

Geologic Map of the Klamath Falls Area, Klamath County, Oregon

2008

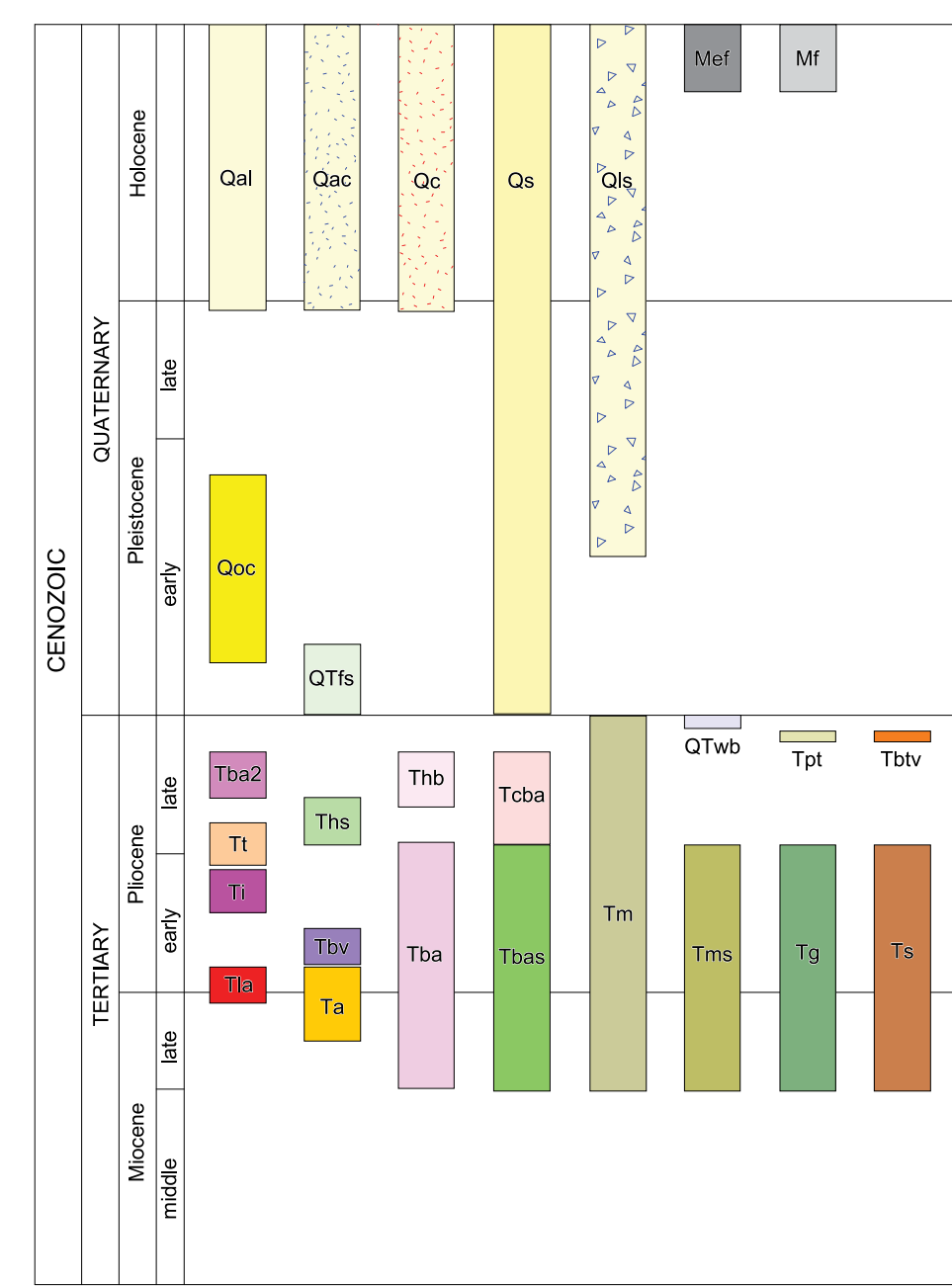
GMS-118

Geologic Map of the Klamath Falls Area, Klamath County, Oregon
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



EXPLANATION OF MAP SYMBOLS

- Inclined bedding - showing strike (trend over horizontal surface) and dip (inclination), measured or estimated.
- Strike - showing general direction of dip inferred from geologic features. These symbols are used to indicate direction of dip 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 concave; bar and half 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 concave; bar and half 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 rock ~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 concave.
- 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-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; 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 Pichthorn and Sherrod (1990) with age listed in millions of years.
- Location of diatom age sample - analysis for diatom age by Platt (1990) with age listed in millions of years.
- Location of potentially valuable surface exposure of diatomite (Peterson and McIntyre, 1970).
- Location of mercury (cinabar) deposit (Peterson and McIntyre, 1970).

