C- Right drift

C- Left drift

N. 63° E.

Fault, 0.4 to 0.6 ft gouge

Altered and fractured zone (gouge and crushed rock). Most of south wall altered 2–3 ft in from wall and in roof to centerline of C- Left drift

Medium- to coarse-grained banded biotite-hornblende gneiss

Blocky but competent

Generally massive granite gneiss; migmatitic zones

Miami tunnel

Shear zone parallel to foliation; as much as 6 in. gouge; extends to Miami tunnel

N. 62° E.

Massive medium- to coarse-grained pegmatitic gneiss

Fine-grained banded hornblende biotite gneiss; blocky; 0.2- to 0.6-ft joint blocks

S. 27° E., 2° SE.

S. 18° E., 2° NW.

Massive granitic to biotitic gneiss

Gneiss as above but closer spaced joints

Probes
B-2 (overcored)
18 (overcored)
B-5

Overcored { Probe 21 / Probe 22

Biotite-hornblende gneiss

Central crosscut

Probe 25 at 4 ft
Probe 24 at 18 ft

Closely banded (0.5–1 in.) to massive hornblende gneiss; calcite veinlets

Probe 19 at 4 ft
Probe 15 at 18 ft

S. 62.5° W., 1.5° NE.

Pegmatite; biotite lenses

Probe 9
July 28, 1967

Banded quartz-plagioclase-biotite gneiss; pegmatite and sulfide veins

ROOM 2

Probe 10 July 28, 1967

Massive hornblende plagioclase gneiss; minor banding; pegmatite veins parallel to foliation

N. 39° W.

Massive granite gneiss

Banded biotite gneiss grades to granite gneiss

Pegmatite

Silicified altered zone parallel to joints and foliation

Very massive granite gneiss;

Moderately altered biotite gneiss

Zone of minor shearing parallel to foliation

Massive pegmatite parallel to foliation

Massive pegmatite

Biotite gneiss and migmatite

Intensely sheared zone 6 in. to 2 ft wide; ~20 percent gouge

Moderately to intensely sheared biotite gneiss and pegmatite

Well-foliated biotite gneiss and interlayered amphibolite

Massive biotite gneiss

Massive gneissic granite

FAULT 2

Fault, 0.5–4 in. gouge; as much as 6 ft crushed rock

Sheared and altered zone (mainly on hanging wall of fault)

S. 60° W., 2° NE.

Mainly granite; moderately sheared

Altered zone; intensely sheared; > 20 percent gouge

FAULT 1

Granite gneiss; pegmatite stringers

Pegmatite gneiss

Probe 8 Dec. 9, 1966

Fine-grained biotite-hornblende gneiss; amphibolite lenses

Medium- to coarse-grained biotite-quartz-plagioclase gneiss; minor alteration; includes numerous stringers of biotite-hornblende gneiss

Pegmatite

Pegmatitic zone

Fault, 0.1 ft gouge; as much as 2 ft crushed rock; mineralized with pyrite, galena

Fault, <0.1 ft gouge

Amphibolite; interlayered biotite gneiss

Altered biotite-rich layer; fault(?)

B- Right drift

Elevation about 7885 ft

ROOM 1

Coarse-grained granite

Iron-stained, blocky granite

Probe 17 (overcored)

S. 75° W., 2° NE.

Granitic gneiss and pegmatite veins

Minor water from roof

Medium-grained biotite gneiss, well foliated; pegmatite stringers usually parallel to foliation; wet; disseminated pyrite veins parallel to foliation

Massive gneissic granite

Blocky granite

Migmatite with pegmatite stringers

Minor water in roof and walls

Coarse-grained feldspar-rich pegmatite parallel to foliation in gneiss

Central crosscut

Massive granite

B- Left drift N. 62° E.

Probe 5
Oct. 19, 1966

N. 39° W., 2° SE.

Probe B-3 (overcored)

S. 36° W., 2° NE.

Biotite schist, gneiss; minor granite; moderately altered

Coarse-grained feldspar-rich pegmatite in gneiss

Miami tunnel (7931 ft) to portal

-2% grade

EXPLANATION

SYMBOLS

75 — Strike and dip of foliation

70 — Strike and dip of joints

40 — Strike and dip of faults

Zone of shearing or alteration

Probe 19 — Drillhole with borehole probe

Vertical hole in roof

JOINT INFORMATION

Significance: ① Major; ② Intermediate; ③ Minor

Average spacing in feet

Alteration: + Gouge or intense fracturing; ○ Minor gouge and fracturing; - Fresh unaltered surface

N

10 0 10 20 30 40 FEET
5 0 5 10 METRES

GEOLOGIC MAP OF PART OF COLORADO SCHOOL OF MINES EXPERIMENTAL MINE, IDAHO SPRINGS, COLORADO

Plan view–4.5 ft. above invert

Geology by F. T. Lee and T. C. Nichols, Jr., 1967–69

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