08228"
P-317	1	19°05'27.28748"	80°44'52.82599"	P-367	2	19°03'54.90018"	80°51'45.12863"
P-318	1	19°05'30.81668"	80°44'47.08207"	P-368	2	19°03'56.54355"	80°51'39.11658"
P-319	1	19°05'34.01637"	80°44'41.12684"	P-369	2	19°03'57.88095"	80°51'33.36120"
P-320	1	19°05'35.03515"	80°44'34.86818"	P-370	2	19°03'58.46645"	80°51'26.71159"
P-321	1	19°05'32.29432"	80°44'28.66492"	P-371	2	19°04'00.63808"	80°51'20.26062"
P-322	1	19°05'29.85706"	80°44'22.31895"	P-372	2	19°04'02.89459"	80°51'13.84245"
P-323	1	19°05'27.50011"	80°44'15.94096"	P-373	2	19°04'05.25491"	80°51'07.46503"
P-324	1	19°05'25.05461"	80°44'09.60207"	P-374	2	19°04'07.62134"	80°51'01.09009"
P-325	1	19°05'22.33847"	80°44'03.45981"	P-375	2	19°04'08.93003"	80°50'54.40508"
P-326	1	19°05'20.72125"	80°43'56.90994"	P-376	2	19°04'09.06578"	80°50'53.25055"
P-327	1	19°05'22.30513"	80°45'57.16027"	P-377	2	19°04'09.06578"	80°50'53.25055"
P-328	1	19°05'20.91728"	80°45'50.49047"	P-378	2	19°04'09.68497"	80°50'46.43799"
P-329	1	19°05'18.92724"	80°45'43.98625"	P-379	2	19°04'10.28404"	80°50'39.62349"
P-330	1	19°05'18.89321"	80°45'43.87687"	P-380	2	19°04'10.85872"	80°50'32.80661"
P-331	1	19°05'11.84222"	80°46'47.47968"	P-381	2	19°04'12.50844"	80°50'26.40180"
P-332	1	19°05'12.27094"	80°46'40.80971"	P-382	2	19°04'17.09770"	80°50'21.55114"
P-333	1	19°05'14.26688"	80°46'34.29558"	P-383	2	19°04'21.71289"	80°50'16.72809"
P-334	1	19°05'16.22961"	80°46'27.76996"	P-384	2	19°04'26.25083"	80°50'11.82348"
P-335	1	19°05'18.26405"	80°46'21.26907"	P-385	2	19°04'30.79711"	80°50'06.92706"
P-336	1	19°05'20.28661"	80°46'14.76397"	P-386	2	19°04'35.28004"	80°50'01.96774"
P-337	1	19°05'22.37398"	80°46'08.28380"	P-387	2	19°04'36.33188"	80°50'00.76967"
P-338	1	19°05'22.43880"	80°46'01.48145"	P-388	2	19°02'54.55143"	80°50'55.99583"
P-339	1	19°05'22.30513"	80°45'57.16027"	P-389	2	19°02'58.98714"	80°51'00.84353"
P-340	1	19°11'54.84197"	80°43'08.49292"	P-390	2	19°03'02.26955"	80°51'06.74028"
P-341	1	19°11'49.89419"	80°43'04.61465"	P-391	2	19°03'05.84693"	80°51'12.43529"
P-342	1	19°11'54.36460"	80°43'07.89250"	P-392	2	19°03'11.39116"	80°51'15.87004"
P-343	1	19°11'56.02369"	80°43'09.83611"	P-393	2	19°03'17.03747"	80°51'19.25212"
P-344	1	19°11'23.58513"	80°43'02.76493"	P-394	2	19°03'20.40079"	80°51'22.45108"
P-345	1	19°11'25.92545"	80°43'01.22200"	P-395	2	19°04'56.02669"	80°49'14.07112"
P-346	1	19°11'20.66652"	80°43'05.23849"	P-396	2	19°04'59.92209"	80°49'08.67527"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-347	1	19°11'28.26143"	80°43'00.34250"	P-397	2	19°05'02.43749"	80°49'02.38789"
