

SERIES 1501 AIR SHEET NN 38-8 EDITION 1
SERIES 1501 COMPANION SHEET IS EDITION 2

- POPULATED PLACES**
- Over 100,000 **MOSKVA**
 - 50,000-100,000 **KLIMOVSK**
 - 10,000-50,000 **Obukhovo**
 - 2,000-10,000 **Kubinka**
 - Less than 2,000 **Dubny**
- ROADS**
- Dual highway **4 LANES DUAL**
 - All weather, hard surface:
 - More than two lanes wide **4 LANES**
 - Two lanes wide **2 LANES**
 - One lane wide **1 LANE**
 - All weather, loose or light surface:
 - More than two lanes wide **2 LANES**
 - Two lanes wide **1 LANE**
 - One lane wide **0.5 LANE**
 - Fair or dry weather, loose surface **0.5 LANE**
 - Cart track **0.2 LANE**
 - Footpath, trail **0.1 LANE**
 - Route marker **0.05 LANE**
- RAILROADS**
- Normal gauge 1.44m (4'8 1/2") **RAILROAD**
 - Station position **RAILROAD**
 - Narrow gauge **RAILROAD**
- BOUNDARIES**
- International **BOUNDARY**
 - First-order administrative division **BOUNDARY**
- VEGETATION**
- Woods **VEGETATION**
 - Orchard **VEGETATION**
 - Shelter Belts **VEGETATION**
- OTHER FEATURES**
- Area name **OTHER FEATURES**
 - School, Church, Mosque **OTHER FEATURES**
 - Landmark feature or object **OTHER FEATURES**
 - Tank, Well, Fence **OTHER FEATURES**
 - Hot, coal, Pass, Mine or quarry **OTHER FEATURES**
 - Horizontal control point **OTHER FEATURES**
 - Dam, Dam carrying road **OTHER FEATURES**
- HYDROGRAPHY**
- Underground aqueduct with shafts **HYDROGRAPHY**
 - Small reservoir, Dry lake **HYDROGRAPHY**
 - Sekha (Kavir), Intermittent lake **HYDROGRAPHY**
 - Intermittent streams: Single, Double line **HYDROGRAPHY**
 - Well: Perennial, Intermittent, Disappearing stream **HYDROGRAPHY**
 - Spring, fountain, cistern, Salt evaporator **HYDROGRAPHY**
 - Wadi: Land subject to inundation **HYDROGRAPHY**
 - Rice paddy, Marsh or swamp **HYDROGRAPHY**
- TERRAIN ELEVATIONS**
- Spot elevation: Normal, Critical **TERRAIN ELEVATIONS**
 - HIGHEST KNOWN elevation is **1204** feet at the following coordinates:
 - Geographic: **53°21'N, 45°54'E**
 - Grid: **NE5811**
- AERODROMES (Military or Civil)**
- Runway pattern known **AERODROMES**
 - EDNA-Name **AERODROMES**
 - 50-Length of longest runway to nearest hundreds of feet **AERODROMES**
 - Soft or unimproved surface **AERODROMES**
 - Unknown surface **AERODROMES**
 - 725-Elevation **AERODROMES**
 - Field limits and runway pattern unknown **AERODROMES**
- HELIPORT**
- HELIPORT **HELIPORT**
- RADIO FACILITIES**
- VOR VORTAC **RADIO FACILITIES**
 - TACAN VOR/DME **RADIO FACILITIES**
 - RADIO RANGE LF/MF **RADIO FACILITIES**
 - MULTIPLE RADIO FACILITIES **RADIO FACILITIES**
- CONTROLLED AIRSPACE**
- ADIZ **CONTROLLED AIRSPACE**
- VISUAL AIDS AND OBSTRUCTIONS**
- Obstructions **VISUAL AIDS AND OBSTRUCTIONS**
 - 1108-Elevation of obstruction top, above sea level (259)-Elevation of obstruction top, above ground level **VISUAL AIDS AND OBSTRUCTIONS**
 - Group obstruction **VISUAL AIDS AND OBSTRUCTIONS**
 - Radio facility obstruction **VISUAL AIDS AND OBSTRUCTIONS**
 - Power transmission line **VISUAL AIDS AND OBSTRUCTIONS**
 - Visual ground sign **VISUAL AIDS AND OBSTRUCTIONS**
 - Aero light, Marine light **VISUAL AIDS AND OBSTRUCTIONS**

CAUTION
Vertical obstructions, including powerlines, have been extracted from the most reliable sources available. However, there is no assurance that they are shown, or that their locations or heights are exact.

