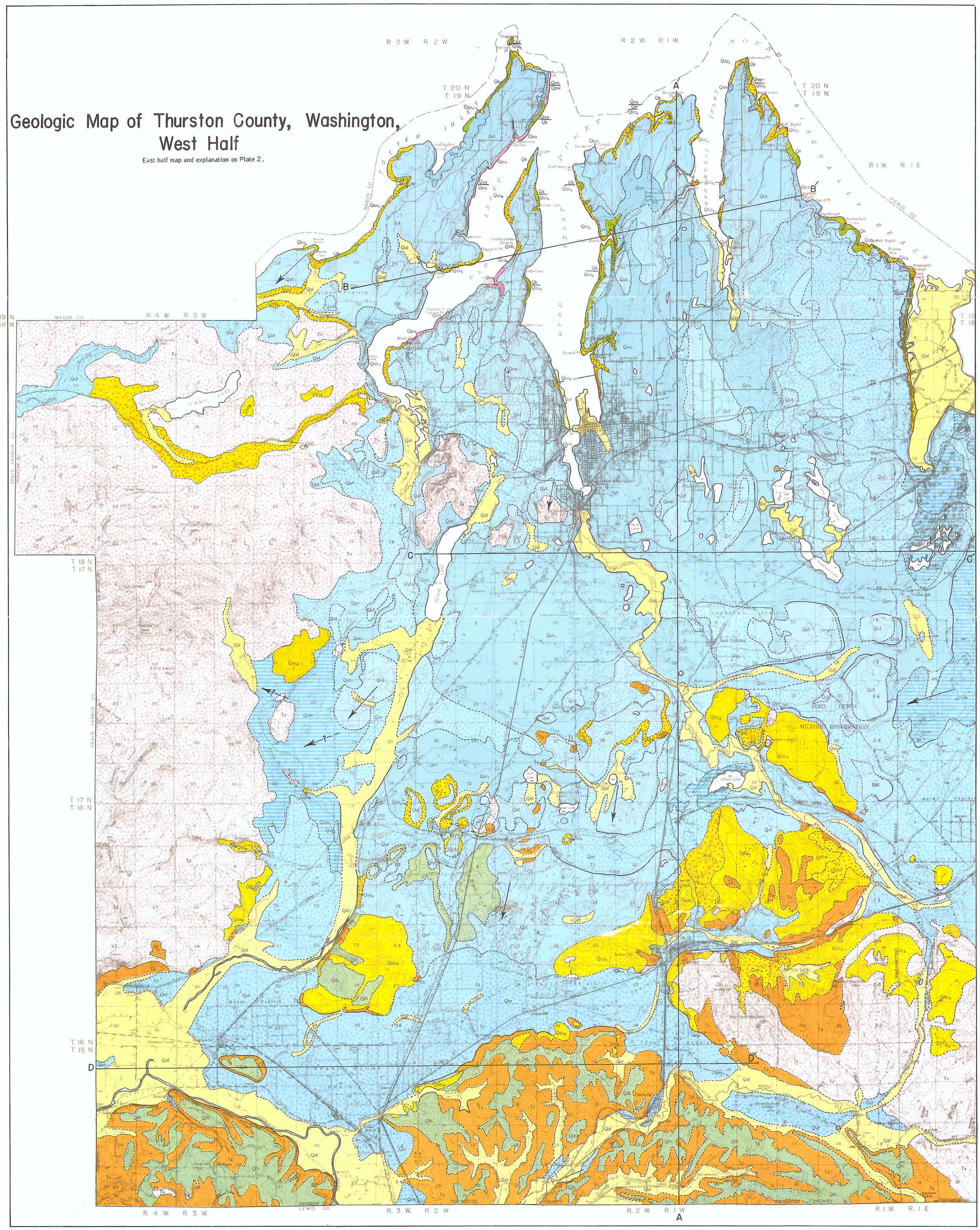
PLATE I

Geologic Map of Thurston County, Washington, West Half

East half map and explanation on Plate 2.



Geologic Map of Thurston County, Washington, East Half

West half map on Plate 1.

