

No. F45A13

Scale 1:50,000

G45S12	G45S16	G45T4
F45A9	F45A13	F45B1
F45A10	F45A14	F45B2

1 Palamu, JHARKHAND.

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

1st Edition 2009.

Price : Rs. 50/-

CONVENTIONAL SYMBOLS

Express highway with toll; with bridge; with distance stone	20
Roads, metalled; according to importance	
Roads, double cartage-way; 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 distance stone; under construction	
Railways, other gauges: double; single with distance stone; do	
Mineral line or tramway. Kib. Cutting with tunnel	
Contours with sub-features. Rocky slopes. Cliffs	
Sand features: (dunes, dune-hills (permanent), (dunes, shifting))	
Towns or Villages: inhabited; deserted. Fort	
Huts: permanent; temporary. Tower. Antiquities	
Temple. Chattri. Church. Mosque. Idgah. Tomb. Graves	
Lighthouse. Lightship. Buoys: lighted; unlighted. Anchorage	
Mine. Vine on trellis. Grass. Scrub	
Palms: palm-tree; other. Plantain. Conifer. Bamboo. Other trees	
Areas: cultivated; wooded. Surveyed tree	
Boundary, International	
state demarcated; undemarcated	
district; subdivision, taluk or taluk; forest	
Boundary pillars: surveyed; unlocated; village junction	
Heights, triangulated; station; point; approximate	
Barometric; 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 89 National Highway No. 89

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 motorable 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 ribbon.
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 $\frac{1}{4}$ West in 2005.
(Decreasing by about $\frac{1}{4}$ annually).

1:50,000

500 m to 1 cm 2 cm to 1 km

CONTOUR INTERVAL 20 METRES

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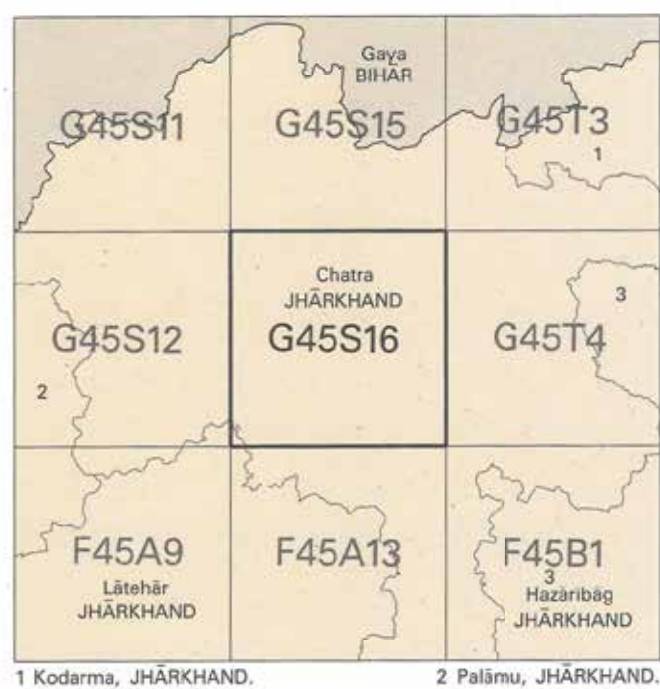
REG. No. B194-SPG D 09 (Jharkhand GOC-1:50,000)-1015.

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No. G45S16

Scale 1:50,000



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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; underlined. 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 distance stone; do	
Mineral line or tramway. Kin. Cutting with tunnel	
Contours with sub-features. Rocky slopes. Cliffs	
Sand features: (flat, dune, hill) (permanent, (dis)continuous)	
Towns or Villages: inhabited; deserted. Fort	
Huts: permanent; temporary. Tower. Antiquities	
Temples. Chhatri. Church. Mosque. Ghat. Tomb. Govan	
Lighthouses. Lightships. Buoy: lighted; unlighted. Anchorage	
Mine. Vine on trellis. Grass. Scrub	
Palms: palm-tree; other. Plantain. Conifer. Bamboo. Other trees	
Areas: cultivated; wooded. Surveyed tree	
Boundary: international	
state: demarcated; undemarcated	
district: subdivision, taluk or tehsil; forest	
Boundary pillars: surveyed; unlocated; village trijunction	
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	
Aerodrome. Helipad. Tourist site	
Power line: with pylons surveyed; with poles unsurveyed	

