

6.0 GEO-REFERENCING:

These above values were used for generation of Forest and Non-Forest Road boundary on Toposheet No. 64 M/1, 64 M/2 and Forest Map No. 64 M/1, 64 M/2.

The Forest and Non-Forest Road boundary as per the following table marked on Toposheet are given in **Figure No. 3 & 4** and **Plate-I**, Forest Map are given in **Figure No. 5 & 6** and **Plate-II**, Khasra Map are given in **Figure No. 7 & 8** and **Plate-III**.

The details of Forest and Non-Forest area are shown on Annexure-I.

6.1 Geo-Referencing of Toposheet:

The Secondary Control Coordinates fixed through DGPS survey were used to georeference the digitized Toposheet No. 64 M/1 and 64 M/2 by applying the co-ordinate value of the field observation to the corresponding point on the map.

The georeferenced Map are given in **Figure No-3** and **4 (Plate-I)**.



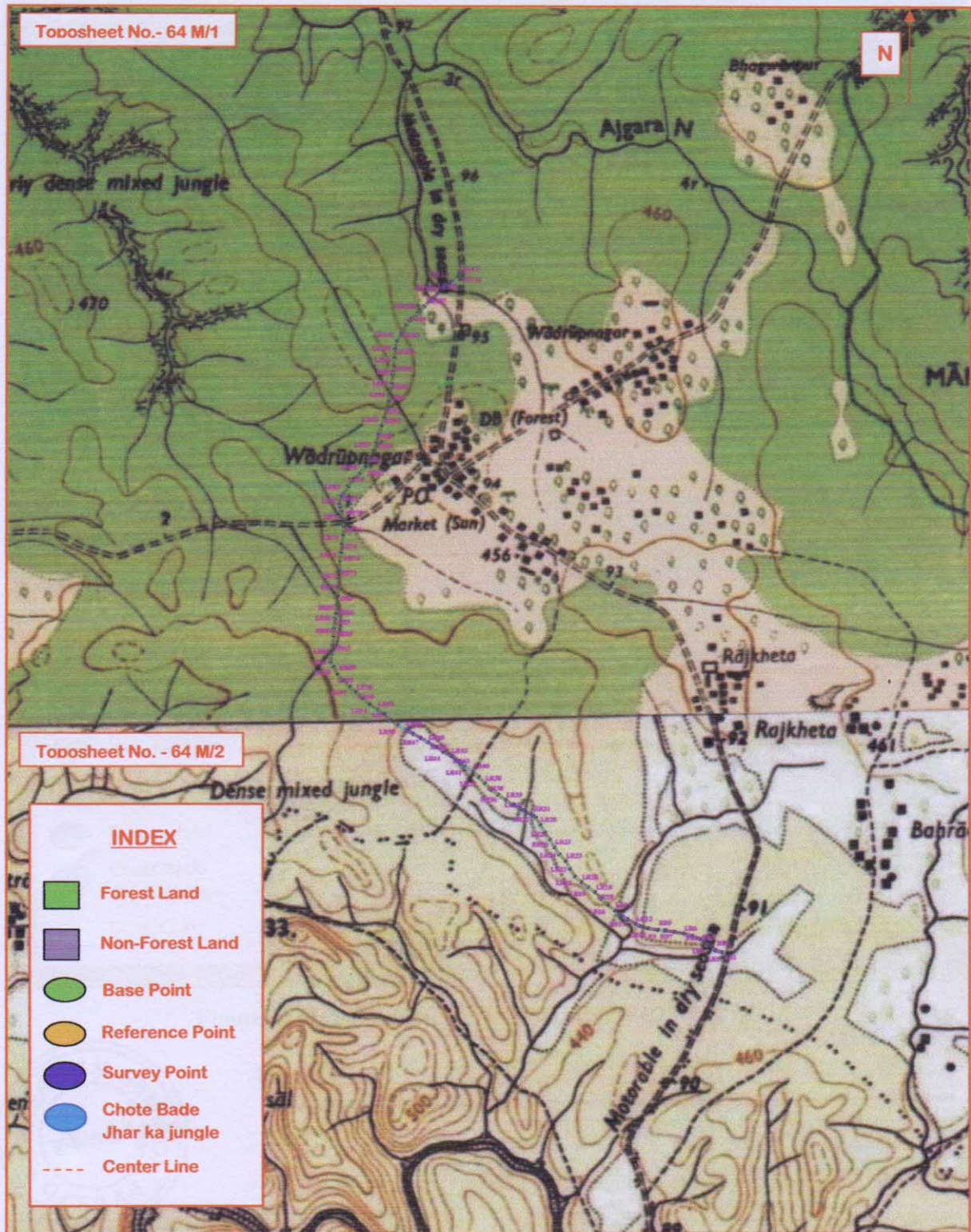


Figure-3: Geo-Referencing on Toposheet No. 64 M/1 and M/2.



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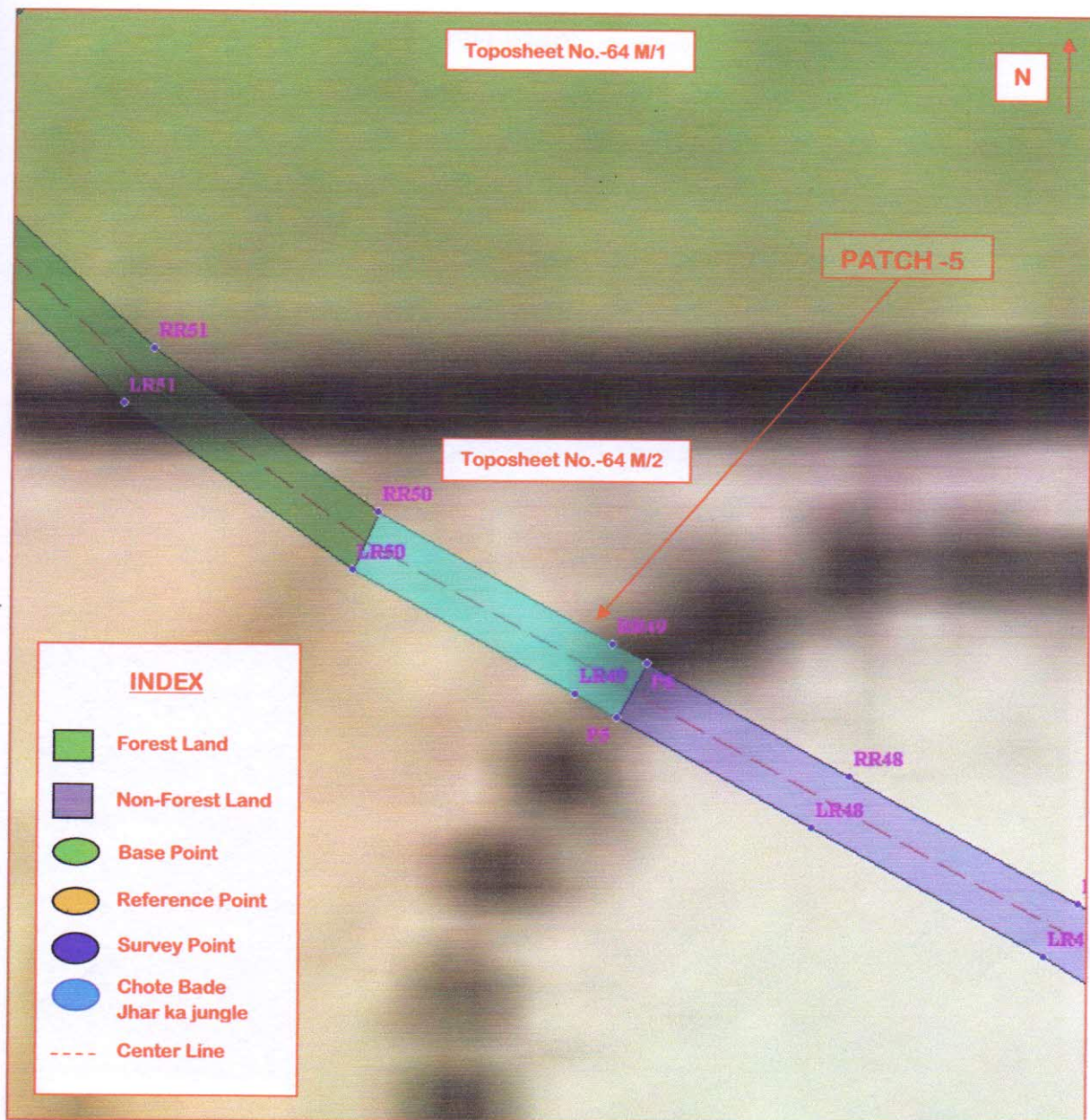


