

U.S. GEOLOGICAL SURVEY  
CHARLES D. WALCOTT, DIRECTOR

# AREAL GEOLOGY

WASHINGTON  
MOUNT STUART QUADRANGLE

## LEGEND

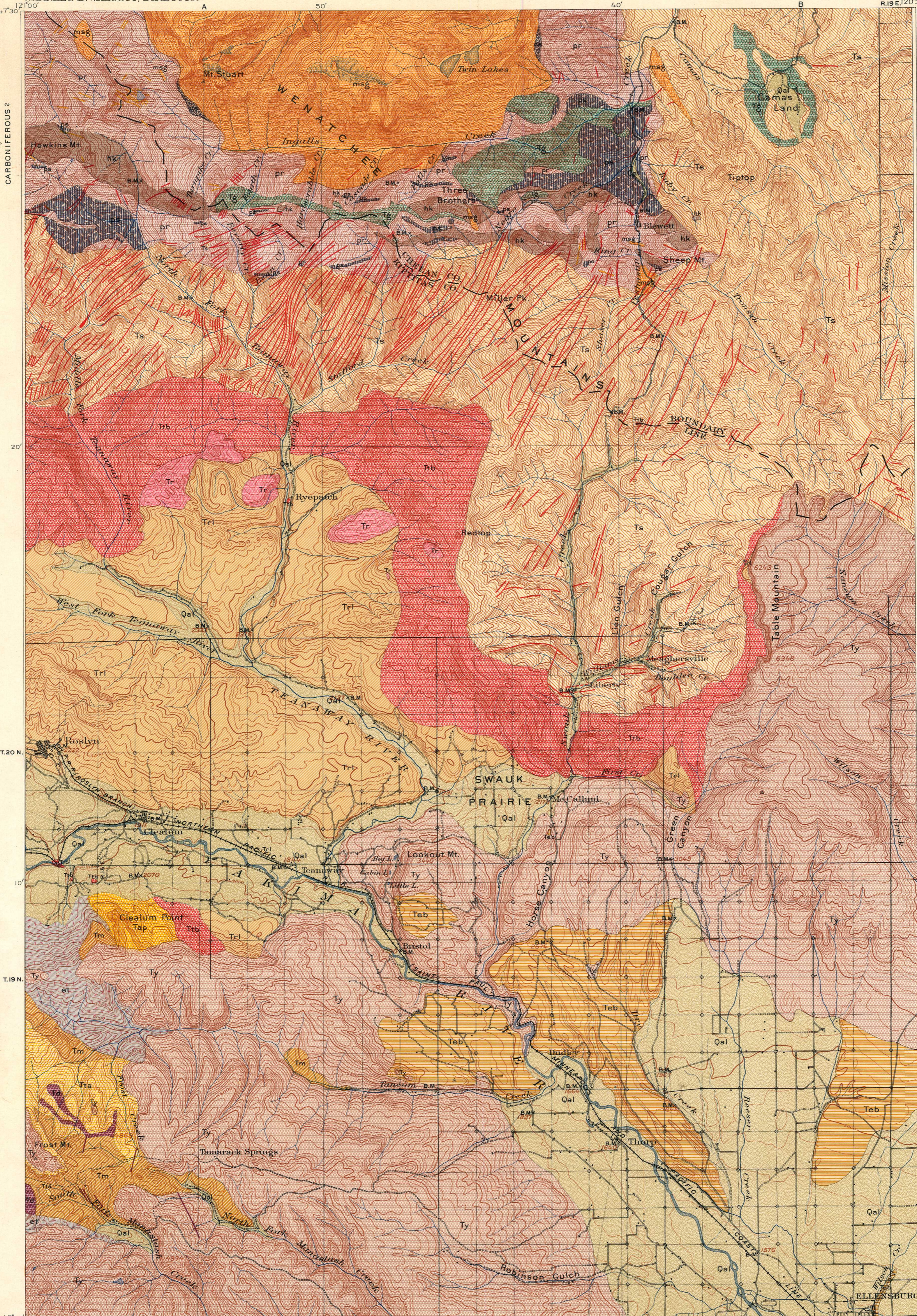
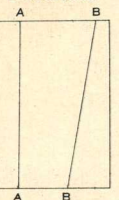
### LEGEND

IGNEOUS ROCKS  
(continued)

Metamorphic  
Hawkins formation  
(diabase, lava, tuff, and breccia)

Faults

Sections



### SEDIMENTARY ROCKS

(Areas of subsequent deposits are shown by patterns of parallel lines, subhorizontal deposits by patterns of dots and circles, metamorphic by patterns indicated by hachures combined with the line patterns.)

Recent  
Qal  
Alluvium  
(fine silt and sand with gravel near streams forming terraces)

Miocene  
Teb  
Ellensburg formation  
(fluviatile deposits of sandstone, silt, and coarse material locally indurated)

UNCONFORMITY  
Tm  
Manastash formation  
(sandstone, conglomerate, and shale)

UNCONFORMITY  
Trl  
Roslyn formation  
(sandstone and shale with beds of silt)

UNCONFORMITY  
Ts  
Swank formation  
(sandstone, conglomerate, and shale)

UNCONFORMITY  
Contact  
schist  
(sedimentary rock metamorphosed by intrusive granodiorite)

Metamorphic  
T.21 N.  
Peshastin formation  
(black slate and grit with beds of chert and lenses of limestone locally)

UNCONFORMITY  
et  
Easton schist  
(quartz-mica schist with associated hornblende-schist and epidote-schist)

### IGNEOUS ROCKS

(Areas of igneous rocks are shown by patterns of triangles and rhombs. Metamorphism is indicated by hachures.)

Pliocene  
T.20 N.  
Tr  
Rhyolite  
(lava and associated tuff)

Ty  
Yakima basalt  
(extensive series of lava flows with local tuff beds)

Miocene (pre-Ellensburg)  
Teb  
Diabase  
(intrusive bodies with associated sills, containing sills, basaltic conduits)

Andesite porphyry  
(intrusive mass related to Taneum andesite)

Taneum andesite  
(hypersphene-andesite lava with beds of tuff and breccia)

Eocene (pre-Roslyn)  
Tg  
Gabbro  
(intrusive bodies of gabbro, in part olivine bearing and in part quartz bearing)

Teb  
Taneum basalt  
(lava flows with tuff beds)

Basic dikes  
(diabase, mostly quartz bearing, filling Taneum basalt conduits)

Post-Carboniferous  
msg  
Mount Stuart granodiorite  
(batholith of massive granodiorite with smaller masses of granodiorite-porphphy)

Acid dikes  
(granodiorite porphyry associated with Mount Stuart batholith)

pr  
Peridotite  
(intrusive body, largely altered to serpentinite)

QUATERNARY

TERTIARY

CARBONIFEROUS & OLDER

TERTIARY

PRE-TERTIARY

R. U. Goode, Geographer in charge.  
Triangulation by S.S. Gannett.  
Topography by G.E. Hyde.  
Surveyed in 1896-97.

Scale 1:25000  
Miles  
Kilometers

Contour interval 100 feet.  
Datum is mean sea level.  
Edition of Nov. 1903.

DIAGRAM OF TOWNSHIP

16 13 12 11
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36

Geology by Israel C. Russell, 1897;  
George Otis Smith and G.C. Curtis, 1898;  
George Otis Smith and W.C. Mendenhall, 1899.

Legend is continued on the left margin.