

EXPLANATION

- Dark tone indicates bedrock exposed
- Metadiabase
- Dark greenish-gray, fine-grained rock; locally porphyritic and amygdaloidal
- Pit formation
- tp1, meta-andesite tuff and keratophyre tuff; tp2, metadacite tuff and quartz keratophyre tuff; tp3, shale, mudstone, and siltstone
- Bully Hill rhyolite
- rbh1, porphyritic quartz keratophyre and quartz keratophyre breccia (contains quartz and feldspar phenocryst 1 to 4 mm in diameter in a fine-grained groundmass); rbh2, quartz keratophyre crystal-lithic tuff; rbh3, metadacite tuff and breccia; rbh4, massive felspathic quartz keratophyre, locally brecciated, probably a shallow intrusive facies of the Bully Hill rhyolite
- PRODUCTS OF ALTERATION AND MINERALIZATION
- Limonite
- Iron-stained rock or rock containing disseminated pyrite  
Intensity of mineralization shown by density of stippling
- Intensely silicified rock
- Limit of outcrop
- Contact, showing dip  
Dashed where approximately located
- Indefinite contact
- Fault, showing dip  
Dashed where approximately located; dotted where concealed  
U, upthrown side; D, downthrown side
- Vertical fault  
Dashed where approximately located; dotted where concealed
- Doubtful or probable fault
- Shear zone, showing dip  
Queried where approximately located
- Strike and dip of beds
- Strike of vertical beds
- Strike and dip of overturned beds
- Strike and dip of flow banding
- Strike of vertical flow banding
- Strike and dip of schistosity
- Strike of vertical schistosity
- Strike and dip of joints
- Plunge of minor anticline  
Shown by bedding or flow banding
- Plunge of minor syncline  
Shown by bedding or flow banding
- Overturned minor anticline  
Showing bearing and plunge of axis and direction of dip of limbs
- Overturned minor syncline  
Showing bearing and plunge of axis and direction of dip of limbs
- Opencut
- Portal of adit
- Vertical shaft
- Dump
- DDH AI-2-70°  
Inclined diamond-drill hole  
Projected to horizontal

JURASSIC(?)  
OR  
CRETACEOUS(?)

TRIASSIC



Note: Sections are shown on plate 5



Topographic base furnished by the Glidden Co. Adjustments and additions by J. P. Albers and J. F. Robertson, U.S. Geological Survey, and by M. G. Hansen, E. J. Longyear Co. Mapped in part for the Defense Minerals Exploration Administration, 1951-55

Geology south of coordinate 20,000 N by J. P. Albers, J. F. Robertson, and C. D. Rinehart, U.S. Geological Survey. Geology north of coordinate 20,000 N by M. G. Hansen and A. L. Lutenko, E. J. Longyear Co. Diamond drilling done for the Defense Minerals Exploration Administration

GEOLOGIC MAP OF THE BULLY HILL AND RISING STAR MINES AREA, SHASTA COUNTY, CALIFORNIA