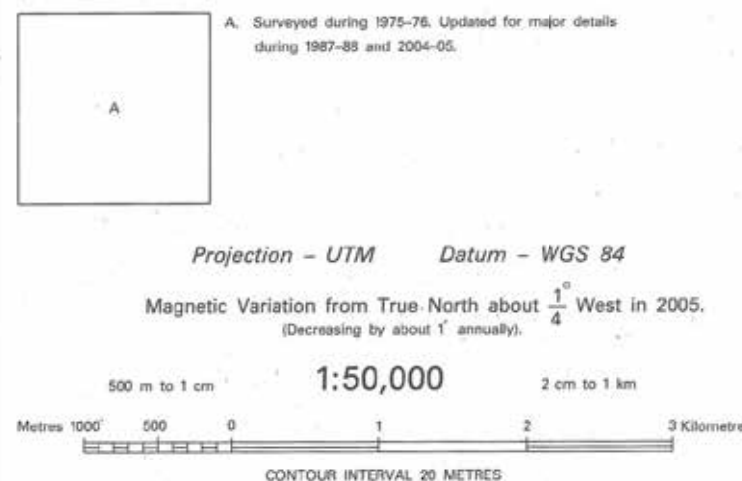
REFERENCE

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 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, Δ , 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. 'S' whereas milestone numbers, are shown in upright type e.g. '3'.
The common boundary between the Protected Forests are not shown for want of reliable information.

