



निर्वात के लिए नहीं NOT FOR EXPORT

OPEN SERIES
MAP

No. G45S15

Scale 1:50,000

| | | |
|---|---|-----------------------------------|
| Aurangabad BIHAR G45S10 (72D/10) | G45S14 (72D/14) | Gaya BIHAR G45T2 (72H/2) |
| G45S11 (72D/11) | G45S15 (72D/15) | G45T3 (72H/3) |
| G45S12 (72D/12) | Chitra JHARKHAND G45S16 (72D/16) | G45T4 (72H/4) |

1 Patna, JHARKHAND
2 Hazratnagar, JHARKHAND
3 Koderma, JHARKHAND.

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

1st Edition 2010.

Price : Rs. 50/-

CONVENTIONAL SYMBOLS

| | |
|--|-----|
| Express highway with toll; with bridge with distance stone | ... |
| Roads, metalled: according to importance | ... |
| Roads, double cartageway: according to importance | ... |
| Unmetalled road. Cart-track. Pack-track with pass. Foot-path | ... |
| Stream: with track in bed; undefined. Canal | ... |
| Dam: masonry or rock-filling; earthwork. Well | ... |
| River: dry with water channel; with island & rocks. Tidal river | ... |
| Submerged rocks. Shoal. Swamp. Reeds | ... |
| Wells: lined; unlined. Tubewell. Spring. Tank: permanent; dry | ... |
| Embankment: road or rail tank. Broken ground | ... |
| Railways, other gauges: double; single with distance stone; do. | ... |
| Mineral line or tramway. Kln. Cutting with tunnel | ... |
| Contours with sub-features. Rocky slopes. Cliffs | ... |
| Sand features: (1) flat. (2) sand-hill (permanent). (3) dunes (shifting) | ... |
| Towns or Villages: inhabited; deserted. Fort | ... |
| Huts: permanent; temporary. Tower. Antiquities | ... |
| Temple. Chhatra. Church. Mosque. Idgah. Tomb. Graves | ... |
| Lighthouse. Lightship. Buoy: lighted; unlighted. Anchorage | ... |
| Mine. Vine on trellis. Grass. Scrub | ... |
| Palms: palms; other. Plantain. Conifer. Bamboo. Other trees | ... |
| Areas: cultivated; wooded. Surveyed tree | ... |
| Boundary, international | ... |
| state: demarcated; undemarcated | ... |
| district: subdivided; tahsil or taluk; forest | ... |
| Boundary pillars: surveyed; unlocated | ... |
| Heights, triangulated: station; point; approximate | ... |
| Bench-mark: geodetic; tertiary; canal | ... |
| Post office. Telegraph office. Overhead tank | ... |
| Rest house or inspection bungalow. Circuit house. Police station | ... |
| Camping ground. Forest: reserved; protected | ... |
| Spaced names: administrative; locality or tribal | ... |
| Hospital. Dispensary. Veterinary. Hospital/Dispensary | ... |
| Aerodrome. Helipad. Tourist site | ... |
| Power line: with pylons surveyed; with poles unsurveyed | ... |

REFERENCES

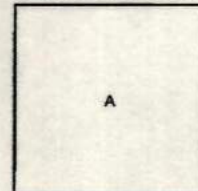
NH 99 National Highway No. 99 FB Foot bridge

NOTES :-

Heights are in metres and above Indian mean sea level.
Contours are approximate.
The kilometre stone numbers along roads and canals are shown in slant type, e.g., 'g' whereas
relative numbers are shown in upright type, e.g., '15'.
A relative height, e.g., '8', marked along a canal indicates the height of the top of the
canal embankment above the adjacent country.
Numerous wells and field-bonds exist throughout the cultivated portions of the sheet; only the
important ones have been shown.
Cart-tracks and unmetalled roads are generally not motorable in dry season. Permission to use these
roads for transport and along canals is required from the Forest and Irrigation authorities respectively.
Names of Protected Forests in this sheet have not been shown for want of reliable information.

COMPILATION INDEX

A. Surveyed during 1987-88. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1° West in 2005.
(Decreasing by about 1° annually).

