



DESCRIPTION OF MAP UNITS

Qu

ALLUVIAL, COLLUVIAL, EOLIAN, TALUS, MUDFLOW, AND LANDSLIDE DEPOSITS (QUATERNARY)--Silt, sand, gravel, and rubble, undifferentiated

Tr?

RINGOLD FORMATION (PLIOCENE AND MIOCENE?)--Fluvial and lacustrine sediments, very weakly to moderately indurated

Tr

Siltstone and sandstone in bluff north of Columbia River, tentatively assigned to Ringold Formation but perhaps wholly or partly younger  
Claystone, siltstone, sandstone, and conglomerate; includes a few large isolated bodies that may have moved laterally as slide blocks

Yakima Basalt

YAKIMA BASALT (MIOCENE)--Various basalt formations of the Yakima Basalt Subgroup. Includes sedimentary interbeds

CONTACT--Dashed where approximately located or inferred

CONTINUOUS SEDIMENTARY STRATA AND LAVA FLOWS--Lines indicate parts of river bluffs where exposures of layered rocks are good to excellent and layers appear to be continuous and essentially undeformed. Lines are solid where there has been no stratigraphic offset by faulting or where maximum conceivable offset appears to be 6 ft (2 m) or less; lines are dotted where control is less precise and offset, though not evident, could conceivably be more than 6 ft (2 m) but in no case more than 20 ft (6 m). Control is based on tracing various strata, stratigraphic surfaces, and lava flows:

RS--Strata and stratigraphic surfaces in claystone, siltstone, and sandstone of Ringold Formation

RC--Top of thick conglomerate layer in Ringold Formation

RP--Strata of Ringold Formation traced on aerial photos (1967-80)

C--Calcrete capping Ringold Formation

L--Lava (basalt) flows

Though lines are based on exposures on steep slopes of bluffs, they are drawn above or below these slopes where necessary to avoid crowding other lines. Short cross lines indicate points where basis for stratigraphic control changes or terminates

RS RC

RP C L

A A'

LINE OF CROSS SECTION--Shown in figure 2

SMOOTH LATE PLEISTOCENE SURFACES--Selected surfaces, produced by late Pleistocene floods, that are notably large, smooth, well preserved, and well exposed; underlain by Pleistocene gravel, sand, or silt and commonly a thin Holocene mantle; individual surfaces identified by capital letters



SCALE 1:100 000



Contour intervals: Priest Rapids, 50 meters, with supplementary contours at 10 meters; Richland 20 meters

Base from U.S. Geological Survey, 1:100,000: southern part of Priest Rapids quadrangle, 1979; northern part of Richland quadrangle, 1978



GENERALIZED GEOLOGIC MAP OF THE COLUMBIA RIVER VALLEY BETWEEN RICHLAND AND PRIEST RAPIDS DAM, WASHINGTON, EMPHASIZING FEATURES THAT SUGGEST RECENT TECTONIC STABILITY

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Geology mapped 1980-82

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.