



## **CONTACT INFORMATION**

Mining Records Curator  
Arizona Geological Survey  
1520 West Adams St.  
Phoenix, AZ 85007  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

## **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

## **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

## **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

PRINTED: 01/31/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MAGMA MINE

ALTERNATE NAMES:

QUEEN  
SILVER QUEEN  
MAGMA GROUP  
PATENTED CLAIMS MS 2930A  
PATENTED CLAIMS MS 350  
IRENE CLAIM  
PATENTED CLAIM MS 340  
PATENTED CLAIMS MS 3144  
PATENTED CLAIMS MS 4152  
HUB  
BROKEN HILL  
APEX  
MAGMA KING MINING CO. PROPERTY  
POMEROY  
ALTA GROUP  
AMALGAMATED AU, AG AND AU CO.

PINAL COUNTY MILS NUMBER: 98A

LOCATION: TOWNSHIP 1 S RANGE 12 E SECTION 35 QUARTER ALL  
LATITUDE: N 33DEG 18MIN 14SEC LONGITUDE: W 111DEG 05MIN 50SEC  
TOPO MAP NAME: SUPERIOR - 7.5 MIN

CURRENT STATUS: PRODUCER

COMMODITY:

COPPER SULFIDE  
COPPER OXIDE  
SILVER  
MANGANESE  
ZINC  
GOLD LODE  
CALCIUM LIMESTONE  
STONE DECORTIVE  
IRON PYRITE

BIBLIOGRAPHY:

RANSOME, F.L., USGS 540-D, P 7-19  
JONES, E.L., JR. & F.L. RANSOM, USGS 710-D,  
P 159, 162-163  
SHORT, M.N., ET.AL., AZBM BULL. 151, P 59-135  
BLM MINING DISTRICT SHEET 608  
ADMMR MAGMA MINE FILE  
ADMMR MAGMATIC COPPER MINES FILE, MAP  
STATE LEASE IN SEC. 4, 5, 8 & 9-T2S-R13E

CONTINUED ON NEXT PAGE

CONTINUATION OF MAGMA MINE

FARNHAM, L.L. ET.AL. USBI IC 7990, 1961,  
P. 124, 130-132

ELSIN, J.J. & E.S. HEINEMAN, USGS BULL. 140,  
1936, P. 99

BLM AMC FILE 60069

AMJ JULY 1922, P. 32-24

ADMMR U FILE

STATE LEASE IN SEC. 4,5,8 & 9-T2S-R13E

SHORT, M.N., & E. WILSON AZBM 145, SOME AZ  
ORE DEPOSITS 1938, P. 90-97

CLAIMS EXTEND INTO SEC. 23-27, 29, 34-36, AND  
INTO T2S-R12E, T1S-R13E AND T2S-R13E

GEO FILE - MIERITZ, RICHARD, 1970 (LIMESTONE)

AGS 1995 FALL FIELD TRIP

14 - MICROFILME MAPS

07/25/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: MAGMA MINE

ALTERNATE NAMES:

QUEEN  
SILVER QUEEN  
MAGMA GROUP  
PATENTED CLAIMS MS 2930A  
PATENTED CLAIMS MS 350  
IRENE CLAIM  
PATENTED CLAIM MS 340  
PATENTED CLAIMS MS 3144  
PATENTED CLAIMS MS 4152  
HUB  
BROKEN HILL  
APEX  
MAGMA KING MINING CO. PROPERTY  
POMEROY  
ALTA GROUP  
AMALGAMATED AU, AG AND AU CO.

PINAL COUNTY MILS NUMBER: 98A

LOCATION: TOWNSHIP 1 S RANGE 12 E SECTION 35 QUARTER ALL  
LATITUDE: N 33DEG 18MIN 14SEC LONGITUDE: W 111DEG 05MIN 50SEC  
TOPO MAP NAME: SUPERIOR - 7.5 MIN

CURRENT STATUS: PRODUCER

COMMODITY:

COPPER SULFIDE  
COPPER OXIDE  
SILVER  
MANGANESE  
ZINC  
GOLD LODE  
CALCIUM LIMESTONE  
STONE DECORTIVE

BIBLIOGRAPHY:

RANSOME, F.L., USGS 540-D, P 7-19  
JONES, E.L., JR. & F.L. RANSOM, USGS 710-D,  
P 159, 162-163  
SHORT, M.N., ET.AL., AZBM BULL. 151, P 59-135  
BLM MINING DISTRICT SHEET 608  
ADMMR MAGMA MINE FILE  
ADMMR MAGMATIC COPPER MINES FILE, MAP  
STATE LEASE IN SEC. 4, 5, 8 & 9-T2S-R13E

