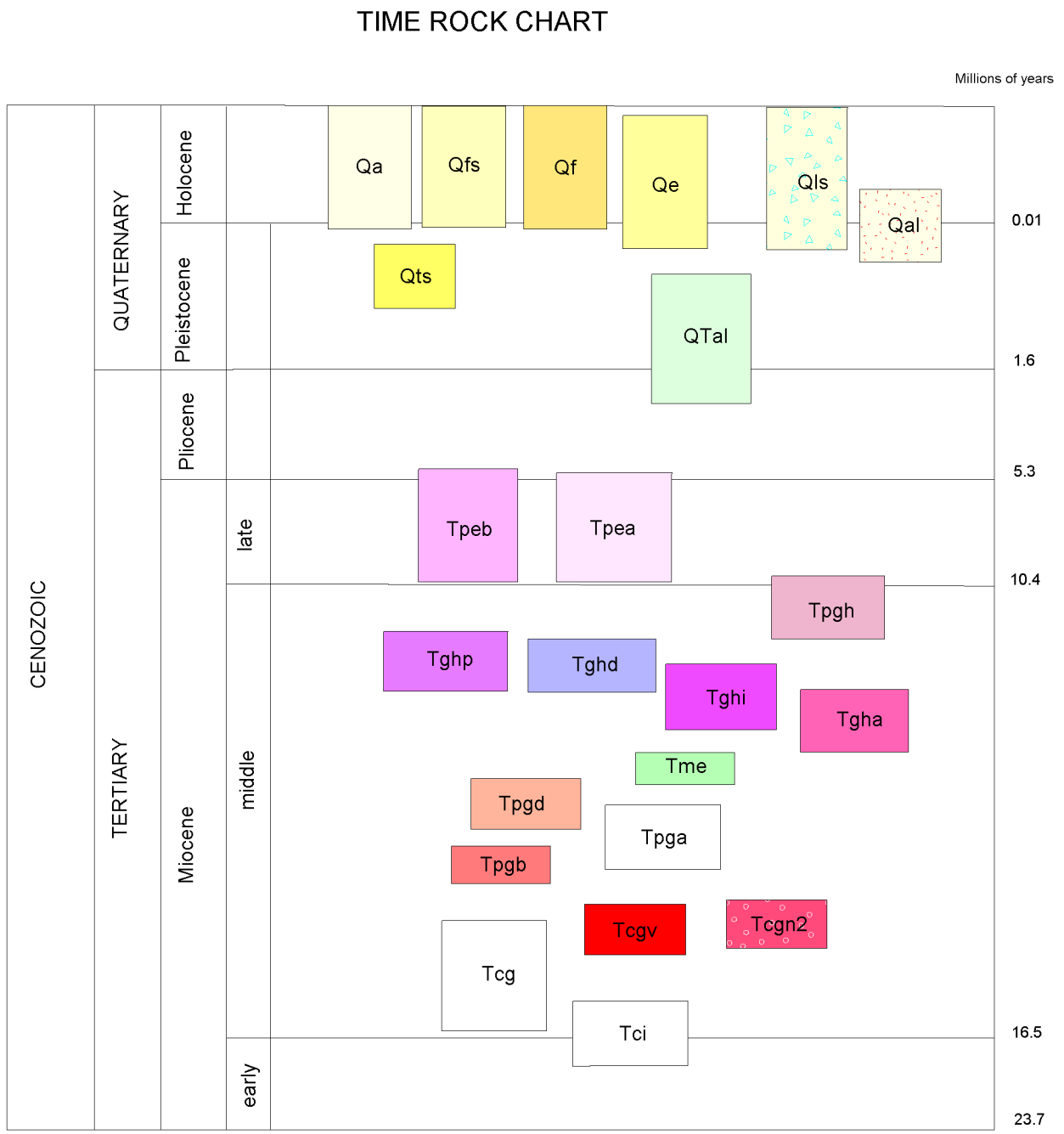
