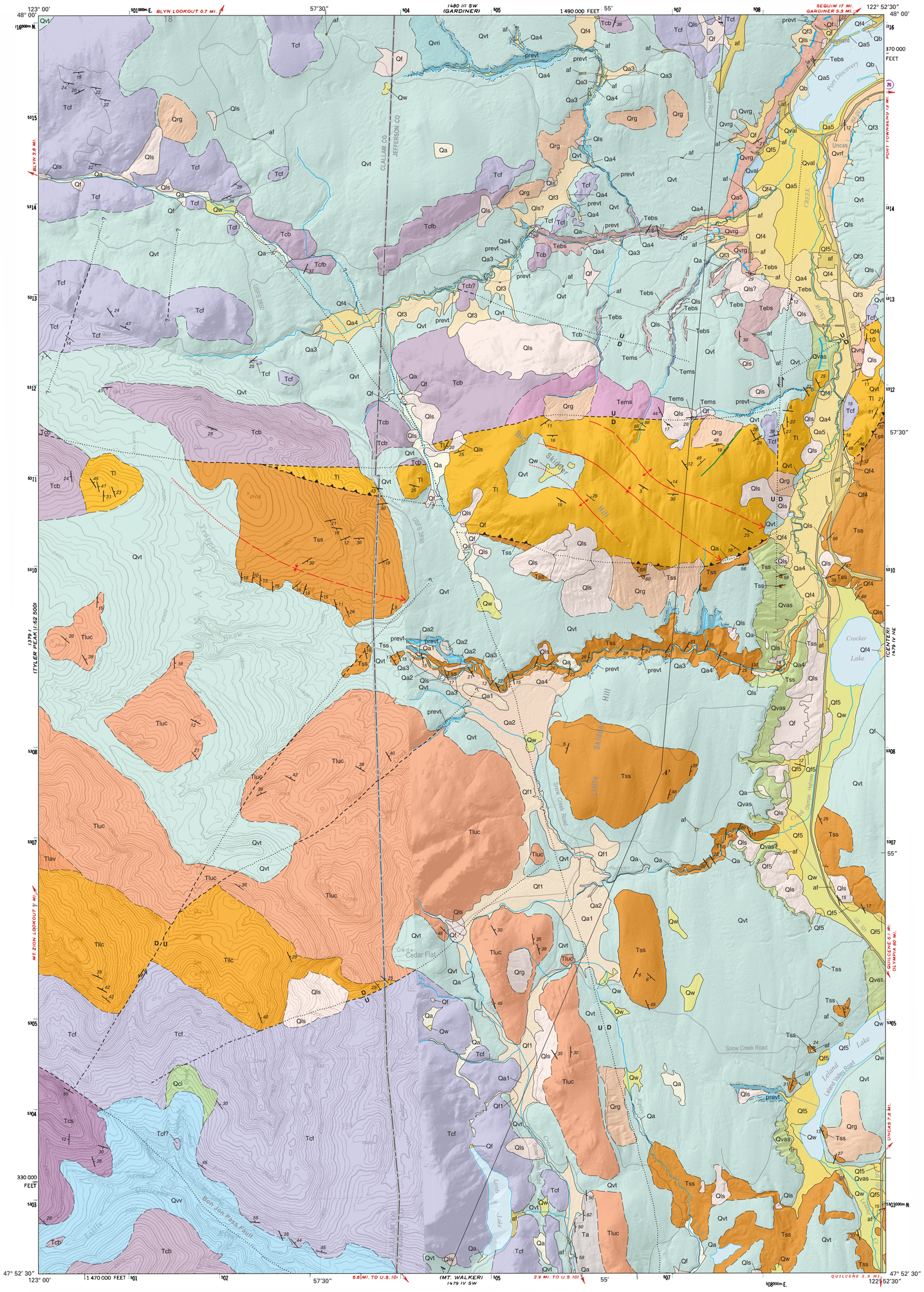
U.S. Department of the Interior
U.S. Geological Survey

Scientific Investigations Map 3160
Pamphlet accompanies map



Contour base and collar from U.S. Geological Survey, 1953 (rev. 1973) Washington State Plane projection, north zone, NAD27, reprojected into NAD83 coordinates. Hillshade image calculated from 6-ft lidar DEM, Puget Sound Lidar Consortium.