CONTINUED ON NEXT PAGE



CONTINUATION OF MAGMA MINE

FARNHAM, L.L. ET.AL. USBI IC 7990, 1961,  
P. 124, 130-132  
ELSIN, J.J. & E.S. HEINEMAN, USGS BULL. 140,  
1936, P. 99  
BLM AZ MINING CLAIMS LEAD FILE 60069  
AMJ JULY 1922, P. 32-24  
ADMMR U FILE  
STATE LEASE IN SEC. 4,5,8 & 9-T2S-R13E  
SHORT, M.N., & E. WILSON AZBM 145, SOME AZ  
ORE DEPOSITS 1938, P. 90-97  
CLAIMS EXTEND INTO SEC. 23-27, 29, 34-36, AND  
INTO T2S-R12E, T1S-R13E AND T2S-R13E  
GEO FILE - MIERITZ, RICHARD, 1970 (LIMESTONE)

14 - Magma Mine MAPS



Magma Mine  
T-1 S Blk Sec. 35

Superior 7.5

3750 / SW  
(PICKETPOST MOUNTAIN)

PHOENIX 62 MI.  
13 MI. TO U.S. 89

1 S.  
2 S.

36° 15' N

36° 15' N





MAGMA COPPER COMPANY

Jupiter Mine (file) Pima

E/MJ, January, 1962, p. 119, 120  
 " February, 1962, p. 17, 154, 161  
 " December, 1965, p. 104  
 " January, 1966, p. 76  
 " December, 1967, p. 14  
 " January, 1967, p. 136  
 " January, 1968, p. 124  
 " August, 1968, p. 13  
 " September, 1968, p. 199  
 " March, 1969, p. 196  
 " April, 1969, p. 146  
 " February, 1972, p.  
 " May, 1972, p. 110  
 " June, 1972, p. 263  
 " September, 1972, p. 88  
 " October, 1972, p. 147  
 " January, 1973, p. 64, 74  
 " February, 1973, p. 118, 129  
 " October, 1973, p. 156  
 " December, 1973, p. 100  
 " February, 1974, p. 410  
 " January, 1974, p. 128  
 " Aug., 1974, p. 45 (strike)  
 " July, 1974, p. 106 (personnel)  
 " June, 1974, p. 136 (personnel)  
 " January, 1975, p. 120 (personnel)

Metal Mining & Processing, May, 1964, p. 61  
 " " " August, 1964, p. 18  
 " " " April, 1965, p. 27

Mining Engineering, November, 1965, p. 70  
 " " January, 1973, p. 68  
 " " October, 1972, p. 126  
 " " November, 1972, p. 22, 62  
 " " February, 1973, p. 119  
 " " April, 1973, p. 45, 46  
 " " June, 1973, p. 23, 33-37  
 " " January, 1974, p. 47  
 " " February, 1974, p. 145  
 " " November, 1974, p. 56 (personnel)  
 " " December, 1974, p. 74 ("an old mine is given new  
 life with a modern hoisting plant")

Mining Engineering, Jan., 1975, p. 52  
 (personnel)  
 " " February, 1975, p. 96  
 (personnel)

MAGMA COPPER COMPANY

USGS Bull. 540, p. 143

San Manuel (file)  
Kalamazoo Project (file)

USGS P.P. 610, p. 44

IC 7990, p. 127-131-*132, 134, 129*  
IC 6168

IC 6319

IC 7300

ABM Bull. 127, p. 83-85

" " 151, p. 10, 54, 50, 158

" " 180, p. 121, 128, 129, 137, 138, 145, 147, 148, 320

Mining World, May, 1953, p. 91

" " December, 1958, p. 58

" " April, 1959, p. 40

" " May, 1962, p. 20

" " February, 1963, p. 32

" " June, 1963, p. 43

MAGMA COPPER COMPANY

Skilling's Mining Review, March, 1966, p. 15  
" " " April 22, 1966, p. 8  
" " " November 23, 1968, p. 17  
" " " June 18, 1966, p. 22  
" " " July, 30, 1966, p. 12  
" " " June 17, 1972, p. 16  
" " " May 13, 1972, p. 21  
" " " September 23, 1972, p. 25  
" " " September 30, 1972, p. 188  
" " " October 7, 1972, p. 12  
" " " October 14, 1972, p. 29  
" " " December 16, 1972, p. 23  
" " " December 30, 1972, p. 21  
" " " January 27, 1973, p. 15  
" " " March 17, 1973, p. 30  
" " " October 6, 1973, p. 22  
" " " October 20, 1973, p. 27  
" " " December 15, 1973, p. 19  
" " " January 19, 1974, p. 4  
" " " March 2, 1974, p. 1, 6  
" " " March 9, 1974, p. 27  
" " " April 16, 1974, p. 12  
" " " May 18, 1974, p. 26, 34

Economic Geology, November, 1966, p. 1244, 1245

World Mining, April, 1966, p. 36  
" " June, 1967, p. 38  
" " April, 1968, p. 61  
" " August, 1968, p. 52  
" " May, 1972, p. 56  
" " May, 1974, p. 77 (air poll. rules)

Arizona Review, October, 1967, p. 11

SMR, May 27, 1974, p.  
" June 15, 1974, p. 14, 8  
" July 20, 1974, p. 23 (doubling  
cu rod capacity)  
" Aug. 24, 1974, p. 4 (labor con-  
tract)  
" Nov. 16, 1974, p. 18 (personnel)  
" Oct. 26, 1974, p. 24 (copper  
price reduction)  
" September 28, 1974, p. 14  
(cu price decreased)  
" December 7, 1974, p. 18 (cu price  
reduced)  
" February 8, 1975, p. 21 (reduce  
cu price)  
" June 28, 1975, p. 4 (gen. info.  
on Superior)

