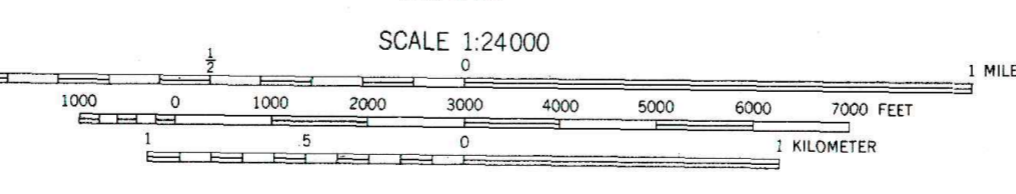


Maped by the Defense Mapping Agency and the National Ocean Service
Published for civil use by the Geological Survey
Control by NOS/NOAA and USCE
Topography by multiplex methods from aerial photographs taken 1943. Field checked 1949
Bathymetry compiled by the National Ocean Service from tide-coordinated hydrographic surveys. This information is not intended for navigational purposes
Mean low water (dotted) line and mean high water (heavy solid) line compiled by NOS from tide-coordinated aerial photographs. Apparent shoreline (outer edge of vegetation) shown by light solid line
Polyconic projection. 1927 North American Datum
10,000-foot grid based on Washington coordinate system, south zone and Oregon coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue
To place on the predicted North American Datum 1983, move the projection lines 24 meters north and 97 meters east as shown by dashed corner ticks
Dashed land lines indicate approximate locations
Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1981 and other sources
This information not field checked. Map edited 1984

NATIONAL OCEAN SERVICE
HYDROGRAPHIC SURVEY INDEX

SURVEY NUMBER	SURVEY DATE	SURVEY SCALE	SURVEY LINE SPACING (NAUT. MILES)
H-8420	1958	1:10,000	.01-12
H-8422	1958	1:10,000	.01-17

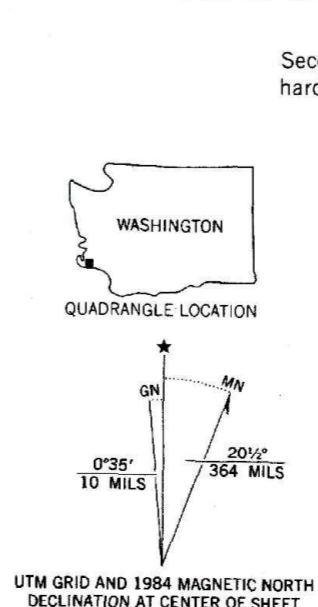
NOS CHART 18521 MARCH 27, 1982 1:40,000



CONTOUR INTERVAL 50 FEET
DASHED LINES REPRESENT HALF-INTERVAL CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
BATHYMETRIC CONTOUR INTERVAL 2 METERS WITH SUPPLEMENTARY 1 METER CONTOURS - DATUM IS MEAN LOWER LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
THE MEAN RANGE OF TIDE IS APPROXIMATELY 2.4 METERS

BASE MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
BATHYMETRIC SURVEY DATA COMPLIES WITH INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO) SPECIAL PUBLICATION 44 ACCURACY STANDARDS AND/OR STANDARDS USED AT THE DATE OF THE SURVEY

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225,
OR RESTON, VIRGINIA 22082
AND NATIONAL OCEAN SERVICE, ROCKVILLE, MARYLAND 20852
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



KNAPPTON, WASH. - OREG.
46123-C7-1B-024

1949
PHOTOREVISED 1984
BATHYMETRY ADDED 1984
DMA 1276 IV SE - SERIES V891