



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
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Tucson, Arizona 85701
520-770-3500
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inquiries@azgs.az.gov

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Richard Mieritz Mining Collection

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October 15, 1979

Page two

surfacing material. This work may be lengthy and somewhat expensive.

As soon as the Portal has been cleaned and made "safe" for entrance, Mr. Lips and the writer will examine the interior to determine any interior caves, amount of rail, etc.

I will journey to the Savoy this Wednesday or Thursday.

It is very likely that a fair amount of water may be "trapped" behind the portal cave. A small amount of water is seeping and running now. How far it may have "backed" up, I would have no idea at this time.

After signing the "application", please make a copy for your records and return the original to me so I can give same to the Forest Service. Verbal permission has been given, as I said before, this is just the paper work.

Sincerely,

R. E. Mieritz,
Mining Consultant.

Forest Service }
Rangers } Bruce Wilson } 632-7740
Tom R Chacon }

P.O. 471
86343
C.K.

Richard H. Mieritz

GEOLOGIST
ARIZONA REGISTERED

October 15, 1979

Mr. Dennis Pickens
Mine Management Corporation
P. O. Box 66189
Birmingham, Alabama, 35210

Re: Savoy Mine Work

Dear Mr. Pickens:

A trip to the Savoy Mine was made on October 11th, accompanied by Mr. Ron Tips, contractor cleaning out the caved portal of the Adit driven by Mine Management in its previous exploration program. A visit was also made to the Forest Service in Crown King with regards Mine Managements work on the road which is in bad disrepair.

The contractor will have about a weeks work just cleaning out the caved material at the portal entrance. Unfortunately, the Adit was portaled in a "gully" (drainage area) and the extreme heavy rains this past year has caused much caving and weakening of the surface in the portal area. Timber of the three or four sets have been saved but it is feared this timber will not be enough to properly timber the new entrance to make it safe. Thus, new timber will have to be ordered and Mr. Tips advises the saw mill in Prescott can supply same. Could you therefor make the necessary arrangements with the saw mill to obtain the needed timber.

We will also construct a small diversion DAM above the Portal and a short diversion canal to the next gully east to prevent further washing of Portal area.

I enclose an application for the maintainance of the road. There will be two phases for this road, (1) from the portal to the junction with the OroBelle turnoff and (2) from the OroBelle turnoff to the junction with the Senator Highway. The application covers the first phase--permission is granted--but the paper work is required. The second phase, the road of which is part of the Forest Service System, an agreement will be necessary which in short states we will maintain this portion to the standard set by the Forest Service for the purpose and use of the road. I indicated ore shipping would be in the future--our current use being access for exploration work.

That portion of the road-phase (1)- is relatively easy and fast, the second portion will require surfaceing, re-establishing some drainage ditches (now existant but filled), some blasting of the protruding bedrock and the cleaning of the "toe" for additional

Hipp's -

10/20/79 -

one car - at end -
air receiver

Rail-connection back

alum. portal - to back

elec. wire - portal back

Iron pipe. Portal to back (2)

Ladder in tact - good shape

No caves -

water to waste

October 21, 1979

Mr. Dennis Pickens
Mine Management Corp.
P. O. Box 66189
Birmingham, Alabama, 35210

Re: Savoy Mine Work

Dear Mr. Pickens:

On Saturday, October 20th inst., a cold stormy day, your son Clark, his friend Ray and the writer visited the Savoy Mine property to inspect the underground workings and observe what equipment was present in the underground workings and the condition of same.

First off, no backhoe or dozer were on location at our arrival and quite a "muck" pile remained in front of the portal. A hole about six feet long and three feet high at the back of the Adit was the entrance to the Adit.

The following is what was observed in the workings:

- (1) The rail or track is intact and in place from the junction or connection back to the stoped area.
- (2) A 3 or 4 inch aluminum air line is in tact and in place, hung on the left wall from the portal to the stoped area.
- (3) An electric wire line is in tact and in place from the portal to the stoped area.
- (4) The air receiver is in place.
- (5) A mine muck car is on the rails in the Wilkerson Adit portion.
- (6) There are two two inch iron pipe lines from the portal back to the stoped area.
- (7) There is a 3/4 inch pipe line in place.
- (8) The ladder in the stope above the Wilkerson Adit appears to be in good shape.
- (9) There is some sloughing of material but no major caves of any kind.

As you are aware, the mine has always been "wet" - making some water all year long. Except for some seepage at the base of the "muck" pile, little water has escaped the workings. The caved muck at the portal acted as a dam, backing up the water to the junction of the two Adits. (my October 15th letter). The depth of water at the junction or connection was about six inches whereas just beyond the portal and away from the influence of the caved material it is three feet deep. Under this condition the writer was not about to wade through waist high water.

Before he could be stopped, Clark, in shorts and tennis shoes was

October 21, 1979

Page Two

in the water and working his way toward the Adit junction. Clark got the information you require but came back bruised and cut. Sure hope he does not catch pneumonia.

I enclose some pictures I took during the visit - 2 of the "muck" pile and one showing Clark in the water. The water is to his knees and he is standing on a foot or so of "caved muck". The aluminium and iron pipe are visible in this picture.

Sincerely yours,

R. E. Mieritz,
Mining Consultant

cc. Phoenix Office.

Meeting → 3 directors - Ballam - Coggins - self.
Open discussion -

Jack Kennedy - Dennis - Mason & McCae.
Robert Kennedy

Roads - \$12,000 for 100 hrs -
Security - Trailer - power on property
Fence - ?

Portal → dam ok - bypass ok also.
Housing - cabins during winter

Power - Diesel gen.

San G.M.O. ~~Hub:~~
Patton ~~copy 1979~~
Tom ~~Budgrat~~

89 - ~~to site~~ HIPP5
632-2054 ~~mt 10 days~~

Postal ~~Loco.~~
Ad - ~~where~~
Bakum ~~Haist~~
Camp ~~Vader~~

Jerry Spaniol

304-255
1511

132

3hr-

3 to 5

~~304-255-1511~~
Dennis - 304-255-1511
Rm 132 (Holiday Inn)

Lipp - 632-7056

Dennis Birmingham Alab.
205-592-8935



Aldactone[®]
(spironolactone)

"the diuretic with specific action in CHF"

SEARLE

(*Please see prescribing information on back cover)

REPLY TO:

1634 W. HAZELWOOD STREET
PHOENIX, ARIZONA 85015-16
TELEPHONE (602) 277-6053

2940 N. Casa Tomas

Richard E. Mieritz

MINING CONSULTANT

ARIZONA REGISTERED
MINING ENGINEER AND GEOLOGIST

GEOLOGY
EXPLORATION
EVALUATION
FEASIBILITY
OPERATION

September 26, 1979

Mr. Anthony DePrimas, Attorney
1833 N. 3rd Street
Phoenix, Arizona, 85004

Re: Mine Management Corporation's
1979 Savoy Exploration Project.

Dear Mr. DePrimas:

At the request and authorization by Mr. Dennis Pickens, the writer reviewed past activity and work at the Savoy Mine as well as his Report - Probable Consequences of Exploration of Savoy Gold-Silver Property - September, 1979, Tiger Mining District, Yavapai County, Arizona.

In the writers opinion, the proposed 1979 Exploration Project meets all criteria of exploration prior to its development of the mine; i. e., the commercialization or shipment of mined values. Such work as access tunnels, adits, drifts, crosscuts, raises and sinking, (vertical or decline) in or about the mineralized zone will make the mineralization visually observable and aid in determining the size, shape, position, character and value of the deposit.

The suggested footwall decline shown on Map No. 1, Mr. Pickens Report - is a means of access to an area of mineralization projected down dip from geologic evidence observed on the Wilkerson Adit level and would be at least 125 feet vertically below the Wilkerson Adit level. From a decline or shaft, crosscuts, drifts, raises, etc., could be completed to explore the deposit to determine those facts or requirements mentioned in the above paragraph. All such work is "exploratory" in nature. Material removed from such work should be stockpiled regardless of grade.

An alternative to the suggested inclined tunnel is a vertical shaft sunk in the footwall or hanging wall of the main structure to the same vertical depth below the Wilkerson Adit level. Evidence from the old history of the Oro Belle Mine, adjacent to the Savoy, gives indications of a continuance of mineralization well below that indicated on Map No. 1. If so, a vertical shaft could more easily be advanced to a greater depth and not be limited such as a decline might be.

Changes in the Exploration plan should be made as required and as the program moves forward. Such changes cannot be predetermined because they would be based on the information still to be obtained and evaluated.

Anthony DePriano

September 20, 1979

Page Two

It is the writer's opinion that the Project should be successful to its objective if sufficient and adequate underground exploration work is completed.

Respectfully submitted,

E. E. Meritz,
Mining Consultant
Arizona Registered Mining Engineer #2745
Arizona Registered Geologist #7784

cc: Mr. Dennis Pickens,
Mine Management Corporation

Richard E. Mieritz

GEOLOGY
EXPLORATION
EVALUATION

GEOLOGIST
ARIZONA REGISTERED

Rough Draft.

Dear Mr. Pickens:

At ^{the} ~~your~~ request and authorization ^{by Mr. Dan Pickens,} the writer reviewed past activity and work at the Savoy Mine as well as ~~the~~ Report - Probable Consequences of Exploration of Savoy Gold-Silver Property - September, 1979, Tiger Mining District, Yavapai County, Arizona.

P In the writer's opinion, ^{The Proposed 1979 Exploration Project} Exploration of the complex type mineralization ^{meets all criteria of exploration prior to its development} at the Savoy Mine is best done by underground methods ^{of the mine i.e. the commercialization or shipment of mineral values.} such as ~~you have suggested in the above mentioned report~~ ^{Such work as access tunnels, and adits, to make the mineralized zone accessible, drifting, cross-}

cutting, raising and sinking, (vertical or decline) in or about the mineralized zone will make the mineralization visually observable ^{and} aid ⁱⁿ ~~to~~ determining the size, shape, position, character and value of the deposit.

P The suggested footwall decline shown on Map No. 1 - your Report - is a means of access to an area ^{of} ~~suspected~~ mineralization projected down dip from geologic evidence observed on the Wilkerson Adit level and would be ^{at least} 125 feet vertically below the ^{Wilkerson tunnel area.} ~~Adit~~ level. From the bottom of ^a ~~this~~ decline ^{or shaft,} crosscuts, drifts, raises, etc. could be completed to explore the deposit to determine those facts or requirements

mentioned in the above paragraph. All such work is "exploratory" in

nature. Material removed from such work ^{should} ~~could~~ be stockpiled ^{regardless of grade.}

P An alternative to the suggested ^{inclined tunnel} ~~decline~~ is a vertical shaft sunk in the ^{or hanging wall} footwall of the main structure to the same vertical depth below the Wilkerson Adit. ^{Evidence from the old history of the Oro Belle adjacent} Observed geologic evidence at this lower level may indicate a continuance of mineralization ^{well that indicated on Map 1.} below ~~this~~ level. If so, a vertical shaft could more easily be advanced to a greater depth and

not be limited such as a decline might be.

P Changes in the exploration plan ^{should be made as} ~~will most assuredly~~ be required ^{and} as the program moves forward. Such changes can ~~not~~ be predetermined because

mine
to the Savoy Mine

they would be based on the information ^{*still to be obtained & Evaluated*} ~~obtained and evaluated at that~~
~~time~~

It is the writer's opinion that the Project should be successful to
its objective if sufficient and adequate underground exploration work
is completed.

Respectfully submitted,

R. E. Mieritz,
Mining Consultant

Req ME #

Req Deabys #

11031 WHITE MOUNTAIN RD.
SUN CITY, ARIZONA 85351
TELEPHONE (602) 977-1771

Richard L. Mieritz

GEOLOGY
EXPLORATION
EVALUATION

GEOLOGIST
ARIZONA REGISTERED

Dear Mr. Pickens:

At your request and authorization the writer reviewed past activity and work at the Savoy Mine as well as your Report - Probable Consequences of Exploration of Savoy Gold-Silver Property - September, 1979, Tiger Mining District, Yavapai County, Arizona.

In the writers opinion, Exploration of the complex type mineralization at the Savoy Mine is best done by underground methods- such as you have suggested in the above mentioned report. Such work as access tunnels and/or adits to make the mineralized zone accessible, drifting, cross-cutting, raising and sinking, (vertical or decline) in or about the mineralized zone will make the mineralization visually observable, aid to determine the size, shape, position, character and value of the deposit.

The suggested footwall decline shown on Map No. 1 - your Report- is of a means of access to an area suspected mineralization projected down dip from geologic evidence observed on the Wilkerson Adit level and would be 125 feet vertically below the Adit level. From the bottom of this decline, crosscuts, drifts, raises, etc. could be completed to explore the deposit to determine those facts or requirements mentioned in the above paragraph. All such work is "exploratory" in nature. Material removed from such work could be stockpiled.

An alternative to the suggested decline is a vertical shaft sunk in the footwall of the main structure to the same vertical depth below the Wilkerson Adit. Observed geologic evidence at this lower level may indicate a continuance of mineralization below this level. If so, a vertical shaft could more easily be advanced to a greater depth and not be limited such as a decline might be.

Changes in the exploration plan will most assuredly be required as the program moves forward. Such changes can not be predetermined because

they would be based on the information obtained and evaluated at that time.

It is the writer's opinion that the Project should be successful to its objective if sufficient and adequate underground exploration work is completed.

Respectfully submitted,

R. E. Mieritz,
Mining Consultant

Conference De Prima - 9-25-79 - 10:00 AM.

1974-75 M.N.C. - atk had not suff. @ \$150. - and 4.50
4/5/79 - apt to purchase - ^{H.R.} playford

Plan for Mining
Exploration Phase

Prepar for mining and to prove further are BEFORE
start of comm. production - drive inclined tunnel off
existing tunnel in part wall of +125 ft depth into
approx center of ore shoot.

Plan out from point cross toward Map.

Code Sec. 617 of I.R.S. and part of 1611 B.

4 ad. Tax write off

Increase hours.

Annual mining of 50 TPD

During explor. time to install cyanidization plant.

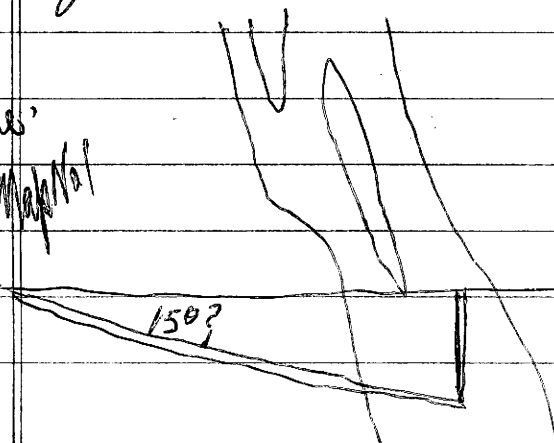
Ag. \$280. - /oz

Ag 8.00 /oz

cu 8.04 /lb.

Ag. Mine - at Camp drive tunnels - start ship \$100-200,000 -
cyanide plant \$250,000.

Savoy Mine
Plan & Profile
Map No 1



Draw out case beyond ground tape
Map No 2
Savoy Mine Assay Map

650 N. 2nd Ave.

Asarco - Sulphur. #25, ton
Explor. prog. - ~~Ferry Report~~ De Prima

254-4731
1835 N. 3rd St
85004

cost → 7 yrs. Proposed

256'
125'



Mine Management Corp.
Herminio Pickens. Exploration
Pl. 66189 - Print alba
85004 7277- → 35210 205-592-
8935

- 1 - Pkto do further exploration →
- 2 - Incl. plan 125 vertically. } to
- 3 - Sink →

cc -

Tips - Crown / ing - backhoe - small contractor
open Portal - now drift - 100?

Cave? Van Lee - copy of report. \$280,000

Tiger -

Proposed Exploration Plan for the Savoy Mine Project

NEED

- ① Read Pickens Sept 1979 Report - Savoy Mine Project - at De Prima's Office.
- ② Internal Revenue Service definition of Exploration.
- ③ De Prima's Office address

Thank you ~~for~~ ^{again} requesting and authorizing the writer ~~to~~ ^{to} review ~~the~~ ^{of past} activity and work at the Savoy Mine, as well as your ~~report~~ ^{report} ~~dated~~ ^{dated} ~~1979~~ ¹⁹⁷⁹ for exploration of the mineralization common to the Savoy Mine property,

Probable Consequences of Exploitation of Savoy Gold-Silver Property,
Tiger Mining District, Yavapai County, Arizona.

As you may know, my acquaintance and knowledge of the ~~Savoy Mine~~ ^{Savoy} dates back to ~~March 1960~~ ¹⁹⁶⁰. To the writer's knowledge, little to no ~~exploration~~ ^{really} has/been done to explore the several mineralization potentials the writer opines to exist laterally, down dip and up dip in the strong structure present and in evidence on the Main Adit level/

Exploration of the complex type mineralization at the Savoy Mine is best done by underground methods, ~~of drifting, cross-cutting, raising and sinking~~ ^{such work as access tunnels and/or adits to make the mineralized zone accessible,} (vertical or decline) will make the mineralization observable, ~~permit taking and determining~~ ^{take close spaced samples to determine metal contents and provide ample room to obtain large bulk samples for metallurgical testing to determine amenability of mineralization to milling processes.} a potential ore body ~~availability~~ ^{of needed minerals}

A review of your general underground exploration plans, dated ~~1979~~ ^{Sept 1979}, are satisfactorily ~~projected~~ ^{indicate they} and should provide sufficient evidence and data that can be used to categorize the mineralization explored into the various classifications of ore types.

Changes in the exploration plan will most assuredly be required as the program moves forward. Such changes cannot be pre-determined because they would be based on the information obtained and evaluated at that time.

It is the writer's opinion that the Project should be successful to its objective if ~~the plans you have indicated are carried to completion.~~ ^{sufficient and adequate underground exploration work is completed}

Sept 1979

Section

*and is
Brazos to
development*

Report dated 1979

Savoy

zone accessible

Sept

the minerals

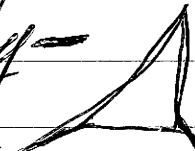
shows indicates (containing)

indicate they


"The work of exploring a mineral deposit to gain knowledge of the size, shape, position, characteristics and value of the deposit"

1957 and 1969
2.20 Exp. paid or incurred during taxable year for the purpose of
ascertaining the existence, location, extent or quality of any
deposit of ore - and paid before the beginning of the development
stage of the mine, shall be allowed.

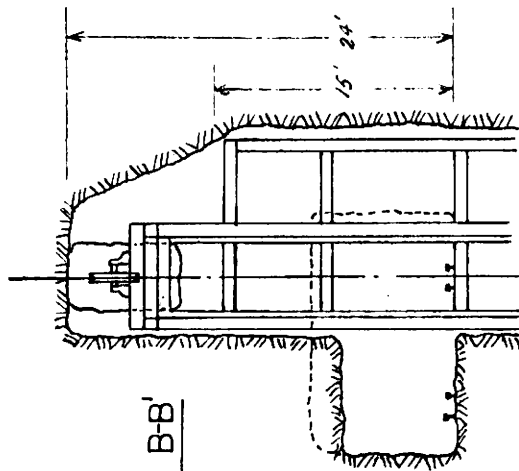
Probable consequences of depletion of Survey
Gold - Silver Property - Sept 1979

Call to ~~Bob~~ → 10/7/79 - Monday - 

Dennis 304-255-1511 Rm. 132 Polys -
Address to: Tony - Dennis on both co-employment

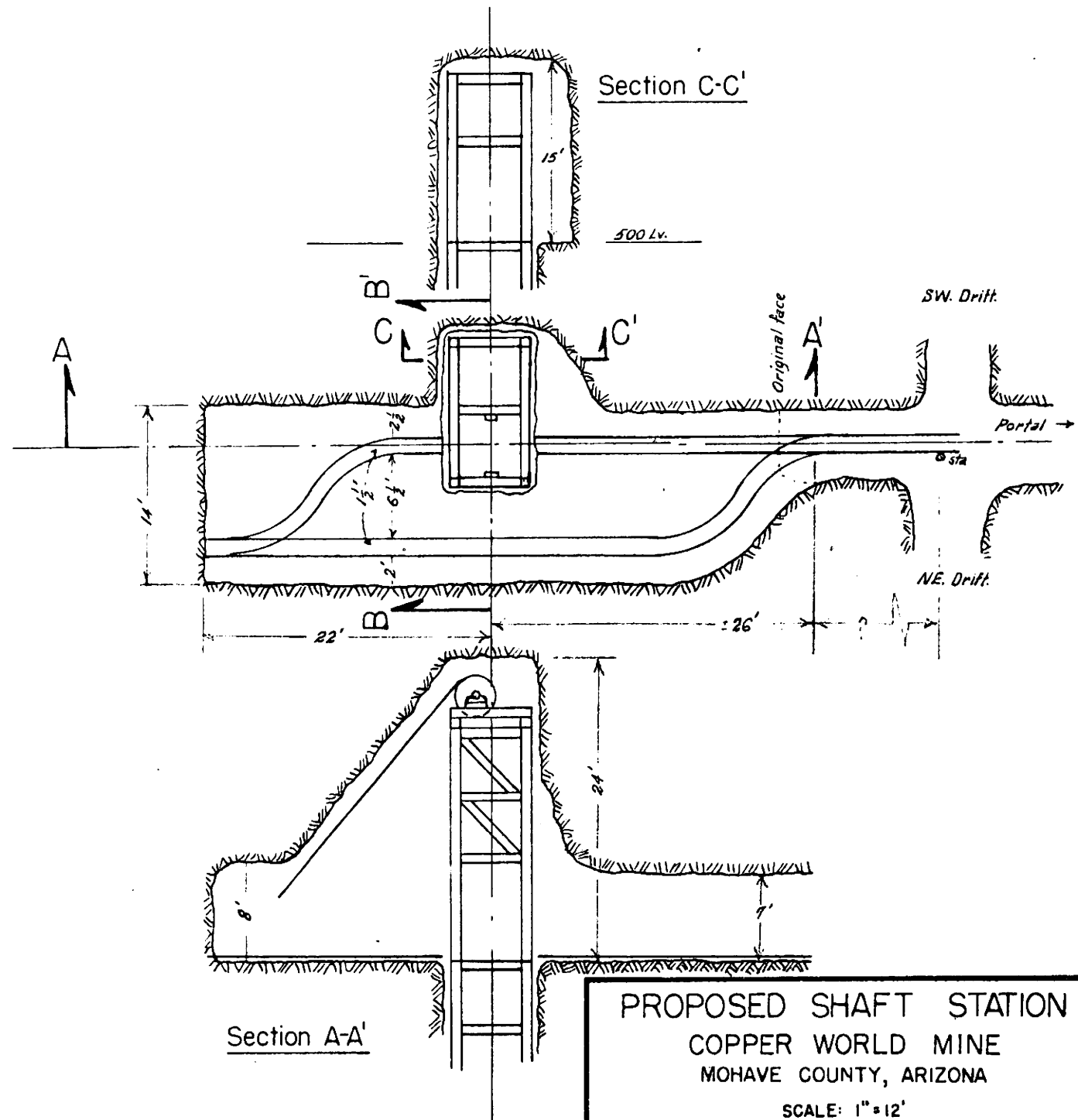
Off. Miss Mary Carpenter 1979. Sorry ex. 