# MAGMA COPPER COMPANY

Mining Congress Journal, January, 1968, p. 8  
 " " " April, 1968, p. 6  
 " " " September, 1968, p. 11  
 " " " June, 1969, p. 13 (merger)  
 " " " September, 1972, p. 20  
 " " " November, 1973, p. 20  
 " " " December, 1973, p. 15  
 " " " April, 1974, Pg. 13  
 " " " March, 1974, p. 17  
 " " " June, 1974, p. 17 (personnel)  
 " " " December, 1974, p. 16 (personnel)

Metals Week, June, 21, 1971, p. 16-26  
 " " October 1, 1973, p. 2  
 " " December 3, 1973, p. 2

Mining Magazine, June, 1972  
 " " November, 1973, p. 457, 453

Arizona Mining Journal, May, 1918, p. 24, 25  
 " " " December, 1917, p. 25  
 " " " April, 1918, p. 13, 14  
 " " " June, 1919, p. 61  
 " " " October, 1919, p. 22  
 " " " February, 1920, p. 44  
 " " " December 1, 1922, p. 37, 41  
 " " " December 15, 1922, p. 21

Metals Week, December 18, 1972, p. 9  
 " " March 18, 1974, p. 9  
 " " March 11, 1974, p. 9  
 " " February 25, 1974, p. 1  
 " " May 6, 1974, p. 1  
 " " June 10, 1974, p. 1  
 " " June 17, 1974, p. 3  
 " " June 24, 1974, p. 1  
 " " July 8, 1974, p. 1  
 " " July 15, 1974, p. 2 (strike)  
 " " July 22, 1974, p. 2 (strike)  
 " " p. 3 (suit against  
 Dept. of Commerce)  
 " " July 29, 1974, p. 1 (strike)  
 " " Aug. 19, 1974, p. 2 (strike)  
 " " Sept. 23, 1974, p. 1 (cu prices)  
 " " Nov. 4, 1974, p. 1,2 (cu prod.)

Mining Journal, October 26, 1973, p. 351  
 " " February 1, 1974, p. 72  
 " " August 10, 1973, p. 117  
 " " July 19, 1974, p. 51 (strike)  
 " " Aug. 16, 1974, p. 135 (strike)

MAGMA COPPER COMPANY

Contractor & Engineer, November, 1973, p. 34

Mining Annual Review, July, 1973, p. 19, 295  
" " " 1974, p. 305



Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA CARD 1

PINAL COUNTY

SUPERIOR AREA

PIIONEER DISTRICT

MAGMA MINE

*MMS 98A  
16 - AKAS  
Magma Mine file*

MM-331 Enargite & Quartz  
332 Coronardite (Blk, Brown)  
& Sauconite (Light Colored)  
333 Tennantite  
334 Bornite  
335 Chalcopyrite  
336 Chalcocite  
337 Sphalerite  
338 Sauconite  
339 Chalcopyrite  
340 Bornite  
341 Pyrolusite  
342 Enargite  
343 Chalcopyrite & Galena  
344 Galena  
345 Stromeayerite  
346 Pyrolusite  
347 Cuprite  
348 Diamond Drill Core  
349 Blister Copper & Ashtray  
4451 Bornite, Chalcopyrite, Chalcocite,  
Tennantite

ARIZONA

CARD 2

PINAL COUNTY

SUPERIOR AREA

PIIONEER DISTRICT

MAGMA MINE

*MMS 498A*

MM-2117 Stomeyerite  
7475 Stromeayerite  
4203 Bornite  
4204 Chalcocite  
4205 Enargite  
4206 Chalcopyrite  
4314 Native Copper on Hematite  
6643 Barite, pyrite, galena  
507 Barite on pyrite  
MM-K202 Bornite  
MM-K203 Enargite  
MM-K204 Chalcopyrite  
MM-K205 Chalcocite & bornite  
MM-K206 Chalcopyrite and bornite  
MM-K207 Bornite  
MM-K208 Sphalerite  
MM-K209 Chalcopyrite  
MM-K210 Galena & sphalerite  
MM-K211 Cuprite & chalcocite  
MM-K212 Bornite  
MM-K213 Bornite & chalcocite

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

CARD # 3

PINAL COUNTY

SUPERIOR AREA

PIONEER DISTRICT

MAGMA MINE

*MILS # 98A*

MM-K214 Enargite & Chalcopyrite  
MM-K215 Sphalerite  
MM-K216 Bornite & chalcocite  
MM-K217 Chalcopyrite & pyrite  
MM-K218 Galena  
MM-K219 Chalcopyrite  
MM-K220 Sphalerite & chalcopyrite  
MM-K221 Bornite  
MM-K222 Sphalerite, chalcopyrite  
MM-K223 Chalcopyrite  
MM-K224 Bornite & chalcopyrite  
MM-K225 Sphalerite & chalcopyrite  
MM-K226 Chalcocite, bornite  
MM-K227 Enargite, chalcopyrite  
MM-K228 Sphalerite & chalcopyrite  
MM-K229 Chalcocite 7 Bornite  
MM-K230 Bornite  
MM-K231 Enargite, chalcopyrite  
MM-K232 Bornite & chalcocite  
MM-K455 Barite & Gypsum  
MM L267 Calcite  
MM M 118 Chalcopyrite