P-348	1	19°11'28.74819"	80°43'01.66946"	P-398	2	19°05'04.75456"	80°48'55.99223"
P-349	1	19°11'31.45874"	80°42'59.64834"	P-399	2	19°05'06.98029"	80°48'49.56094"
P-350	1	19°11'28.70528"	80°42'58.55385"	P-400	2	19°05'09.21340"	80°48'43.13238"
P-401	2	19°05'11.58753"	80°48'36.76003"	P-451	4	18°58'32.99729"	80°50'17.53152"
P-402	2	19°05'13.94656"	80°48'30.38148"	P-452	4	18°58'39.32317"	80°50'16.75795"
P-403	2	19°05'16.38090"	80°48'24.03422"	P-453	4	18°58'45.70135"	80°50'16.58051"
P-404	2	19°05'18.14460"	80°48'17.47967"	P-454	4	18°58'51.99072"	80°50'14.82645"
P-405	2	19°05'19.12271"	80°48'10.72849"	P-455	4	18°58'57.80362"	80°50'12.84563"
P-406	2	19°05'21.40364"	80°48'04.33223"	P-456	4	18°58'57.82281"	80°50'12.46412"
P-407	2	19°05'21.91801"	80°47'57.52227"	P-457	4	18°55'33.12295"	80°50'08.99782"
P-408	2	19°05'22.12349"	80°47'56.33638"	P-458	4	18°55'39.10360"	80°50'06.57941"
P-409	2	19°02'23.60450"	80°50'35.43267"	P-459	4	18°55'44.75915"	80°50'03.19789"
P-410	2	19°02'25.70484"	80°50'36.96831"	P-460	4	18°55'50.38279"	80°49'59.76372"
P-411	3	19°00'49.55579"	80°50'25.59511"	P-461	4	18°55'53.34282"	80°49'53.94184"
P-412	3	19°00'53.72540"	80°50'27.63389"	P-462	4	18°55'55.18595"	80°49'47.38392"
P-413	3	19°00'59.71791"	80°50'30.30017"	P-463	4	18°55'57.09966"	80°49'40.84825"
P-414	3	19°01'05.72666"	80°50'32.92591"	P-464	4	18°56'00.33677"	80°49'37.07227"
P-415	3	19°01'11.72302"	80°50'35.58250"	P-465	4	18°57'12.77194"	80°50'14.55665"
P-416	3	19°01'17.66234"	80°50'38.37743"	P-466	4	18°57'18.47038"	80°50'17.60365"
P-417	3	19°01'23.91379"	80°50'39.93021"	P-467	4	18°57'24.42181"	80°50'20.36000"
P-418	3	19°01'24.12515"	80°50'39.92065"	P-468	4	18°57'30.78594"	80°50'21.61407"
P-419	3	19°02'06.13949"	80°50'40.62938"	P-469	4	18°57'37.28057"	80°50'22.03660"
P-420	3	19°01'59.71497"	80°50'40.13301"	P-470	4	18°57'43.77421"	80°50'22.47480"
P-421	3	19°01'53.24972"	80°50'40.26797"	P-471	4	18°57'50.26000"	80°50'23.02132"
P-422	3	19°01'46.75806"	80°50'39.94260"	P-472	4	18°57'56.74316"	80°50'23.60740"
P-423	3	19°01'40.25129"	80°50'39.95780"	P-473	4	18°58'03.22519"	80°50'24.20751"
P-424	3	19°01'33.74576"	80°50'39.88924"	P-474	4	18°58'09.69412"	80°50'24.24334"
P-425	3	19°01'27.23919"	80°50'39.85645"	P-475	4	18°58'14.18325"	80°50'22.99256"
P-426	3	19°01'27.51592"	80°50'39.85506"	P-476	4	18°59'34.72387"	80°50'12.77779"
