

**DGPS Survey report of 315.00 Hectares of land
proposed for Compensatory Afforestation in
Katghora forest division, Chhattisgarh for
compliance with Forest Diversion Proposal of
Urga to Dharamjaygarh BG Railway corridor
Of
Chhattisgarh East Railway Ltd
(A JV of IRCON, SECL AND CHHATTISGARH GOVT.)**



March 2021

**DGPS SURVEY AND GIS MAPPING DONE BY:
Geotrax International Services
Raipur, Chhattisgarh.**

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1. Introduction and Background

1.1 Background

Government of Chhattisgarh (GoCG) is keen to develop Rail infrastructure for facilitating passengers and freight traffic in the Northern part of Chhattisgarh. To this extent the State Government, in consultation with Ministry of Railways (MoR), has appointed a high level Committee, chaired by Mr. A.K. Mishra, Retd. Chief Secretary of C.G comprising representatives of MoR, GoCG, NTPC Ltd, SECL and Confederation of Indian Industry to identify the rail corridors. As per the committee's report and in line with the recommendations of Chhattisgarh Integrated Infrastructure Development Committee (CIIDC), three corridors were identified for the development of rail infrastructure.

- 1) Corridor-I, East corridor: Kharsia - Chhal - Gharghoda - Korichhapar - **Dharamjaygarh up to Korba** with a spur from Gharghoda to Donga Mauha to connect mines of Gare-Pelma block, approximately 180km in length.
- 2) Corridor-II, North Corridor: Surajpur-Parsa-Katghora-Korba, approximately 150 km in length.
- 3) Corridor-III, East-west Corridor: Gevra Road to Pendra Road via Dipka, Katghora, Sindurgarh, Pasan, approximately 122 km in length.

Memorandum of Understanding (MoU) was made on 03.11.12 between Government of Chhattisgarh (GoCG), South East Coalfields Limited (SECL) and IRCON for formation of Specific Joint Venture Companies (JVCs) upon the advise/instructions of Ministry of Railways (MoR) to **develop rail infrastructure for facilitating passengers and freight traffic in northern parts of Chhattisgarh**. In consideration of the above, the implementation of developing Corridor-I and Corridor-III would be taken up by JVCs. The names of the JVCs are proposed as "Chhattisgarh East Rail Ltd" for Corridor- I and "Chhattisgarh East-West Rail Ltd" for Corridor-III.

As part of the Corridor-I, East Corridor phase-II, a new BG line is proposed from Urga (District Korba) to Dharamaygarh (District Raigarh).

The approximate length of the rail corridor is 62 kms. The total forest area proposed for diversion is given below

Sl.No	Name of the Forest Division	Protected/Reserved/Orange Area (Ha)	Revenue Forest Area (Ha)	Total Forest Area (Ha)
1	Dharamjaygarh	46.173	51.494	97.667
2	Korba	23.483	35.885	59.368
	Total Forest Area (Ha)	69.656	87.379	157.035

The feasibility cum detailed project study was conducted by Delhi Integrated Multi Modal Transit System Ltd. (DIMTS). The preliminary alignment was accepted by IRCON and detailed topographical survey (including DGPS Survey) is conducted on the alignment by DIMTS. The Rail corridor line passes through two Districts, i.e. Korba & Raigarh, and three tehsils of these districts. It passes through two forests Division; Korba Forest Division, & Dharamjaygarh forest Division.

This Project is a passenger cum freight corridor line and will help in overall economic development of Northern Chhattisgarh region.

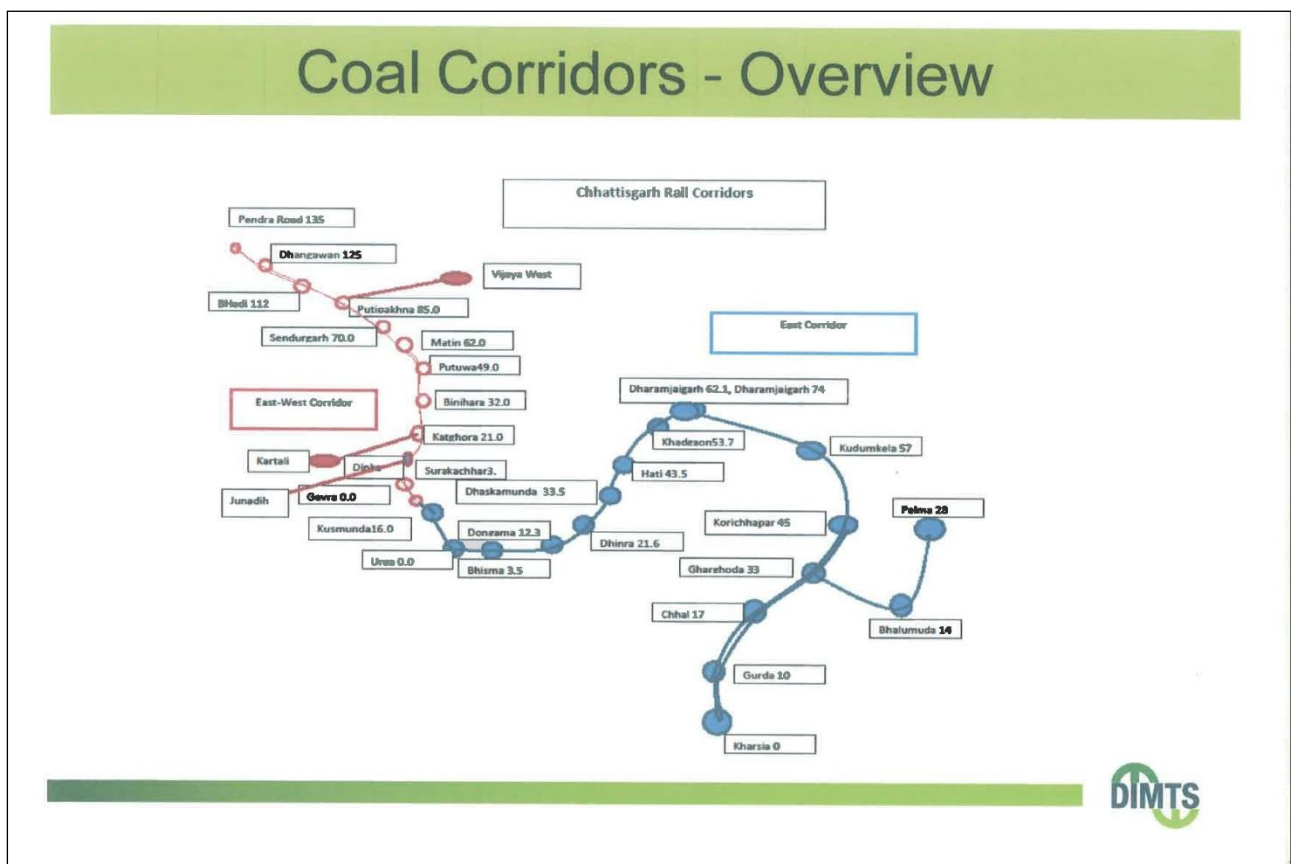




Fig-1: BG Rail Corridor from Urga to Dharamjaygarh on Satellite Imagery

As per directives of Ministry of Environment & Forests dated 8th July 2011; all applications seeking diversion of forest land for non-forest purpose under Forest Conservation Act, 1980 must be accompanied with Geo-referenced shape file (both soft copy and hard copy maps) of the forest land proposed for diversion prepared using Differential GPS (DGPS).

1.2 Compensatory Afforestation (CA) Land Details and Site Inspection Report:

The total forest area for diversion in the proposed Railway Corridor is approximately 157.035 Hectares. The degraded forest land (DFL) proposed for CA is approximately 315 Hectares out of which in this report 315 **Hectares of Degraded forest land is surveyed and submitted in this report by Geotrax.**

The proposed CA land is Degraded Forest land which is identified in Kendai forest range of Katghora forest division. The land is identified and proposed by the Katghora Forest department staff. The site was jointly inspected by Geotrax staff along with Kendai Range forest department staff.

The Divisional Forest Officer, Katghora division allotted 150 Hectares of Degraded Forest area to CERL vide letter no. /2019/4131 dated 29.06.2019 And allotted 165 Hectares of Degraded Forest area to CERL vide letter no. /2019/8655 dated 03.10.2019. The said letter is herewith enclosed

 कार्यालय वन मण्डलाधिकारी कटघोरा वनमण्डल कटघोरा, जिला - कोरबा (छ.ग.) Phone/Fax No.: 07815-250157, mail : dfo-katghora.cg@gov.in	
क्रमांक / तक.अधि. / 2019 / <u>4131</u>	कटघोरा, दिनांक <u>29.06.2019</u>
प्रति,	
Rajesh Khare Chief Operation Officer Chhattisgarh East Rail Corridor	
विषय :	Rail Corridor Project implemented by CERL and land for Compensatory Afforestation.
संदर्भ:	परिक्षेत्र अधिकारी केंदई का पत्र क्र. 396 दि. 26.06.19 — ::000:: —
उपरोक्त संदर्भित विषयांतर्गत लेख है कि छ.ग. ईस्ट वेस्ट रेल कॉरीडोर लिमि. द्वारा क्षतिपूर्ति वृक्षारोपण हेतु 316.00 हे. क्षेत्र का मांग किया गया है। परिक्षेत्र अधिकारी केंदई द्वारा सिरमिना सर्किल अंतर्गत कक्ष क्रमांक P312 में 100.00 हे. एवं P313 में 50.00 हे. कुल 150.00 हे. वनभूमि क्षतिपूर्ति वृक्षारोपण हेतु उपलब्ध होना पाया गया है। अतः क्षतिपूर्ति वृक्षारोपण हेतु 150.00 हे. का DGPS सर्वे कार्य पूर्ण कर प्रतिवेदन शीघ्र इस कार्यालय में प्रस्तुत करें।	
संलग्न:-	संदर्भित पत्र की छायाप्रति।
क्रमांक / तक.अधि. / 2019 / <u>4131</u> प्रतिलिपि	 वनमण्डलाधिकारी कटघोरा वनमण्डल कटघोरा कटघोरा, दिनांक
1. उप वनमण्डलाधिकारी कटघोरा की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित। 2. परिक्षेत्र अधिकारी केंदई की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।	
 वनमण्डलाधिकारी कटघोरा वनमण्डल कटघोरा	
T.O. 2019-20	260

कार्यालय वन मण्डलाधिकारी कटघोरा वनमण्डल कटघोरा, जिला - कोरबा (छ.ग.)

Phone/Fax No.: 07815-250157, mail : dfo-katghora.cg@gov.in

क्रमांक/तक.अधि./2019/ 8655
प्रति,

कटघोरा, दिनांक 03.10.19

✓ Rajesh Khare
Chief Operation Officer
Chhattisgarh East Rail Corridor

विषय : Rail Corridor Project implemented by CERL and land for Compensatory Afforestation.

संदर्भ: 1. उपवनमंडलाधिकारी कटघोरा का पत्र क्र. 2136 दि. 26.09.19
2. कार्या. पत्र क्र. 6099 दि. 17.09.19

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उपरोक्त संदर्भित विषयांतर्गत लेख है कि छ.ग. ईस्ट रेल कॉरीडोर लिमि. द्वारा क्षतिपूर्ति वृक्षारोपण हेतु 316.00 हे. क्षेत्र का मांग किया गया था। जिसमें 150.00 हे. क्षेत्र उपलब्ध कराया जा चुका है। शेष 165.00 हे. क्षेत्र हेतु DGPS की अनुमति चाही गई है।

अतः आवेदक विभाग को 165.00 हे. क्षेत्र का DGPS सर्वे हेतु अनुमति प्रदान की जाती है।

संलग्न:- संदर्भित पत्र की छायाप्रति।

क्रमांक/तक.अधि./2019/ 8656
प्रतिलिपि

nl.
वनमण्डलाधिकारी
कटघोरा वनमण्डल कटघोरा
कटघोरा, दिनांक 03.10.19

1. वनमंडलाधिकारी कोरबा वनमंडल कोरबा की ओर सूचनार्थ प्रेषित।
2. उप वनमंडलाधिकारी कटघोरा की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित।
3. परिक्षेत्र अधिकारी केंदई की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित। DGPS सर्वे कार्य के दौरान आवश्यक सहयोग प्रदान करें।

nl.
वनमण्डलाधिकारी
कटघोरा वनमण्डल कटघोरा

1.3 Geotrax Empanelment Certificate in Chhattisgarh- from CGCOST



छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद

एम.आई.जी. 25, इन्द्रावती कॉलोनी, रायपुर, (छ.ग.) 492 001

Chhattisgarh Council of Science & Technology

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Prof. M.M. Hambarde
Director General

No. 2470 /CCOST/2026

Date: 23/01 /2016

प्रति

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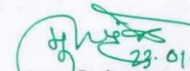
Email: info@geotrax.in, Web: www.geotrax.in

विषय :- DGPS / GIS Services प्रदान करने हेतु Empanelment के संबंध में।

परिषद द्वारा पूर्व में DGPS / GIS Services प्रदान करने हेतु firms के empanelment हेतु EOI (Expression of Interest) बुलाये गये थे। जिसके संदर्भ में आपके द्वारा आवेदन प्रस्तुत किया गया था।

दिनांक 28.12.2015 को आपके द्वारा विषय विशेषज्ञ समिति के समक्ष दिये गये प्रस्तुतिकरण के आधार पर समिति द्वारा डीजीपीएस सर्वे कार्य हेतु आपकी संस्था का empanelment किया जाता है।

कृपया अपनी सहमति परिषद को प्रदान करने का कष्ट करें।


(महानिदेशक)

खनिज साधन विभाग
मंत्रालय, महानदी भवन, नया रायपुर

नया रायपुर, दिनांक 5 जून 2014

क्रमांक एफ 7-14/2013/12.—राज्य शासन एतद्वारा चीफ कंट्रोलर आफ माईन्स, भारतीय खान ब्यूरो, नागपुर के परिपत्र क्रमांक N-110137/MP/90/CCOM Vol-VII, Circular No. 2/2010, दिनांक 06-04-2010 के पैरा-02 के बिन्दु क्रमांक-02 के तारतम्य में Differential Global Positioning System (डीजीपीएस) का उपयोग करते हुए सर्वेक्षण करने के लिए नीचे तालिका के कालम नंबर-02 में दर्शित संस्थान को कालम नंबर-03 में दर्शित खनिज से संबंधित खनिज रियायतों के लिए अधिमान्यता प्रदान करता है :-

तालिका

क्र.	एजेन्सी का नाम एवं पता	अधिमान्यता का विवरण
1.	छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद्, एम.आई.जी.-25 इन्द्रावती कॉलोनी, रायपुर-492001 (छत्तीसगढ़)	राज्य में समस्त खनिजों की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
2.	स्टील अथॉरिटी आफ इंडिया लिमिटेड, भिलाई इस्पात संयंत्र, भिलाई-490001, जिला-दुर्ग (छत्तीसगढ़)	राज्य में स्थित स्वयं की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
3.	भारतीय सर्वेक्षण विभाग, छत्तीसगढ़ जियो-स्पेशल डाटा सेंटर, सर्वे आफ इंडिया, रीना अपार्टमेंट 3 ^{अं} फ्लोर, पंचपेड़ी नाका, धमतरी रोड, रायपुर-492001 (छत्तीसगढ़)	राज्य में समस्त खनिजों की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
2.	अधिमान्यता प्राप्त संस्थान के लिये शर्तें :-	
1.	Coordinates of boundry pillars shall be established in the World Geodetic System 1984 (WGS-84) Datum.	
2.	Each boundry pillar shall be surved using DGPS, at least 2-Hours observation, for its ground position.	
3.	The maximum distance between any two successive pillars should not be more than 100 meter.	
4.	All corner pillar should be of pyramid shaped whith base of 1 meter and height of 2 meter and should be placed 1 meter above the ground and 1 meter below the ground.	
5.	Distance and bearing to the forward and backward pillars and latitudes and longitudes should be marked on all the corner pillars.	
3.	उपरोक्त शर्तों के अतिरिक्त निम्नलिखित शर्तों को भी शामिल किया जाना होगा :-	
1.	उपरोक्त बिन्दु में दर्शित कार्य के लिए खनिज रियायतधारी द्वारा अधिमान्यता प्राप्त संस्थान को भुगतान करना होगा. डीजीपीएस सर्वे कार्य हेतु पारिक्रमिक का निर्धारण अधिमान्यता प्राप्त संस्थान एवं खनिज रियायतधारी के मध्य आपसी समन्वय से किया जाएगा.	
2.	डीजीपीएस सर्वे के संबंध में भारतीय खान ब्यूरो/राज्य शासन द्वारा समय-समय पर जारी निर्देशों का कालम अधिमान्यता प्राप्त संस्थान को करना होगा.	
3.	यह अधिमान्यता इस आदेश के जारी होने से आठमासे आदेश पर्यंत प्रभावशील होगी.	

छत्तीसगढ़ के राज्यपाल के नाम से तथा आदेशानुसार,
के.डी.कोल्हाम, उप-सचिव

2. Scope of Work

1. Establishment of one base station for DGPS Survey with 72 Hours observation and one or more secondary control points near the CA land boundary.
2. Fixation of corridor boundary point by DGPS (Boundary point fixed at every corner and turning point.
3. Data processing and interpretation :-
 - a. Geo referencing of SOI Toposheet map (1:50000)& and Forest Map (1:15000)
 - b. Creation of proposed CA land boundary vector map using the DGPS survey data.
 - c. Superimposition of CA land polygon layer on Georeferenced forest map.
 - d. Computation of area proposed for CA.
 - e. Preparation of DGPS report along with soft copies of maps in shape file format and kml file.
4. Printing of report and Georeferenced map.