USA ARIZONA PINAL CO.  
Superior

Magma mine CARD # 4

*MILS # 98A*

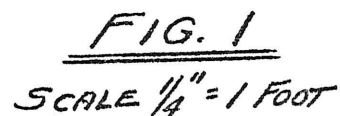
MM M 118 Chalcopyrite

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

PINAL  
USA ARIZONA, ~~GILA~~ CO MM M 183 Diopase  
Superior  
Magma mine MILS # 98A  
16-AKA  
MAGMA MINE (Gila)

7182550



SECTION ACROSS RAISE  
LOOKING UP

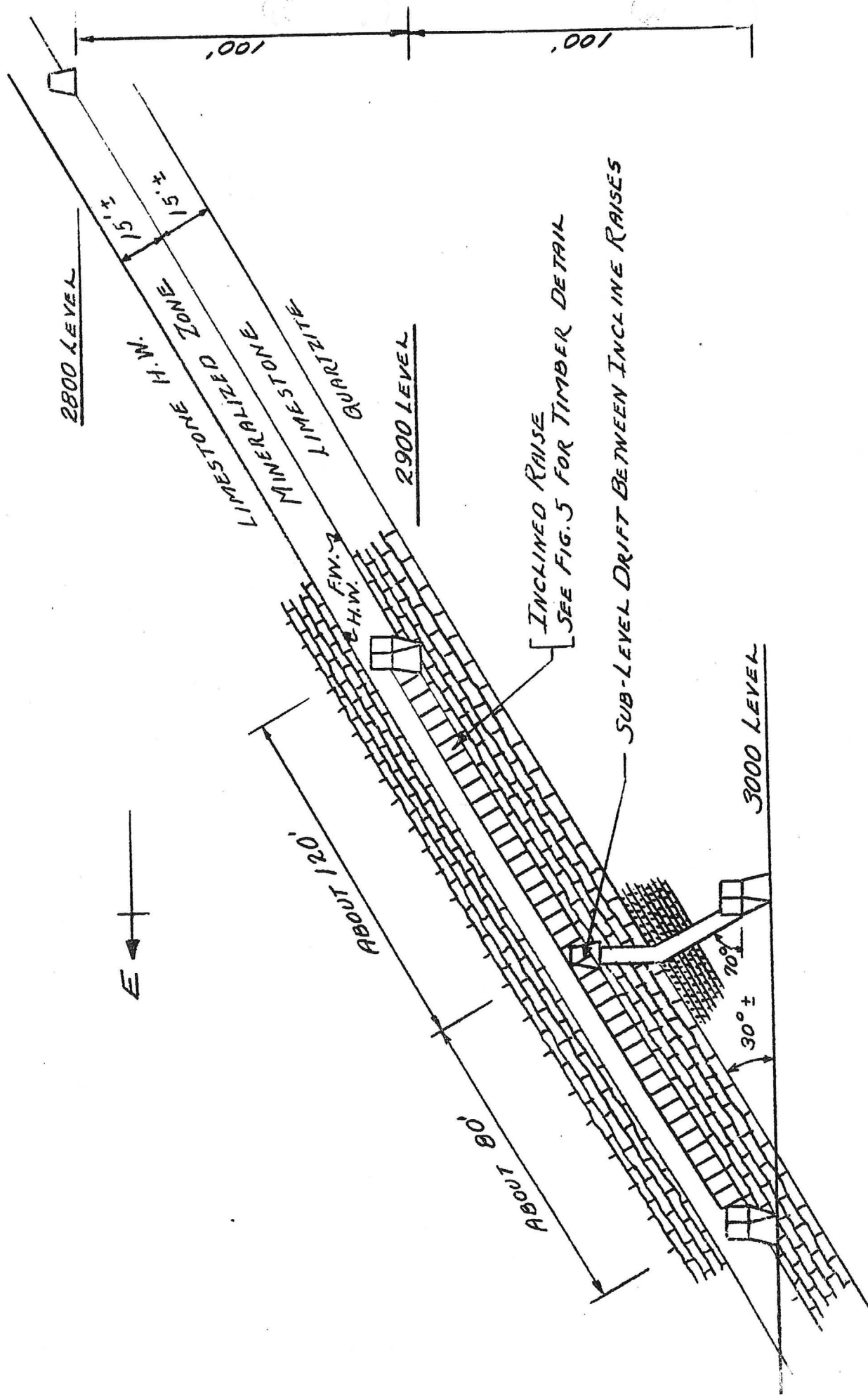


FIG. 2  
SCALE 1" = 40 FT.

