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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 1024
PLATE 1

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GEOLOGIC MAP OF THE EAST TINTIC MINING DISTRICT, UTAH AND JUAB COUNTIES, UTAH

By Hal T. Morris and Lorin C. Lovering

CORRELATION OF MAP UNITS

Qya	Holocene and Pleistocene	QUATERNARY
Unconformity		
Qb, Qa	Lake Bonneville Group	
Unconformity	Pleistocene	
Qtg, Qoa, Qal		
Unconformity		
Tsd, Tsf	Miocene	TERTIARY
Unconformity		
Tpc, Tib, Tpd, Tsc, Til, Ttdf, Ttdt, Tpqf, Tpqt, Tnsf, Tnst	Laguna Springs Volcanic Group	
Unconformity	Oligocene	
Tp, Tpp, Tbcf, Tbct, Tlrw, Tlrt, Tcf	Tintic Mountain Volcanic Group	
Unconformity		
Tp, Tap		
Unconformity		
Mgb, Mh, Md, Mg, MDf	Upper Mississippian	MISSISSIPPIAN
	Lower Mississippian	
Dpp	Lower Mississippian and Upper Devonian	MISSISSIPPIAN AND DEVONIAN
Dv	Upper Devonian	DEVONIAN
DSOb	Devonian, Silurian, and Upper Ordovician	DEVONIAN, SILURIAN, AND ORDOVICIAN
Oth	Upper Ordovician	ORDOVICIAN
Oop	Lower Ordovician	
Caj, Caje	Upper Cambrian	CAMBRIAN
Cop, Ccc, Cbb, Ch, Cd, Cte	Middle Cambrian	
Coa, Com, Col, Ct	Lower Cambrian	

DESCRIPTION OF MAP UNITS

Qya YOUNGER ALLUVIUM

LAKE BONNEVILLE GROUP (Pleistocene)

Qb BONNEVILLE FORMATION
Qa ALPINE FORMATION
Qtg TERRACE GRAVEL
Qal ALLUVIUM, TALUS, AND TERRACE GRAVEL, UNDIVIDED

Qoa OLDER ALLUVIUM

SILVER SHIELD QUARTZ LATITE (Miocene)

Tsd DIKE
Tsf FLOW
Tpc PINYON CREEK CONGLOMERATE (Miocene)
Tib INTRUSION BRECCIA AND ASSOCIATED BIOTITE–AUGITE ANDESITE DIKES
Tpd PEBBLE DIKE
Tsc MONZONITE PORPHYRY PLUGS AND DIKES RELATED TO SILVER CITY STOCK
Til INTRUSIVE LATITE BODIES

LAGUNA SPRINGS VOLCANIC GROUP (Oligocene)

TINTIC DELMAR LATITE
Ttdf FLOW MEMBER
Ttdt TUFF MEMBER

PINYON QUEEN LATITE
Tpqf FLOW MEMBER
Tpqt TUFF MEMBER

NORTH STANDARD LATITE
Tnsf FLOW MEMBER
Tnst TUFF MEMBER
Tg MONZONITE PORPHYRY OF GOUGH SILL
Tbp LATITE BRECCIA PIPE

TINTIC MOUNTAIN VOLCANIC GROUP (Oligocene)

BIG CANYON LATITE
Tbcf FLOW MEMBER
Tbct TUFF MEMBER

LATITE RIDGE LATITE
Tlrw WELDED TUFF MEMBER
Tlrt AIRFALL TUFF MEMBER

COPPEROPOLIS LATITE
Tcf FLOW MEMBER
Tp PACKARD QUARTZ LATITE (Oligocene)
Tap APEX CONGLOMERATE (Oligocene)
Mgb GREAT BLUE FORMATION (Upper Mississippian)
Mh HUMBUG FORMATION (Upper Mississippian)
Md DESERET LIMESTONE (Upper Mississippian)
Mg GARDISON LIMESTONE (Lower Mississippian)
MDf FITCHVILLE FORMATION (Upper Devonian and Lower Mississippian)
Dpp PINYON PEAK LIMESTONE (Upper Devonian)
Dv VICTORIA FORMATION (Upper Devonian)
DSOb BLUEBELL DOLOMITE (Upper Ordovician, Silurian, and Devonian)
Oth FISH HAVEN DOLOMITE (Upper Ordovician)
Oop OPOHONGA LIMESTONE (Lower Ordovician)
Caj AJAX DOLOMITE, UNDIFFERENTIATED (Upper Cambrian)
Caje EMERALD MEMBER
Cop OPEX FORMATION (Upper Cambrian)
Ccc COLE CANYON DOLOMITE (Middle Cambrian)
Cbb BLUEBIRD DOLOMITE (Middle Cambrian)
Ch HERKIMER LIMESTONE (Middle Cambrian)
Cd DAGMAR DOLOMITE (Middle Cambrian)
Cte TEUTONIC LIMESTONE (Middle Cambrian)
Co OPHIR FORMATION, UNDIVIDED (Middle Cambrian)
Cou UPPER SHALE MEMBER
Com MIDDLE LIMESTONE MEMBER
Col LOWER SHALE MEMBER
Ct TINTIC QUARTZITE (Lower Cambrian)

Contact – Dashed where approximately located

Fault – showing dip and relative displacement; dashed where inferred, dotted where concealed beneath alluvium or volcanic rocks; D, downthrown side, U, upthrown side. A, direction of movement away from observer, T, toward observer. Queried where location is uncertain

Thrust fault – Dashed where inferred; dotted where concealed beneath alluvium or volcanic rocks. Sawtooth on side of upper plate

Crackled zone or breccia

Anticline – Showing direction of plunge and axial plane

Syncline – Showing direction of plunge and axial plane

Plunge of minor anticline

Plunge of minor syncline

Strike and dip of beds

Overturned

Vertical

Platy structure in igneous rocks

Strike and dip of platy structure in igneous rocks with direction of lineation indicated – Amount of plunge of lineation shown only where platy structure is steep or where amount of plunge differs appreciably from that of dip

Strike of vertical platy structure in igneous rocks showing plunge of lineation

Strike and dip of platy structure in igneous rocks with horizontal lineation

Strike and dip of joints

Vertical

Shaft
Adit
Trench
Prospect

Base from U.S. Geological Survey
Eureka, 1943 – 54

Geology modified from U.S.G.S. MF–230
by Hal T. Morris in 1968 – 74

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SCALE 1:9600
1000 0 1000 2000 3000 4000 FEET
500 0 500 1000 METERS
CONTOUR INTERVAL 25 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929