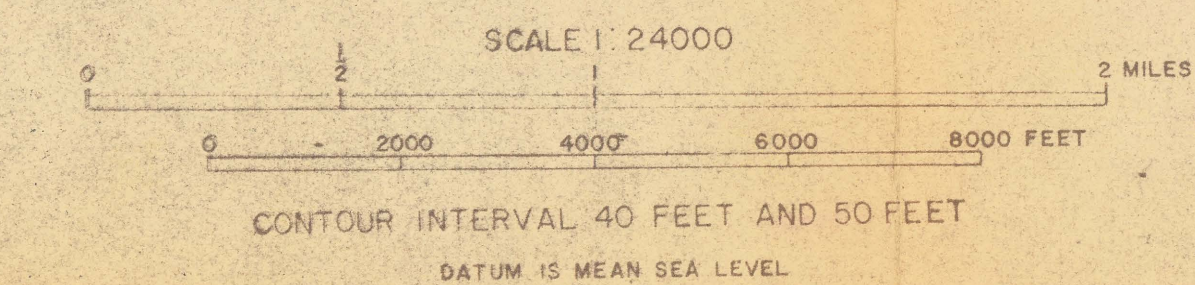




PLATE I
GEOLOGIC MAP AND SECTIONS OF THE EAST SHASTA COPPER-ZINC DISTRICT, SHASTA COUNTY, CALIFORNIA



U. S. Geological Survey
This map or illustration is preliminary
and has not been edited or revised for
conformity with Geological Survey
standards or nomenclature.

EXPLANATION

U. S. Geological Survey
OPEN FILE REPORT
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QUATERNARY

Unconsolidated deposits
Alluvium, Qal, landslide debris, Qls, terrace deposits,
Ql, alluvial fan deposits, Qaf, stone wash or colluvium,
Qrm (mapped only where bedrock is effectively obscured).

UNCONFORMITY

Basalt
Medium gray, porphyritic, hypersphen augite basalt, Thb,
dark gray, aphanitic, augite basalt, Tab, diabase, Tdb

UNCONFORMITY(?)

T1
Tuscon formation

UNCONFORMITY

Quartz veins

Calcareous rock

Basalt porphyry
(Known locally as "birdseye porphyry" because of the
conspicuous, large zoned plagioclase phenocrysts it contains)

Skarn

Mixture of lime silicate minerals, magnetite, and locally minor
sulfides. Occurs as alteration of the Baird formation, McCloud
limestone, Vascon formation, Dekkas andesite, mafic quartz
diorite, and augite quartz diorite

Mafic quartz diorite, diorite,
and meladiorite, andiferous,
enriched, mnd, albite diorite,
d, differentiated in the
Bully Hill area.

Augite quartz diorite. Also
includes minor granodiorite,
undifferentiated.

Pit River stock, ps.

Chiefly leucocratic granodiorite quartz diorite, and
albite granites, in places contains dark inclusions of
hybrid rocks, includes albite dikes not differentiated
on map. Albite dikes, differentiated on east side of O'Brien
Mountain.

UNCONFORMITY

Housekiss limestone

Pit formation
Shale, mudstone, and siltstone, undifferentiated, Tps,
limestone (lithologically similar to the Housekiss limestone),
Tps, porphyritic quartz keratophyre and metadiorite, undifferentiated, Tps,
Tps, and keratophyre and metadiorite, undifferentiated, Tps,
Open triangles designate monolithologic breccia interpreted as flow breccia
in both porphyritic and nonporphyritic facies. Wavy lines
designate flow banded rock. Tuff and tuff breccia, undifferentiated, Tps, mafic flow
banded rock. Tuff and tuff breccia, undifferentiated, Tps, mafic flow
banded rock.