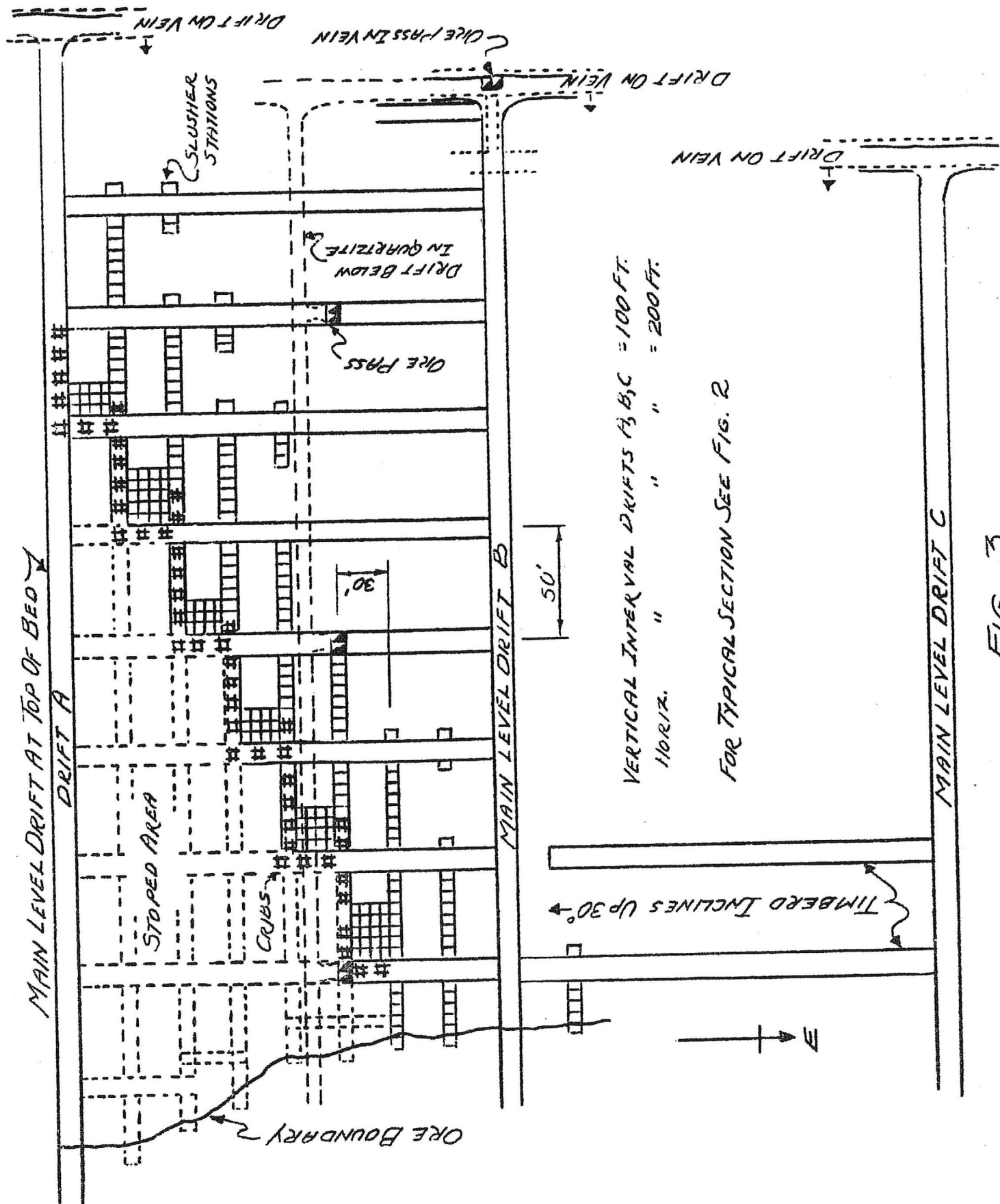
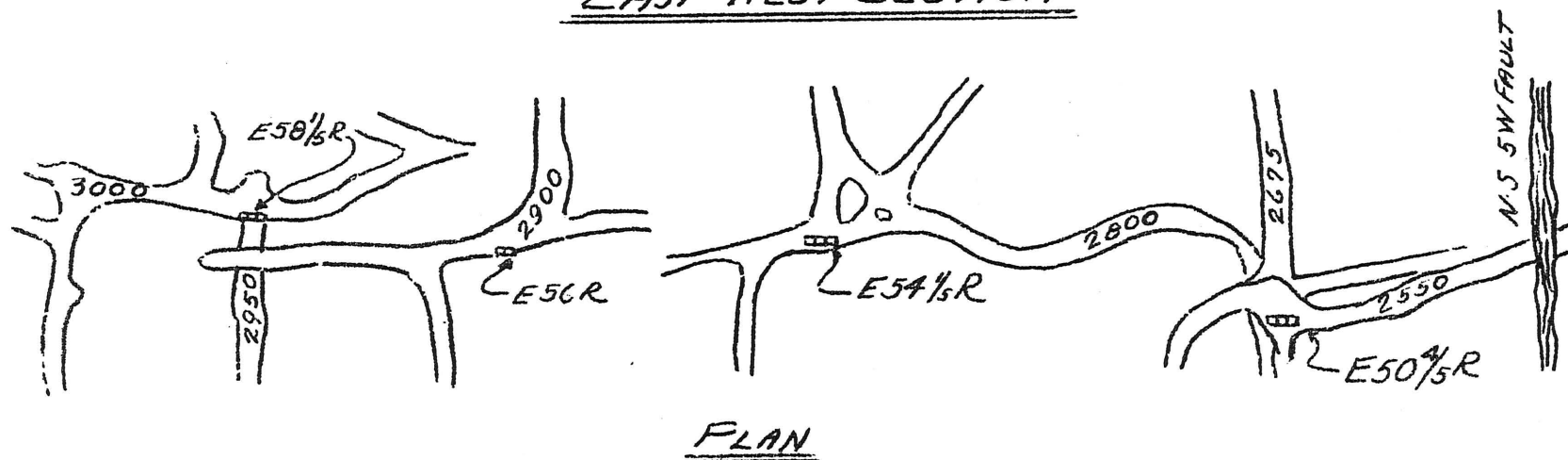