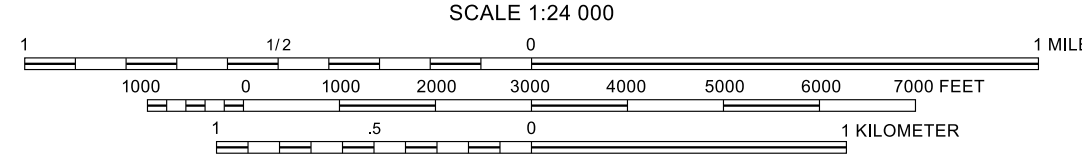
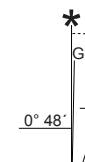
EXPLANATION OF MAP UNITS

(see accompanying text for full explanations)

- MF Modern (Modern)
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- Qc Colluvium (Holocene)
- Qac Alluvium and colluvium undifferentiated (Holocene)
- Qal Coarse-grained alluvium (Quaternary)
- Qr Lacustrine and alluvial clay, silt, fine-grained sand, and peat (Quaternary)
- Qls Landslide deposits (Quaternary)
- Qol Older colluvium and alluvium (Pleistocene)
- QThs Sedimentary rocks of Foothills Drive (lower Quaternary or upper Pliocene)
- QTwb Basalt of Wicwas Marsh (lower Quaternary or upper Pliocene)
- Tsb Basaltic andesite of Cove Point (Pliocene)
- Tbs Basalt of Hugab Mountain (Pliocene)
- Tba Basaltic andesite (Pleistocene and upper Pliocene)
- Tm Lacustrine mudstone (Pliocene and upper Miocene)
- Tm Lacustrine mudstone (Pliocene and upper Miocene)
- Tm Mafic diatreme vent complex (Pliocene and upper Miocene)
- Ta Andesite (Pliocene and upper Miocene)
- Ta Andesite of Link River (Pliocene or upper Miocene)
- Tba Tertiary basaltic andesite (Pliocene and upper Miocene)
- Tm Mixed volcanic and sedimentary rocks (Pliocene and upper Miocene)
- Tm Lacustrine mudstone (Pliocene and upper Miocene)
- Tm Mudstone and sandstone (Pliocene and upper Miocene)
- Ts Conglomerate (Pliocene and upper Miocene)
- Ts Sandstone (Pliocene and upper Miocene)
- Ti Intrusion (Pliocene)
- Hydrothermal alteration

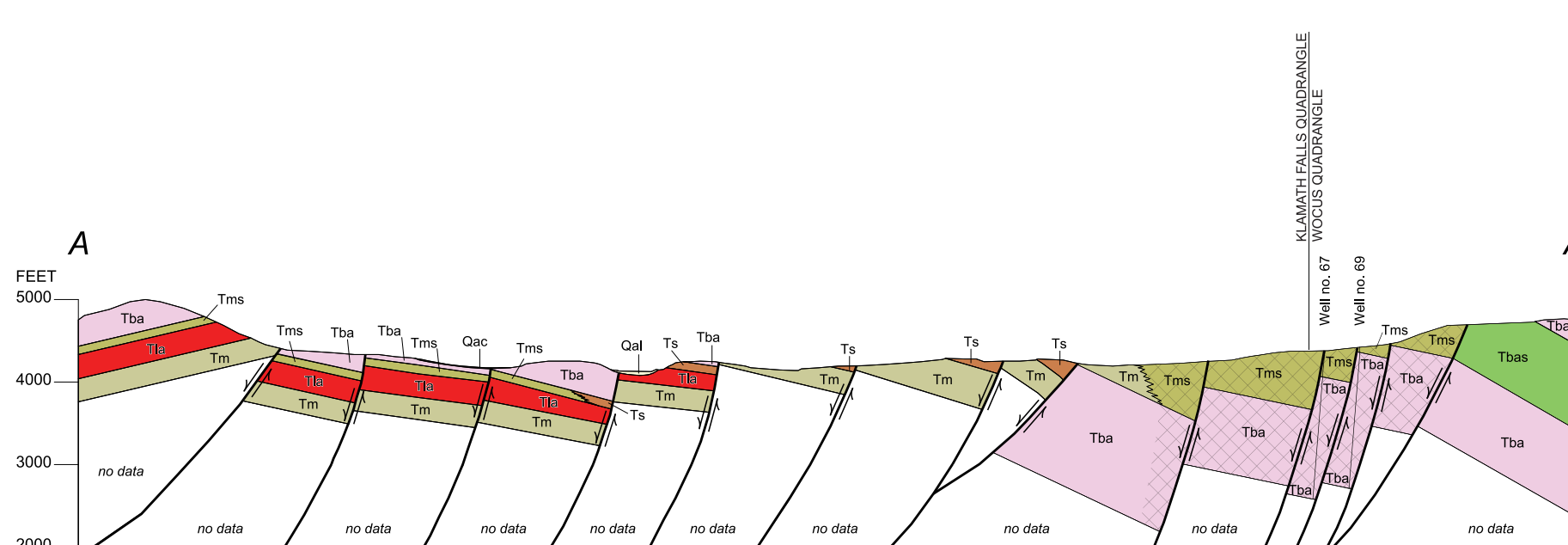
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Base map compiled from parts of USGS digital raster graphics (DRGs) of Klamath Falls, Altamont, Wicwas, and White Lake Reservoir 7.5' topographic quadrangles
Projection: Lambert Conformal Conic
Vertical datum: National Geodetic Vertical Datum of 1929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



