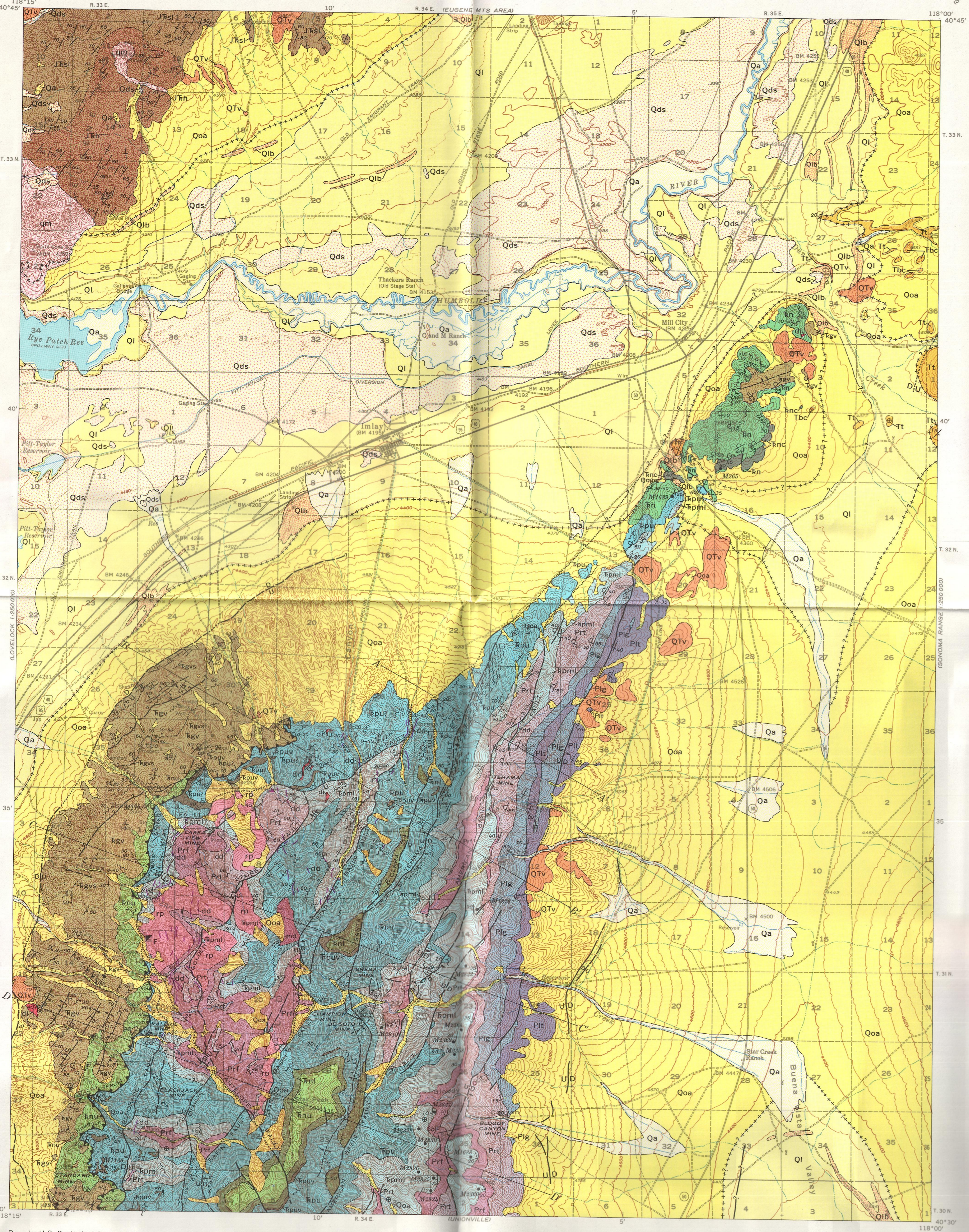