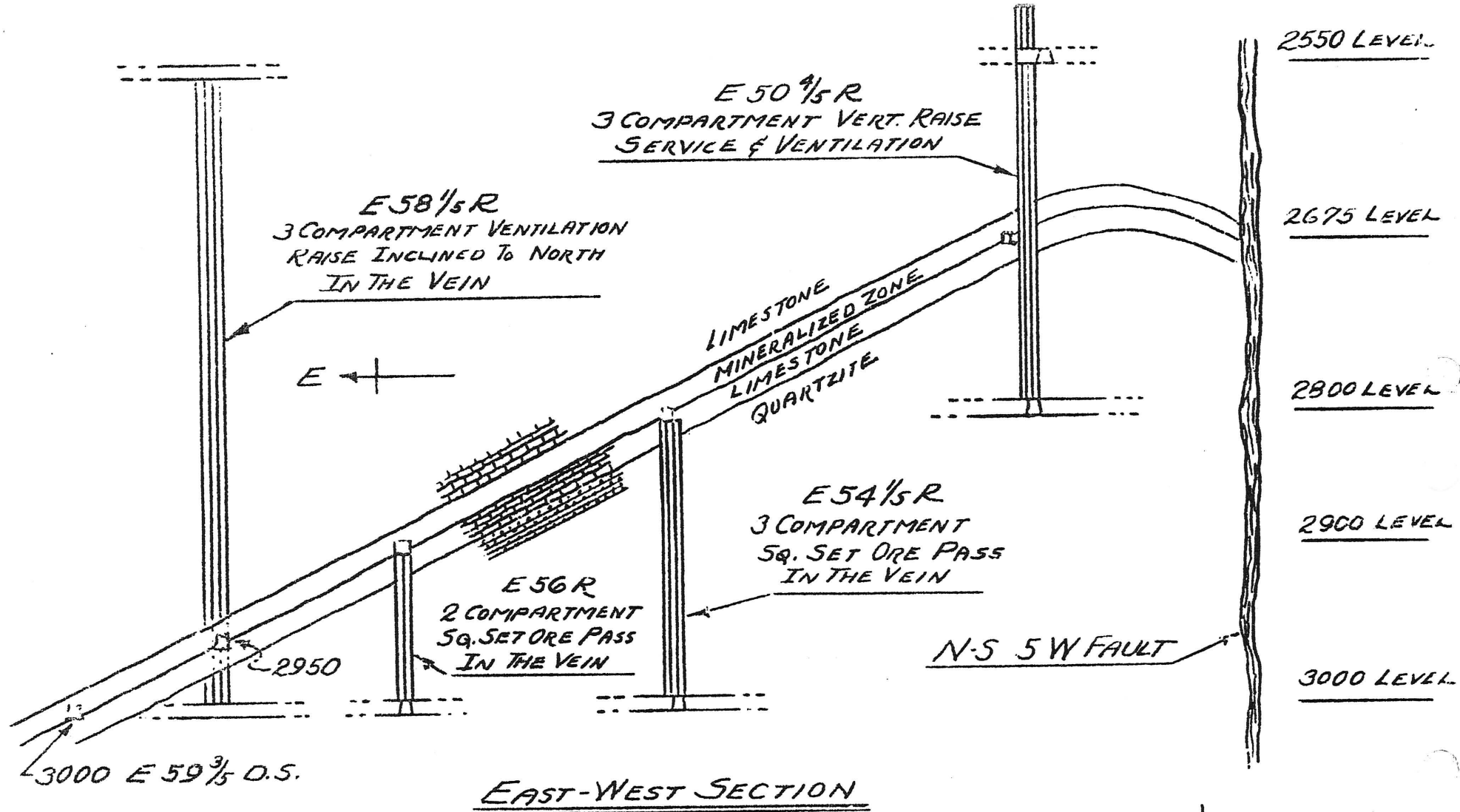