Figure-4: Geo-Referencing on Toposheet 64 M/1 & M/2.



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6.2 Geo-Referencing on Forest Map:

The Secondary Control Coordinates fixed through DGPS survey were used to georeference the digitized Forest Map by applying the co-ordinate value of the field observation to the corresponding point on the map provided by M/s Public Works Department-Surajpur which are given below **Figure No.5 and 6 (Plate-II)**.

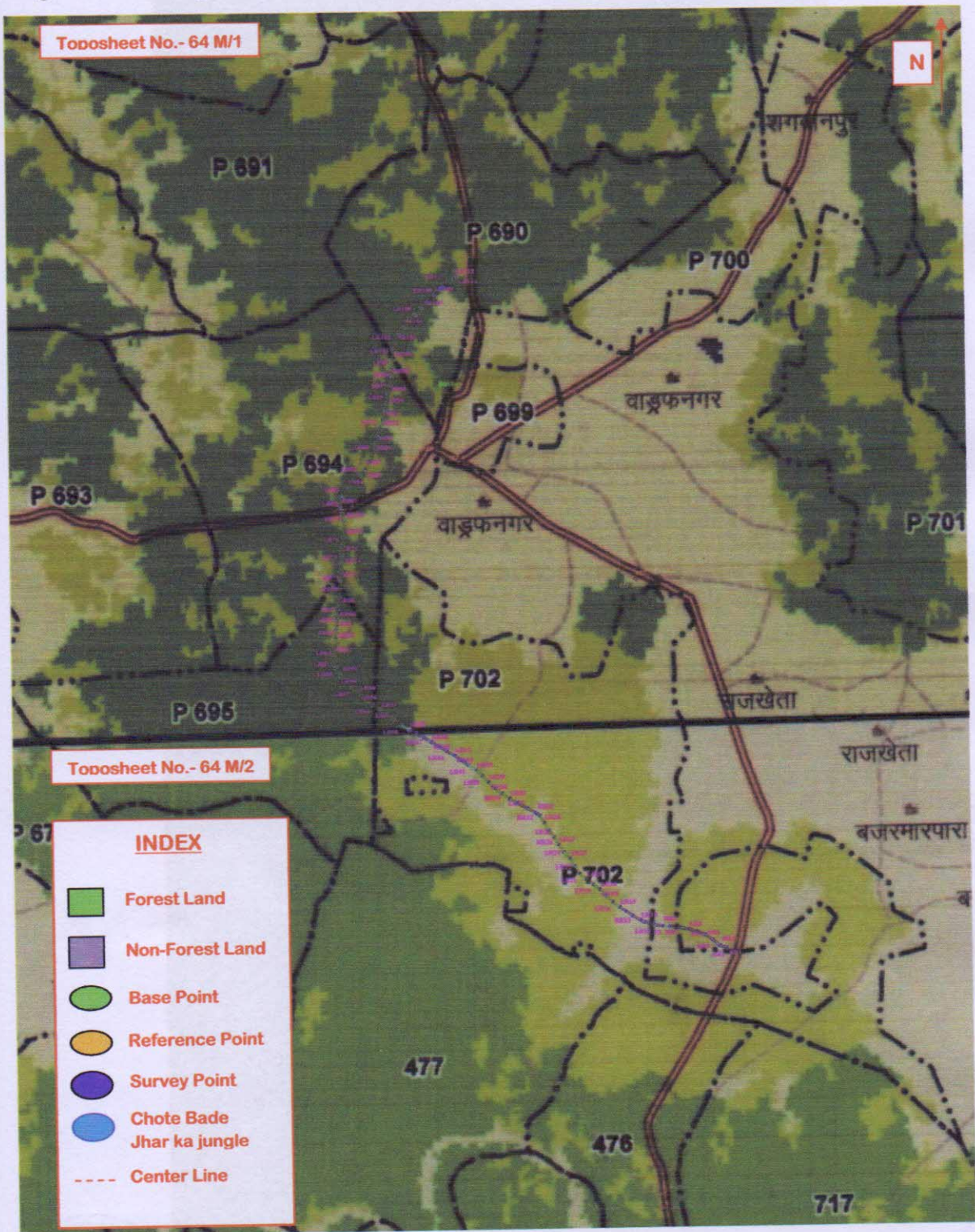
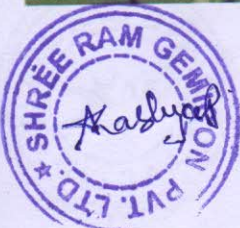