u



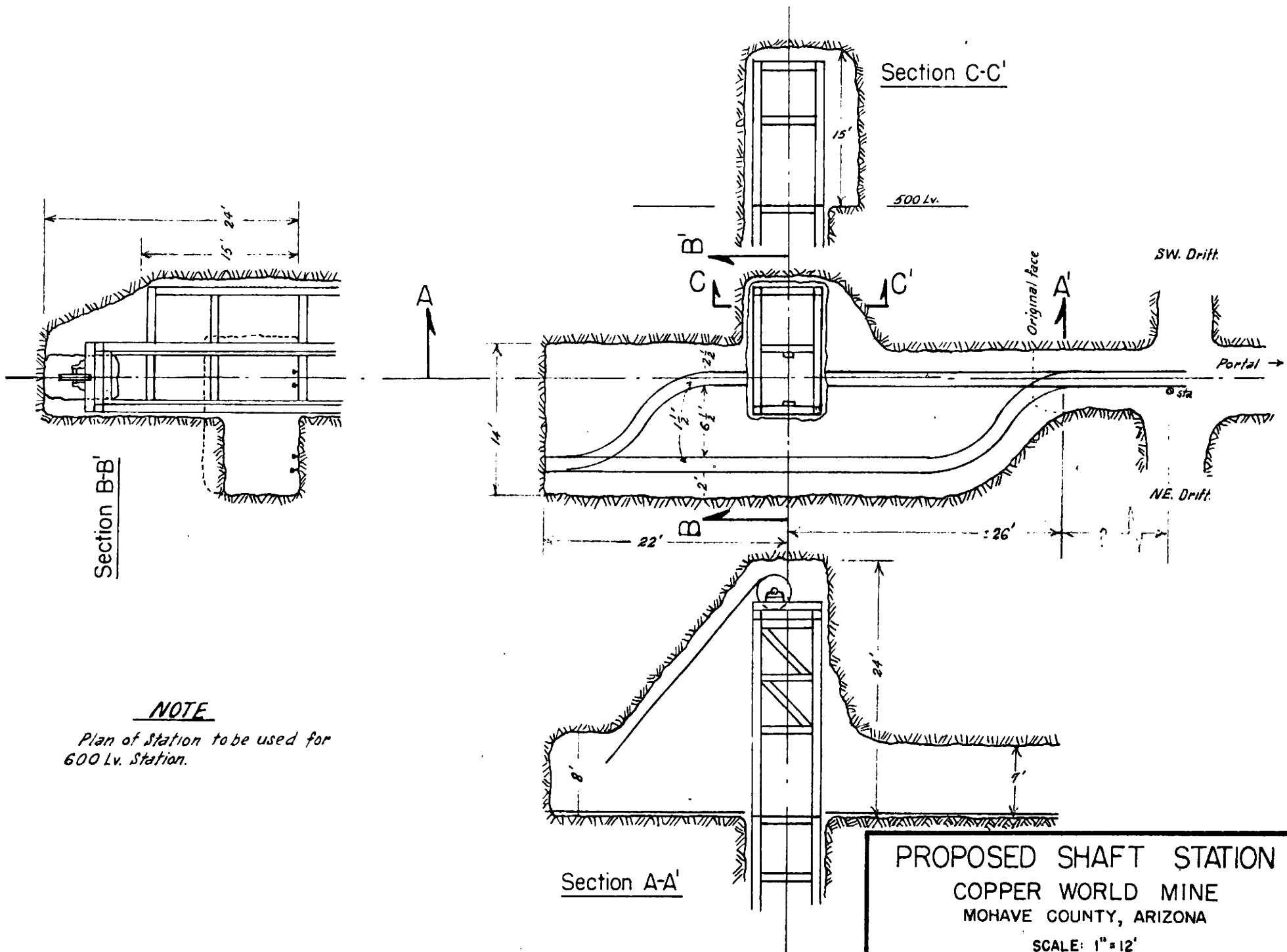
Section B-B'

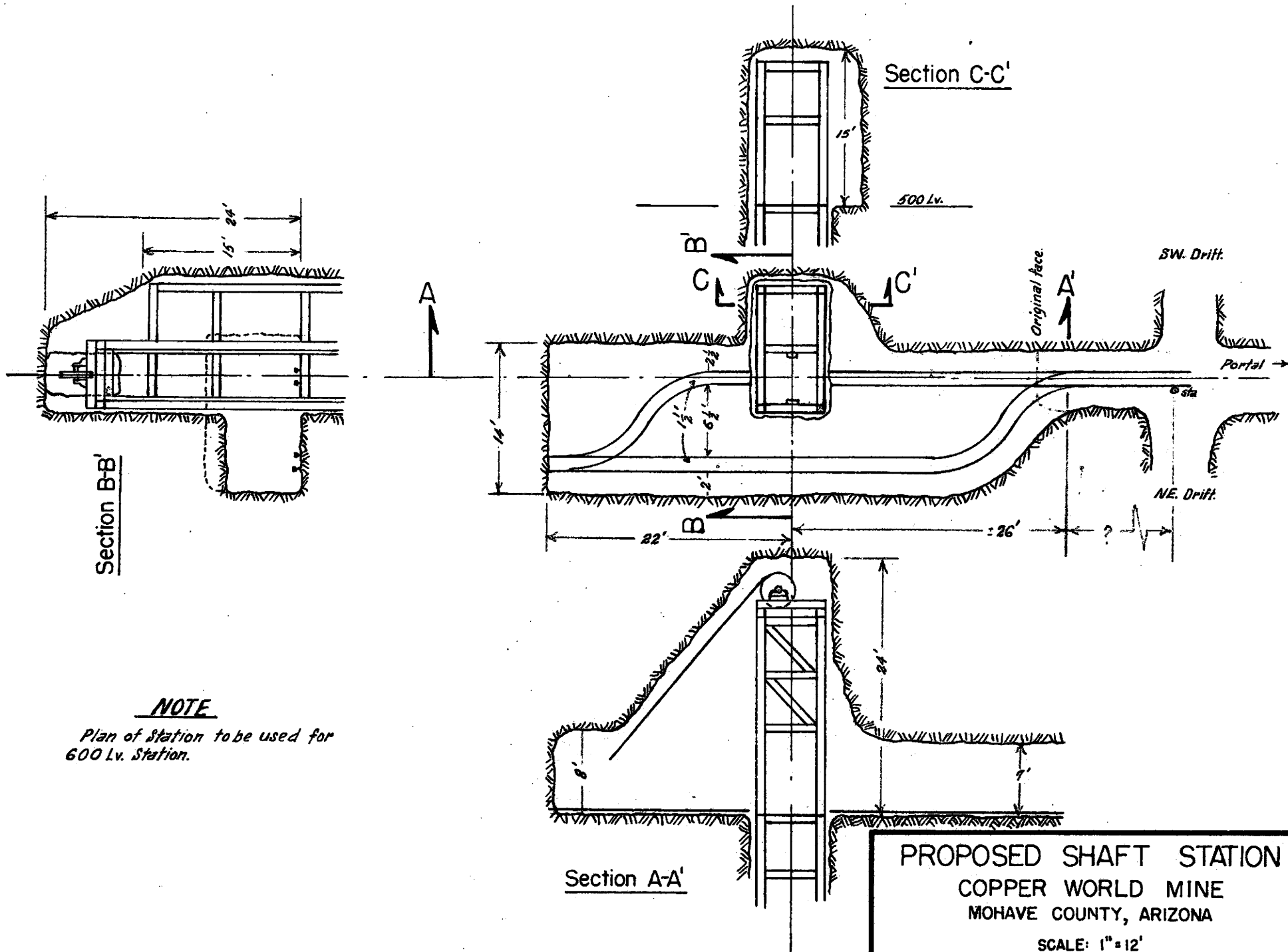
NOTE
 Plan of Station to be used for
 600 Lv. Station.



PROPOSED SHAFT STATION
 COPPER WORLD MINE
 MOHAVE COUNTY, ARIZONA
 SCALE: 1" = 12'

OCTOBER 12, 1956 R.E. MERITZ





Section B-B'

Section C-C'

Section A-A'

500 Lv.

SW. Drift.

Original face

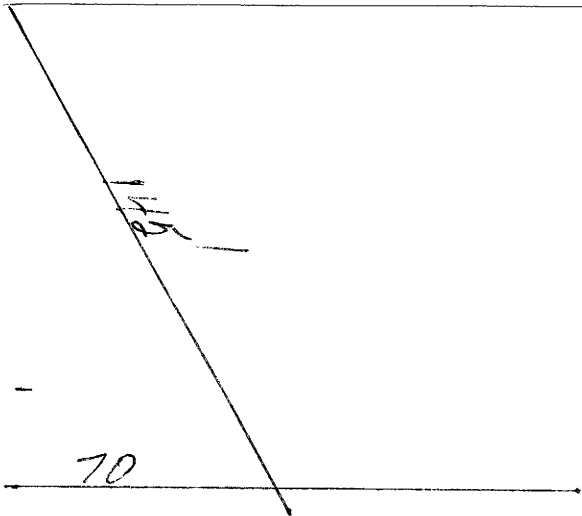
Portal →

NE. Drift.

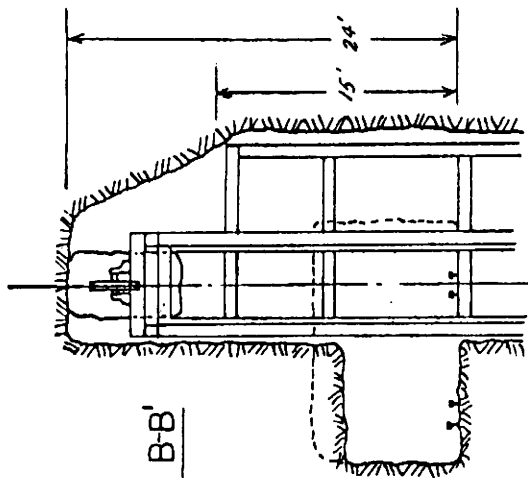
NOTE

Plan of Station to be used for 600 Lv. Station.

PROPOSED SHAFT STATION
 COPPER WORLD MINE
 MOHAVE COUNTY, ARIZONA
 SCALE: 1" = 12'
 OCTOBER 12, 1956
 R.E. MERITZ



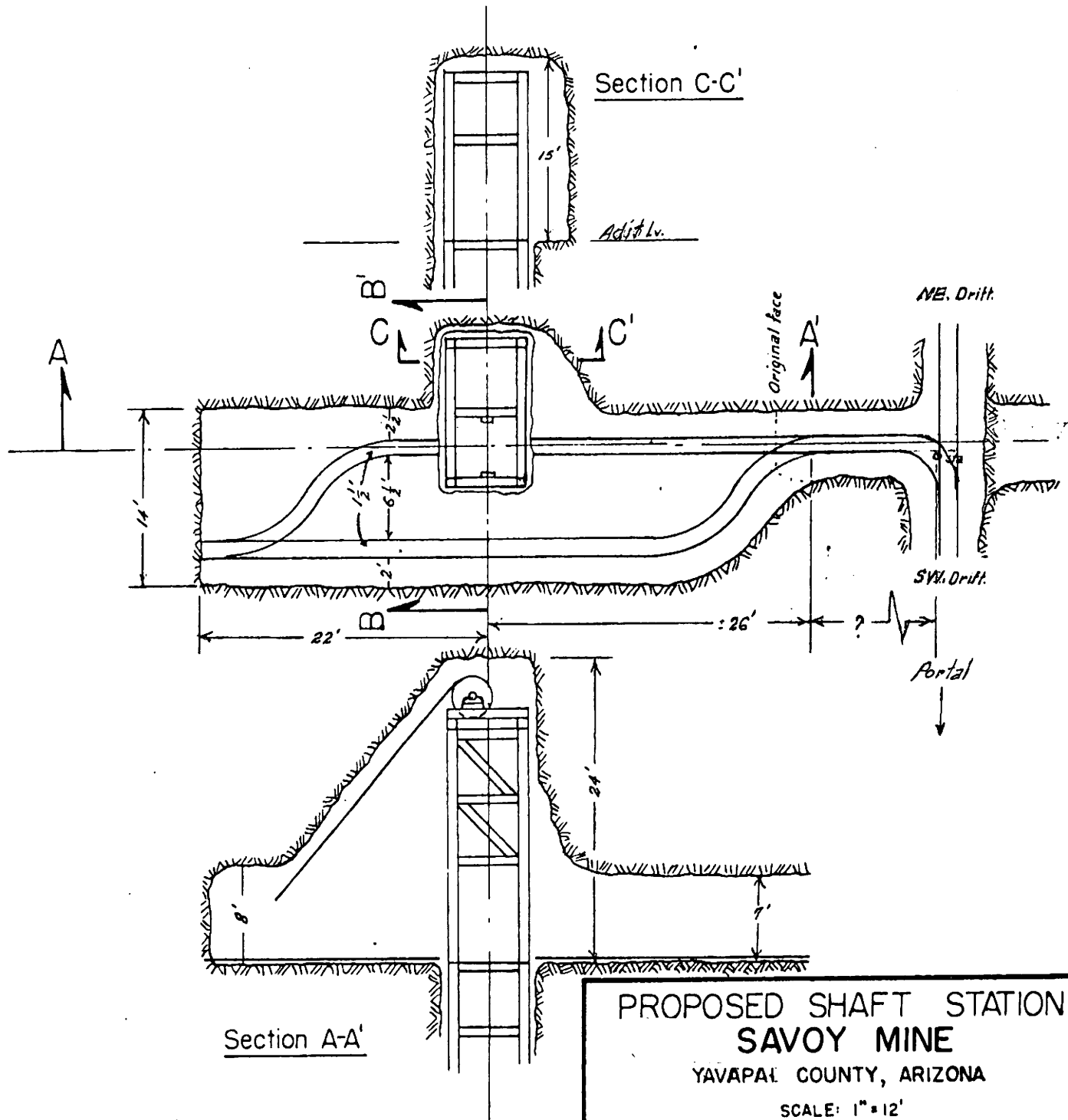
1
2
3



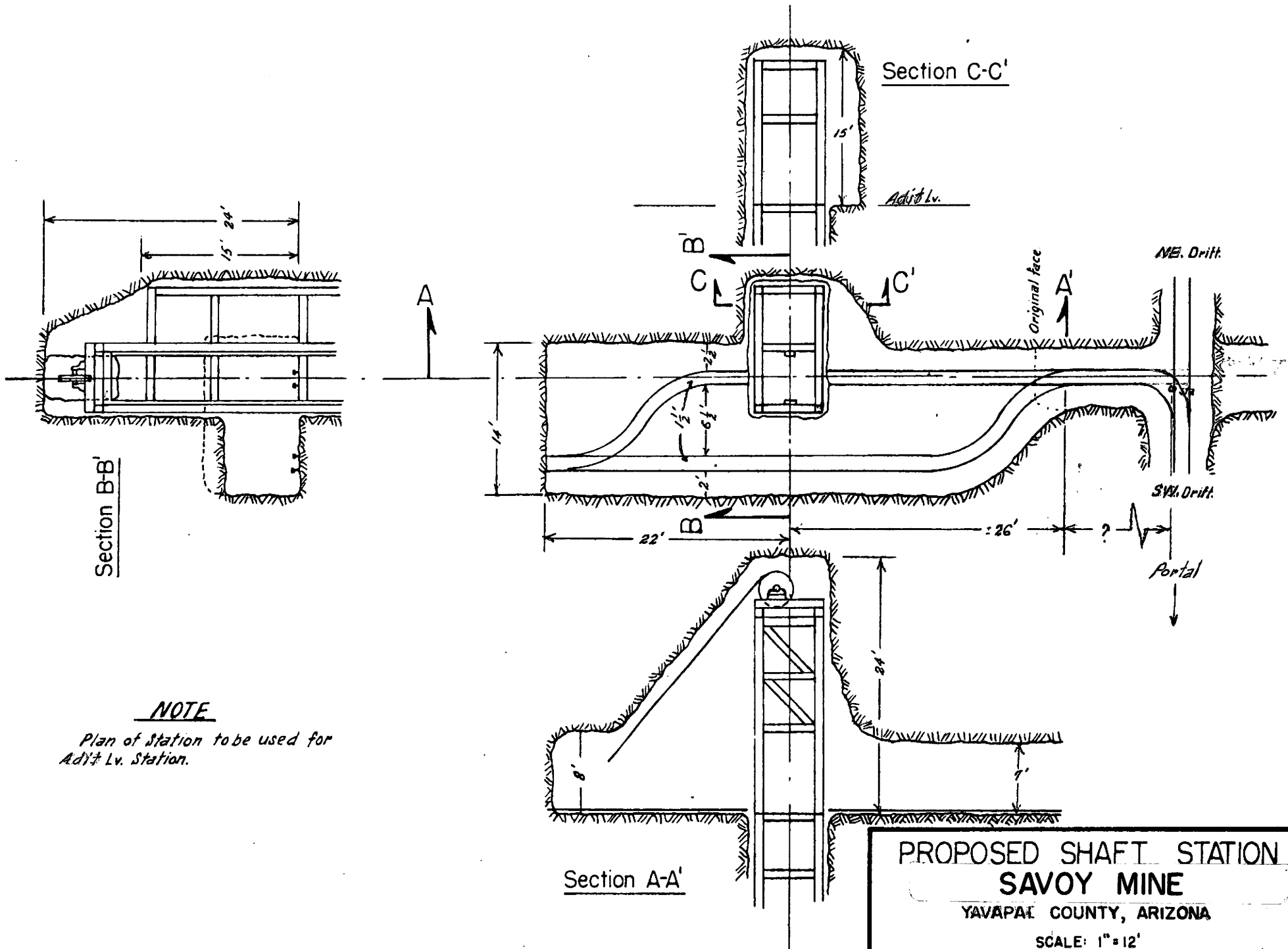
Section B-B'

NOTE

Plan of Station to be used for Adit Lv. Station.



PROPOSED SHAFT STATION
SAVOY MINE
 YAVAPAI COUNTY, ARIZONA
 SCALE: 1" = 12'
 OCTOBER 26, 1979
 R.E. MERITZ



Section B-B

Section C-C'

Section A-A'

NOTE
 Plan of Station to be used for
 Adit Lv. Station.

**PROPOSED SHAFT STATION
 SAVOY MINE**
 YAVAPAI COUNTY, ARIZONA
 SCALE: 1" = 12'
 OCTOBER 26, 1979 R.E. MERITZ

SUGGESTED AGENDA 1979 SAVOY EXPLORATION PROGRAM 11-9-79

9:15 AM Expected to be present - (Coe & VanLoo Conference Room)

- ✓ Robert Kennedy
- Richard Pelican
- ✓ Jack Kennedy

- ✓ Dennis K. Pickens
- ✓ Richard Mieretz - RPE - Mining
- ✓ Mason Coggin - Coe & VanLoo RPE - Mining
- ✓ Jack Coe - President Coe & VanLoo
- D. Clarke Pickens - (If free - Engineering Staff
Sargent Hauskins & Beckwith)

PURPOSE: Technical & Economic Review of Project

- 1.0 Review all known data - Old Reports
Smelter settlement sheets previous shipments
Mining Conductors - environmental considerations-
project potential.

- 2.0 Exploration Program - Selection of Field Manager
 - 2.1 Physical status of Mine
 - 2.2 Roads & access - Forest Service
 - 2.3 Make ready work
Security - Housing - Communication
Power - Air - Fuel
Complete portal
 - 2.4 Work on existing tunnel
Air - Electricity - Water - Ventilation
 - 2.5 Exploration Considerations
Rail vs Diesel Rubber Tired Haulage
incline, spiral or shaft - raises -
ventilation - Power Distribution

- 3.0 General Concept of Timing & Budget

- 4.0 Any other Subjects

12:00 Lunch - Navarres - Services Back-up
Expected to be Present

Robert Kennedy	Dennis K. Pickens
Richard Pelican	Dwight McClure-Insurance
Jack Kennedy	William Farrell-CPA

1:30 - 3:00 PM Visit

- D. W. Jacquays - Mining Supply House
- Paul Helmick - Machinery Company
- MMC Office - If desired



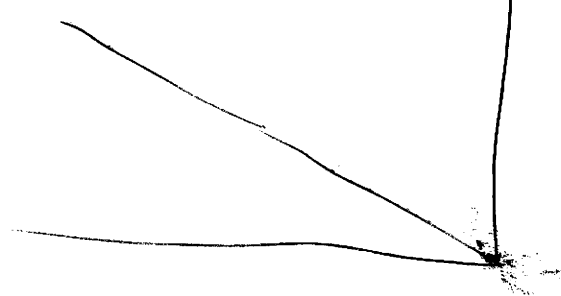
140 deep Ramp
6/850

3 / 4 1/3 deep Shaft (top)
125

20 deep Shaft (top)
15 deep Shaft (bottom)

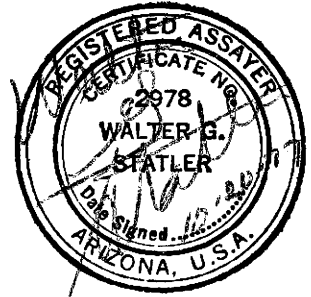
76

crosscut



IRON KING ASSAY OFFICE
ASSAY CERTIFICATE

BOX 14 — PHONE 632-7410
HUMBOLDT, ARIZONA 86329



ASSAY
MADE
FOR

DEXTER BROYLES
General Delivery
Crown King, Ariz. 86343

Oct. 20, 1977

Ref no.	DESCRIPTION	oz/ton Au	oz/ton Ag	% Fe	% Pb	% Zn	% Cu
80-20-11	Meiritz sample #1458	1.992	6.95				0.95

CHARGES \$1.50 paid

ASSAYER _____

REPLY TO:

2940 N CASA TOMAS
PHOENIX, ARIZONA 85016
TELEPHONE (602) 277-8053

Richard H. Mieritz

MINING CONSULTANT

ARIZONA REGISTERED
MINING ENGINEER AND GEOLOGIST

GEOLOGY
EXPLORATION
EVALUATION
FEASIBILITY
OPERATION

October 15, 1979

Mr. Dennis Pickens
Mine Management Corporation
P. O. Box 66189
Birmingham, Alabama, 35210

Re: Savoy Mine Work

Dear Mr. Pickens:

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The contractor will have about a weeks work just cleaning out the caved material at the portal entrance. Unfortunately, the Adit was portaled in a "gully" (drainage area) and the extreme heavy rains this past year has caused much caving and weakening of the surface in the portal area. Timber of the three or four sets have been saved but it is feared this timber will not be enough to properly timber the new entrance to make it safe. Thus, new timber will have to be ordered and Mr. Tips advises the saw mill in Prescott can supply same. Could you therefor make the necessary arrangements with the saw mill to obtain the needed timber.