Bully Hill rhyolite
Porphyritic quartz keratophyre and metadiorite, undifferentiated,
Tps, nonporphyritic quartz keratophyre and metadiorite,
undifferentiated, Tps. Open triangles designate monolithologic
breccia interpreted as flow breccia. In both porphyritic and nonporphyritic facies. Wavy lines
designate flow banded rock. Tuff and tuff breccia, undifferentiated,
Tps, volcanic breccia, Tps, mafic flows, commonly
amygdaloidal and lithologically similar to mafic flows of the
Dekkas andesite, Tps, quartz keratophyre of probable intrusive
origin, Tps, mafic tuff and tuff breccia, Tps. The
Bully Hill rhyolite locally intertongues with the Dekkas andesite
and with the Pit formation.

Dekkas andesite
Mafic flows including keratophyre and spilitic, undifferentiated,
Pd1, commonly porphyritic and amygdaloidal. Open triangles
designate monolithologic breccia interpreted as flow breccia.
Volcanic breccia consisting of mafic rocks, Pd2, tuff and
tuff breccia, undifferentiated, Pd3, mudstone and tuffaceous
mudstone, undifferentiated, Pd4, quartz keratophyre, Pd5,
spilitic, probably an intrusive phase of the Dekkas
andesite, Pd6.

UNCONFORMITY(?)

Ph
Nasoni formation
Predominantly tuffaceous mudstone and tuff, with sub-
ordinate mudstone, tuffaceous sandstone, mafic flows, and
conglomerate.

TERTIARY

McCloud limestone
Gray limestone with thin, irregular chert layers and
chert nodules

UNCONFORMITY

Baird formation
Mafic flows and volcanic breccia, Mbs, shale, mudstone, tuff,
and tuffaceous sandstone, undifferentiated, Mbs, limestone and
chert, Mbs, mafic pyroclastic rocks, with minor lenses of
tuffaceous mudstone, Mbp

UNCONFORMITY(?)

Bragdon formation
Shale, mudstone, and siltstone, undifferentiated, Mbs, con-
glomerate, grit, and sandstone, undifferentiated, Mbs, tuff
tuff breccia, and volcanic breccia, undifferentiated, Mbs

UNCONFORMITY

Dks
Kenneth formation
Limestone, Dks, siliceous shale, tuffaceous shale,
sandstone, and pyroclastic rocks, undifferentiated, Dks

Baldkila rhyolite
Porphyritic and nonporphyritic quartz keratophyre,
undifferentiated, Dbr1. Open triangles indicate mono-
lithologic breccia interpreted as flow breccia or flow
breccia. Quartz keratophyre, volcanic breccia, Dbr2,
quartz keratophyre tuff and tuff breccia, undifferentiated,
Dbr3, mafic flows, commonly amygdaloidal, lithologically
similar to mafic flows of the Copley greenstone, Dbr4,
quartz keratophyre of probable intrusive origin, Dbr5.
The Baldkila rhyolite intertongues with the Copley green-
stone in the O'Brien Mountain area.

Copley greenstone
Porphyritic, slightly amygdaloidal greenstone, Dcg1. Open
triangles indicate monolithologic breccia interpreted as
blocky flows or flow breccia. Volcanic breccia, Dcg2,
consisting of blocks of greenstone locally mixed with
blocks of quartz keratophyre, tuff and tuff breccia,
undifferentiated, Dcg3

Contact, showing dip
(Dashed where approximately located)

Indefinite contact
(Includes gradational contacts, inferred contacts, and in-
definite boundaries of surficial deposits)

Concealed contact

Fault, showing dip
(Dashed where approximately located)

Vertical fault

Doubtful or probable fault

Concealed fault

Anticline
(Showing crest line)

Syncline
(Showing position of trough)

Plunge of minor anticline

Plunge of minor syncline

Strike and dip of beds

Strike of vertical beds

Strike and dip of overturned beds

Horizontal beds

Strike and dip of flow banding in volcanic rocks

Strike and dip of foliation

Strike of vertical foliation

Strike and dip of joints

Plunge of prismatic columns in volcanic and
hypabyssal intrusive rocks

C-120 X
Fossil locality

JURASSIC OR CRETACEOUS

Middle Devonian

MISSISSIPPIAN

PERMIAN