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GEOLOGIC MAP OF THE KLAMATH RIVER BASIN, OREGON -
NORTHWESTERN PART

EXPLANATION

Op
Pumice
Airborne and flow pumice of dacitic types from ancestral Mount Mazama. In part is younger than most of the alluvium. Consists of a widespread mantle of airborne pumice and flow pumice on the slopes and plains below the source. Flow pumice contains some layers of semiconsolidated and some of loose pumice. Transmits large quantities of ground water and serves as an excellent medium for the infiltration of water from the surface.

Qal
Alluvium
Silt, sand, clay, peat, volcanic ash, pumice, gravel and some slope debris near escarpments. Thickness ranges from a featheredge to possibly as much as 1,000 feet. Largely lake-type deposits in which only the coarser sands and gravels yield more than small supplies of water to wells.

Cr
Volcanic rocks
Lava flows and pyroclastic materials of andesitic, dacitic, and basaltic composition. Consists largely of the outpour from ancestral Mount Mazama and local vents elsewhere. In part consists of permeable material but lies mostly above the regional water table.

----- Unconformity -----

Volcanic rocks of High Cascades

Tcu
Intrusive rocks
Dikes and stocks of andesitic porphyry and other rock types. Tight, non-water-bearing rocks.

Tca
Andesitic lava flows
A series of lava flows forming the uplands at the north end of the basin. May have been contemporaneous with the basaltic flows farther south. Tight rocks apparently lacking much water-bearing capacity.

Tul
Upper lava rocks
Basaltic lava flows occurring mostly in "steprock" position. Thickness commonly 50 to 200 feet but is much greater near some of its lava outlets. Brecciated and jointed layers are highly permeable and transmit water readily. Mapped as Tca except where locally prominent areas are shown as (Tul).

Tcu
Basaltic rocks and igneous formation undifferentiated.

Tcu
Tuff formation
Tuff, silty sandstone, siltstone, and intertuff layers. Commonly 200 to 1,000 feet thick but in places may be up to 2,000 feet. Largely of low permeability but some agglomeratic layers are of relatively high permeability.

Tcu
Lower lava rocks
Basaltic lava flows occurring in a thickness of 800 or more feet. Breccia layers and jointed zones are permeable and transmit water readily.

----- Unconformity -----

Volcanic rocks of Western Cascades
Lava flows and tuff beds several thousand feet in total thickness. Largely tight, non-water-bearing materials.

Tcu
Tuff formation
Sandstone, shale, and conglomerate several hundred feet in total thickness exposed in a small area. Slightly permeable; commonly carries artesian water beyond the first hundred feet or so in depth.

----- Unconformity -----

Metamorphic, igneous, or sedimentary rocks older than Tertiary
Lava, igneous rocks that crop out in the extreme northwestern part of the basin in Oregon.

GEOLOGIC SYMBOLS

