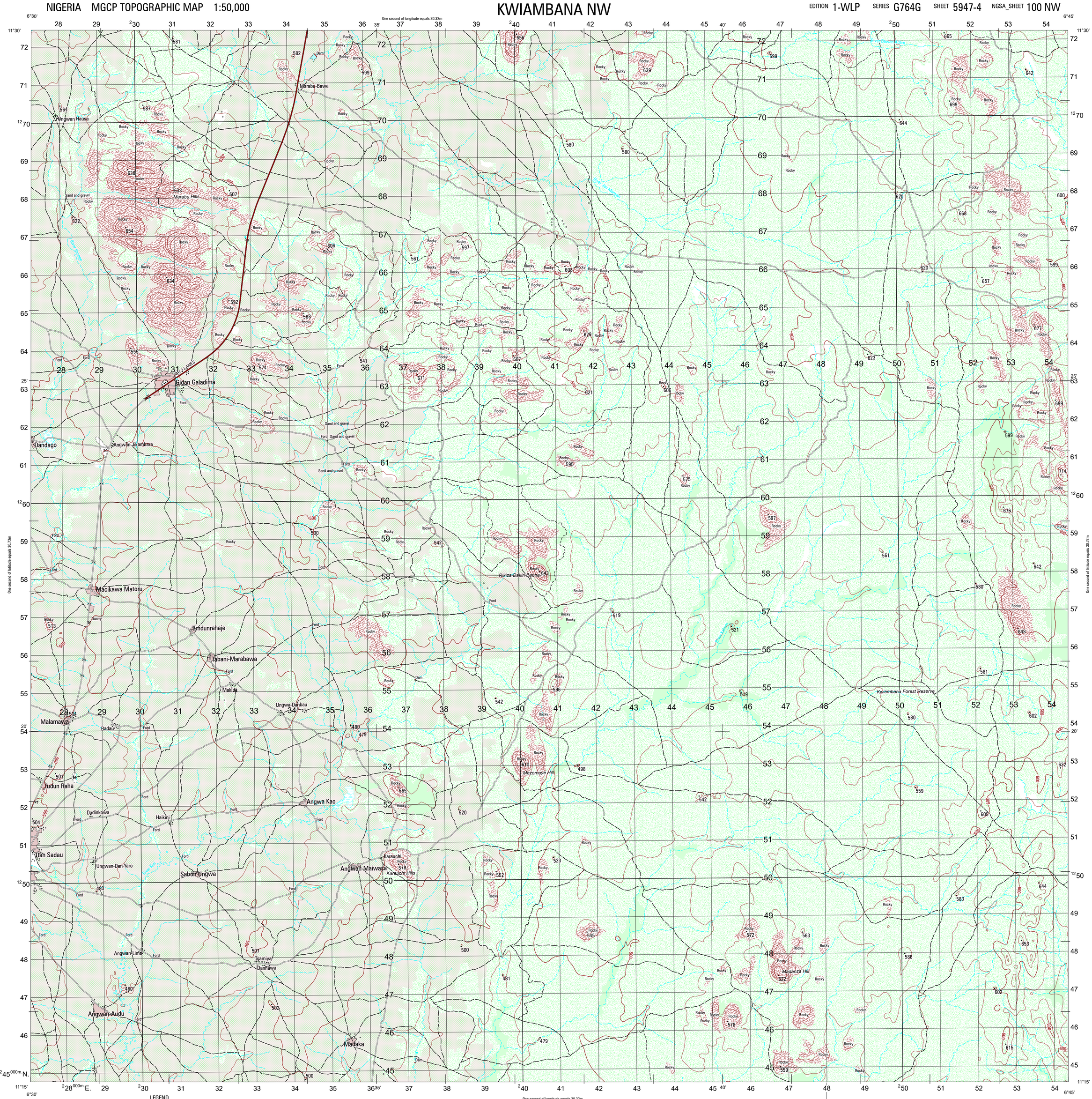
NIGERIA MGCP TOPOGRAPHIC MAP 1:50,000

KWIAMBANA NW

EDITION 1-WLP SERIES G764G SHEET 5947-4 NGSA_SHEET 100 NW



LEGEND

POPULATED PLACES
Built-up areas: Dense
Sparse or moderate
Not intact
Shantytown; Settlement
Buildings