3. Deliverables

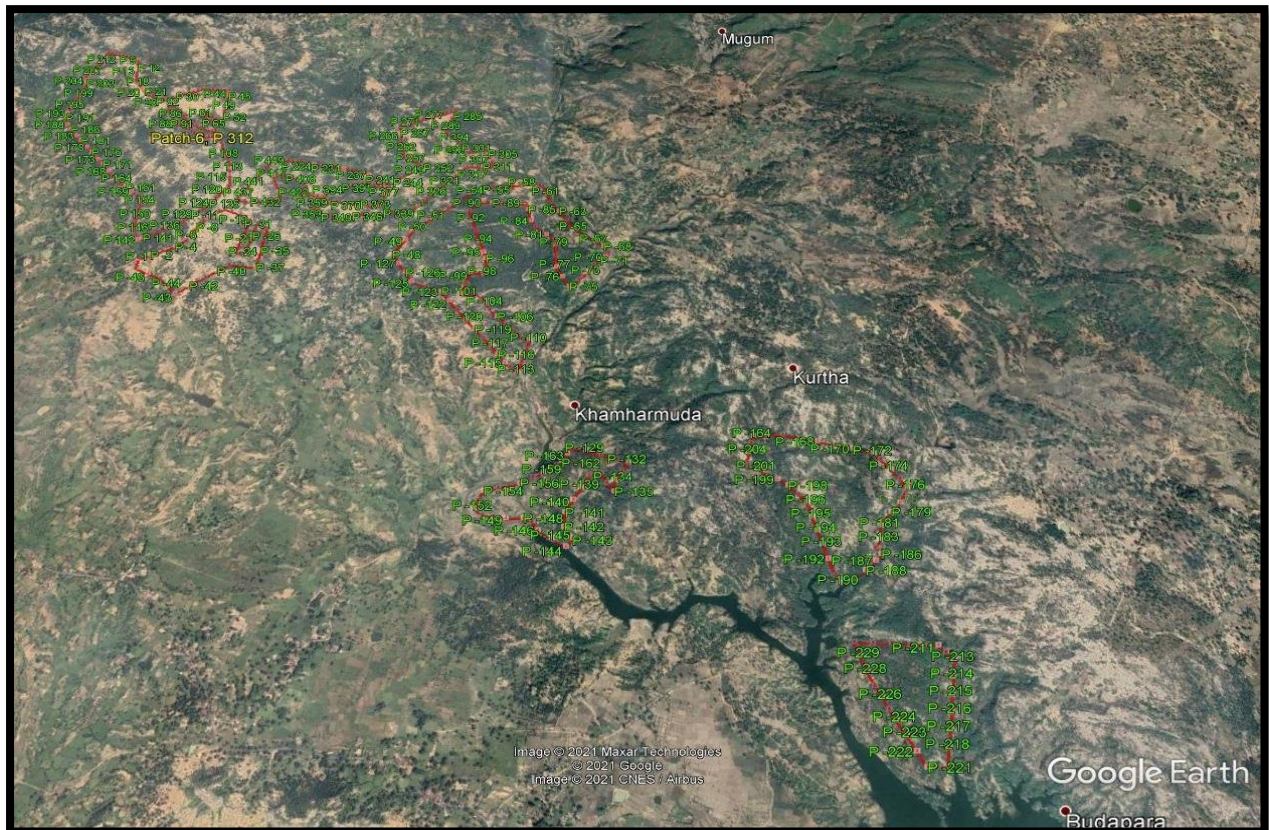
The deliverables envisaged for the assignment are described below

1. Georeferenced SOI map & Forest map showing CA land patches.
2. Georeferenced shape files & kml file (Soft copy) showing CA land Patches.
3. Area statement as per DGPS Survey, showing proposed area for compensatory afforestation.
4. CA land boundary coordinates as per DGPS Survey.
5. DGPS Survey and mapping report.

4. Brief description of the Technical approach

4.1 Input Data

Forest Department staff of Kendai range accompanied the Geotrax survey team for identification of the forest compartment boundary of 315 Hectares degraded forest land for the purpose of CA and assisted the survey team in carrying out DGPS Survey.



4.2 Planning DGPS survey

Using Survey of India Toposheet, forest maps and revenue maps the DGPS base station Primary and Secondary control points (PCP & SCP) in & around the CA land area are established by Geotrax. One PCP is established in Korba and 2 Secondary Controls are established in Kendai Range, Katghora forest division. The Korba Primary Control point (on roof top of Niharika Guest House) is established with reference to Urga primary control point which was observed for 24 hours duration and processed with reference to

Raipur PCP which is observed for 72 Hours duration and processed with reference to IGS Stations in Hyderabad and Bangalore.

- Korba PCP (Niharika Guest House) est. w.r.t to Urga PCP**
- Urga PCP (on primary school roof top) est. w.r.t Raipur PCP**

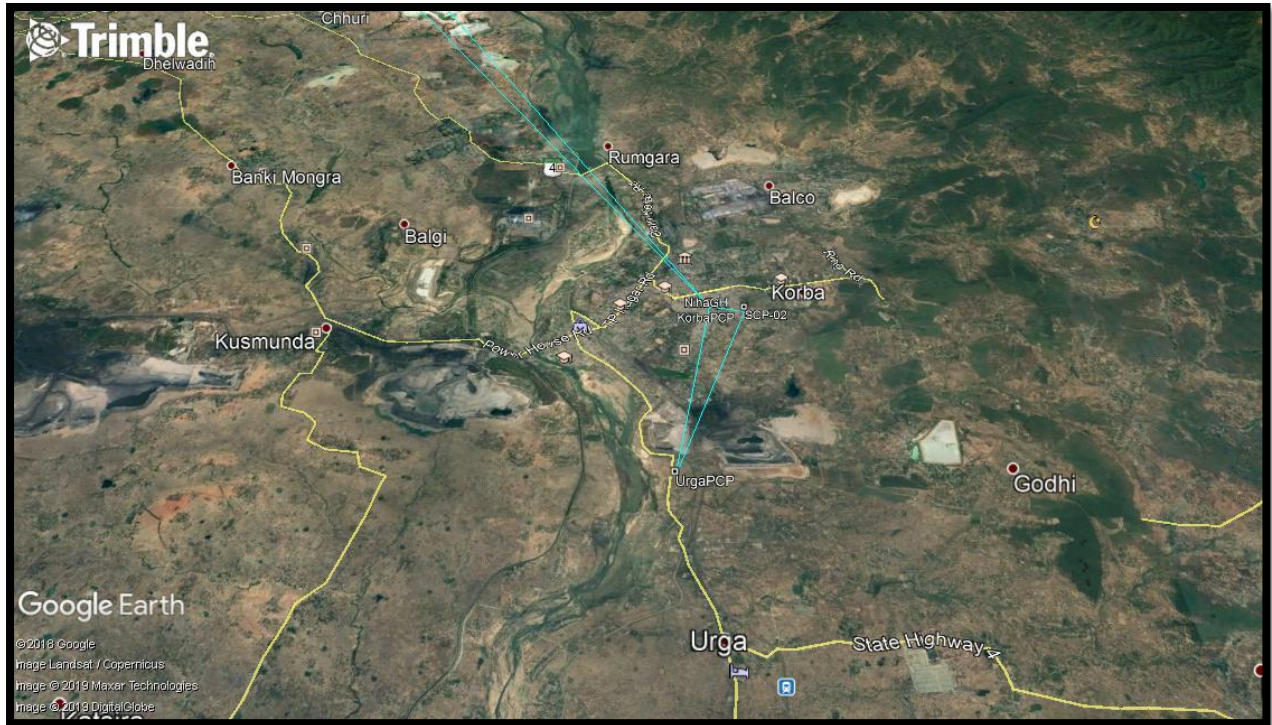


Fig-1: Google Image showing locations of Korba (Niharika Guest house) Primary Control Point & Urga Primary Control Points (PCP)

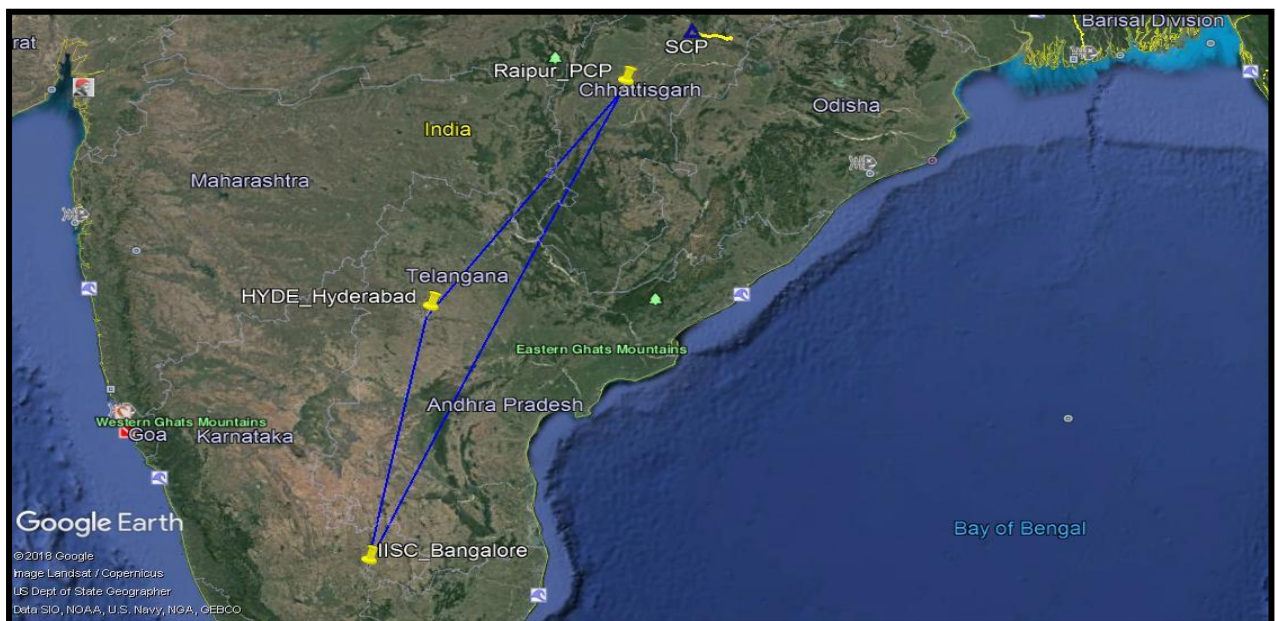


Fig-2: Google Image showing locations of Raipur PCP & IGS-Bangalore and Hyderabad

4.3 Establishment of Primary Control Point

Based on the input data (maps of the proposed line corridor, tower location details), the DGPS base station – Primary, Secondary and Temporary Benchmarks Control Points (PCP and TBM) in the project area are planned. One PCP with 72 hours observation was planned and established in Raipur. The PCP was connected to main control in Raipur which is established with continuous 72 hours observation and processed using the IGS stations in Hyderabad and Bangalore. As per Survey of India (SOI) Guideline, the PCP is to be fixed through continuous observation for 72 hours duration. The 72 hours of observation was carried out using DGPS. The observed data was processed with reference to the data of International GNSS Service (IGS) stations- HYDE & IISC as per SOI guideline (Post processed report is enclosed as Annexure-1).

Point ID	UTM-Easting(m)	UTM-Northing(m)	EGM-Elevation(m)	Latitude	Longitude	Ellipsoidal Height (m)	City	Location
PCP-Raipur	560764.042	2351378.878	298.819	N21°15'47.16512"	E81°35'08.50131"	234.801	Raipur	Geotrax Office Roof Top
IGS_HYDE	239826.372	1927383.113	521.783	N17°25'02.21987 "	E78°33'03.17892 "	444.790 m	Hyderabad	NRSC, Hyderabad
IGS_IISC	127917.413	1441987.668	929.917	N13°01'16.19707 "	E77°34'13.35337 "	843.714 m	Bangalore	IISC, Bangalore

Table 1: UTM and Geographical coordinates of IGS stations and Raipur-PCP

The Urga Primary Control Point (PCP) with static 24 hours of DGPS Observation was established as the DGPS base station near the project location. The PCP was established in the roof top of the primary school in Urga tehsil in Korba district. The Secondary control point (PCP) was established with reference to the Raipur Primary control point (PCP).

The coordinate of the Urga PCP is as follows:

Latitude: N22°18'39.55260", Longitude: E82°43'07.23316"

Easting: 677032.804m, Northing: 2468257.701m (as per UTM Zone 45N)

Elevation (EGM2008): 285.201m, Ellipsoidal Height: 224.164m.



Fig-3: Images showing Urga Primary Control Point (PCP)

4.4 Establishment of Secondary control point

The Kendai Secondary Control is established with reference to the Korba Primary Control Point (Niharika Guest House) in Static mode. The CA land boundary survey has been carried with reference to this secondary control points in Real-Time-Kinematic mode (RTK) using DGPS instruments.

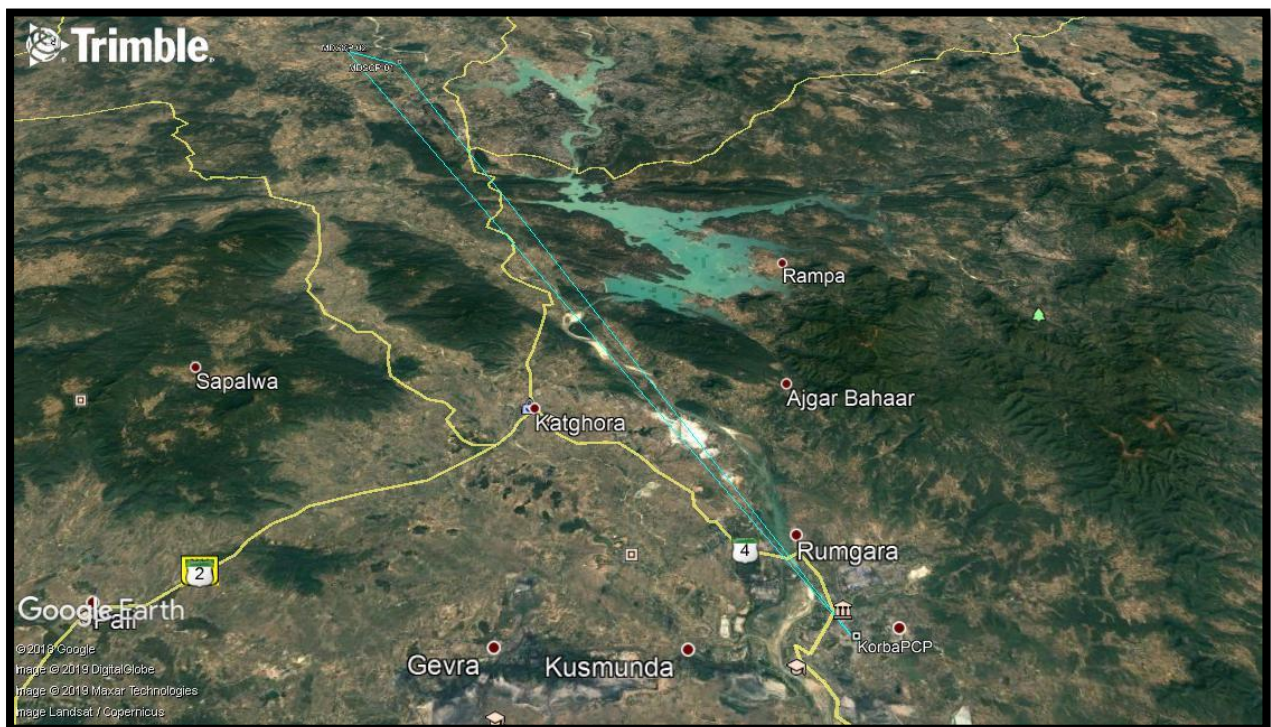


Fig-4: Google satellite image showing Secondary Control Point (SCP) in kendai Range

The coordinate of the SCP is given below:

Point ID	Easting	Northing	Latitude (Local)	Longitude (Local)	Elevation
KorbaPCP	677921.651	2473378.503	22°21'25.69098"	82°43'40.33817"	314.45
MDSCP-01	643775.865	2532951.033	22°53'54.03989"	82°24'06.47437"	435.994
MDSCP-02	638287.387	2535670.607	22°55'24.12451"	82°20'54.74759"	396.255
MDSCP-03	648317.424	2540434.364	22°57'55.89234"N	82°26'48.43147"E	408.545

Table 2: UTM and Geographical coordinates of Korba PCP and Kendai Range-SCP

4.5 DGPS Survey Procedure

DGPS survey was carried out using a pair of DGPS instrument. One DGPS Instrument was used as Base Station and other is used as Rover. The survey was conducted in Real Time Kinematic (RTK) survey method. The Survey team carried out DGPS Survey of CA land boundary points by walking along the CA boundary. DGPS readings were collected at every 50m distance along CA land boundary and at every turn or bend.

During the survey the start and end of the CA patch was identified in the field with the help of staff from the revenue department. The revenue department staff also provided information regarding the Khasra number, ownership etc.

4.6 Creation of CA land patch boundary

The surveyed points captured through DGPS were plotted in the GIS Software and the boundary line was created by joining the points. The vector layer prepared and then superimposed on Georeferenced forest map.

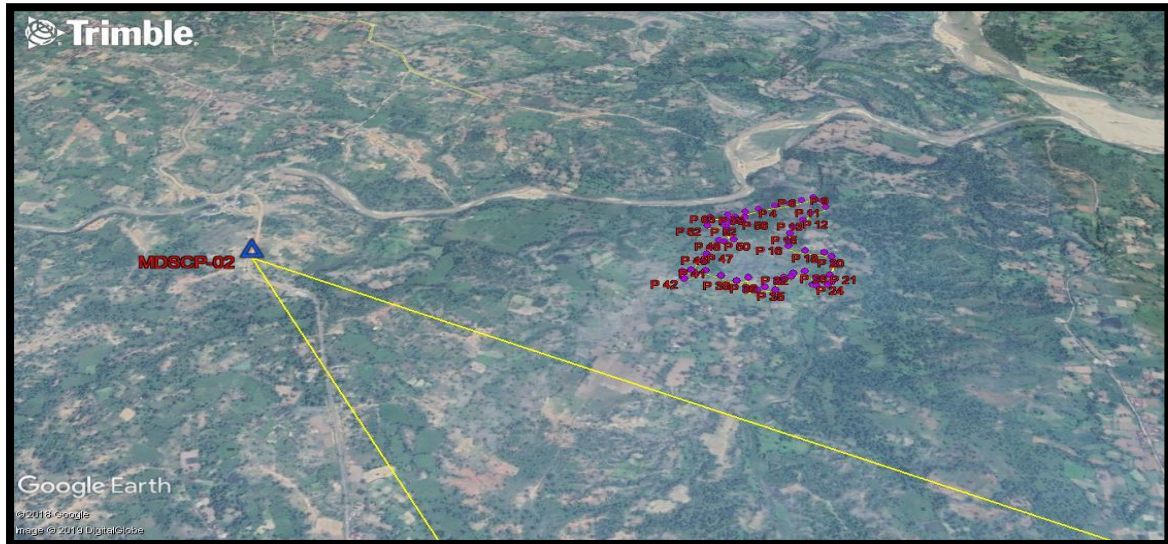


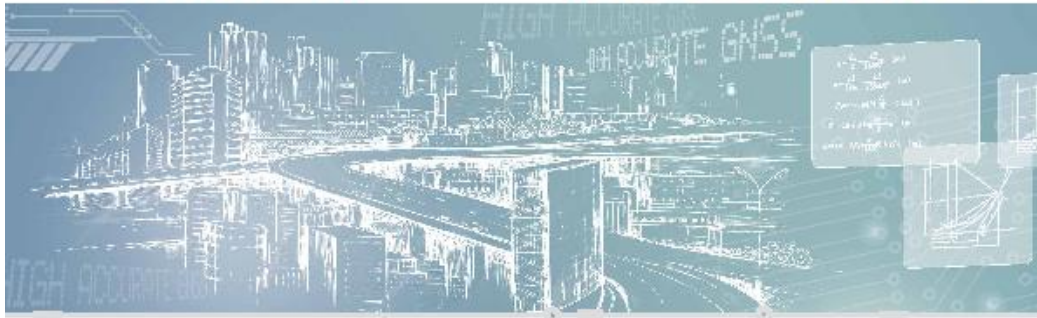
Fig-5: Google satellite image showing Secondary Control Point (SCP) in kendai Range and nearby proposed CA land boundary

4.7 Specification of DGPS Equipment

Geotrax deployed the most advance and hi-precision devices to carry out the DGPS survey. The DGPS performance specifications are given below. The corresponding fact sheets are placed below for ready reference.