P-427	3	19°01'34.02239"	80°50'39.89682"	P-477	4	18°59'41.22614"	80°50'13.03262"
P-428	3	19°01'40.52801"	80°50'39.95581"	P-478	4	18°59'47.73164"	80°50'13.18505"
P-429	3	19°01'47.03476"	80°50'39.93930"	P-479	4	18°59'54.23565"	80°50'13.39254"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-430	3	19°01'53.52521"	80°50'40.29544"	P-480	4	19°00'00.73884"	80°50'13.63000"
P-431	3	19°01'59.99124"	80°50'40.12123"	P-481	4	19°00'07.23779"	80°50'13.96627"
P-432	3	19°02'06.13949"	80°50'40.62938"	P-482	4	19°00'13.73981"	80°50'14.21101"
P-433	4	18°55'48.96293"	80°49'03.14341"	P-483	4	19°00'20.12863"	80°50'15.45532"
P-434	4	18°55'50.61359"	80°49'09.75524"	P-484	4	19°00'24.41846"	80°50'16.68698"
P-435	4	18°55'52.83792"	80°49'16.17510"	P-485	4	18°58'57.82281"	80°50'12.46412"
P-436	4	18°55'55.08103"	80°49'22.59256"	P-486	4	18°59'03.69239"	80°50'11.72798"
P-437	4	18°55'57.19972"	80°49'29.05751"	P-487	4	18°59'09.99401"	80°50'10.02260"
P-438	4	18°55'58.20413"	80°49'33.40518"	P-488	4	18°59'16.31314"	80°50'08.43701"
P-439	4	18°55'58.20413"	80°49'33.40518"	P-489	4	18°59'22.56542"	80°50'10.19420"
P-440	4	18°55'57.25403"	80°49'40.06870"	P-490	4	18°59'28.77266"	80°50'12.24092"
P-441	4	18°55'55.33594"	80°49'46.60294"	P-491	4	18°59'34.72387"	80°50'12.77779"
P-442	4	18°55'53.48349"	80°49'53.15792"	P-492	4	18°58'42.11382"	80°49'20.51529"
P-443	4	18°55'50.88730"	80°49'59.25891"	P-493	4	18°58'43.42956"	80°49'27.20567"
P-444	4	18°55'45.29622"	80°50'02.75248"	P-494	4	18°58'43.55217"	80°49'33.86337"
P-445	4	18°55'39.64167"	80°50'06.13624"	P-495	4	18°58'47.24761"	80°49'38.93798"
P-446	4	18°55'33.75158"	80°50'08.85865"	P-496	4	18°58'53.20595"	80°49'41.50691"
P-447	4	18°55'33.10784"	80°50'08.93314"	P-497	4	18°58'54.24283"	80°49'46.68846"
P-448	4	18°58'14.18325"	80°50'22.99256"	P-498	4	18°58'51.35539"	80°49'52.62028"
P-449	4	18°58'20.47411"	80°50'21.24494"	P-499	4	18°58'50.98430"	80°49'59.39476"
P-450	4	18°58'26.72203"	80°50'19.33698"	P-500	4	18°58'52.75774"	80°50'05.29243"
P-501	4	18°58'58.01678"	80°50'09.27109"	P-551	5	18°55'03.08011"	80°46'31.52900"
P-502	4	18°58'57.04029"	80°50'11.37248"	P-552	5	18°55'05.44835"	80°47'09.37516"
P-503	4	18°58'54.39096"	80°50'06.94144"	P-553	5	18°55'08.53201"	80°47'15.34976"
P-504	4	18°58'50.59053"	80°50'01.88567"	P-554	5	18°55'12.94027"	80°47'20.36300"
P-505	4	18°58'50.94416"	80°49'55.11404"	P-555	5	18°55'17.83337"	80°47'24.86188"
P-506	4	18°58'53.39196"	80°49'49.02478"	P-556	5	18°55'21.81177"	80°47'30.14117"