Figure-5: Geo-Referencing on Forest Map



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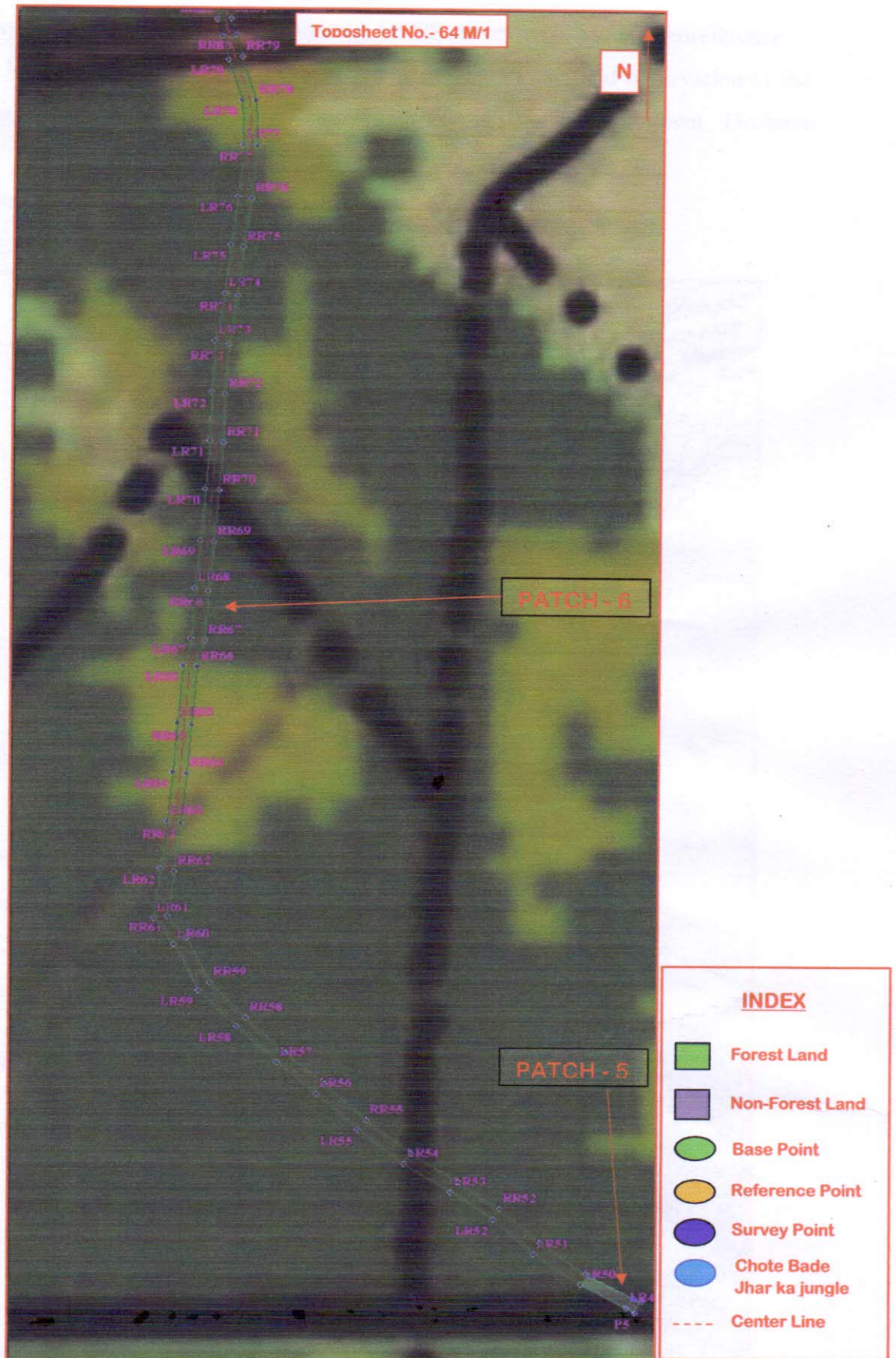


