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DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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Geologic Map of the Klamath Falls Area, Klamath County, Oregon

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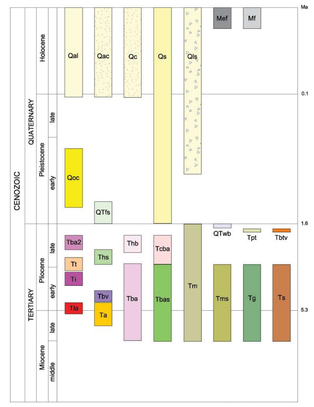
By George R. Priest, Frank R. Hladky, and Robert B. Murray

NOTICE

This map cannot serve as a substitute for site-specific investigations by qualified practitioners. Site-specific data may give results that differ from those shown on the maps. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. government.

TIME ROCK CHART



After Gradstein and others, 2004

EXPLANATION OF MAP SYMBOLS

- **Inclined bedding** – showing strike (trend over horizontal surface) and dip (inclination), measured pr estimated
- **Strike** – showing general direction of dip inferred from geologic features. These symbols are used to indicate direction of tilt of major fault blocks
- **Strike** – showing dip of flow foliation fractures in a lava flow
- **Joints or fractures** – showing strike and dip
- **Fault plane** – showing direction of rake and plunge of slickensides on the fault plane (diamond) and dip and direction of dip on the fault plane (open arrow).
- **Normal fault** cutting rocks older than ~1.8 Ma – dashed where approximately located; dotted where concealed; bar and ball on downthrown side; if shown, dip (inclination) applies to the point where shown and may not represent inclination of the fault plane as a whole
- **Normal fault** cutting rocks ~1.8 Ma (approximate age of unit QTwb) or younger – dashed where approximately located; dotted where concealed; bar and ball on downthrown side; if shown, dip (inclination) applies to the point where shown and may not represent inclination of the fault plane as a whole
- **Strike-slip fault** – arrows show relative motion
- **Reverse fault** – showing teeth on upper plate of fault; dotted where covered)
- **Boundary of an area of complex surface deformation** along a normal fault cutting rocks ~1.8 Ma (approximate age of unit QTwb) and younger but caused in part by geothermal circulation; hatches are in the direction of downward displacement; see Figure 3.6 in the text for detailed map of deformation.
- **Contact** – approximately located; dotted where concealed
- **Anticline** – showing plunge direction
- **Minor anticline** – showing plunge direction
- **Diatreme dike complex** – composed of layers of basaltic glass fragments; range of dip of layers given with arrow in direction of dip
- **Approximate location of water well** – estimated to within one quarter-quarter section; depth in feet on right; map identification number on left; 0 = no data on depth
- **Approximate location of water well** – high confidence in location; depth in feet on right; map identification number on left; probably within 50 m; 0 = no data on depth
- **Location of surveyed water well** – depth in feet on right; map identification number on left; 0 = no data on depth
- **Location of whole-rock XRF geochemical analysis sample** – see Table 1.3 in the text
- **Location of isotopic age and chemical composition sample** – see Table 1.1 and Table 1.3 in the text for details
- **Location of isotopic age sample** – analysis by Pickthorn and Sherrod (1990) with age listed in millions of years
- **Location of diatom age sample** – analysis for diatom age by Platt Bradbury; see Table 1.4 in the text
- **Location of potentially valuable surface exposure of diatomite** (Peterson and McIntyre, 1970)
- **Location of mercury (cinnabar) deposit** (Peterson and McIntyre, 1970)

EXPLANATION OF MAP UNITS

(see accompanying text for full explanations)