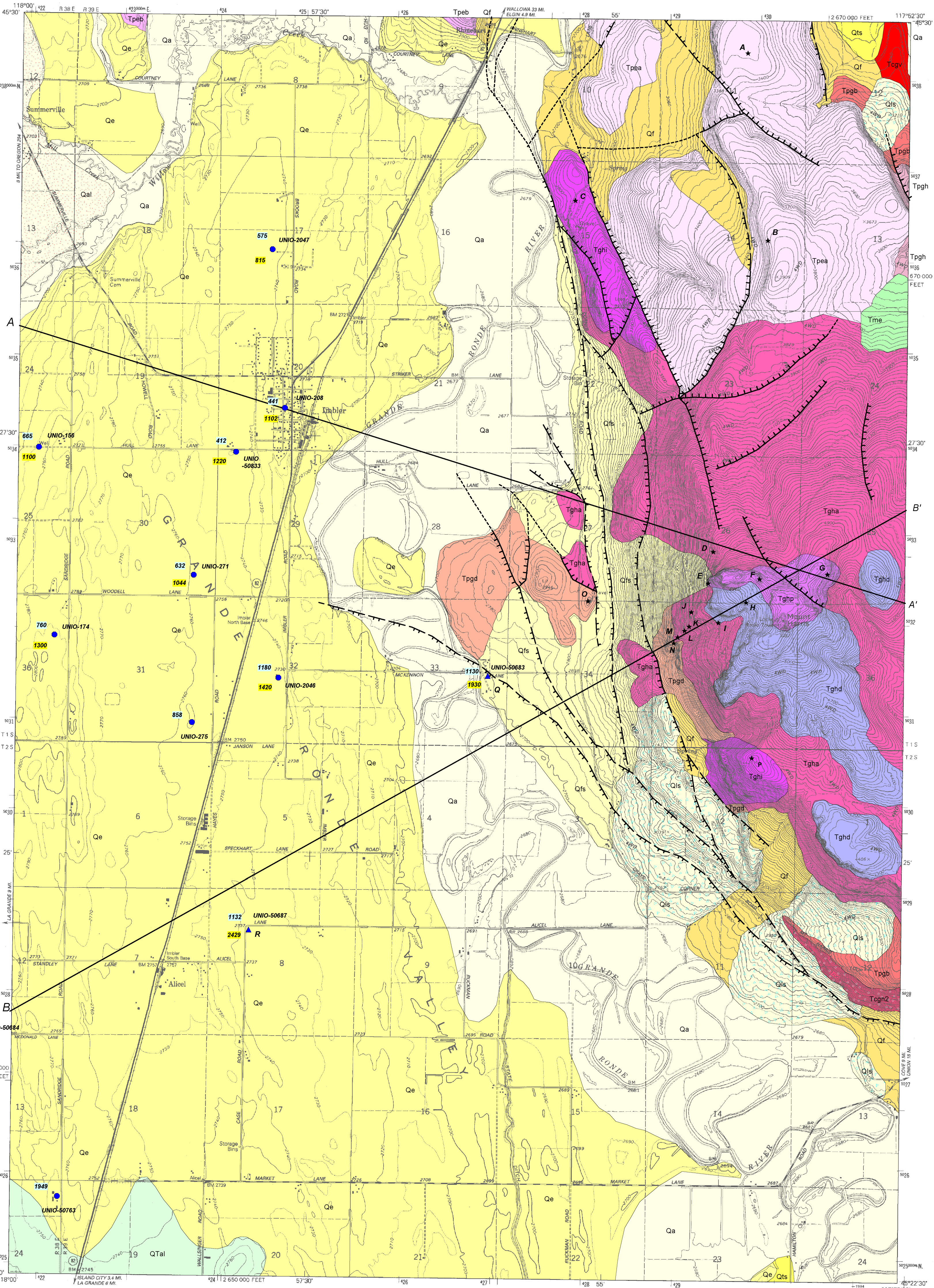