ROADS
All weather, hard surface: 6 LANES
Divided highway: Wide separation
Narrow separation: 6 LANES
Not intact divided: (CONSTRUCTION)
Four or more lanes wide
Two or three lanes wide
One lane wide
All weather, loose surface:
Four or more lanes wide
Two or three lanes wide
One lane wide: 250m
Fair-weather, loose surface
Street: Hard; Loose
Not intact not divided: (DESTROYED)
Cart track; Trail: 1200m; 1Km
Route markers: International; National: E10; 55
National motorway; Local: 8; 20

RAILWAYS
Standard/Broad gauge >= 1.44m (4' 8.5") — Single Track; Multi-track
Narrow < 1.44m (4' 8.5")
Electrified (standard gauge)
Station; Turntable

BOUNDARIES
International
First-order administrative
Military installation

CULTURAL FEATURES
Building: Important — Police; Prison
Christian; Islam; Judaism
Pagoda; Stupa; Temple
School; Diplomatic; Petrol sale
Hospital; Minaret; Not intact
Fortification; Monument; Ruins
Hut; Holding pen; Surface bunker
Greenhouse; Point; Area

Cemetery: Christian; Islam; Judaism
Buddhism; Unknown
Tower: Communication; Non-communication; Water
Light; Cooling; Water intake
Dish aerial; Smokestack; Flare pipe
Windmill; Wind turbine; Crane
Mooring mast; Ski jump; Rig
Checkpoint; Power substation
Storage tank; Non-water well
Mine/Quarry; Intact; Not intact
UNESCO World Heritage Site
Dam: Hard; Loose
Lock; Sluice/Water gate
Tunnel: Road; Railway
Bridge: Pedestrian; Road; Railway
Culvert: Road; Railway
Wall; Fence
Pipeline: Surface — Water; Not water; Underground; Elevated
Sports ground; Vehicle lot: S; P

VERTICAL OBSTRUCTIONS (VO) (>=46m)
Elevation of obstruction top above sea level: 430
Height of obstruction top above ground level: (70)
Offshore Vertical Obstruction with Helipad
Wind turbine VO: Single; Multiple
VO Power/Communication line
Power line (<46m); Pylon VO
Communication line (<46m)

AERONAUTICAL FEATURES
Water aerodrome
Apron
Taxiway
Intact runway; Stopway
Not intact runway
Helipad: Non-hospital; Hospital: H; H

HYDROGRAPHIC FEATURES — Perennial — Intermittent/Dry
River: Less than 25m wide
25m wide or more
Disappearing; Dissipating
Ditch
Natural pool (spring)
Water well
Lake
Reservoir
Underground aqueduct with qanats
Waterhole; Cistern; Salt evaporator
Rice; Land subject to inundation; Bog/Marsh
Swamp: Other; Nipa/Palm; Mangrove

COASTAL HYDROGRAPHIC FEATURES
Exposed: Rock; Wreck; Reef

VEGETATION
Wood: Deciduous; Evergreen; Mixed
Unknown; Scattered trees; Thicket
Vineyard; Cane; Grassland
Orchard; Cropland: Other; Permanent irrigation
Row of trees; Hedgerow; Tree

HYPSOGRAPHIC FEATURES
Spot elevation: Highest; Normal; Water
Survey point: Geodetic; Benchmark
Mountain pass; Cave mouth
Revetment; Rock; Volcano
Steep terrain face; Levee/Dyke
Cut line; Fill
Sand; Gravel/Moraine
Distorted surface; Other

Sheet History
The Production of Topographic Mapping Sheets with corresponding Geo-databases, using International MGCP Standards, for 340 complete sheets derived from processed satellite imagery (ortho-rectified) mosaic and the WorldDEM. The QA/QC on products incorporated the use of Geospatial Analysis Integrity Tools (GAIT) for geo-database validation by Hexagon. The by-products include anaglyph imaging and MTM50 map sheets (1:50,000 scale) in GeoPDF / GeoTIFF format, generated using Cartographic Production software. The MGCP Topographic Maps were specially prepared as base map data for the use of NGSA in collaboration with the Federal Ministry of Mines and Steel through MinDiver (World Bank assisted project), supported by Woolpert.

NOTES

VECTOR FEATURE DATA CAPTURED FROM 1.5M RESOLUTION SPOT IMAGERY (2018-2022).

A LANE ON THIS MAP IS CONSIDERED TO BE AT LEAST 2.5 METERS (8.2 FEET) WIDE.

ROAD CLASSIFICATION SHOULD BE REFERRED TO WITH CAUTION.

ONLY THROUGH ROUTES ARE CLASSIFIED IN BUILT-UP AREAS.

