

colluvium along steep canyon walls. Lake deposits. Homogeneous, unconsolidated, pinkish-gray to very pale-orange silt. Upper part of the deposits marked by nodular calcium carbonate and powdery gypsite probably of pedogenic

Silt of Mound House. Unconsolidated and weakly bedded, wellsorted, pale-brown, gray, and greenish-gray silty fine sand, sandy silt, and pebbly sand. Gsmg Gypsite. White to pale grayish white, fine-grained, powdery gypsum. Grades downward and laterally into Gsm.

GTb2 Basaltic andesite vent complex. QTb2: Thin (10-15 m) flows of QTbs medium to dark gray, sparsely porphyritic, locally flow-banded

QTbg and vesicular, very fine-grained basaltic andesite. Interlayered with

gravel. 80 to 90% scoriaceous basaltic andesite and 10 to 20% ashflow tuff and basement rock types. QTb1: Flows slightly older

than QTb2 but lithologically similar. Basaltic andesite intrusives, undifferentiated. Plugs of very finegrained, medium-gray, sparsely porphyritic, platy-weathering basaltic andesite. Age uncertain. Alluvial-fan deposits of Morgan Mill. Yellowish-brown to

coarse sand. 0-20 m thick.

QTam Alluvial-fan deposits of Mexican Dam Road. Grayish-orange to pale grayish-brown, locally well-bedded, weakly lithified muddy sandy pebble gravel and pebbly muddy sand. Locally contains rare boulders of metavolcanic rock up to 1 m diameter. Limestone

clasts dominent in southernmost exposures. 0-30 m thick.

QTau Alluvial-fan deposits, undifferentiated. Isolated remnants of moderately sorted, weakly bedded cobbly muddy sandy pebble gravel composed predominently of metavolcanic and Tertiary volcanic rock types. 0-20 m thick.

QTpg Pediment gravel. Yellowish-gray to pale orange-brown bouldery sandy cobble gravel. Most clasts subrounded. Contains numerous very large boulders of Jb and Jd. 0-20 m thick. Sedimentary rocks. Yellowish-brown to greenish-white arkosic sandstone and sandy conglomerate, pinkish-tan tuffaceous pebbly sandstone, and greenish-gray siltstone. 0-250 m thick.

Knickerbocker Andesite. Very dark gray to black, tan-weathering.

Kate Peak Formation. Tkb: Gray to brownish-gray hornblende andesite mudflow and epiclastic breccia. Tki: Plugs of pale bluishgray, coarse-grained hornblende-plagioclase andesite porphyry.

Alta Andesite. Ta: Gray-brown, dark-brown, and black, thin, platy-weathering, porphyritic and locally vesicular pyroxene-plagioclase andesite flows and minor flow breccia. 0-100 m thick. Tab: Pale-gray to bluish-gray, pink, and pale-green coarse mud-flow and epiclastic breccia of fine- to medium-grained, sparsely porphyritic pyroxene-plagioclase andesite. 0-100 m thick. Tabl: Tuffaceous sandstone, bouldery conglomerate, and landslide breccia composed dominently of metavolcanic rock. 0-30 m thick.

Santiago Canyon Tuff. Hornblende-biotite quartz latite crystal-vitric ash-flow tuff. Gray to pale lavender- or brownish-gray, moderately to strongly welded, and largely devitrified. About 300 m

Augite rhyodacite tuff-breccia. Non-welded, pale greenish-gray pumice and lithic-rich, augite-biotite rhyodacite crystal tuffbreccia, 0-170 m thick, Rhyolite tuff. Non-welded, gray-white to yellowish-gray, pumiceous, fine-grained, sparsi crystal tuff. 0-40 m thick.

Biotite dacite tuff. Reddish-brown, moderately welded and de-vitrified biotite dacite crystal-vitric tuff. 0-10 m thick. Tbg: Underlying bouldery cobble gravel.

Eureka Canyon Tuff. Tet: Pale yellowish-white to pale-gray, la-

vender, and tan rhyolite vitric tuff. Pale yellowish white, devitri-fied, and weakly welded in most exposures. 0-130 m thick. Teg: Underlying bouldery cobble gravel.