Lidar data acquired 2001–2002.

APPROXIMATE MEAN DECLINATION, 2011

SCALE 1:24 000

1 .5 0 1 MILE

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1927 AND 1929

MAP LOCATION

Geology mapped by Howard Gower (1979), Jim Yount (1979), Peter J. Haeussler and Ray Wells (1998).

Revision by Ralph A. Haugerud (2001–2009) and Rowland W. Tabor (2008–2009)

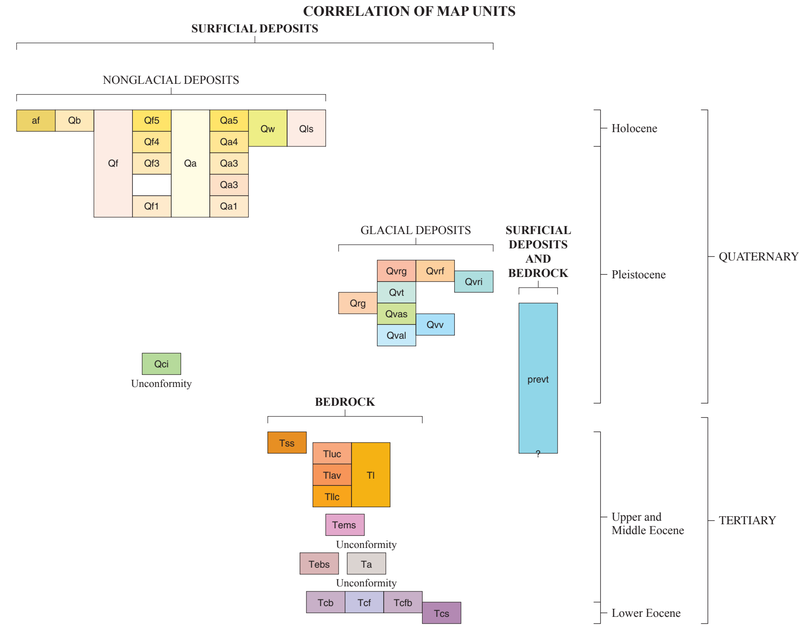
GIS database and digital cartography by Rowland W. Tabor and Ralph A. Haugerud

Base map culture cartography interpreted from lidar by Rowland W. Tabor (2008–2009)

Edited by J.L. Zigler; digital cartographic production by Darlene A. Ryan

Manuscript approved for publication May 27, 2011

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

[See Description of Map Units (in pamphlet) for complete unit descriptions]

SURFICIAL DEPOSITS

NONGLACIAL DEPOSITS

- af — **Artificial fill (Holocene)**
- Qb — **Beach deposits (Holocene)**
- Qf — **Alluvial fan deposits (Holocene and Pleistocene)**
- Qf5 — **Unit 5 (Holocene)**
- Qf4 — **Unit 4 (Holocene and Pleistocene)**
- Qf3 — **Unit 3 (Pleistocene)**
- Qf1 — **Unit 1 (Pleistocene)**
- Qa — **Alluvium (Holocene and Pleistocene)**
- Qa5 — **Unit 5 (Holocene)**
- Qa4 — **Unit 4 (Holocene and Pleistocene)**
- Qa3 — **Unit 3 (Pleistocene)**
- Qa2 — **Unit 2 (Pleistocene)**
- Qa1 — **Unit 1 (Pleistocene)**
- Qw — **Wetland deposits (Holocene and upper Pleistocene)**
- Qls — **Landslide deposits (Holocene and upper Pleistocene)**
- Qci — **Indurated colluvium (Pleistocene?)**