COMNAV

T300 GNSS Receiver



Features

- Ultra small
- Super light
- Many user-friendly conveniences built in
- GPS L1/L2/L5, BeiDou B1/B2/B3, GLONASS L1/L2
- Low power consumption
- Support long baseline E-RTK

RTK robust enough for challenging environments, in a device that is light and easy to carry

With decades of experience in the surveying GNSS receiver, the T300 is a product which combines lots of market proved advantages together. It can track all the working GNSS constellations. By using ComNav's unique QUAN™ algorithm technology, it can function in RTK mode with all the GNSS constellations or by using any single GNSS constellation such as GLONASS or BeiDou. The strong anti-interference ability of the receiver makes it possible to work in any environment.

Design driven to improve user experience

Our R&D people are always thinking about how to improve the physical experience of users and workflow in the field. With this in mind, the T300 integrates a cutting edge GNSS board, Bluetooth®, UHF (Rx&Tx) into a compact board. Smart design makes the T300 the lightest and smallest (volume) receiver in the world.

Hot swap battery design

Extending the field working time is also a passion for our R&D people. They do lots of tests and analysis to reduce the power consumption, and make the whole system work more efficiently. In parallel, they've designed in the capability to hot swap the battery source. When the warning sounds and LED flashes, put your second battery in place. Then recharge the first while you keep working.

Consumer grade batteries... always available

Losing power in the field is significantly inconvenient for users, as the batteries for GNSS receivers are often unusual types and not readily available. Once again our R&D people developed a solution so that the T300 runs on normal consumer batteries.

Technical Specifications

T300

Signal Tracking

- 256 channels with simultaneously tracked satellite signals
- GPS: L1 C/A, L1 C, L2 P, L5
- BeiDou: B1, B2, B3
- GLONASS: L1, L2
- SBAS: WAAS, EGNOS, MSAS, GAGAN

Performance Specifications

- Cold start: <50 s
- Warm start: <30 s
- Hot start: <15 s
- Initialization time: <10 s
- Singal re-acquisition: <2 s
- Initialization reliability: >99.9%

Positioning Specifications

- Post Processing Static
 - Horizontal: 2.5 mm + 0.5 ppm RMS
 - Vertical: 5 mm + 0.5 ppm RMS
- Real Time Kinematic
 - Horizontal: 8 mm + 1 ppm RMS
 - Vertical: 15 mm + 1 ppm RMS
- E-RTK¹ (baseline<100 km)
 - Horizontal: 0.2 m + 1 ppm RMS
 - Vertical: 0.4 m + 1 ppm RMS
- Code differential GNSS positioning
 - Horizontal: 0.25 m + 1 ppm RMS
 - Vertical: 0.5 m + 1 ppm RMS
- SBAS: Typically <1 m 3D RMS
- Standalone: <1.5 m 3D RMS

Communications and Memory

- 1 Serial port (7 pin Lemo).
Baud rates up to 921,600 bps.
- Radio modem: Tx/Rx with full frequency range from 410-470 MHz²
-Transmit power: 0.5-2W adjustable
- Range: 1-4 km
- Position data output rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz
- 5 LEDs (indicating Power, Satellite Tracking, Bluetooth[®] and Differential Data)
- Bluetooth[®]: V 2.X protocol, work compatible with Windows 7, Windows mobile and Android

Data Format

- Correction data I/O:
 - RTCM 2.x, 3.x, CMR (GPS only), CMR+ (GPS only).
- Position data output:
 - ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST, PJK, PTNL
 - ComNav Binary update to 20 Hz

Physical

- Size(WxH): 15.8 cm x 7.5 cm
- Weight: 0.95 kg (include 2 batteries)

Environmental

- Operating temperature: -40 °C to +65 °C (40 °F to 149 °F)
- Storage temperature: -40 °C to +85 °C (40 °F to 185 °F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP67 protected from temporary immersion to depth of 1 meter, floats
- Shock: survives a 2 meter drop on to concrete

Electrical

- Input Voltage: 5-27 VDC
- Power consumption: 2.85 W (3 constellations)³
- Li-ion battery capacity: 2 x 1800 mAh, up to 8 hours typically
- Memory: 256 MB internal with up to 16 GB pluggable memory card

Software

- ComNav field data collection software CGSurvey
- Carlson's SurvCE field data collection software (optional)
- MicroSurvey's FieldGenius field data collection software (optional)

- 1 E-RTK, BeiDou B3 signal used in RTK calculate engine; concern the current situation, this mode can be used in APAC.
- 2 410-470 MHz, 3 frequency range, 410-430, 430-460, 460-470, need to clarify when place the order.
- 3 Power consumption will increase if using internal radio modem transmitter.

Specifications subject to change without notice.

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5. Results

The area proposed for Compensatory Afforestation in degraded forest land is 315.00 Ha. The forest area wise area statement of the proposed land for CA is given below. The final patch wise CA land boundary coordinates are annexed herewith and marked as **Annexure -1**. The forest compartment wise geo-referenced maps showing the CA land patch are annexed herewith and marked as **Annexure-2**. The Survey of India Toposheet is geo-referenced and the CA land patches are superimposed on it. The Geo-referenced SOI map is annexed herewith and marked as **Annexure-3**. The Patch wise CA land treatment maps are annexed herewith and marked as **Annexure-4**. The Patch wise Google map is annexed herewith and marked as **Annexure-5**.

The consolidated area statement of the proposed CA land patches is given in the below table

Statement Showing The Area Of Proposed CA Land						
Sl. No.	Division	Range	Patch No	Compartment No	Type of Forest	Area (Ha.)
1	Katghora	Kendai	Patch 1	P 314	Protected Forest	25
2	Katghora	Kendai	Patch 2	P 314	Protected Forest	60
3	Katghora	Kendai	Patch 3	P 316	Protected Forest	20
4	Katghora	Kendai	Patch 4	P 317	Protected Forest	40
5	Katghora	Kendai	Patch 5	P 318	Protected Forest	20
6	Katghora	Kendai	Patch 6	P 312	Protected Forest	100
7	Katghora	Kendai	Patch 7	P 313	Protected Forest	50
Total Area						315


वनमण्डलाधिकारी
कटघोरा वनमण्डल, कटघोरा


उप वन मण्डलाधिकारी
कटघोरा


वन परिक्षेत्र अधिकारी
केंदई


परिक्षेत्र सहायक
सिरमिना

Background of Organization

Geotrax International Services (www.geotrax.in) is a Professional Land Mapping and Services provider across India established in the year 1999. During the last 15+ years, we had an opportunity to execute a variety of surveying jobs all over India and in the Middle East to various customer specifications for RIS, LIS, and Municipal GIS oriented jobs. Cadastral Surveys using ETS/DGPS and Provision of Ground control conforming to stringent accuracy standards using high end instruments as RTK/GPRS DGPS is our speciality. We also have a UAV (Drone) and Ground Penetrating Radar (on Roaster).

Geotrax is headed by Mr. V.V.S Bandhakavi (Ex-Survey of India employee) who has more than 40+ years' experience in the field of surveying in India and abroad.

Some of our major clients include:

- Odisha Space Application Centre (ORSAC)
- Steel Authority of India (SAIL)
- National Thermal Power Corporation (NTPC)
- Survey Settlement and Land Records Department (Govt. Of Gujarat)
- Survey Settlement and Land Records Department (Govt. Of Madhya Pradesh)
- Irrigation Dept. (Govt. of Jammu and Kashmir)
- National Remote Sensing Agency (Hyderabad)
- Meinhardt India Private Limited (Delhi),
- Nagarjuna Construction Company (NCC, Hyderabad)
- Consulting Engineering Services (CES, New Delhi)
- Lee Associates of South Asia (LASA, Delhi)
- Power development Corporation (Govt. of Jammu and Kashmir)

Geotrax expertise covers:

- ❖ DGPS Surveys for Mining lease boundary, and Forest Diversion
- ❖ Consultancy services for Mining Plan & EIA
- ❖ Boundary and cadastral surveys using DGPS and Total station;
- ❖ Topographic surveys.
- ❖ Ground control surveys for photogrammetric projects, including Airborne GPS.
- ❖ Only one of the two companies in India who are empanelled by NRSA for DGPS survey for ground control point collection
- ❖ Route and alignment surveys combining conventional and photogrammetric methods.
- ❖ Construction and cross-section surveys (from road design to precision layout and quality control).

Being a client focused organization, Geotrax's combination of survey equipment, personnel, and computer resources allow for the tailoring of the project approach to match the orders of accuracy and precision requirements for each project. Geotrax's equipment resources include 250 DGPS, 33 hand-held GPS units, theodolites, electronic digital and automatic levels, 19 Electronic Total Stations, and data collectors.

On the mapping side, our CAD and GIS professionals assist the survey projects by creating accurate maps. We have dedicated CAD experts who have extensive experience with different CAD software.

6. Annexure

6.1 Annexure – 1: CA Land Patch Boundary DGPS Coordinates

Sl. No.	Patch No & Compartment Name	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
1	Patch 1 & P 314	P -1	646769.7991	2539283.243	22°57'18.96687"	82°25'53.69845"
2		P -2	646836.7946	2539315.038	22°57'19.97928"	82°25'56.06126"
3		P -3	646904.4748	2539347.919	22°57'21.02681"	82°25'58.44849"
4		P -4	646975.2631	2539383.092	22°57'22.14783"	82°26'00.94562"
5		P -5	647017.252	2539415.868	22°57'23.20007"	82°26'02.43092"
6		P -6	647037.1469	2539458.439	22°57'24.57776"	82°26'03.14394"
7		P -7	647057.0419	2539501.011	22°57'25.95546"	82°26'03.85697"
8		P -8	647076.9368	2539543.582	22°57'27.33315"	82°26'04.57000"
9		P -9	647093.1584	2539574.34	22°57'28.32796"	82°26'05.15003"
10		P -10	647110.2143	2539601.377	22°57'29.20151"	82°26'05.75808"
11		P -11	647126.5072	2539620.404	22°57'29.81492"	82°26'06.33659"
12		P -12	647146.177	2539637.541	22°57'30.36580"	82°26'07.03300"
13		P -13	647176.8613	2539661.282	22°57'31.12786"	82°26'08.11837"
14		P -14	647197.3761	2539674.873	22°57'31.56319"	82°26'08.84324"
15		P -15	647227.9208	2539690.429	22°57'32.05920"	82°26'09.92090"
16		P -16	647275.5044	2539675.665	22°57'31.56410"	82°26'11.58632"
17		P -17	647332.5913	2539650.815	22°57'30.73808"	82°26'13.58191"
18		P -18	647370.6282	2539631.573	22°57'30.10039"	82°26'14.91064"
19		P -19	647400.8415	2539614.86	22°57'29.54742"	82°26'15.96557"
20		P -20	647383.705	2539526.797	22°57'26.68992"	82°26'15.33371"
21		P -21	647366.5685	2539438.734	22°57'23.83242"	82°26'14.70186"
22		P -22	647349.432	2539350.67	22°57'20.97491"	82°26'14.07001"
23		P -23	647380.575	2539340.851	22°57'20.64576"	82°26'15.15993"
24		P -24	647407.1869	2539332.523	22°57'20.36657"	82°26'16.09130"
25		P -25	647416.92	2539393.303	22°57'22.33942"	82°26'16.45388"
26		P -26	647430.7753	2539480.824	22°57'25.18037"	82°26'16.97037"
27		P -27	647439.7167	2539537.305	22°57'27.01374"	82°26'17.30368"
28		P -28	647447.0589	2539583.685	22°57'28.51921"	82°26'17.57738"
29		P -29	647452.6712	2539579.897	22°57'28.39428"	82°26'17.77311"
30		P -30	647459.7361	2539565.694	22°57'27.93027"	82°26'18.01624"
31		P -31	647467.6736	2539555.441	22°57'27.59443"	82°26'18.29138"
32		P -32	647487.5174	2539545.188	22°57'27.25479"	82°26'18.98449"
33		P -33	647513.1531	2539538.586	22°57'27.03197"	82°26'19.88219"
34		P -34	647506.8811	2539451.133	22°57'24.19086"	82°26'19.63193"
35		P -35	647500.6091	2539363.681	22°57'21.34976"	82°26'19.38167"
36		P -36	647494.337	2539276.228	22°57'18.50865"	82°26'19.13141"
37		P -37	647491.201	2539232.502	22°57'17.08810"	82°26'19.00628"
38		P -38	647408.9202	2539241.389	22°57'17.40321"	82°26'16.12083"

39		P -39	647326.6394	2539250.276	22°57'17.71832"	82°26'13.23538"
40		P -40	647262.8312	2539199.51	22°57'16.08817"	82°26'10.97793"
41		P -41	647199.023	2539148.743	22°57'14.45801"	82°26'08.72049"
42		P -42	647115.3126	2539081.35	22°57'12.29362"	82°26'05.75870"
43		P -43	647038.832	2539019.777	22°57'10.31616"	82°26'03.05273"
44		P -44	646983.983	2539078.286	22°57'12.23570"	82°26'01.14730"
45		P -45	646929.134	2539136.794	22°57'14.15523"	82°25'59.24185"
46		P -46	646847.1581	2539173.571	22°57'15.37685"	82°25'56.37665"
47	Patch 2 & P 314	P -47	646765.1823	2539210.348	22°57'16.59847"	82°25'53.51144"
48		P -48	648309.968	2539342.792	22°57'20.41221"	82°26'47.78756"
49		P -49	648377.2628	2539470.638	22°57'24.54694"	82°26'50.19420"
50		P -50	648422.126	2539555.868	22°57'27.30342"	82°26'51.79866"
51		P -51	648528.1506	2539655.394	22°57'30.50504"	82°26'55.55523"
52		P -52	648617.4058	2539742.087	22°57'33.29480"	82°26'58.71869"
53		P -53	648685.3374	2539811.671	22°57'35.53517"	82°27'01.12766"
54		P -54	648753.3758	2539881.369	22°57'37.77921"	82°27'03.54043"
55		P -55	648821.9658	2539911.565	22°57'38.73886"	82°27'05.95888"
56		P -56	648885.9424	2539939.731	22°57'39.63395"	82°27'08.21468"
57		P -57	648993.4887	2539945.538	22°57'39.78814"	82°27'11.99231"
58		P -58	649078.33	2539962.233	22°57'40.30361"	82°27'14.97662"
59		P -59	649163.1713	2539978.929	22°57'40.81907"	82°27'17.96094"
60		P -60	649205.381	2539961.012	22°57'40.22299"	82°27'19.43656"
61		P -61	649233.8679	2539888.84	22°57'37.86750"	82°27'20.41153"
62		P -62	649262.3548	2539816.668	22°57'35.51201"	82°27'21.38649"
63		P -63	649314.566	2539741.879	22°57'33.06378"	82°27'23.19340"
64		P -64	649366.7772	2539667.09	22°57'30.61555"	82°27'25.00030"
65		P -65	649418.9885	2539592.301	22°57'28.16731"	82°27'26.80718"
66		P -66	649487.5141	2539540.168	22°57'26.45036"	82°27'29.19466"
67		P -67	649548.0767	2539494.093	22°57'24.93292"	82°27'31.30470"
68		P -68	649601.0222	2539454.717	22°57'23.63571"	82°27'33.14965"
69		P -69	649634.879	2539404.179	22°57'21.98177"	82°27'34.32058"
70		P -70	649614.898	2539368.268	22°57'20.82074"	82°27'33.60662"
71		P -71	649581.6787	2539335.584	22°57'19.76894"	82°27'32.42904"
72		P -72	649543.2332	2539297.759	22°57'18.55166"	82°27'31.06621"
73		P -73	649505.2056	2539234.116	22°57'16.49488"	82°27'29.70906"
74		P -74	649456.6358	2539179.948	22°57'14.74955"	82°27'27.98514"
75		P -75	649397.0401	2539128.003	22°57'13.08007"	82°27'25.87494"
76		P -76	649355.6585	2539202.268	22°57'15.50776"	82°27'24.44810"
77		P -77	649314.277	2539276.533	22°57'17.93546"	82°27'23.02125"
78		P -78	649307.8498	2539364.398	22°57'20.79402"	82°27'22.82621"
79		P -79	649301.4226	2539452.263	22°57'23.65258"	82°27'22.63116"
80		P -80	649298.209	2539496.195	22°57'25.08186"	82°27'22.53364"
81		P -81	649244.6983	2539538.826	22°57'26.48505"	82°27'20.66994"
82		P -82	649213.2701	2539558.54	22°57'27.13607"	82°27'19.57348"
83		P -83	649172.8185	2539602.406	22°57'28.57517"	82°27'18.16865"
84		P -84	649144.0469	2539649.549	22°57'30.11706"	82°27'17.17499"

85		P -85	649119.8976	2539745.43	22°57'33.24193"	82°27'16.36054"
86		P -86	649107.823	2539793.37	22°57'34.80436"	82°27'15.95331"
87		P -87	649021.2088	2539793.936	22°57'34.85063"	82°27'12.91279"
88		P - 88	648957.8978	2539794.349	22°57'34.88444"	82°27'10.69030"
89		P -89	648891.2876	2539794.784	22°57'34.92000"	82°27'08.35200"
90		P -90	648837.794	2539810.872	22°57'35.46022"	82°27'06.47961"
91		P -91	648750.109	2539727.788	22°57'32.78733"	82°27'03.37247"
92		P -92	648778.3543	2539641.896	22°57'29.98590"	82°27'04.33426"
93		P -93	648806.5995	2539556.004	22°57'27.18447"	82°27'05.29604"
94		P -94	648834.8448	2539470.112	22°57'24.38303"	82°27'06.25782"
95		P -95	648863.09	2539384.22	22°57'21.58160"	82°27'07.21957"
96		P -96	648880.0311	2539335.522	22°57'19.99299"	82°27'07.79740"
97		P -97	648890.6145	2539233.922	22°57'16.68655"	82°27'08.13367"
98		P -98	648875.7978	2539210.639	22°57'15.93437"	82°27'07.60544"
99		P -99	648794.712	2539220.317	22°57'16.27506"	82°27'04.76227"
100		P -100	648772.5375	2539131.736	22°57'13.40241"	82°27'03.95311"
101		P -101	648750.363	2539043.155	22°57'10.52975"	82°27'03.14396"
102		P -102	648846.005	2539039.863	22°57'10.39200"	82°27'06.50031"
103		P -103	648881.6186	2539018.022	22°57'09.67050"	82°27'07.74293"
104		P -104	648907.1092	2538971.517	22°57'08.15043"	82°27'08.62163"
105		P -105	648932.7064	2538924.818	22°57'06.62400"	82°27'09.50400"
106		P -106	648977.266	2538878.788	22°57'05.11325"	82°27'11.05226"
107		P -107	649033.8082	2538826.142	22°57'03.38352"	82°27'13.01885"
108		P -108	649087.0761	2538772.092	22°57'01.60922"	82°27'14.87000"
109		P -109	649135.7662	2538722.687	22°56'59.98740"	82°27'16.56205"
110		P -110	649178.4993	2538713.12	22°56'59.66260"	82°27'18.05883"
111		P -111	649161.8394	2538648.653	22°56'57.57215"	82°27'17.45159"
112		P -112	649137.6696	2538555.127	22°56'54.53938"	82°27'16.57063"
113		P -113	649118.4781	2538480.864	22°56'52.13126"	82°27'15.87113"
114		P -114	649074.5351	2538515.129	22°56'53.25937"	82°27'14.34048"
115		P -115	649042.1222	2538545.571	22°56'54.25946"	82°27'13.21325"
116	Patch 2 & P 314	P -116	648995.9403	2538601.227	22°56'56.08369"	82°27'11.61142"
117		P -117	648957.6301	2538661.324	22°56'58.04980"	82°27'10.28746"
118		P -118	648904.109	2538720.402	22°56'59.98761"	82°27'08.42916"
119		P -119	648850.588	2538779.479	22°57'01.92542"	82°27'06.57085"
120		P -120	648795.9733	2538848.484	22°57'04.18632"	82°27'04.67758"
121		P -121	648741.3585	2538917.489	22°57'06.44722"	82°27'02.78429"
122		P -122	648686.7438	2538986.494	22°57'08.70812"	82°27'00.89098"
123		P -123	648632.129	2539055.499	22°57'10.96901"	82°26'58.99765"
124		P -124	648541.062	2539092.886	22°57'12.21366"	82°26'55.81370"
125		P -125	648449.995	2539130.272	22°57'13.45829"	82°26'52.62974"
126		P -126	648403.3193	2539201.112	22°57'15.77627"	82°26'51.01569"
127		P -127	648356.6437	2539271.952	22°57'18.09424"	82°26'49.40163"
128	Patch 3 & P 316	P -128	649452.2838	2537963.837	22°56'35.21516"	82°27'27.40880"
129		P -129	649527.0746	2537938.468	22°56'34.36626"	82°27'30.02528"
130		P -130	649611.656	2537910.775	22°56'33.43868"	82°27'32.98461"