Figure-6: Geo-Referencing on Forest Map.



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6.3 Geo-Referencing on Khasra Map:

The Secondary Control Coordinates fixed through DGPS survey were used to georeference the digitized Khasra Map by applying the co-ordinate value of the field observation to the corresponding point on the map provided by M/s Public Works Department, Division Balrampur.

The Georeferenced Khasra maps are given in **Figure-7** and **8 (Plate-III)**.

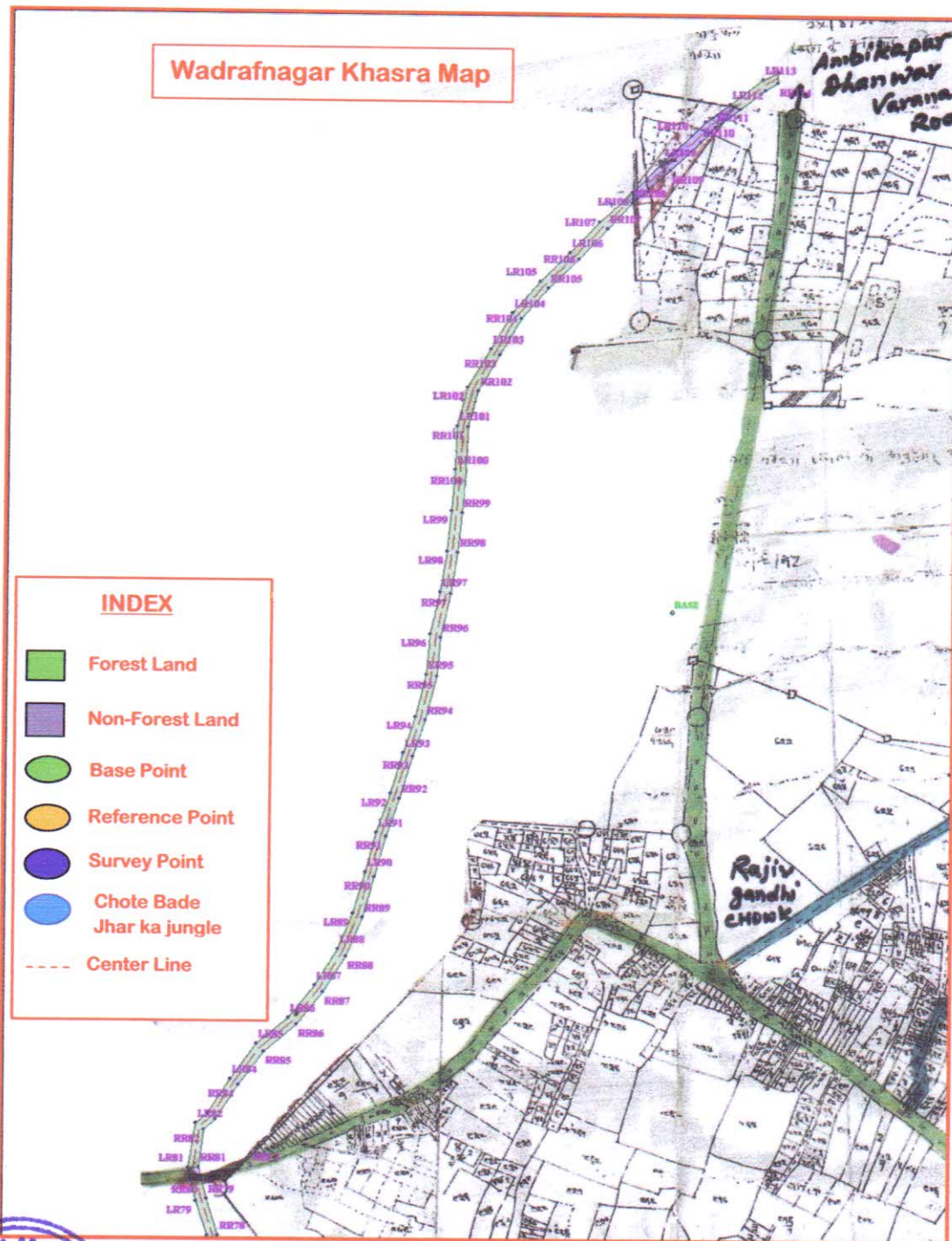


Figure-7: Geo-Referencing on Khasra Map.



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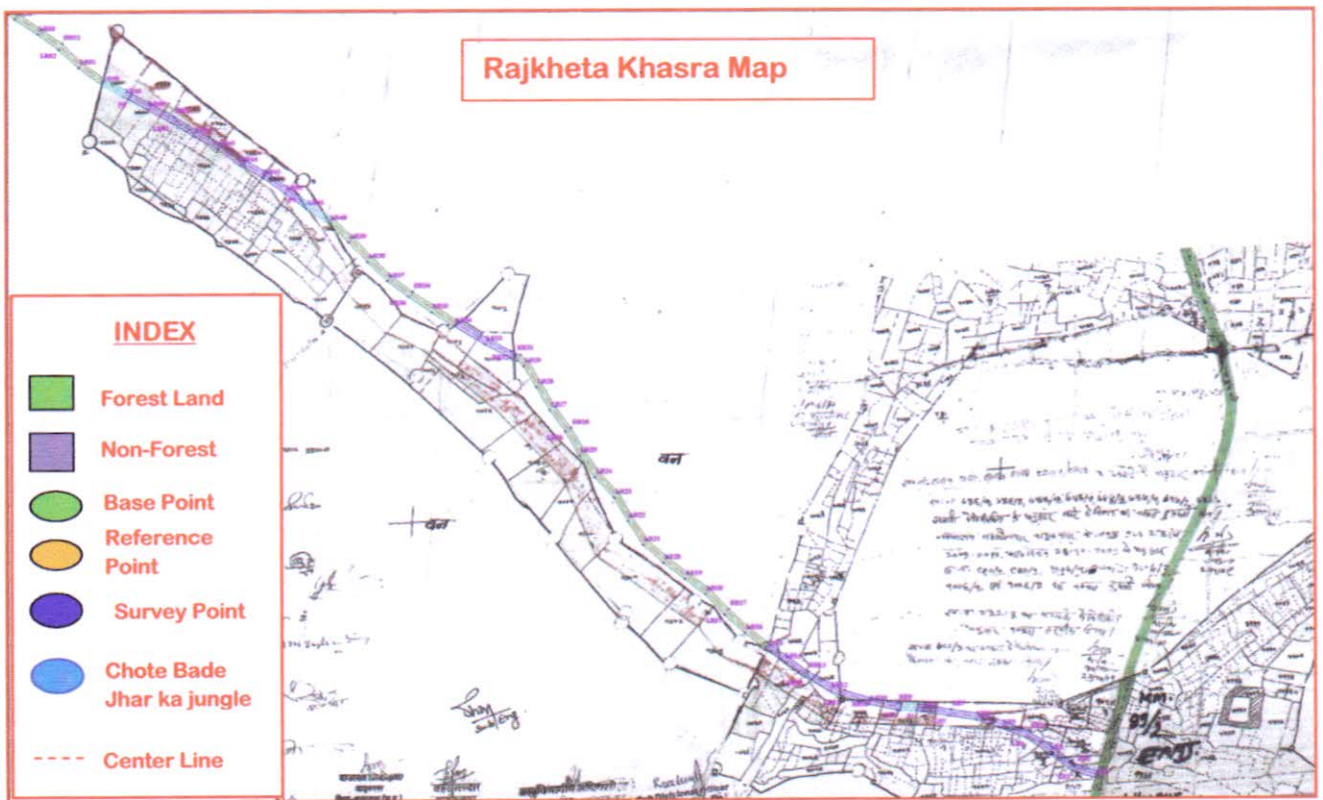


