STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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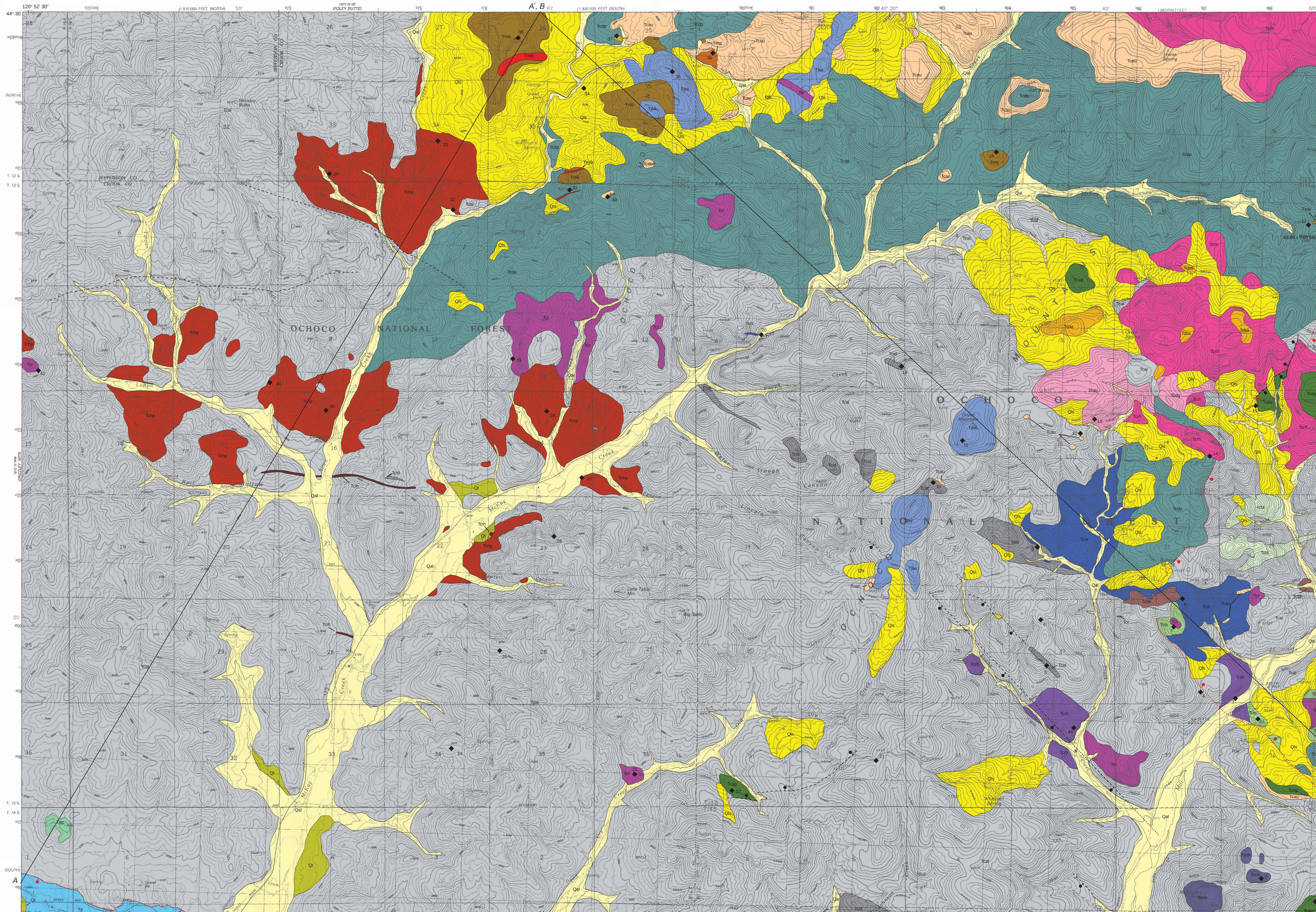
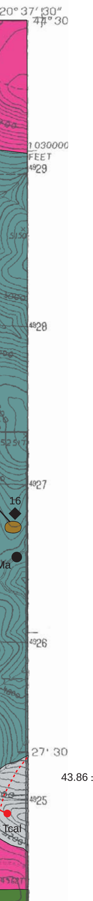
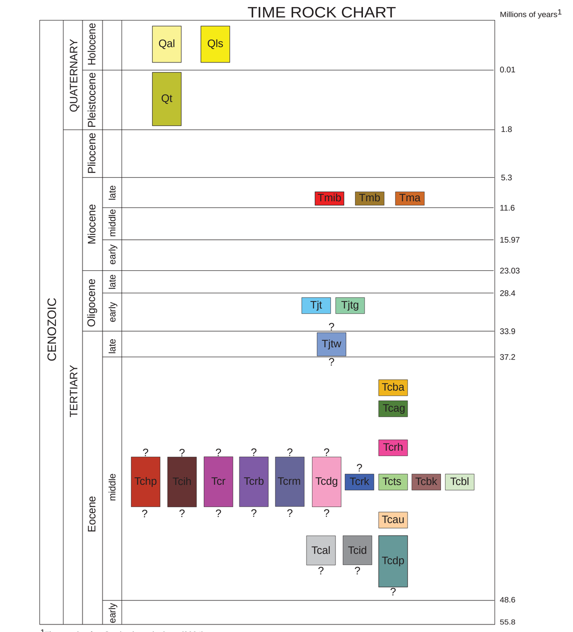
Preliminary Geologic Map of the Hensley Butte and Salt Butte 7.5′ Quadrangles, Crook County, Oregon
2007