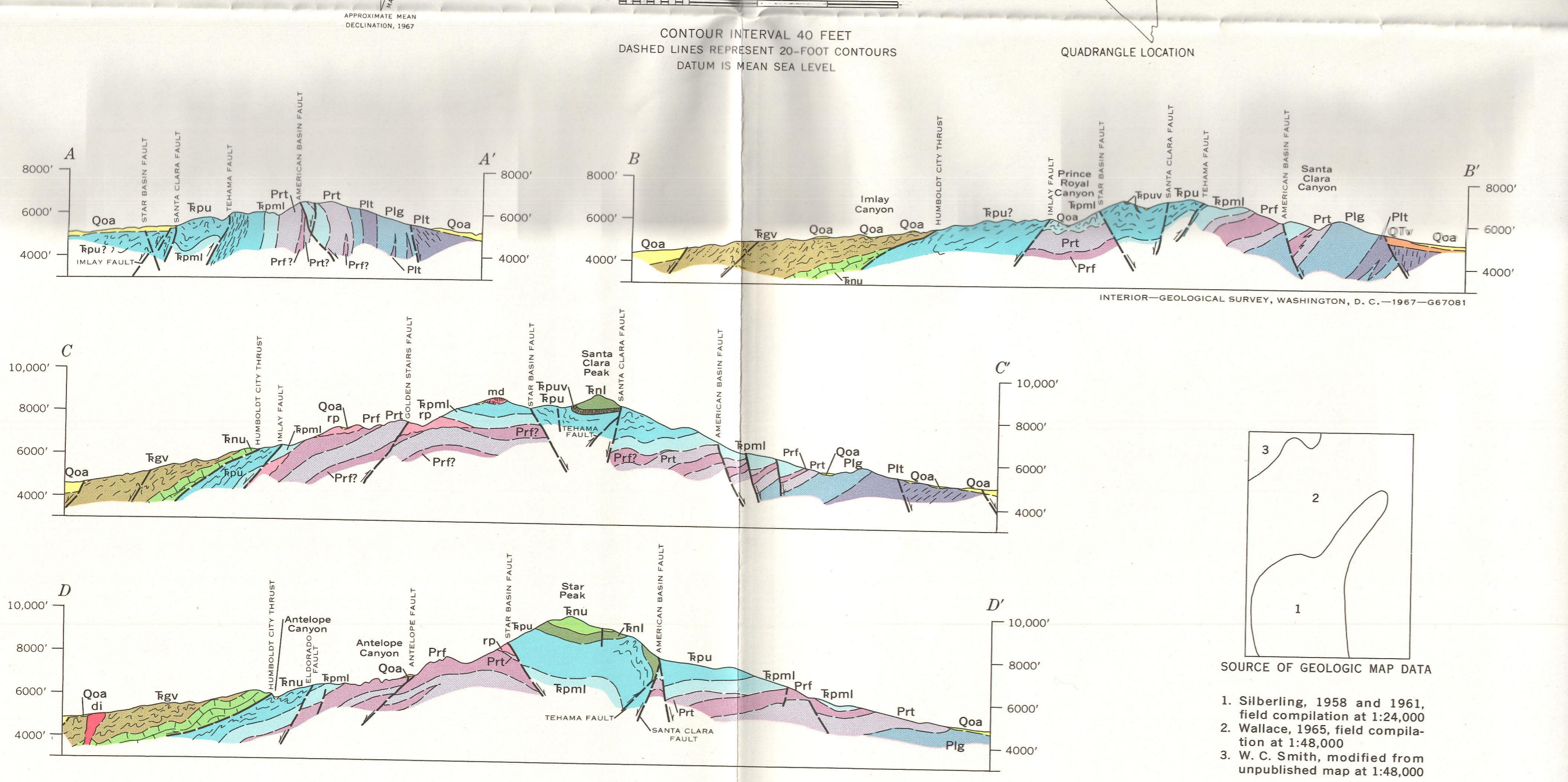