1:50,000

500 m to 1 cm 2 cm to 1 km 3 Kilometres

CONTOUR INTERVAL 20 METRES

For further details about this map, please contact

Director
Bihar Geo-Spatial Data Centre
Survey of India, 164, Sheikhpura House, Sheikhpura
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REG. No. -WPG D'10 (Bihar GOC-1:50,000)

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No. G45T3

Scale 1:50,000

| | | |
|---|------------------|---|
| Gayā BIHAR G45S14 (72D/14) | G45T2 (72H/2) | G45T6 (72H/6) |
| G45S15 (72D/15) | G45T3 (72H/3) | Kodama JHARKHAND G45T7 (72H/7) |
| Chatra JHARKHAND G45S16 (72D/16) | G45T4 (72H/4) | Hazārbāg JHARKHAND G45T8 (72H/8) |

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

1st Edition 2010. Revised 2014. Price : Rs. 70/-

CONVENTIONAL SYMBOLS

| | |
|--|--|
| Express highway with toll; with bridge; with distance stone | |
| Roads, metalled: according to importance | |
| Roads, double carriageway, according to importance | |
| Unmetalled road. Cart-track. Pack-track with pass. Foot-path | |
| Streams: with track in bed, undefined. Canal | |
| Dams: masonry or rock-filled; earthenwork. Weir | |
| River: dry with water channel; with island & rocks. Tidal river. | |
| Submerged rocks. Shoal. Swamp. Reeds | |
| Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry | |
| Embankments: road or rail; tank. Broken ground | |
| Railways, broad gauge: double; single with station; under constr. | |
| Railways, other gauges: double; single with distance stone; do. | |
| Mineral line or tramway. Kin. Cutting with tunnel | |
| Contours with sub-features. Rocky slopes. Cliffs | |
| Sand features: (1) flat, (2) sand-hill (permanent), (3) dunes (shifting) | |
| Towns or Villages: inhabited; deserted. Fort | |
| Huts: permanent; temporary. Tower. Antennae | |
| Temple: Chhatri. Church. Mosque. Igloo. Tomb. Graves | |
| Lighthouse. Lightship. Buoy: lighted; unlighted. Anchorage | |
| Mine: View on trellis. Grass. Scrub | |
| Palms: palmyra; other. Plantation. Conifer. Bamboo. Other trees | |
| Areas: cultivated; wooded. Surveyed tree | |
| Boundary, international | |
| state: demarcated; undemarcated | |
| district: subdivision; tahsil or taluk; forest | |
| Boundary pillars: surveyed; unlocated | |
| Heights, triangulated: station point; approximate | |
| Bench-mark: geodetic; tertiary; canal | |
| Post office. Telegraph office. Overhead tank | |
| Rest house or inspection bungalow. Circuit house. Police station | |
| Camping ground. Forest: reserved; protected | |
| Spaced names: administrative; locally or tribal | |
| Hospital. Dispensary. Veterinary Hospital / Dispensary | |
| Aerodrome. Helipad. Tourist site | |
| Power line: with pylons surveyed; with poles unsurveyed | |

REFERENCE

NH 2 National Highway No. 2

NOTES :-

Contours are approximate.
Heights are in metres and above Indian mean sea level.
A relative height, *h*, represents the approximate height, in metres between the top and bottom of a steep slope.
The triangulated heights and contours in this sheet have not been adjusted to the height of the spirit-levelled bench-marks and may not be strictly in accordance with them.
The kilometre scale numbers along roads are shown in sans type, e.g., "5" whereas milestone numbers are shown in upright type, e.g., "5".
Cart-tracks along canals are jeepable in dry season. Permission to use these is required from the irrigation authorities.
Numerous unlined wells exist throughout the cultivated portions of this sheet; only the important ones have been shown.
Cultivation is periodic and dependent on rainfall.

COMPILED INDEX

A. Surveyed during 1977-78. Updated for major details during 2005-06.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1° West in 2005.
(Decreasing by about 1° annually)

1:50,000

500 m to 1 cm
Metres 1000 500 0 1 2 3 Kilometres

For further details about this map, please contact

Director

Bihar Geo-Spatial Data Centre
Survey of India, 164, Sheikhpura House, Sheikhpura
Patna - 800014.
Fax : 0612 - 2280265

