PREPARED IN COOPERATION WITH
NEVADA BUREAU OF MINES

CORRELATION OF MAP UNITS

QUATERNARY

Unconformity

TERTIARY

Nonconformity

JURASSIC(?)

JURASSIC

Nonconformity

TRIASSIC

Unconformity

MESOZOIC OR
PALEOZOIC

Unconformity

PERMIAN AND
PENNSYLVANIAN

Fault

MISSISSIPPIAN(?)
AND DEVONIAN(?)

Unconformity

ORDOVICIAN

Fault

CAMBRIAN

Highest shoreline of Lake Lahontan

Contact

Fault. Dashed where approximately located; dotted where concealed. Ball and bar on downthrown side

Fault. Arrows show relative horizontal movement

Thrust fault. Dashed where approximately located; dotted where concealed. Sawteeth on upper plate

Overturned thrust fault. Dashed where approximately located; sawteeth in direction of dip; bars on tectonically higher plate

Anticline. Showing direction of plunge

Syncline. Showing direction of plunge

Minor anticline. Showing plunge of axis

Minor syncline. Showing plunge of axis

Overturned fold. Showing plunge of axis

Strike and dip of beds

Strike and dip of overturned beds

Strike of vertical beds

Horizontal beds

Strike and dip of foliation

Strike of vertical foliation

Shaft

Adit

Prospect pit

Fossil locality. Showing USGS locality number

DESCRIPTION OF MAP UNITS

ALLUVIUM (Quaternary)--Gravel, sand, silt, and clay

LAKE LAHONTAN SEDIMENTS (Quaternary)--Mainly silt and fine sand

OLDER ALLUVIUM (Quaternary)--Fanglomerate, gravel, sand, and some loess and silt

BASALT (Miocene)--Dark-gray basalt flows

ASH-FLOW TUFF (Miocene?)--Light-gray to pale-yellowish-brown rhyolite or quartz latite containing small phenocrysts of sanidine and quartz

SEDIMENTARY ROCKS (Tertiary)--Sandstone, conglomerate, and lacustrine tuffaceous rocks. Locally highly silicified

DIABASE (Jurassic?)--Dikes and sills of diabase consisting mainly of plagioclase (andesine-labradorite) and pyroxene

RHYODACITE AND RHYODACITE PORPHYRY (Jurassic)--Medium-gray, fine-grained to porphyritic dikes. Porphyritic varieties contain small phenocrysts of andesine and biotite

HORNBLENDE DIORITE PORPHYRY (Jurassic)--Dikes and small bodies of hornblende diorite porphyry containing abundant phenocrysts of hornblende 2-10 mm long in a matrix of feldspar, hornblende and minor quartz

QUARTZ DIORITE (Jurassic)--Medium-gray, fine-grained quartz diorite, locally porphyritic. Composed mainly of hornblende, biotite, plagioclase (andesine), and quartz. Hornblende and biotite comprise 30-50 percent of the rock

GRANODIORITE (Jurassic)--Medium-light-gray, fine-grained granodiorite composed of biotite, hornblende, plagioclase (andesine), K-feldspar, and quartz. Apatite, sphene, and magnetite are accessory minerals. Locally grades into quartz diorite near borders

QUARTZ MONZONITE (Jurassic)--Light-gray, medium-grained quartz monzonite composed of biotite, hornblende, plagioclase (oligoclase-andesine), K-feldspar, and quartz. Sphene, apatite, and magnetite are accessory minerals. Orthoclase is locally as much as 10 mm across. Grades into granodiorite and diorite near borders of the two bodies north of Table Mountain

AULD LANG SYNE GROUP (Triassic)

WINNEMUCCA FORMATION--Limestone and dolomite in upper part of exposed section, and interbedded argillite, quartzite, and limestone in lower part. Exposed thickness about 450 m

DUN GLEN FORMATION--Medium-bedded to massive limestone and thick-bedded to massive dolomite. About 200 m thick

GRASS VALLEY FORMATION--Light-olive-gray to dark-gray argillite and siltstone and very fine grained micaceous quartzite, with interbedded units of fine-grained to medium-grained quartzite. About 540 m thick north of the Hayden Ranch

STAR PEAK GROUP OF NICHOLS AND SILBERLING (1977) (Triassic)

CANE SPRING FORMATION

UPPER MEMBER--Mainly thick-bedded to massive limestone. The upper 30-50 m is well-bedded, very finely crystalline dolomite except in northernmost exposures. Basal part is yellowish-gray silty limestone and calcareous siltstone with some thick-bedded limestone. Average thickness about 285 m

LOWER MEMBER--Resistant, reddish-brown-weathering, chert-pebble conglomerate with interbeds of quartzite and argillite. 75-120 m thick

AUGUSTA MOUNTAIN FORMATION--Thin-bedded to massive limestone. Base obscured by secondary dolomite except east of Auld Lang Syne Peak

Mafic volcanic rocks composed of breccias, tuffs, and nonporphyritic flows

SECONDARY DOLOMITE--Light-gray to medium-dark-gray, very finely to coarsely crystalline, massive dolomite. Locally includes some very finely crystalline bedded dolomite. Replaces lower part of Augusta Mountain Formation and upper part of Prida Formation

PRIDA FORMATION--Upper member is thin- to thick-bedded limestone; middle member is interbedded calcareous siltstone and limestone; lower member is siltstone, sandstone, and limestone or dolomite. Top obscured by secondary dolomite except east of Auld Lang Syne Peak

AUGUSTA MOUNTAIN AND PRIDA FORMATIONS UNDIVIDED--About 300-750 m thick

KOIPATO GROUP (Triassic)

ROCHESTER RHYOLITE--Rhyolite tuff, flows, and breccia, with minor siltstone, quartzite, and conglomerate

METASEDIMENTARY ROCKS OF UNDETERMINED AGE

UPPER UNIT--Dark-gray argillite and phyllite, with layers of hornfels and interbeds of limestone, quartzite, and minor siliceous argillite

LOWER UNIT--Light-gray to white, finely to coarsely crystalline marble. Locally contains tremolite, diopside, talc, or serpentine

HAVALLAH SEQUENCE OF SILBERLING AND ROBERTS (1962) (Permian, Pennsylvanian, and Mississippian)--Interbedded argillite, chert, greenstone, quartzite, and limestone

INSKIP FORMATION (Mississippian? and Devonian?)

UPPER MEMBER--Phyllite, quartzite, and wacke, with some mafic metavolcanic rocks and limestone. Maximum exposed thickness about 2,500 m

LOWER MEMBER--Phyllite, wacke, quartzite, conglomerate, and minor limestone. Characterized by beds of quartzite or wacke with very coarse grains and granules of quartz and quartzite. Average thickness about 900 m

VALMY FORMATION (Ordovician)

QUARTZITE--Massive, vitreous, fine- to medium-grained quartzite with interbedded argillite, chert, and minor greenstone

ARGILLITE-CHERT--Chiefly dark-gray argillite and chert, with some greenstone and minor limestone and bedded quartzite

GREENSTONE--Greenish-gray altered mafic volcanic rocks

HARMONY FORMATION (Cambrian)--Feldspathic quartzite with interbedded argillite, conglomerate, and minor limestone

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GEOLOGY BY D.H. WHITEBREAD, 1964-76;
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CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Light-duty _____ Unimproved dirt _____

NEVADA

QUADRANGLE LOCATION

PRELIMINARY GEOLOGIC MAP OF THE DUN GLEN QUADRANGLE, PERSHING COUNTY, NEVADA

By

DONALD H. WHITEBREAD

1978