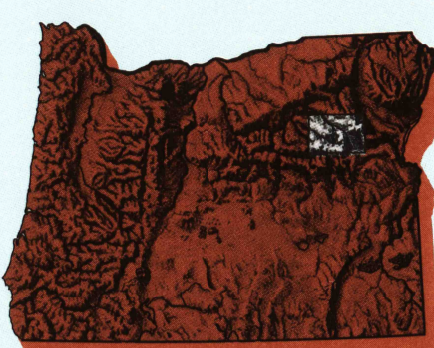


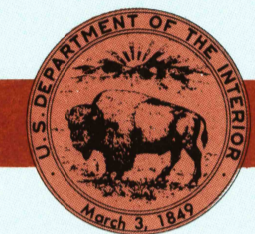
Bates OREGON

1:100 000-scale metric topographic map



30 X 60 MINUTE QUADRANGLE SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names



GEOLOGICAL SURVEY

1987

Produced by the United States Geological Survey
 Compiled from USGS 1:24 000 and 1:62 500-scale topographic maps dated 1949-1972. Planimetry revised from aerial photographs taken 1981 and other source data. Revised information not field checked. Map edited 1987.
 Projection and 10 000-meter grid, zone 11 Universal Transverse Mercator
 25 000-foot grid ticks based on Oregon coordinate system, north zone. 1927 North American Datum
 To place on the predicted North American Datum 1983 move the projection lines 18 meters north and 83 meters east. There may be private inholdings within the boundaries of the National or State reservations shown on this map.

CONTOUR INTERVAL 50 METERS
 NATIONAL GEODETIC VERTICAL DATUM OF 1929
 ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U.S. GEOLOGICAL SURVEY,
 P.O. BOX 25286, DENVER, COLORADO, 80225

CONVERSION TABLE		DECLINATION DIAGRAM		ADJOINING MAPS		
Meters	Feet	GN	MN	1	2	3
1	3.2808		19°	1	1	1
2	6.5617			2	2	2
3	9.8425			3	3	3
4	13.1234			4	4	4
5	16.4042			5	5	5
6	19.6850			6	6	6
7	22.9659			7	7	7
8	26.2467			8	8	8
9	29.5276			9	9	9
10	32.8084			10	10	10

To convert meters to feet multiply by 3.2808
 To convert feet to meters multiply by 0.3048

UTM grid convergence (GN) and 1987 magnetic declination (MN) at center of map
 Diagram is approximate

1	Hegner
2	La Grande
3	Enterprise
4	Mount Hood
5	Bahville
6	Dayville
7	John Day
8	Brown



Topographic Map Symbols

- Primary highway, hard surface
- Secondary highway, hard surface
- Light duty road, principal street, hard or improved surface
- Other road or street, trail
- Route marker: Interstate, U. S. State
- Railroad: standard gage; narrow gage
- Bridge: overpass; underpass
- Tunnel: road; railroad
- Built up area, locality, elevation
- Airport; landing field; landing strip
- National boundary
- State boundary
- County boundary
- National or State reservation boundary
- Land grant boundary
- U. S. public lands survey: range, township, section
- Range, township; section line; protruded
- Power transmission line; pipeline
- Dam; dam with lock
- Cemetery; building
- Windmill; water well; spring
- Mine shaft; adit or open mine; lava; gravel pit
- Campground; picnic area; U. S. location monument
- Ruin; cliff dwelling
- Disturbed surface: strip mine, lava; sand
- Contours: index; intermediate; supplementary
- Bathymetric contours: index; intermediate
- Stream, lake; perennial; intermittent
- Rapids; large and small falls; levee and spill
- Area to be submerged; marsh; swamp
- Land subject to controlled inundation; woodland
- Scrub; mangrove
- Orchard; vineyard