EXPLANATION

TERTIARY QUATERNARY

Recent

Qal — Alluvium

Predominantly fine-grained floodplain deposits of detritus and peat. Also includes some lake deposits, marine alluvium, and artificial fill. Locally yields much water to wells

Pleistocene — Vashon Drift

Qvr, Qvrl — Recessional outwash

Glaciofluvial materials deposited during recession of the Vashon glacier. Ovr, gravel and sand, poorly sorted, usually above water table but excellent aquifer where below water table. Ovrl, sandy and silty outwash with lenses of gravel. Frequently kettled. Produces moderate amount of ground water except in Peninsular Area. Usually overlies till or recessional gravel

Qvm — End moraine

Virtually unstratified sand and gravel deposited as ice-contact outwash. Characteristically occurs on kettled terrane. Potential ground-water production is good

Qvt — Till

In most places a compacted gravelly clay but also includes uncompacted ablation till. Acts as relatively impermeable barrier when below water table

Qva — Advance outwash and Colvos Sand

Glaciofluvial sand and gravel deposited by advancing Vashon glacier. Also includes Colvos Sand which conformably overlies Kitsap Formation. Important aquifer where below water table

Qk — Kitsap Formation

Chiefly silty clays of lake, swamp, and floodplain deposits. Locally contains peat, sand, and gravel. Yields only small amounts of water, generally containing objectionable quantities of iron

Qss_1, Qss_2 — Salmon Springs(?) Drift

Qss_1, stratified glaciofluvial sand and gravel. Oxidation staining common. Forms important regional aquifer in Peninsular Area and probably important beneath much of Prairie Area. Qss_2, unstratified thin upland drift or drift of unknown character. Not a water-bearing unit

Eocene to Pliocene(?)

Qpu — Pre-Salmon Springs(?) deposits, undifferentiated

Chiefly fine-grained deposits of glacial and nonglacial origin lying unconformably beneath Salmon Springs(?) Drift. Gravel lenses produce supplies of artesian water highly variable in quantity and quality. Generally of low permeability

Qlh — Logan Hill Formation

Fluvial and glaciofluvial(?) deposits chiefly derived from local source areas. Completely weathered to clay near land surface, only moderately weathered at depth. Locally yields small amounts of ground water

Tm — Mashel Formation

Chiefly fluvial sand and gravel, locally containing fine-grained plant-bearing deposits. Highly oxidized, probably has good permeability at depth. May be an aquifer in southeast part of the county

Ts — Sedimentary rocks

Chiefly marine sedimentary rocks of the McIntosh, Skookumchuck, Lincoln, and Astoria(?) Formation. None important as aquifers

Tv — Volcanic rocks

Chiefly volcanic rocks of the Northcraft and Crescent(?) Formations but includes intrusive bodies not mapped separately. None important as aquifers

Geologic contact. Dashed where inferred or approximated.

A——A′ Line of geologic section shown on Plate 3.

Topographic lineation or rock striations showing latest direction of movement of the Vashon glacier. Arrowhead is at area of reference.