We will also construct a small diversion DAM above the Portal and a short diversion canal to the next gully east to prevent further washing of Portal area.

I enclose an application for the maintainance of the road. There will be two phases for this road, (1) from the portal to the junction with the OroBelle turnoff and (2) from the OroBelle turnoff to the junction with the Senator Highway. The application covers the first phase--permission is granted--but the paper work is required. The second phase, the road of which is part of the Forest Service System, an agreement will be necessary which in short states we will maintain this portion to the standards set by the Forest Service for the purpose and use of the road. I indicated ore shipping would be in the future--our current use being access for exploration work.

That portion of the road-phase (1)- is relatively easy and fast, the second portion will require surfaceing, re-establishing some drainage ditches (now existant but filled), some blasting of the protruding bedrock and the cleaning of the "toe" for additional

Page two

surfacing material. This work may be lengthy and somewhat expensive.

As soon as the Portal has been cleaned and made "safe" for entrance, Mr. Lips and the writer will examine the interior to determine any interior caves, amount of rail, etc.

I will journey to the Savoy this Wednesday or Thursday.

It is very likely that a fair amount of water may be "trapped" behind the portal cave. A small amount of water is seeping and running now. How far it may have "backed" up, I would have no idea at this time.

After signing the "application", please make a copy for your records and return the original to me so I can give same to the Forest Service. Verbal permission has been given, as I said before, this is just the paper work.

Sincerely,

R. E. Mieritz,
Mining Consultant.

October 31, 1979

Mr. Dennis Pickens:
Mine Management Corporation
P. O. Box 7277
Phoenix, Arizona, 85011

Re: Savoy Mine Shaft

Dear Mr. Pickens:

On Wednesday October 24, 1979, I spent two hours with Mason Coggins (Coe & Van Loo) reviewing and discussing several "access" routes to exploring the potential ore body extension below the Wilkerson Adit level at the Savoy Mine.

The writer is not necessarily in agreement with Coggins "ramp type" approach (rubber tired vehicle usage), believing it to be too ambitious for the type of exploration required for the project and to suit the financial program planned by yourself.

The writer is of the opinion that a vertical or steep incline (60°) shaft is the best approach to gaining depth and access to the projected potential ore body below the Wilkerson Adit level.

Physical "sinking costs" in either case should be about the same, timbering costs would however favor the incline shaft because little to no lagging would be required --the number of timber sets being about the same except for the slightly longer distance of the incline.

A vertical shaft has two potential locations--(1) starting in the footwall and remaining there with increasing cross-cutting lengths to reach the ore zone with depth, or (2) starting in the hanging wall, intersecting the ore structure at about 120 feet below the Adit level and proceeding into the footwall at a greater depth than 120 feet.

An incline shaft, paralleling the schistosity (-60°) can either be located in the foot or hanging wall--dependent on which wall shows the greatest rock stability, durability and competency. The writer's opinion at this moment would be to favor the footwall.

The included shaft design (station on the Wilkerson level) is meant to be informative only. This design can be revised to accommodate an incline station without too much difficulty.

The planned program for exploration of the potential ore zone between the Wilkerson Adit level and the proposed 125 foot level below the

Dennis Pickens

October 31, 1979

Page Two

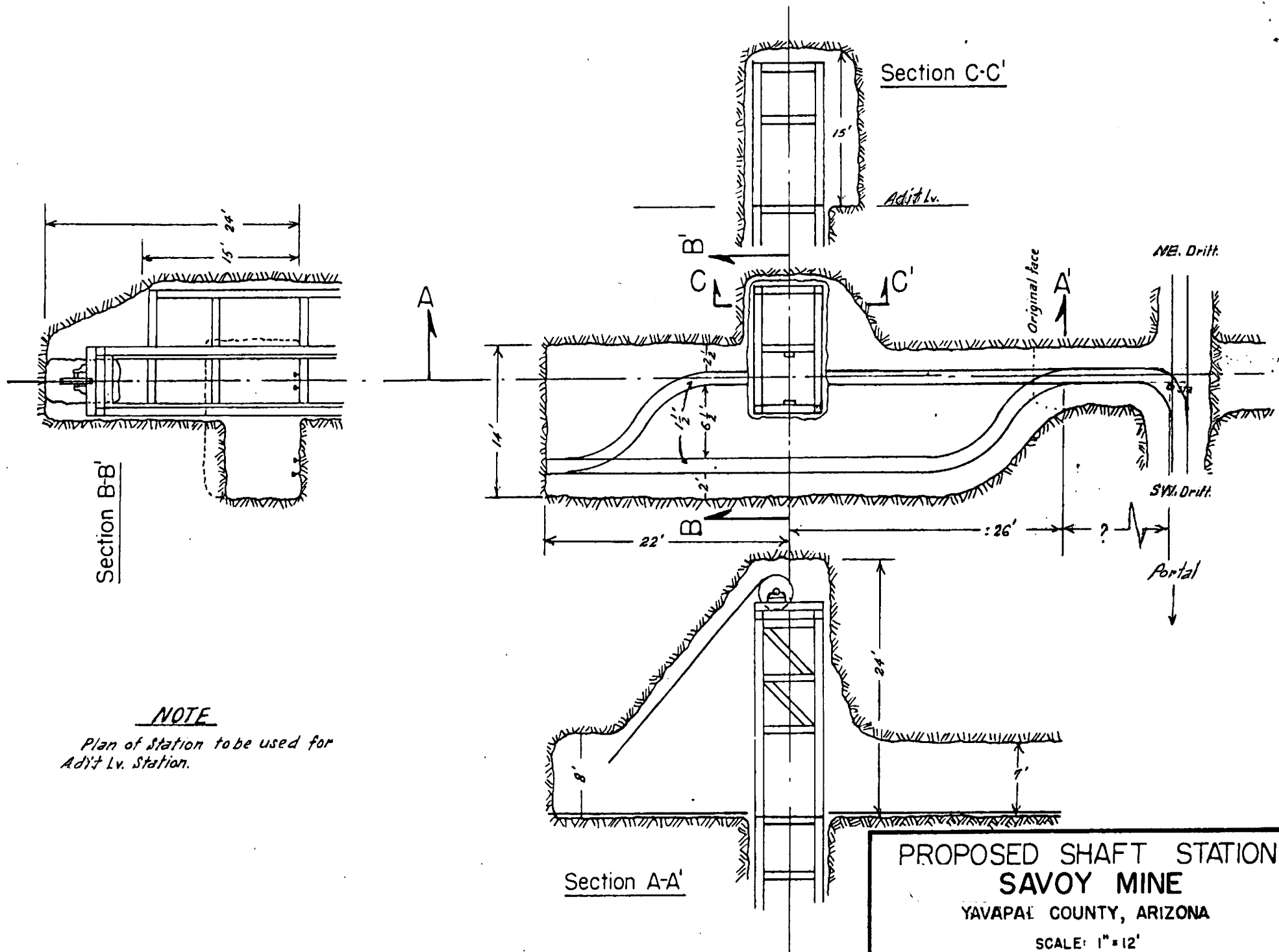
Adit level, would not change regardless of any selected position for the "access" shaft.

The writer has indicated - on Coe & Van Loo's Map - a proposed system of raises and sub-drifts to explore and sample the potential projected ore zone below the Wilkerson Adit level for the purpose of determining the size, shape and grade of the orebody.

Respectfully submitted,

R. E. Mieritz,
Mining Consultant

Attachments: Shaft Station Design Map.
Coe & Van Loo's Map with Proposed Exploration Plan
by R. E. Mieritz.



Section B-B'

NOTE
 Plan of Station to be used for
 Adit Lv. Station.

Section A-A'

Section C-C'

Adit Lv.

Original face

NE. Drift

SW. Drift

Portal

PROPOSED SHAFT STATION
SAVOY MINE
 YAVAPAI COUNTY, ARIZONA
 SCALE: 1" = 12'

OCTOBER 26, 1979

R.E. MERITZ

November 20, 1979

Mr. Dennis Pickens
Mine Management Corporation
P. O. Box 7277
Phoenix, Arizona 85011

Re: Savoy Mine
Exploration

Dear Mr. Pickens:

During a telephone conversation with you on Saturday, November 17th, you asked me to consider and study the thought and feasibility of sinking a large size - 10 ft. by 20 ft. - incline shaft in the heart of the projected, potential orebody below the Wilkerson Adit level, and as a means of access to and exploration of this potential target.

At that time - as a "quick appraisal" - I expressed concern of the idea because of the "highly altered condition" of the rock material within the observable ore zone material previously worked on and above the Adit level.

You indicated your desired use of steel sets, wire mesh and roof bolting as applied in the eastern coal fields and as a means of support for the structure rock and safety operation for this shaft. Your thought also was that the "ore removed" in this shaft shaft sinking operation would permit sampling the walls of the shaft as advance was made. Coupled with this, you mentioned the thought of "crushing the ore" at the interior shaft and transporting the crushed ore to the outside by "slurry pumping".

After considerable thought and study, the writer is neither enthused about nor agreeable to the proposal for several reasons which I will attempt to explain.

The Shaft:

The mentioned size - 10 feet by 20 feet - indicates a 3 compartment, shaft, 2 hoisting and one manway. This size has its disadvantages.

First - the writer opines the suggested size is too generous for the anticipated ore production capacity and mine potential

Second - this size opening in the highly incompetent (gouge, fractured and altered) ore zone material would be a constant source of problems, alignment, washing of gouge by mine water, etc.

This demensioned shaft - located in the ore zone to prospect the "width" would require that the long demension - 20 feet - be perpendicular or at right angles to the ore zone strike. As such, with the head frame and hoist room in the footwall, a "hanging or stacking" condition of

Page two

the second hoisting compartment and the manway would exist, an unusual arrangement.

To correct the above arrangement, the head frame and hoist room would be in the ore zone, a most undesirable position for such a large opening, particularly if "inside" crushing is desired. Secondly, the shaft would assume a double dip or inclination (dip of the ore zone and rake of the ore zone. This position again produces a most unusual arrangement.

Were the long dimension of the shaft parallel to the strike of the ore zone, the full width of the ore zone would not be explored - the true reason for the shaft being located in the ore zone.

Rock Bolting:

Rock bolting, plates and wire screening are a successful means of support, however, its success is based on the existence of a minimal fractured, somewhat competent rock which could accept and retain the "bolts and plates" required for shaft support.

The Savoy Mine "ore zone", in the opinion of the writer, is not a material which would accept and retain "bolts, plates and mesh".

General:

Locating the shaft in the "ore zone" could definitely reduce the amount of "available ore" because any staking that might be done in the future would have to remain at least 10 feet, preferably 15 feet, away from the sides of the shaft.

A shaft in the ore zone would, to a great degree, reduce the effectiveness of a systematic plan for exploration of the potential ore zone between the Wilkerson Adit level and the 125 foot depth below the Adit level.

Slurry Transportation:

This method of moving material is very good, however, the writer is of the opinion that this just might be too much of a refinement for the Savoy Mine.

Use of same at the Savoy raises questions, such as water supply from the mine and other sources, material handling of the hoisted ore through the primary and secondary crushing to prepare the material for transport and the availability of "room" within the Mine for this sophisticated means of transport.

Opinion:

The writer opines that the proposal as herein stated would be a very expensive project and would not wholly realize the program, the objective and the results as indicated in the writer's letter of September 26, 1979 to Mr. Anthony DePrima, your attorney.

Page three

It is the writers opinion that the proposed shaft program and slurry transport is not for the Savoy Mine and would not be recommended by the writer.

Respectfully submitted,

R. E. Mieritz,
Mining Consultant

2940 N. Casa Tomas

October 21, 1977

Mr. W. R. Kelly, Manager
ASRCO
P. O. Box 1111
El Paso, Texas, 79999

Dear Mr. Kelly:

Under separate mailing I am sending an ore sample to your attention from the Savoy Mine, Yavapai County, Arizona. This is being done at the request of Mr. Sherwood B. Owens of Tucson.

Mr. Owens requested I obtain a sample from this property which which in my estimation would be a sample representative of the material in the structure and of what would be shipped to the smelter as a trial run and possibly future shipments.

I personally took the sample from the area that would be mined. The ore is primarily a gold and silver ore. As in most vein structures, these two contents can vary to some degree, however, the sample should be quite representative of the material in place. Aside from the gold and silver, some of which may be native or free, the material contains pyrite, chalcopryrite, galena, quartz, iron oxides, perhaps some argentite and some clay. The copper and lead content should be rather low for this type material. A small amount of zinc may also be present since this is the general makeup of the complex ores in the Crown King area.

Please send the results of the assaying to Mr. Sherwood Be Owens whom in turn will advise me of the results.

Sincerely yours,

R. E. Mieritz

cc: S. B. Owens

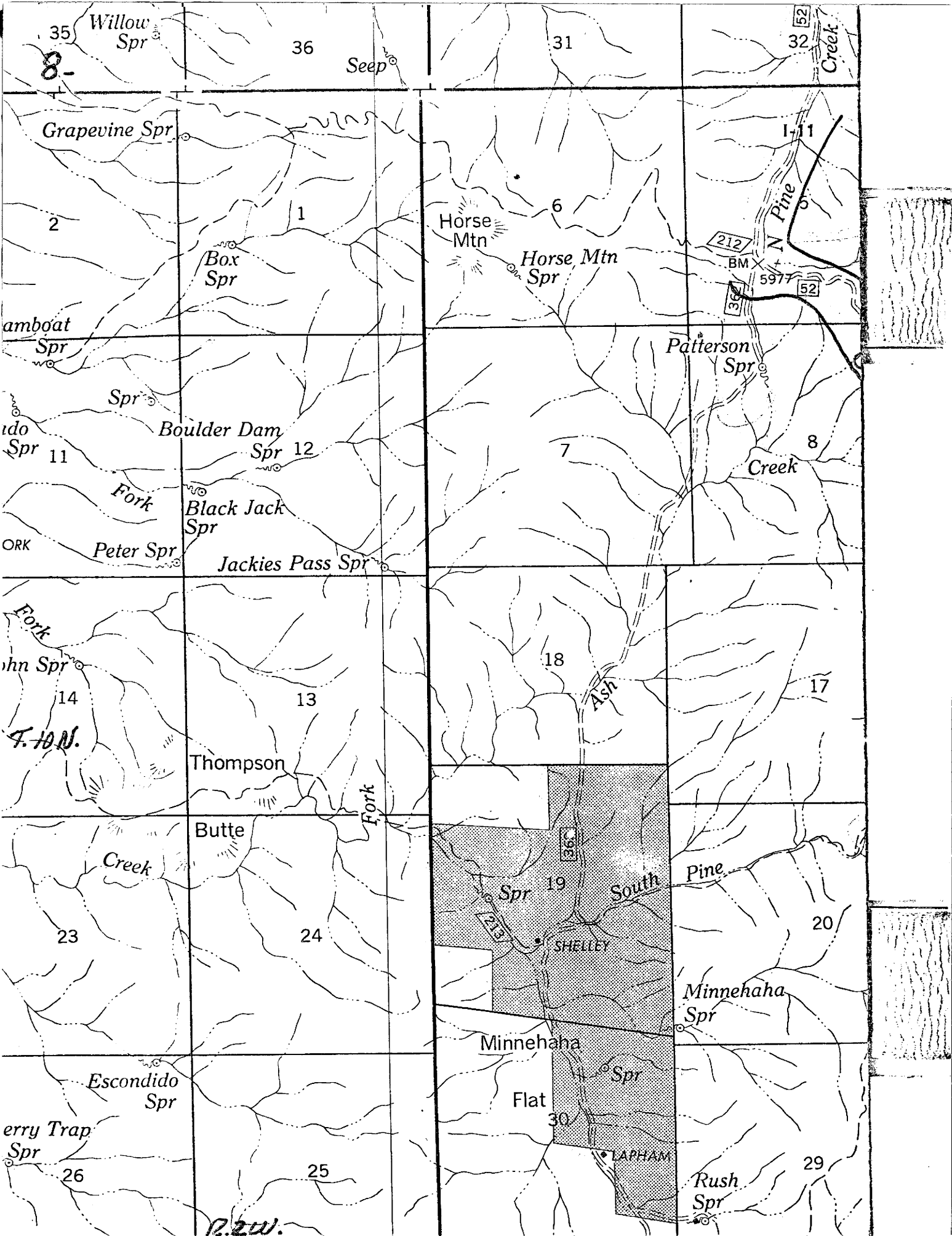
10-19-77 } *Walter*

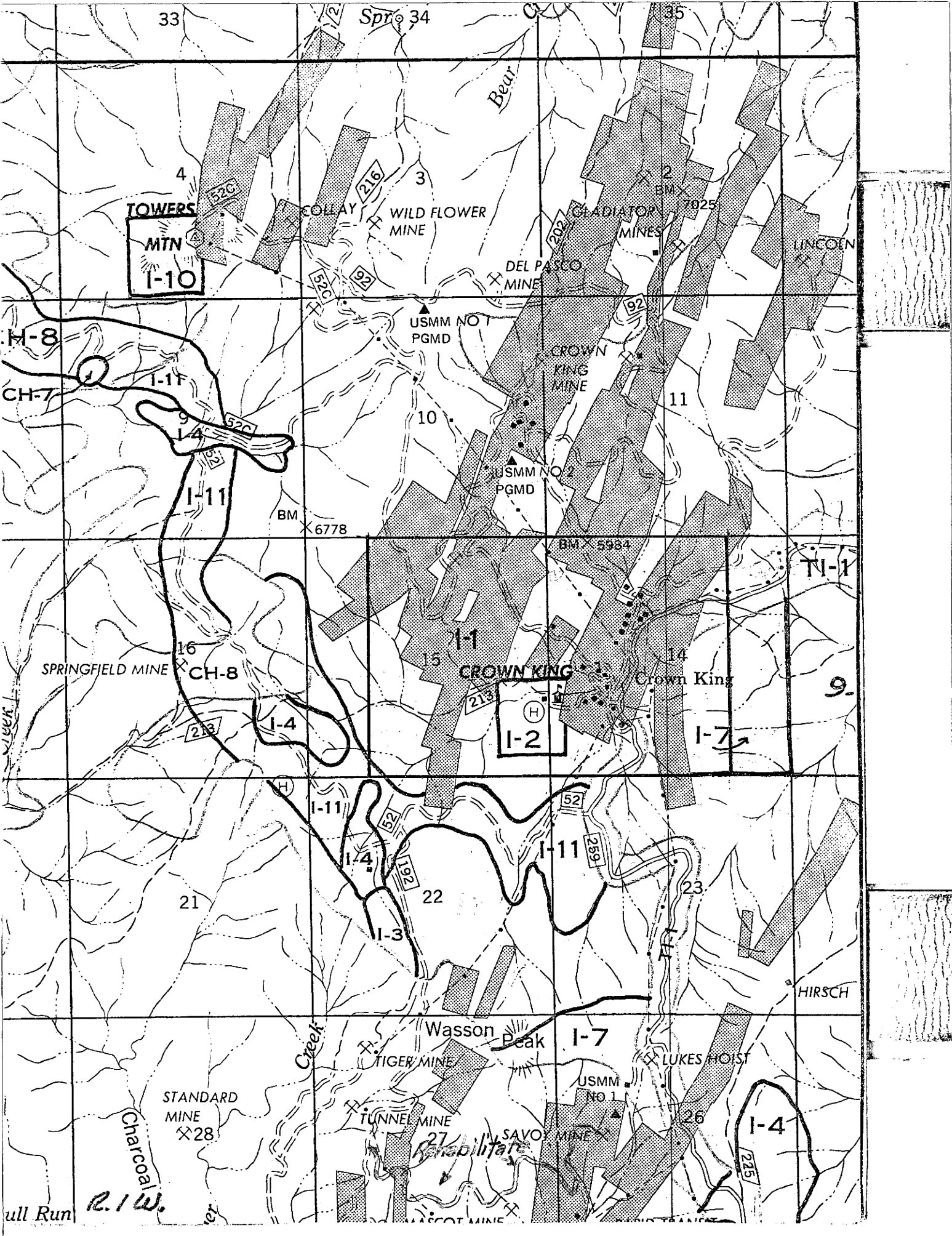
<i>Ag</i>	<i>1.992</i>	<i>= 298.80 @ 150.00</i>
<i>Ag</i>	<i>6.95</i>	<i>27.80 @ 4.00</i>
<i>Cu</i>	<i>0.95</i>	<i>10.45 @ 55¢</i>
		<i>\$ 337.05</i>

7 tons

Shipped - Paid on

<i>1.10</i>
<i>5.90</i>
<i>2.55</i>





MINE MANAGEMENT CORPORATION

P. O. BOX 7277
INDIAN SCHOOL STATION
PHOENIX, ARIZONA 85011

Western Office:

1505 FINANCIAL CENTER BLDG.
PHOENIX, ARIZONA 85012
602 - 274-8049

Southern Office:

Box 66189
Birmingham, Ala. 35210
(205) 592-8935

July 17, 1980

SAVOY MINE

ON-SITE MILLING, CONCENTRATING, AND EXTRACTION OF VALUES

Compared to

SALE RAW CRUSHED ORE TO SMELTER

Contents

	Page (s)	Paragraph
Introduction and Current Status	1	1.0
Process Parameters	1 & 2	2.0
Description of Process	2 & 3	3.0
Waste Disposal	3	4.0
Summary Economics	3 & 4	5.0
Preliminary Capital Cost	5 & 6	6.0
Conclusion	7	7.0
Block Flow Sheet	8	--

Corrected for typos - 7/28/80

1.0 Introduction

This memorandum supersedes a preliminary report regarding cyaniding Savoy raw ore at site submitted to Mr. Robert Kennedy by MMC February 26, 1980.

Newsletters to participants in the Savoy 1979 exploration program numbers 1 through 8 have detailed the events and principal data gathered from this exploration program to date.

It is the concensus at this time that there are 40,000 tons of mineable ore confirmed by the present work, and that when the bypass tunnel intersects the vein and drives to the end of the ore chute at the Wilkerson Tunnel level; this should prove to be a low figure. What percentage of this developed and proven ore can be selectively mined for shipment to the smelter will require actual mining experience.

