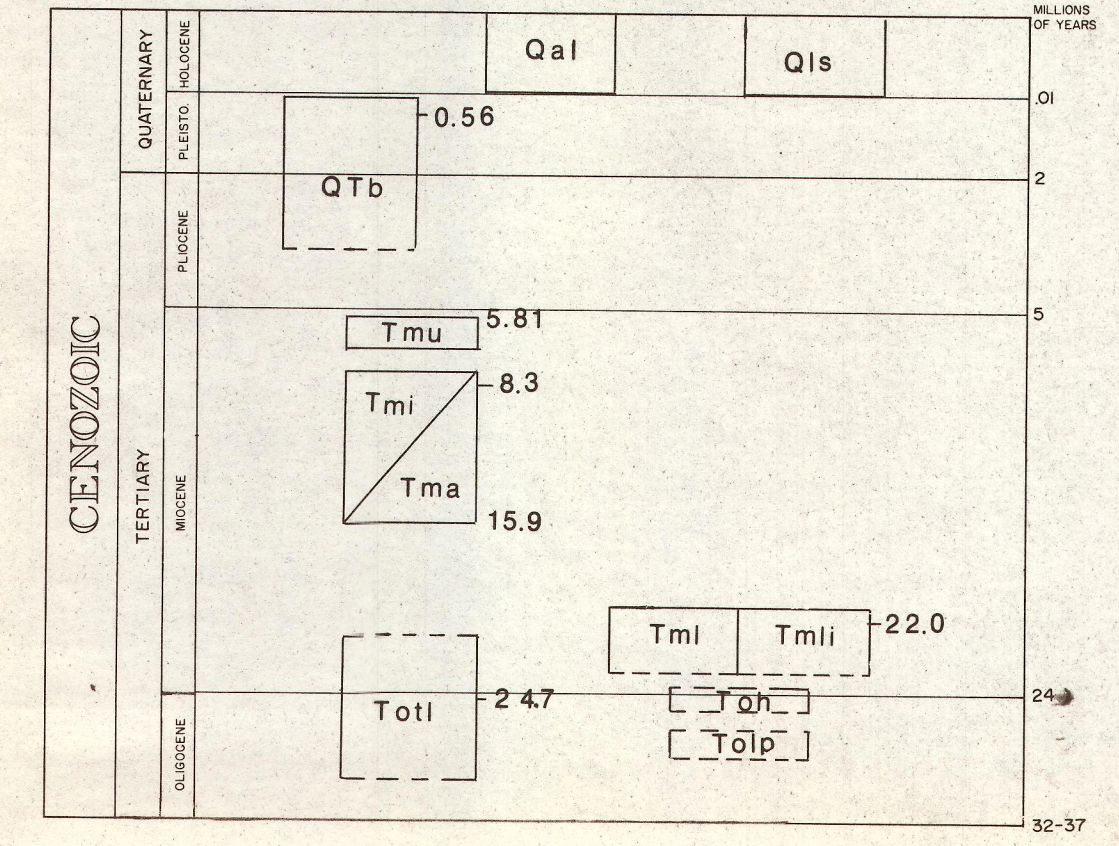


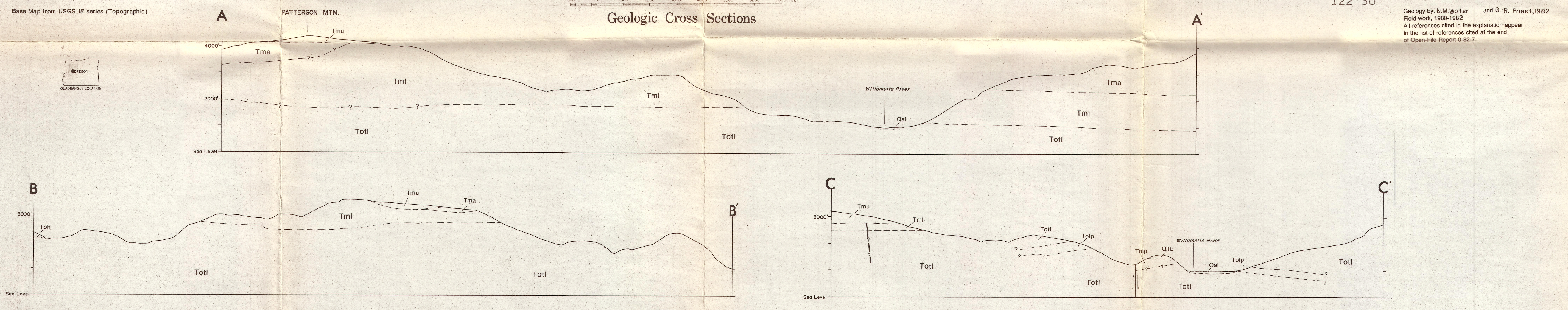
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**PRELIMINARY GEOLOGIC MAP OF THE
LOOKOUT POINT AREA
LANE COUNTY, OREGON
1982
PLATE 5**