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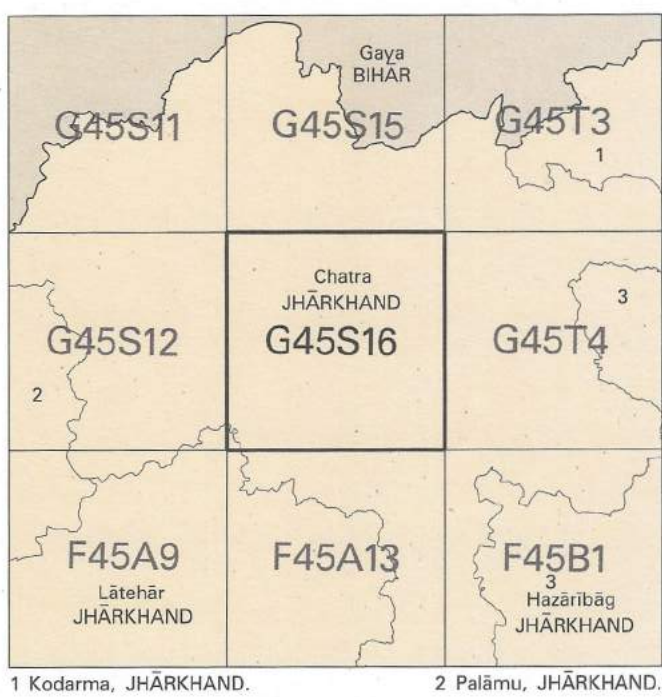
REG. No. 4295-NPG D/10 (BiharGDC-1:50,000)-1013/11.

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Department of Science & Technology, Government of India.

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No. G45S16

Scale 1:50,000



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1st Edition 2009.

Price : Rs. 50 /-

CONVENTIONAL SYMBOLS



REFERENCE

NH 99 National Highway No. 99.

NOTES

Heights are in metres and above Indian mean sea level.
Contours are approximate.
Tanks shown dry in this area, usually contain water from July to March.
Wells are numerous in squares C/1, 2 and 3, only the important ones have been shown.
Cart tracks and unmetalled roads, in this sheet, are generally motorable in dry season. Permission to use those inside forest areas is required from the Forest Authorities.
A relative height, or represents the approximate height, in metres, between the top and bottom of a steep slope.
The kilometre stone numbers along roads are shown in slant type e.g. '5' whereas milestone numbers, are shown in upright type e.g. '5'.
The common boundary between the Protected Forests are not shown for want of reliable information.

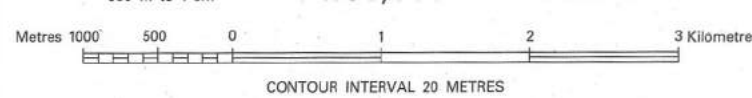
COMPILATION INDEX

A. Surveyed during 1975-76. Updated for major details during 1987-88 and 2004-05.

Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1° West in 2005.
(Decreasing by about 1' annually).

1:50,000



For further details about this map, please contact

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Jharkhand Geo-Spatial Data Centre