The principal physical problem remaining will be to establish a method of mining that will assure that ore of a consistent grade can be produced at a given rate and cost.

This approach would involve a period of mining and stockpiling ore until facilities to beneficiate ore on site are either justified or the project would revert to the original concept of selling to the smelter. So long as this approach is used, the mine remains in an exploration status.

2.0 Ore, Reagents & Utilities - Process Parameters

2.1 Ore

The 1979 exploration program has established the values of gold, silver and copper ore contained in both sulphide and oxide minerals.

This fact sets the process parameters in that facilities, if installed at the site, must provide for removal of sulphides as a flotation sulphide concentrate and the extraction of gold and silver from the values contained in the oxides by cyanidization.

Not yet established, and not available from the large amount of historical data, is the amount (%) of gold and silver lost in waste when the vein material is mined selectively to justify freight and smelter charges. Because of the values sampled from broken stope ore left in the Wilkerson Tunnel, it would appear that a mining cut-off grade of .2 oz. of gold and 4.0 oz. of silver, if treated at the site, would result in at least doubling production in terms of metal or concentrate sales.

2.2 Reagents Required/Per Ton/Ore - Delivered Savoy

<u>Lime</u>	<u>Pounds/Per Ton</u>	<u>Cost/Ton/Ore</u>
Lime	2	\$.10
Sodium Cyanide	2	1.50
Coconut Charcoal	2	1.20
<u>Flotation</u>	-	<u>.50</u>
Total Reagent Cost		\$ 3.30

2.3 Utilities

	<u>Per Ton/Ore</u>
<u>Fuel & Lubricants - Diesel Electric</u> (Extraction Plant Only) 15 gal/ton ore	\$ 15.00
<u>Water Make-Up</u> 20 gals/min	-
<u>Air for Agitation</u> 250 cfm at 30 psi	-

2.4 Manpower

2 men day shift, 1 man second shift 3 men at \$200 day All Burdens = \$600 (see p. 3.0)	12.00
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2.5 Maintenance & Repair Parts 2.00

2.6 Rental Equipment including 2 cu/yd Loader 4.00

2.7 Total Direct Cash Operating Cost
Per Ton/Ore - Extraction Plant @ 50 TPD \$ 36.30

3.0 Description of Process & Plant

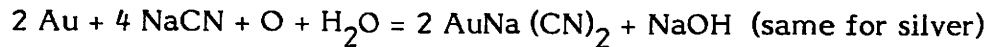
Ore in one or two ton cars will be dumped into a receiving hopper and carried by front-end loader to a stockpile in front of crusher. When 50 tons or more are in stock the primary crusher (Pulverizer) will reduce 50 tons ore to 1/8" x 0" in under two hours. The pulverized ore will be delivered to a 100 ton storage silo with 60° cone bottom.

The silo will be equipped with a small Syntron (vibrating type) feeder, feeding directly to a 4' x 6' ball mill.

The ball mill will be an enclosed circuit with scavenger flotation cells to remove sulphide gold-silver bearing values.

The tailings from flotation will be pumped to one of 2 air agitated tanks, each capable of handling 50 tons of solids at 45% pulp density. These tanks will be approximately 12' diameter and 30' high made of mild steel known in the trade as Pachuca Tanks after the vessels at the Terets Mine, Pachuca, Mexico (in operation over 60 years).

The process will require a maximum of 48 hours of air agitation to drive the gold and silver into solution as per the Elmer empirical equation.



One tank will be agitating while the other is taken out of rotation after 48 hours of agitated leaching and the pulp discharged by air lift into two small tanks to which plus 10 mesh activated (coconut) charcoal is added. The tanks are gently agitated allowing the gold and silver in the pregnant solution to be absorbed by the carbon as the pulp passes from one tank to the next. The solution is passed across a small screen to recover the impregnated gold/silver bearing carbon. The enriched charcoal will then be placed in sealed steel drums for removal to a gold and silver recovery and carbon regeneration plant or melted down to gold and silver bullion.

4.0 Waste Disposal

The carbon will not pick up all of the metal values but leaves a weak (stock) solution and essentially barren solids (sands). The last step is to a thickener to recapture as much weak solution as possible for recycle and to rinse off the sands with fresh water. The barren sands are either placed in ponds or returned to the mine to sand fill empty underground mined-out areas. This gets rid of the sands and meets safety standards..

5.0 Comparision Economics - Treatment at Mine vs. Sale Smelter

5.1 Assumption Same cost mining 50 ton/day selectively crushed ore at historic average shipping grade used in Private Placement Memoranda 1979 Savoy Exploration Program (copper ignored) i.e.

	<u>Oz.</u>	<u>Current/Price</u>	<u>Gross Value Ton</u>
Gold	.443	\$ 600	\$ 265.80
Silver	8.15	16	<u>130.40</u>
		Total Gross Value	\$ 396.20

5.2 Cost Trucked to Smelter - July 1980 \$'s

	<u>Per Ton/Ore</u>	<u>Per/Day</u>	
Trucking	\$ 35.00	\$ 1,750	
Smelter Charge Gold	44.57	2,229	(1)
Smelter Charge Silver	<u>16.80</u>	<u>840</u>	
Total Smelter	\$ 96.37	\$ 4,819	

5.3 Cost Treatment Mine

	<u>Per Ton/Ore</u>	<u>Per/Day</u>	
Trucking Approximately 3.5 Sulphide Tons Concentrate	\$ 2.46	\$ 123	(2)
Smelter Charge Concen- trate Estimated 3.0 oz. Gold	9.80	490	(1)
Smelter Charge 4.0 oz. Estimated Silver	<u>.96</u>	<u>48</u>	
Smelter Portion Cost	\$ 13.22	\$ 661	(2)
Milling Concentrating and Cyaniding (Para 2.7)	<u>36.90</u>	<u>1,845</u>	
Total Cash Cost	\$ 50.12	\$ 2,506	
Adjusted for 92% the Recovery on 50% of ore Cyanided	<u>16.07</u>	<u>804</u>	
Total Cost	<u>\$ 66.19</u>	<u>\$ 3,310</u>	
Cost Advantage			

5.4 On Site Treatment \$ 30.18 \$ 1,509

Notes (1) All tonnage smelter charges to gold, i.e., \$7.50 ton ore plus estimated \$6.50 ton flux.

(2) Assumes 50% gold-silver values in Sulphide concentrate and balance removed and refined as pure gold and silver.

6.0 Preliminary Capital Cost Estimate - Cyanide Plant

6.10 MMC Owned and Available Equipment

	<u>Item</u>	<u>Cost</u>	<u>Installation</u>	<u>Installed & Operates Total</u>
6.11	350 hp Diesel Generator	-----	\$ 20,000	\$ 20,000
6.12	Unitizer Primary Pulverizer	-----	10,000	10,000
6.13	22' Thickener	-----	10,000	10,000
6.14	Syntron Feeder	-----	500	500
6.15	Vibrating Screen	-----	500	500
6.16	Centrifugal Dryer	-----	<u>2,000</u>	<u>2,000</u>
6.17	Total	(1)	\$ 48,000	\$ 48,000(1)

6.20 Purchased Equipment Required

6.21	2 Steel Pachuca Tanks Complete with Air Agitation	\$ 40,000	\$ 20,000	\$ 60,000
6.22	2 Mechanically Agitated Carbon Absorption Tanks	10,000	5,000	15,000
6.23	1-100 Ton Storage Silo 60° Cone Bottom	35,000	5,000	40,000
6.24	Conveyor to Silo	10,000	2,000	12,000
6.25	Used Flotation Cells	6,000	3,000	9,000
6.26	50,000 Gallon Fresh Water Tank	20,000	10,000	30,000
6.27	Pumps, Blowers Controls	<u>15,000</u>	<u>5,000</u>	<u>20,000</u>
6.28	Total	\$136,000	\$ 50,000	\$186,000

6.30 Other Capital Costs

6.31	Site Preparation and Ponds		\$ 15,000	\$ 15,000
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6.32	Rehabilitate Ball Mill	5,000	5,000
6.32	Concrete	10,000	10,000
6.33	Winterizing	10,000	10,000
6.34	Working Capital Oversight, Contingency and Miscellaneous		<u>\$ 51,000</u>
6.40	Total Cash Required		\$325,000 (2)

Note: (1) MMC owns Items 6.11 through 6.16 which would be furnished at no cost. The value of this equipment is as follows:

	<u>Item</u>	<u>Reasonable Replacement</u>	<u>New Cost</u>
6.11	Diesel Generator	\$ 35,000	\$ 70,000
6.12	Crushing Screening Out (Modulized, with Motor Drums and Starters)	30,000	50,000
6.13	Thickener - 22' - 6,000 gallon	30,000	40,000
6.14	Feeder	2,000	3,000
6.15	Vibrating Screen	1,500	3,000
6.16	Centrifugal Dryer	<u>15,000</u>	<u>35,000</u>
6.17	Total Value	\$113,500	\$201,000

Therefore the true installed cost of the process facility is on the order of \$425,000 to \$450,000.

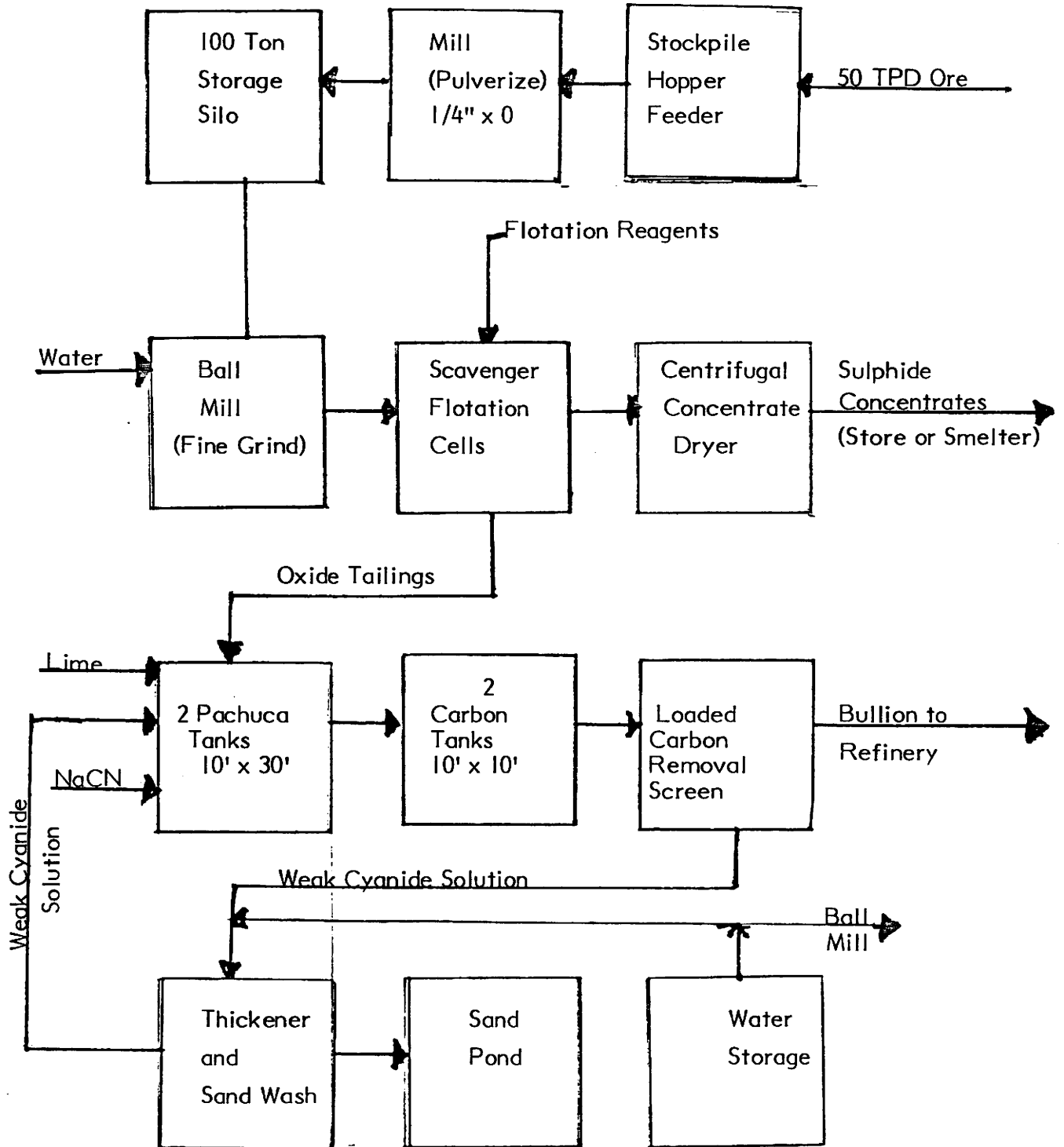
- (2) It is noted that this total is preliminary and subject to minor revisions. It is believed that the estimate is very close, taken in total, but that variations in individual units of cost may be encountered.

7.0 Conclusion

A decision to install preparation and concentrating facilities at the site should be deferred in favor of a continuing exploration program, the financing of which to be secured by the stockpiled ore.



SAVOY MINE
 BLOCK FLOW DIAGRAM
 MILLING, CONCENTRATING AND CYANIDING
 GOLD-SILVER ORE



MINE MANAGEMENT CORPORATION

P. O. BOX 7277
 INDIAN SCHOOL STATION
 PHOENIX, ARIZONA 85011

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June 9, 1980

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 Birmingham, AL 35210
 (205) 592-8935

NEWSLETTER #7 - SAVOY 1979 GOLD/SILVER EXPLORATION PROGRAM

1.0 SUMMARY: The new and permanent air system has been installed and 60' of the 185' by-pass tunnel completed. (P.2.0-NL #6). Progress is at about 5' (average) per working day but will tend to slow down as tunnel gets further from the car exchange track. A reasonable projection to bisect and cross cut virgin ore beyond the old workings is 30 working days. The plan then is to drive on virgin ore to the limit of the ore shoot (i.e. some point passed Map II) but expected to exceed an additional 100'.

Results of a bulk sample of broken ore left in the old Wilkerson stope after his high-grading operations are very good. The samples run by Iron King Assaying Laboratory, Humbolt, Arizona, Mr. Walter Statler, are as follows:

<u>Assay/No.</u>	<u>Description</u>	<u>Gold/oz.</u>	<u>Silver/oz.</u>	<u>Gross Value</u> <u>ton/500 oz.</u> <u>gold/20 oz.</u> <u>silver.</u>
05-13-21	Hand sorted	.576	3.34	\$252.80
05-13-22	Hand sorted	.888	2.71	499.20
05-13-23	Bulk	.272	2.09	177.00

Note: The silver was probably lower because in selective mining 1958-1964 silver had more relative value and every effort was made to keep silver heads above 9 oz. by selective mining. Also please note that gold closed on 6/6/80 at \$591 and silver at \$16.70 so value per ton is understated.

2.0 Cost-Price Ratio - June 1980: The Summary of the Savoy Gold/Silver Mine (pages 5 through 8 of Offering Memorandum) was prepared from July 1979 costs and prices. Estimated costs (para. 4.26 page 7) were then \$110.00 per ton. The past year has seen a spectacular rise in prices, but costs have also risen very sharply. It is useful to review probable costs today with those estimated a year ago. We now have the actual cost of labor, timber, fuel, explosives, camp costs, road maintenance, etc. We have also now been able to assess more accurately the mining conditions and methods which will have to be used to operate in compliance with all regulations. The following is a consensus of MMCA our two registered consultants, and our contractor:

<u>Estimated Costs</u>	<u>Ton ore</u> <u>July 1979</u>	<u>Ton ore</u> <u>June 1980</u> (1)
1.0 Mining by contract	\$50.00	\$85.00

2.0 Trucking to smelter	25.00	35.00
3.0 Smelter charges	25.00	40.00
4.0 G.A. & O.	<u>10.00</u>	<u>12.00</u>
5.0 Total all cash costs	\$110.00	\$172.00

Note (1) Largest increases are Timber because of much larger amounts required for safe mining in mineralized zone and its price increase from \$350 mbf to \$450 mbf. Increase in Labor and Camp Costs from \$23.74 estimated in 1979 to \$35.00 in 1980 is second large factor.

3.0 Management of Project: There appears to be some misconception of the management effort which has gone into and will continue to go into this project. This misconception seems to stem from the idea that more progress would be made if the writer and our contractor, Mr. Montonati, spent "more time" on the project. We spend time as required and are in constant communication. Now that the dead work (very expensive and very frustrating) and various time set-backs have occurred, even less attention should be needed until mining starts.

Out of every 10 day working periods Montonati spends an average of 60% of his time at the mine. The writer averages 5 working days a month exclusively on the project and is in telephone communication at all times. Our consultants review the work on an average of once a month - oftener if special problems arise. The resident foreman is underground every working day. The men are now on pay plus performance bonus in the by-pass tunnelling now going on. Any further pressure on them would be counter productive.

It is also desirable in connection with this subject to note as our C. P. A. did (NL. #4: Farrow tax opinion) that MMCA is at very considerable risk to complete a turn-key exploration. If successful (as it seems almost certain to be so far as quantity and quality of ore is concerned) MMCA must then put the mine in operation. For reasons clearly detailed in previous newsletters, the exploration funds will be exhausted by about August 1st, and MMCA may have no method of raising further funds except from other activities of the writer. Taking all of this into account all of us involved sincerely believe that the project is, if anything, over-managed for its size.

4.0 Social Security Numbers: In connection with the documents to be filed evidencing your ownership in the Savoy Patented Claims, your Social Security number (and that of your wife if a community property State) is required. Please send this information/ to:

Mine Management Corporation of Arizona
 Box 7277
 Phoenix, Arizona 85011

Time spent. —

Jan 30	- letter to Kennecott -		1 1/2 hr
Feb. 2	- letter to AS, & R.		1 1/2 hr
Feb 3	- Studying claims, & photo. & sketches		1 1/2 hr
	sketch.		4 1/2
March - 23	- Maps.		4 hrs.
24	Field	184 miles @ 11	8
25	"	= 20.24	8
26	office - Maps.		8
27	office maps.		8
28	office Maps & Report		12
29	office		12

8 1/2 days.
\$ = 400

184 miles @ 11
Points
Pictures

3 1/2 @ 75
20.24
4.88
2.29

27.41
4 25.

\$ 452.41

225
400

625
27

652
200

452

T-10-N R1W-26-27



5' ~~200~~
50.00

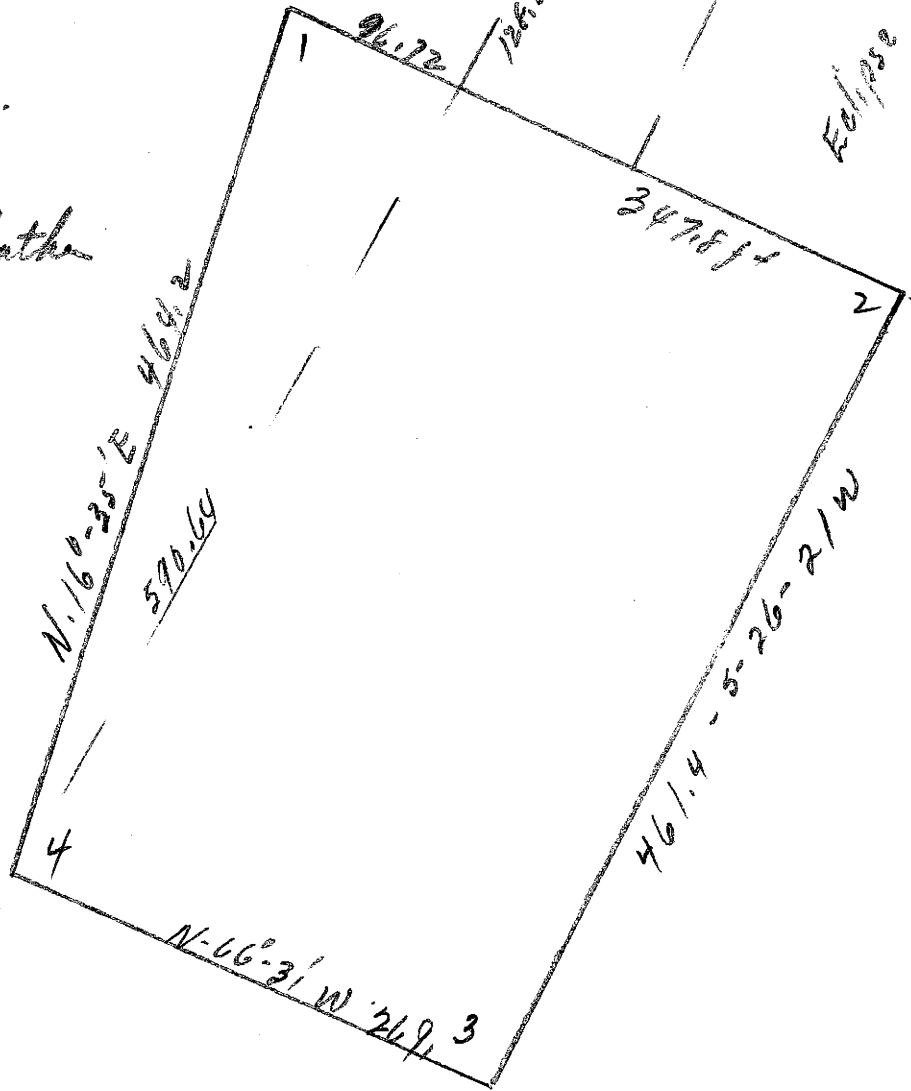
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Tiger - T. 10 N. R. 1 W. Sec. 26 E. Sec 27 N. Tiger

Lot - 3032 A-13.

New Jersey - 853.

Parallel to Apache leather
50 ft NW.



Ophio.
266

Cal. West

Calif.

Beaufort

22

□
N/W
□

aphir.

300 trench.

N. Tiger 2

UNION

Tiger M.S.

Tiger
50 x 28.