COMPILATION INDEX

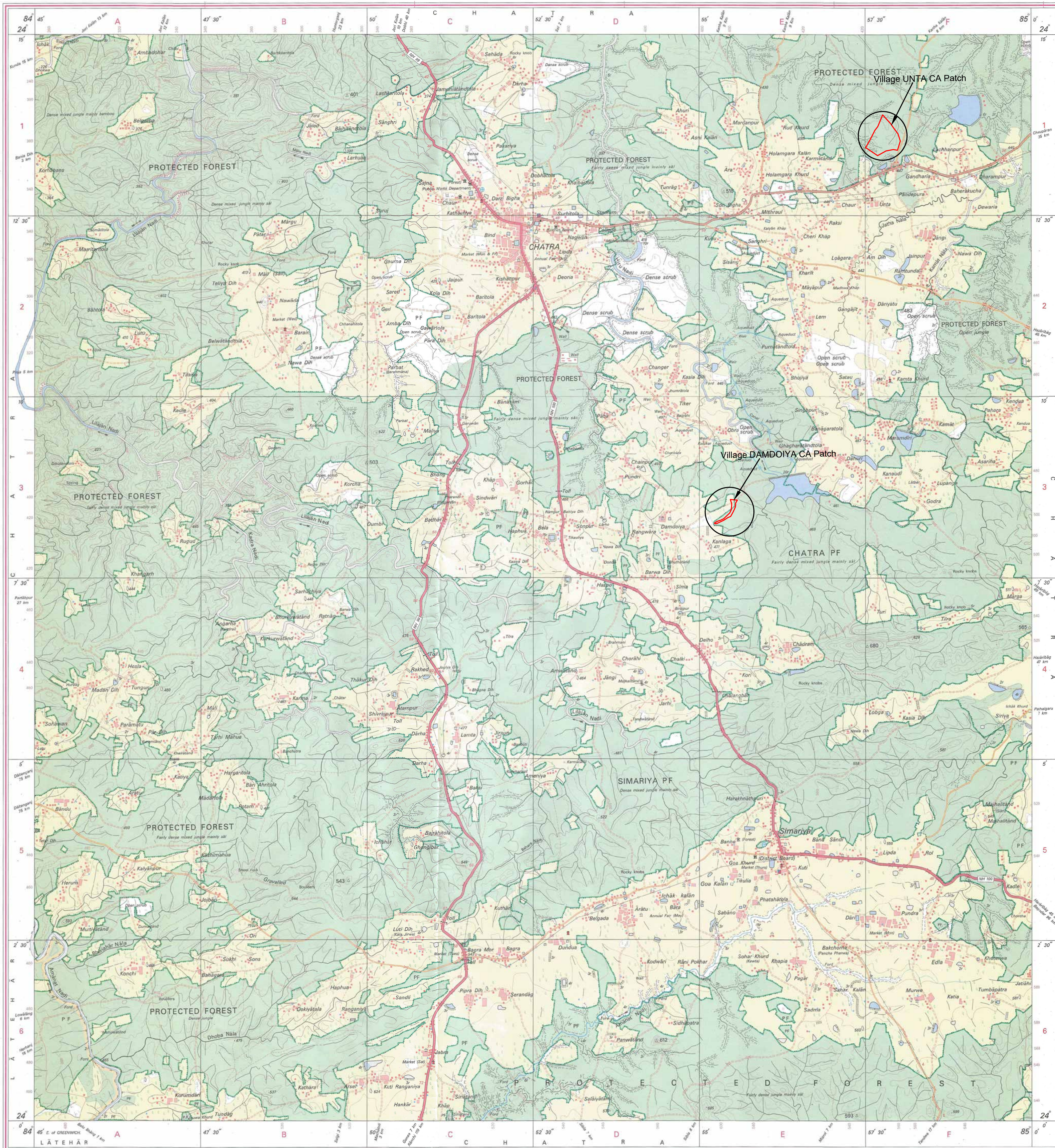


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No. G45T4

Scale 1:50,000

G45S15 (72D/15)	G45T3 (72H/3)	G45T7 (72H/7)
G45S16 (72D/16)	G45T4 (72H/4)	G45T8 (72H/8)
F45A13 (73A/13) Jharkhand	F45B1 (73E/1) Jharkhand	F45B5 (73E/5) Jharkhand

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CONVENTIONAL SYMBOLS

Express highway with toll; with bridge with distance stone	20
Roads, metalled: according to importance	10
Roads, double cartilageway: according to importance	10
Unmetalled road, Cart-track, Pack-track with pass, Foot-path	10
Streams with track in bed; undefined, Canal	10
Dams: masonry or rock-filled; earthwork, Weir	10
River: dry with water channel; with island & rocks, Tidal river	10
Submerged rocks, Shoal, Swamp, Reeds	10
Wells: lined, unlined, Tube-well, Spring, Tanka; perennial; dry	10
Embankments: road or rail; tank, Broken ground	10
Railways, broad gauge: double; single with station; under constn	20
Railways, other gauges: double; single with distance stone; do	20
Mineral line or tramway, Kili, Cutting with tunnel	20
Contours with sub-features, Rocky slopes, Cliffs	20
Sand features: (1) flat, (2) sand-hills (permanent), (3) dunes/shifting	20
Towns or Villages: inhabited; deserted; Fort	20
Huts: permanent; temporary, Tower, Antiquities	20
Temple, Chhatri, Church, Mosque, Iglihi, Tomb, Graves	20
Lighthouse, Lightship, Buoys: lighted; unlighted, Anchorage	20
Mine: Vein on trelis, Grass, Scrub	20
Palms: palmyra; other, Plantain, Conifer, Bamboo, Other trees	20
Areas: cultivated; wooded, Surveyed tree	20
Boundary, International	20
state: demarcated; undemarcated	20
district: subdivision, tahsil or taluk; forest	20
Boundary pillars: surveyed; unlocated	20
Heights, triangulated; station; point; approximate	200
Bench-mark: geodetic; tertiary; canal	BM 63.3
Post office, Telegraph office, Overhead tank	20
Rest house or inspection bungalow, Circuit house, Police station	20
Camping ground, Forest: reserved, protected	20
Specified names: administrative; locality or tribal	KIKRI
Hospital, Dispensary, Veterinary; Hospital / Dispensary	NAGA
Aerodrome, Heliport, Tourist site	20
Power line: with pylons surveyed; with poles unsurveyed	20

REFERENCE

NH 100 National Highway No. 100.