131		P -131	649699.4965	2537882.569	22°56'32.49332"	82°27'36.05815"
132		P -132	649764.6512	2537861.51	22°56'31.78766"	82°27'38.33786"
133		P -133	649727.0607	2537805.496	22°56'29.97880"	82°27'36.99883"
134		P -134	649688.69	2537748.32	22°56'28.13238"	82°27'35.63201"
135		P -135	649686.702	2537673.843	22°56'25.71177"	82°27'35.53626"
136		P -136	649647.1499	2537729.35	22°56'27.52908"	82°27'34.16727"
137		P -137	649612.525	2537791.444	22°56'29.55894"	82°27'32.97353"
138		P -138	649548.241	2537778.549	22°56'29.16047"	82°27'30.71255"
139		P -139	649506.2823	2537700.836	22°56'26.64756"	82°27'29.21267"
140		P -140	649464.3237	2537623.124	22°56'24.13465"	82°27'27.71280"
141		P -141	649422.365	2537545.411	22°56'21.62173"	82°27'26.21294"
142		P -142	649419.209	2537458.079	22°56'18.78359"	82°27'26.07177"
143		P -143	649466.1745	2537388.301	22°56'16.49995"	82°27'27.69601"
144		P -144	649433.2597	2537337.404	22°56'14.85587"	82°27'26.52296"
145		P -145	649356.6234	2537385.934	22°56'16.45830"	82°27'23.84985"
146		P -146	649279.9871	2537434.464	22°56'18.06071"	82°27'21.17673"
147		P -147	649244.858	2537488.588	22°56'19.83160"	82°27'19.96248"
148		P -148	649198.451	2537506.995	22°56'20.44493"	82°27'18.33994"
149		P -149	649103.443	2537508.545	22°56'20.52590"	82°27'15.00558"
150		P -150	649036.5159	2537518.76	22°56'20.87953"	82°27'12.65991"
151		P -151	648974.7081	2537528.194	22°56'21.20609"	82°27'10.49365"
152		P -152	648926.0001	2537568.449	22°56'22.53043"	82°27'08.79791"
153		P -153	648942.7365	2537619.696	22°56'24.19110"	82°27'09.40316"
154		P -154	648972.2413	2537679.577	22°56'26.12837"	82°27'10.45960"
155		P -155	649052.0011	2537699.342	22°56'26.74527"	82°27'13.26616"
156		P -156	649168.3092	2537727.715	22°56'27.63026"	82°27'17.35862"
157		P -157	649215.3185	2537736.546	22°56'27.90224"	82°27'19.01179"
158		P -158	649238.6103	2537766.061	22°56'28.85428"	82°27'19.83963"
159		P -159	649296.1573	2537796.224	22°56'29.81633"	82°27'21.87012"
160		P -160	649333.1192	2537824.734	22°56'30.73130"	82°27'23.17747"
161		P -161	649364.8168	2537848.214	22°56'31.48443"	82°27'24.29829"
162		P -162	649392.179	2537872.685	22°56'32.27115"	82°27'25.26727"
163		P -163	649424.3136	2537921.724	22°56'33.85508"	82°27'26.41232"
164	Patch 4 & P 317	P -164	650460.24	2538032.652	22°56'37.12618"	82°28'02.81428"
165		P -165	650541.186	2538037.438	22°56'37.25547"	82°28'05.65734"
166		P -166	650622.132	2538042.223	22°56'37.38474"	82°28'08.50040"
167		P -167	650718.1121	2538020.548	22°56'36.64888"	82°28'11.86189"
168		P -168	650814.0922	2537998.872	22°56'35.91299"	82°28'15.22337"
169		P -169	650910.0723	2537977.197	22°56'35.17708"	82°28'18.58485"
170		P -170	651006.0525	2537955.521	22°56'34.44115"	82°28'21.94631"
171		P -171	651102.0326	2537933.846	22°56'33.70520"	82°28'25.30776"
172		P -172	651120.4166	2537925.948	22°56'33.44243"	82°28'25.95029"
173		P -173	651154.6186	2537886.882	22°56'32.16128"	82°28'27.13709"
174		P -174	651202.7398	2537828.178	22°56'30.23711"	82°28'28.80555"
175		P -175	651250.861	2537769.473	22°56'28.31293"	82°28'30.47399"
176		P -176	651286.349	2537712.69	22°56'26.45534"	82°28'31.69966"

177		P -177	651266.1328	2537673.419	22°56'25.18525"	82°28'30.97620"
178		P -178	651239.2987	2537621.293	22°56'23.49939"	82°28'30.01593"
179		P -179	651184.9197	2537562.295	22°56'21.59912"	82°28'28.08640"
180		P -180	651130.5407	2537503.297	22°56'19.69884"	82°28'26.15688"
181		P -181	651120.6488	2537474.047	22°56'18.75113"	82°28'25.79937"
182		P -182	651114.6797	2537412.139	22°56'16.74048"	82°28'25.56806"
183		P -183	651107.9328	2537387.93	22°56'15.95564"	82°28'25.32272"
184		P -184	651075.59	2537340.806	22°56'14.43419"	82°28'24.17089"
185		P -185	651110.267	2537327.529	22°56'13.99125"	82°28'25.38339"
186		P -186	651104.4138	2537303.078	22°56'13.19826"	82°28'25.16934"
187		P -187	651073.8544	2537264.581	22°56'11.95669"	82°28'24.08315"
188		P -188	651013.9262	2537206.637	22°56'10.09246"	82°28'21.95927"
189		P -189	650945.875	2537158.351	22°56'08.54485"	82°28'19.55369"
190		P -190	650871.4093	2537130.721	22°56'07.67085"	82°28'16.93024"
191		P -191	650855.3317	2537178.061	22°56'09.21510"	82°28'16.38254"
192		P -192	650823.1765	2537272.741	22°56'12.30359"	82°28'15.28715"
193		P -193	650800.8944	2537357.473	22°56'15.06546"	82°28'14.53480"
194		P -194	650778.6124	2537442.205	22°56'17.82733"	82°28'13.78245"
195		P -195	650756.3303	2537526.936	22°56'20.58920"	82°28'13.03008"
196		P -196	650734.0482	2537611.668	22°56'23.35106"	82°28'12.27771"
197		P -197	650689.644	2537662.492	22°56'25.01778"	82°28'10.73691"
198		P -198	650634.8339	2537719.534	22°56'26.89003"	82°28'08.83302"
199		P -199	650579.8981	2537756.269	22°56'28.10214"	82°28'06.91758"
200		P -200	650532.5677	2537785.568	22°56'29.07001"	82°28'05.26649"
201		P -201	650474.499	2537821.514	22°56'30.25747"	82°28'03.24079"
202		P -202	650422.396	2537845.103	22°56'31.04127"	82°28'01.42015"
203		P -203	650414.696	2537857.681	22°56'31.45267"	82°28'01.15428"
204		P -204	650430.0094	2537927.748	22°56'33.72558"	82°28'01.71636"
205		P -205	650444.9033	2537986.276	22°56'35.62349"	82°28'02.25968"
206	Patch 5 & P 318	P -206	650919.88	2536796.833	22°55'56.80038"	82°28'18.51422"
207		P -207	651013.093	2536792.39	22°55'56.62561"	82°28'21.78436"
208		P -208	651106.306	2536787.948	22°55'56.45082"	82°28'25.05450"
209		P -209	651199.519	2536783.505	22°55'56.27601"	82°28'28.32463"
210		P -210	651292.7321	2536779.063	22°55'56.10119"	82°28'31.59476"
211		P -211	651339.3386	2536776.842	22°55'56.01377"	82°28'33.22982"
212		P -212	651373.2996	2536739.465	22°55'54.78757"	82°28'34.40865"
213		P -213	651411.0607	2536697.906	22°55'53.42416"	82°28'35.71937"
214		P -214	651395.4318	2536606.655	22°55'50.46271"	82°28'35.13865"
215		P -215	651379.803	2536515.404	22°55'47.50126"	82°28'34.55794"
216		P -216	651364.1741	2536424.153	22°55'44.53980"	82°28'33.97724"
217		P -217	651348.5452	2536332.902	22°55'41.57835"	82°28'33.39654"
218		P -218	651332.9164	2536241.651	22°55'38.61690"	82°28'32.81586"
219		P -219	651317.2875	2536150.4	22°55'35.65544"	82°28'32.23518"
220		P -220	651265.8223	2536146.208	22°55'35.53595"	82°28'30.42740"
221		P -221	651216.6785	2536142.611	22°55'35.43503"	82°28'28.70130"
222		P -222	651174.1676	2536221.405	22°55'38.01047"	82°28'27.23699"

223		P -223	651131.6567	2536300.199	22°55'40.58591"	82°28'25.77267"
224		P -224	651089.1458	2536378.993	22°55'43.16135"	82°28'24.30834"
225		P -225	651058.9831	2536434.9	22°55'44.98869"	82°28'23.26934"
226		P -226	651029.9178	2536496.684	22°55'47.00674"	82°28'22.27092"
227		P -227	651000.2787	2536559.687	22°55'49.06463"	82°28'21.25278"
228		P -228	650969.7737	2536633.891	22°55'51.48694"	82°28'20.20818"
229		P -229	650942.0334	2536720.18	22°55'54.30120"	82°28'19.26485"

Sl. No.	Patch No & Compartment Name	Pillar ID	Easting (m)	Northing (m)	Longitude (°E)	Latitude (°N)
1	Patch No- 6 & P 312	P 1	646192.284	2541118.289	42°40'08.70666"	22°58'18.80765"
2		P 2	646221.107	2541108.829	42°41'06.50393"	22°58'18.49098"
3		P 3	646247.711	2541100.097	42°41'59.85062"	22°58'18.19870"
4		P 4	646274.314	2541091.365	42°42'53.19724"	22°58'17.90641"
5		P 5	646300.918	2541082.633	42°43'46.54379"	22°58'17.61413"
6		P 6	646327.522	2541073.901	42°44'39.89027"	22°58'17.32184"
7		P 7	646354.125	2541065.169	42°45'33.23668"	22°58'17.02955"
8		P 8	646380.729	2541056.437	42°46'26.58303"	22°58'16.73726"
9		P 9	646413.386	2541045.298	42°47'32.06039"	22°58'16.36479"
10		P 10	646415.936	2541024.198	42°47'36.77561"	22°58'15.67800"
11		P 11	646418.732	2540996.338	42°47'41.85552"	22°58'14.77138"
12		P 12	646421.528	2540968.478	42°47'46.93543"	22°58'13.86475"
13		P 13	646424.325	2540940.618	42°47'52.01532"	22°58'12.95813"
14		P 14	646427.121	2540912.758	42°47'57.09519"	22°58'12.05150"
15		P 15	646429.917	2540884.898	42°48'02.17506"	22°58'11.14488"
16		P 16	646433.163	2540852.567	42°48'08.07004"	22°58'10.09278"
17		P 17	646446.962	2540833.537	42°48'35.45722"	22°58'09.46973"
18		P 18	646463.4	2540810.869	42°49'08.07892"	22°58'08.72760"
19		P 19	646479.837	2540788.202	42°49'40.70052"	22°58'07.98547"
20		P 20	646496.274	2540765.534	42°50'13.32203"	22°58'07.24334"
21		P 21	646512.711	2540742.867	42°50'45.94344"	22°58'06.50121"
22		P 22	646531.588	2540716.836	42°51'23.40555"	22°58'05.64895"
23		P 23	646553.405	2540707.214	42°52'07.10551"	22°58'05.32924"
24		P 24	646579.025	2540695.916	42°52'58.42021"	22°58'04.95383"
25		P 25	646604.644	2540684.618	42°53'49.73482"	22°58'04.57841"
26		P 26	646630.264	2540673.32	42°54'41.04935"	22°58'04.20299"

27	P 27	646659.382	2540660.479	42°55'39.37141"	22°58'03.77631"
28	P 28	646680.807	2540671.679	42°56'22.69063"	22°58'04.13363"
29	P 29	646705.622	2540684.65	42°57'12.86134"	22°58'04.54746"
30	P 30	646730.436	2540697.621	42°58'03.03214"	22°58'04.96129"
31	P 31	646755.25	2540710.592	42°58'53.20301"	22°58'05.37512"
32	P 32	646780.065	2540723.563	42°59'43.37397"	22°58'05.78895"
33	P 33	646808.286	2540738.316	43°00'40.43449"	22°58'06.25960"
34	P 34	646835.039	2540752.3	43°01'34.52542"	22°58'06.70576"
35	P 35	646863.429	2540767.14	43°02'31.92513"	22°58'07.17920"
36	P 36	646888.817	2540780.411	43°03'23.25701"	22°58'07.60259"
37	P 37	646911.513	2540778.64	43°04'08.87803"	22°58'07.53781"
38	P 38	646933.966	2540776.888	43°04'54.00853"	22°58'07.47372"
39	P 39	646961.881	2540774.709	43°05'50.11997"	22°58'07.39403"
40	P 40	646989.796	2540772.531	43°06'46.23140"	22°58'07.31435"
41	P 41	647017.711	2540770.352	43°07'42.34280"	22°58'07.23466"
42	P 42	647045.626	2540768.174	43°08'38.45417"	22°58'07.15497"
43	P 43	647076.49	2540765.765	43°09'40.49303"	22°58'07.06685"
44	P 44	647076.323	2540740.724	43°09'39.66417"	22°58'06.25280"
45	P 45	647076.136	2540712.724	43°09'38.73743"	22°58'05.34259"
46	P 46	647075.949	2540684.725	43°09'37.81069"	22°58'04.43238"
47	P 47	647075.762	2540656.726	43°09'36.88397"	22°58'03.52217"
48	P 48	647075.575	2540628.726	43°09'35.95725"	22°58'02.61196"
49	P 49	647075.388	2540600.727	43°09'35.03054"	22°58'01.70176"
50	P 50	647075.2	2540572.728	43°09'34.10384"	22°58'00.79155"
51	P 51	647075.013	2540544.728	43°09'33.17715"	22°57'59.88134"
52	P 52	647074.826	2540516.729	43°09'32.25047"	22°57'58.97113"
53	P 53	647074.639	2540488.729	43°09'31.32380"	22°57'58.06092"
54	P 54	647074.445	2540459.644	43°09'30.36120"	22°57'57.11542"
55	P 55	647053.226	2540476.202	43°08'48.00397"	22°57'57.66045"
56	P 56	647031.152	2540493.427	43°08'03.93806"	22°57'58.22746"
57	P 57	647009.077	2540510.653	43°07'19.87205"	22°57'58.79448"
58	P 58	646983.68	2540530.471	43°06'29.17386"	22°57'59.44683"
59	P 59	646960.76	2540536.781	43°05'43.19209"	22°57'59.65927"
60	P 60	646942.924	2540541.475	43°05'07.40521"	22°57'59.81753"
61	P 61	646933.846	2540525.365	43°04'48.82800"	22°57'59.29666"
62	P 62	646950.966	2540504.686	43°05'22.86008"	22°57'58.61894"
63	P 63	646997.957	2540477.975	43°06'56.86148"	22°57'57.73565"
64	P 64	647015.478	2540456.561	43°07'31.68434"	22°57'57.03391"
65	P 65	647036.057	2540431.408	43°08'12.58716"	22°57'56.20965"
66	P 66	647041.386	2540410.166	43°08'22.88773"	22°57'55.51735"
67	P 67	647046.619	2540389.301	43°08'33.00509"	22°57'54.83737"
68	P 68	647023.588	2540387.458	43°07'46.63997"	22°57'54.78479"
69	P 69	647002.505	2540385.772	43°07'04.19809"	22°57'54.73665"
70	P 70	646970.879	2540402.098	43°06'00.90194"	22°57'55.27748"
71	P 71	646946.333	2540414.77	43°05'11.77527"	22°57'55.69723"
72	P 72	646915.129	2540430.879	43°04'09.32202"	22°57'56.23085"