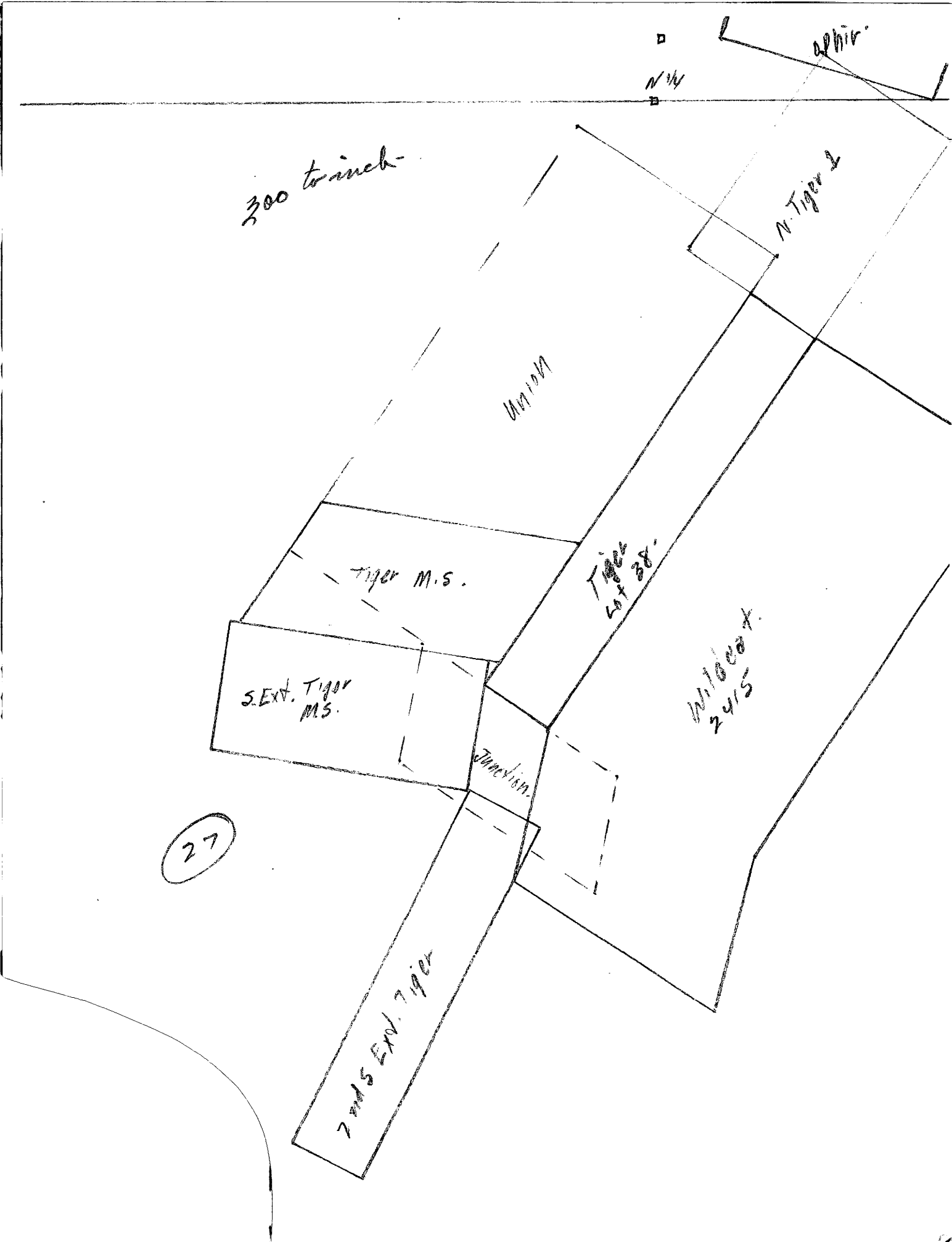
S. EXT. TIGER
MS.

W/600 x
2415

Junction.

27

2 and 5 EXT. TIGER

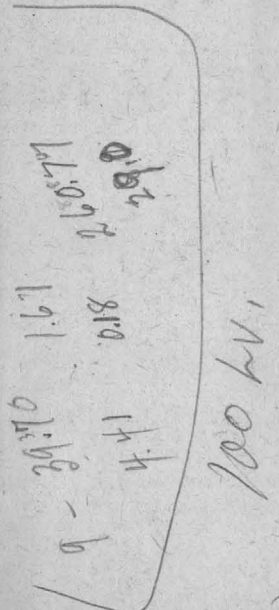
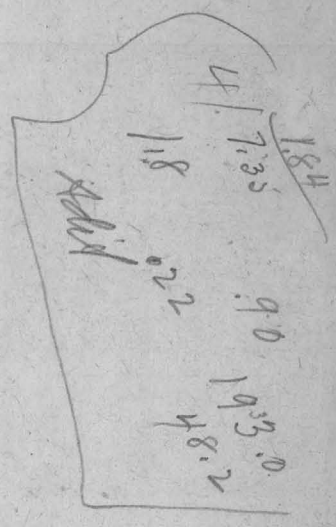


606	116	70.0
66	108	42.2
1123	102	4.2
1.90	104	4.0
1100	102	4.2
0.96	106	16.4
1100	120	45.6
1100	124	387.6
115	102	50.0
1.50	108	8.0
		<u>34</u>
11.16	92	653.6
1.12	609	65.4

.5	106	242.50
4.0	104	43.80
3.0	120	15.20
510	106	11.16
113	108	4.90
		<u>2</u>
13.8	1.74	317.04
2.8	.35	63.4

4.41	0.18	29.0
1.8	0.22	48.2
2.8	0.35	63.4
1.12	0.09	65.4
		<u>2</u>
10.73	0.84	206.0
2.53	= 0.21	51.5
5	= 0.11	25.7

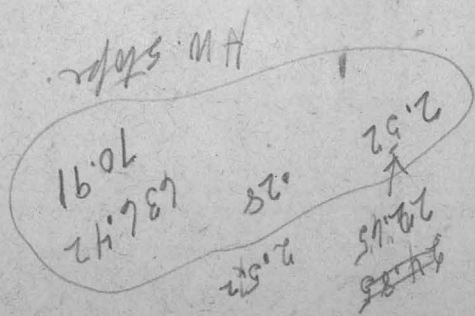
\$3.85 \$25.45
3.85
 29.30
 Cu \$1.50
30.80



$$\frac{300}{100} \times \frac{30000 \times 6}{12} = 15,000 \text{ tons}$$

$$\frac{100 \times 100 \times 6}{12} = \frac{25,000 \text{ tons}}{20,000 \text{ tons}}$$

20,000
 30
 \$400,000



6

Li-35625
WA

5 oz. Na - 380 oz Ag - 30.00 - RABO - .02
.14 oz (75/330) (A) → 1800,000
12 5-1 ans. 10% 25%
Eps00
20-1-P0

150,000 — Current Expd 15% ..

Sarav Mine - Sarav Mining Co. 70 A.D. Grant - 507 First Natl. Bank Bldg. St. Petersburg, Florida. J.H. Wilkerson (512 S. 4th St.) Phoenix. (777 W. Coolidge.) 2 Pat. Claims - Apache Panther - lot 49 (1881) & Nilda - Sur. 2908. (1911) -

Shipments to International S. & Ref. Co - Miami. F.W. Mercer 932 W. Hazelwood AM - 5-7228

211 copper less 10 lbs (23,375 - 44 = 29,375)

95% of silver @ 91.375

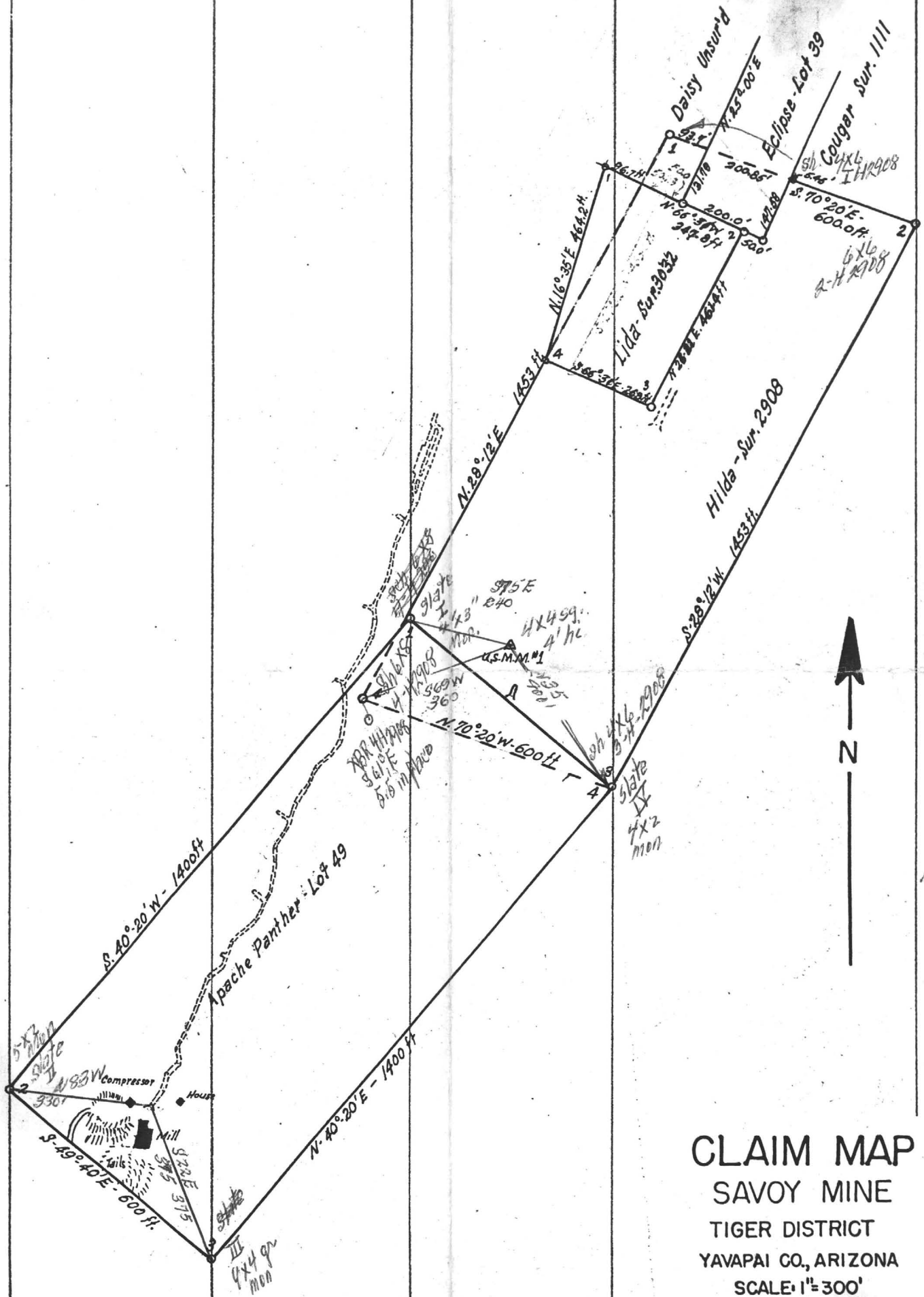
all gold @ 32.20

charges. Treatment \$9.00

Excess Metal - Value \$15.00 - then 10% on first \$25.00 - 5% on balance after value - \$15.00 - \$25.00

Royalty - 15% of net smelter value.

Shipments - (orig. 5 tons) 1.80 Cu; 26-40 oz sil. 2.7 1/2 5.2 oz Au - SiO2 8-9% Al2O3 - 10% Fe 38% CaO .4% Sul. 42% (Oct, & Dec. 1959)



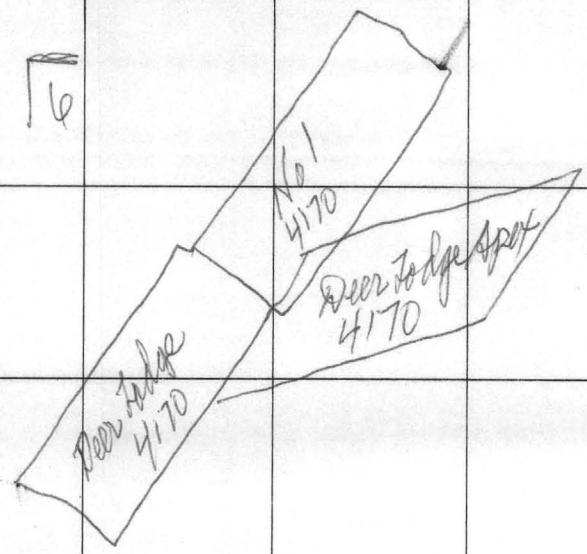
CLAIM MAP
SAVOY MINE
TIGER DISTRICT
YAVAPAI CO., ARIZONA
SCALE: 1" = 300'

March, 1960

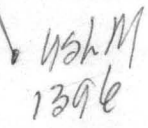
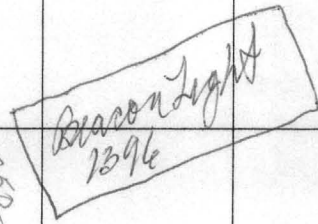
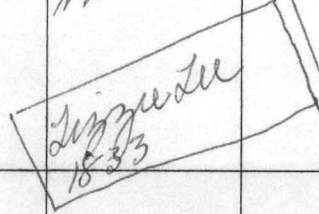
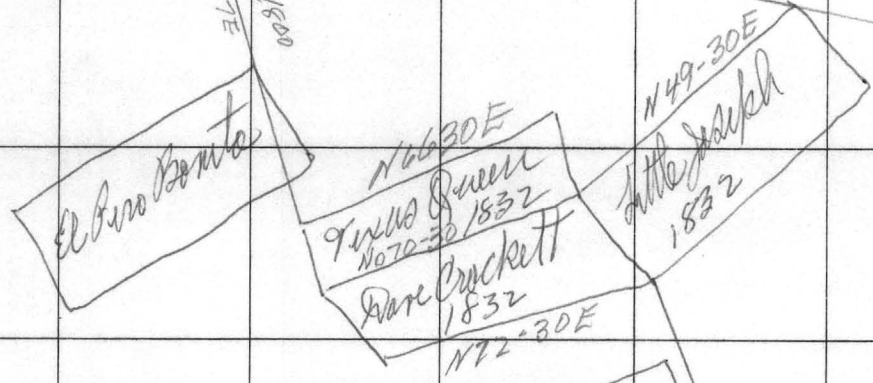
R.E.M.

16

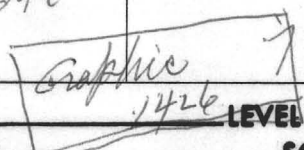
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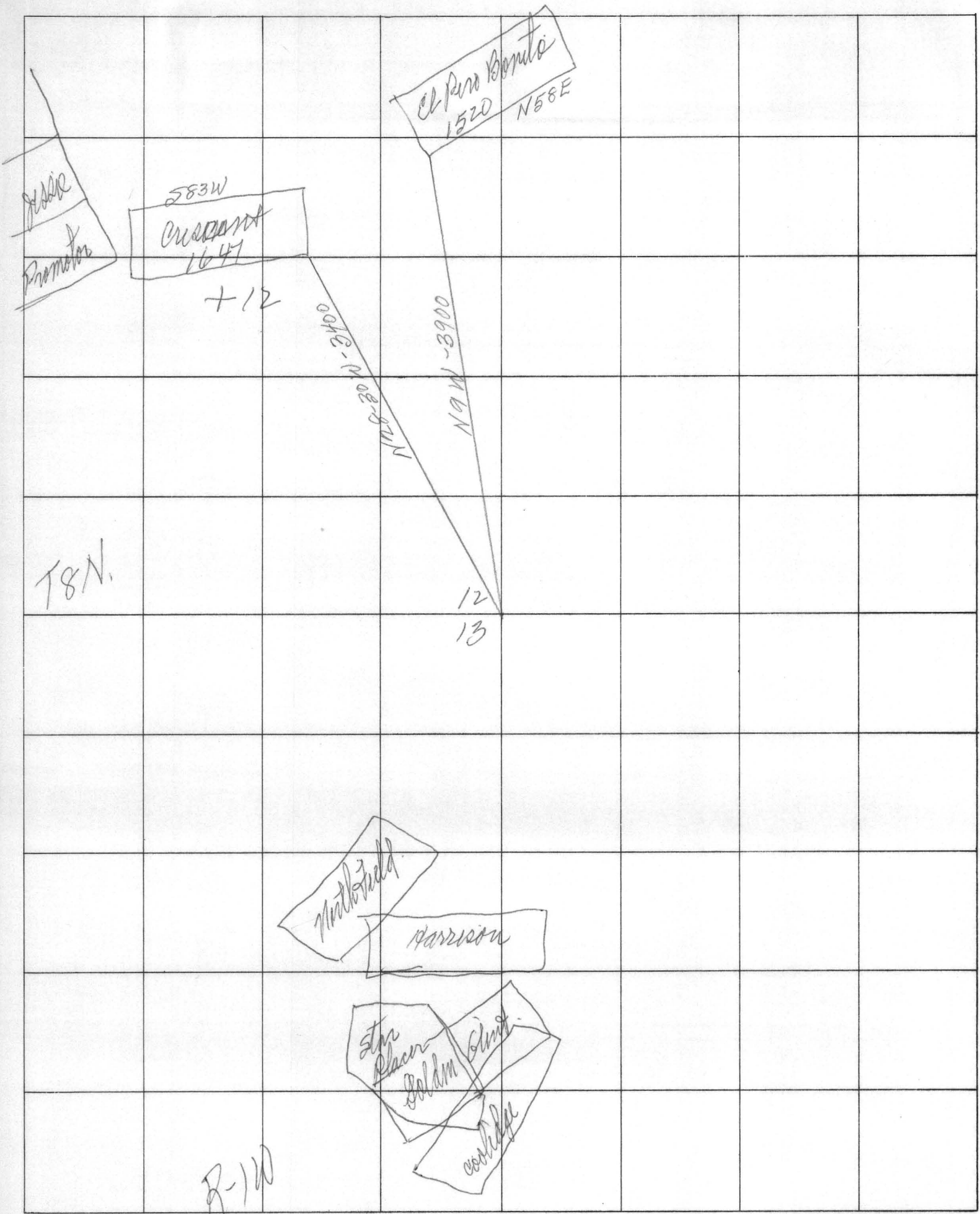
6
7



17



MINE _____ LOCATION _____
 GEOLOGY BY _____ SURVEY _____ DATE _____ SCALE _____
 N _____ E _____ EL. _____



MINE _____ LOCATION _____ LEVEL _____
 GEOLOGY BY _____ SURVEY _____ DATE _____ SCALE _____
 N _____ E _____ EL. _____

X

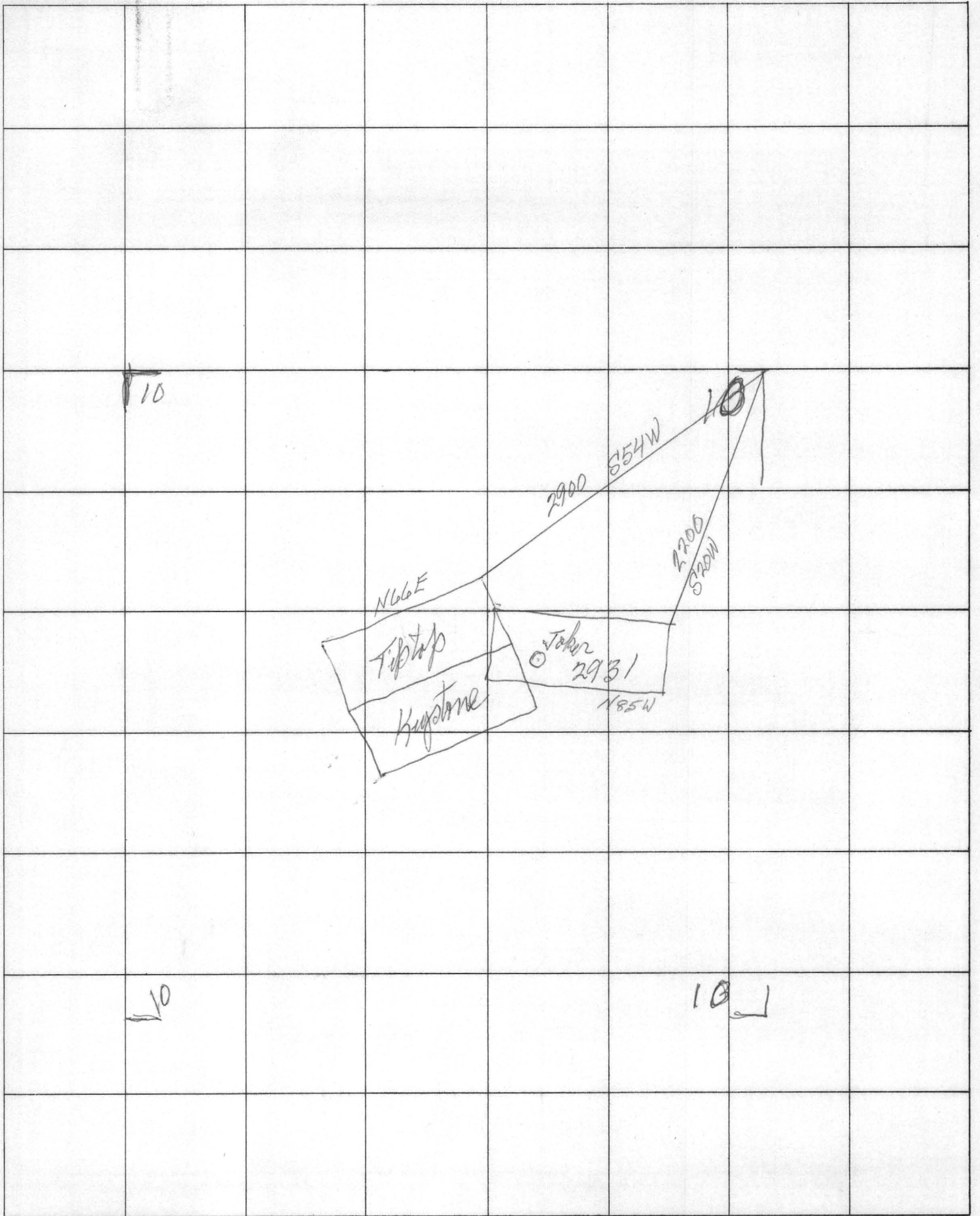
Cinda
 115mo
 4346
 hapan
 Jessie
 Harrison