NOTES :-

Heights in metres and above Indian mean sea level.
Contours are approximate.
A relative height, *h*, 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 area of Reserved or Protected Forests are shown by green ribands.
The kilometre stone numbers along roads are shown in slant type, e.g., 'S' 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.

COMPILED INDEX

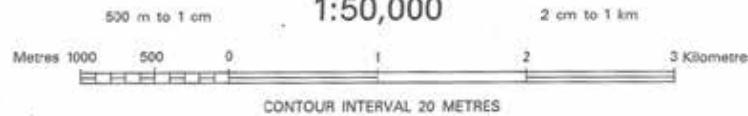
A. Surveyed during 1977-78. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about $\frac{1}{8}^{\circ}$ West in 2005.
(Decreasing by about 1' annually).

1:50,000



CONTOUR INTERVAL 20 METRES

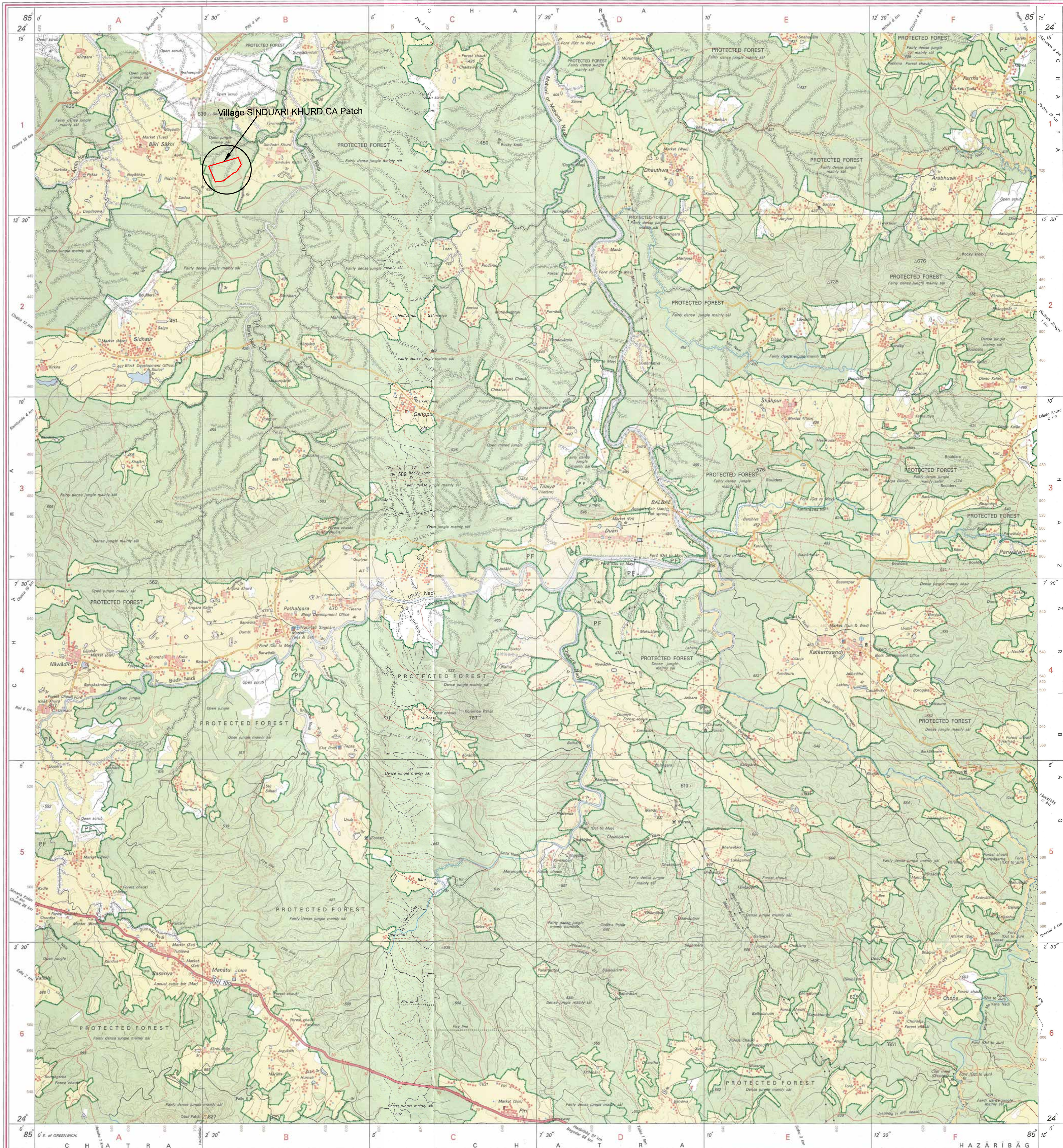
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MAP

