UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 1181—M, N
PLATE 1

124°00′ 123°30′ 123°00′ 122°30′

46°00′ 45°30′ 45°00′ 44°30′ 44°00′

OCEAN

PACIFIC

Astoria
Columbia River
Clatskanie
Cannon Beach
Tillamook
Mt Hebo
Kings Mtn
Rose Lodge
Saddleback Mtn
Cougar Mtn
Ball Mtn
Kernville
Government Point
Siletz
Newport
Yaquina River
Waldport
Blodgett Peak
Cannibal Mtn
Table Mtn
Heceta Head
Marys Peak
Triangle Lake
Fern Ridge Res
Laurel Mtn
Corvallis
Albany
Junction City
Halsey
Eugene
SALEM
PORTLAND

NEHALEM BASIN
TILLAMOOK HIGHLANDS
TUALATIN VALLEY
WILLAMETTE VALLEY
PORTLAND HILLS ANTICLINE

I I′ II II′ III III′ IV IV′ V V′ VI VI′ VII VII′ VIII VIII′ IX IX′ X X′ XI XI′ XII XII′ XIII XIII′ XIV XIV′ XV XV′ XVI XVI′

A A′ B B′ C C′ D D′ E E′ F F′ G G′ H H′

QTn Tb Tg Tm Tab Ts Tpb

+50 +45 +40 +35 +30 +25 +20 +15 +10 +5 0 −5 −10 −15 −20 −25 −30 −35 −40 −45 −50 −55

EXPLANATION

TERTIARY AND QUATERNARY

Pliocene to Recent

QTn

Nonmarine fluviatile and lacustrine deposits

Undifferentiated nonmarine valley alluvium, dune sand, beach sand, bay fill, and landslide debris, all of Recent age; light-brown silt of Pleistocene age; basalt flows in Portland Hills, and semiconsolidated carbonaceous claystone, siltstone, and sandstone and massive quartzose sandstone and siltstone mainly of Pliocene age, 500–1000 feet thick

TERTIARY

Miocene

Tb

Basalt flows and breccias

Dark-gray fine-grained columnar-jointed basalt, pillow basalt, and volcanic breccia of late(?) Miocene age; as much as 1000 feet thick

Eocene, Oligocene, and Miocene

Tm

Marine tuffaceous siltstone and sandstone

Undifferentiated tuffaceous siltstone, massive mudstone, and massive to crossbedded tuffaceous arkosic sandstone containing a few basaltic sandstone and conglomerate beds; of late Eocene to middle Miocene age; west of Tualatin Valley, includes marine siltstone of middle Eocene age; south of Tillamook Highlands, includes some basalt and andesite flows, breccia, and pyroclastic rocks of late Eocene age; along southwestern margin of map, includes tuffs, volcanic breccia, and lava flows of andesitic and basaltic composition of Oligocene age (HH symbol on section Y–Y′); about 7000 feet thick

Tab

Alkalic basalt

Dark-gray porphyritic alkalic basalt flows, breccias, and water-laid pyroclastic rocks containing a few intercalated beds of tuffaceous siltstone; of late Eocene age; as much as 5000 feet thick

Ts

Rhythmically bedded sandstone and siltstone

Bluish-gray medium-grained micaceous, arkosic, and lithic wacke and carbonaceous siltstone in graded beds 2–10 feet thick; grade laterally to siltstone and mudstone; of middle Eocene age; as much as 10,000 feet thick

Eocene

Tpb

Basaltic pillow lavas and breccias

Dark-greenish-gray basaltic pillow lavas and volcanic breccias containing interbedded marine tuffaceous siltstone and basaltic sandstone (stipple pattern on sections) of early to middle Eocene age; as much as 10,000 feet thick; base not exposed

INTRUSIVE ROCKS — **TERTIARY**

Miocene

Tg

Gabbroic and alkalic intrusive rocks

Sills and dikes of dark-gray granophyric gabbro and granophyric diorite; include a few bodies of light-gray nepheline syenite porphyry and dark-gray camptonite; gabbroic rocks probably of late(?) Miocene age