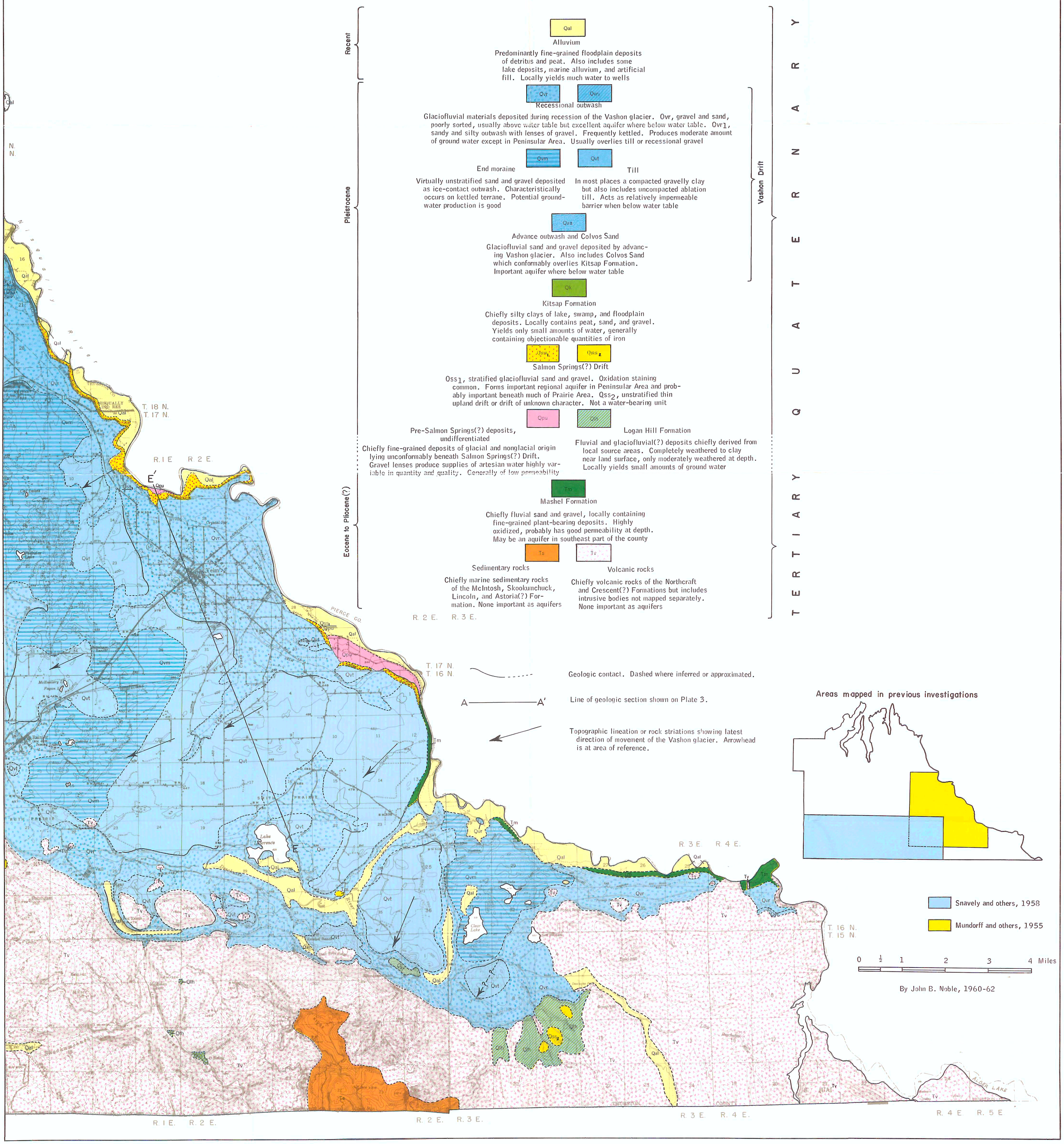
Areas mapped in previous investigations

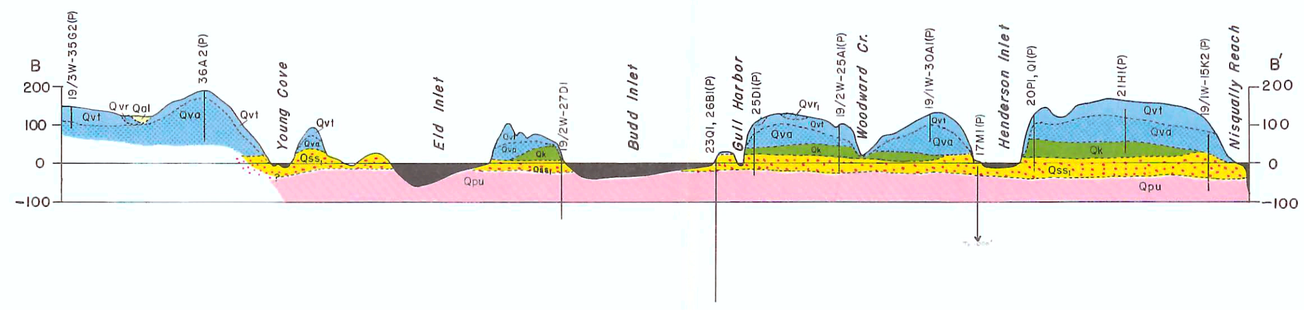
Snavely and others, 1958

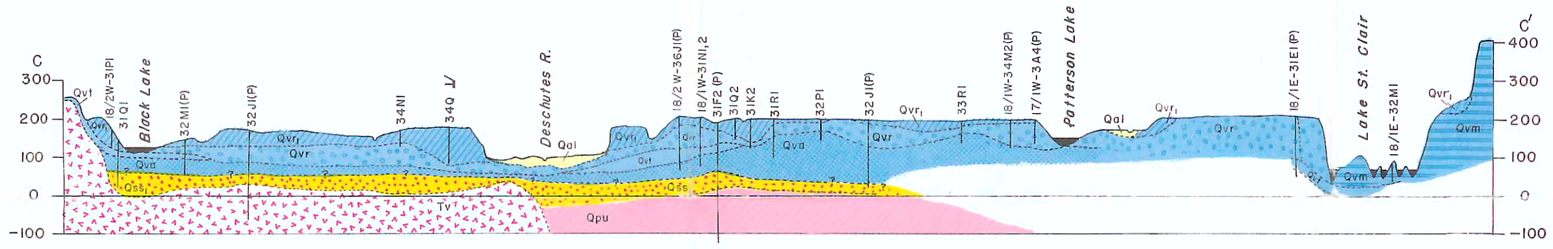
Mundorff and others, 1955

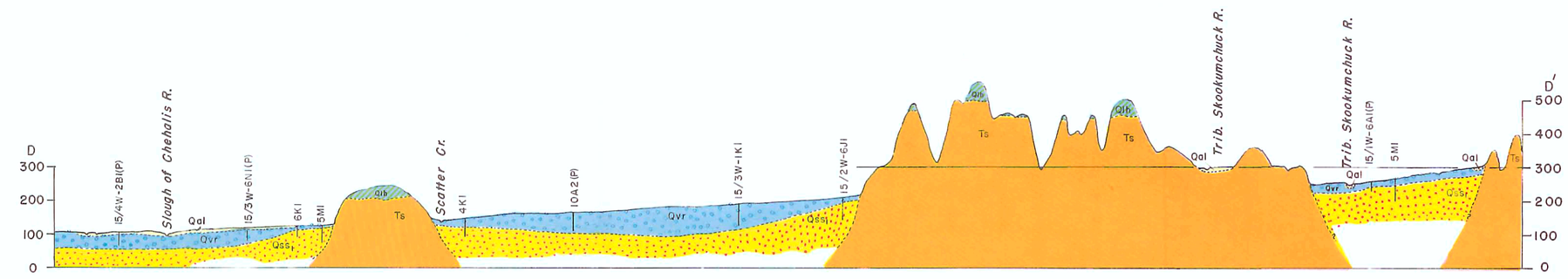
0 ½ 1 2 3 4 Miles