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Scale 1:50,000



728

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CONVENTIONAL SYMBOLS



REFERENCES

NH 33 National Highway No. 33 PWD Public Works Department

NOTES

Heights are in metres and above Indian mean sea level.
Contours are approximate.
The kilometre scale numbers along roads and canals are shown in black type, e.g. 5, whereas
mileage numbers are shown in upright type, e.g. 5.
A relative height e.g. 50, marked along a canal indicates the height of the top of the canal
embankment above the adjacent country.
Tanks shown dry in this area, usually contain water from June to February.
Numerous wells exist throughout the sheet; only the important ones have been shown.
Unimproved roads, in this sheet, against which there is no descriptive remarks, are generally
improvable in dry season.
Canal-track along Lohia Left Main Canal is pebbly in dry season. Permission to use this is required
from the irrigation authorities.
The triangulated heights and contours in this sheet have not been adjusted to the heights of the
triangulated bench-marks and may not be strictly in accordance with them.

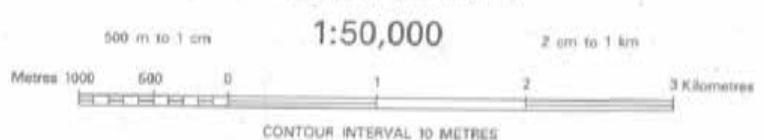
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A. Compiled from 1:25,000 survey 1977-78. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

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



CONTOUR INTERVAL 10 METRES

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No. G45T7

Scale 1:50,000

Gaya BIHAR G45T2 (72H/2)	Nawada BIHAR G45T6 (72H/6)	G45T10 (72H/10)
G45T3 (72H/3)	G45T7 (72H/7)	Kodama JHARKHAND G45T11 (72H/11)
Chatra JHARKHAND G45T4 (72H/4)	Hazaribag JHARKHAND G45T8 (72H/8)	G45T12 (72H/12)

1 Gridth, JHARKHAND.

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CONVENTIONAL SYMBOLS



REFERENCE

NH-33 National Highway No. 33

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.
The triangulated heights and contours in this sheet have not been adjusted to the heights of the spirit-levelled bench-marks and may not be strictly in accordance with them.
A relative height, e.g., Δ , marked along a canal, indicates the height of the top of the canal embankment above the adjacent country.
Unfilled wells are numerous throughout the sheet, only the important ones have been shown.
Unfilled wells in this sheet are generally not shown in dry season.
Tanks, shown dry, in this sheet usually contain water from July to February.

COMPILATION INDEX

A. Compiled from 1:50,000 scale Survey 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
1:50,000
2 cm to 1 km
3 Kilometres

CONTOUR INTERVAL 20 METRES

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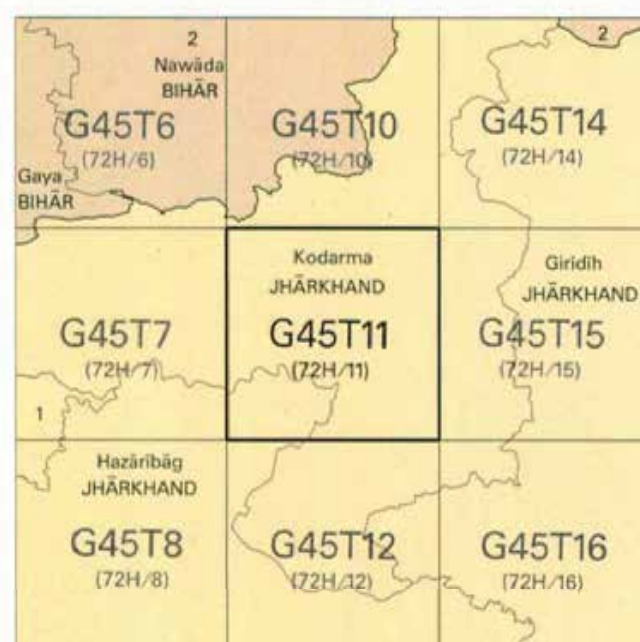