GLACIAL DEPOSITS

Deposits of the Vashon Stade of Fraser Glaciation of Armstrong and others (1965) (Pleistocene)

- Qvrg — **Gravel-dominated recessional outwash deposits (upper Pleistocene)**
- Qvrf — **Fine-grained recessional glaciomarine or glaciolacustrine deposits (upper Pleistocene)**
- Qvri — **Ice contact deposits (upper Pleistocene)**
- Qvt — **Till (upper Pleistocene)**
- Qrg — **Rilled ground (upper Pleistocene)**
- Qvas — **Sand-dominated advance outwash deposits (upper Pleistocene)**
- Qvv — **Valley-fill glacial and glaciofluvial deposits (upper Pleistocene)**
- Qval — **Advance outwash lake deposits (upper Pleistocene)**

SURFICIAL DEPOSITS AND BEDROCK

- prevt — **Pre-Vashon-stade till deposits (upper Pleistocene and (or) older)**

BEDROCK

- Tss — **Sandstone of Snow Creek (upper Eocene)**
- Tl — **Lyre Formation (upper Eocene)**
- Tluc — **Upper conglomerate member**
- Tlav — **Andesite tuff and breccia**
- Tllc — **Lower conglomerate member**
- Tems — **Micaceous sediments (Eocene?)**
- Tebs — **Basaltic sediments (middle Eocene)**
- Ta — **Aldwell Formation (middle and upper Eocene)**

Crescent Formation (lower, middle, and upper Eocene)

- Tcb — **Basalt breccia**
- Tcf — **Basalt flows**
- Tcfb — **Basalt flows and breccia**
- Tcs — **Basaltic submarine deposits**

Contact—Dashed where approximately located; dotted where concealed

Contact inferred—Separates unit prevt from overlying units (see pamphlet)

Fault—Dashed where approximately located; dot-dashed where inferred; dotted where concealed; queried where uncertain. **U**, upthrown block; **D**, Down-thrown block. Arrows show strike-slip displacement

Reverse fault—Dashed where approximately located; dotted where concealed; teeth on overthrust block

LIDAR lineament—Cutting Pleistocene erosional features; see discussion (pamphlet)

Plunging syncline—Dashed where approximately located; dotted where concealed

Plunging anticline—Dashed where approximately located; dotted where concealed

Glacial marine shoreline

Strike and dip of bedding

25 **Inclined**

Horizontal

Symbols Added to LIDAR base

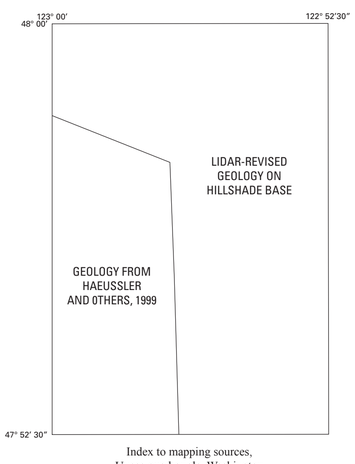
Major highways

Secondary highways

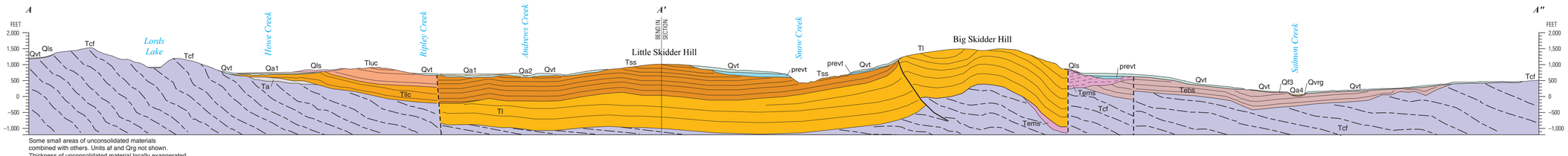
Significant unsurfaced and surfaced roads

Mostly unsurfaced improved roads

Stream



Index to mapping sources, Uncas quadrangle, Washington



Some small areas of unconsolidated materials combined with others. Units af and Qrg not shown.
Thickness of unconsolidated material locally exaggerated.