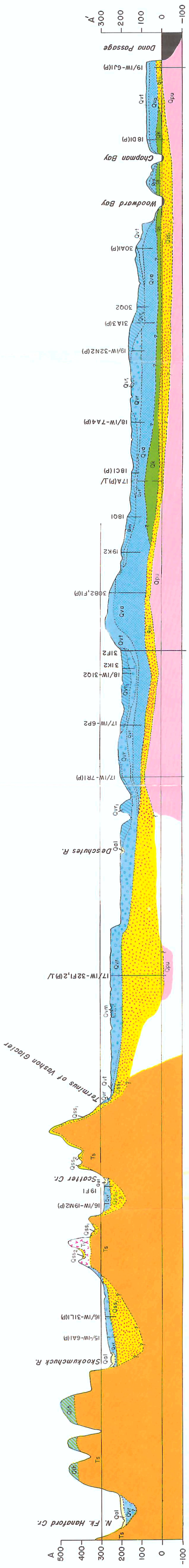
By John B. Noble, 1960-62

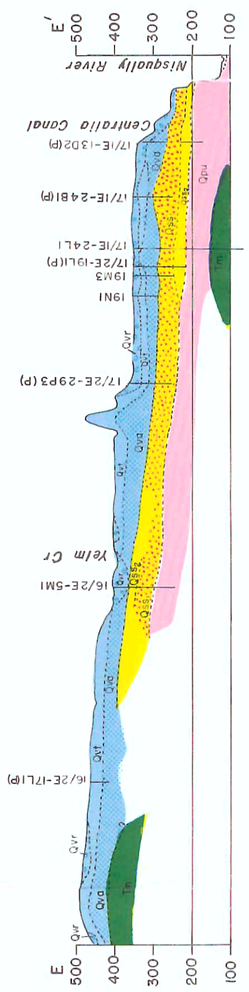




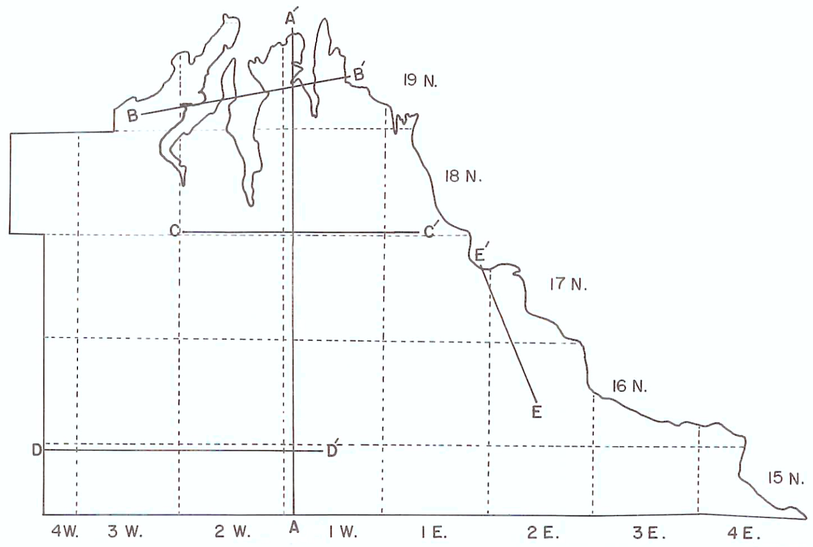




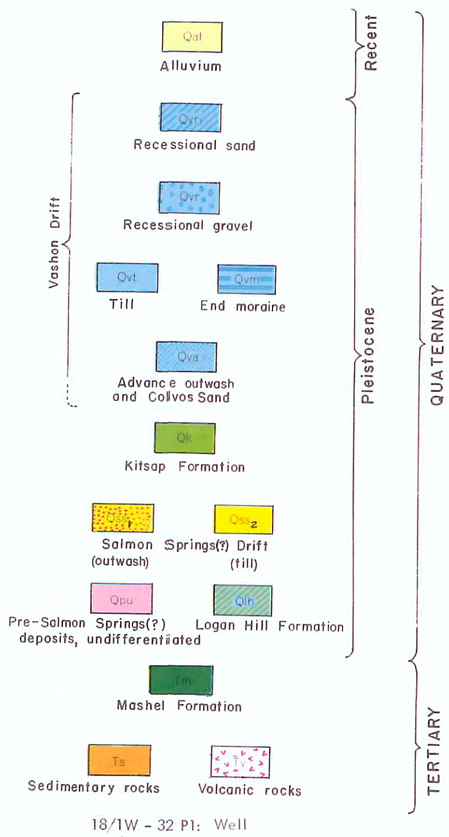




Section Location Map



EXPLANATION



18/1W - 32 P1: Well number of representative well. (P) indicates projection of well to section line. 1/ indicates well log appearing in appendix of Vol. 2

GEOLOGIC SECTIONS,

THURSTON COUNTY, WASHINGTON

STATE OF WASHINGTON
Department of Conservation
Division of Water Resources

By John B. Noble, 1962

1 0 1 2 3 4 Miles

Vertical scale approximately 20 X horizontal.

