

QUATERNARY DEPOSITS

- Qa Active channels and minor terraces (latest Holocene)
- Qc Eolian deposits and sand sheets of North Valley (Pleistocene to Holocene)
- Qf Youngest alluvial-fan deposits (Holocene)
- Qm Lacustrine deposits of the upper Sehoio Alluviation (late Pleistocene)
- Ql Intermediate alluvial-fan deposits (late Pleistocene to early Holocene)
- Qs Landslides (Pleistocene to Holocene)
- Qd Colluvium and talus (Pleistocene to Holocene)
- Qp Oldest alluvial-fan deposits (Pliocene to Pleistocene)

CENOZOIC VOLCANIC AND SEDIMENTARY ROCKS OF THE PYRAMID SEQUENCE

- Tv Volcanic rocks (Miocene)
- Tp Upper Pyramid Sequence (middle Miocene, 13–14 Ma)
- Tp1 Aphanitic basaltic dikes (middle Miocene)
- Tp2 Volcanic rocks of the upper Pyramid sequence (middle Miocene)
- Tp3 Finely porphyritic basaltic andesite (middle Miocene)
- Tp4 Aphanitic basaltic andesite (middle Miocene)
- Tp5 Olivine-rich aphanitic basaltic andesite (middle Miocene)

Sedimentary Rocks

- Tp6 Sedimentary rocks of the upper Pyramid sequence (middle Miocene) (cross section only)
- Tp7 Volcaniclastic conglomerate (middle Miocene)
- Tp8 Volcaniclastic sandstone (middle Miocene)
- Tp9 Diatomite (middle Miocene)
- Tp10 Water-lain ash (middle Miocene)
- Tp11 Tuff of Mullen Pass (middle Miocene, ~13.8 Ma)
- Tp12 Tuff of Mullen Pass (middle Miocene) (cross section only)
- Tp13 Middle cooling unit of Tuff of Mullen Pass (middle Miocene)
- Tp14 Lower cooling unit of Tuff of Mullen Pass (middle Miocene)
- Tp15 Dacite (middle Miocene, ~14–15 Ma?)
- Tp16 Porphyritic dacite flow and intrusion (middle Miocene)
- Tp17 Dacite block-and-ash flow (middle Miocene)

Lower Pyramid Sequence (middle Miocene, 14–15 Ma)

- Tp18 Volcanic rocks of the lower Pyramid sequence (middle Miocene)
- Tp19 Porphyritic basaltic andesite (middle Miocene)
- Tp20 Aphanitic to finely porphyritic basaltic andesite (middle Miocene)
- Tp21 Finely porphyritic to aphanitic basaltic andesite (middle Miocene)
- Tp22 Coarsely porphyritic basaltic andesite (middle Miocene)

OLIGOCENE ASH-FLOW TUFFS

- Tu Ash-flow tuff (Oligocene)
- Tc Tuff of Chimney Spring (late Oligocene)
- Tm Tuff of Dogskin Mountain (?) (late Oligocene)

MESOSZOIC BASEMENT ROCKS

- M Mesozoic basement rocks (Triassic to Cretaceous) (cross section only)

