

**EXPLANATION**

**UNCONSOLIDATED DEPOSITS**

**Qyal**  
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

**Qoal**  
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**

**Tibb Tib**  
Little Butte Volcanic Series  
Tib, Little Butte Volcanic Series, undifferentiated; volcanic rocks, predominantly dacitic and andesitic flows and tufts, 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

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

**Te**  
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

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

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

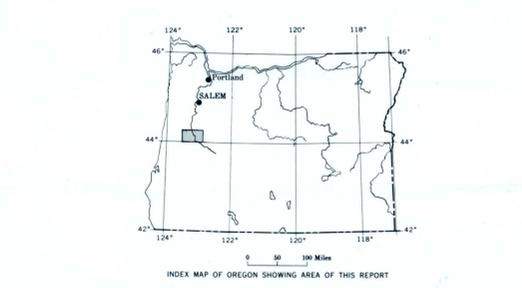
**Tty**  
Tye Formation  
Marine sandstone beds interbedded with siltstone and mudstone. In places, intruded by igneous rocks. Yields water slowly to wells. Contains water of poor chemical quality locally

--- Contact  
--- Dashed where approximately located

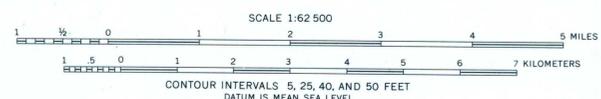
--- Fault  
--- Dashed where inferred; dotted where concealed

○ Well and number

A—A' Line of section. See plate 2



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



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

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