73	P 73	646882.34	2540447.807	43°03'03.69640"	22°57'56.79157"
74	P 74	646850.645	2540464.169	43°02'00.26194"	22°57'57.33356"
75	P 75	646834.513	2540489.094	43°01'28.30140"	22°57'58.14900"
76	P 76	646817.784	2540514.944	43°00'55.15549"	22°57'58.99469"
77	P 77	646800.649	2540541.418	43°00'21.20766"	22°57'59.86083"
78	P 78	646784.174	2540566.875	42°59'48.56523"	22°58'00.69366"
79	P 79	646765.595	2540581.167	42°59'11.47274"	22°58'01.16417"
80	P 80	646746.393	2540595.937	42°58'33.13724"	22°58'01.65044"
81	P 81	646729.14	2540609.209	42°57'58.69130"	22°58'02.08738"
82	P 82	646698.368	2540624.232	42°56'57.08512"	22°58'02.58555"
83	P 83	646699.507	2540590.159	42°56'58.70762"	22°58'01.47745"
84	P 84	646710.893	2540568.454	42°57'21.18550"	22°58'00.76823"
85	P 85	646725.709	2540540.211	42°57'50.43517"	22°57'59.84534"
86	P 86	646738.903	2540515.06	42°58'16.48337"	22°57'59.02347"
87	P 87	646753.271	2540487.671	42°58'44.84796"	22°57'58.12850"
88	P 88	646767.24	2540461.042	42°59'12.42630"	22°57'57.25834"
89	P 89	646789.893	2540440.987	42°59'57.60098"	22°57'56.59916"
90	P 90	646807.646	2540432.865	43°00'33.15216"	22°57'56.32949"
91	P 91	646830.215	2540422.54	43°01'18.34847"	22°57'55.98666"
92	P 92	646852.163	2540412.489	43°02'02.30178"	22°57'55.65294"
93	P 93	646874.132	2540402.418	43°02'46.29520"	22°57'55.31856"
94	P 94	646894.865	2540383.968	43°03'27.63911"	22°57'54.71216"
95	P 95	646913.321	2540367.544	43°04'04.44152"	22°57'54.17238"
96	P 96	646934.878	2540348.362	43°04'47.42709"	22°57'53.54190"
97	P 97	646955.234	2540330.247	43°05'28.01921"	22°57'52.94653"
98	P 98	646982.411	2540332.785	43°06'22.73669"	22°57'53.02042"
99	P 99	647011.461	2540335.499	43°07'21.22612"	22°57'53.09940"
100	P 100	647035.307	2540337.726	43°08'09.23771"	22°57'53.16424"
101	P 101	647063.566	2540340.365	43°09'06.13290"	22°57'53.24107"
102	P 102	647074.344	2540325.731	43°09'27.52544"	22°57'52.76187"
103	P 103	647090.18	2540304.228	43°09'58.95827"	22°57'52.05777"
104	P 104	647103.986	2540285.482	43°10'26.36024"	22°57'51.44396"
105	P 105	647113.851	2540257.123	43°10'45.64642"	22°57'50.51887"
106	P 106	647123.4	2540223.397	43°11'04.19114"	22°57'49.41940"
107	P 107	647133.424	2540187.991	43°11'23.65989"	22°57'48.26515"
108	P 108	647146.065	2540164.816	43°11'48.63156"	22°57'47.50771"
109	P 109	647158.824	2540141.424	43°12'13.83699"	22°57'46.74317"
110	P 110	647171.221	2540133.403	43°12'38.61635"	22°57'46.47845"
111	P 111	647178.384	2540106.848	43°12'52.50109"	22°57'45.61288"
112	P 112	647187.73	2540072.198	43°13'10.61908"	22°57'44.48341"
113	P 113	647195.021	2540045.164	43°13'24.75444"	22°57'43.60221"
114	P 114	647201.619	2540017.964	43°13'37.49118"	22°57'42.71585"
115	P 115	647207.319	2539990.551	43°13'48.41726"	22°57'41.82281"
116	P 116	647213.019	2539963.137	43°13'59.34331"	22°57'40.92977"
117	P 117	647218.719	2539935.723	43°14'10.26933"	22°57'40.03673"
118	P 118	647222.954	2539915.353	43°14'18.38792"	22°57'39.37315"

119		P 119	647216.149	2539889.266	43°14'04.18572"	22°57'38.52720"
120		P 120	647201.042	2539864.843	43°13'33.31749"	22°57'37.73800"
121		P 121	647182.358	2539834.638	43°12'55.14240"	22°57'36.76198"
122		P 122	647167.629	2539810.825	43°12'25.04614"	22°57'35.99250"
123		P 123	647152.899	2539787.013	43°11'54.94998"	22°57'35.22302"
124		P 124	647136.887	2539764.068	43°11'22.29083"	22°57'34.48218"
125		P 125	647120.254	2539741.544	43°10'48.39090"	22°57'33.75520"
126		P 126	647103.621	2539719.02	43°10'14.49108"	22°57'33.02821"
127		P 127	647086.691	2539696.722	43°09'39.99989"	22°57'32.30869"
128		P 128	647069.301	2539674.778	43°09'04.58866"	22°57'31.60078"
129		P 129	647049.418	2539655.152	43°08'24.20949"	22°57'30.96907"
130		P 130	647028.778	2539636.232	43°07'42.32182"	22°57'30.36050"
131		P 131	647008.138	2539617.311	43°07'00.43425"	22°57'29.75193"
132		P 132	646984.092	2539595.267	43°06'11.63301"	22°57'29.04291"
133		P 133	646964.181	2539583.015	43°05'31.34285"	22°57'28.65091"
134		P 134	646940.334	2539568.341	43°04'43.08798"	22°57'28.18143"
135		P 135	646916.487	2539553.667	43°03'54.83320"	22°57'27.71194"
136		P 136	646889.252	2539536.908	43°02'59.72290"	22°57'27.17574"
137		P 137	646864.83	2539521.88	43°02'10.30328"	22°57'26.69492"
138		P 138	646837.595	2539505.121	43°01'15.19319"	22°57'26.15872"
139		P 139	646809.784	2539488.008	43°00'18.91819"	22°57'25.61119"
140		P 140	646782.856	2539471.439	42°59'24.42969"	22°57'25.08103"
141		P 141	646757.132	2539455.609	42°58'32.37576"	22°57'24.57457"
142		P 142	646733.502	2539441.069	42°57'44.56149"	22°57'24.10934"
143		P 143	646722.573	2539459.957	42°57'22.94862"	22°57'24.72686"
144		P 144	646712.254	2539481.113	42°57'02.60741"	22°57'25.41793"
145		P 145	646700.875	2539504.442	42°56'40.17694"	22°57'26.17997"
146		P 146	646691.43	2539523.807	42°56'21.55789"	22°57'26.81253"
147		P 147	646688.459	2539551.523	42°56'16.12496"	22°57'27.71453"
148		P 148	646686.187	2539579.431	42°56'12.10241"	22°57'28.62254"
149		P 149	646683.916	2539607.339	42°56'08.07984"	22°57'29.53055"
150		P 150	646681.644	2539635.247	42°56'04.05727"	22°57'30.43856"
151	Patch No- 6 & P 312	P 151	646682.049	2539663.177	42°56'05.41958"	22°57'31.34645"
152		P 152	646684.017	2539693.689	42°56'09.97703"	22°57'32.33779"
153		P 153	646685.924	2539723.249	42°56'14.39231"	22°57'33.29820"
154		P 154	646687.84	2539752.945	42°56'18.82792"	22°57'34.26303"
155		P 155	646689.758	2539782.671	42°56'23.26796"	22°57'35.22882"
156		P 156	646673.704	2539795.026	42°55'51.21838"	22°57'35.63555"
157		P 157	646651.514	2539812.102	42°55'06.91872"	22°57'36.19775"
158		P 158	646629.325	2539829.179	42°54'22.61896"	22°57'36.75995"
159		P 159	646607.135	2539846.256	42°53'38.31909"	22°57'37.32214"
160		P 160	646584.945	2539863.332	42°52'54.01911"	22°57'37.88434"
161		P 161	646562.755	2539880.409	42°52'09.71904"	22°57'38.44653"
162		P 162	646541.944	2539899.056	42°51'28.22289"	22°57'39.05933"
163		P 163	646522.143	2539918.853	42°50'48.78058"	22°57'39.70920"
164		P 164	646502.342	2539938.649	42°50'09.33817"	22°57'40.35907"

165	P 165	646482.541	2539958.446	42°49'29.89565"	22°57'41.00894"
166	P 166	646462.74	2539978.243	42°48'50.45303"	22°57'41.65880"
167	P 167	646444.32	2539999.233	42°48'13.81157"	22°57'42.34702"
168	P 168	646426.614	2540020.891	42°47'38.62047"	22°57'43.05674"
169	P 169	646408.039	2540041.843	42°47'01.66605"	22°57'43.74375"
170	P 170	646389.463	2540062.794	42°46'24.71154"	22°57'44.43076"
171	P 171	646370.888	2540083.745	42°45'47.75692"	22°57'45.11777"
172	P 172	646352.313	2540104.697	42°45'10.80220"	22°57'45.80478"
173	P 173	646333.738	2540125.648	42°44'33.84737"	22°57'46.49179"
174	P 174	646315.163	2540146.6	42°43'56.89245"	22°57'47.17880"
175	P 175	646296.587	2540167.551	42°43'19.93742"	22°57'47.86581"
176	P 176	646278.012	2540188.502	42°42'42.98228"	22°57'48.55282"
177	P 177	646259.437	2540209.454	42°42'06.02705"	22°57'49.23982"
178	P 178	646240.862	2540230.405	42°41'29.07171"	22°57'49.92683"
179	P 179	646222.286	2540251.357	42°40'52.11627"	22°57'50.61384"
180	P 180	646203.711	2540272.308	42°40'15.16072"	22°57'51.30084"
181	P 181	646185.136	2540293.259	42°39'38.20507"	22°57'51.98784"
182	P 182	646166.561	2540314.211	42°39'01.24932"	22°57'52.67485"
183	P 183	646147.985	2540335.162	42°38'24.29347"	22°57'53.36185"
184	P 184	646129.41	2540356.113	42°37'47.33751"	22°57'54.04885"
185	P 185	646110.835	2540377.065	42°37'10.38145"	22°57'54.73585"
186	P 186	646092.26	2540398.016	42°36'33.42529"	22°57'55.42285"
187	P 187	646074.07	2540419.287	42°35'57.25117"	22°57'56.12012"
188	P 188	646057.471	2540441.805	42°35'24.30044"	22°57'56.85741"
189	P 189	646045.295	2540466.887	42°35'00.29636"	22°57'57.67669"
190	P 190	646038.49	2540487.376	42°34'47.00785"	22°57'58.34496"
191	P 191	646035.176	2540505.821	42°34'40.70142"	22°57'58.94566"
192	P 192	646035.893	2540528.037	42°34'42.57806"	22°57'59.66768"
193	P 193	646037.881	2540546.271	42°34'46.93385"	22°58'00.25983"
194	P 194	646042.282	2540573.922	42°34'56.32598"	22°58'01.15741"
195	P 195	646049.25	2540601.025	42°35'10.87216"	22°58'02.03633"
196	P 196	646057.292	2540627.845	42°35'27.57236"	22°58'02.90574"
197	P 197	646066.676	2540654.208	42°35'46.96336"	22°58'03.75985"
198	P 198	646076.689	2540680.357	42°36'07.61573"	22°58'04.60679"
199	P 199	646086.701	2540706.505	42°36'28.26817"	22°58'05.45372"
200	P 200	646096.714	2540732.654	42°36'48.92068"	22°58'06.30066"
201	P 201	646107.881	2540761.816	42°37'11.95357"	22°58'07.24521"
202	P 202	646105.327	2540792.591	42°37'07.41772"	22°58'08.24654"
203	P 203	646103.002	2540820.611	42°37'03.28803"	22°58'09.15821"
204	P 204	646095.6	2540848.742	42°36'48.94583"	22°58'10.07508"
205	P 205	646086.696	2540882.575	42°36'31.69620"	22°58'11.17782"
206	P 206	646090.873	2540902.548	42°36'40.48873"	22°58'11.82583"
207	P 207	646096.388	2540926.445	42°36'52.04898"	22°58'12.60099"
208	P 208	646109.48	2540941.163	42°37'18.67245"	22°58'13.07536"
209	P 209	646122.854	2540956.199	42°37'45.87055"	22°58'13.55996"
210	P 210	646142.968	2540987.817	42°38'26.95088"	22°58'14.58154"

211		P 211	646156.324	2541008.812	42°38'54.22862"	22°58'15.25987"
212		P 212	646169.37	2541029.826	42°39'20.88225"	22°58'15.93891"
213		P 213	646177.284	2541060.38	42°39'37.40009"	22°58'16.92973"
214		P 214	646185.163	2541090.796	42°39'53.84332"	22°58'17.91608"
215	Patch No- 7 & P 313	P 215	647468.876	2540149.465	43°22'37.67012"	22°57'46.90593"
216		P 216	647496.819	2540145.122	43°23'33.79287"	22°57'46.75585"
217		P 217	647525.44	2540140.674	43°24'31.27668"	22°57'46.60212"
218		P 218	647557.678	2540135.664	43°25'36.02465"	22°57'46.42897"
219		P 219	647586.339	2540131.21	43°26'33.58900"	22°57'46.27503"
220		P 220	647617.526	2540126.363	43°27'36.22635"	22°57'46.10751"
221		P 221	647642.639	2540122.46	43°28'26.66457"	22°57'45.97262"
222		P 222	647671.165	2540118.027	43°29'23.95675"	22°57'45.81940"
223		P 223	647697.512	2540113.932	43°30'16.87425"	22°57'45.67788"
224		P 224	647725.419	2540109.595	43°31'12.92317"	22°57'45.52798"
225		P 225	647752.037	2540105.458	43°32'06.38471"	22°57'45.38499"
226		P 226	647778.966	2540101.273	43°33'00.46886"	22°57'45.24034"
227		P 227	647806.96	2540096.923	43°33'56.69296"	22°57'45.08997"
228		P 228	647834.444	2540092.651	43°34'51.89329"	22°57'44.94233"
229		P 229	647861.866	2540088.39	43°35'46.96879"	22°57'44.79503"
230		P 230	647890.305	2540083.97	43°36'44.08747"	22°57'44.64225"
231		P 231	647918.813	2540079.54	43°37'41.34213"	22°57'44.48912"
232		P 232	647947.086	2540075.145	43°38'38.12766"	22°57'44.33723"
233		P 233	647971.932	2540071.284	43°39'28.02941"	22°57'44.20376"
234		P 234	647998.424	2540067.167	43°40'21.23650"	22°57'44.06144"
235		P 235	648035.35	2540054.323	43°41'35.25895"	22°57'43.63208"
236		P 236	648071.362	2540041.797	43°42'47.44942"	22°57'43.21335"
237		P 237	648087.524	2540026.507	43°43'19.65549"	22°57'42.71111"
238		P 238	648104.685	2540010.272	43°43'53.85331"	22°57'42.17780"
239		P 239	648125.929	2539992.04	43°44'36.22511"	22°57'41.57827"
240		P 240	648149.513	2539976.993	43°45'23.36655"	22°57'41.08155"
241		P 241	648177.97	2539960.448	43°46'20.28063"	22°57'40.53456"
242		P 242	648205.554	2539949.964	43°47'15.55791"	22°57'40.18491"
243		P 243	648225.943	2539944.867	43°47'56.46813"	22°57'40.01267"
244		P 244	648247.259	2539963.871	43°48'39.72208"	22°57'40.62366"
245		P 245	648268.16	2539982.504	43°49'22.13179"	22°57'41.22273"
246		P 246	648289.06	2540001.136	43°50'04.54160"	22°57'41.82179"
247		P 247	648309.96	2540019.769	43°50'46.95151"	22°57'42.42085"
248		P 248	648330.287	2540039.644	43°51'28.23336"	22°57'43.06046"
249		P 249	648353.866	2540053.864	43°52'15.94462"	22°57'43.51523"
250		P 250	648379.579	2540069.372	43°53'07.97327"	22°57'44.01114"
251		P 251	648403.999	2540084.1	43°53'57.38671"	22°57'44.48213"
252		P 252	648428.967	2540099.158	43°54'47.90696"	22°57'44.96366"
253		P 253	648452.513	2540113.359	43°55'35.55201"	22°57'45.41779"
254		P 254	648430.048	2540123.866	43°54'50.57102"	22°57'45.76658"
255		P 255	648404.685	2540135.729	43°53'59.78851"	22°57'46.16037"
256		P 256	648377.128	2540148.617	43°53'04.61367"	22°57'46.58820"

257		P 257	648349.543	2540161.519	43°52'09.38259"	22°57'47.01648"
258		P 258	648322.37	2540174.228	43°51'14.97525"	22°57'47.43836"
259		P 259	648294.627	2540187.204	43°50'19.42770"	22°57'47.86908"
260		P 260	648289.966	2540211.398	43°50'10.53022"	22°57'48.65714"
261		P 261	648285.83	2540232.864	43°50'02.63624"	22°57'49.35632"
262		P 262	648280.532	2540260.358	43°49'52.52521"	22°57'50.25186"
263		P 263	648274.358	2540292.404	43°49'40.74039"	22°57'51.29565"
264		P 264	648268.953	2540320.457	43°49'30.42376"	22°57'52.20939"
265		P 265	648263.315	2540349.718	43°49'19.66295"	22°57'53.16247"
266		P 266	648257.464	2540380.085	43°49'08.49515"	22°57'54.15160"
267		P 267	648252.572	2540405.478	43°48'59.15707"	22°57'54.97867"
268		P 268	648247.117	2540433.791	43°48'48.74475"	22°57'55.90087"
269		P 269	648242.125	2540459.698	43°48'39.21703"	22°57'56.74473"
270		P 270	648263.667	2540469.578	43°49'22.74574"	22°57'57.05902"
271		P 271	648286.658	2540480.122	43°50'09.20332"	22°57'57.39446"
272		P 272	648312.109	2540491.795	43°51'00.63078"	22°57'57.76578"
273		P 273	648337.561	2540503.467	43°51'52.05832"	22°57'58.13710"
274		P 274	648363.012	2540515.14	43°52'43.48593"	22°57'58.50841"
275		P 275	648388.463	2540526.812	43°53'34.91361"	22°57'58.87973"
276		P 276	648413.914	2540538.484	43°54'26.34137"	22°57'59.25104"
277		P 277	648439.381	2540550.119	43°55'17.80244"	22°57'59.62111"
278		P 278	648465.089	2540561.216	43°56'09.73424"	22°57'59.97363"
279		P 279	648490.796	2540572.313	43°57'01.66611"	22°58'00.32614"
280		P 280	648516.503	2540583.409	43°57'53.59805"	22°58'00.67866"
281		P 281	648542.21	2540594.506	43°58'45.53006"	22°58'01.03117"
282		P 282	648567.917	2540605.603	43°59'37.46215"	22°58'01.38368"
283		P 283	648599.539	2540619.253	44°00'41.34213"	22°58'01.81729"
284		P 284	648592.507	2540591.683	44°00'26.65012"	22°58'00.92325"
285		P 285	648585.605	2540564.618	44°00'12.22686"	22°58'00.04557"
286		P 286	648578.963	2540538.579	43°59'58.35041"	22°57'59.20116"
287		P 287	648571.753	2540510.307	43°59'43.28469"	22°57'58.28437"
288		P 288	648564.065	2540480.165	43°59'27.22214"	22°57'57.30693"
289		P 289	648556.682	2540451.216	43°59'11.79510"	22°57'56.36814"
290		P 290	648549.877	2540424.536	43°58'57.57751"	22°57'55.50296"
291		P 291	648564.567	2540408.607	43°59'26.81179"	22°57'54.98040"
292		P 292	648582.726	2540388.918	44°00'02.94771"	22°57'54.33447"
293		P 293	648601.134	2540368.959	44°00'39.57950"	22°57'53.67968"
294		P 294	648620.108	2540348.386	44°01'17.33665"	22°57'53.00477"
295		P 295	648640.753	2540326	44°01'58.42154"	22°57'52.27038"
296		P 296	648661.009	2540304.038	44°02'38.72931"	22°57'51.54987"
297		P 297	648680.63	2540282.762	44°03'17.77597"	22°57'50.85190"
298		P 298	648698.858	2540262.998	44°03'54.04832"	22°57'50.20352"
299		P 299	648720.437	2540239.6	44°04'36.99049"	22°57'49.43591"
300		P 300	648742.97	2540247.643	44°05'22.47607"	22°57'49.69015"
301	Patch No- 7 & P 313	P 301	648768.435	2540256.732	44°06'13.88073"	22°57'49.97747"
302		P 302	648792.359	2540265.272	44°07'02.17247"	22°57'50.24739"