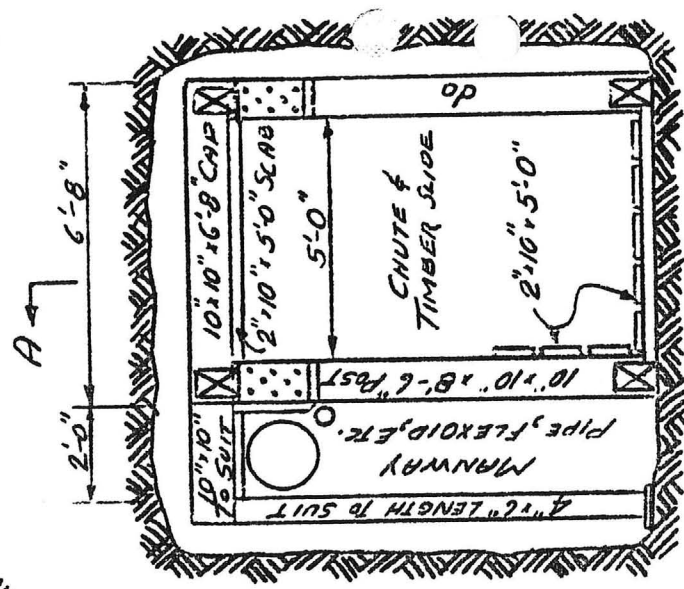
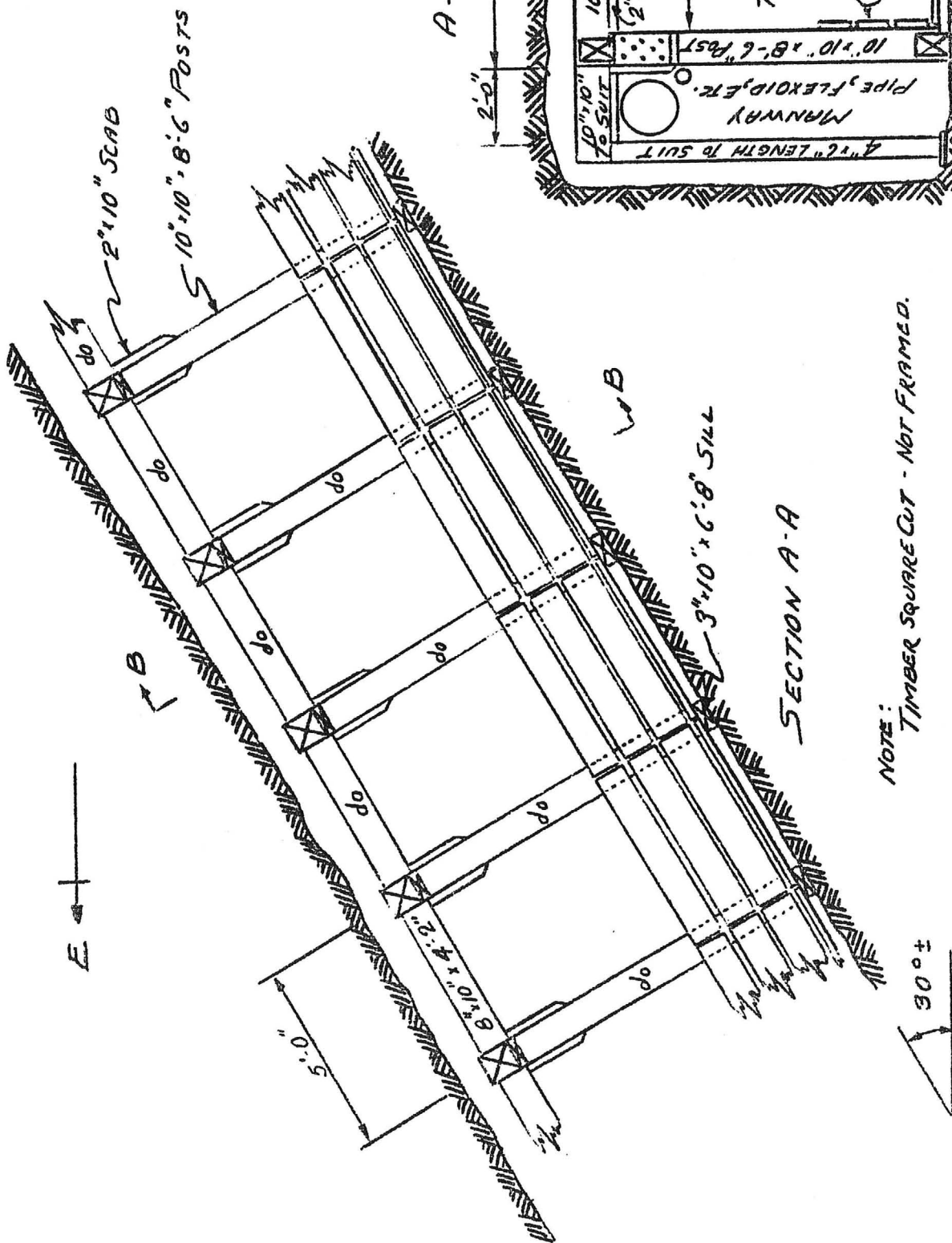