P-507	4	18°58'54.76275"	80°49'42.40279"	P-557	5	18°55'25.36593"	80°47'35.84038"
P-508	4	18°58'48.98922"	80°49'40.06719"	P-558	5	18°55'27.54813"	80°47'42.18505"
P-509	4	18°58'43.94201"	80°49'36.09617"	P-559	5	18°55'29.76624"	80°47'48.60321"
P-510	4	18°58'43.67777"	80°49'29.46220"	P-560	5	18°55'33.32421"	80°47'54.28481"
P-511	4	18°58'42.31023"	80°49'22.78642"	P-561	5	18°55'37.45819"	80°47'59.55962"
P-512	4	18°58'41.96568"	80°49'20.43557"	P-562	5	18°55'41.37086"	80°48'05.02068"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-513	4	18°56'00.33677"	80°49'37.07227"	P-563	5	18°55'43.51592"	80°48'11.40955"
P-514	4	18°56'06.08167"	80°49'39.29761"	P-564	5	18°55'44.88024"	80°48'18.06229"
P-515	4	18°56'09.82665"	80°49'44.73235"	P-565	5	18°55'44.50978"	80°48'24.88529"
P-516	4	18°56'12.32371"	80°49'51.04508"	P-566	5	18°55'44.32384"	80°48'29.14497"
P-517	4	18°56'16.65469"	80°49'55.31682"	P-567	5	18°55'03.08011"	80°46'31.52900"
P-518	4	18°56'23.01749"	80°49'56.73445"	P-568	5	18°55'02.84463"	80°46'38.35977"
P-519	4	18°56'29.39792"	80°49'58.07745"	P-569	5	18°55'02.68949"	80°46'45.19054"
P-520	4	18°56'35.76004"	80°49'59.50095"	P-570	5	18°55'03.18726"	80°46'52.00507"
P-521	4	18°56'41.83119"	80°50'01.94229"	P-571	5	18°55'03.43895"	80°46'58.83697"
P-522	4	18°56'47.97680"	80°50'04.18747"	P-572	5	18°55'04.28862"	80°47'05.60831"
P-523	4	18°56'54.07871"	80°50'06.56158"	P-573	5	18°55'05.44835"	80°47'09.37516"
P-524	4	18°57'00.40427"	80°50'08.15838"	P-574	5	18°55'44.32384"	80°48'29.14497"
P-525	4	18°57'06.55940"	80°50'10.26301"	P-575	5	18°55'46.06642"	80°48'33.12126"
P-526	4	18°57'12.02331"	80°50'13.96393"	P-576	6	18°55'20.95761"	80°50'09.31377"
P-527	4	18°57'12.77194"	80°50'14.55665"	P-577	6	18°55'14.45459"	80°50'09.55538"
P-528	4	18°58'41.96568"	80°49'20.43557"	P-578	6	18°55'07.95031"	80°50'09.75583"
P-529	4	18°58'40.65538"	80°49'13.76867"	P-579	6	18°55'01.44497"	80°50'09.91576"
P-530	4	18°58'40.87148"	80°49'07.02154"	P-580	6	18°54'56.41353"	80°50'11.38778"
P-531	4	18°58'40.17648"	80°49'00.26878"	P-581	6	18°54'56.62391"	80°50'18.21330"
P-532	4	18°58'40.34279"	80°48'53.43271"	P-582	6	18°54'55.01207"	80°50'24.79729"
P-533	4	18°58'37.83296"	80°48'47.55111"	P-583	6	18°54'55.49270"	80°50'31.60060"
P-534	4	18°58'39.85399"	80°48'49.91881"	P-584	6	18°54'53.77340"	80°50'38.02190"
P-535	4	18°58'40.39450"	80°48'56.64970"	P-585	6	18°54'49.28973"	80°50'42.96018"
P-536	4	18°58'40.84154"	80°49'03.43111"	P-586	6	18°54'47.69117"	80°50'47.52642"