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MAP

No. G45T11

Scale 1:50,000



1 Chitra, JHARKHAND.

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SURVEY OF INDIA

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CONVENTIONAL SYMBOLS



REFERENCES

NH 31 National Highway No.31. DVC Damodar Valley Corporation. PWD Public Works Department.

NOTES :-

Heights are in metres and above Indian mean sea level.
Contours are approximate.
A relative height, if represented by the approximate height, in metres between the top and the bottom of a steep slope.
The common boundaries of the Protected & Reserved Forests have not been shown for want of reliable information.
Tanks shown only in this area usually contain water from July to December.
Villages are numerous throughout the sheet; only the important ones have been shown.
Unsettled roads and cart-tracks in this sheet are generally motorable in dry season.
Elevation boundaries are shown in black with name.
The triangulated heights and contours in this sheet have not been adjusted to the heights of the spot - levelled bench-marks and may not be strictly in accordance with them.

COMPILATION INDEX

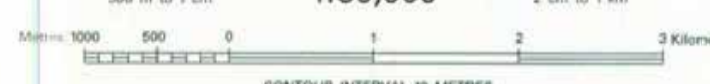
A. Surveyed during 1977-78. Updated for major details during 2004-05.



Projection - UTM Datum - WGS 84

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

1:50,000



CONTOUR INTERVAL 10 METRES

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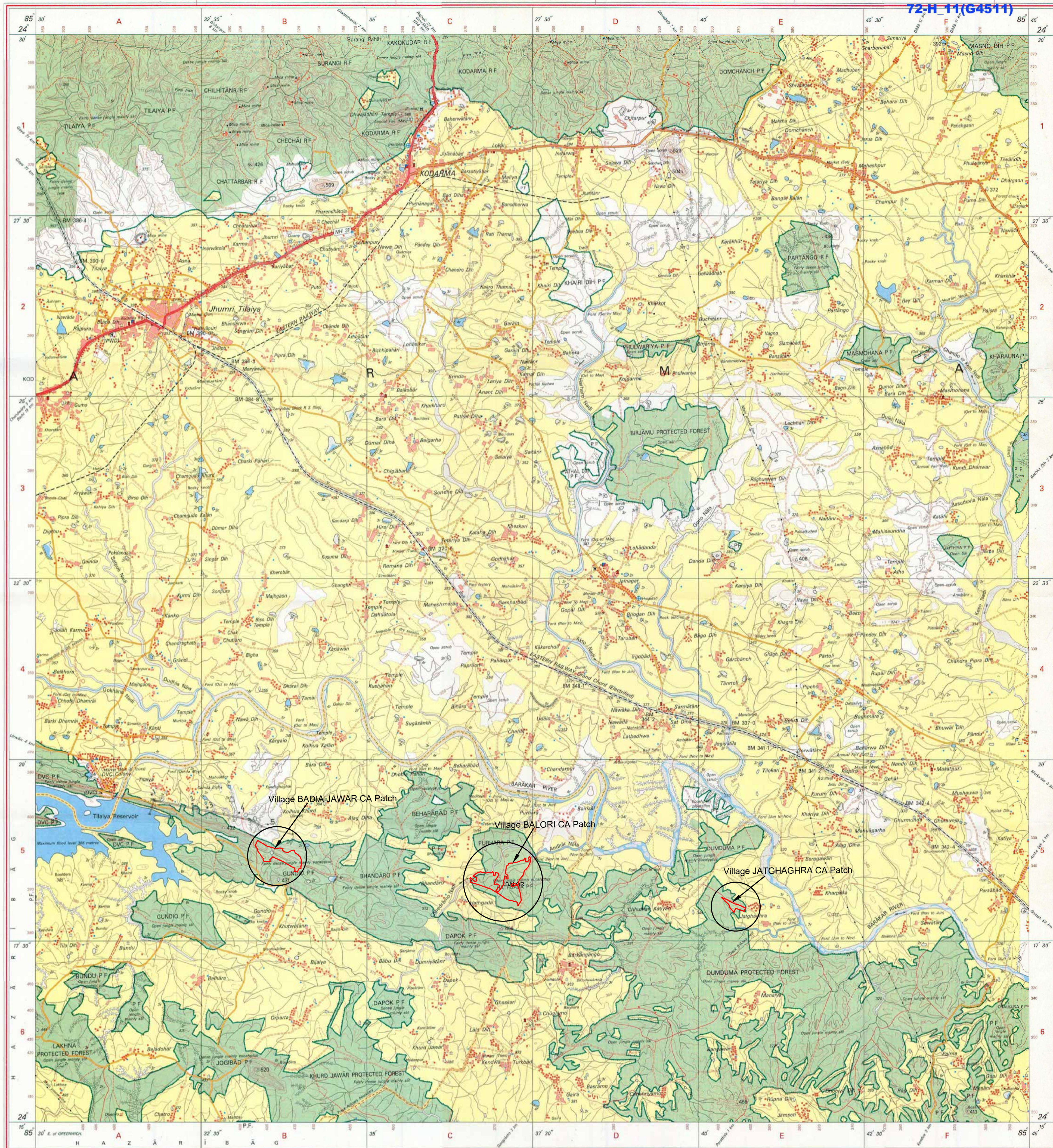
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G45T7	G45T11	G45T15
G45T8	G45T12	G45T16
F45B5	F45B9	F45B13