1520
 El Paso
 Bunker

1107
 192



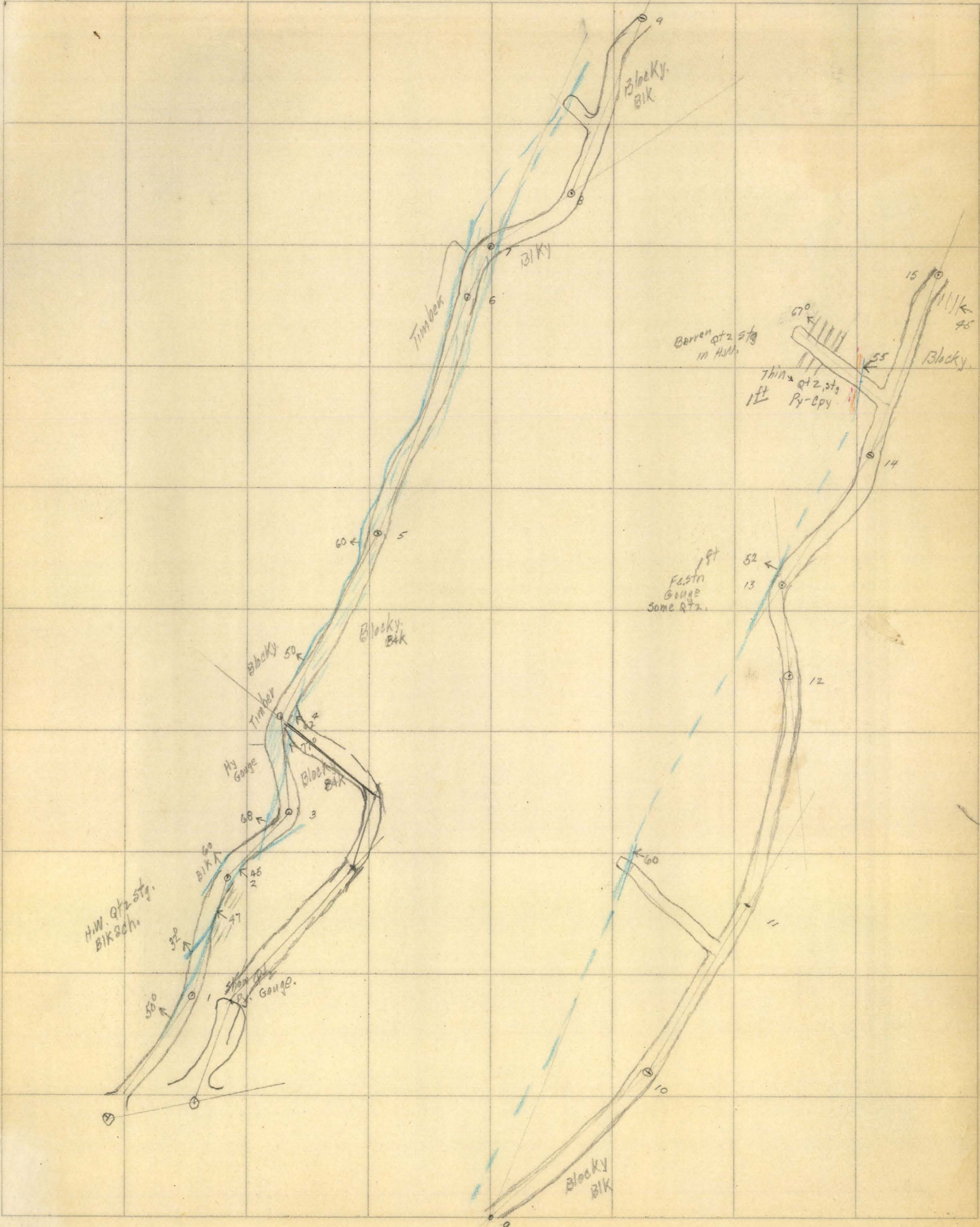
13
 North Field
 Harrison



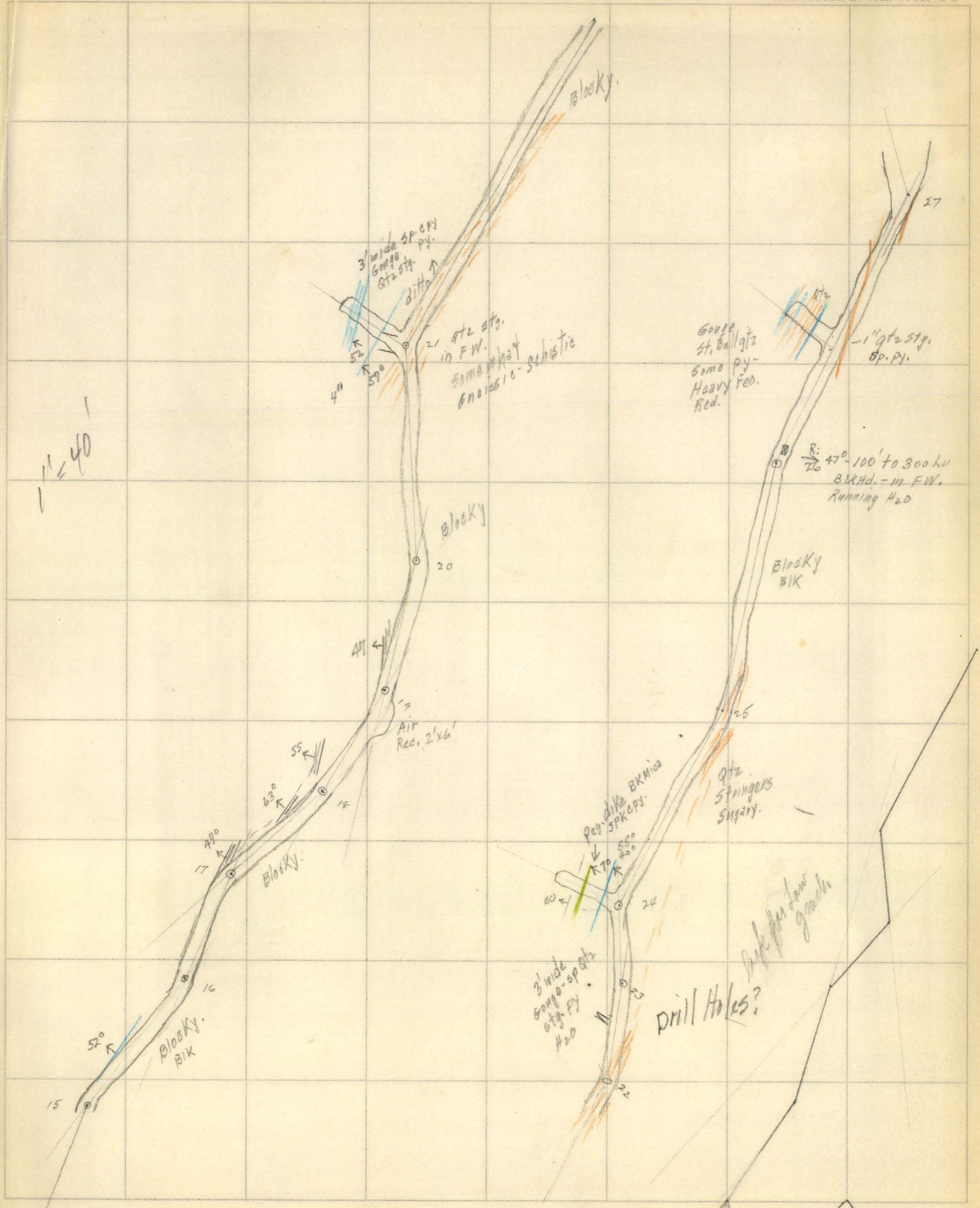
MINE _____ LOCATION _____ LEVEL _____

GEOLOGY BY _____ SURVEY _____ DATE _____ SCALE _____

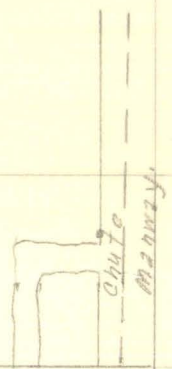
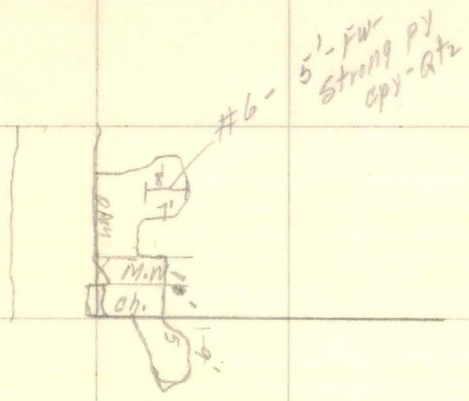
N _____ E _____ EL. _____



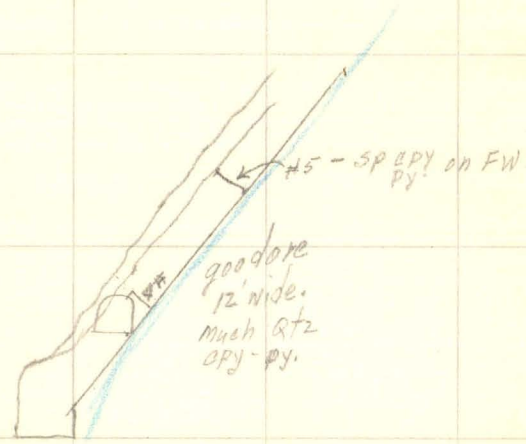
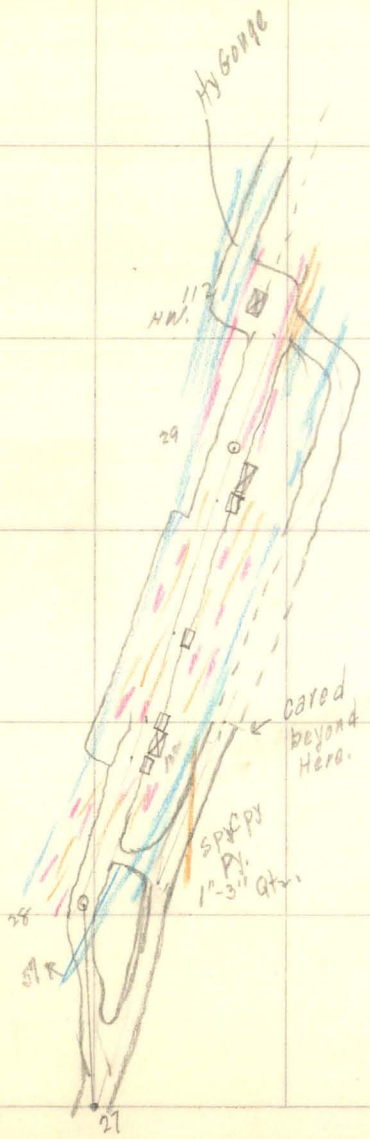
MINE _____ LOCATION _____ LEVEL _____
GEOLOGY BY _____ SURVEY _____ SCALE _____ DATE _____



MINE _____ LOCATION _____ LEVEL _____
 GEOLOGY BY _____ SURVEY _____ SCALE _____ DATE _____



#4-6.5'
fw - Nor. to
Zona - Min
bay



#5 - SPKPY on FW
py

good ore
12' wide.
Much Qtz
opy - py.

Savoy. - owner
10% sub Smitts.
\$250,000 - 500/mo - min.

Bob Gray. - gold sample
for S.B.O. → 99 Crown
King. → 60 days
Boston -
Rapid Transit → Savoy.

Dwight - think possible
certain points to be done.

Jett
Minor change
Spencer, change.

	<u>Su -</u>	<u>Ag</u>	<u>Cu</u>	<u>Pb</u>
1	0.03	0.4	0.39	0.30
2	1.44	3.8	1.45	0.30
3	0.05	0.9	0.34	0.50
4	0.13	0.1	0.75	0.50
5	0.04	3.0	0.35	
6	0.18	<u>Tn</u>	<u>0.60</u>	
	<u>3-35</u>	3.1	<u>3/170</u>	
	.12	1.0	0.57	

Hendon.
 Conc.
 Tails.
 Yavapai County Ariz.
 Tiger Mining District
 SAvoy Mine, & North Tiger Mine

Equipment on Property

Mining	8.00
Milling	2.00
Smelting (Freight)	1.50
Royalty	2.00
	<u>13.50</u>
	9.75
	<u>23.25</u>

700
 200
 10.20
 10

25
 52
 196

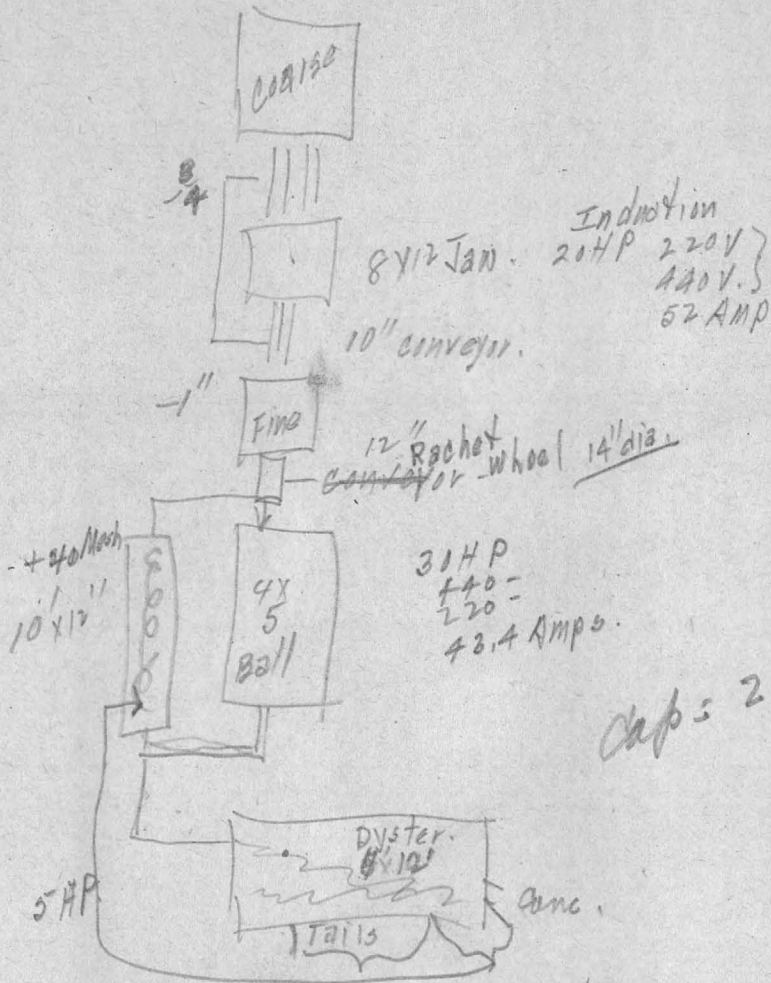
50,000
 25,000
 20,000

150,000 Prop.
 225,000 Mill & Mine
 20,000 shaft & haul.
~~200,000~~
 195,000

25,000 Open caps
1,20,000

District Possibilities 9.75

Mill flow sheet



6-lens ap -
80-
20-3' balls per ft.
7 stamps -
1010 # gms.

Compressor
I. R.
C. P. - 50HP.

5-84E
320'

Sample #	Location	Au	Ag	Cu	Pb
#1	sample - Heads	..	..	..	..
#2	" " Concentrate	..	..	..	..
#3	" " Tails	..	..	..	..
#4	6.5' - from FW - slope above chotes - N of Raise.	..	..	..	..
#5	4.0 up Raise . 57' up.	..	..	..	..
#6	5.0' across back of slope - N. End.	..	..	..	..
#7					
#8					

64 acres - South of
N-60 ac of West 1/2 of NW 1/4.
O'Malley - Montrose

ENGINEERING REPORT

ORO BELLE CLAIMS
BRADSHAW MOUNTAINS
ARIZONA

PREPARED FOR

JACK & ACQUANETTA ROSS
4415 NORTH ARCADIA LANE
PHOENIX, ARIZONA

WILLIAM P. CRAWFORD
CONSULTING MINING ENGINEER

WILLIAM P. CRAWFORD

CONSULTING MINING ENGINEER

17624 N. 23RD STREET

PHOENIX, ARIZONA 85022

24 SEPTEMBER 1968

MR. & MRS. JACK ROSS
4415 NORTH ARCADIA LANE
PHOENIX, ARIZONA

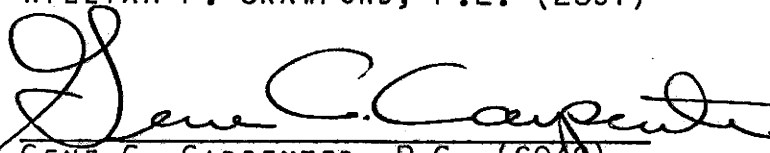
HEREIN SUBMITTED IS A REPORT ON THE ORO BELLE CLAIM
GROUP IN THE BRADSHAW MOUNTAINS, YAVAPAI COUNTY,
ARIZONA.

UPON YOUR REQUEST WE HAVE VISITED THE PROPERTY,
REVIEWED THE WORKINGS AND RESEARCHED AVAILABLE DATA
OF PAST OPERATIONS.

THE RESULTS OF OUR EFFORTS LEADING TO CONCLUSIONS
AND RECOMMENDATIONS REGARDING FUTURE DEVELOPMENT OF
THE PROPERTY ARE INCLUDED HEREIN.

RESPECTFULLY SUBMITTED,


WILLIAM P. CRAWFORD, P.E. (2591)


GENE C. CARPENTER, P.G. (6949)

/BA

PRELIMINARY INVESTIGATION OF
ORO BELLE GROUP CLAIMS

PREPARED FOR
JACK & ACQUANETTA ROSS
PHOENIX, ARIZONA

GENERAL

THE ORO BELLE GROUP OF CLAIMS CONSISTS OF 24 PATENTED MINING CLAIMS LOCATED IN THE TIGER MINING DISTRICT OF YAVAPAI COUNTY, ARIZONA. ALL CLAIMS ARE LOCATED IN TOWNSHIP 10 NORTH RANGE 1 WEST AND OCCUPY PORTIONS OF SECTIONS 26, 27, 34 AND 35. THE CONTIGUITY OF THESE CLAIMS IS SHOWN IN FIGURE 1. PRESENT OWNERSHIP OF THE ORO BELLE GROUP OF CLAIMS IS UNDERSTOOD TO BE VESTED 100 PERCENT WITH JACK ROSS, ET AL. GENERAL LOCATION FOR THE ORO BELLE GROUPS IS APPROXIMATELY 3 MILES SOUTHWEST OF THE TOWN OF CROWN KING BY VERY POOR "FOUR WHEEL DRIVE" ACCESS ROADS. FIGURE 1 SHOWS THE GENERAL LOCATIONS OF CROWN KING WITH RESPECT TO THE ORO BELLE GROUP OF CLAIMS.

OPERATING HISTORY

THE ORO BELLE VEIN WAS DISCOVERED AND FIRST MINED IN 1870 ON A SMALL SCALE UNTIL APPROXIMATELY 1887 WHEN THE ORO BELLE MINING COMPANY WAS OFFICIALLY ORGANIZED. IN 1890 RICHARD S. BARNES OF NEW YORK CITY BECAME PRESIDENT OF THE ORO BELLE MINING COMPANY. NO RECORDS ARE AVAILABLE OF THE OPERATIONS OF THE ORO BELLE MINING COMPANY, HOWEVER, IT WAS REPORTED BY MR. BARNES THAT THE OPERATION WAS VERY PROFITABLE. MR. F. E. HARRINGTON TOOK OVER OPERATIONS OF THE ORO BELLE MINING COMPANY IN 1900 AND CONTINUED OPERATING SAME UNTIL 1908. IT WAS DURING THIS TIME THAT MR. HARRINGTON'S SON, J. RUBEN HARRINGTON, EXPLORED THE GREY EAGLE VEIN AND BEGAN MINING OPERATIONS THERE IN 1902. AT THIS SAME TIME, THE TIGER GOLD COMPANY WAS ORGANIZED UNDER THE MANAGEMENT OF GEORGE P. HARRINGTON AND IN 1905 THE TIGER GOLD COMPANY ATTAINED THE STATUS OF LEADING GOLD PRODUCER IN THE STATE OF ARIZONA.

CONTROL OF THE ORO BELLE MINING COMPANY IN THE YEAR 1908 PASSED INTO THE HANDS OF A SPRINGFIELD, ILLINOIS GROCER'S GROUP AND FROM THAT DATE UNTIL APPROXIMATELY 1912 OPERATIONS WERE CONDUCTED UNDER THEIR SUPERVISION. ACCORDING TO REPORTS, VERY LITTLE PROFIT WAS MADE DURING THIS TIME. IN 1912 THE 500 AND 600 FOOT LEVELS OF THE MINES CAVED, CUTTING OFF THE ORE WHICH HAS BEEN MINED. THE PROPERTY WAS SHUT DOWN AT THIS POINT. MR. RICHARD BARNES, IN 1913, FORECLOSED ON THE MORTGAGE HE HELD WITH THE OWNERS AND TOOK THE PROPERTY BACK TO BE WORKED BY HIMSELF. BECAUSE OF HIS DEATH IN 1913, THE CLAIM STAYED IN THE BARNES FAMILY UNDER THE CONTROL OF THE BARROD MINING COMPANY. FROM 1913 UNTIL 1917 SMALL PORTIONS OF THE WORKINGS IN THE UPPER PART OF THE MINE WERE OPERATED BY FOSTER F. NAETHING. IN 1917 THE PROPERTIES WERE AGAIN SHUT DOWN BECAUSE OF WORLD WAR I AND THE HIGH COST OF MINING WHICH MADE THE OPERATION UNPROFITABLE. SINCE THAT DATE, A COUPLE OF ATTEMPTS HAVE BEEN MADE AT OPERATING THIS MINE BUT NONE WERE SUCCESSFUL. AT PRESENT, TITLE TO ALL OF THE PATENTED CLAIMS IS OWNED BY JACK ROSS.

GENERAL GEOLOGY

THE GENERAL GEOLOGY OF THE BRADSHAW MOUNTAINS IN THE VICINITY OF THE ORO BELLE CLAIM GROUP IS SHOWN IN FIGURE 3. THE ROCKS OF THE AREA CONSIST PREDOMINATELY OF THE BRADSHAW GRANITE COMPLEX, PRE-CAMBRIAN SCHIST AND OTHER INTRUSIVE GRANITE TYPES OF PRECAMBRIAN AGE.

THE SCHIST IN THE AREA OF THE ORO BELLE CLAIMS IS DESIGNATED AS THE YAVAPAI SCHIST AND IS PRESUMABLY THE OLDER ROCK IN THE AREA. THE PARENT MATERIAL OF THE SCHIST WAS SANDSTONE, CONGLOMERATE AND SOME LIMESTONE AS HAS BEEN EVIDENCED BY THE OCCASIONAL LENSES OF THESE MATERIALS FOUND UNMETAMORPHOSED IN THE SCHIST. ALTERATION OF THIS MATERIAL TO THE SCHIST WAS ACCOMPLISHED BY THE EXTREME HEAT AND PRESSURES AFFORDED BY THE INTRUSION OF THE BRADSHAW GRANITE.