P-537	4	18°58'40.51838"	80°49'10.19406"	P-587	6	18°54'53.48583"	80°50'50.61187"
P-538	4	18°58'41.62815"	80°49'16.85260"	P-588	6	18°54'58.51637"	80°50'54.68266"
P-539	4	18°58'42.11382"	80°49'20.51529"	P-589	6	18°55'02.27306"	80°51'00.26513"
P-540	5	18°54'53.42630"	80°45'20.35992"	P-590	6	18°55'06.03149"	80°51'05.84667"
P-541	5	18°54'55.24534"	80°45'26.89201"	P-591	6	18°55'09.81167"	80°51'11.41214"
P-542	5	18°54'57.50309"	80°45'33.30245"	P-592	6	18°55'13.59506"	80°51'16.97522"
P-543	5	18°54'58.62932"	80°45'40.00815"	P-593	6	18°55'14.20177"	80°51'17.82700"
P-544	5	18°54'59.90354"	80°45'46.68736"	P-594	6	18°55'14.27241"	80°51'17.79350"
P-545	5	18°55'01.31564"	80°45'53.36127"	P-595	6	18°55'10.48930"	80°51'12.23146"

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Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-546	5	18°55'02.79471"	80°46'00.00587"	P-596	6	18°55'06.69816"	80°51'06.67467"
P-547	5	18°55'03.19030"	80°46'06.73776"	P-597	6	18°55'02.93801"	80°51'01.09443"
P-548	5	18°55'02.02381"	80°46'13.41994"	P-598	6	18°54'59.19132"	80°50'55.50425"
P-549	5	18°55'02.83941"	80°46'20.15287"	P-599	6	18°54'54.50696"	80°50'50.97469"
P-550	5	18°55'03.23525"	80°46'26.94502"	P-600	6	18°54'48.63923"	80°50'48.03579"
P-601	6	18°54'48.72428"	80°50'43.63869"	P-651	7	18°46'04.47935"	80°44'20.06765"
P-602	6	18°54'53.27853"	80°50'38.75833"	P-652	7	18°46'05.38362"	80°44'26.83233"
P-603	6	18°54'55.49859"	80°50'32.54233"	P-653	7	18°46'06.33956"	80°44'33.58962"
P-604	6	18°54'55.21616"	80°50'25.72671"	P-654	7	18°46'07.42837"	80°44'40.32187"
P-605	6	18°54'56.49608"	80°50'19.14112"	P-655	7	18°46'09.17209"	80°44'46.88872"
P-606	6	18°54'56.57471"	80°50'12.33777"	P-656	7	18°46'10.90563"	80°44'53.46610"
P-607	6	18°55'00.80986"	80°50'10.02729"	P-657	7	18°46'07.92084"	80°44'58.28887"
P-608	6	18°55'07.31478"	80°50'09.84757"	P-658	7	18°46'02.77048"	80°45'02.46205"
P-609	6	18°55'13.81939"	80°50'09.65655"	P-659	7	18°45'57.48074"	80°45'06.43951"
P-610	6	18°55'20.32292"	80°50'09.43304"	P-660	7	18°45'51.26834"	80°45'06.35385"
P-611	6	18°55'21.01312"	80°50'09.41709"	P-661	7	18°45'46.53825"	80°45'05.63289"
P-612	6	18°55'14.20177"	80°51'17.82700"	P-662	8	18°45'14.16660"	80°42'35.56164"
P-613	6	18°55'19.13161"	80°51'22.26444"	P-663	8	18°45'11.08274"	80°42'29.55060"
P-614	6	18°55'24.36481"	80°51'26.32793"	P-664	8	18°45'11.70794"	80°42'22.98213"
P-615	6	18°55'29.62791"	80°51'30.34868"	P-665	8	18°45'10.16063"	80°42'16.34807"
