PRELIMINARY GEOLOGIC MAP OF THE PRINEVILLE 7 ½' QUADRANGLE, CROOK COUNTY, OREGON

By J.D McClaughry and M.L. Ferns

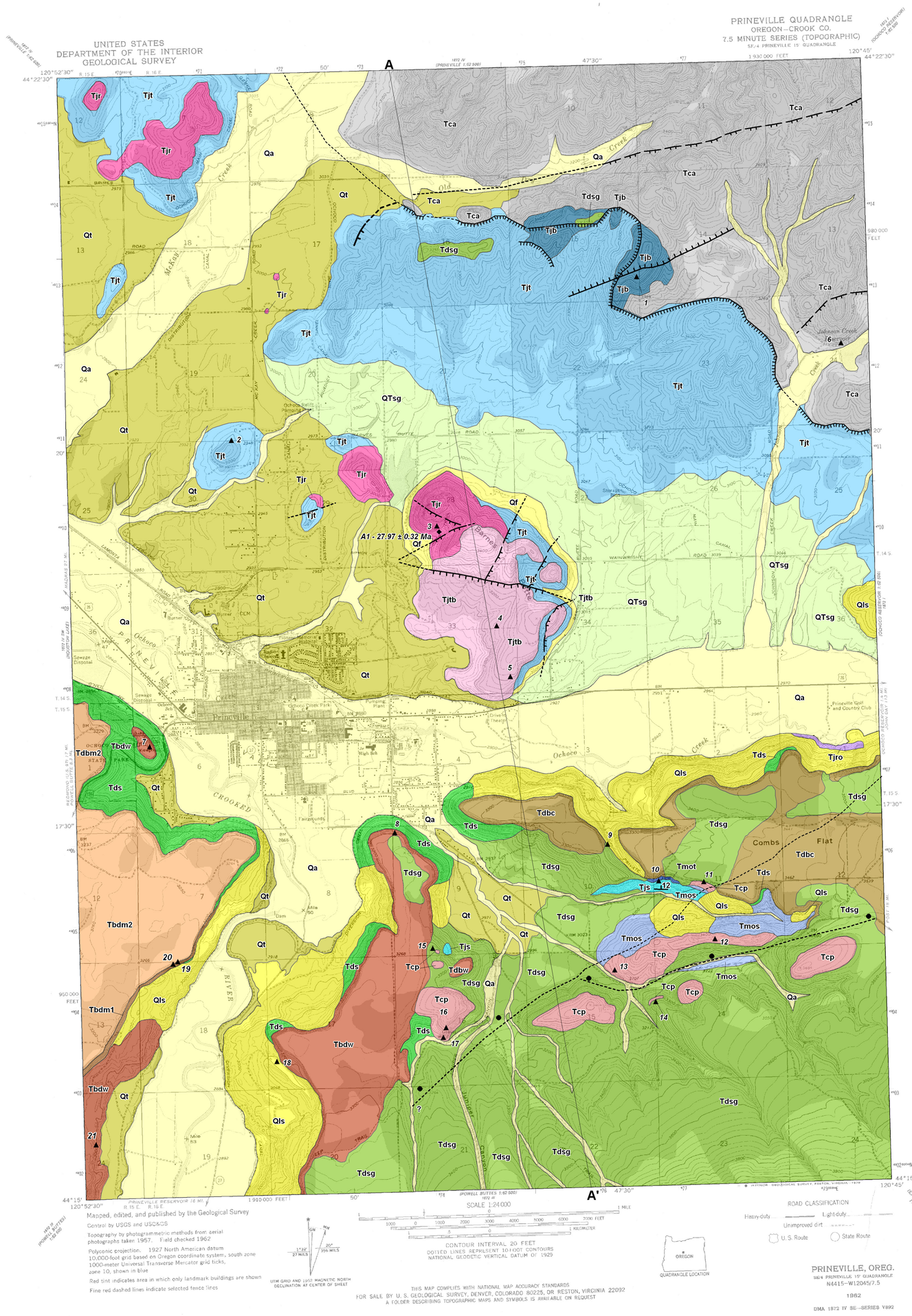
2006

Open-File Report O-06-22
Oregon Department of Geology and Mineral Industries
Dr. Vicki S. McConnell, State Geologist