- Mef – Engineered fill (Modern)
- Mf – Fill (Modern)
- Qc – Colluvium (Holocene)
- Qac – Alluvium and colluvium undifferentiated (Holocene)
- Qal – Coarse-grained alluvium (Quaternary)
- Qs – Lacustrine and alluvial clay, silt, fine-grained sand, and peat (Quaternary)
- Qls – Landslide deposits (Quaternary)
- Qoc – Older colluvium and alluvium (Pleistocene)
- QTfs – Sedimentary rocks of Foothills Drive (lower Quaternary or upper Pliocene)
- QTwb – Basalt of Wocus Marsh (lower Quaternary or upper Pliocene)
- Tcba – Basaltic andesite of Cove Point (Pliocene)
- Thb – Basalt of Hogback Mountain (Pliocene)
- Tba2 – Basaltic andesite (Pleistocene and upper Pliocene)
- Ths – Sedimentary rocks of Hogback Mountain (Pliocene)
- Tpt – Tuff of Ponderosa Junior High School (upper Pliocene or upper Miocene)
- Tt – Tuff, lapilli tuff, and tuffaceous breccia (Pliocene)
- Tbv – Basalt or basaltic andesite vent complex (Pliocene and upper Miocene)
- Tbtv – Mafic diatreme vent complex (Pliocene and upper Miocene)
- Ta – Andesite (Pliocene and upper Miocene)
- Tla – Andesite of Link River (Pliocene or upper Miocene)
- Tba – Tertiary basaltic andesite (Pliocene and upper Miocene)
- Tbas – Mixed volcanic and sedimentary rocks (Pliocene and upper Miocene)
- Tm – Lacustrine mudstone (Pliocene and upper Miocene)
- Tms – Mudstone and sandstone (Pliocene and upper Miocene)
- Tg – Conglomerate (Pliocene and upper Miocene)
- Ts – Sandstone (Pliocene and upper Miocene)
- Tt – Intrusion (Pliocene)
- Hydrothermal alteration

Base map compiled from parts of USGS digital raster graphics (DRGs) of Klamath Falls, Altamont, Wocus, and Whiteline Reservoir 7.5' topographic quadrangles
Projection: Lambert Conformal Conic
Vertical datum: National Geodetic Vertical Datum of 1929
Horizontal datum: 1927 North American Datum

SCALE 1:24 000

1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

MAP LOCATION

				ADJOINING 7.5' QUADRANGLE NAMES	
1	2	3	4	1 Shoalwater Bay	9 Keno
5	6	7	8	2 Modoc Pot	10 Klamath Falls
				3 Swan Lake Point	11 Altamont
9	10	11		4 Sprague River West	12 Dairy
				5 Howard Bay	13 Hamaker Mountain
13	14	15	16	6 Wocus	14 Worden
				7 Whiteline Reservoir	15 Lost River
				8 Swan Lake	16 Merrill

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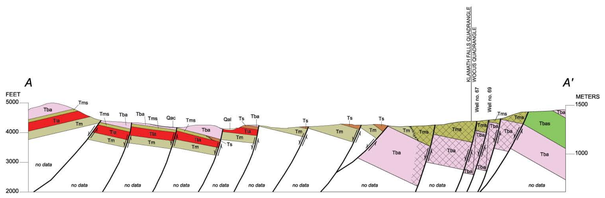
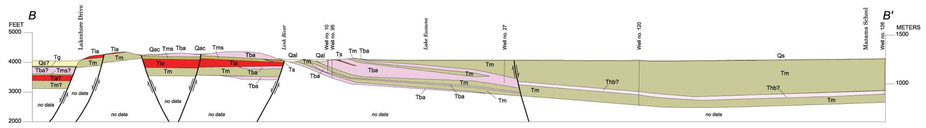
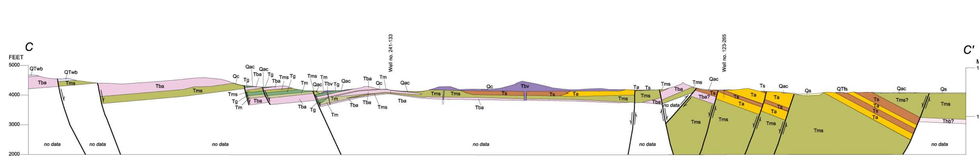
Errata note 06/19/2015:
On the southwesternmost fault on cross section A-A' the offset arrows incorrectly show the offset direction. The arrows should be reversed.

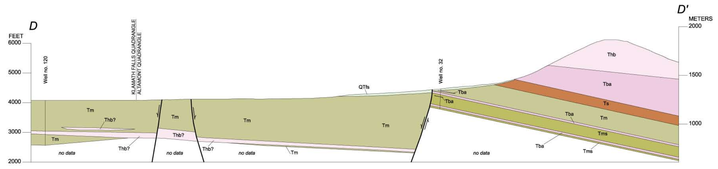
GEOLOGIC CROSS SECTIONS

Qal is not shown in cross section
No vertical exaggeration









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