STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES

PREPARED IN COOPERATION WITH THE
U.S. GEOLOGICAL SURVEY

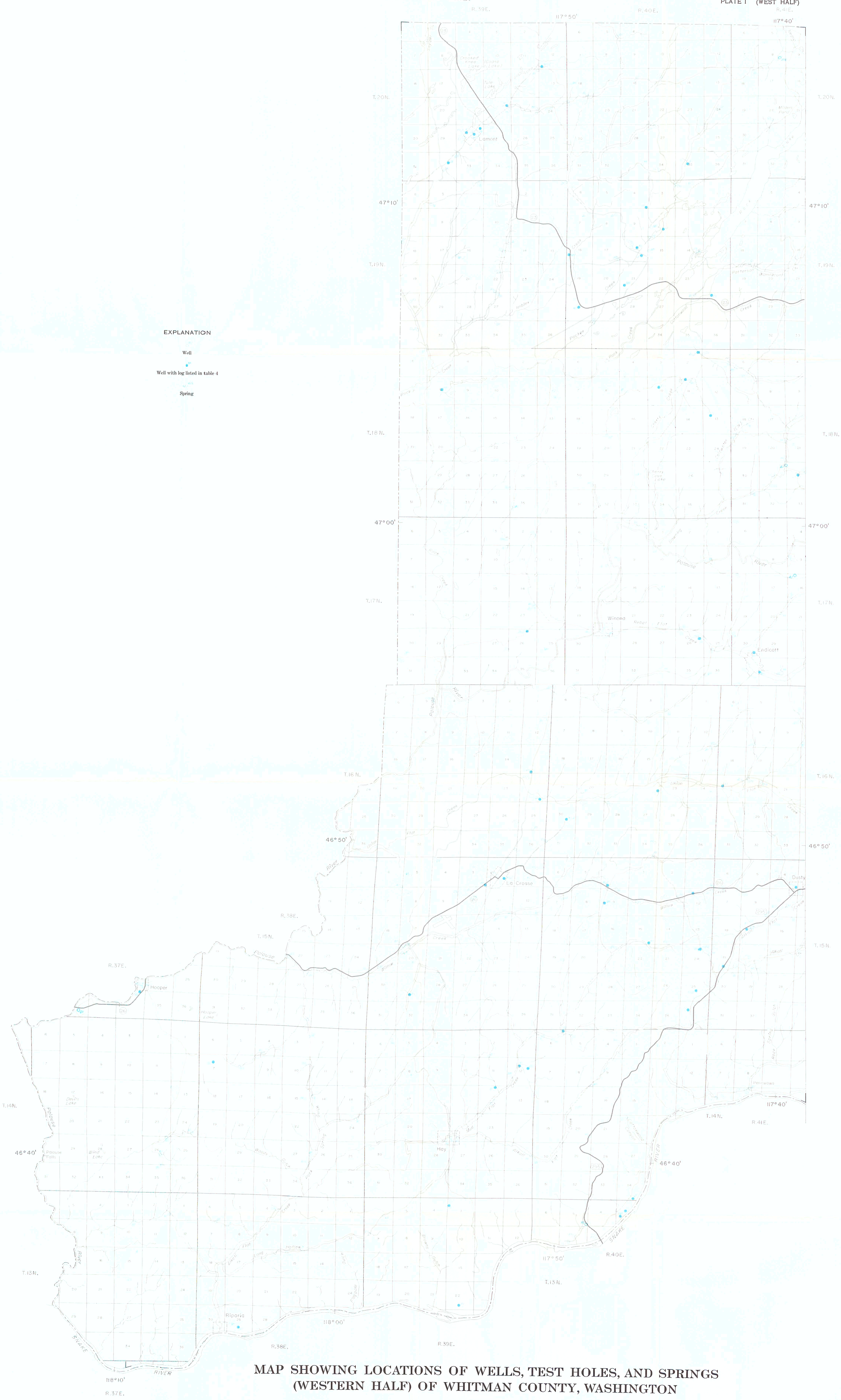
WATER-SUPPLY BULLETIN 26
PLATE 1 (WEST HALF)

EXPLANATION

Well

Well with log listed in table 4

Spring



MAP SHOWING LOCATIONS OF WELLS, TEST HOLES, AND SPRINGS (WESTERN HALF) OF WHITMAN COUNTY, WASHINGTON

1 0 1 2 3 4 5 MILES

1 0 1 2 3 4 5 KILOMETERS

WASHINGTON STATE
DEPARTMENT OF WATER RESOURCES

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WATER-SUPPLY BULLETIN 26
PLATE 2 (EAST HALF)

MAP SHOWING LOCATIONS OF WELLS, TEST HOLES, AND SPRINGS (EASTERN HALF) OF WHITMAN COUNTY, WASHINGTON

1 0 1 2 3 4 5 MILES

1 0 1 2 3 4 5 KILOMETERS

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EXPLANATION

QUATERNARY

Recent

Qal — Alluvium

Fluvial deposits consisting of some rock fragments (mostly basalt in smaller tributaries, but also various igneous and metamorphic rock types in major drainages), sand, silt and clay (in smaller tributaries, silt and clay are mainly reworked loess). Unit also includes windborne volcanic ash deposits visible in some freshly cut arroyos. Includes alluvial terrace deposits of possible Pleistocene age along Snake River upstream from Riparia. Deposits restricted mainly to major flood plains, and range in thickness from a few feet to 170 feet