303	P 303	648811.859	2540272.232	44°07'41.53632"	22°57'50.46741"
304	P 304	648824.036	2540251.245	44°08'05.61316"	22°57'49.78121"
305	P 305	648837.155	2540228.636	44°08'31.55164"	22°57'49.04195"
306	P 306	648850.258	2540206.051	44°08'57.46088"	22°57'48.30353"
307	P 307	648864.729	2540181.112	44°09'26.07217"	22°57'47.48809"
308	P 308	648867.116	2540150.374	44°09'30.26248"	22°57'46.48805"
309	P 309	648869.496	2540119.728	44°09'34.44036"	22°57'45.49096"
310	P 310	648839.633	2540119.289	44°08'34.36134"	22°57'45.48628"
311	P 311	648810.767	2540118.864	44°07'36.29045"	22°57'45.48175"
312	P 312	648773.901	2540118.322	44°06'22.12293"	22°57'45.47597"
313	P 313	648740.838	2540117.835	44°05'15.60616"	22°57'45.47077"
314	P 314	648707.739	2540117.348	44°04'09.01854"	22°57'45.46557"
315	P 315	648691.392	2540096.637	44°03'35.72582"	22°57'44.79749"
316	P 316	648673.6	2540074.093	44°02'59.48805"	22°57'44.07031"
317	P 317	648654.458	2540049.84	44°02'20.50309"	22°57'43.28800"
318	P 318	648639.034	2540030.298	44°01'49.08982"	22°57'42.65763"
319	P 319	648621.761	2540008.413	44°01'13.91144"	22°57'41.95170"
320	P 320	648602.602	2539984.138	44°00'34.89041"	22°57'41.16865"
321	P 321	648587.697	2539963.845	44°00'04.50598"	22°57'40.51370"
322	P 322	648573.03	2539945.314	43°59'34.63516"	22°57'39.91596"
323	P 323	648558.3	2539926.704	43°59'04.63766"	22°57'39.31568"
324	P 324	648545.317	2539910.301	43°58'38.19749"	22°57'38.78659"
325	P 325	648527.94	2539888.346	43°58'02.80758"	22°57'38.07840"
326	P 326	648510.562	2539866.391	43°57'27.41778"	22°57'37.37021"
327	P 327	648493.185	2539844.436	43°56'52.02809"	22°57'36.66202"
328	P 328	648475.808	2539822.481	43°56'16.63849"	22°57'35.95383"
329	P 329	648458.43	2539800.526	43°55'41.24900"	22°57'35.24564"
330	P 330	648441.053	2539778.571	43°55'05.85962"	22°57'34.53745"
331	P 331	648423.676	2539756.616	43°54'30.47034"	22°57'33.82925"
332	P 332	648406.734	2539735.211	43°53'55.96859"	22°57'33.13882"
333	P 333	648378.946	2539728.025	43°52'59.93188"	22°57'32.91410"
334	P 334	648351.838	2539721.015	43°52'05.26605"	22°57'32.69488"
335	P 335	648324.729	2539714.004	43°51'10.60025"	22°57'32.47566"
336	P 336	648297.621	2539706.994	43°50'15.93450"	22°57'32.25643"
337	P 337	648270.513	2539699.984	43°49'21.26880"	22°57'32.03721"
338	P 338	648243.405	2539692.973	43°48'26.60314"	22°57'31.81798"
339	P 339	648216.297	2539685.963	43°47'31.93752"	22°57'31.59875"
340	P 340	648189.188	2539678.953	43°46'37.27194"	22°57'31.37952"
341	P 341	648162.08	2539671.942	43°45'42.60641"	22°57'31.16028"
342	P 342	648134.972	2539664.932	43°44'47.94093"	22°57'30.94105"
343	P 343	648110.367	2539658.569	43°43'58.32456"	22°57'30.74206"
344	P 344	648081.605	2539679.101	43°43'00.87656"	22°57'31.41875"
345	P 345	648054.293	2539666.441	43°42'05.68871"	22°57'31.01591"
346	P 346	648026.238	2539653.438	43°41'09.00120"	22°57'30.60213"
347	P 347	647999.83	2539641.197	43°40'15.64168"	22°57'30.21263"
348	P 348	647971.76	2539628.186	43°39'18.92224"	22°57'29.79861"

349	P 349	647942.085	2539615.046	43°38'18.97389"	22°57'29.38091"
350	P 350	647922.72	2539627.335	43°37'40.26509"	22°57'29.78660"
351	P 351	647902.355	2539640.258	43°36'59.55654"	22°57'30.21324"
352	P 352	647880.907	2539653.868	43°36'16.68430"	22°57'30.66256"
353	P 353	647856.946	2539669.073	43°35'28.78856"	22°57'31.16453"
354	P 354	647830.555	2539685.82	43°34'36.03472"	22°57'31.71741"
355	P 355	647807.367	2539700.535	43°33'49.68320"	22°57'32.20319"
356	P 356	647785.575	2539714.364	43°33'06.12316"	22°57'32.65971"
357	P 357	647765.318	2539727.218	43°32'25.63020"	22°57'33.08408"
358	P 358	647749.681	2539737.141	43°31'54.37303"	22°57'33.41167"
359	P 359	647772.925	2539742.933	43°32'41.24257"	22°57'33.59255"
360	P 360	647799.56	2539749.57	43°33'34.94924"	22°57'33.79982"
361	P 361	647831.259	2539756.373	43°34'38.84469"	22°57'34.01086"
362	P 362	647858.688	2539762.124	43°35'34.12979"	22°57'34.18908"
363	P 363	647887.195	2539768.102	43°36'31.59012"	22°57'34.37431"
364	P 364	647913.28	2539773.571	43°37'24.16620"	22°57'34.54380"
365	P 365	647934.493	2539778.019	43°38'06.92236"	22°57'34.68162"
366	P 366	647966.121	2539772.673	43°39'10.43565"	22°57'34.49771"
367	P 367	647995.993	2539767.623	43°40'10.42220"	22°57'34.32400"
368	P 368	648026.413	2539762.481	43°41'11.50873"	22°57'34.14711"
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370	P 370	648089.11	2539751.883	43°43'17.41259"	22°57'33.78251"
371	P 371	648116.376	2539747.274	43°44'12.16649"	22°57'33.62395"
372	P 372	648146.926	2539742.11	43°45'13.51330"	22°57'33.44630"
373	P 373	648170.896	2539738.058	43°46'01.64840"	22°57'33.30690"
374	P 374	648181.786	2539767.213	43°46'24.12943"	22°57'34.25126"
375	P 375	648192.081	2539794.778	43°46'45.38404"	22°57'35.14409"
376	P 376	648201.933	2539821.154	43°47'05.72196"	22°57'35.99841"
377	P 377	648211.903	2539847.848	43°47'26.30586"	22°57'36.86306"
378	P 378	648222.51	2539876.247	43°47'48.20441"	22°57'37.78293"
379	P 379	648233.611	2539905.968	43°48'11.12167"	22°57'38.74559"
380	P 380	648213.038	2539911.881	43°47'29.85623"	22°57'38.94442"
381	P 381	648185.624	2539919.76	43°46'34.87039"	22°57'39.20935"
382	P 382	648158.127	2539927.664	43°45'39.71718"	22°57'39.47509"
383	P 383	648131.049	2539935.447	43°44'45.40399"	22°57'39.73678"
384	P 384	648103.783	2539943.284	43°43'50.71385"	22°57'40.00029"
385	P 385	648080.94	2539949.867	43°43'04.89547"	22°57'40.22160"
386	P 386	648053.812	2539944.07	43°42'10.21381"	22°57'40.04183"
387	P 387	648025.572	2539938.036	43°41'13.28922"	22°57'39.85468"
388	P 388	647994.196	2539931.331	43°40'10.04588"	22°57'39.64675"
389	P 389	647967.029	2539925.527	43°39'15.28547"	22°57'39.46672"
390	P 390	647951.452	2539916.123	43°38'43.76623"	22°57'39.16600"
391	P 391	647927.481	2539901.654	43°37'55.26251"	22°57'38.70324"
392	P 392	647900.557	2539885.401	43°37'00.78465"	22°57'38.18347"
393	P 393	647876.624	2539870.955	43°36'12.35889"	22°57'37.72145"
394	P 394	647853.544	2539859.042	43°35'25.69738"	22°57'37.34154"

395	P 395	647839.053	2539835.4	43°34'56.08330"	22°57'36.57756"
396	P 396	647825.046	2539812.547	43°34'27.45751"	22°57'35.83906"
397	P 397	647785.498	2539823.978	43°33'08.13289"	22°57'36.22331"
398	P 398	647785.498	2539823.978	43°33'08.13289"	22°57'36.22331"
399	P 399	647740.549	2539836.97	43°31'37.97501"	22°57'36.66004"
400	P 400	647729.559	2539837.119	43°31'15.87284"	22°57'36.66839"
401	P 401	647713.22	2539823.779	43°30'42.74370"	22°57'36.23992"
402	P 402	647677.843	2539823.432	43°29'31.57783"	22°57'36.23992"
403	P 403	647673.219	2539825.824	43°29'22.32339"	22°57'36.31915"
404	P 404	647683.586	2539849.677	43°29'43.64712"	22°57'37.09131"
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406	P 406	647704.981	2539898.904	43°30'27.65448"	22°57'38.68487"
407	P 407	647687.91	2539923.239	43°29'53.79687"	22°57'39.48146"
408	P 408	647672.242	2539945.575	43°29'22.72068"	22°57'40.21260"
409	P 409	647658.002	2539965.874	43°28'54.47844"	22°57'40.87706"
410	P 410	647634.594	2539971.726	43°28'07.50909"	22°57'41.07478"
411	P 411	647608.974	2539978.131	43°27'16.10085"	22°57'41.29117"
412	P 412	647583.628	2539984.467	43°26'25.24221"	22°57'41.50526"
413	P 413	647557.61	2539990.972	43°25'33.03440"	22°57'41.72501"
414	P 414	647530.77	2539997.682	43°24'39.17760"	22°57'41.95171"
415	P 415	647503.456	2540004.51	43°23'44.37137"	22°57'42.18241"
416	P 416	647475.564	2540011.483	43°22'48.40393"	22°57'42.41799"
417	P 417	647483.456	2539991.126	43°23'03.87822"	22°57'41.75366"
418	P 418	647493.578	2539965.02	43°23'23.72294"	22°57'40.90170"
419	P 419	647503.699	2539938.913	43°23'43.56759"	22°57'40.04974"
420	P 420	647515.152	2539909.373	43°24'06.02187"	22°57'39.08575"
421	P 421	647526.191	2539880.898	43°24'27.66684"	22°57'38.15649"
422	P 422	647537.52	2539851.679	43°24'49.87693"	22°57'37.20297"
423	P 423	647546.85	2539827.612	43°25'08.17132"	22°57'36.41756"
424	P 424	647558.502	2539797.558	43°25'31.01582"	22°57'35.43679"
425	P 425	647563.569	2539776.727	43°25'40.79702"	22°57'34.75795"
426	P 426	647540.96	2539772.808	43°24'55.24334"	22°57'34.63774"
427	P 427	647513.416	2539767.78	43°23'59.73868"	22°57'34.48305"
428	P 428	647485.871	2539762.752	43°23'04.23405"	22°57'34.32836"
429	P 429	647457.881	2539762.215	43°22'07.92368"	22°57'34.31983"
430	P 430	647429.885	2539761.745	43°21'11.60131"	22°57'34.31347"
431	P 431	647401.889	2539761.276	43°20'15.27892"	22°57'34.30712"
432	P 432	647373.893	2539760.806	43°19'18.95654"	22°57'34.30076"
433	P 433	647339.36	2539764.554	43°18'09.56737"	22°57'34.43359"
434	P 434	647308.578	2539768.227	43°17'07.72409"	22°57'34.56279"
435	P 435	647279.964	2539771.641	43°16'10.23460"	22°57'34.68289"
436	P 436	647290.38	2539792.472	43°16'31.59522"	22°57'35.35681"
437	P 437	647301.801	2539815.315	43°16'55.01843"	22°57'36.09579"
438	P 438	647312.799	2539837.311	43°17'17.57352"	22°57'36.80739"
439	P 439	647325.321	2539862.355	43°17'43.25419"	22°57'37.61759"
440	P 440	647337.843	2539887.399	43°18'08.93494"	22°57'38.42780"

441		P 441	647350.365	2539912.443	43°18'34.61578"	22°57'39.23800"
442		P 442	647362.887	2539937.487	43°19'00.29670"	22°57'40.04820"
443		P 443	647375.409	2539962.531	43°19'25.97772"	22°57'40.85840"
444		P 444	647387.931	2539987.574	43°19'51.65882"	22°57'41.66860"
445		P 445	647399.564	2540010.84	43°20'15.51677"	22°57'42.42128"
446		P 446	647411.641	2540034.995	43°20'40.28642"	22°57'43.20272"
447		P 447	647423.56	2540058.833	43°21'04.73056"	22°57'43.97389"
448		P 448	647435.733	2540083.178	43°21'29.69573"	22°57'44.76149"
449		P 449	647447.95	2540107.614	43°21'54.75322"	22°57'45.55200"
450		P 450	647459.028	2540129.768	43°22'17.47201"	22°57'46.26873"

