EXPLANATION

SEDIMENTARY ROCKS

CARBONIFEROUS
- Pennsylvanian
  - Magdalena group
    - Sandia formation
      - Css — Shale
      - Csll — Lower limestone
      - Cslq — Lower quartzite
      - Pzsp Ck — Kelly limestone "5 pr Silver pipe" bed
- Mississippian

UNCONFORMITY

PRECAMBRIAN
- arg — Argillite

IGNEOUS ROCKS

INTRUSIVE

TERTIARY(?)
- Tl — Lamprophyre dike
- Tm — Monzonite
- Trp — Rhyolite porphyry

INTRUSIVE

PRECAMBRIAN
- db — Diabase dike

Fault — Showing downthrow and dip

Shaft
Raise
Winze

Mitchell tunnel
2d level (Graphic tunnel No 2)
3d level (Graphic tunnel)
Ida Hill tunnel
4th level
5th level
6th level
7th level
8th level
9th level
10th level

Stope
(Color represents level)

Diabase or argillite pyritic along fault

Lower Ck

"Silver pipe"

Upper Ck Quartzite

Vertical fault

"Silver pipe" N.25°W.

Lower Ck

"Silver pipe"

Upper Ck

Kelly-Graphic fault

Black shale

Many minor slips in shale and quartzite

White quartzite impregnated with pyrite

Shale

N.20°W. fault containing quartz and a little pyrite

Ck

Silicified upper Ck

Iron-stained Ck along fault containing flat crystals of calcite

TUNNEL

Mineralized vertical fault

Diabase

Ck

MITCHELL TUNNEL

Silicified upper Ck

Mineralized fault N.30°W.

"Silver pipe"

Silicified

Upper Css

Iron-manganese oxide and clay

"Silver pipe"

NORTH DRIFT

Mineralized fault N.60°W.

Silver pipe

Quartz

Top of Ck silicified

Old stope

Upper "silver pipe"

SANDSTONE

"Silver pipe"

2d LEVEL

Argillite

COOK TUNNEL

Leached vein

TABACCHI TUNNEL

"Sp" STOPE

TUNNEL

Mineralized fault

AUGUSTINE TUNNEL

"Sp" TUNNEL

GIBBS

REVIEW TUNNEL

Replaced bed

"Silver pipe"

Old stope

Approximate position of "silver pipe" on 3d level

Stope along nearly vertical fissure

Small stope

2d LEVEL

"Silver pipe"

Lead carbonate stope with copper carbonate casing

Silver pipe fissure along drift

Old stope above "silver pipe"

Rich copper ore

Tl on level 5

5th LEVEL

"Silver pipe"

6th LEVEL

Zinc carbonate on pyritic ore

Fault on 3d level

Incline on "silver pipe"

Stope with roof of quartz

Caved

"Silver pipe"

Fault on 3d level

GRAPHIC TUNNEL No 2 OR 3d LEVEL

Argillite

Ck

arg

Ck

Cslq

Altitude of portal 7585 ft.

Cut out

Cut out for winze station

Few small stopes along drift

Old quarry for flux

Stope rises 25 ft. along fault

Fault projected to 5th level

Fault projected to 6th level

Fault on 7th level

Ore shoot 35 ft wide on 7th lev.

Silver pipe on 7th. level

Old stope above 6th level

Copper stope 18 in. thick

Upper "silver pipe"

Calcite and iron oxide

Lead carbonate Zinc carbonate

Tm dike cut off by bedding fault

Basal shale of Sandia formation on "silver pipe"

Fault on 7th level

Ore shoot 35 ft wide on 7th lev.

Silver pipe on 7th. level

Old stope above 6th level

Argillite on 8th lev.

Copper ore on 8th lev.

Fault above 8th lev. on east ore shoot

Copper ore

Incline on ore streak

Dike offset 30 ft. along normal bedding fault on Silver pipe

Basal Css

"Silver pipe"

Upper Ck?

Cslq?

Shale on "silver pipe" along bedding fault

Base of Sandia formation

Bedding fault within "silver pipe"

Cslq (Base of Sandia formation)

CROSSCUT 2

CROSSCUT 4

9th LEVEL

Pyritic copper ore Lower "silver pipe"

Argillite

Pyritic ore

Vertical ore

Silver pipe Stope in Cslq Ida Hill level

Monzonite dike offset along S.P.

"Silver pipe"

IDA HILL TUNNEL

Altitude of portal 7555 ft.

Descends obliquely along dip of upper Ck

Tl below 10th level

Fault zone not clearly outlined on level 10 contains calcite

10th LEVEL

WALDO TUNNEL

SUBLEVEL

Metamorphic limestone with monzonite stringers

"Silver pipe"

Lower "silver pipe"

Pyritic ore

Zinc ore

Pyritic ore

CROSSCUT 11

CROSSCUT

Metamorphic Sandia formation with many silicified and mineral fractures, with stringers of pyrite and veinlets and pockets of calcite

Cslq

Csll

Tm

Css

Tm

Caved

NITT SHAFT

LEVEL 2

WALDO SHAFT

65° N.65°W.

Monzonite porphyry dike

Waldo fault

WALDO TUNNEL

TFP

Portal Altitude 7,284 feet

A A'

Plan of workings furnished by the Ozark Smelting & Mining Co. 1916

PLAN OF GRAPHIC WALDO AND NITT MINES SHOWING GEOLOGIC FEATURES AND STOPES

100 0 100 500 FEET