Pleistocene and Recent

Qe — Eolian deposits

Tan to brown deposits of silt and clay-size particles that contain some prominent caliche zones in western part of county. Individual deposits not differentiated. In part older than scabland deposits. Eolian deposits (principally loess) are extensive throughout the county, although erosion has removed considerable quantities in channeled scabland region. Thickness ranges from a few feet to about 300 feet

Pleistocene

Qs — Scabland deposits

Gravel, sand, and silt of glaciofluvial origin, deposited by scabland floods. Principal rock type is basalt, but other rock types are present. Fragments, well-rounded to very angular, as large as several feet in diameter. Crossbedding is strikingly apparent in many fresh exposures. Unit also includes fine-grained sediments deposited in upstream tributaries. Deposits are restricted to channeled scabland region in western half of county. Thickness ranges from a few feet to several tens of feet

TERTIARY

Miocene and Pliocene

Columbia River Group

Ty_2 — Yakima Basalt and associated sedimentary interbeds overlying the Roza Member

Includes flows of Priest Rapids Member and flows of possibly younger age. Exposures are dark-gray to black and range from massive- to medium-bedded, depending on thickness of individual flows. Some vesicular zones are present, but much basalt is very dense. Basalts of this unit are distinguished by lack of megascopically developed plagioclase phenocrysts. Some flows impinge on steptoes of pre-Tertiary crystalline basement rocks that were only slightly covered or never completely buried by basalt flows. Interbeds consist essentially of sand and finer size particles derived mainly from crystalline rocks and pyroclastic detritus. General areal extent was county wide; however, erosion has removed part or all of unit in places. Thickness exceeds 100 feet in many places

Ty_1 — Yakima Basalt and associated sedimentary interbeds, with Roza Member as uppermost unit

Basalt of Roza Member chiefly characterized by distinctive plagioclase phenocrysts in matrix ranging from reddish-brown to gray to black. Roza basalt is variable in vesicle content, ranging from sparsely to highly vesicular. Basalt flows underlying Roza Member are distinguishable in some exposures: Frenchman Springs Member and older Yakima flows are exposed in western part of county. Interbeds consists essentially of sand and finer size particles derived mainly from crystalline rocks and pyroclastic detritus. Unit is thousands of feet thick over most of the county; not differentiated in extreme southeast corner, where characteristic Roza Member apparently pinches out

Typ — Yakima and (or) Picture Gorge Basalt and associated sedimentary interbeds

Includes basalt flows that range from thin- to thick-bedded. Composition of individual flows appears to vary only slightly within project area. Individual lithologic units fine- to coarse-grained basalt, porphyritic basalt, flow breccias, cinder beds, and sedimentary interbeds. Interbeds consist essentially of sand and finer size particles derived mainly from crystalline rocks and pyroclastic detritus. Unit mapped only in southeastern part of county where apparent absence of Roza Member and structural deformation complicates differentiation of individual units. Thickness ranges from hundreds to thousands of feet

PRE-TERTIARY

pTc — Crystalline rocks

Principally quartzite, phyllite, schist, granite gneiss, granite pegmatite, and granitic igneous rocks. Includes a distinctive granitic body exposed along Snake River at Granite Point. Metamorphic rocks, probably metasediments, generally chemically altered, in many places extensively. Unit locally protrudes above all basalt flows in eastern part of county. In other exposures it has been exhumed by recent erosion. Thickness unknown