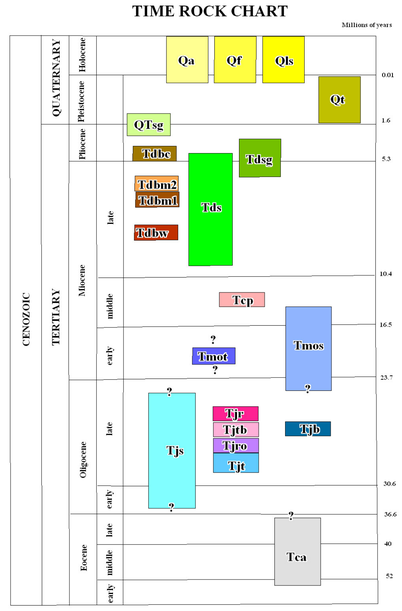
This geologic map was funded in part by the
USGS National Cooperative Geologic Mapping Program

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

DRAFT



TIME ROCK CHART



After Berggren and others, 1985 and Kent and Gradstein, 1985

EXPLANATION OF MAP UNITS

(full description of units in accompanying text)

Surficial Deposits

- Qa — Stream alluvium (Holocene and Pleistocene)
- Qf — Alluvial fan deposits (Holocene and Pleistocene)
- Qls — Landslide deposits (Holocene and Pleistocene)
- Qt — Terrace deposits (Pleistocene)

Tertiary volcanics and sedimentary rocks

- QTsg — Sand and gravel deposits (Pliocene and Pleistocene)

Deschutes Formation (Pliocene and late Miocene), Td - subdivided into:

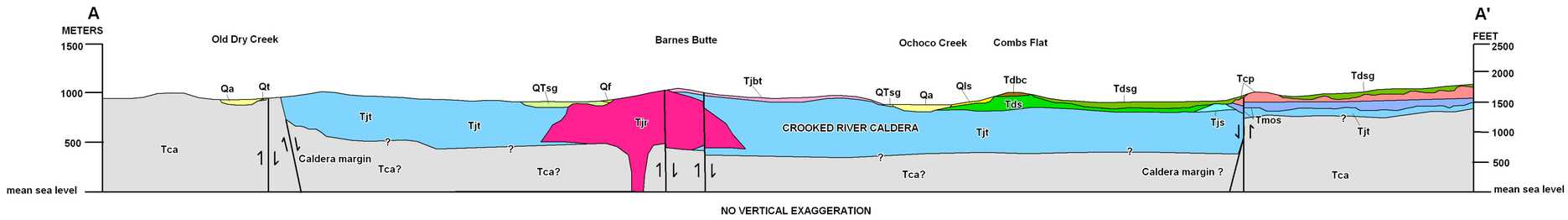
- Tdsg — Sand and gravel (Pliocene or late Miocene?)
- Tdbc — Basalt of Combs Flat (late Miocene)
- Tdbm2 — Basalt of Meyers Butte, upper flow (late Miocene)
- Tdbm1 — Basalt of Meyers Butte, lower flow (late Miocene)
- Tdbw — Basalt of White Deer Ranch (late Miocene)
- Tds — Sedimentary rocks (late Miocene)
- Tcp — Prineville Basalt (middle Miocene)
- Tmos — Tuffaceous sedimentary rocks (middle Miocene to late Oligocene?)
- Tmot — Pumice-lithic tuff (middle Miocene to late Oligocene?)

John Day Formation (early Miocene? and Oligocene), Tj - subdivided into:

- Tjs — Sedimentary rocks (late Oligocene)
- Tjb — Breccia and welded tuff (late Oligocene)
- Tjtb — Welded ash-tuff of Barnes Butte (late Oligocene)
- Tjp — Rhyolite (late Oligocene)
- Tjro — Rhyolite of Ochoco Reservoir (late Oligocene)
- Tjt — Pumice-lithic tuff (late Oligocene)

Clarno Formation (Eocene), Tc - subdivided into:

- Tca — Dacite and andesite lava flows (Eocene)

EXPLANATION OF MAP SYMBOLS

- Geologic contact - approximately located
- 22 — Inclined bedding - showing measured strike and dip
- Fault, approximately located; dashed where inferred, hachures indicate downdropped side; dotted where concealed, filled circles indicate downdropped side
- Caldera margin, approximately located; dotted where concealed by younger deposits.
- ▲ 4 — Geochemical sample locality - see Table 1.1 in accompanying text
- ◆ A1 - 27.97 ± 0.32 Ma — Radiometric age-date sample locality - see Table 1.2 in accompanying text