Contact metamorphic rocks related to intrusion

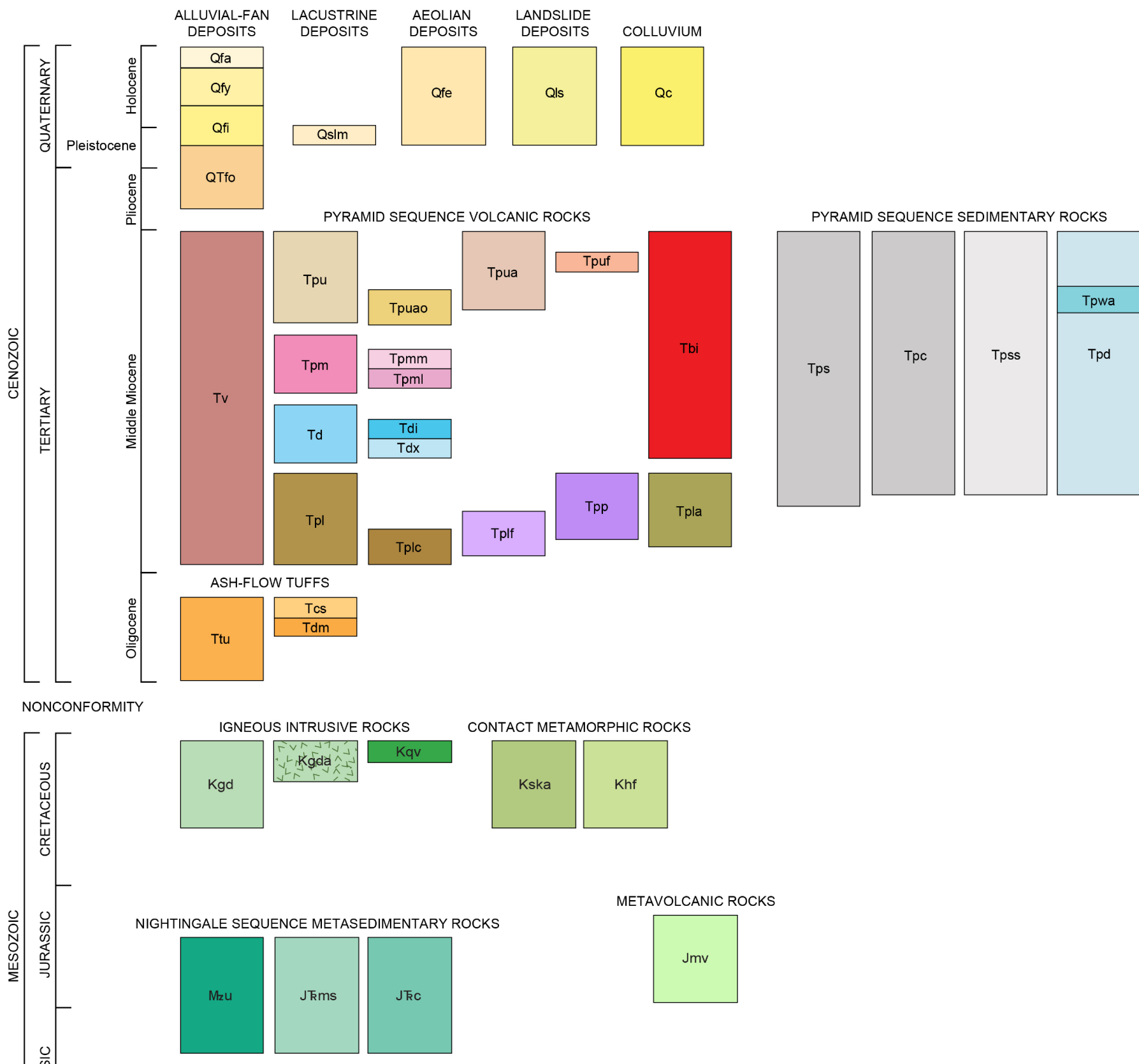
- Ka Skarn and hornfels (Cretaceous)

Mesozoic intrusive rocks

- Kgd Granodiorite (and/or quartz monzonite?) (Cretaceous)
- Kgd1 Altered (?) granodiorite or leucocratic enclaves (Cretaceous?)
- Kgd2 Veining in pluton
- Kgd3 Quartz veins in granodiorite (Cretaceous?)

Metamorphic rocks: metavolcanic and metasedimentary rocks

- Jm Metavolcanic rocks (Jurassic?)
- Jms Metasedimentary rocks of the Nightingale sequence, undivided – slate, meta-siltstone, argillite, quartzite, phyllite, and schist
- Jlc Carbonates – dolomite and marble



Contact Dashed where approximately located, dotted where concealed; queried if identity or existence uncertain.

Normal fault Solid where certain and location accurate, dashed where approximately located, dotted where concealed; queried if identity or existence uncertain. Arrows show oblique motion. Locality showing dip. Ball on downthrown side.

Syncline Dashed where approximately located.

Former shoreline Dashed where approximately located.

Dike Aphanitic Miocene basalt.

Vein, veinlet, or mineralized stringer Solid where certain and location accurate.

Internal flow foliation (In cross section only).

Strike and dip of bedding (sedimentary) or layering (pyroclastic)