THE BRADSHAW GRANITE COMPLEX IS PREDOMINATELY A VERY COARSE-GRAINED (INDICATING GREAT DEPTH OF COOLING) ORTHOCLASE FELSPAR AND QUARTZ

GRANITE WITH LARGE CRYSTALS OF ORTHOCLASE AND MUSCOVITE MICA. CUTTING THROUGH BOTH THE SCHIST AND THE GRANITE ARE MANY DIKES OF A GRANODIORITE AND RHYOLITE PORPHYRY. THERE ARE SOME MINOR AREAS IN THE REGION WHICH SHOW A QUARTZ POOR MAGMA AND THE GRANITE COMPLEX CHANGES IN CHARACTER TO BECOME A GRANODIORITE OR DIORITE, DEPENDING UPON THE CHEMICAL COMPOSITION OF THE PARTICULAR AREA.

THE EXACT AGE OF THE DIKES AND VEINS WHICH CROSS THE OLDER COMPLEX AND FORM THE BASIS FOR ALL ORE DEPOSITS IS QUESTIONABLE, HOWEVER, IT IS FELT THAT THEY ARE PROBABLY OF MESOZOIC AGE. ORE DEPOSITION IS HYDROTHERMAL COMING FROM THE SOLUTIONS ASSOCIATED WITH THE DIKE INTRUSIONS IN THE AREA. PRIMARY ORE DEPOSITS ARE FOUND AT DEPTH AND SOME ENRICHMENT HAS TAKEN PLACE BECAUSE OF CHEMICAL WEATHERING. THE MAJOR VEIN IN THE AREA, THE GREY EAGLE VEIN, RANGES IN WIDTH FROM 20 FEET TO A MINIMUM OF ABOUT 3 FEET AND HAS A NORTH-SOUTH STRIKE WITH A DIP ANGLE OF APPROXIMATELY 50° WEST. THE UPPER PORTIONS OF THIS VEIN HAVE BEEN LEACHED CONSIDERABLY, HOWEVER, PRIMARY ORE DEPOSITS ARE FOUND WITH DEPTH. THE VEIN IS LOCATED ALONG THE CONTACT BETWEEN THE YAVAPAI SCHIST AND THE BRADSHAW GRANITE COMPLEX AND IS PREDOMINATELY PYRITE AND CHALCOPYRITE WITH SOME SMALL AMOUNTS OF GALENA ALL FOUND IN A QUARTZ GANGUE MATERIAL. SOME GOLD AND SILVER CONTENT IS ALSO EVIDENT IN THESE MATERIALS. THE FOOT WALL OF THE VEIN IS A VERY HEAVY CLAY "GOUGE" MATERIAL WHICH COULD PRESENT SOME PROBLEMS IN THE MINING.

THE ORO BELLE AND NEW JERSEY VEINS PARALLEL THE MAIN GREY EAGLE VEIN AND RANGE IN THICKNESS FROM 6 INCHES TO 3 FEET. MOST CHARACTERISTICS OF THESE VEINS ARE IN GENERAL THE SAME AS THE GREY EAGLE. THE DIP OF THE NEW JERSEY AND ORO BELLE VEINS IS APPROXIMATELY 75° WEST WITH THE SAME STRIKE AS THE GREY EAGLE VEIN. BECAUSE OF THIS DIFFERENCE IN DIP BETWEEN THE VEINS, IT IS FELT THAT THE GREY EAGLE VEIN WILL INTERSECT WITH THE NEW JERSEY AND ORO BELLE VEINS WITH DEPTH, HOWEVER, ANALYTICAL PROJECTIONS ARE NECESSARY TO DETERMINE EXACTLY WHERE AND AT WHAT DEPTH.

IN SOME OF THE AREA, HYDROTHERMAL ALTERATION HAS TAKEN PLACE THROUGH CHANNELS AND FRACTURES IN THE SCHIST BY REPLACEMENT OF THE SCHIST. OCCASIONALLY THE ORE MATERIALS RETAIN SOME OF THE ORIGINAL SCHISTOSE STRUCTURES. LATER ALTERATION OF THE SULFIDES HAS PRODUCED MANY ZONES OF HIGHLY LEACHED MATERIALS IN PLACE WHICH HAS ENRICHED THE ORES WITH DEPTH AND CAUSED SURFACE DEPOSITS TO BE VERY POOR. IT IS FELT, HOWEVER, THAT SECONDARY ENRICHMENT WITH DEPTH IS NOT EVIDENT FOR ANY GREAT DISTANCE.

DEVELOPMENT - PAST-PRESENT

FIGURES 3 THROUGH 5 ARE CROSS SECTIONS OF THE ONLY MAPPED OR SKETCHED SHAFTS AND TUNNELS IN THE ORO BELLE CLAIM GROUP. THE ACCURACY OF THESE CROSS SECTIONS ARE SOMEWHAT QUESTIONABLE INASMUCH AS MOST WERE DRAWN OR SKETCHED ON THE SURFACE FROM MEMORY.

ON THE GREY EAGLE, CLEVELAND AND SECOND NORTH EXTENSION OF THE GREY EAGLE, THE GREY EAGLE VEIN WAS ORIGINALLY OPENED UP FOR OVER 25 FEET ALONG THE STRIKE TO A DEPTH OF 700 FEET BELOW THE OUTCROP. ONLY HIGH GRADE ORE WAS MINED, THEREFORE LARGE TONNAGES OF LOW GRADE ORE ARE PROBABLY STILL REMAINING IN THE STOPES AND UNMINED PORTIONS OF THE VEINS. ALL OF THE TUNNELS IN THIS PARTICULAR AREA ARE CAVED AT PRESENT.

THE CLEVELAND SHAFT WAS SUNK 600 FEET IN THE DIORITE AT AN ANGLE OF 75°. IN THE LATE 1920'S THE COLLAR OF THIS SHAFT COLLAPSED, HOWEVER, A CANADIAN COMPANY TRYING TO REOPEN THESE CLAIMS RE-SHORED, TIMBERED AND OPENED UP THE CLEVELAND SHAFT. THIS EFFORT WAS ABANDONED AFTER THE SHAFT WAS FLOODED COMPLETELY WITH WATER. AT PRESENT WATER IS RUNNING OUT OF THE COLLAR OF THE CLEVELAND SHAFT AND FINDING ITS WAY INTO THE MAIN DRAINAGE BASIN OF THE ORO BELLE CLAIM GROUP. SEVERAL SHORT TUNNELS WERE DRIVEN ON THE SECOND NORTH EXTENSION OF THE GREY EAGLE CLAIM AND THE PILGRIM CLAIMS. NUMEROUS SMALL TUNNEL AND SHAFT WORKINGS WERE MADE IN SOME OF THESE CLAIMS ALONG THE VEIN, HOWEVER, LITTLE DOCUMENTATION IS AVAILABLE AT PRESENT.

ORE PRODUCTION

THE ACTUAL AMOUNTS AND VALUES OF THE ORE PRODUCED FROM THESE CLAIMS IS NOT KNOWN BECAUSE OF THE EXTREMELY POOR AND SPOTTY RECORDS KEPT BY ALL OF THE OPERATING COMPANIES FOR THESE LEASES. ALL OF THE DATA OF RECORD IS PRESENTED IN TABLES 1 THROUGH 5.

ORE RESERVES AND POTENTIAL

NO ORE RESERVES CAN BE MEASURED OR CALCULATED BECAUSE OF THE LACK OF ANY DATA PERTAINING TO THE WORKINGS AT DEPTH. SINCE NO FORMAL EXPLORATION PROGRAMS WERE UNDERTAKEN BY THE PREVIOUS OWNERS, NO DATA IS AVAILABLE OF RECORD WHICH WOULD INDICATE AMOUNT OF ORE LEFT IN PLACE TO WORK. IT IS KNOWN THAT ALL ORE WOULD HAVE TO BE MINED BY SHAFT AND TUNNEL TECHNIQUES AT DEPTH BECAUSE OF THE VEIN NATURE OF THE ORE BODY AND THE LACK OF SURFACE ORE DEPOSITS. BECAUSE OF THIS LACK OF SURFACE ORE DEPOSITS IT WILL BE NECESSARY TO UNDERTAKE A DRILLING PROGRAM TO PROVE UP THE EXISTENCE OF ADEQUATE ORES TO JUSTIFY MINING.

CONCLUSIONS AND RECOMMENDATIONS

TAKING ALL FACTS INTO CONSIDERATION, THE FOLLOWING CONCLUSIONS PERTAINING TO THE Oro Belle Claim Group CAN BE MADE.

1. THERE IS DEFINITELY MINERALIZATION BEARING COPPER AND GOLD AND SILVER ORES OF VARYING TYPES IN THE AREA OF THE Oro Belle Claim Group.
2. THE MINERALIZATION IS ALL LOCATED IN VEIN TYPE DEPOSITS WITH A STEEP DIP RANGING FROM 50 TO 75° IN A WESTERLY DIRECTION.
3. ALL MINERALIZATION IS ASSOCIATED WITH THE INTRUSION OF THE GRANDODIORITE AND PHYOLITE PORPHY DIKES IN THE AREA.
4. BECAUSE OF THE ORIGIN OF THE ORE BEARING MATERIALS, ENRICHMENT OF THE ORE SHOULD BE EVIDENT WITH DEPTH. HOWEVER, DRILLING IS NECESSARY TO VALIDATE THIS.
5. LARGE TONNAGES HAVE BEEN MINED OUT IN THE PAST WHICH INDICATES ITS VALUE AS AN ORE PRODUCING AREA.
6. BECAUSE OF THE GENERAL METHODS OF MINING AT THE TIMES THESE CLAIMS WERE OPERATED, ONLY THE HIGH GRADE ORES

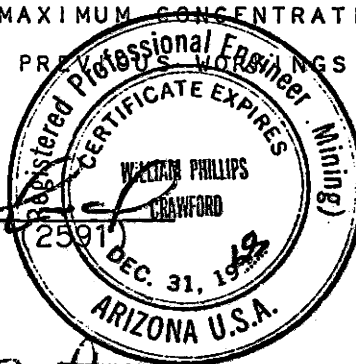
WERE EXTRACTED AND LARGE TONNAGES OF LOW GRADE ORE HAVE BEEN REPORTED LEFT IN PLACE.

7. IT IS PRESUMED THAT ALL UNDERGROUND WORKINGS HAVE COLLAPSED AND CAVED AND SOME HAVE BEEN FLOODED WITH WATER. NONE OF THE OLD WORKINGS WOULD BE AVAILABLE FOR RE-ENTRY WITHOUT CONSIDERABLE COST.

IN VIEW OF THE CONCLUSIONS REACHED BY A STUDY OF THE CLAIMS, THE FOLLOWING RECOMMENDATIONS ARE HEREBY MADE.

1. A COMPLETE DETAILED SURFACE GEOLOGICAL STUDY BE MADE OF THE VEINS AND THEIR ATTITUDES AND MAPS PREPARED TO A SCALE ADEQUATE FOR ANALYTICAL PROJECTIONS WITH DEPTH.
2. A COMPREHENSIVE CORE DRILLING PROGRAM BE UNDERTAKEN TO INTERSECT ALL OF THE VEINS IN THE AREA TO DETERMINE ENRICHMENT IN THE ORE CONTENT WITH DEPTH.
3. ALL CORE SAMPLES SHOULD BE ASSAYED FOR ORE CONTENT TO DETERMINE THE ZONES OF ENRICHMENT OR HEAVY LOCALIZATION OF ORES.
4. THE ORIGIN OF THE GROUND WATER FOUND IN THE CLEVELAND SHAFT SHOULD BE DETERMINED SO AS TO DESIGN ALL OPERATIONS TO WORK AROUND THIS PARTICULAR LEVEL TO PRECLUDE ANY POSSIBILITY OF FLOODING THE UNDERGROUND WORKINGS.
5. AFTER ALL OF THE PREVIOUS STEPS HAVE BEEN TAKEN THEN A SHAFT OR DRIFT SHOULD BE CONSTRUCTED TO INTERSECT THE ORE BODY AT ITS MAXIMUM CONCENTRATION AND IN A POSITION WHERE ALL OF THE PREVIOUS WORKINGS WILL BE BYPASSED.

William P. Crawford
WILLIAM P. CRAWFORD, P.E. (2591)



Gene C. Carpenter
GENE C. CARPENTER, P.G. (6949)

TABLE I

SUMMARY OF OPERATIONS

FROM
1903 TO 1912

TOTAL CRUDE ORE MINED AND MILLED-----82,115 TONS
 TOTAL CONCENTRATES PRODUCED-----7,256.55 TONS
 TOTAL BULLION PRODUCED -----28,839.72 TROY OZS.
 TOTAL GROSS VALUE OF CONCENTRATES-----\$518,482.15
 TOTAL GROSS VALUE OF BULLION-----\$446,271.01
 TOTAL GROSS VALUE OF CONCENTRATES & BULLION----\$964,753.16

* AVERAGE TONNAGE MILLED - 39 TONS PER DAY (2.5 TONS PER STAMP)
 AVERAGE NUMBER OF DAYS MILL OPERATED - 235 DAYS PER YEAR (9 YRS.)
 AVERAGE RATIO OF CONCENTRATION - 11.3 TONS ORE TO 1 TON CONCENTRATE
 AVERAGE BULLION-TO-ORE RATIOS - 0.35 OZS. PER TON CRUDE ORE.
 AVERAGE VALUE OF BULLION---\$15.47 PER TROY OUNCE.
 AVERAGE VALUE OF CONCENTRATES - \$71.47 PER TON
 AVERAGE TAILING LOSS (ESTIMATED) \$3.50 PER TON
 AVERAGE COST OF MARKETING BULLION AT MINT- - - - - \$0.13 PER OZ.
 AVERAGE COST OF MARKETING BULLION IN CONCENTRATES - - - \$1.16 PER OZ.

BULLION RECOVERY, PER TON CRUDE ORE - - - - - \$5.43 36%
 CONCENTRATE RECOVERY, PER TON CRUDE ORE - - - - - 6.31 41%
 TAILINGS LOSS, PER TON CRUDE ORE- - - - - 3.50 23%
 AVERAGE GROSS VALUE, PER TON CRUDE ORE- - - - - \$15.24 100%

 PRODUCTION FROM 1903 TO DECEMBER 1907 (5 YEARS)-----\$744,513.00
 PRODUCTION FROM JANUARY, 1908 TO MARCH, 1912 (4 YRS.)\$220,240.00

* NOTE - DURING THE 9 YEARS OF RECORDED OPERATIONS THE MILL OPERATED 2,110 DAYS. FROM 1903 TO 1905 TEN STAMPS WERE OPERATED PART OF THE TIME, AND 20 STAMPS PART OF THE TIME. IN 1905, 1906, AND 1907 TWENTY STAMPS WERE OPERATED PRACTICALLY ALL THE TIME THE MILL WAS OPERATED. FROM 1908 UNTIL THE MINE CLOSED DOWN IN MARCH 1912, ONLY TEN STAMPS WERE OPERATED WHEN THE MILL WAS OPERATED. THE MILL RECORDS SHOW A MILL CAPACITY OF ALMOST EXACTLY 2.5 TONS PER STAMP, OR 50 TONS PER DAY, BUT AS SHUT-DOWNS WERE VERY FREQUENT OWING TO THE BAD CONDITION OF THE MILL AND MINING EQUIPMENT DURING THE LAST 4 YEARS OF OPERATION, THE AVERAGE MILL CAPACITY FOR THE ENTIRE 9 YEARS FIGURES OUT TO BE BUT 39 TONS PER DAY.

AFTER NAETHING, 1934

TABLE II

TOTAL GROSS PRODUCTION FROM 1903 TO 1912

THE FOLLOWING RECORDS WERE COMPILED FROM THE ORIGINAL MINE AND MILL RECORDS OWNED BY A. G. MOUTIER, HOLLYWOOD, CALIF. MR. MOUTIER WAS EMPLOYED AT THE GRAY EAGLE MINE FROM 1905 TO 1911 IN VARIOUS CAPACITIES RANGING FROM MILL MAN TO ACCOUNTANT, STORE MANAGER, AND POST-MASTER. MR. A. G. SHERER, MANAGER FROM 1908 TO 1912 WAS MR. MOUTIER'S UNCLE.

YEAR	CONCENTRATES			BULLION			No. DAYS MILL OPERATED	No. STAMPS OPERATED
	No. CARS	DRY. WT. TONS	NET SMELTER RETURNS	No. BARS	NET MINT RETURNS	TOTAL NET SETTLEMENTS		
1905	34	1,008.25	53,596.72	115	79,205.14	132,801.86	185	20
1906	47	1,509.97	87,073.39	147	100,576.17	187,649.56	340	20
1907	21	659.54	39,260.29	70	49,818.59	89,078.88	190	20
1908	12	356.47	18,497.09	43	21,999.03	40,456.12	255	10
1909	4	96.62	8,069.84	11	6,771.48	14,841.32	105	10
1910	19	552.35	36,389.80	43	26,554.54	62,944.34	165	10
1911	35	954.05	52,634.47	59	36,614.19	89,248.66	340	10
1912	5	109.30	6,290.51	11	6,459.36	12,749.87	65	10
	<u>177</u>	<u>5,246.55</u>	<u>301,812.11</u>	<u>499</u>	<u>327,998.50</u>	<u>629,770.61</u>	<u>1,645</u>	

TOTAL NET SMELTER AND MINT RETURNS (ABOVE)-----\$629,770.61
 TOTAL SMELTER CHARGES, PENALTIES, DEDUCTIONS, FREIGHT, ETC. (CONCEN.) 75,970.04
 TOTAL MINT, BANK, POSTAGE, INC. & EXCHG. CHARGES ON BULLION 2,599.79
 GROSS VALUE 67 CARS (2010 TONS) CONCENTRATES SHIPPED 1903 TO JULY 1905 140,700.00
 GROSS VALUE 139 BARS (7,605.51 oz.) BULLION " " " 115,712.72

TOTAL GROSS PRODUCTION OF GRAY EAGLE MINE, 1903 TO 1912- - - - - \$964,753.16

NOTE: NO RECORDS ARE AVAILABLE FOR THE PRODUCTION FROM THE ORO BELLE AND GRAY EAGLE MINES PREVIOUS TO 1903. HOWEVER THERE ARE A NUMBER OF MEN LIVING NEAR CROWN KING, ARIZONA, NOW WHO ARE FAMILIAR WITH THE OPERATIONS PREVIOUS TO 1903. PROBABLY CONSIDERABLY MORE THAN \$500,000. HAS BEEN PRODUCED FROM THE ORO BELLE MINE ALONE, SINCE ITS DISCOVERY IN 1870. THE GRAY EAGLE VEIN WAS NOT WORKED UNTIL 1900, EXCEPT FOR THE RICH OXIDIZED ORE ON THE SURFACE WHICH WAS WORKED IN ARASTRAS. THE ORO BELLE ORE WAS TREATED IN A 5-STAMP MILL UNTIL 1890. IN 1890 A NEW 10-STAMP MILL WAS ERECTED AND OPERATED UNTIL ENLARGED IN 1905.

TABLE III

BATTERY HEADS FROM ORIGINAL ASSAY RECORDS - 1905

<u>MONTH</u>	<u>GOLD</u>	<u>SILVER</u>	<u>1905 VALUE</u>	<u>1968 VALUE</u>
JANUARY	.38	3.5	\$15.50	\$29.40
FEBRUARY	.43	3.4	17.18	31.85
MARCH	.49	3.8	19.63	36.20
APRIL	.52	5.0	21.40	41.20
MAY	.62	4.2	24.38	44.30
JUNE	.59	4.3	23.30	43.30
AVERAGE	.50 oz.	4.0 oz.	21.00	37.70

FROM REPORTS OF TIGER GOLD COMPANYTO U. S. GEOLOGICAL SURVEY

<u>YEAR</u>	<u>TONS MILLED</u>	<u>TOTAL VALUE RECOVERED</u>	<u>VALUE RECOVERED PER TON</u>
1904	5,319	\$ 83,763.94	\$15.75
1905	21,915	266,792.07	12.25
1906	16,858	198,066.33	11.80
1907	<u>7,428</u>	<u>97,438.85</u>	<u>13.10</u>
TOTAL	51,520	\$646,061.19	<u>AVERAGE 12.54</u>

AFTER NAETHING, 1934

TABLE IV

THE MILL RECORDS SHOW THAT 20 STAMPS WERE OPERATED FOR 340 DAYS IN 1906, AN AVERAGE OF 28.3 DAYS PER MONTH. THE TAILINGS LOSS VARIED CONSIDERABLY ACCORDING TO THE GRADE OF THE ORE, THE AVERAGE BEING AT LEAST \$3.50 PER TON.

ANALYZING THE ABOVE DATA WE OBTAIN THE FOLLOWING INFORMATION:

AVERAGE DAILY TONNAGE MILLED - 49.6 TONS, OR 2.5 TON PER STAMP.
 " TAILINGS LOSSES - 3.50 PER TON
 " BULLION-TO-ORE RATIO - 0.37 OZ. PER TON CRUDE ORE
 " RATIO OF CONCENTRATION - 11.8 TONS ORE TO 1 TON CONCENTRATE
 " VALUE OF BULLION - 16.06 PER TROY OUNCE
 " VALUE OF CONCENTRATES - 68.86 PER TON.

BULLION RECOVERY	PER TON CRUDE ORE	\$9.26 = 48%
CONCENTRATE RECOVERY	" " " "	6.57 = 34%
TAILINGS LOSSES	" " " "	<u>3.50 = 18%</u>
TOTAL VALUE OF CRUDE ORE MINED - - -		\$19.35 = 100%
TOTAL MINING AND MILLING COSTS - - -		<u>12.32</u> PER TON
LESS TAILINGS LOSS		<u>7.01</u> PER TON
		<u>3.50</u>
NET PROFIT - - - - -		\$3.51 PER TON

NOTE: THE TAILINGS LOSS USED ABOVE IS AN ESTIMATE BASED ON THE STATEMENTS OF MEN WHO WORKED IN THE MILL, AND ON A NUMBER OF TAILINGS SAMPLES TAKEN BY THE WRITER IN 1909 AND 1910. THE TAILINGS SAMPLES AS TAKEN BY THE MILL MEN INCLUDED ONLY COARSE, SANDY MATERIALS, THE SLIMES WHICH CARRIED THE HIGHER VALUES BEING DECANTED. THE TAILINGS VARIED PARTIALLY WITH THE GRADE OF THE HEADS AND PARTIALLY WITH THE CONDITIONS OF THE BATTERY SCREENS, AMALGAN TRAPS AND TABLES. THE TAILINGS LOSS OFTEN RAN AS HIGH AS \$12.00 PER TON ON HEADS RUNNING \$40.00 PER TON, AND SELDOM RAN UNDER \$2.00 PER TON ON HEADS RUNNING \$9.00 TO \$12.00.