601159-0005

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY



Base by U.S. Geological Survey, 1956
SCALE 1:62,500
DASHED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL



SOURCE OF GEOLOGIC MAP DATA
1. Silberling, 1958 and 1961, field compilation at 1:24,000
2. Wallace, 1965, field compilation at 1:48,000
3. W. C. Smith, modified from unpublished map at 1:48,000

GEOLOGIC MAP OF THE IMLAY QUADRANGLE, PERSHING COUNTY, NEVADA

By
N. J. Silberling and R. E. Wallace
1967

HUMBOLDT HOUSE
PLATE 7
GEOLOGIC QUADRANGLE MAP
IMLAY QUADRANGLE, NEVADA
QG-666

EXPLANATION

QUATERNARY

- Qa (Qds) Alluvial and eolian deposits
Principally fluvial gravel and sand
Qds, dune sand
- Ql (Qlb) Lake Lahontan deposits
Principally lake silt and fine sand; some gravel, clay and saline deposits
Qlb, bar, spit, beach, and deltaic deposits; largely gravel and sand
- Qoa Older alluvial deposits
Principally fanlomerate, but also fluvial gravel and sand deposited during main period of fan building. Includes isolated deposits of alluvium and colluvium in higher parts of range

ANGULAR UNCONFORMITY

TERTIARY OR QUATERNARY

- Qtv Volcanic rocks
Basalt flows and breccias; rhyolite and rhyolite tuff; some cobble and boulder conglomerate, sand and silt interbedded with volcanic rocks
- Tl Lacustrine deposits
Possibly correlative with Truckee Formation
Tl, calcareous siltstone and sandstone, locally silicified; includes some rhyolite tuff as well as breccia and conglomerate and Tlc
Tlc, silicified chert and limestone breccia, and silicified chert pebble conglomerate
Tli, massive-bedded, brownish-gray lacustrine limestone

NONCONFORMITY

JURASSIC OR TRIASSIC AND TERTIARY

- qm Biotite-hornblende quartz monzonite of Eugene Mountains
- Jsl Metasedimentary rocks of Eugene Mountains
Jsl, slate, argillite, and quartzite; calcareous in minor parts
Jst, hornfolded rocks of unit Jsl
- Tev Grass Valley Formation
Slate, phyllite, argillite, and subordinate impure micaceous siltstone and fine-grained sandstone; dark gray or black, characteristically weathering olive gray. Along east side of Humboldt Range between Humboldt and Johnson Canyons mostly altered to light gray and red, aphanitic argillaceous rock. Maximum exposed thickness probably a few thousand feet
Tev, light-colored, slightly calcareous, clean sandstone in laterally persistent units up to several tens of feet in thickness
- Tnu Natchez Pass Formation, upper member
Massive, thick to very thick-bedded gray limestone in upper part; grading downward into evenly stratified, thin to thick-bedded, brownish gray weathering, thin to thick-bedded, brownish gray weathering, thin to thick-bedded, brownish gray weathering, thin to thick-bedded, brownish gray weathering limestone in lower part that includes minor amounts of chert pebble conglomerate, calcareous siltstone, and mafic metasedimentary rocks. Thickness of incompletely exposed upper part at least a few hundred feet; thickness of lower part 100-300 feet
- Tn Natchez Pass Formation, undifferentiated
Massive, thick and very thick-bedded, recrystallized gray limestone and buff-weathering dolomite in hills at northeast end of Humboldt Range. Thickness, including unit Tnc, about 2,000 feet
Tnc, thick and very thick-bedded, siliceous chert sandstone and pebble and cobble conglomerate interbedded with red-brown weathering argillite and calcareous siltstone. Thickness about 100 feet; may be equivalent to lower part of upper member farther south in Humboldt Range
- Tnl Natchez Pass Formation, lower member
Very thick bedded, or unbedded, massive, cliff-forming gray limestone; 100-300 feet thick
- Tpu Prida Formation, upper member
Mainly well stratified, thin to medium-bedded, medium to dark-gray, commonly laminated, limestone including chert laminae and horizons in varying proportions. Subordinate interbedded units of thick and very thick-bedded massive gray limestone, particularly in upper part. Thickness varies from about 800 feet at northwest end of Humboldt Range to at least 1,800 feet farther south within Imlay quadrangle. Includes ammonites of early Korean (earliest Late Triassic age at USGS Measico loc. M1188
Tpu, mafic metasedimentary flows, breccias, and calcareous tuff, commonly amygdaloidal; flows locally have pillow-like structures. May include some volcanic feeder dikes
- Tpm Prida Formation, undifferentiated middle and lower members
Middle member, thin to medium-bedded, medium to dark-gray limestone interbedded with gray, yellowish-brown, and pinkish-gray calcareous shale and siltstone. Limestone beds locally highly fossiliferous. Thickness 200-400 feet; thickest along east flank of Humboldt Range
Lower member, along east flank of Humboldt Range and on west flank near Eldorado Canyon includes three units, in descending order: (1) reddish-brown and yellowish-brown calcareous or dolomitic siltstone interbedded with calcareous siltstone and sandstone up to 300 feet thick; and (2) sandstone, grit, and conglomerate, 10-50 feet thick, derived from rocks of Kojigato Group; maximum total thickness at any one place about 100 feet. Includes ammonite fauna of late Spethian (latest Early Triassic) age in unit (2)
In Star Canyon near DeSoto Mine: sandstone and grit with subordinate sandy limestone; total thickness about 100 feet
On crest of Humboldt Range between Star and Humboldt Canyons: brown-weathering impure dolomite with sandstone and conglomerate at base; total thickness locally less than 50 feet