Lidar-revised Geologic Map of the Uncas 7.5′ Quadrangle, Clallam and Jefferson Counties, Washington

By
Rowland W. Tabor, Peter J. Haeussler, Ralph A. Haugerud, and Ray Wells
2011

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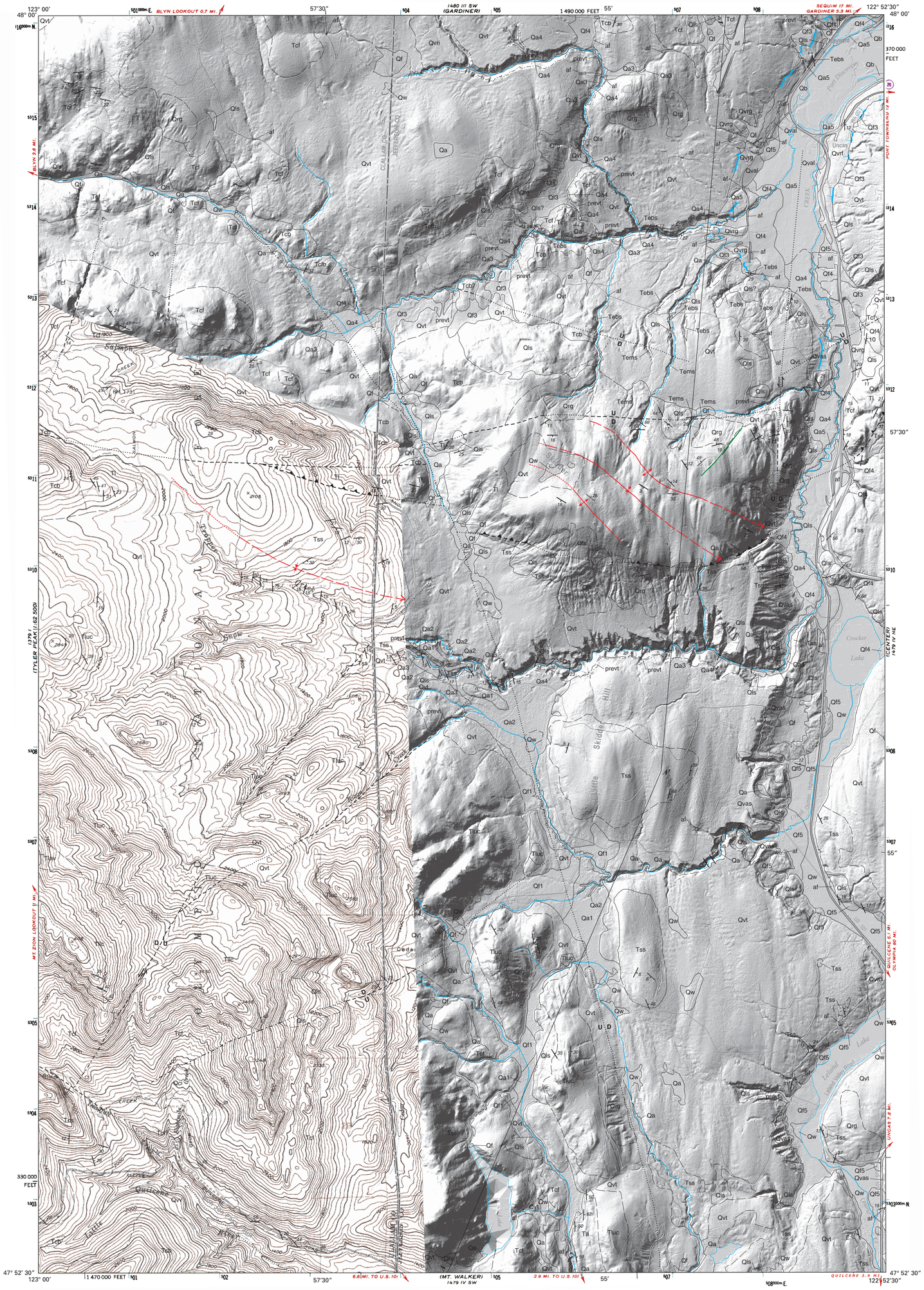
Digital files available at http://pubs.usgs.gov/sim/3160/