TIME ROCK CHART



Geology by Mark L. Ferns and Jason D. McClaughry,
Oregon Department of Geology and Mineral Industries

Field work conducted in 2006
Digital cartography by Jason D. McClaughry
Map edited by Deb Schueller and Jan Durflinger
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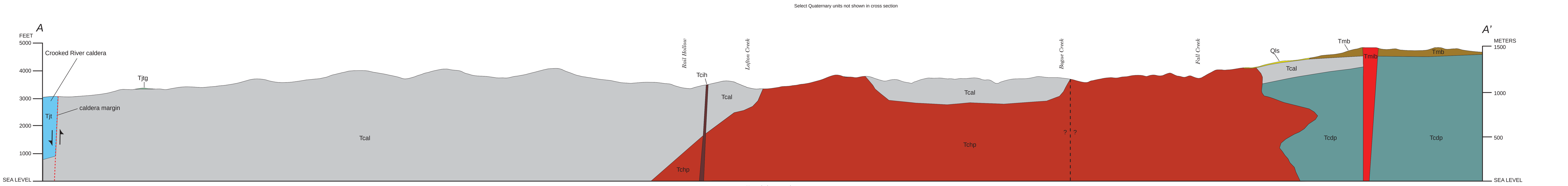
GEOLOGIC CROSS SECTIONS



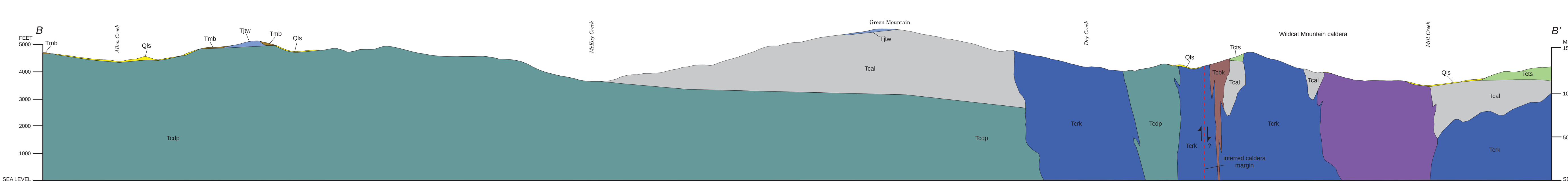


Figure 1. Total alkalis vs. silica (TAS) classification of whole-rock analyses table 1. Fields are from Le Bas and others (1986) and Le Maitre and others (1989).

Table 1. Whole-rock XRF (x-ray fluorescence) analyses, Hensley Butte and Salt Butte 7.5′ quadrangles, Crook County, Oregon.

Table 2. $^{40}Ar/^{39}Ar$ radiometric age date determination, Salt Butte 7.5′ Quadrangle, Crook County, Oregon.

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Preliminary Geologic Map of the Hensley Butte and Salt Butte 7.5′ Quadrangles, Crook County, Oregon

By M.L. Ferns and J.D. McClaughry

This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program.

Tcih **Hornblende-phyric intrusions (Eocene) –** The unit includes prominent, vertical, east-west trending dikes and a small plug exposed near the intersection of McKay and Allen Creeks. The dike exposed through sec. 15, 16, and 17, T.13 S., R. 16. E. can be followed discontinuously for ~2.5 km, is 4 to 6 m thick, and has well-developed horizontal columnar jointing. A small, 20 to 25 m wide, vertically jointed plug is exposed along McKay Creek in the NW ¼ of sec. 23, T. 13 S., R. 16 E. Bingert (1984) interpreted this outcrop as a possible feeder to an autobrecciated plagioclase-, hornblende-phyric dacite flows exposed directly above the plug.

Tcdg **Dacite of Green Mountain (Eocene) –** Blue to gray, variably altered, feldspar- and pyroxene-phyric dacite intrusion that is nonconformable into unit Tcal and unit Tcdp south of Green Spring. The age relations between the unit Tcdg intrusion and the Rhyolite of Hash Rock (Tcrh) are unknown. Outcrops of the dacite are bulbous massive, to tabular- and columnar-jointed with a subvertical to vertical flow foliation. The south part of the intrusion, exposed at the head of Dry Creek (NE ¼, sec. 15, T. 13 S., R. 17 E.) is characterized by distinct columnar jointing. Columns are up to 1 m across, have an internal platy fabric, and sweep from subvertical at the base of the outcrop to vertical orientations near the top of the exposure.

REFERENCES