Figure-8: Geo-Referencing on Khasra Map.



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7.0 DETAILS SPECIFICATION OF DGPS EQUIPMENT & SOFTWARE:

M/s Shreeram Gemicon Pvt. Ltd. deployed the most advance and hi-precision devices to carry out the DGPS survey.

The DGPS Image and performance specifications are given below.



FIGURE-9: DGPS SURVEY INSTRUMENT

Spectra Pricision ProMark 220:

ProMark 220 is the most cost-effective Single-frequency network RTK rover. ProMark 220 solution includes a rugged GNSS handheld receiver running Windows Embedded Handheld 6.5 operating system, the comprehensive Survey Pro or FAST Survey field software and the ASH-661 (L1/L2 GNSS) antenna.

Advanced GNSS Solution:

ProMark 220 is the most cost-effective single-frequency, all-in-view network RTK rover. Thanks to the Z-Blade GNSS centric technology, ProMark 220 makes optimal use of all GNSS signals to deliver fast and stable RTK positions even when GPS coverage is insufficient but other constellations like GLONASS are visible.



Designed For Efficient Network RTK:

Very lightweight, with a compact and rugged design, a large memory and autonomy, ProMark 220 has been designed for a comfortable and productive field use. Built-in wireless connectivity and embedded GSM/GPRS modem make ProMark 220 a powerful solution suitable for any network RTK application.

Best Value for a High-End Survey Solution ProMark 220 is extremely cost-effective, meeting the most demanding requirements for a high-end survey solution. Together with Survey Pro or FAST Survey field software, it enables interoperability with a wide range of survey instruments and accessories to run complete survey jobs, including site calibration, stake out, and survey projects where total stations are used.

PROMARK 220 – SPECIFICATIONS:

Product specifications:

Constellation : GPS, GLONASS, SBAS
Frequency : L1, L2
Channels : 45
Update Rate : 0.05 sec
Data format : RTCM 3.1, ATOM, CMR(+), NMEA
Raw data output : Yes
Real-time Accuracy - RTK mode (HRMS) : 1 cm
Real-time Accuracy - DGPS mode (HRMS) : < 30 cm
Real-time Accuracy - SBAS mode (HRMS) : < 50 cm
Post-Processed Accuracy (HRMS) : 0.5 cm + 1 ppm
Time to first fix : 15 sec
Initialization range : Up to 10 km
Processor : 806 MHz
Operating system : Windows Embedded Handheld 6.5
Communications : GSM/GPRS, BT, WLAN
Unit size (mm / inches) : 190x90x43mm / 7.5x3.5x1.7in
Weight : 0.62 kg / 1.43 lb
Display : 3.5
Memory : 256 MB SDRAM / 2 GB NAND / SDHC
Temp Min (°C) : -20°C / -4°F
Temp Max (°C) : 60°C / 140°F
Waterproof : IP 65
Shock & vibration : ETS300 019 & MIL-STD-810
Power (type - lifetime) : 6600 mAh Li-Ion / > 8 hrs
Antenna Type : Internal / External
Firmware options : Yes
Software options : Yes