CAUTION
AIR INFORMATION CURRENT THROUGH 20 JUNE 1997
Consult NOTAMS and Flight Information Publications for the latest air information; the NIMA Aeronautical Chart Updating Manual or MOD (U.K.) Aeronautical Chart Amendment document, for other chart revision information.

CAUTION
THIS CHART CONTAINS MAXIMUM ELEVATION FIGURES (MEF)
The Maximum Elevation Figures shown in quadrangles bounded by ticked lines of latitude and longitude are represented in THOUSANDS and HUNDREDS of feet above mean sea level. The MEF is based on information available concerning the highest known feature in each quadrangle, including terrain and obstructions (trees, towers, antennas, etc.).
EXAMPLE: 12,500 feet

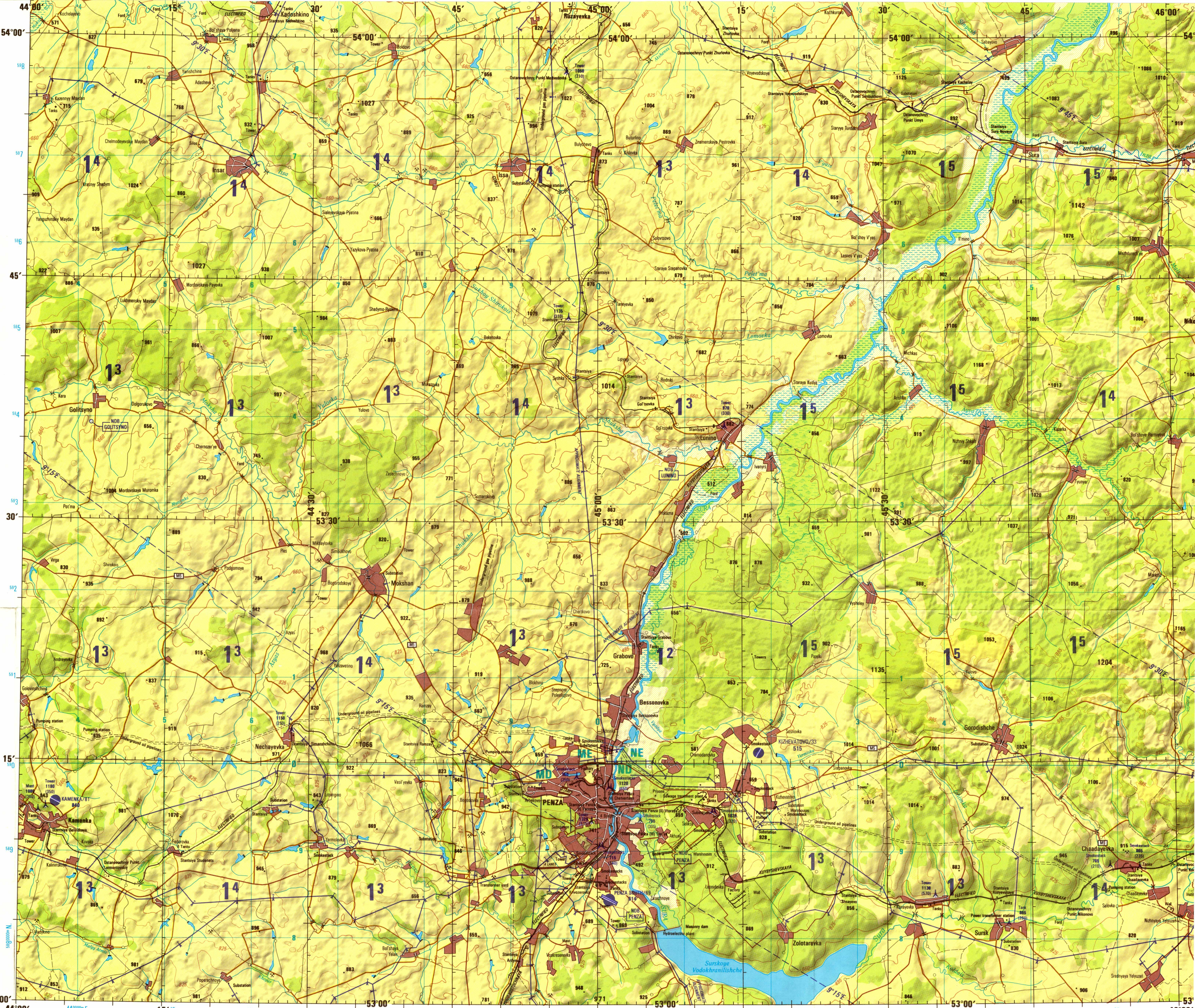
LOCATION DIAGRAM
(IAC INDEX SHOWN IN BLUE)
(WAC INDEX SHOWN IN RED/BROWN)