Geology of the Imbler Quadrangle, Union County, Oregon

2002

GMS-114

Geologic Map of the Imbler Quadrangle, Union County, Oregon
by M.L. Ferns, V.S. McConnell, J.P. Madin, and J. Van Tassel
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EXPLANATION

Surficial Deposits

- Qa Stream alluvium (Holocene and upper Pleistocene)
- Qal Alluvial plain deposits (Holocene? and upper Pleistocene)
- Qfs Talus, scree, and debris-flow deposits (Holocene and Pleistocene)
- Qf Alluvial fan deposits (Holocene and Pleistocene)
- Qe Eolian sand and loess (Holocene and upper Pleistocene)
- Qls Landslide deposits (Holocene and Pleistocene)
- Qts Terrace deposits (Pleistocene)

- QTal Lacustrine and fluvial sediments (Pleistocene, Pliocene, and Miocene)
- Tme Sedimentary interbed (upper Miocene)

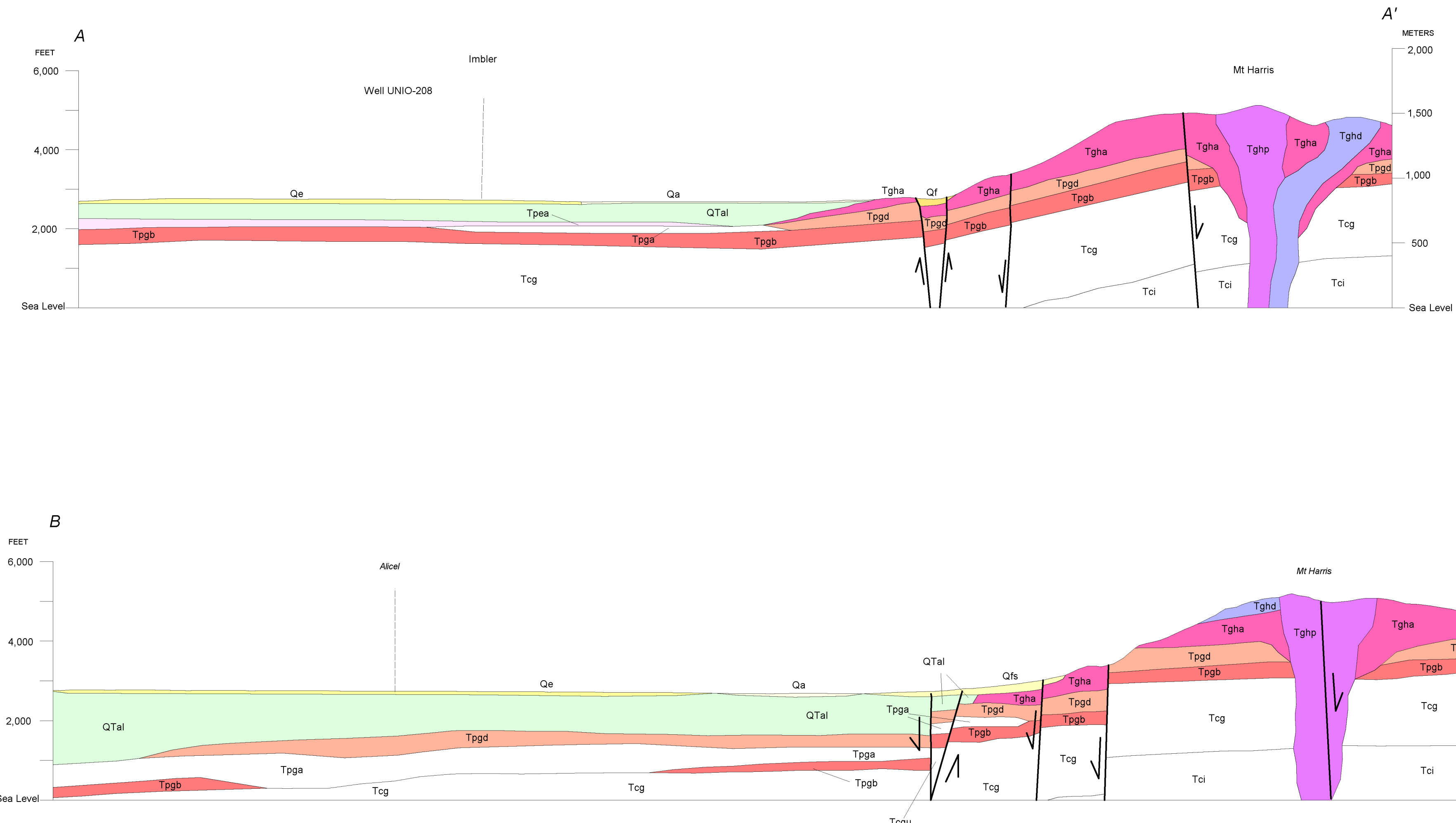
- Volcanic Rocks**
- Powder River Volcanic Field (upper Pliocene to middle Miocene)
- Lavas of Elgin (Pliocene? or upper Miocene)
- Tpea Trachyandesite and andesite (Pliocene? or upper Miocene)
- Tpeb Basaltic trachyandesite and trachyandesite (Pliocene? or upper Miocene)
- Lavas of Glass Hill (upper and middle Miocene)
- Tpgh Bell-tone basaltite (middle or upper Miocene)
- Lavas of Mount Harris (middle Miocene)
- Tghd Dacite, undivided (middle Miocene)
- Tghp Dacite plug (middle Miocene)
- Tghi Dacite dome (middle Miocene)
- Tgha Andesite and dacite (middle Miocene)
- Tpgd Dacite (middle Miocene)
- Tpga Basaltic andesite and andesite (upper Miocene) (shown in cross section only)
- Tpgb Olivine basalt (middle Miocene)
- Columbia River Basalt Group (middle and lower Miocene)**
- Tcg Grande Ronde Basalt, undivided (middle Miocene) (shown in cross section only)
- Tcgn2 N2 Grande Ronde Basalt (middle Miocene)
- Tcgn Mafic hydrovolcanic deposits (middle Miocene)
- Tci Imnaha Basalt (middle and lower Miocene) (shown in cross section only)

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GEOLOGIC CROSS SECTIONS



Geologic Map Symbols

- Fault, dashed where concealed, dotted where inferred. Hatchures on down-dropped side.
- A * Location from where analyzed rock chip sample was collected
- 1200 • Deep water well, with depth in feet to volcanic basement (blue) and depth in feet to the top of the Grande Ronde Basalt (yellow)
- 2000 • Well from which cuttings were analyzed