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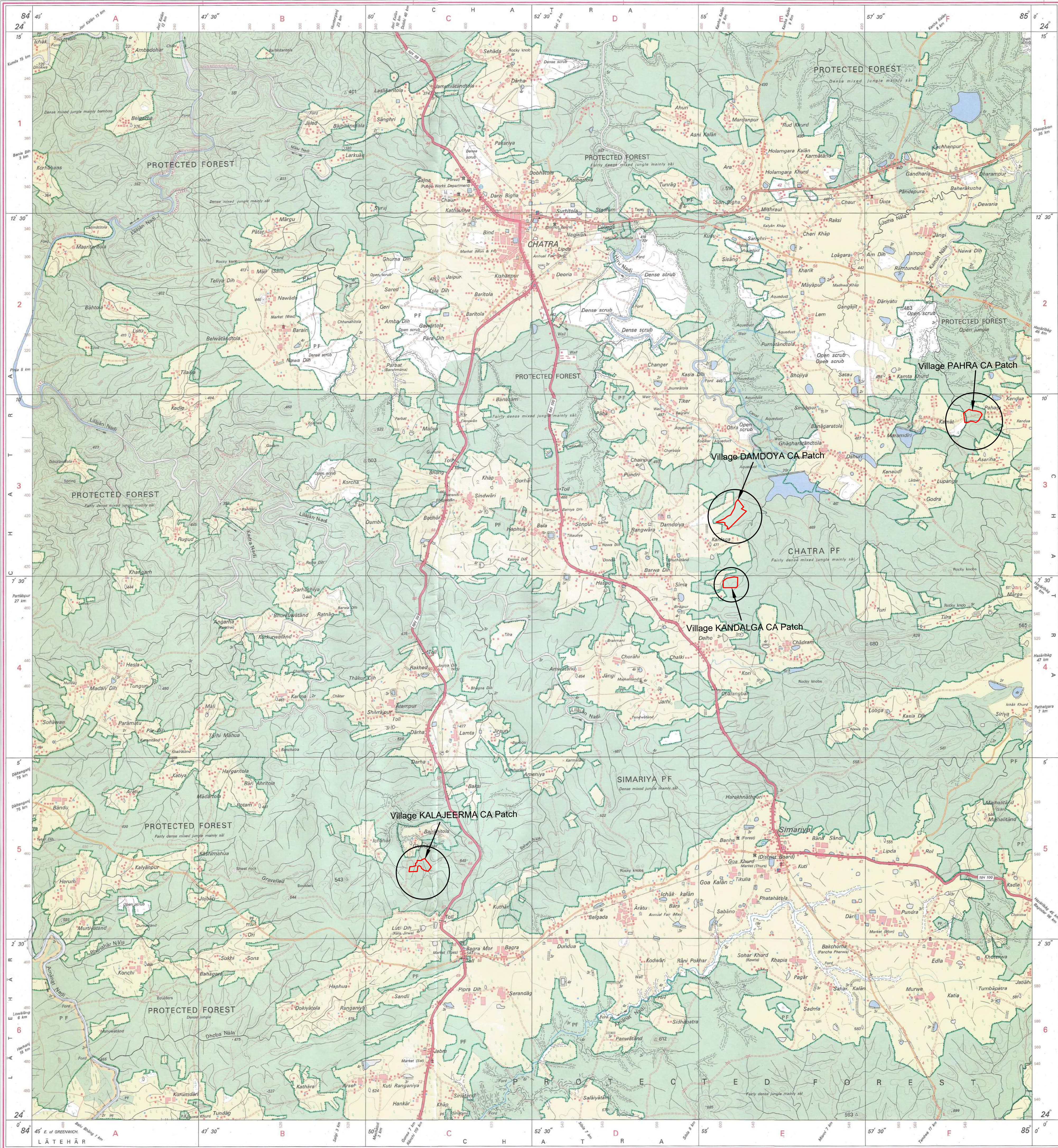
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Fax : 0651 - 2482930

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Department of Science & Technology, Government of India.

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No. F45A13

Scale 1:50,000

| | | |
|------------------------|---------------------|------------------------|
| G45S12 | G45S16 | G45T4 |
| 1 | Chatra JHARKHAND | |
| F45A9 | F45A13 | F45B1 |
| Lātehār JHARKHAND | | Hazārībāg JHARKHAND |
| F45A10 | F45A14 | F45B2 |
| Lohārdēga JHARKHAND | | Rānchi JHARKHAND |

1 Palāmu, JHARKHAND.

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

1st Edition 2009.

Price : Rs. 50/-

CONVENTIONAL SYMBOLS

Express highway: with toll; with bridge; with distance stone
Roads, metalled: according to importance
Roads, double carriageway: according to importance
Unmetalled road. Cart-track. Pack-track with pass. Foot-path.
Streams: with track in bed; undefined. Canal
Cams: masonry or rock-filled; earthenwork. Weir
River: dry with water channel; with island & rocks. Tidal river
Submerged rocks. Shoal. Swamp. Reeds
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry
Embankments: road or rail; tank. Broken ground
Railways: broad gauge; double; single with station under constr.
Railways, other gauges: double; single with distance stone; do
Mineral line or tramway. Kln. Cutting with tunnel
Contours with sub-features. Rocky slopes. Cliffs
Sand features: (flat); (sand-hills); (permanent); (shifting)
Towns or Villages: inhabited; deserted. Fort
Huts: permanent; temporary. Tower. Antiquities
Temple. Chhatra. Church. Mosque. Idgah. Tomb. Graves
Lighthouse. Lightship. Buoy: lighted; unlighted. Anchorage
Mine. Vine on trellis. Grass. Scrub
Palms: palmyra; other. Plains. Conifer. Bamboo. Other trees
Areas: cultivated; wooded. Surveyed tree
Boundary: international
states: demarcated; undemarcated
district; subdivision; taluk or block; forest
Boundary pillars: surveyed; unlocated; village trijunction
heights, triangulated: station; point; approximate. BM 63.3
Bench-mark: geodetic; tertiary; canal
Post office. Telegraph office. Overhead tank
Rest house or inspection bungalow. Circuit house. Police station
Camping ground. Forest: reserved; protected
Spaced names: administrative; locality or tribal
Hospital. Dispensary. Veterinary hospital
Aerodrome. Helipad. Tourist site
Power line: with pylons surveyed; with poles unsurveyed