1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

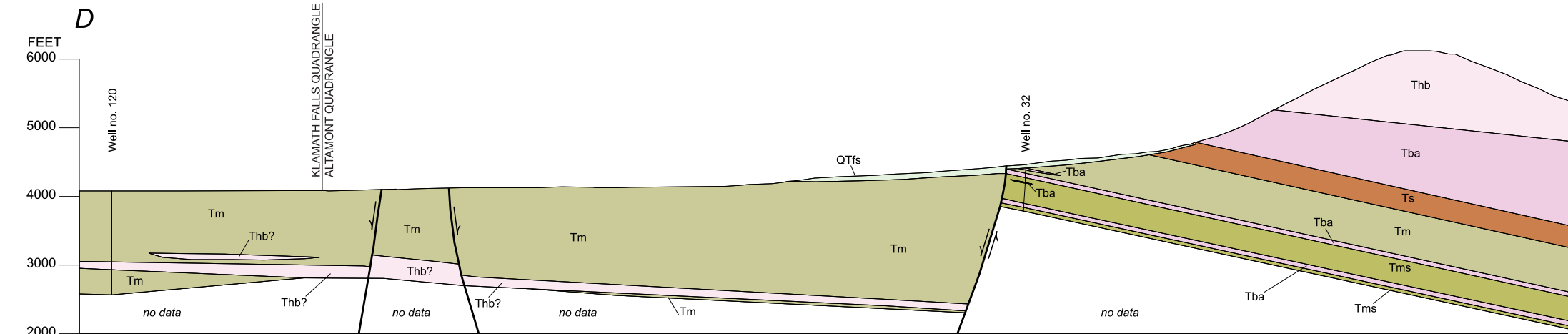
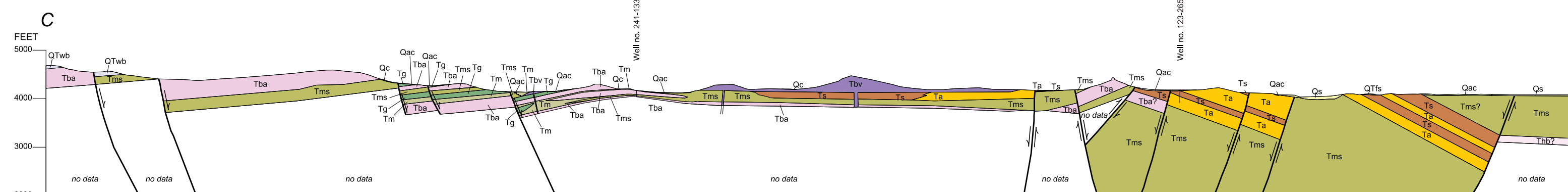
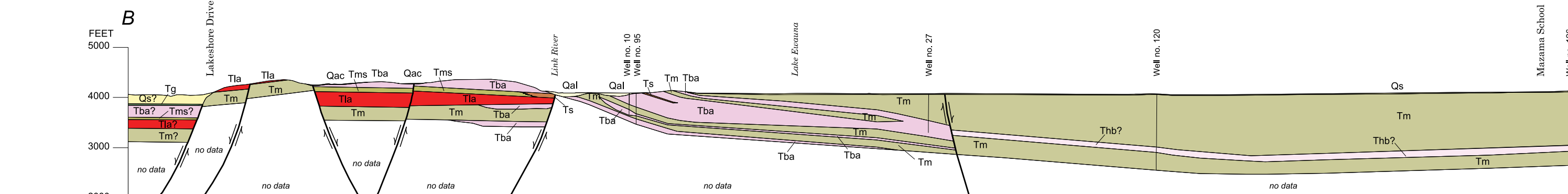
Errata note 06/19/2015:
On the southwesternmost fault on cross section A-A', the offset arrows incorrectly show the offset direction. The arrows should be reversed.



GEOLOGIC CROSS SECTIONS

See accompanying text for full explanations.

No vertical exaggeration.



REFERENCES

- Goodwin, F.M., Ogg, J.G., and Smith, A.G., 1990. A geologic map of the Klamath Falls area, Klamath County, Oregon. Oregon Department of Geology and Mineral Industries Bulletin 66, 70 p.
- Peterson, N.V., and McIntyre, J.R., 1970. The reconnaissance geology and mineral resources of eastern Klamath County and western Lake County, Oregon. Oregon Department of Geology and Mineral Industries Bulletin 66, 70 p.
- Pichthorn, L.B.G., and Sherrod, D.R., 1990. Potassium-argon ages from Klamath Falls area, south-central Oregon. Isochron/West, no. 55, p. 13-17.