- Inclined

Strike and dip of compaction foliation in ash-flow tuff

- Inclined

Strike and dip of flow banding or flow foliation in volcanic rocks

- Inclined

Strike and dip of metamorphic foliation in metamorphic rocks

- Inclined

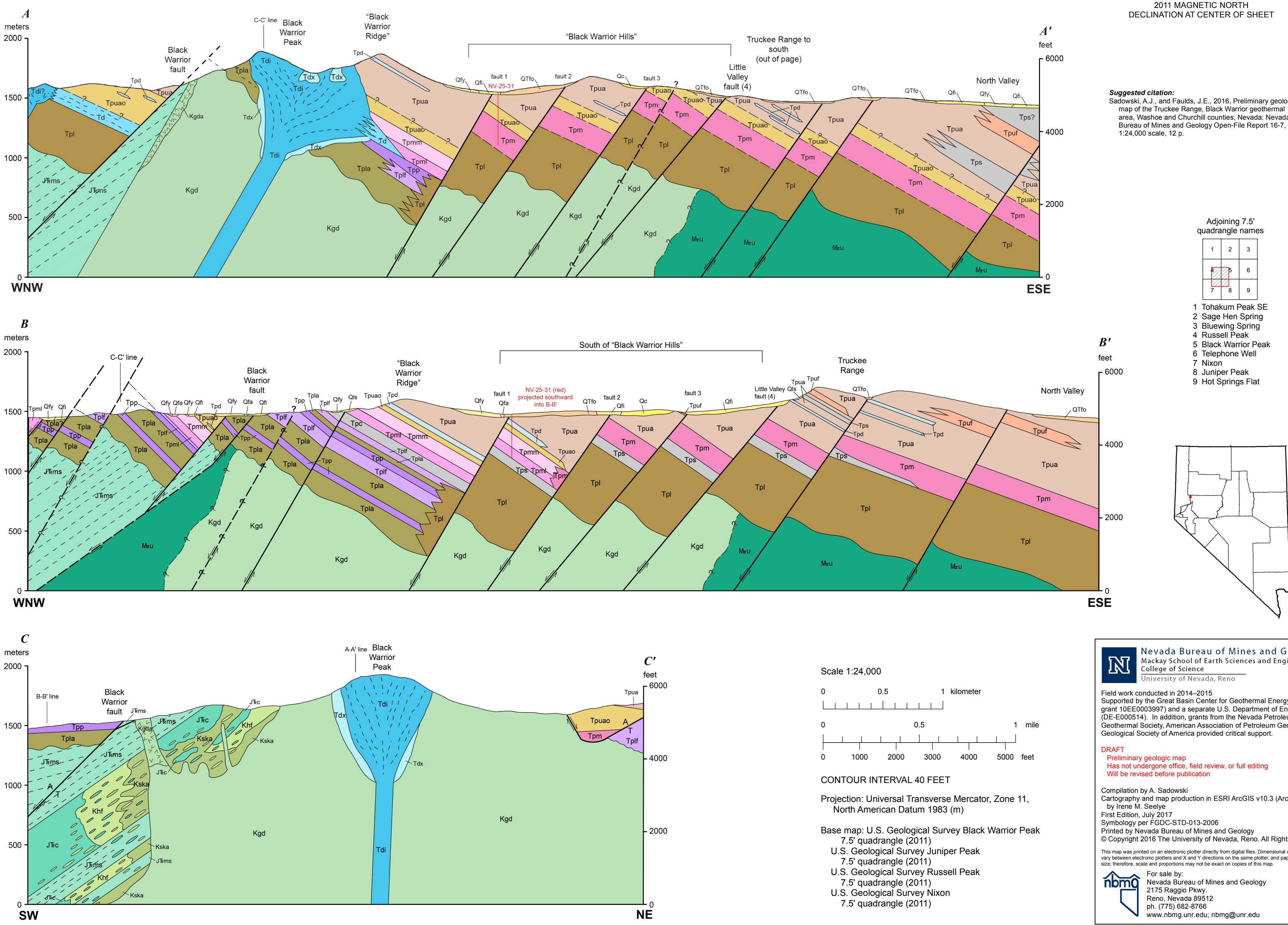
Strike and dip of joint

- Inclined

Sample locality Showing ⁴⁰Ar-³⁹Ar age.

Line of cross section

Sample	⁴⁰ Ar- ³⁹ Ar Ma	Unit	Brief Unit Description	Datable Material	Eastings (NAD83)	Northings (NAD83)
15-143	11.12 ±0.21	Tpua	aphyric basaltic andesite of upper Pyramid seq.	groundmass	310652.90	4414677.84
14-023	13.98 ±0.03	Tpmm	middle member of tuff of Mullen Pass	plagioclase	308315.81	4419195.17
16-001	15.29 ±0.06	Td	dacite of Black Warrior Peak	plagioclase	308459.69	4420614.79
14-383	15.54 ±0.03	Tp1c	coarsely-porph. basaltic andesite of low er Pyramid seq.	groundmass	308224.28	4423027.17



PRELIMINARY GEOLOGIC MAP OF THE TRUCKEE RANGE, BLACK WARRIOR GEOTHERMAL AREA, WASHOE AND CHURCHILL COUNTIES, NEVADA

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