Dikes

Dark gray to black, dense, usually porphyritic basalt of undetermined age

Contact

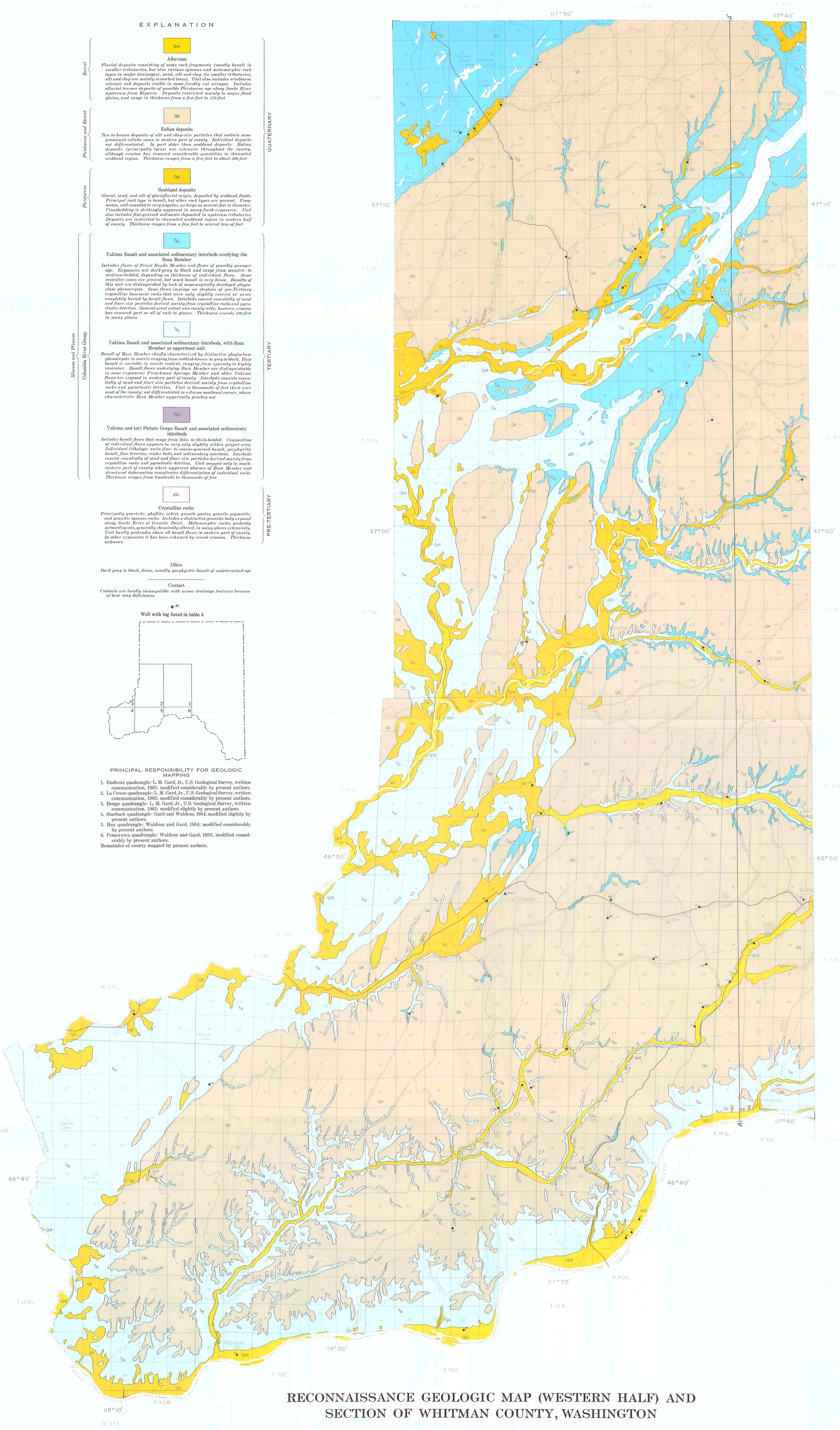
Contacts are locally incompatible with minor drainage features because of base map deficiencies

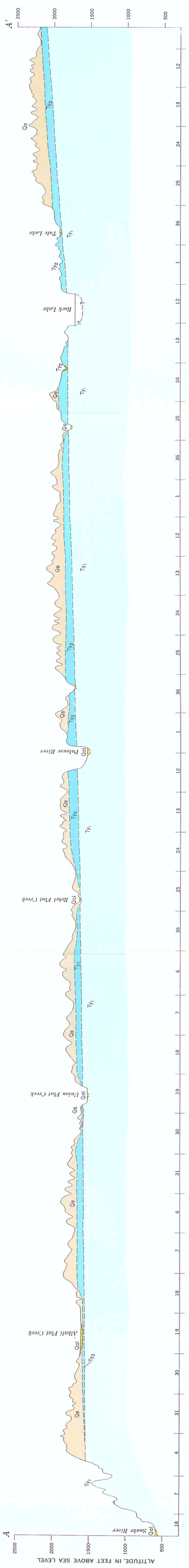
● A1 — Well with log listed in table 4

PRINCIPAL RESPONSIBILITY FOR GEOLOGIC MAPPING

1. Endicott quadrangle: L. M. Gard, Jr., U.S. Geological Survey, written communication, 1963; modified considerably by present authors.
2. La Crosse quadrangle: L. M. Gard, Jr., U.S. Geological Survey, written communication, 1963; modified considerably by present authors.
3. Benge quadrangle: L. M. Gard, Jr., U.S. Geological Survey, written communication, 1963; modified slightly by present authors.
4. Starbuck quadrangle: Gard and Waldron, 1954; modified slightly by present authors.
5. Hay quadrangle: Waldron and Gard, 1954; modified considerably by present authors.
6. Penawawa quadrangle: Waldron and Gard, 1955; modified considerably by present authors.

Remainder of county mapped by present authors.





RECONNAISSANCE GEOLOGIC MAP (WESTERN HALF) AND SECTION OF WHITMAN COUNTY, WASHINGTON

1 0 1 2 3 4 5 MILES

1 0 1 2 3 4 5 KILOMETERS

RECONNAISSANCE GEOLOGIC MAP (EASTERN HALF) OF WHITMAN COUNTY, WASHINGTON

1 0 1 2 3 4 5 MILES

1 0 1 2 3 4 5 KILOMETERS