

**EXPLANATION OF GRAPHIC LOGS**

- Sand and gravel
- Sand, gravel, clay and silt
- Sand, silt, silty sand
- Silt, silty clay, clayey silt, silty sand
- Approximate contact
- Profile of water table, December, 1960

VERTICAL EXAGGERATION X 200

**REFERENCES CITED**

Cartwright, Keros, 1961, A study of the Lake Lahontan sediments in the Winnemucca area, Nevada; Univ. of Nevada M. S. thesis, 52 p.

Ferguson, Muller, and Roberts (1951) (1952)

Hawley, J. W., and Wilson, W. E., 1961, Preliminary geologic map of the Winnemucca area; written communication.

Holz and Willden (1961)

Willden (1961)

**EXPLANATION**

<p><b>Younger flanglomerate</b> Generally poorly sorted flanglomerate containing lenses of loose sand, gravel, silt and clay; occurs as alluvial fans; commonly of low to moderate permeability; largely above zone of saturation</p> <p><b>Fluviatile and lacustrine deposits</b> Generally loose coarse-grained sand and gravel of moderate to high permeability in stream channel draining mountains; include silt and clayey silt of low permeability on floors of Grass and Paradise Valleys</p> <p><b>Terrace deposits</b> Qt, undifferentiated terrace deposits Qt<sub>1</sub>, lower terrace deposits; include sand and gravel of moderate permeability covered by windblown sand and silt of high porosity but only moderate to low permeability Qt<sub>2</sub>, middle terrace deposits; lithology similar to Qt<sub>1</sub>; differentiated by physiographic position</p> <p><b>Gravel-bar deposits</b> Well-sorted sand and gravel; highly permeable</p> <p><b>Medial gravel unit</b> Well-sorted sand and gravel; highly permeable; recognized only in subsurface</p> <p><b>Lower silt and clay unit</b> Dense, blocky silt and clayey silt; contains ostracodes; moderate to high porosity but low permeability; recognized only in subsurface</p>	<p><b>Fluviatile and subaerial deposits</b> Permeable sand and gravel interbedded with clay, silt and silty clay of low permeability; includes windblown silt and fine sand, volcanic ash, and flood-plain and channel deposits of the Humboldt River</p> <p><b>Upper silt and clay unit</b> Silt, clayey silt and fine sand; clayey silt is blocky and contains ostracodes; silt and sand contain mollusks, partly covered by windblown sand and silt; moderate to high porosity but low permeability; largely above zone of saturation. Upper terrace deposits</p> <p><b>Alluvium</b> Clay, sand, silt and gravel; poorly to moderately sorted; includes fluvial and subaerial deposits; recognized in subsurface only; partly equivalent in age to Qg and Qs</p>	<p><b>Fanglomerate, undifferentiated</b> Fanglomerate; poorly to moderately sorted; practically no clay in matrix; forms alluvial fans; includes lenses of sand and gravel of moderate to high permeability</p> <p><b>Medial fanglomerate</b> Coarse relatively unconsolidated poorly sorted fanglomerate; low to moderate permeability; includes boulders as much as 5 feet in diameter; practically no clay in matrix; forms alluvial fans; includes lenses of sand and gravel of moderate to high permeability</p> <p><b>Older fanglomerate</b> Fanglomerate; partly cemented; includes boulders as much as 10 feet in diameter; practically no clay in matrix; calciche common; low permeability; covers pediments</p> <p><b>Basalt</b> Lava flows and intrusive rocks ranging from andesite to olivine basalt; structurally deformed; practically no interstitial permeability</p> <p><b>Sedimentary rocks</b> Sandstone, siltstone, limestone, marl and tuff; compact and dense; low permeability</p> <p><b>Consolidated rocks, undifferentiated</b> Undifferentiated Tertiary volcanic rocks and Mesozoic and Paleozoic sedimentary, metamorphic, and igneous rocks; composed largely of nearly impermeable rocks Mu, undifferentiated Mesozoic rocks in western part of area; includes compact, dense limestone, dolomite, quartzite, slate, phyllite, shale, siltstone, sandstone, fanglomerate, tuff and lava flows; composed largely of nearly impermeable rocks</p>
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**Contact**  
Long dashed where approximately located; short dashed where inferred

**River-cut scarp**  
Dashed where approximately located

**Wave-cut scarp**  
Dashed where approximately located; dotted where concealed

**Fault**  
Arrow shows direction of dip of fault plane. U, upthrown side; D, downthrown side. Dashed where approximately located; dotted where concealed or inferred

**Dry test boring**  
aba

**6-inch-diameter test well**  
bba

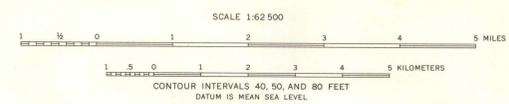
**6-inch-diameter test well, equipped with recorder**  
cdd

**Irrigation well**  
o dc

**Streamflow measuring station equipped with staff gage**  
Δ S

**Streamflow measuring station equipped with recorder**  
Δ U

**GEOLOGIC MAP AND SECTION OF THE VALLEY OF THE HUMBOLDT RIVER NEAR WINNEMUCCA, NEVADA, SHOWING LOCATION OF TEST BORINGS, OBSERVATION WELLS, AND STREAMFLOW MEASURING STATIONS**



Base from U.S. Geological Survey topographic quadrangles, 1939-59

APPROXIMATE LOCATION OF SECTION LINE