P-616	6	18°55'34.91169"	80°51'34.33968"	P-666	8	18°45'07.88018"	80°42'09.98417"
P-617	6	18°55'40.19544"	80°51'38.33075"	P-667	8	18°45'04.99959"	80°42'03.85995"
P-618	6	18°55'45.47667"	80°51'42.32554"	P-668	8	18°45'02.25592"	80°41'57.66611"
P-619	6	18°55'48.44761"	80°51'44.78696"	P-669	8	18°44'59.15157"	80°41'51.66293"
P-620	6	18°55'53.70983"	80°51'48.52492"	P-670	8	18°44'55.99371"	80°41'45.87380"
P-621	6	18°55'58.97115"	80°51'52.54756"	P-671	8	18°44'55.27129"	80°41'44.97107"
P-622	6	18°55'59.77195"	80°51'53.03658"	P-637	6	18°56'18.96759"	80°52'08.51308"
P-623	6	18°55'54.49102"	80°51'49.04296"	P-638	6	18°56'13.36870"	80°52'05.10889"
P-624	6	18°55'49.23267"	80°51'45.01608"	P-639	6	18°56'08.84920"	80°52'00.19157"
P-625	6	18°55'43.95508"	80°51'41.01635"	P-640	6	18°56'03.68916"	80°51'56.03650"
P-626	6	18°55'38.64965"	80°51'37.05761"	P-641	6	18°56'02.04847"	80°51'54.75011"
P-627	6	18°55'33.38499"	80°51'33.04116"	P-642	7	18°46'11.56535"	80°44'55.22041"
P-628	6	18°55'28.10230"	80°51'29.04885"	P-643	7	18°45'51.49949"	80°43'27.23359"

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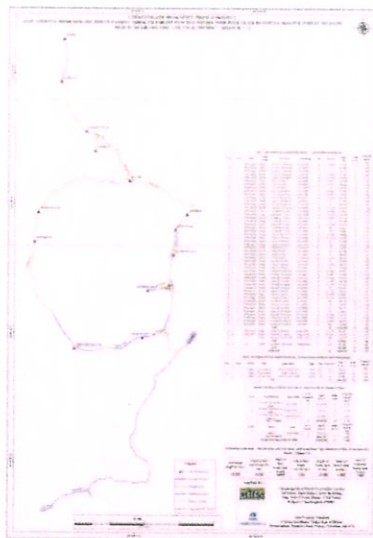
Point	Patch	Latitud in D:M:S	Longitud in D:M:S	Point	Patch	Latitud in D:M:S	Longitud in D:M:S
P-629	6	18°55'22.83389"	80°51'25.03694"	P-644	7	18°45'53.07357"	80°43'33.86110"
P-630	6	18°55'17.60436"	80°51'20.96832"	P-645	7	18°45'54.53597"	80°43'40.51748"
P-631	6	18°55'14.27241"	80°51'17.79350"	P-646	7	18°45'56.12723"	80°43'47.13884"
P-632	6	18°56'01.98587"	80°51'54.81373"	P-647	7	18°45'58.15490"	80°43'53.62997"
P-633	6	18°56'07.21276"	80°51'58.88682"	P-648	7	18°46'00.26299"	80°44'00.09260"
P-634	6	18°56'11.87284"	80°52'03.63609"	P-649	7	18°46'02.03238"	80°44'06.66529"
P-635	6	18°56'17.02520"	80°52'07.71727"	P-650	7	18°46'03.55341"	80°44'13.30675"
P-636	6	18°56'22.88583"	80°52'10.68602"				


Dy. Director
Indrawati Tiger Reserve
Bijapur (C.G.)



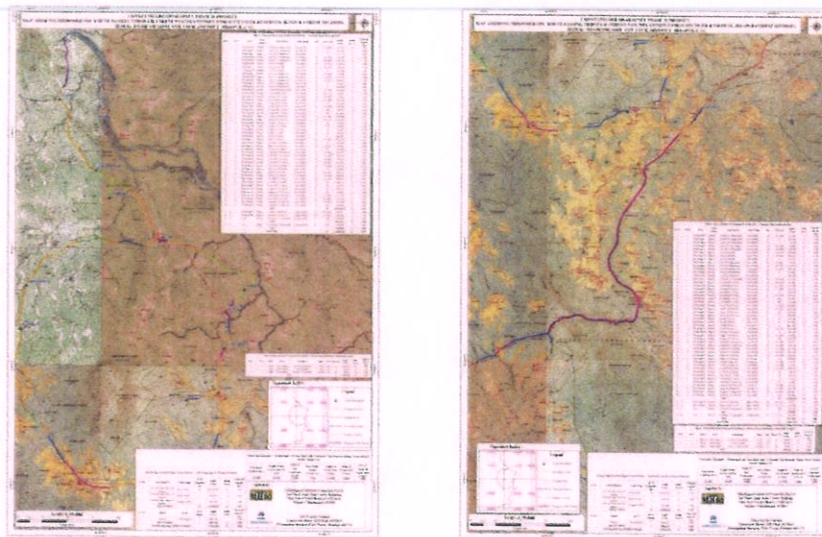
5.3. Geo-Referenced Maps of the Proposed Route (Annexure-3)

5.3.1. Map showing Geo-reference map of proposed OFC Route



Geo-Referenced Maps of Forest Patched with in Indravati Tiger Reserves, Bijapur Forest Division.

5.3.2. Map showing proposed OFC Route on Toposheet map on 1:50,000 scale.



Geo-Referenced Toposheet Map of Forest Patched Bhairamgarh and Usur block(Part1&part2) in Indravati Tiger Reservesn Bijapur Forest Division.

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Dy. Director
Indravati Tiger Reserve
Bijapur (C.G.)