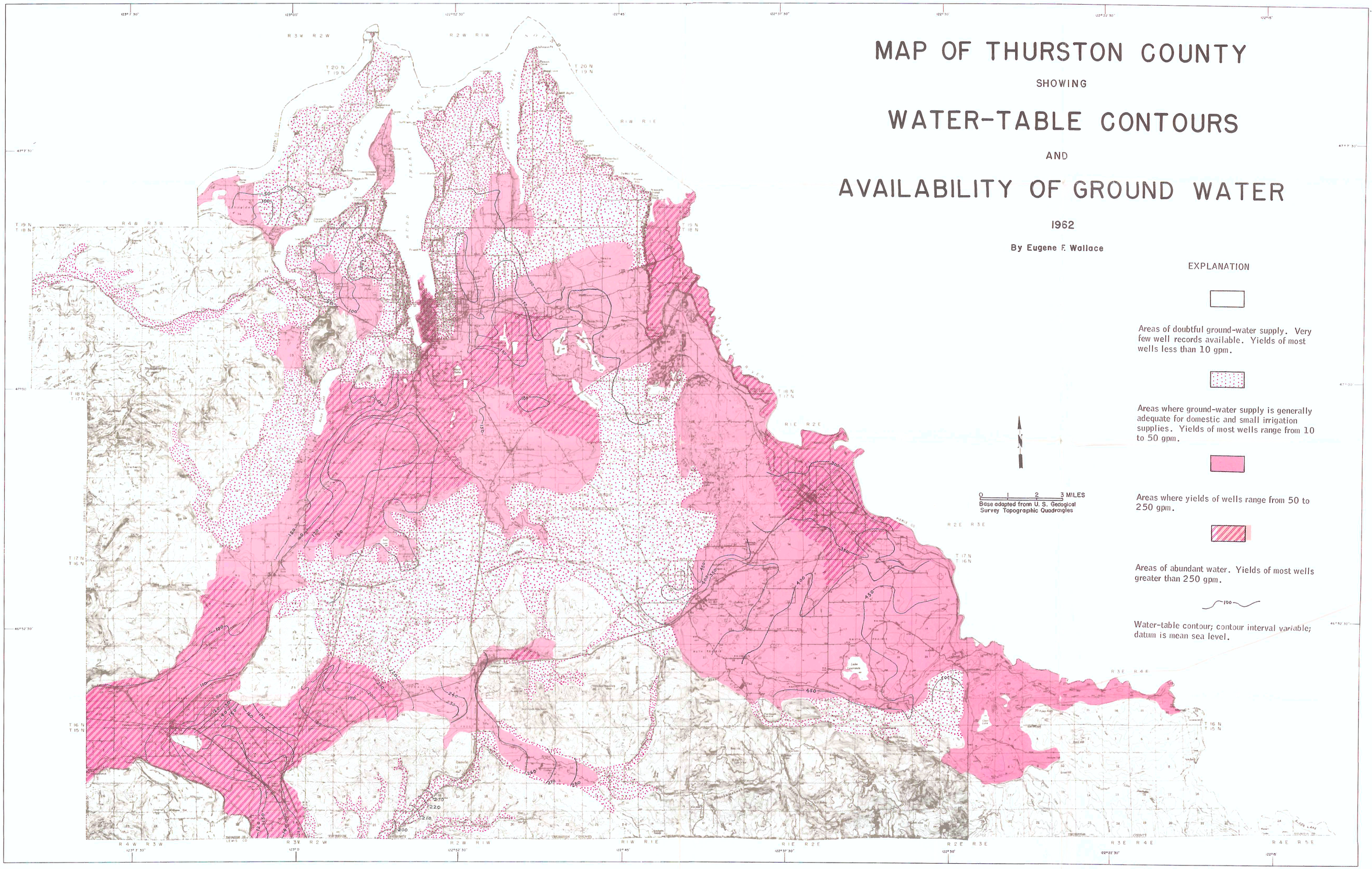
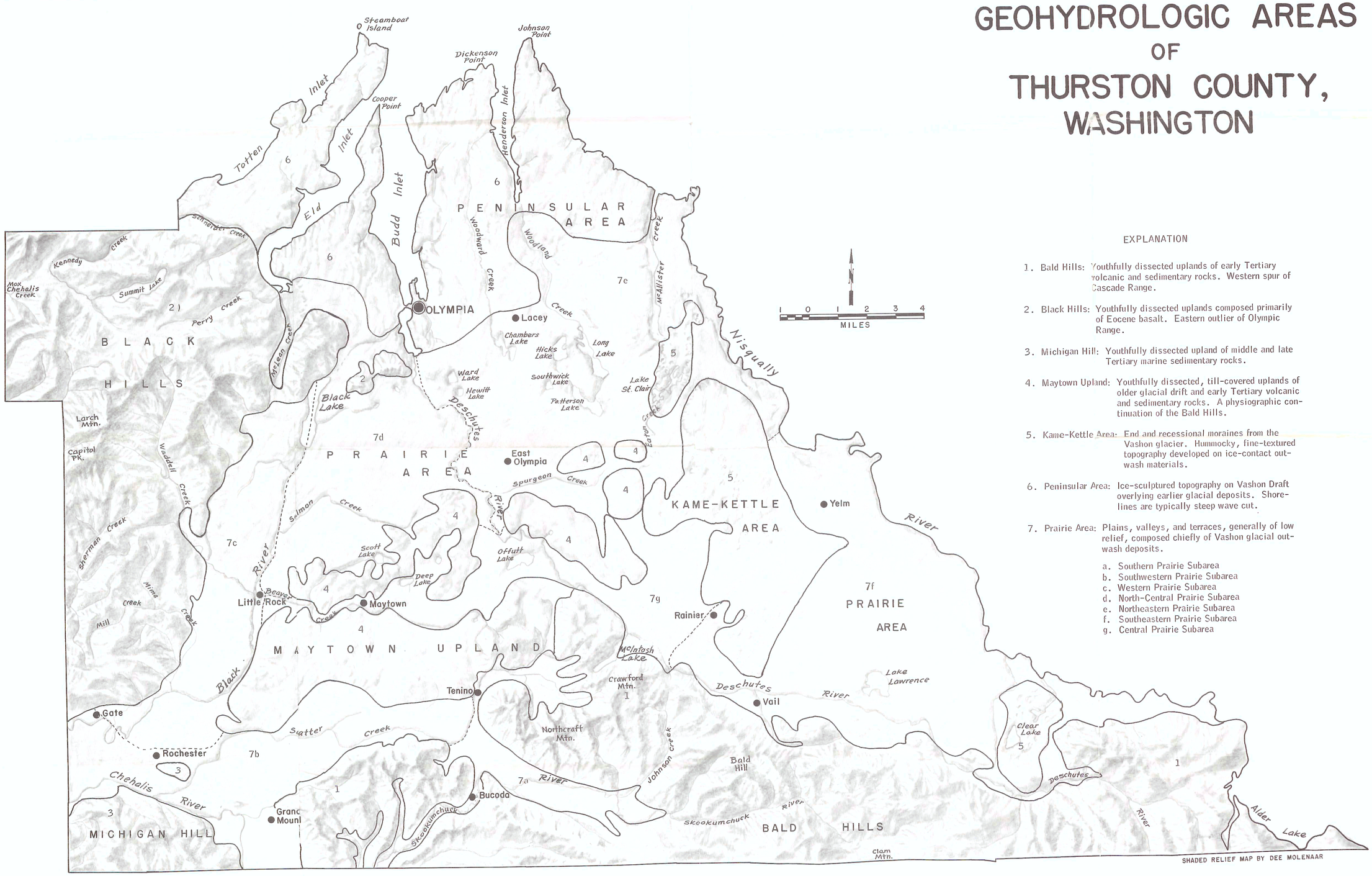

