lead pencil comments are C. M. Tschanz's Nov. 1956.

This has been revised Dec, 1956 see other copy

# PIOCHE HILLS

## EXPLANATION

TERTIARY AND QUATERNARY

QTa

**Alluvium and Panaca formation, undifferentiated**
Includes stream deposits, slope wash, talus, and the Panaca formation. Mostly unconsolidated.

TERTIARY

Tv

**Volcanic rocks.**
Chiefly dacite and latite [welded tuffs]

Tgd

**[Granite porphyry.]**
Granodiorite

Td

**Diabase.**

CAMBRIAN

Ɛhu

**Highland Peak limestone, undifferentiated**
Dolomites and limestones undifferentiated.

Highland Peak limestone

Middle Cambrian

Ɛhdl

**Dolomite and limestone**
Uppermost member of the Highland Peak mapped in the Pioche Hills. Light-gray, thin-bedded, finely-laminated and somewhat silty dolomite and limestone. Gray to blue-gray on fresh surfaces. Weathers to light gray. Locally called Badger dolomite. 110-175 feet thick.

Ɛhl

**Limestone**
Dark gray medium grained, mottled, thickly but distinctly bedded carbonaceous limestone. Locally called Bristol limestone. Correlated with Swazey limestone by wheeler (1948) 345-430 feet thick.

Correlated with Swazey limestone by wheeler

Ɛhs

**Sandstone [or siltstone] and dolomite**
Buff to reddish brown fine grained, thinly laminated dolomitic or limy sandstone or [siltstone] sandy dolomite. Weathers into flat plates 2-6 inches across and 1-2 inches thick. Locally called Platy dolomite. Designated Condor member of Swazey limestone by wheeler 110-120 feet thick.

Ɛhol

**Limestone**
Dark blue massive limestone with white massive limestone beds at both top and bottom of the member. Locally is composed largely of dark oolites that impart a mottled salt and pepper appearance to the rock. Locally called Newport limestone. Total thickness ± 625 feet.

O not C

Correlated with Dome l.s. by wheeler (1948)

Ɛhll

**Limestone**
Thin-bedded dark gray to black, fine-grained or medium-grained limestone. Shale partings common in lower beds. Limestone is lenticular and knotty. Weathered surface stained by spots of pink or red iron oxides. White calcite stringers abundant. Shale member 60 feet above base is fossiliferous. Locally called Davidson Black limestone. Thickness 180-240 feet.

Burnt Canyon limestone of wheeler (1940, 1948)

Ɛhd

**Dolomite**
White to light pearl gray, coarsely crystalline thick-bedded to massive dolomite, commonly brecciated. Locally is fine-grained dense white limestone. Locally called Davidson dolomite. Thickness is 300-350 feet.

Burrows dolomite of wheeler (1940, 1948)

restricted by wheeler

Ɛhbl

**Limestone**
Dark blue-gray, thick bedded or massive limestone. Partly dolomitized, especially in the upper beds. Commonly brecciated and contains numerous white calcite stringers. The basal member of the Highland Peak formation. Locally called Davidson blue limestone. Thickness is 160-180 feet.

Peasley limestone wheeler (1940, 1948)

Ɛc

**Chisholm shale**
Dull olive green, tan to maroon, argillaceous and calcareous shales and limy shales to shaly limestones. Weathers drab brown. Paper thick layers contain well preserved trilobites and brachiopods in weathered material. Thickness 160-170 feet.

Ɛl

**Lyndon limestone**
The uppermost member is dark blue-gray limestone about 30 feet thick. The middle member is a white or light gray dense crystalline limestone which averages 200 feet thick. The lower member is a dark gray massive bedded limestone 115 feet thick. Locally called Prince limestone.

Lower Cambrian

320
60

Ɛp

CM bed

CM bed is consistently 240 feet above base of shale

**Pioche shale**
Largely shales, locally with conspicuous mica. Elsewhere mica is absent. Contains beds of impure limestones and quartzites. Grades downward into Prospect Mountain quartzite. Dark gray, gray, greenish gray to brown on fresh surfaces. Commonly weathers brown. Limestones and several shale layers are fossiliferous. The lowest limestone member, locally called the Combined Metals bed, is the most productive ore horizon. Thickness of the Pioche shale ranges from 855-920 feet.

[illegible] attached

Ɛpm

**Prospect Mountain quartzite**
Alternating beds of shale and quartzite in uppermost part. Grades downward into massive glassy to white pure quartzite, probably 1000 to 1500 feet thick. The lowest known members consist of brownish to reddish-brown shales and quartzite. Total thickness is unknown because it is the basal unit in the region.

65

**Contact, showing dip**
Dashed where approximately located

**Concealed contact**

?
75

**Fault, showing dip**
Dashed where approximately located

90

**Vertical fault**
Dashed where approximately located

**Concealed fault**

20

**Strike and dip of beds**

**Dike**

**Shaft at surface**

**Portal of adit**

×

**Prospect**

—?—?—
Doubtful or probable fault

132

3640 0069

175