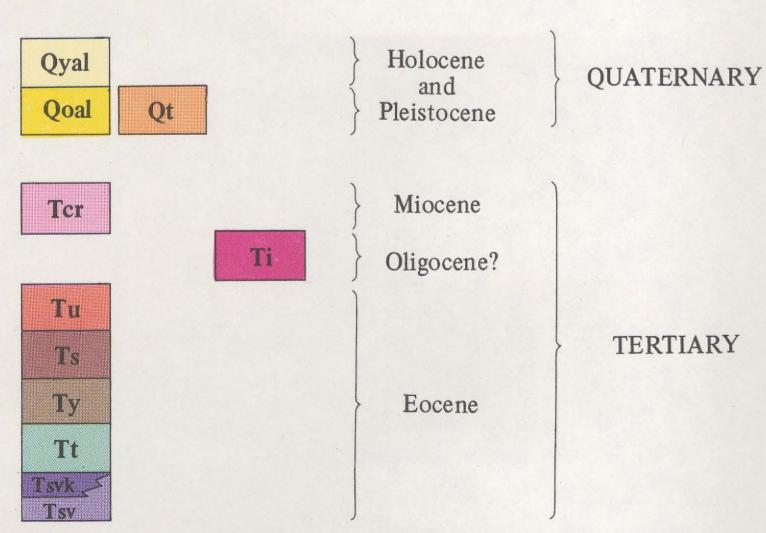


Base from U.S. Geological Survey  
Covington, 1936; Albany, Dallas, and  
Salem, 1957; 1:24,000

Geology modified from Baldwin, 1964;  
Mundorff, 1939; Pester and Niem, 1975;  
and Vokes and others, 1954

## CORRELATION OF MAP UNITS



## DESCRIPTION OF MAP UNITS

## UNCONSOLIDATED DEPOSITS

**YOUNGER ALLUVIUM (HOLOCENE AND PLEISTOCENE)** — Sand, gravel, and silt. Generally consists of 10 to 45 feet of sand gravel overlain by 5 to 30 feet of silt and very fine sand. Sand-and-gravel beds generally yield 100 to 500 gallons per minute to properly constructed wells.

**OLDER ALLUVIUM (HOLOCENE AND PLEISTOCENE)** — Silt, clay, and very fine sand, with interbedded sand and gravel. Total thickness ranges between 0 and about 85 feet. Sand and gravel, where present generally occur beneath 30 feet or more of silt and clay. Sand-and-gravel beds are thickest near Monmouth and Independence in the lower part of Ash Creek basin and near the east edge of the mapped unit. Saturated sand-and-gravel beds generally yield small quantities of water to wells, except near east edge of unit where yield may be as much as 300 gallons per minute to properly constructed wells.

**TERACE DEPOSITS (HOLOCENE AND PLEISTOCENE)** — Poorly sorted and deeply weathered sand, gravel, and clay. Mantes slopes of foothills near Dallas and near Adair Village. Largely unsaturated, but locally may yield small quantities of water to wells.

## CONSOLIDATED ROCKS

**Tcr** COLUMBIA RIVER BASALT GROUP (MIOCENE) — Basaltic lava flows. Caps two hills in the northeastern part of the area. Probably is unsaturated and not a potential source of water to wells.

**Ti** TERTIARY INTRUSIVE ROCKS (OLIGOCENE?) — Gabbro and diorite sills and dikes. Should yield small quantities of water to wells. Saline water may be present in formation at irregular depths.

**Tu** TERTIARY ROCKS, UNDIFFERENTIATED (EOCENE) — Tuffaceous siltstone and sandstone. Yields small quantities of water to wells. Saline water present in formation at irregular depths.

**Ts** SPENCER FORMATION (EOCENE) — Micaceous and silty marine sandstone. Includes several interbedded basaltic flows in the northwestern part of the area. Yields small quantities of water to wells. Saline water present at irregular depths.

**Ty** YAMHILL FORMATION (EOCENE) — Thinly bedded marine sandstone and siltstone. Basal part of formation contains impure limestone near Dallas. Yields small quantities of water to wells. Contains saline water at irregular depths.

**Tt** TYEE FORMATION (EOCENE) — Arkosic marine sandstone and sandy siltstone. Yields small quantities of water to wells. Contains saline water at irregular depths.

**Tsvk** SILETZ RIVER VOLCANICS (EOCENE) — Basaltic lava flows, breccia, and pillow lavas, interbedded with minor amounts of tuffaceous marine siltstone and tuff. Both units yield small quantities of water to wells. Contains saline water at irregular depths.

Contact — Approximately located

**D** — **U** Fault — U, upthrown side; D, downthrown side; dashed where approximately located

**O adb** Well — Letters refer to well-location system. (See figure 4 for explanation.)

**O bca** Spring — Letters refer to spring-location system. (See figure 4 for explanation.)

**-130-** Potentiometric contour — Shows altitude at which water levels would rise in tightly cased wells in sand and gravel in the Independence area in October 1976. Contour intervals 5 and 10 feet (National Geodetic Vertical Datum of 1929).

→ Arrows show approximate direction of ground-water flow in sand and gravel in Independence area

— Boundary of area shown on Plate 2