MAP OF THURSTON COUNTY
SHOWING
WATER-TABLE CONTOURS
AND
AVAILABILITY OF GROUND WATER
1962
By Eugene F. Wallace
EXPLANATION
Areas of doubtful ground-water supply. Very few well records available. Yields of most wells less than 10 gpm.
Areas where ground-water supply is generally adequate for domestic and small irrigation supplies. Yields of most wells range from 10 to 50 gpm.
Areas where yields of wells range from 50 to 250 gpm.
Areas of abundant water. Yields of most wells greater than 250 gpm.
Water-table contour; contour interval variable; datum is mean sea level.
0 1 2 3 MILES
Base adapted from U. S. Geological Survey Topographic Quadrangles
N

PLATE 5

GEOHYDROLOGIC AREAS OF THURSTON COUNTY, WASHINGTON



EXPLANATION

1. Bald Hills: Youthfully dissected uplands of early Tertiary volcanic and sedimentary rocks. Western spur of Cascade Range.

2. Black Hills: Youthfully dissected uplands composed primarily of Eocene basalt. Eastern outlier of Olympic Range.

3. Michigan Hill: Youthfully dissected upland of middle and late Tertiary marine sedimentary rocks.

4. Maytown Upland: Youthfully dissected, till-covered uplands of older glacial drift and early Tertiary volcanic and sedimentary rocks. A physiographic continuation of the Bald Hills.

5. Kame-Kettle Area: End and recessional moraines from the Vashon glacier. Hummocky, fine-textured topography developed on ice-contact outwash materials.

6. Peninsular Area: Ice-sculptured topography on Vashon Draft overlying earlier glacial deposits. Shorelines are typically steep wave cut.

7. Prairie Area: Plains, valleys, and terraces, generally of low relief, composed chiefly of Vashon glacial outwash deposits.

   a. Southern Prairie Subarea
   b. Southwestern Prairie Subarea
   c. Western Prairie Subarea
   d. North-Central Prairie Subarea
   e. Northeastern Prairie Subarea
   f. Southeastern Prairie Subarea
   g. Central Prairie Subarea