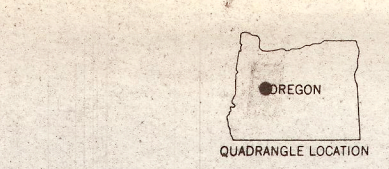
TIME ROCK CHART



- SURFICIAL DEPOSITS**
- Qal** Recent alluvium: Recent unconsolidated sediments located in present river and creek channels.
 - Qls** Landslide deposits: Unconsolidated landslide deposits, including slumps and slide blocks.
- BEDROCK GEOLOGIC UNITS**
- Volcanic rocks of late High Cascade time**
- QTb** Pliocene-Pleistocene(?) basaltic lavas: Dike-taxitic to compact, gray, fresh intracanyon flows of Pliocene and late Pliocene age. Olivine altering to iddingsite; groundmass contains subvolcanic clinopyroxene. Equivalent to High Cascade lavas of White (1980a), basalts of High Prairie of Brown and others (1980b), and Pliocene to Pleistocene basalts of High Cascades of Brown and others (1980c); partially equivalent to volcanic rocks of High Cascades... (undivided) of Peck and others (1964). Small flow near Arnet Creek dated at 0.56 m.y. B.P.
- Volcanic rocks of early High Cascade time**
- Tmu** Upper Miocene lavas: Olivine-bearing basalt; fresh, gray, and compact; intracanyon into units Tmi and Tma. Caps Patterson Mountain, undifferentiated. Dated at 5.81±0.30 m.y. B.P. Equivalent to Pliocene volcanic rocks of Brown and others (1980a), outcrop formation of White (1980a), outcrop series of Thayer (1939), and outcrop basalt of Hammond and others (1960).
- Volcanic rocks of late Western Cascade time**
- Tma** Miocene andesitic lavas: Two-pyroxene plagioclase-rich andesites with interbeds of epiclastic volcanic rocks and minor flows of olivine basalt and dacite. Appears to be intracanyon into units Tmi and Tmu on north and northwest sides of Patterson Mountain. Includes at least one dacite on north side of river. Sheared and altered. One flow high on Patterson Mountain dated 8.3 m.y. B.P.; another low in section dated at 15.9 m.y. B.P. Equivalent to Sardine Formation of Peck and others (1964), Rhododendron Formation of Hodges (1933). Miocene volcanic rocks of Brown and others (1980a,b), and Sardine and Elk Lake Formations of White (1980a). Tmi: Intrusive equivalent of unit Tma.
 - Tmi** Miocene andesitic lavas: Two-pyroxene plagioclase-rich andesites with interbeds of epiclastic volcanic rocks and minor flows of olivine basalt and dacite. Appears to be intracanyon into units Tmi and Tmu on north and northwest sides of Patterson Mountain. Includes at least one dacite on north side of river. Sheared and altered. One flow high on Patterson Mountain dated 8.3 m.y. B.P.; another low in section dated at 15.9 m.y. B.P. Equivalent to Sardine Formation of Peck and others (1964), Rhododendron Formation of Hodges (1933). Miocene volcanic rocks of Brown and others (1980a,b), and Sardine and Elk Lake Formations of White (1980a). Tmi: Intrusive equivalent of unit Tma.
- Volcanic rocks of early Western Cascade time**
- Tmi** Lavas of Black Canyon (early Miocene): Aphyric basalts and basaltic andesites; intracanyon into unit Totl. Kreuger Rock and Deception Butte (at southern margin) may be vents for this unit. Contains microphenocrysts of olivine and plagioclase in plagioclase groundmass. Generally black or gray. Contains interbeds of sediments and ash flows of unit Totl. Sequence extruded in short period of time about 22 m.y. B.P. Equivalent to Scorpion Mountain lavas of White (1980a,c). Tmii: Plug of these lavas.
 - Toh** Lavas of Hardesty Mountain (early Miocene): Altered silicic lavas, generally plagioclase-bearing or aphyric; some flows have pyroxene microphenocrysts; some are plagioclase porphyritic. At least one flow is amygdaloidal. Caps Hardesty Mountain west of map area. Chemical analysis of one sample yielded an icelandite composition.
 - Tolp** Oligocene and lower Miocene tuffs and lavas (undifferentiated): Tuffs are generally altered, welded and nonwelded yellow, green, or red ash flows with lithic fragments of aphyric or plagioclase-bearing silicic lavas. Airfall tuffs also present. In lower part of sequence, ash flows are lithic-fragment-rich and may be partly labric in origin. Lavas are generally silicic, altered, with plagioclase as the only mesoscopic phenocryst. Unit is folded, faulted, and altered. Overlies thick sequence of sediments not exposed in area. K-Ar date high in section was 24.7 m.y. B.P. Equivalent to Little Butte Volcanic Series of Peck and others (1964), Oligocene volcanic rocks of Brown and others (1980a,b), Breitenbush tuffs of Thayer (1939), and Breitenbush formation of White (1980a), and Hammond and others (1960).
 - Tol** Lavas of Lookout Point (Oligocene): Black, glassy, sparse-plagioclase-bearing, pyroclastic lavas, resistant compared to surrounding tuffs; forms knobby hills and exposures.
- GEOLOGIC SYMBOLS**
- Contacts:** Solid where visible; dashed where inferred below cover or from aerial photo interpretation.
 - Fault:** Solid where visible; dashed where approximately located; dotted where concealed by alluvium, landslide, colluvium, or reservoir. Dip on fault plane indicated; bar and ball on downthrown side.
 - Dike:** Solid where visible; dashed where inferred; dip indicated.
 - Shear:** with dip of plane and orientation of striations within plane.
 - Strike and dip of thinly bedded epiclastic units or volcanic flow tops.**
 - Geochemical sample location.**
 - K-Ar date:** sample location with age in millions of years (this study).
 - Brill hole location:** Terrain-corrected gradient in °C/km and heat-flow values in mW/m² where available.
 - K-Ar date:** sample location with age in millions of years (Sutter, 1978).



Base Map from USGS 15 series (Topographic)



See Level

See Level