

CORRELATION OF MAP UNITS

Unit	Age / Period	Classification
Qya	Quaternary	QUATERNARY
QToa	Quaternary-Pliocene	QUATERNARY-TERTIARY
Tb	Pliocene?	TERTIARY
Tar	Miocene	
Trt	Miocene	
Tsr	Miocene	
Tvs	Miocene?	TERTIARY
Til	Miocene?	
Kg	Cretaceous	MESOZOIC
Mes	Triassic/Jurassic(?)	

DESCRIPTION OF MAP UNITS

- Qya** Younger alluvium (Quaternary)—Eolian sand, sand, silt, and gravel
 - QToa** Older alluvium (Quaternary-Pliocene)—Sand, silt, and gravel of alluvial, lacustrine, and fluvial deposits and colluvium, deposited on older or upland erosional surfaces; 0-70 m thick
 - Tb** Basalt dikes (Pliocene?)—Aphyric to sparsely porphyritic basalt with fine plagioclase phenocrysts; dark brown; 1-12 m thick
 - Tar** Rhyolite of Awakening Peak (Awakening rhyolite) (Miocene)—Lavas, dikes, and domes of dacite to rhyolite. Phenocrysts of quartz, plagioclase, and sanidine are sparse to abundant (5 to 25 percent total), 3-6 percent pyroxene, hornblende, or biotite; dark reddish brown to pink; creates craggy outcrops; 0 to about 180 m thick. Age is 13.6 Ma (Conrad and others, 1993)
 - Trt** Rhyolite ash-flow tuffs (Miocene)—Densely welded ash-flow tuff of Oregon Canyon and tuff of Long Ridge, each with basal vitrophyres, and variable amounts of white ash-fall tuff; 0-80 m thick. Unit ages are 16.2 and 15.6 Ma, respectively (Conrad and others, 1993)
 - Tsr** Rhyolite porphyry of Sleeper mine (Sleeper rhyolite) (Miocene)—Quartz-sandine-plagioclase porphyry; lavas and flow-domes(?), and associated dikes; generally white to tan due to alteration; friable character makes rounded, poor outcrops; 0-250 m thick. Age is about 17-6.3 Ma (Conrad and others, 1993)
 - Til** Intermediate lavas (Miocene)—Andesite and basalt lavas, commonly vesicular, and associated dikes; some interbedded volcanoclastic sedimentary rocks; dark green to reddish brown, weathers to orange-brown soils; about 150 m thick
 - Tvs** Volcanoclastic sedimentary rocks (Miocene?)—Sand, silt, clay, and conglomerate, massive to faintly bedded, weakly lithified; outcrops are very poor; cream to pale green; 0-160 m thick
 - Kg** Granitic rocks (Cretaceous)—Dikes and sills of altered monzonite
 - Mes** Metasedimentary rocks (Mesozoic)—Chiefly phyllite, slate, and quartzite, minor limestone; local tight folds; dark gray to silvery gray; thickness not known
- Contact, approximately located—Dashed where uncertain, dotted where covered
- $\frac{D}{U}$ Normal fault—Dashed where uncertain, dotted where covered; where determined, U, upthrown side; D, downthrown side; barbs show direction of relative movement in cross section
- $\frac{35}{35}$ Strike and dip of bedding
- $\frac{35}{35}$ Strike and dip of flow layering

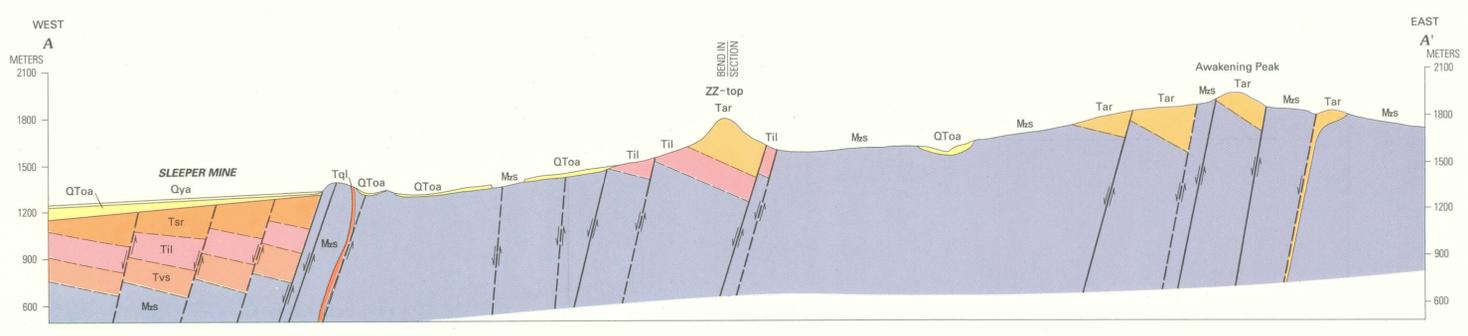
Base from U.S. Geological Survey 1:24,000 Jackson Well (1982), Awakening Peak (1982)
Mine area coordinates in feet, from AMAX Gold, Inc.

SCALE 1:24 000
1 2 3 KILOMETERS

CONTOUR INTERVAL 10 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Geology by J. Thomas Nash, May 1990-September 1992

MAP LOCATION



MAP SHOWING GEOLOGY OF SLUMBERING HILLS IN VICINITY OF THE SLEEPER MINE, HUMBOLDT COUNTY, NEVADA

By
J. Thomas Nash, William C. Utterback, and Wayne S. Trudel
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