Nine Hill Tuff. Tnt: Pale orange-red to reddish-purple, densely welded, stretched, devitrified, very pumiceous rhyolite vitric tuff. Grades upward into weakly welded to non-welded, pumice-poor vitric tuff. 0-300 m thick. Tntb: Pale pinkish-brown, non-welded, pumiceous vitric tuff and lapilli-tuff breccia. 0-100 m thick. Tng: Underlying interformational bouldery cobble gravel locally con-

taining boulders of Tlt and Tmt up to several meters in diameter. Lenihan Canyon Tuff. Pale-lavender to purplish-tan, moderately to densely welded, devitrified, fine-grained hornblende quartz la-tite crystal-vitric tuff, 0-300 m thick. Mickey Pass Tuff. Tmt: Tan to reddish-brown, moderately to strongly welded, devitrified biotite quartz latite vitric crystal tuff. Grades downward into a basal few meters of rhyodacitic crystalich vitrophyre and upward into pumice- and crystal-rich rhyolite. 0-200 m thick. Tmg: Underlying bouldery cobble gravel. Hornblende-biotite granodiorite. Grayish-white to gray and greenish-gray, medium to coarse-grained, equigranular to porphy-

Granodiorite porphyry. Dikes and small plugs of light grayishbrown to pale pinkish-green, medium to coarse-grained grano-diorite and quartz monzonite porphyry. Locally aplitic near the Bidwell Mine. Quartz monzonite porphyry. Grayish white to white, medium grained, bleached and albitized. Contains zoned, euhedral alkali

ritic, locally foliated and lineated granodiorite.

feldspar phenocrysts 2-3 cm in diameter.

Metavolcanic breccia. Gray to greenish-gray and greenish-black very poorly sorted coarse andesitic mud-flow breccia.

Dacite porphyry. White to pale bluish-gray, fine-grained dacite to

Metasedimentary rocks. Jmg: Coarse-grained gypsum. Jmm: Yellowish-tan, medium-grained marble. Calcareous argillite. Fine-grained, dense, bluish-black to bluishgray, thin-bedded, calcareous to siliceous argillite and silty lime-stone. Equivalent to the Gardnerville Formation of Noble (1962). Calcite marble. Thin (0-3 m) beds of coarse-grained white marble. Phyllite. Dark gray-brown andalusite phyllite and slate. Metasedimentary rocks. Rmm: Gray, fine to medium-grained, mottled calcite marble. Rmt: Pale-green to pale bluish-gray

recrystallized tuff, lithic-tuff breccia, and graded chert interbeds Rml: Bluish-gray to bluish-black, fine-grained recrystallized limestone. Equivalent to the Oreana Peak Formation of Noble Felsic schist, undifferentiated. Gray-white to pale bluish-gray, si-

liceous, fine-grained flaser schist and banded flaser gneiss.

Metavolcanic rocks of Brunswick Canyon. Rm: Interbedded porphyritic flows of dark orange-brown to dark greenish-gray quartz latite, latite, and andesite. Includes welded tuff and tuff-breccia near the top of the map unit and thin beds of epiclastic and mud-flow breccia throughout, Rmb: Volcanic breccia. Mafic metavolcanic rocks, undifferentiated. Grayish-green to greenish-black, fine-grained, sparsely porphyritic, dense and hard

Contact. Long dashes where approximately located; short dashes where transitional; dotted where con-

metamorphosed mafic andesite flows and volcanic breccia.

33 Foliation. Schistosity in metamorphic rocks; com-

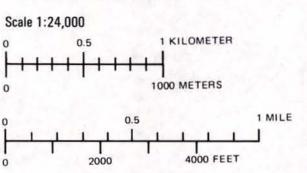
paction foliation in ash-flow tuffs.

mately located; dotted where concealed.

62 Bedding.

Mapped 1975-77. Correlation of selected Mesozoic rocks based on Noble, D. (1962) Mesozoic geology of the southern Pine Nut Range, Douglas County, Nevada: Stanford Univ., unpub. Ph.D. dissertation.

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CONTOUR INTERVAL 40 FEET DOTTED LINES ARE 20-FOOT CONTOURS

DATUM IS MEAN SEA LEVEL

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Topographic base from U. S. Geological

Survey New Empire 7½' quadrangle, 1968 Cartography by Susan L. Nichols

NEVADA BUREAU OF MINES AND GEOLOGY UNIVERSITY OF NEVADA RENO, NEVADA 89557 ORDER MAP NO. 59