U.S. Department of the Interior
U.S. Geological Survey

Scientific Investigations Map 3160
Pamphlet accompanies map



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TRUE NORTH
MAGNETIC NORTH
17°
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SCALE 1: 24 000

1 .5 0 1 MILE

1 .5 0 1 KILOMETER

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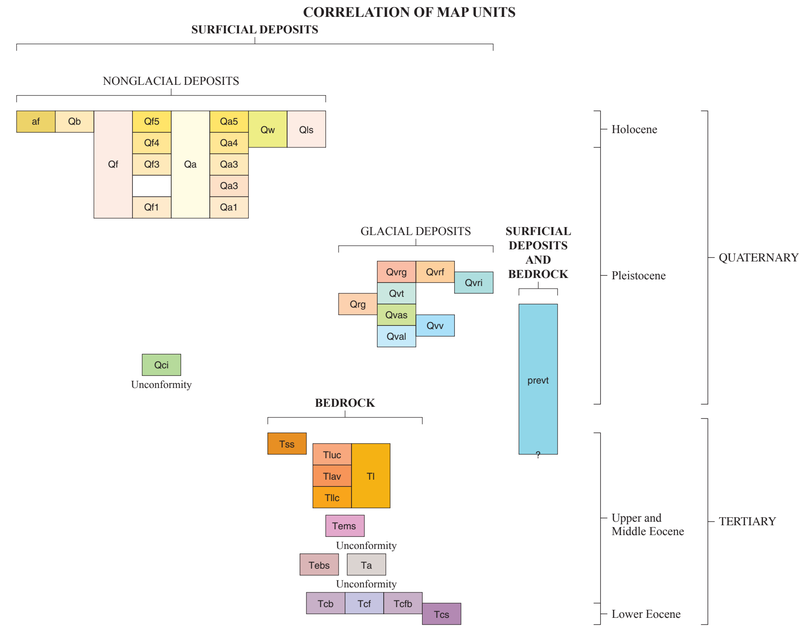

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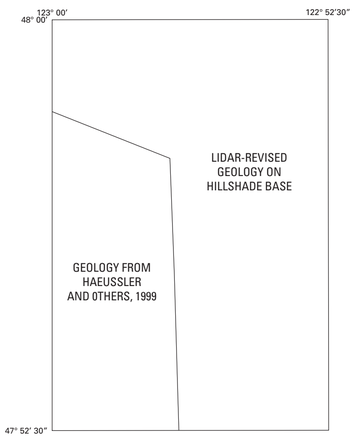

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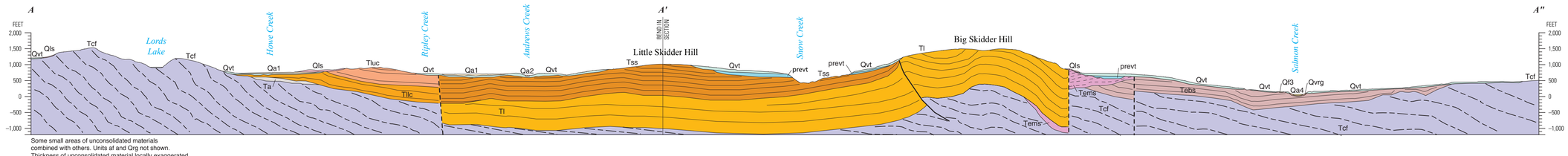

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