TABLE V

PRODUCTION RECORDS AND DATA FOR YEAR 1906

FROM REPORTS BY GEO. P. HARRINGTON, MANAGER, T. N. SCHLESINGER, E.M., AND MINE RECORDS IN POSSESSION OF MR. A. G. MOUTIER, HOLLYWOOD, CALIF.

PRODUCTION, COSTS AND NET PROFITS

GRAY EAGLE MINE TIGER GOLD COMPANY HARRINGTON, ARIZ.

MONTH	BULLION	CONCENTRATES	TOTAL	EXPENSES	PROFITS
MAY	10,886.36	9,011.02	19,897.38	17,214.29	2,683.09
JUNE	12,956.97	10,090.19	23,047.16	17,609.64	5,437.52
JULY	13,036.36	9,792.60	22,828.96	16,207.20	6,621.76
AUG.	13,333.55	10,099.00	23,432.55	16,140.88	7,291.67
SEPT.	12,116.73	8,846.16	20,962.89	16,392.23	4,570.66
OCT.	14,600.65	8,049.23	22,649.88	17,756.50	4,893.38
NOV.	13,412.57	8,194.29	21,606.86	17,362.25	4,244.61
DEC.	13,796.86	9,750.05	23,546.91	19,870.50	3,676.41
	<u>\$104,140.05</u>	<u>73,832.54</u>	<u>\$177,972.59</u>	<u>\$138,553.49</u>	<u>\$39,419.10</u>

AVERAGE PER MO.	BULLION	CONCENTRATES	TOTAL	EXPENSES	PROFITS
	13,017.50	\$9,229.07	\$22,246.57	\$17,319.20	\$4,927.37

NOTE: THE ABOVE RECORD IS FOR EIGHT (8) MONTHS OF 1906, WHILE THE MINE WAS OPERATED UNDER DIRECTION OF MR. T. N. SCHLESINGER, MINING ENGINEER.

STATEMENT FROM TIGER GOLD COMPANY OF HARRINGTON, ARIZONA, OF ORE MINED AND OUTPUT FROM SAME IN BULLION AND CONCENTRATES FOR THE YEAR 1906. (TAKEN FROM A LETTER FROM GEO. P. HARRINGTON, WITTEN TO FRANK M. MURPHY AT LONGON, ENGLAND, JUNE 26, 1907.)

TONS OF ORE FROM MINE - - - - - 16,858 TONS
 CONCENTRATES TO SMELTER - - - - - 1,415 TONS

TOTAL METALS FROM ABOVE ORE, BY MILL AND SMELTER RETURNS:

GOLD (FROM BULLION)	4,827.75 ozs.	GROSS VALUE	\$99,789.53
" (FROM CONCENTRATE)	3,829.19 ozs.	" "	79,149.36
			<u>178,938.89</u>
SILVER (FROM BULLION)	1,433.93 ozs.	" "	832.54
" (FROM CONCENTRATES)	8,336.35 ozs.	" "	11,876.06
COPPER FROM CONCENTRATES	40,119 LBS.	" "	6,419.04
IRON FROM CONCENTRATES	1,137,394 LBS.		

TOTAL VALUE (NOT INCLUDING IRON) - - - - - \$198,066.53

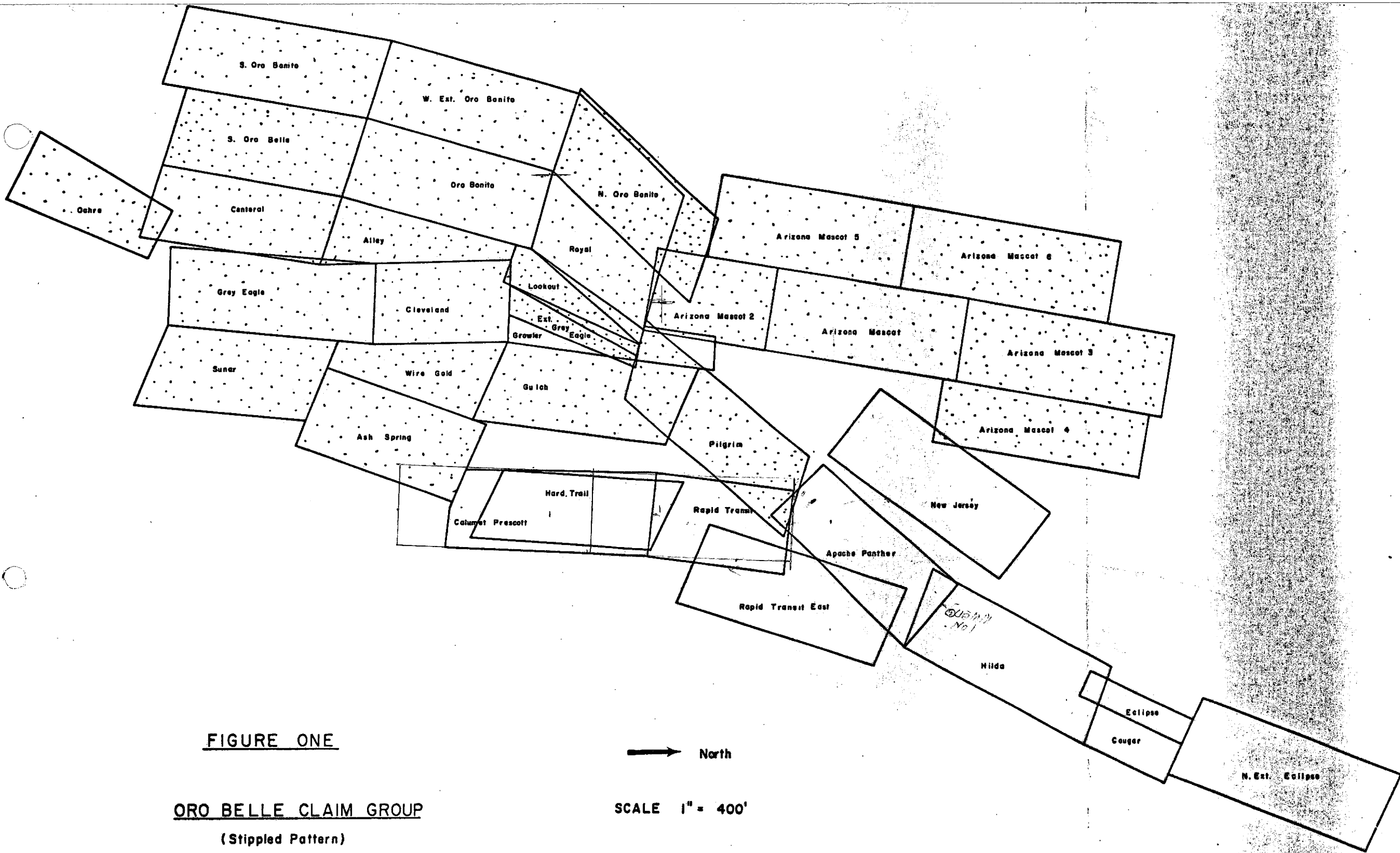
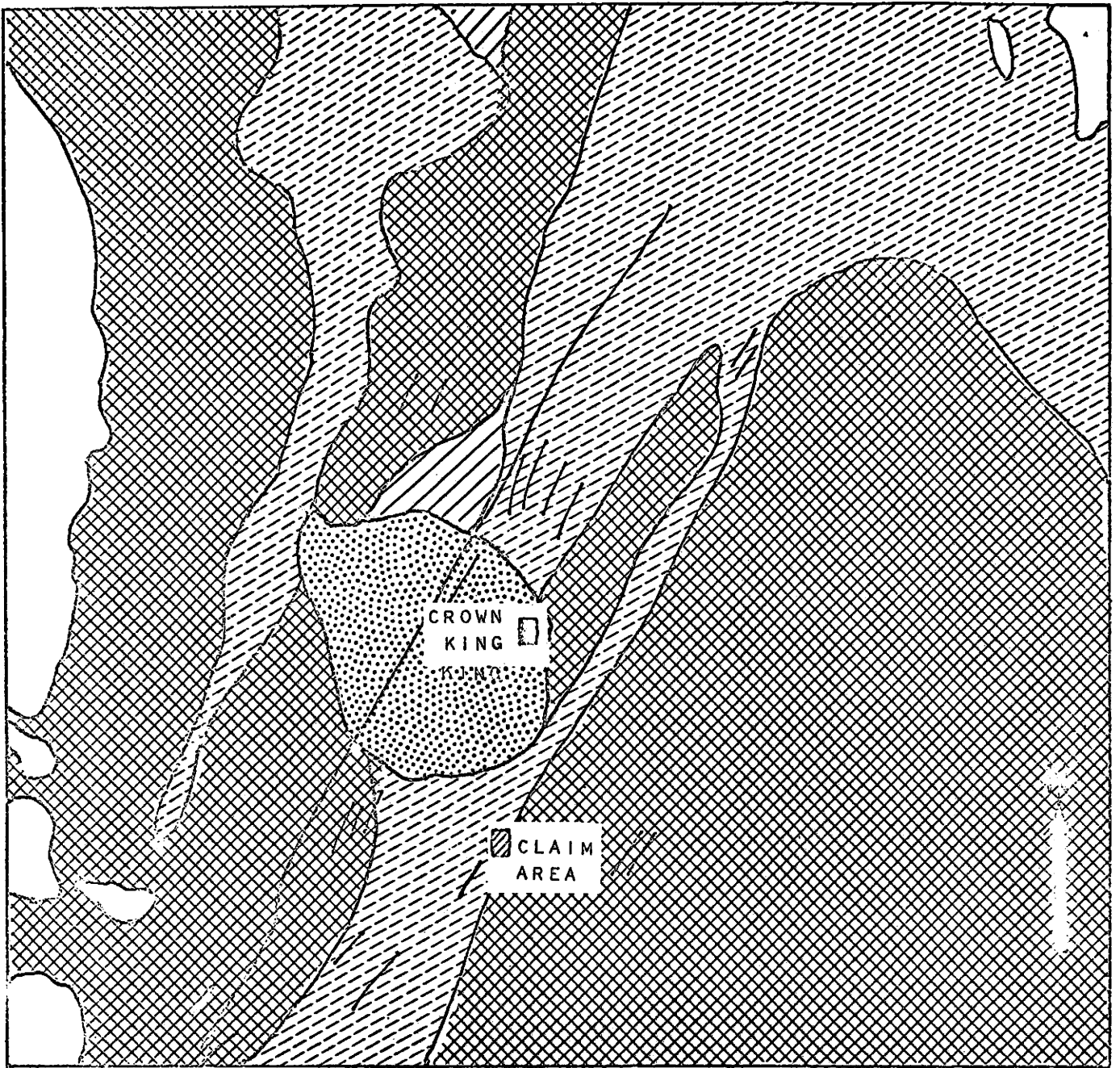







FIGURE ONE

ORO BELLE CLAIM GROUP
 (Stippled Pattern)

→ North

SCALE 1" = 400'



-  VOLCANIC FLOWS
-  BRADSHAW GRANITE
-  YAVAPAI SCHIST
-  GRANODIORITE
-  DIORITE
-  RHYOLITE DIKES

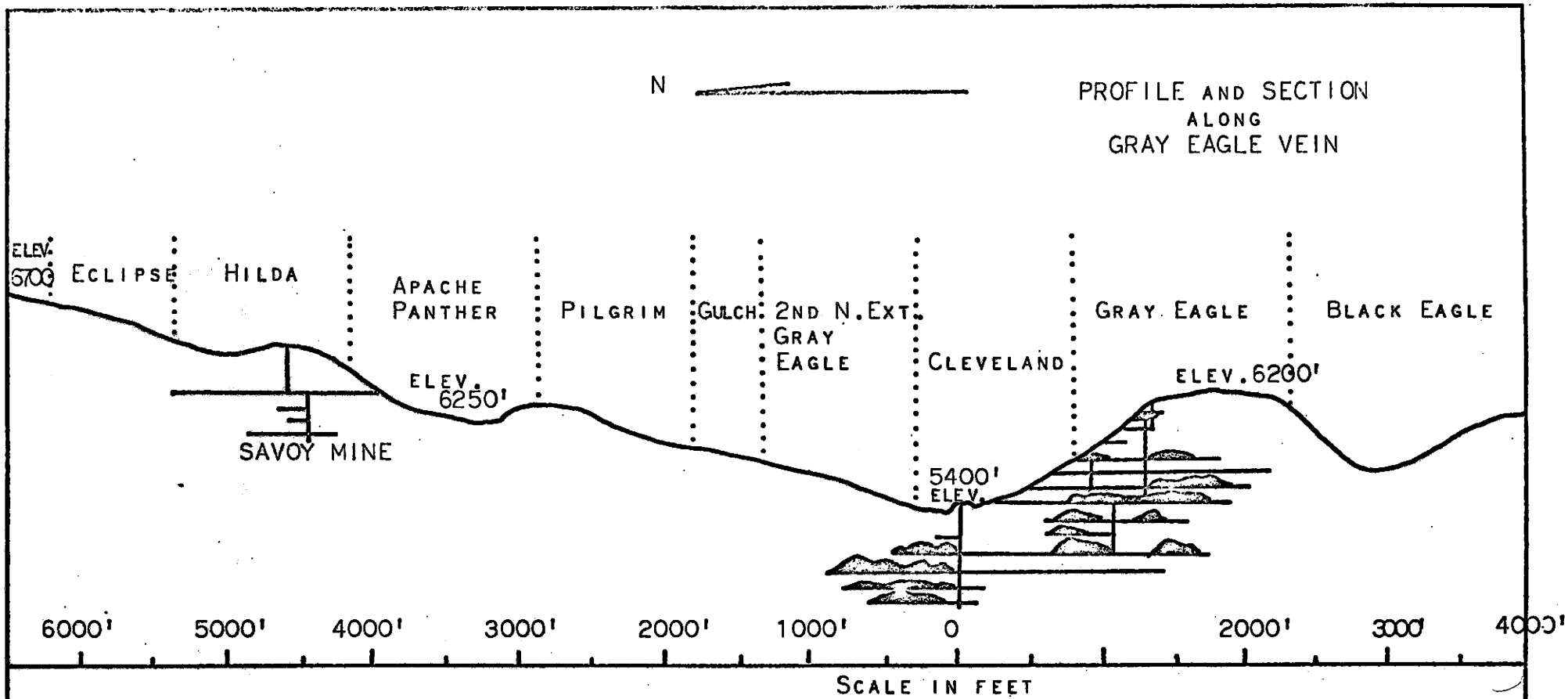
SCALE: 1"=2 MILES

FIGURE #2

GEOLOGIC MAP
ORO BELLE CLAIM AND
ADJACENT AREAS

DATE: 9-24-68

JOB NO.



AFTER NAETHING, 1934

FIGURE #3

PROFILE AND SECTION ALONG GRAY EAGLE VEIN	
DATE: 9-24-68	JOB NO.

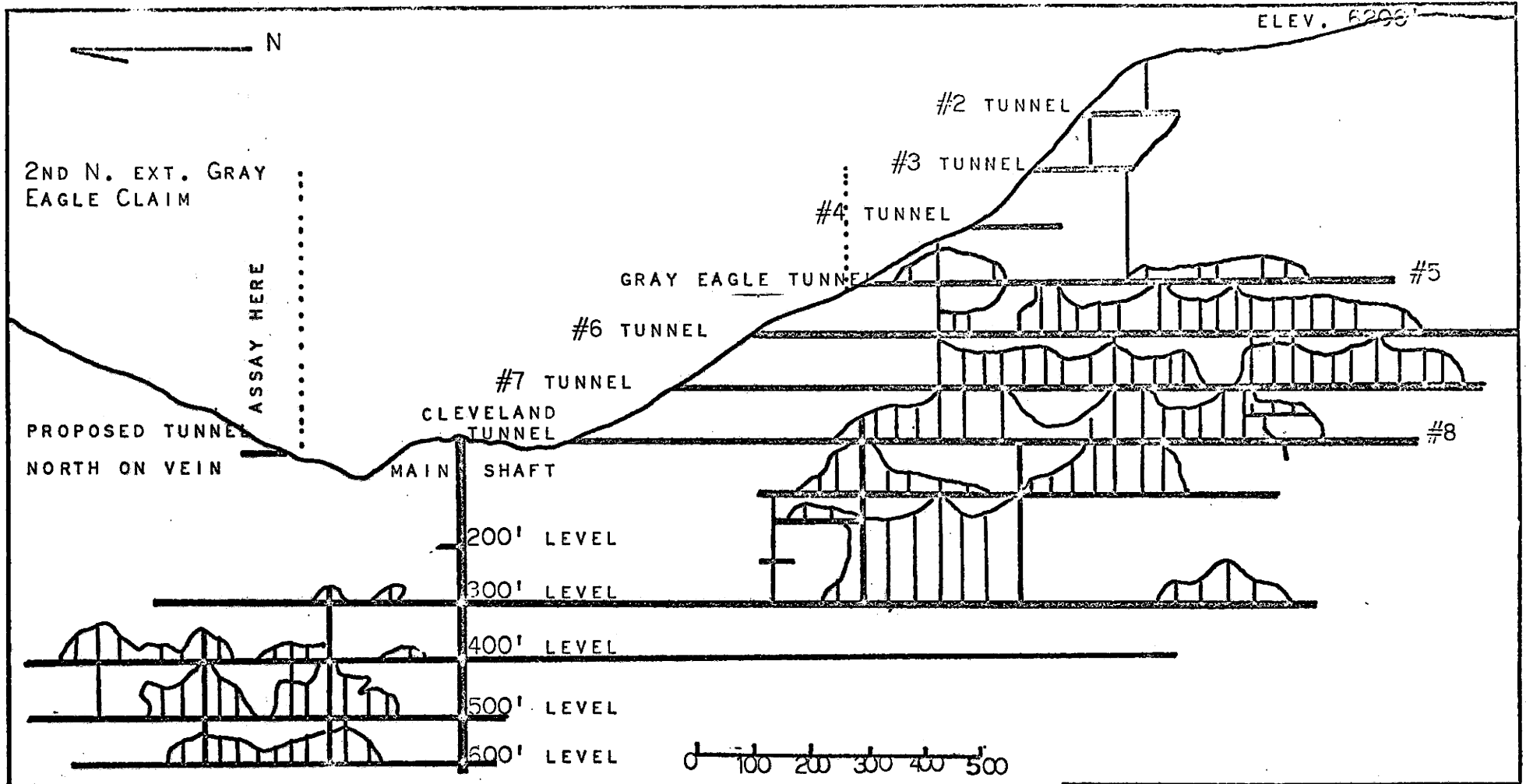


FIGURE #4

AFTER NAETHING, 1934

NORTH-SOUTH SECTION THRU GRAY EAGLE MINE ALONG STRIKE & DIP OF VEIN	
DATE: 9-24-68	JOB NO.

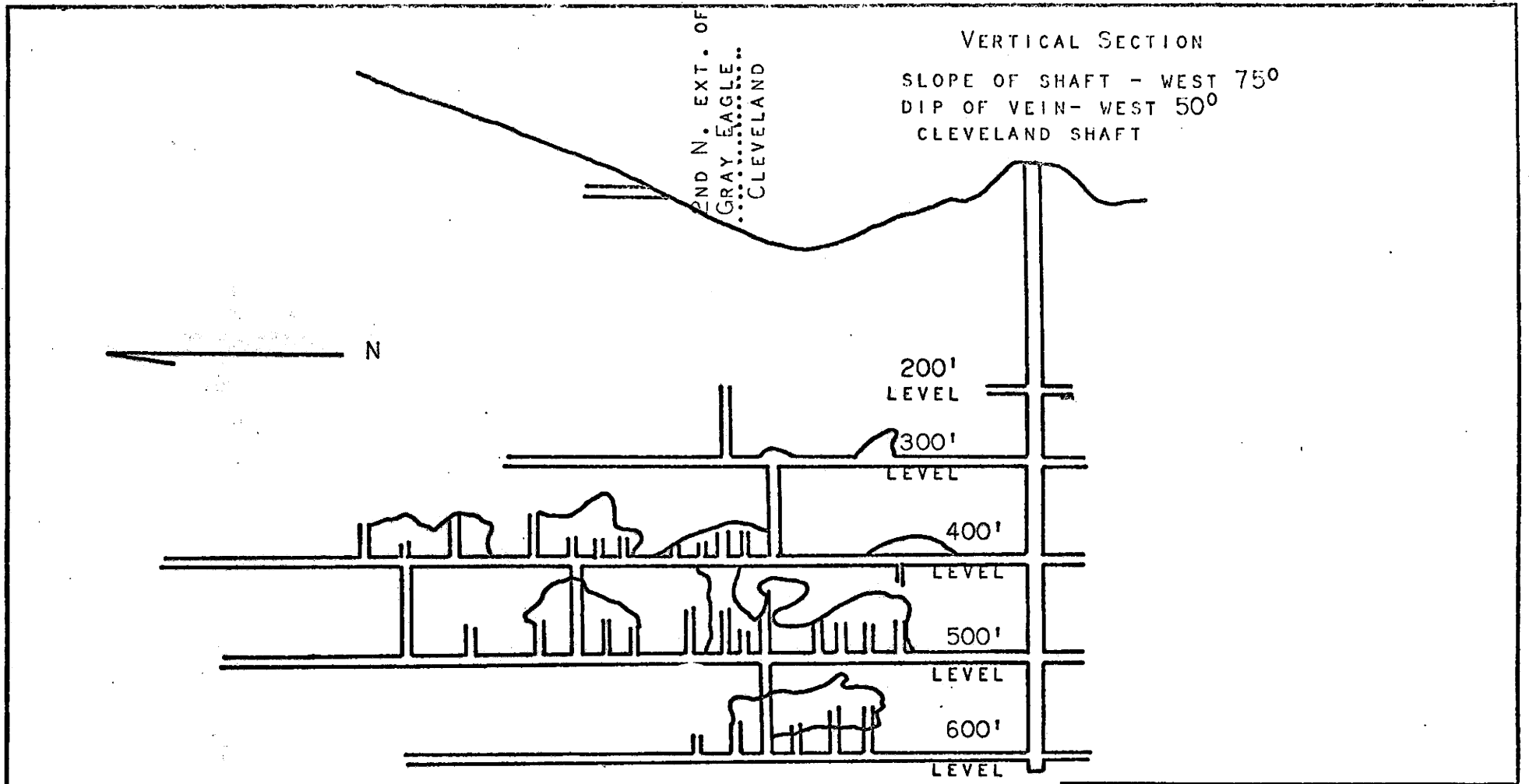


FIGURE #5

AFTER NAETHING, 1934

SECTION NORTH WORKINGS OF
TIGER GOLD COMPANY

DATE: 9-24-68

JOB NO.