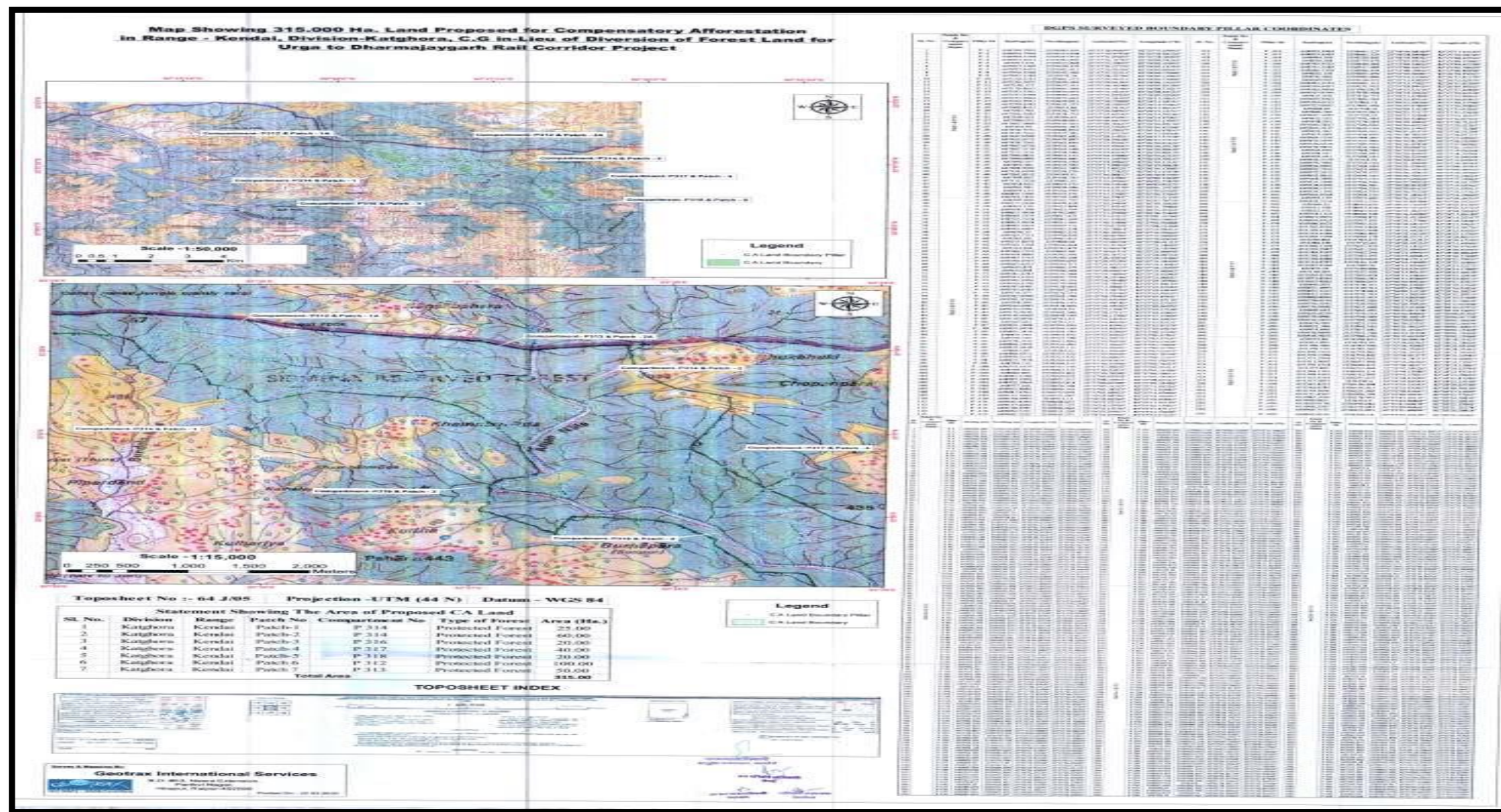

वनमण्डलाधिकारी
कटघोरा वनमण्डल, कटघोरा


उप वन मण्डलाधिकारी
कटघोरा


वन परिक्षेत्र अधिकारी
केंदई

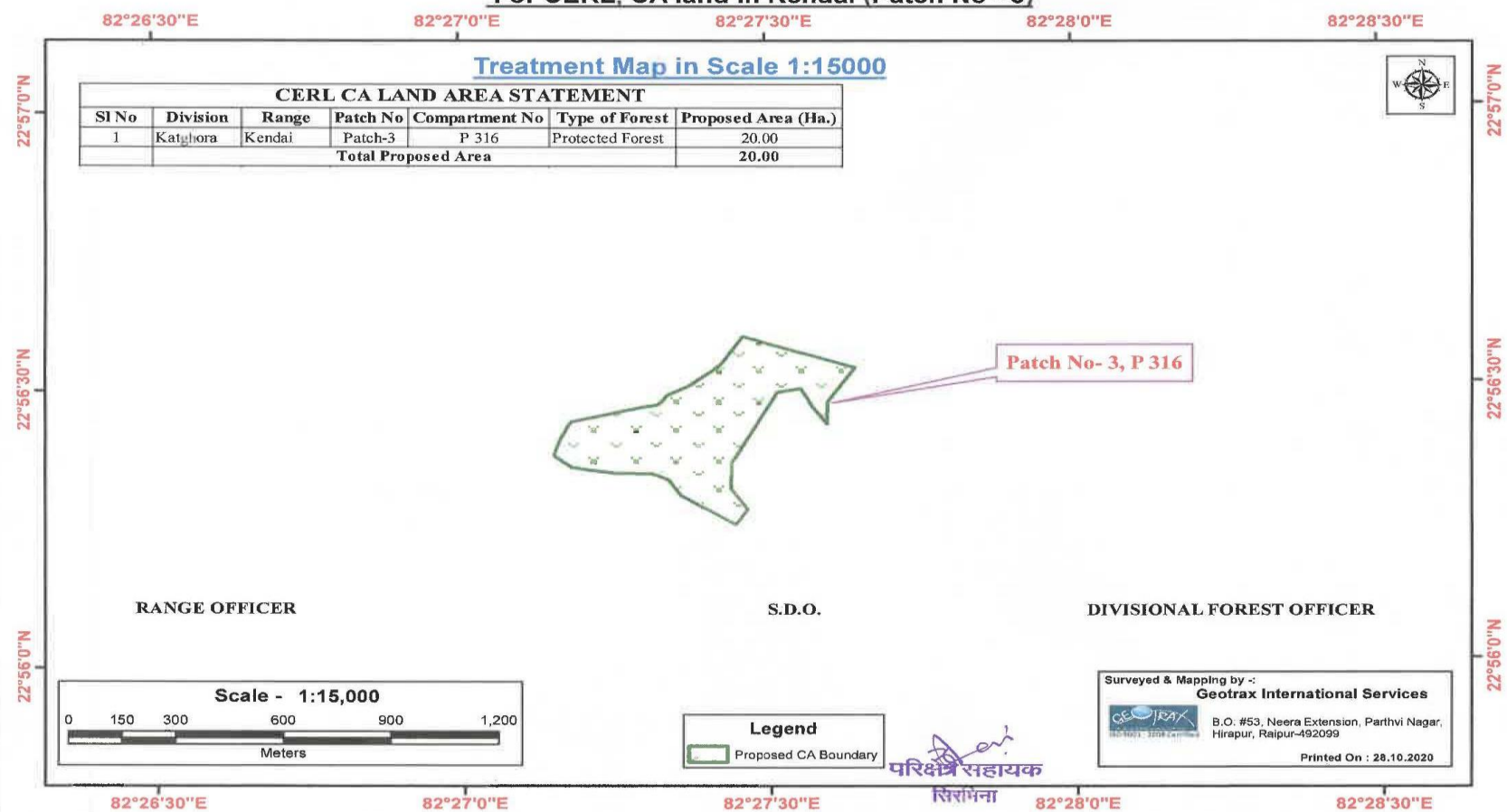

परिक्षेत्र सहायक
सिरमिना

6.3 Annexure-3: Geo-referenced SOI toposheet showing proposed CA land patches

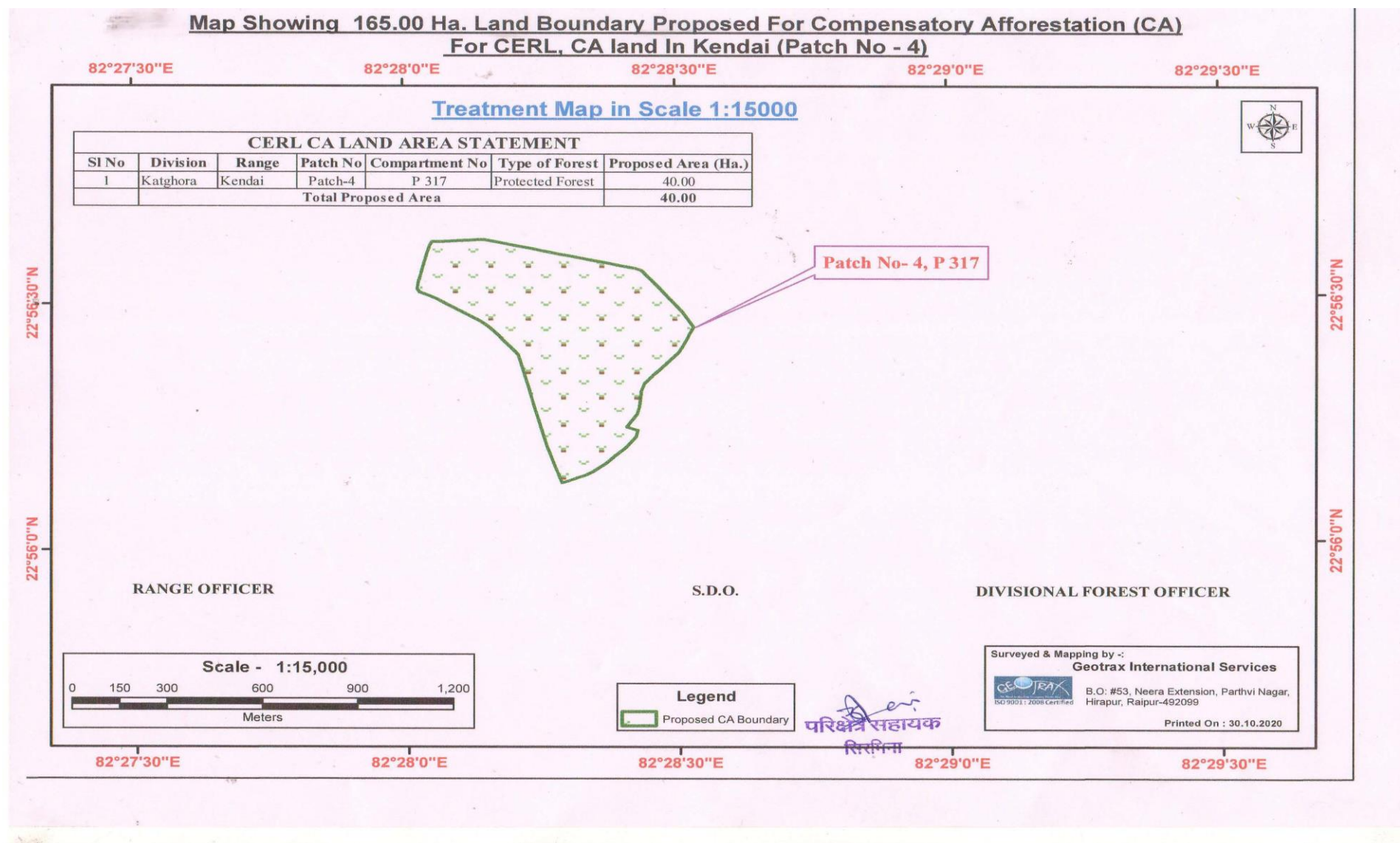


6.4.2 Patch 3 Treatment Map – PF 316 with proposed area of 20.00 Ha

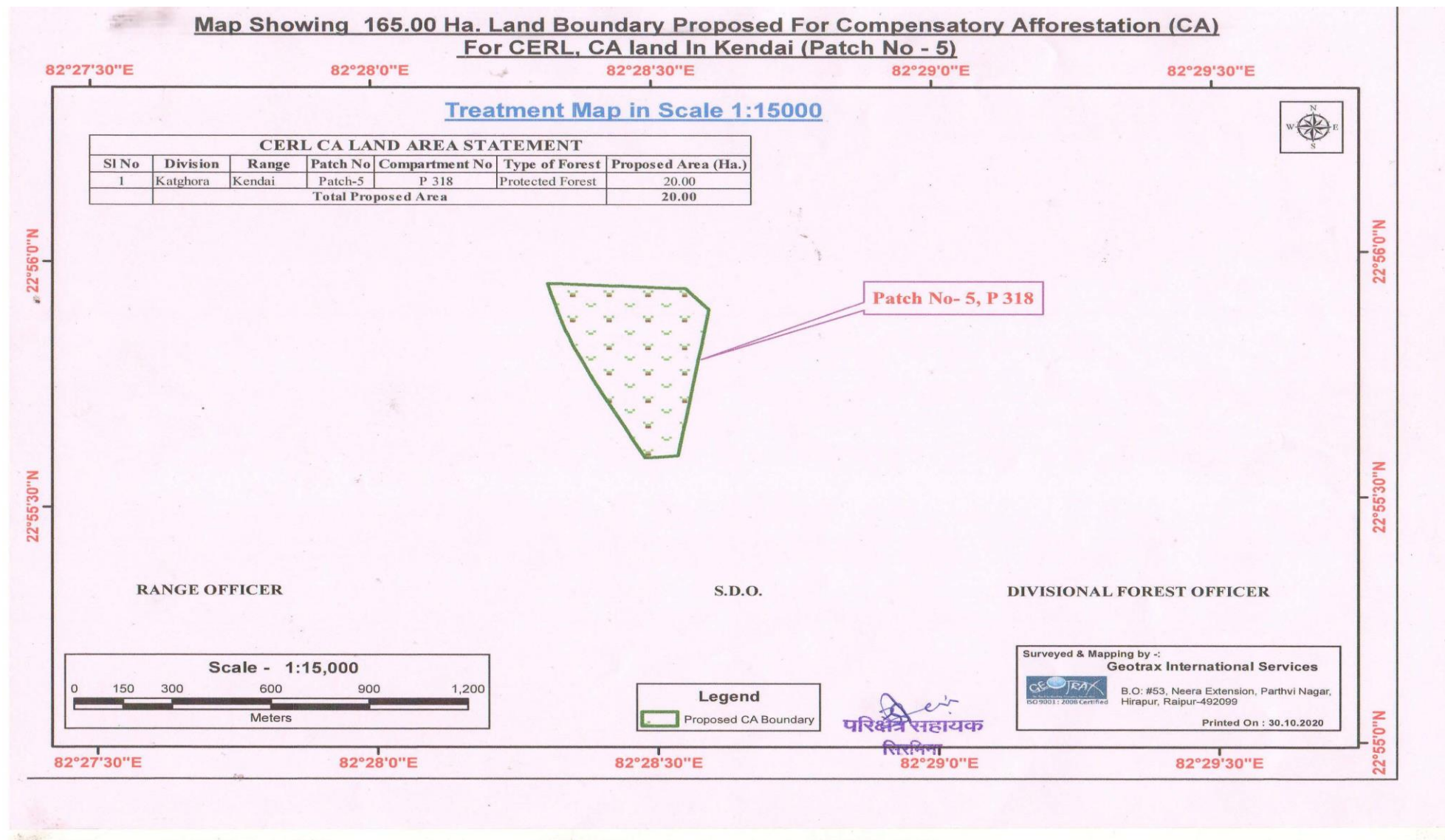
**Map Showing 165.00 Ha. Land Boundary Proposed For Compensatory Afforestation (CA)
For CERL, CA land In Kendai (Patch No - 3)**



6.4.3 Patch 4 Treatment Map – PF 317 with proposed area of 40.00 Ha

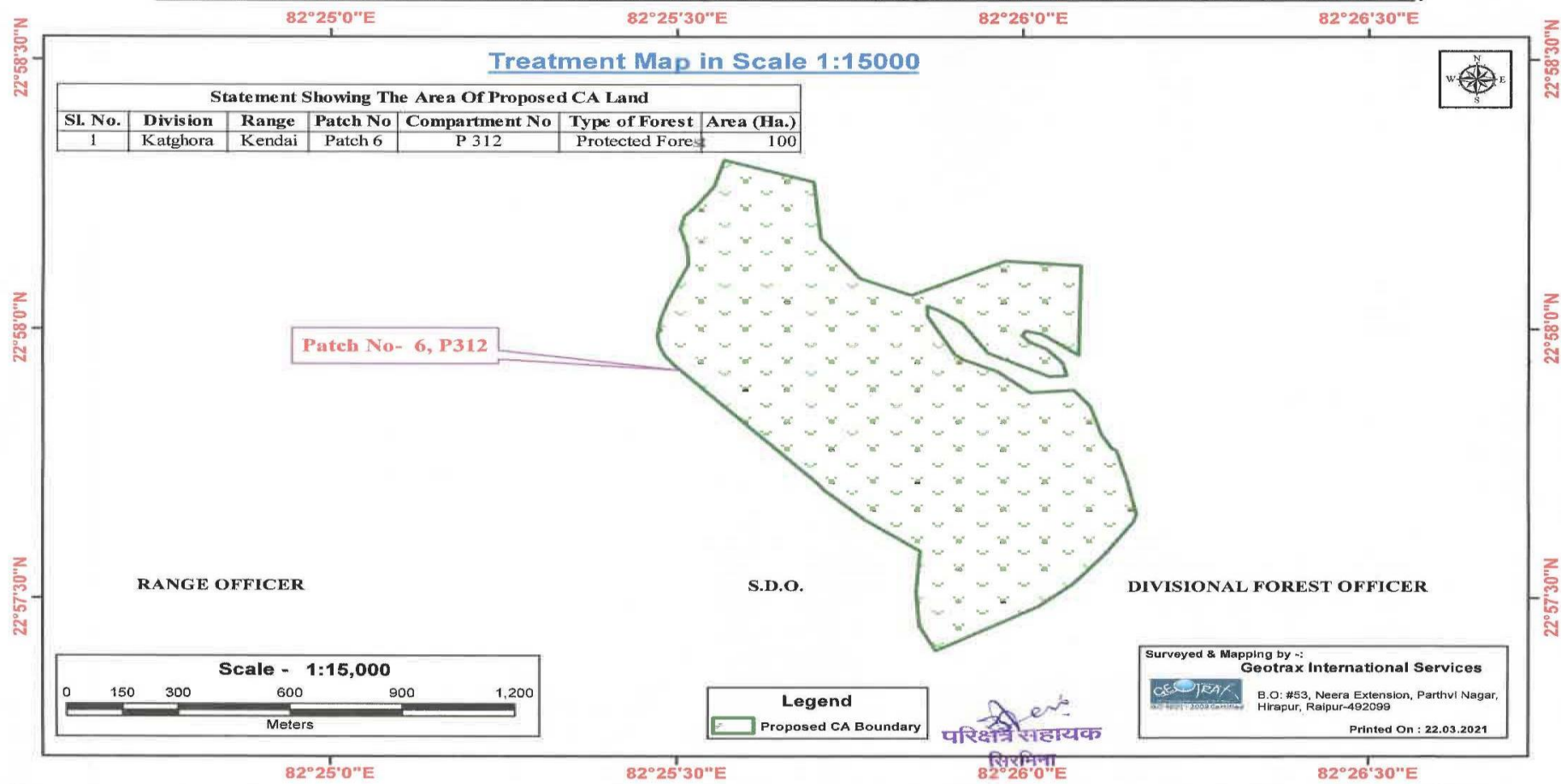


6.4.4 Patch 5 Treatment Map – PF 318 with proposed area of 20.00 Ha

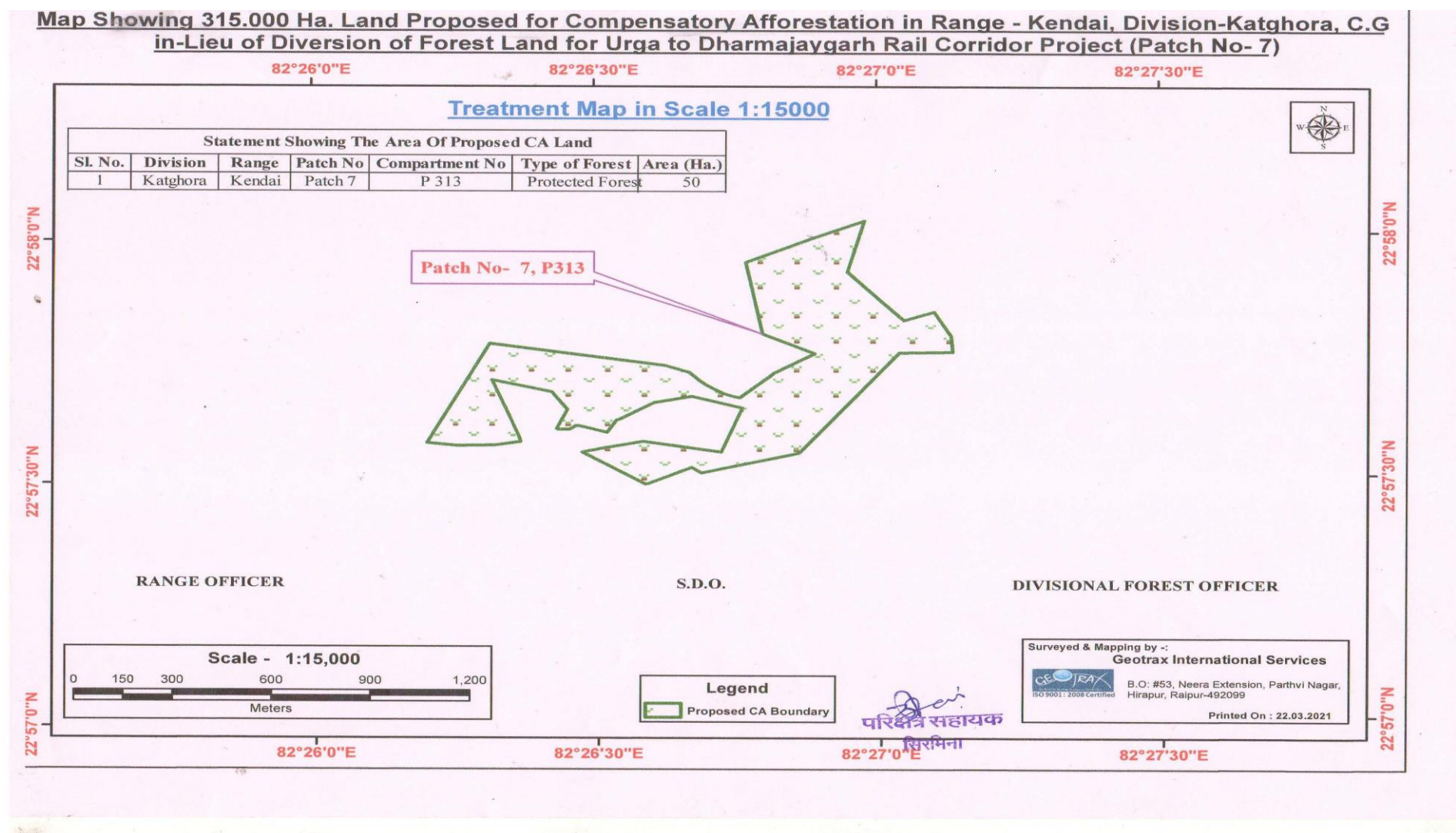


6.4.5 Patch 6 Treatment Map – PF 312 with proposed area of 100.00 Ha

Map Showing 315.000 Ha. Land Proposed for Compensatory Afforestation in Range - Kendai, Division-Katghora, C.G in-Lieu of Diversion of Forest Land for Urga to Dharmajaygarh Rail Corridor Project (Patch No- 6)