UNCONFORMITY

PERMIAN AND TRIASSIC

- rp Rhyolite porphyry
Conspicuous, abundant phenocrysts of feldspar and quartz in aphanitic, locally aphanitic, groundmass; white to greenish gray or dark gray on fresh surfaces
- Prt Rhyolite
Prt, rhyolite foliate with sparse small phenocrysts of feldspar, and more rarely quartz, in aphanitic groundmass; matrix white or light gray, weathering brown; commonly flow banded, locally aphanitic; probably includes both flow and welded tuff
Prt, rhyolite tuff breccia, and volcanic-derived sandstone and conglomerate in complexly intertonguing units; mostly dark shades of gray, grayish red, greenish gray, and brown. Commonly somewhat foliated with lustrous, sericitic parting surfaces
- Pig Limerick Greenstone
Pig, dark greenish-gray amygdaloidal greenstone, greenstone breccia, and fine-grained stratified tuff
Pit, poorly sorted, coarsely fragmental, grayish-red volcanic tuff and breccia; mostly sheared and foliated. Locally conglomeratic with pebbles and boulders of calcareous siltstone and other non-volcanic rocks

PERMIAN

STRUCTURAL FEATURES

- ***** Highest shoreline of Lake Lahontan
- Hydrothermal alteration and silicification
- Contact
Dashed where approximately located, queried where inferred
- Fault, showing dip
Dashed where approximately located, queried where inferred. U, upthrown side; D, downthrown side
- Thrust fault, showing dip
Dashed where approximately located, queried where inferred. Burbs indicate overthrust side
- Shear zone
- Anticline
- Syncline
- Overtured anticline
- Overtured syncline
- Folds
Showing trace of axial plane and direction of dip of limbs; dashed where approximately located
- Minor overthrust folds
Showing strike or approximate strike of axial planes and direction of dip of limbs
- Inclined
- Vertical
- Overtured
- Strike and dip of beds
Dashed indicates top of beds known from sedimentary structures
- Horizontal beds
- Inclined
- Vertical
- Overtured
- Approximate strike of folded beds
Showing average dip or direction of dip. Dashed indicates top of beds known from sedimentary structures
- Folded
- Inclined
- Vertical
- Strike and dip of foliation or cleavage
Showing strike or approximate strike and dip or direction of dip
- Strike and dip of joints
Showing strike or approximate strike and dip or direction of dip
- Shaft
- Open-pit mine
- Adit
- Symbols indicating mine commodities:
Ag, silver; Au, gold; F, fluorite; Hg, mercury; Sb, antimony
- M2000
- Fossil locality
Showing USGS Measico locality number