

EXPLANATION

UNCONSOLIDATED DEPOSITS

Quaternary

Younger alluvium
Assorted coarse gravel and sand with some silt. Clean and pervious at most places. Occurs along the Willamette and McKenzie Rivers. Yields moderate to large quantities of water to wells

Older alluvium
Largely sand and gravel, with mixtures of sand, silt, and clay beneath the flood plains of the Willamette and McKenzie Rivers. Is somewhat finer, less assorted, and less pervious than the younger alluvium. Tends to be of finer materials below a depth of 100 feet. Yields moderate to large quantities of water to properly constructed wells in the valley plain. Includes some terrace deposits in the southwestern part of the area and some younger alluvial deposits along the Long Tom River and other smaller streams; these deposits are of finer materials and yield water slowly to wells

CONSOLIDATED ROCKS

Little Butte Volcanic Series
Tib, Little Butte Volcanic Series, undifferentiated; volcanic rocks, predominantly dacitic and andesitic flows and tuffs, with some rhyolitic flows and some basalts. Poor aquifer; yields small quantities of water to wells
Tibb, basalt flows; olivine basalt with some scoriaceous materials. Yield little water to wells

Intrusive rocks
Dikes and sills of diabasic and basaltic composition. Yield little water to wells

Eugene Formation
Marine-deposited sediments consisting of coarse-to fine-grained arkosic, micaceous sandstone, with intercalated shale and occasional lenses of fine volcanic ash. Generally yields water slowly to wells

Fisher Formation
Largely tuff and breccia with large amounts of basaltic and rhyolitic debris. Yields small quantities of water to wells

Spencer Formation
Marine deposited, consisting of a sequence of tuffaceous sandstone, shale, and mudstone. Yields water slowly to wells. Contains saline water locally

Tyee Formation
Marine sandstone beds interbedded with siltstone and mudstone. In places, intruded by igneous rocks. Yields water slowly to wells. Contains water of poor chemical quality locally

Geological Time Scale

Quaternary
Holocene
Pleistocene and Holocene

Tertiary
Oligocene and Miocene
Oligocene or younger
Oligocene
Eocene and Oligocene
Eocene

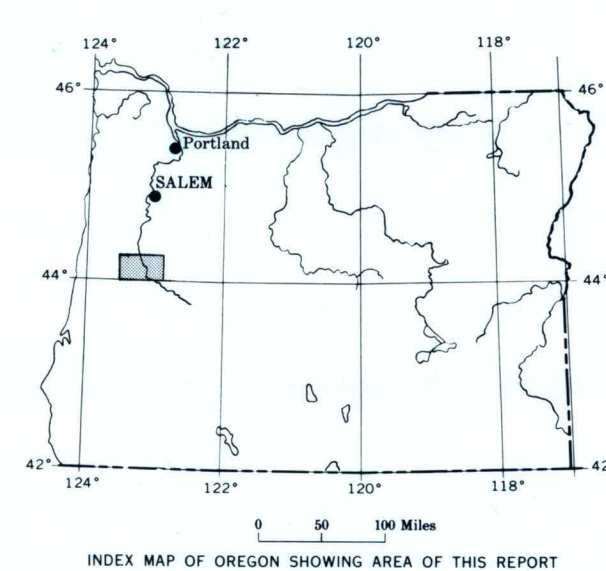
Legend

Contact
Dashed where approximately located

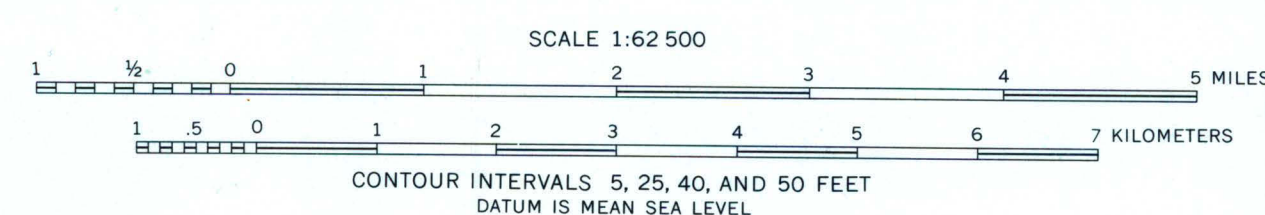
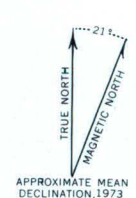
Fault
Dashed where inferred; dotted where concealed

Well and number

Line of section. See plate 2



Base from U.S. Geological Survey:
Elmira, 1967; Eugene, 1946; Marcola, 1950



Geology from Peck, Griegs, Schlicker, Wells, and Dole
(1964); Vokes, Snavely, and Meyers (1951); and Piper (1942)

GEOLOGIC MAP OF THE EUGENE-SPRINGFIELD AREA, SOUTHERN WILLAMETTE VALLEY, OREGON