NN 37-3	NN 38-1	NN 38-2	NN 38-3	NN 38-4
NN 37-6	NN 38-4	NN 38-5	NN 38-6	NN 38-7
NN 37-9	NN 38-7	NN 38-8	NN 38-9	NN 38-10
NN 37-12	NN 38-10	NN 38-11	NN 38-12	NN 38-13
NN 37-3	234 235	NN 38-1	NN 38-3	KAZAKHSTAN

CONVERSION OF ELEVATIONS

FEET	METERS	FEET	METERS
1000	305	10000	3048
800	244	8000	2438
600	183	6000	1829
400	122	4000	1219
200	61	2000	610
100	31	1000	305

SCALE 1:250,000
PENZA, RUSSIA
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JOINT OPERATIONS GRAPHIC (AIR)

SCALE 1:250,000
0 5 10 15 20 25 30 Statute Miles
0 5 10 15 20 25 30 Nautical Miles

CONTOUR INTERVAL APPROXIMATELY 165 FEET

BLUE NUMBERED LINES INDICATE THE 10,000 METER UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16, WORLD GEODETIC SYSTEM 1984 ELLIPSOID.

USERS SHOULD REFER TO THE NIMA CUSTOMER HELP DESK: 1-800-455-0888 FOR CORRECTIONS, ADDITIONS, AND COMMENTS TO THE NIMA CUSTOMER HELP DESK: 1-800-455-0888. FOR CORRECTIONS, ADDITIONS, AND COMMENTS TO THE NIMA CUSTOMER HELP DESK: 1-800-455-0888. FOR CORRECTIONS, ADDITIONS, AND COMMENTS TO THE NIMA CUSTOMER HELP DESK: 1-800-455-0888.

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MAP INFORMATION AS OF 1996

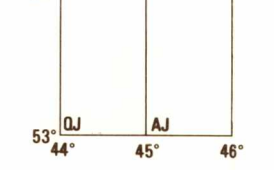
COORDINATE CONVERSION FROM WGS 84 TO WGS 72
Grid: Subtract 10cm, Subtract 4cm N
Geographic: Subtract 0.6" Long, Subtract 0.1" Lat.

SAMPLE 1000 METER GRID SQUARE
Sample point: 11 12
1000 METER SQUARE IDENTIFICATION
Grid Zone Designation: 38U

SAMPLE 1000 METER REFERENCE
1. First letter identifying the 100,000 meter square in which the point lies: **AB**
2. Second letter identifying the 10,000 meter square in which the point lies: **11**
3. Third letter identifying the 1,000 meter square in which the point lies: **12**
4. Fourth letter identifying the 100 meter square in which the point lies: **1112**
5. Final letter identifying the 10 meter square in which the point lies: **111212**
6. Final number identifying the 100 meter square in which the point lies: **111212**
7. Final number identifying the 100 meter square in which the point lies: **111212**

MINIMUM REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA IN WHICH THE POINT LIES, PREFER THE GRID ZONE DESIGNATION.
Example: 38UAB1234

GEOREF BASIC 15° QUADRANGLE



RELIABILITY OF THIS GRAPHIC
(as determined by standard practices)

GRAPHIC FEATURE	DATE OF INFORMATION
Horizontal	within 425 ft
Contour	within 85 ft

ELEVATION TINTS

FEET	TINT
985	[Tint]
495	[Tint]
165	[Tint]

GLOSSARY

Ostanovoy Puntik: railroad stop
Stantsiya: station
Vodokhranitshe: reservoir

NOTES

Powerlines are shown except within populated place limits. Other obstructions are shown if they are 200 feet or more above ground level. See caution note.
On this graphic a lane is generally considered as being 8 feet (2.5 meters) in width.
THE REPRESENTATION OF INTERNATIONAL BOUNDARIES IS NOT NECESSARILY AUTHORITATIVE.
NAMES AND BOUNDARIES OF ADMINISTRATIVE DIVISIONS IN RUSSIA ARE NOT AVAILABLE.

PLOTTING ACCURACY 90% ASSURANCE
Horizontal: within 425 ft
Contour: within 85 ft
GRAPHIC FEATURE DATE OF INFORMATION
ALL FEATURES: See diagram
Horizontal Datum: World Geodetic System
Vertical Datum: Mean Sea Level
Transverse Mercator Projection
NSN 7641014472933
NIMA REF. NO. 1501ANN3808