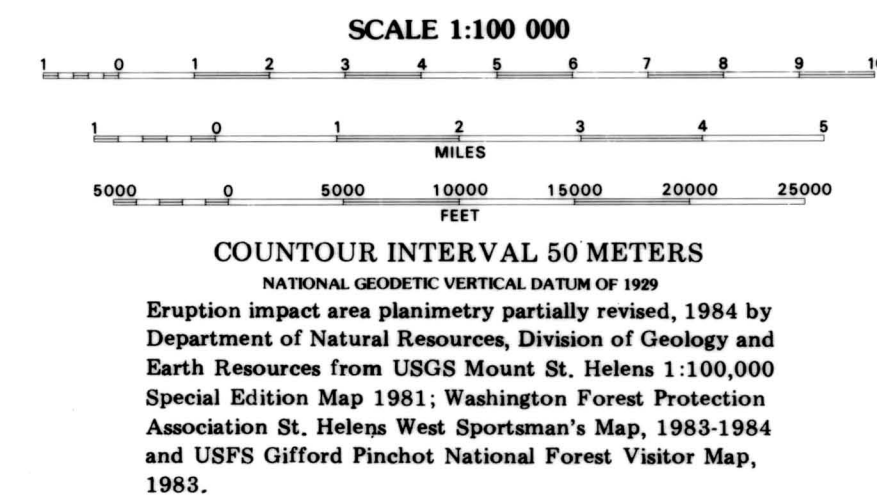
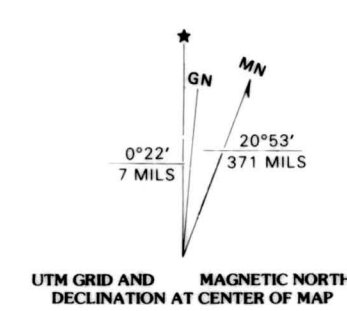


- EXPLANATION**
- Quaternary Sedimentary Deposits**
- Nonglacial Deposits**
- af artificial fill
Qal alluvium
Qls landslide deposits
- Periglacial(?) Deposits**
- Qtr terraced deposit
- Glacial Deposits**
- Qou outwash deposits, younger than Evans Creek age
Qoe outwash deposits of Evans Creek age
Qdet till deposits of Evans Creek age
Qdem moraine deposits of Evans Creek age
Qoh outwash deposits, post-Hayden Creek outwash deposits
Qoh outwash deposits of Hayden Creek age
Qht till deposits of Hayden Creek age
Qow outwash deposits of Wingate Hill age
Qlh Logan Hill Formation
- Quaternary Volcanic Deposits**
- Deposits of Mount St., Helens**
- Deposits of A.D. 1980 and Post-1980 Eruptions**
- Qshu3 lahar deposits
Qshda3 debris avalanche deposits
Qshp3 pyroclastic flow and lateral blast deposits
Qshc3 dacite to andesite lava dome
- Mixed Pyroclastic and Lava Flow Deposits of the Castle Creek, Kalama, and Goat Rocks Eruptive Periods (2500 - 100 yr B.P.)**
- Qshu2 lahar and pyroclastic flow deposits, undivided
Qshd2 andesite lava flows
Qshb2 basalt lava flows, including Cave Basalt
Qshd2 lava and plug domes
- Dominantly Pyroclastic Deposits of the Ape Canyon, Cougar, Swift Creek, Smith Creek, and Pine Creek Eruptive Periods (older than 2500 yr B.P.)**
- Qshu lahar and pyroclastic flow deposits, undivided
Qshal andesite lava flows
Qshd lava and plug domes
- Mount St. Helens Deposits, undivided**
- Qshu Lahar and Pyroclastic Flow Deposits, undivided
Qshc Deposits exposed in crater walls by 1980 eruption
- Lava flows exclusive of Mount St. Helens**
- Qvnm basalt flows of Marble Mountain
Qvna andesite flows of Marble Mountain
Qvtp andesite flows of Timbered Peak
Qvb basalt flows, unnamed
- Tertiary Sedimentary and Volcanic Rocks**
- Pleistocene-Pliocene Sedimentary Deposits**
- QTd Troutdale Formation
- Middle to Upper Miocene Sedimentary and Volcanic Rocks**
- Twk Wilkes Formation
TbR Grange Ronde Basalt of the Columbia River Basalt Group
- Lower to Middle Miocene Sedimentary Rocks**
- Tso Scappoose Formation
- Lower Miocene to Upper Oligocene Volcanic Rocks**
- Tam andesite of Smith Creek Butte
Tv3 volcanoclastic rocks
Tv3 tuff
Tv3 basalt flows
Tv3 basaltic-andesite and andesite flows
Tv3 dacite flows and plugs
Tv2 volcanoclastic rocks
Tv2 tuff
Tv2 basalt flows
Tv2 andesite flows
- Lower Oligocene Volcanic Rocks**
- Tvd1 dacite
Tval basaltic-andesite and andesite flows
Tvl volcanoclastic rocks
- Eocene-Oligocene Sedimentary and Volcanic Rocks**
- Tlc Lincoln Creek Formation
Tto Toutle Formation
Tgo2 basaltic-andesite lava flow member of the Coble Volcanics
Tgo1 volcanoclastic sedimentary rock member of the Coble Volcanics
- Eocene Sedimentary and Volcanic Rocks**
- Tcz Cowitz Formation
Tgv Greys River volcanics
- Tertiary Volcanic rocks, undivided**
- Tvt tuff
Tvc volcanoclastic rocks
Tvd dacite flows and plugs
Tva andesite flows
- Tertiary Igneous Intrusive Rocks**
- Pleistocene-Pliocene Intrusive Rocks**
- QTld hornblende-biotite dacite porphyry of Goat Mountain
- Lower Miocene Intrusive Rocks of the Spirit Lake Pluton**
- Tia argillite alteration
Tib pebble breccia
Tiqm quartz monzonite late phase
Tigd quartz diorite main phase
Tigd granodiorite early phase
- Tertiary Intrusive Rocks, undivided**
- Tia andesite dike, sill or plug
Tidi diorite dike, sill, or plug

Topography from USGS Mount St. Helens 1:100,000 Special Edition Map, 1981.
Compiled in 1975 from USGS 1:24,000 and 1:62,500-scale topographic maps dated 1953-1970. See index for dates of individual maps.
Planimetry revised from aerial photographs taken 1973.
Revised information not field checked.
Projection and 10 000-meter grid, zone 10:
Universal Transverse Mercator
50 000-foot grid scale based on Washington coordinate system, north zone
1927 North American datum
Boundaries as shown represent the proclamation or designated areas.
There may be private inholdings within these boundaries.

INDEX TO 1:24 000 AND 1:62 500 SCALE MAPS

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| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | |



- Village or locality**
Landmark building
Perennial stream, lake
Intermittent stream, lake
Post eruption lake
- ROAD CLASSIFICATION**
- Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Street or other road
Trail
- Interstate route U.S. route State route
- MOUNT SAINT HELENS, WASH., OREG.**
SE 1/4 HQQIAM (N. 10.9) 1:250 000 SCALE MAP
N4600-W12200-30 x 60

THIS REPORT CONSISTS OF 1 MAP AND A 59 PAGE TEXT.

GEOLOGIC MAP OF THE MOUNT ST. HELENS QUADRANGLE, WASHINGTON AND OREGON

Compiled by
WILLIAM M. PHILLIPS

1987