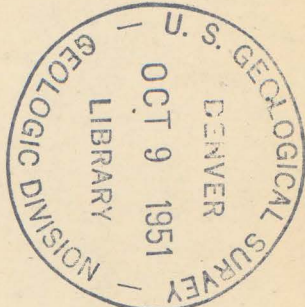


PLEASE REPLACE IN POCKET
IN BACK OF BOUND VOLUME

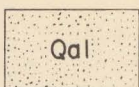


28753

EXPLANATION

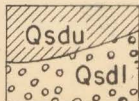
A blanket of Recent eolian silt covers most of the area to depths of as much as 3 feet, but it is not shown on the map.

Recent



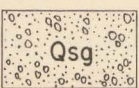
Quaternary alluvium

Recent stream deposits of gravel, sand, silt, and silty basaltic rubble. Includes some Pleistocene pebbly silts on floors of tributary valleys. Thicknesses range from a few inches to several tens of feet. Fine sands and silts nearly all sub-angular quartz; fine gravels and coarse sands predominantly sub-angular basalt. Snake River alluvial gravels generally well-rounded and average about 40 per cent basalt; remainder largely intrusive and metamorphic rocks. Tributary alluvial gravels nearly all subangular to rounded basalt.



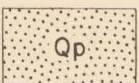
Scabland deposits

Remnants of pro-glacial outwash sands and gravels. Deposits nearly all basaltic in composition, and show an apparent general, though irregular, decrease vertically upward in average grain size. Caliche coating common on pebbles and cobbles near surface. Qsdu comprises fill remnants in protected places along canyon and in scabland below an altitude of 1,300 feet and consists predominantly of coarse basaltic sand and fine gravel and lesser amounts of interbedded silt, fine sand, coarse gravel and basaltic rubble. Material is nearly all sub angular to sub rounded and generally well-bedded in thin lenticular fore-sets. Qsdl comprises lower terraces and consists predominantly of poorly sorted and poorly bedded sub angular to rounded pebbles and cobbles of basalt but contains considerable interstitial silt and many angular basaltic boulders up to 10 feet or more in diameter. Minor amounts of interbedded sand and silt occur. Terraces range in length from a few hundred feet to about 5 miles, and in thickness from a few feet to about 250 feet; in places capped by as much as 20 feet of silt, and locally by sand dunes.



Snow River Gravels

Terrace remnants of poorly-consolidated, generally well-stratified silts, sands, and silty stream gravels. Gravels range from 40 to 60 per cent basalt; remainder largely intrusive and metamorphic rocks; generally well rounded but poorly sorted, and have average diameter of about 3 inches. Interbedded sand and silt moderately well-sorted angular basalt and/or quartz fragments. Boulders as large as 3 feet or more in diameter common. Terraces range from a few feet to about 100 feet in thickness and from a few hundred feet to about 6 1/2 miles in length; in places capped by as much as 25 feet of silt, and locally by sand dunes.



Palouse formation

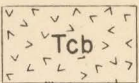
Buff to light brown, massive, homogeneous, unconsolidated loessial silt. Predominantly angular grains of quartz; lesser amounts of feldspar, mica, and hornblends; traces of other minerals. Weathering may extend to depths of several feet, and lime-enriched or caliche zones occur in many places at depths of 18 inches to 10 or more feet below the surface. Mantles plateau basalts from a few inches to over 200 feet, but generally not mapped where less than 3 feet thick. Includes some colluviated loess.

UNCONFORMITY



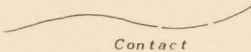
Intracanyon basalt

Discontinuous remnants of old lava-filled canyons; generally less than 100 feet thick, 1,000 feet long and 300 feet wide. Basalt is dark gray to black, dense, finely porphyritic, and fresh appearing. Characterized by well-developed but irregular columns averaging 12 to 18 inches in diameter. Stream sands and gravels may occur at their bases.



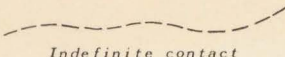
Columbia River basalt

Several thousand feet of nearly horizontal basaltic lava flows. Individual flows range in thickness from 15 to over 150 feet. Basalt is dark gray to black where fresh, and dark brown on weathered surfaces; hard except where weathered or altered; and generally slightly vesicular. Most of the flows are aphanitic; some porphyritic with feldspar phenocrysts. Upper parts of flows vesicular or scoriaceous and commonly oxidized. Central and lower parts of flow commonly massive columns. Thin basal scoria or vesicular zone is also present. Composed of feldspar, augite, olivine and magnetite in a glassy matrix. Rock well-jointed. Weathering confined mostly to minor oxidation on exposed surfaces and along joints. Unit includes basalt talus at base of cliffs and benches, and in places, some slope washed loessial silt.



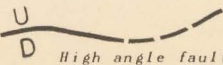
Contact

Dashed where approximately located



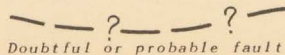
Indefinite contact

Includes gradational contacts, inferred contacts, and indefinite boundaries of surficial deposits.

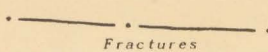


High angle fault

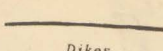
Dashed where approximately located
U, upthrown side; D, downthrown side



Doubtful or probable fault



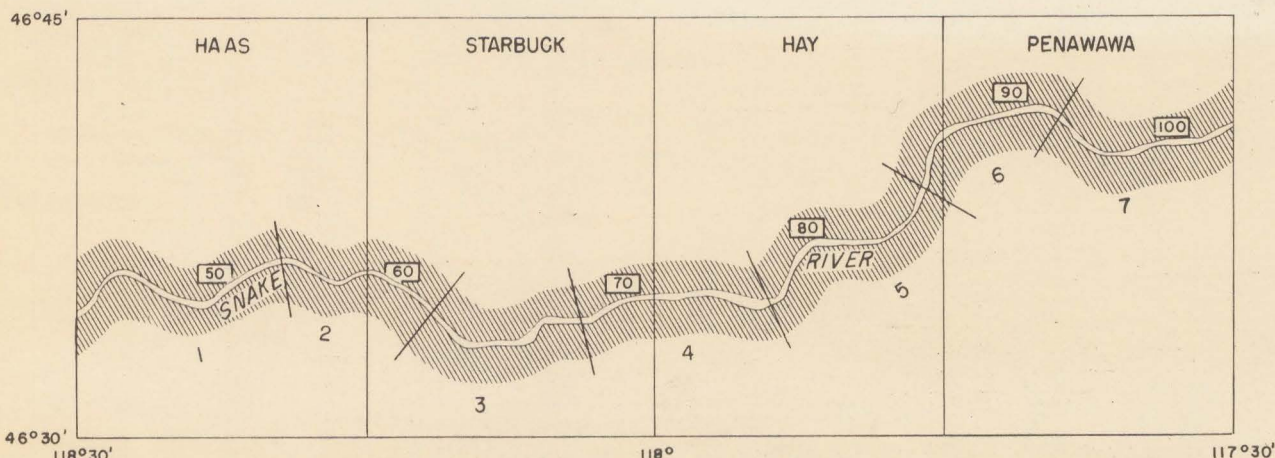
Fractures



Dikes



Springs and seeps



INDEX OF TOPOGRAPHIC QUADRANGLES
AND SHEETS OF GEOLOGIC MAP