1 Gaya, BIHAR.
2 Chitra, JHARKHAND.

CONVENTIONAL SYMBOLS

Express highway with toll with distance stone	20
Roads, metalled: according to importance	
Roads, double cartways: 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 constn.	20 RS
Railways, other gauges: double; single with distance stone; do.	
Mineral line or tramway. Kite. Cutting with tunnel	
Contours with sub-features. Rocky slopes. Cliffs	
Sand features: (l) flat. (2) sand-hills (permanent). (3) dunes. (4) dunes	
Towns or Villages: inhabited; deserted. Fort	
Huts: permanent; temporary. Tower. Antiquities	
Temple. Chhatri. Church. Mosque. Light. Tomb. Graves	
Lighthouse. Lightship. Buoy: lighted; unlighted. Anchorage	
Mine. Vine on trellis. Grass. Scrub	
Palm: palm; other. Plantain. Conifer. Bamboo. Other trees	
Areas: cultivated; wooded. Surveyed tree	
Boundary: international	
state: demarcated; undemarcated	
district: subdivision; taluk or taluk; forest	
Boundary pillars: surveyed; unlocated; village junction	
Heights: triangulated; station; point; approximate	200 200 200
Bench-mark: geodetic; tertiary; canal	BM 63.3 BM 63.3 BM 63.3
Post office. Telegraph office. Overhead tank	1 1 1
Rest house or inspection bungalow. Circus house. Police station	2 2 2
Camping ground. Forest: reserved; protected	RF RF RF
Spaced names: administrative; locality or tribal	KIKRI NAGA
Hospital. Dispensary. Veterinary hospital	
Airport. Helipad. Tourist site	
Power line: with pylons surveyed; with poles unsurveyed	

REFERENCE

NH 2 National Highway No.2

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.
A relative height, or, represents the approximate height, in metres, between the top and bottom of a steep slope.
Forest boundaries are not clearly demarcated but have been surveyed as pointed out by the local officials on the ground. The common boundaries of the forest have not been shown for want of reliable information.
The triangulated heights and contours in this sheet have not been adjusted to the heights of the spirit-levelled bench-marks and may not be strictly in accordance with them.

COMPILATION INDEX

A. Compiled from 1:25,000 survey 1978-79. 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 km 0 1 2 3 Kilometres
CONTOUR INTERVAL 20 METRES

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