

PRELIMINARY  
GEOLOGIC MAP  
of the  
KEATING NW. QUADRANGLE  
OREGON

STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
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CHRONOLITHOGRAPH  
(TIME ROCK CHART)

CENOZOIC	QUATERNARY	Holocene	Qal	Qls
		Pleistocene		
TERTIARY		Pliocene		Tst
		Miocene	Tba	
MESOZOIC	TRIASSIC	Upper		RPU
PALEOZOIC	PERMIAN			RPU

EXPLANATION

- Qal** Mainly valley fill and stream-channel deposits consisting of unconsolidated silt, sand, and gravel.
- Qls** Landslide debris.
- Tst** Lacustrine and fluvial deposits: Poorly to moderately well consolidated, white, or light shades of gray, yellow, or brown water-laid deposits of siliceous ash and tuff; lesser amounts of sandstone, siltstone, and diatomite. Mostly fine grained and moderately well bedded. Mostly lacustrine; some fluvial deposits including gravel locally, particularly in the upper part of the section; also includes thin, welded and non-welded ash-flow and air-fall tuff beds. Siliceous vitriclastic material commonly altered to secondary silica minerals, alkali feldspar, zeolites, and clay minerals. Vertebrate fossils indicate unit is mostly of lower Pliocene (Clarendonian) age. Fossil plants indicate some beds are of Miocene age. Overlies and intertongues with basalt flows of unit Tba.
- Tba** Basalt and andesite: Dark gray to black, locally reddish and dark greenish gray. Chiefly flow-on-flow basalt; some andesite in the northern part of the map area. Includes thin interbeds of poorly to semi-consolidated tuffaceous sedimentary rocks including fluvial gravels rich in rounded fragments of pre-Cenozoic rocks. Flows range from 10 feet to 80 feet in thickness. Flow tops commonly are scoriaceous. Platy jointing and columnar jointing are locally prominent. Clay minerals, zeolites, calcite, common opal, and chalcidony are alteration products in fractures and open spaces. Upper Miocene age based on plant remains found in tuff interbeds (Gilluly, 1937).
- RPU** Volcanic and sedimentary rocks: Closer Creek andesite of Gilluly (1937). Lava flows, flow breccia, agglomerate, and tuff; volcaniclastic conglomerate, breccia, sandstone, and siltstone; lesser argillite, chert, and minor limestone. Greenish-facis metamorphism. Volcanic rocks range from epyllite through meta-andesite to highly siliceous keratophyre and quartz keratophyre. Abundant small intrusive masses. Volcanic rocks and marine sedimentary rocks are interbedded. Poor exposures, facies changes, and complex structure make detailed mapping difficult. Age, Permian and Upper Triassic.

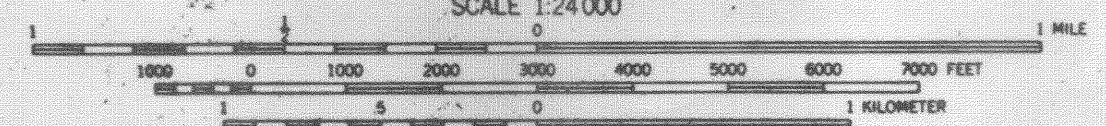
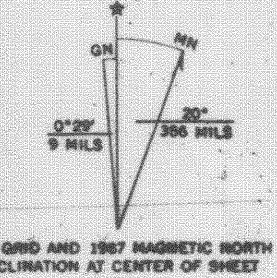
GEOLOGIC SYMBOLS

- Contacts**
- Approximate contact
- Faults**
- Normal fault
  - Approximate fault
  - Reverse fault (photointerpreted)
  - Normal fault (ball and bar on downthrown side)
  - Concealed fault
- Bedding**
- Strike and dip of bed
  - Strike of vertical bed
- Prospect**
- Prospect
  - Shalt
  - Adit



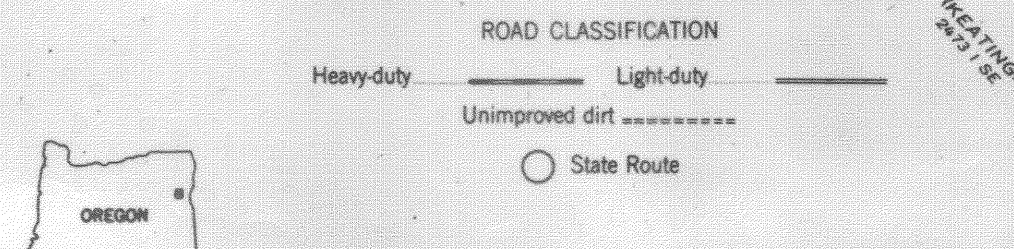
Base Map from USGS 7 1/2 series (Topographic)

Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial photographs taken 1966. Field checked 1967  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Oregon coordinate system, north zone  
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue  
Fine red dashed lines indicate selected fence lines



CONTOUR INTERVAL 20 FEET  
DOTTED LINES REPRESENT 10-FOOT CONTOURS  
DATUM IS MEAN SEA LEVEL

Prepared and Published by the Cartographic Section of the Department of Geology and Mineral Industries  
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Geology by Howard C. Brooks  
Cartography by C. A. Schumacher, 1977