



LEGEND

SURFICIAL ROCKS

(Areas of Surficial rocks are shown by patterns of dots and circles.)

Pas
Swamp alluvium
(usually a dark-colored mud covering steep banks)

Pav
Valley alluvium
(fine glacial silt from living glaciers, usually with sand and gravel, includes alluvium near the mouths of canyons)

Pm
Midland sands
(delta sands and sandy loam, with occasional deposits of *Botanococcus* earth surface usually flat or gently sloping)

Ps
Steilacoom gravels
(coarse gravel and shingle, washed clean, usually covered by thin layer of fine silt, surface level 1 to 20 feet high)

Pg
Gale sands
(soft sandy clay without gravel, shingle, or shales)

Pv
Vashon drift
(coarse gravel and sand, irregularly stratified, generally mixed with fine sandstone, probably deposited by ice as a till)

Pvm
Vashon drift modified
(coarse gravel and sand irregularly stratified, broken by roughly parallel ridges, with thin shales, micaceous, deposited by ice and streams beneath the ice)

Po
Osceola till
(fine sandy clay, compact, containing subangular stones, surface plane, containing, and hills)

Psd
Stratified drift
(includes the Denny gravels, Puget silt, being gravels, and light, exposed, in hills, usually much obscured by landslides)

Pa
Admiralty till
(soft blue clay, usually without locally filling with subangular stones and large boulders)

Ep
Puget formation
(carbon sandstone, shales, carbonaceous shales, and coal beds)

Na
Pyroxene andesite
(lavas, tuffs, breccias, and dikes)

⊗ Coal mines
× Coal prospects

STAGES OF GLACIAL RETREAT

STAGES OF GLACIAL OCCUPATION

STAGES OF INTER-GLACIAL GLACIAL CONDITIONS

STAGE OF GLACIAL OCCUPATION

STAGES OF GLACIAL OCCUPATION

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PLEISTOCENE

EOCENE and probably early Neocene

NEOCENE and probably later

47°30' N. 122°30' R.2 E. ENGRAVED APRIL, 1897 BY U.S.G.S. R.3 E.
Henry Gannett, Chief Topographer.
R. U. Goode, Geographer in charge.
Control by W. T. Griswold and U.S. Coast and Geodetic Survey.
Topography by G. E. Hyde and R. H. Mc. Kee.
Surveyed in 1894-95.

M.K.
Hyde

Scale 1:25000
Miles
Kilometers
Contour interval 50 feet.
Datum is mean sea level.
Edition of Feb. 1899.

R.6 E. 122°00' N.
Geology by Bailey Willis and George Otis Smith.
Surveyed in 1896.