REFERENCE

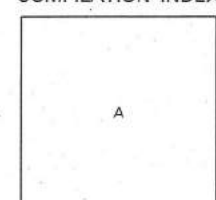
NH 99 National Highway No. 99

NOTES :-

Heights are in metres and above Indian mean sea level.
Contours are approximate.
Tanks shown dry, in this area usually contain water from July to December.
Unmetalled roads and cart-tracks in this sheet are generally not navigable in dry season.
The common boundaries of the Protected Forests at some places in this sheet have not been shown for want of reliable information.
A relative height, Δ , represents the approximate height, in metres, between the top and bottom of steep slope.
The exterior boundaries of areas of Reserved or Protected Forests are shown by green ribands.
The kilometre stone numbers along roads are shown in slant type, e.g. 5 whereas milestone numbers are shown in upright type, e.g. 5.

COMPILATION INDEX

A. Surveyed during 1978-79. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about $\frac{1}{2}^{\circ}$ West in 2005.
(Decreasing by about $\frac{1}{4}^{\circ}$ annually).

1:50,000

500 m to 1 cm
2 cm to 1 km
3 Kilometres

CONTOUR INTERVAL 20 METRES

For further details about this map, please contact

Director
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Fax : 0651 - 2482289

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REG. No. B/194-SPG D/99 (Jharkhand GDC/1:50,000)-01/5.

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Department of Science & Technology, Government of India.

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No. G45T4

Scale 1:50,000

| | | |
|----------------------|------------------|------------------------|
| G45S15 (72D/15) | G45T3 (72H/3) | G45T7 (72H/7) |
| Chatra JHARKHAND | | |
| G45S16 (72D/16) | G45T4 (72H/4) | G45T8 (72H/8) |
| F45A13 (73A/13) | F45B1 (73E/1) | F45B5 (73E/5) |
| Latehar JHARKHAND | | Hazaribag JHARKHAND |

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

1st Edition 2009.

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CONVENTIONAL SYMBOLS

Express highway with toll with bridge with distance stone
Roads, metalled: according to importance
Roads, double cartway: according to importance
Unmetalled road. Cart-track. Pack-track with pass. Foot-path
Streams: with track in bed; undefined. Canal
Dams: masonry or rock-filled; earthwork. Weir
River: dry with water channel; with island & rocks. Tidal river
Submerged rocks. Shoal. Swamp. Reeds
Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry
Embankments: road or rail; tank. Broken ground
Railways, broad gauge: double; single with station; under constr.
Railways, other gauges: double; single with station; under constr.
Mineral line or tramway. Kin. Cutting with tunnel
Contours with wavy-symbols. Rocky slopes. Cliffs
Sand features: (flint,2)land-hill (permanent). (3)dund(hillfling).
Towns or Villages: inhabited; deserted. Fort
Huts: permanent; temporary. Tower. Antiquities
Temple. Chattri. Church. Mosque. Idgh. Tomb. Graves
Lighthouse. Lightship. Buoy: lighted; unlighted. Anchorage
Mine. Vine on trellis. Grass. Scrub
Palms: palmyra; other. Plantain. Conifer. Bamboo. Other trees
Areas: cultivated; wooded. Surveyed tree
Boundary, international
state: demarcated; undemarcated
district: subdivision, tahsil or taluk; forest
Boundary pillars: surveyed; uncoloured
Height, triangulated; station; point; approximate
Bench-mark: geodetic; tertiary; canal
Post office. Telegraph office. Overhead tank
Rest house or inspection bungalow. Circuit house. Police station
Camping ground. Forest: reserved; protected
Spaced names: administrative; locality or tribal
Hospital. Dispensary. Veterinary; Hospital / Dispensary
Aerodrome. Helipad. Tourist site
Power line: with pylons surveyed; with poles unsurveyed

REFERENCE

NH 100 National Highway No. 100.

NOTES :-

Heights are in metres and above Indian mean sea level.
Contours are approximate.
A relative height, Δ , represents the approximate height in metres, between the top and bottom of a steep slope.
Tanks shown dry, in this area usually contain water from July to February.
Wells are numerous throughout the sheet; only the important ones have been shown.
The exterior boundaries of areas of Reserved or Protected Forests are shown by green ribands.
The kilometre stone numbers along roads are shown in slant type, e.g., $\frac{1}{2}$ whereas milestone numbers are shown in upright type, e.g., 5.
The district boundary between Chhota and Hazaribag Districts has been surveyed as pointed out by the local officials on the ground but has not been verified by the District authorities.