FORDS ON RIVERS HAVE ONLY BEEN CAPTURED WHERE VISIBLE ON 1.5M RESOLUTION IMAGERY.

CAUTION: NOT ALL COMMUNICATION AND POWER DISTRIBUTION LINES ARE SHOWN.

THE NORMAL (PREDOMINANT) RAILWAY GAUGE IS 1.067 METERS (3' 6").

TO CONVERT METERS TO FEET USE THIS FACTOR: 1 METER = 3.28 FEET.

GROUND REFERENCE POINTS WERE COLLECTED FOR THE GREATER PROJECT AREA AND CAN BE REQUESTED FROM THE NGSA.

MAP INFORMATION AS OF 2022

INTERNATIONAL BOUNDARIES AS OF 2022

TO ENSURE THAT THIS MAP WAS PRINTED AT THE CORRECT SCALE, 10,000 METERS (10 UTM GRID SQUARES) SHOULD MEASURE EXACTLY 20 CENTIMETERS (7.87 INCHES).

One second of longitude equals 30.32m

Scale 1:50,000

Meters 1000 500 0 1 2 3 4 5 Kilometers
1 0 1 2 3 Statute Miles
1 ½ 0 1 2 3 Nautical Miles

ELEVATIONS IN METERS

CONTOUR INTERVAL 20 METERS
SUPPLEMENTARY CONTOURS 10 METERS

ELLIPSOID ..... WORLD GEODETIC SYSTEM 1984
GRID ..... 1,000 METER UTM ZONE 32
PROJECTION ..... TRANSVERSE MERCATOR
VERTICAL DATUM ..... MEAN SEA LEVEL
HORIZONTAL DATUM ..... WORLD GEODETIC SYSTEM 1984
FILE PREPARED BY ..... Woolpert, Inc.

SAMPLE 1,000 METER GRID SQUARE
SAMPLE POINT
46 45 12 13
100,000 M. SQUARE IDENTIFICATION
KT
GRID ZONE DESIGNATION
32P

100 METER REFERENCE
1. Read large numbers labeling the VERTICAL grid line left of point and estimate tenths (100 meters) from grid line to point: 12 3
2. Read large numbers labeling the HORIZONTAL grid line below point and estimate tenths (100 meters) from grid line to point: 45 6
Example: 123456
WHEN REPORTING ACROSS A 100,000 METER LINE, PREFIX THE 100,000 METER SQUARE IDENTIFICATION IN WHICH THE POINT LIES.
Example: KT123456
WHEN REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA, PREFIX THE GRID ZONE DESIGNATION.
Example: 32PKT123456

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SLOPE GUIDE

PERCENTAGE	DEGREE
15%	8.5°
14%	8.0°
13%	7.4°
12%	6.9°
11%	6.3°
10%	5.7°
9%	5.2°
8%	4.6°
7%	4.0°
6%	3.4°
5%	2.9°

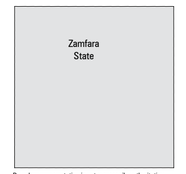
A B C
AB-HORIZONTAL DISTANCE BETWEEN CONTOURS
AC-HORIZONTAL DISTANCE BETWEEN INDEX CONTOURS

GN
MAGNETIC NORTH
GRID NORTH
2020
G-M ANGLE
0° (0 MILS) WEST
GRID CONVERGENCE
0°28' (8 ½ MILS) EAST
FOR CENTER OF SHEET
TRUE NORTH

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH SUBTRACT G-M ANGLE

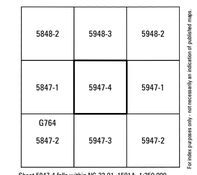
TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH ADD G-M ANGLE

BOUNDARIES: NIGERIA



Boundary representation is not necessarily authoritative.

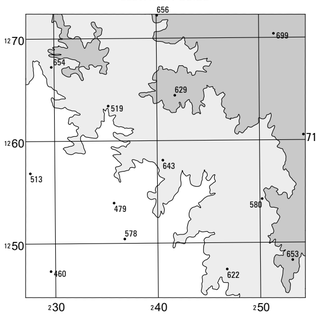
ADJOINING SHEETS



For index purposes only, not necessarily an indication of published maps.

Sheet 5947-4 falls within NC-32-01, 1501A, 1:250,000.

ELEVATION GUIDE



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WGS 84

CAUTION: VERIFY RED-LIGHT READABILITY

MINISTRY OF Mines and Steel Development

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WOOLPERT

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Nigerian Geological Survey Agency

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