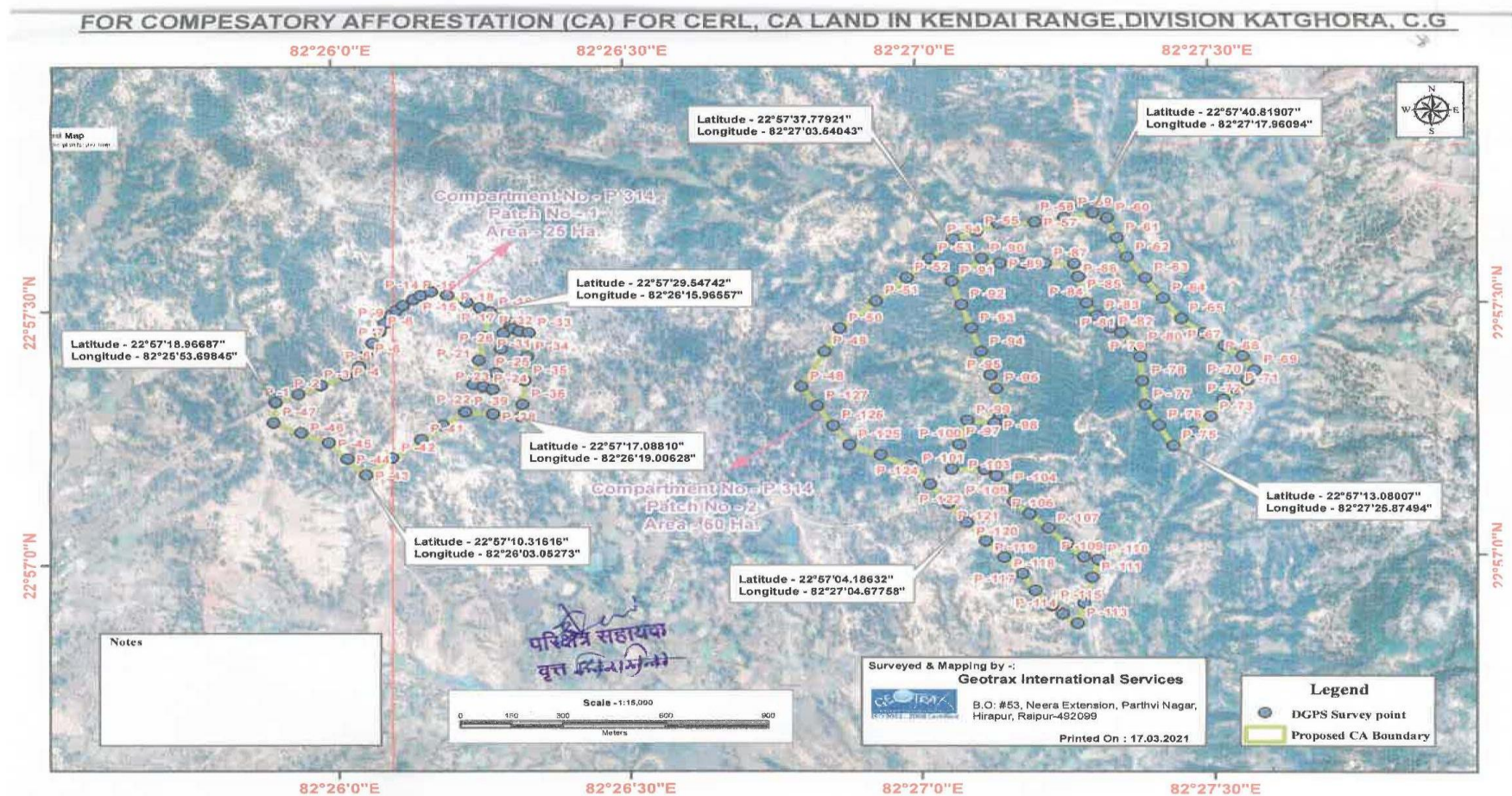


6.4.6 Patch 7 Treatment Map – PF 313 with proposed area of 50.00 Ha

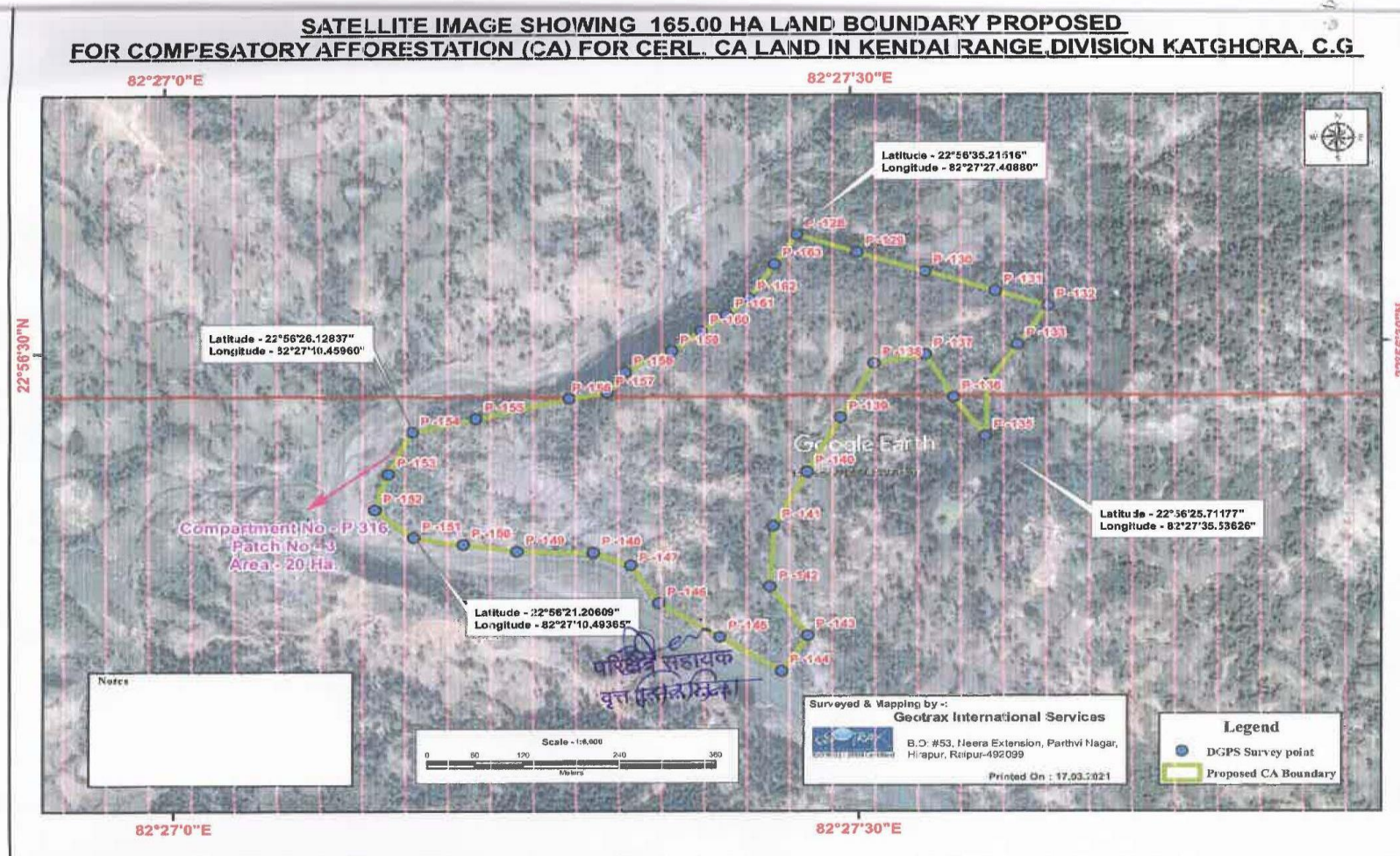


6.5 Annexure-5: Geo-referenced Google maps showing proposed CA land patches

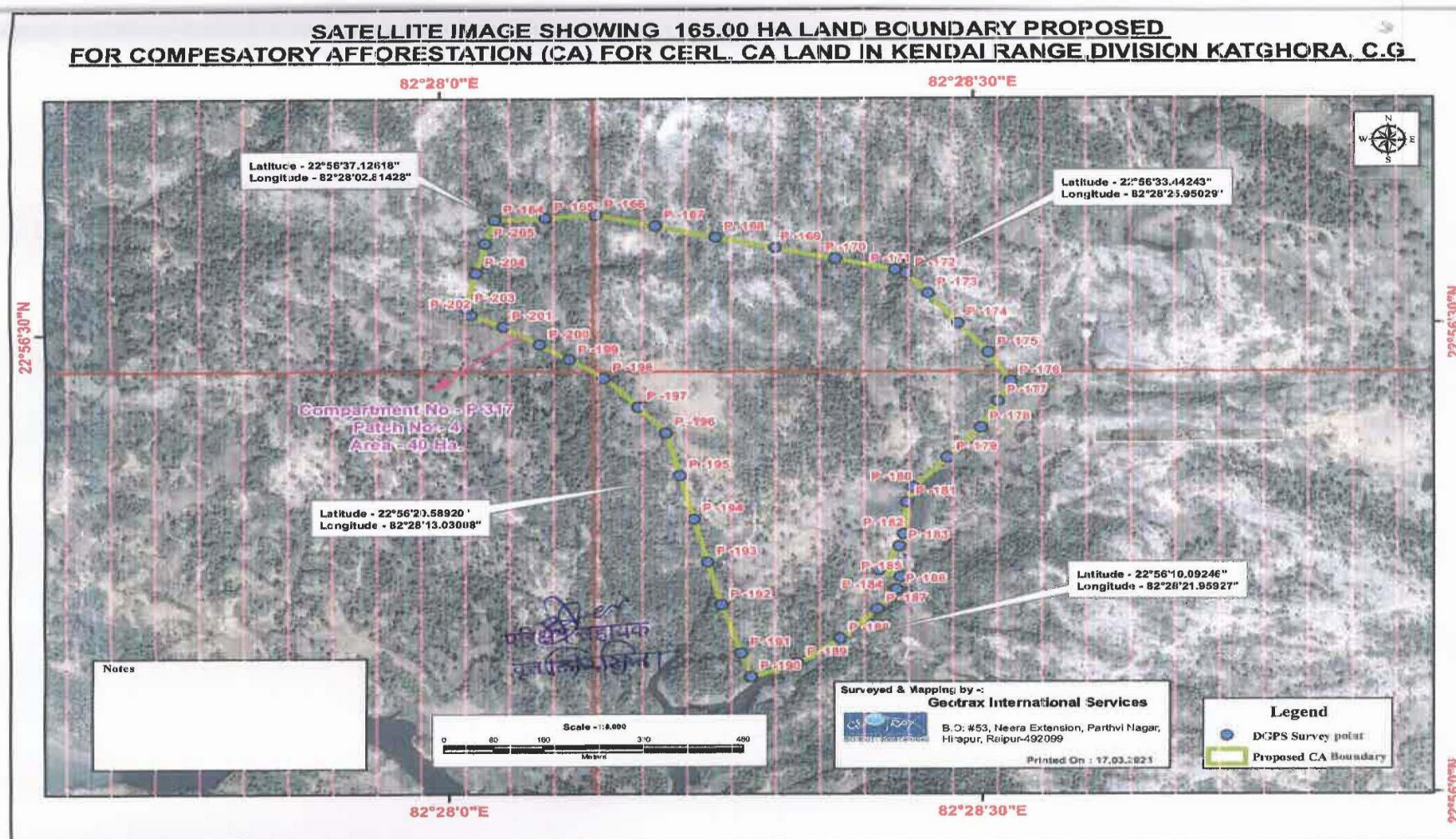
6.5.1 Patch 1&2 Google Map – PF 314 with proposed area of 85.00



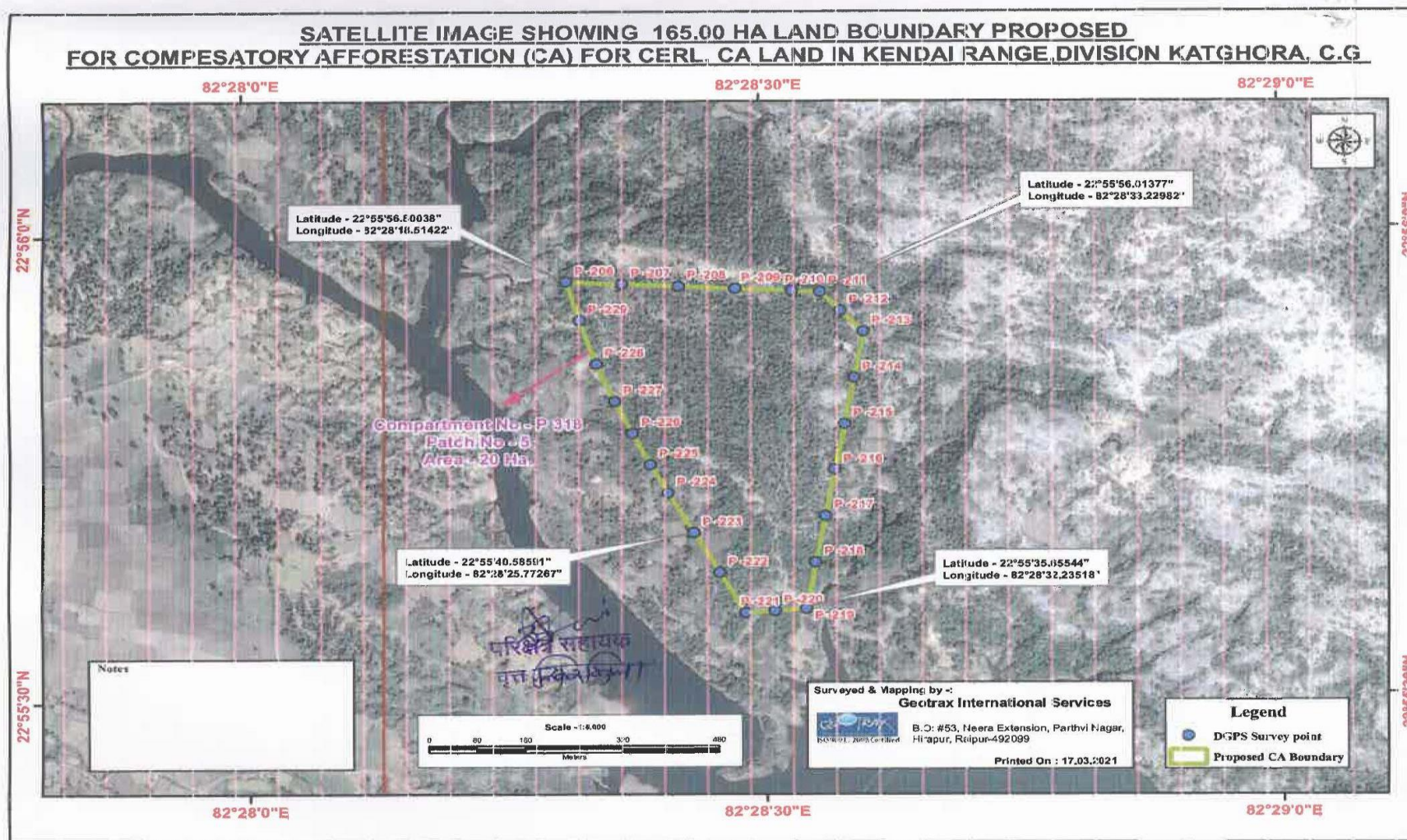
6.5.2 Patch 3 Google Map – PF 316 with proposed area of 20.00 Ha



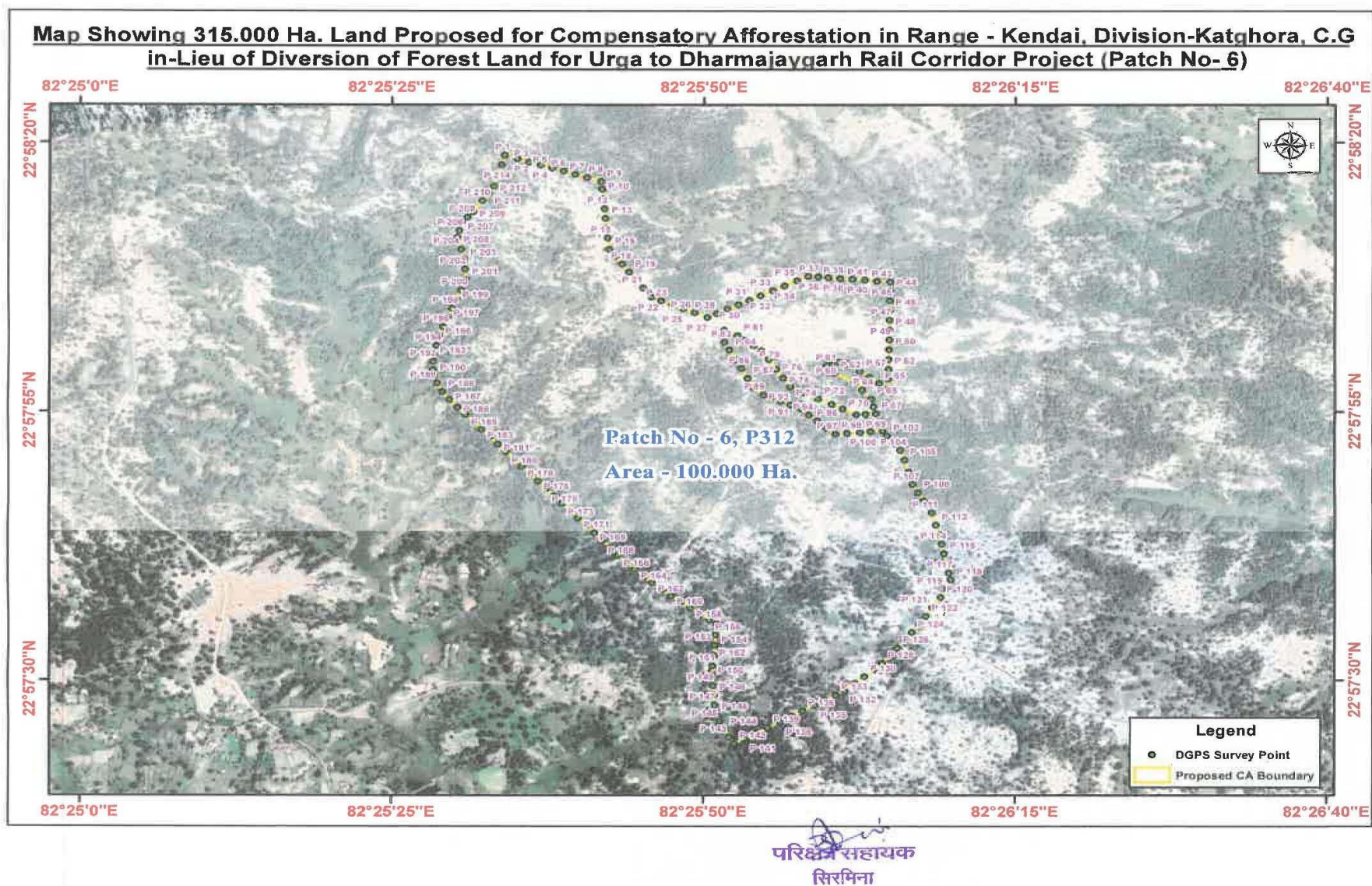
6.5.3 Patch 4 Google Map – PF 317 with proposed area of 40.00 Ha



6.5.4 Patch 5 Google Map – PF 318 with proposed area of 20.00 Ha



6.5.5 Patch 6 Google Map – PF 312 with proposed area of 100.00 Ha



6.5.6 Patch 7 Google Map – PF 313 with proposed area of 50.00 Ha