COMPIATION INDEX

A. Surveyed during 1977-78. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about $\frac{1}{4}^{\circ}$ West in 2005.
(Decreasing by about $\frac{1}{4}^{\circ}$ annually).

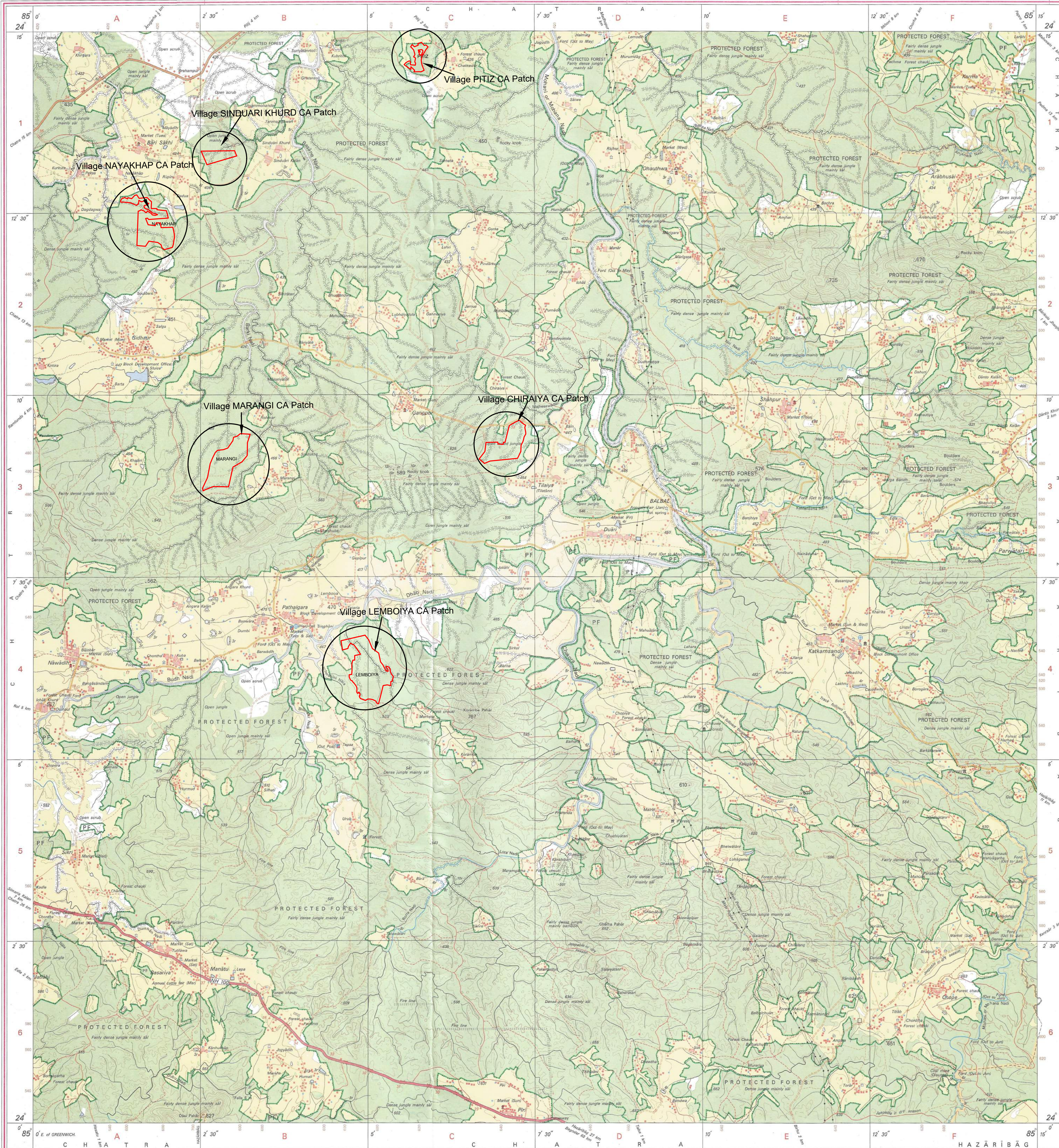
1:50,000

500 m to 1 cm
2 cm to 1 km
Kilometres
CONTOUR INTERVAL 20 METRES

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