Contact
Dashed where approximately located

Fault
Dashed where approximately located; dotted where concealed. In section Y–Y′, T, toward observer; A, away from observer

Anticline
Showing trace of axial plane and direction of plunge. Dashed where approximately located; dotted where concealed

Syncline
Showing trace of axial plane and direction of plunge. Dashed where approximately located; dotted where concealed

+25
Lines of equal Bouguer anomaly in milligals
Contour interval 5 milligals

Gravity station

A — A′
Line of gravity profile and section shown in chapter N, figures 1–4

IV — IV′
Line of aeromagnetic profile shown on plates 2, 3

X — X′
Line of geologic section

The Texas Co. Clark and Wilson abandoned test well 9 miles south of Clatskanie
Total depth 8,501 feet

TRUE NORTH
21°
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1964

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1964—G64067

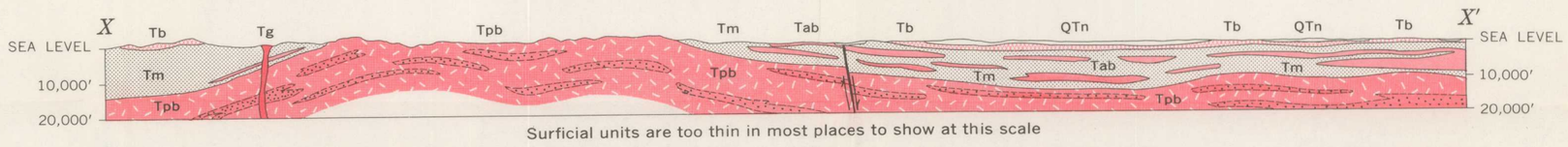
Base from U.S. Geological Survey
base map of Oregon, 1958

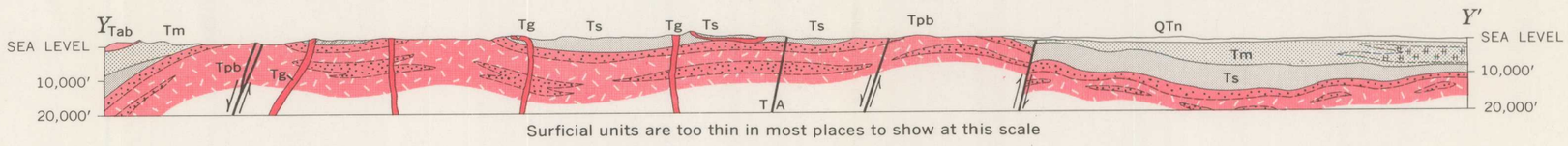
Generalized from Geologic Map of Oregon West of the 121st Meridian by F.G. Wells and D.L. Peck (1961). Modified from fieldwork by E.M. Baldwin, P.D. Snavely, Jr., and H.C. Wagner, 1960–61
Bouguer gravity contours by R.W. Bromery, 1958–60

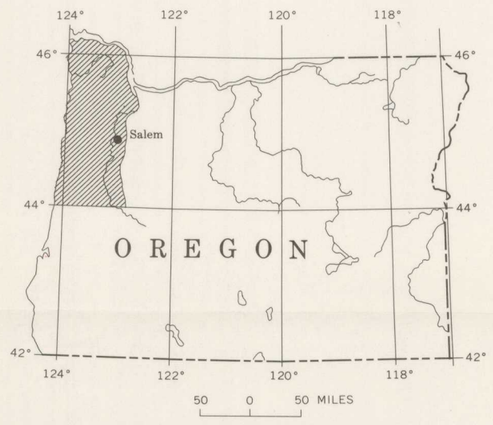
SCALE 1:500 000

10 0 10 20 30 MILES

10 0 10 20 30 KILOMETERS







INDEX MAP SHOWING THE AREA COVERED BY THE GEOLOGIC MAP

GENERALIZED GEOLOGIC AND SIMPLE BOUGUER GRAVITY MAP OF NORTHWESTERN OREGON