FIG. 3

PLAN OF 30° BED



**FIG. 4**  
SCALE 1"=100 FT.



SECTION A-A

SECTION B-B

NOTE: TIMBER SQUARE CUT - NOT FRAMED.

FIG. 5  
SCALE 1/4" = 1 FOOT



LIMESTONE H.W.



LIMESTONE F.W.

12"x12" 6'-10" CAP

2"x10" } 16'-0" FLOORING  
2"x12"

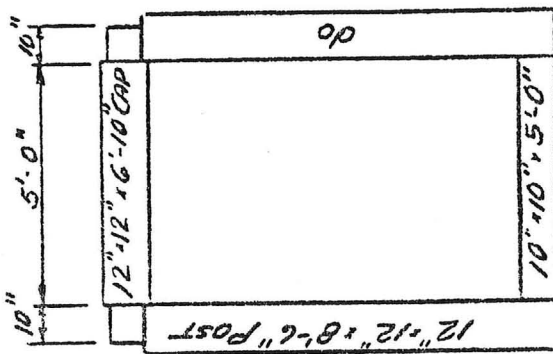


FIG. 6  
SCALE 1/4" = 1'00"



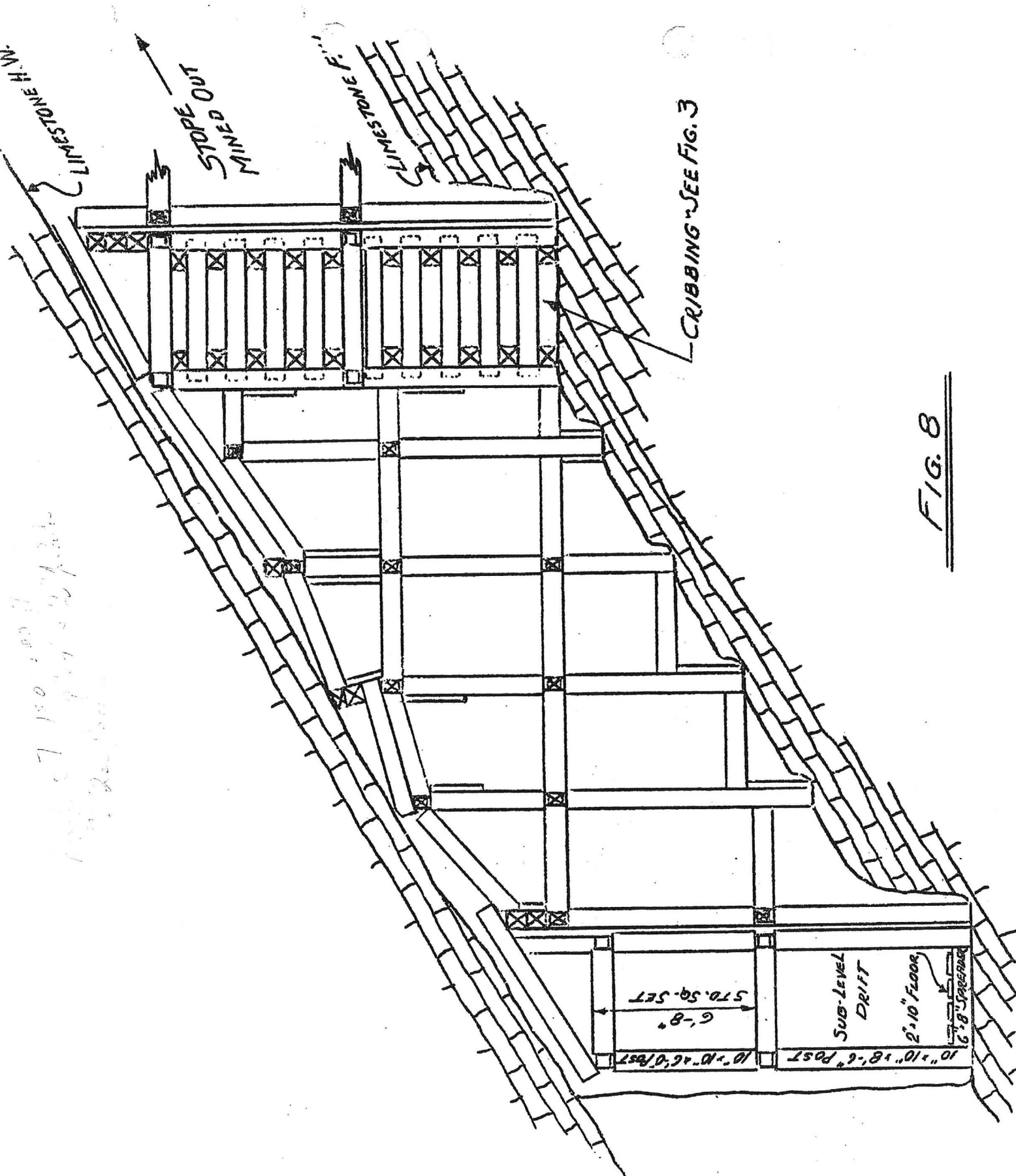


FIG. 8

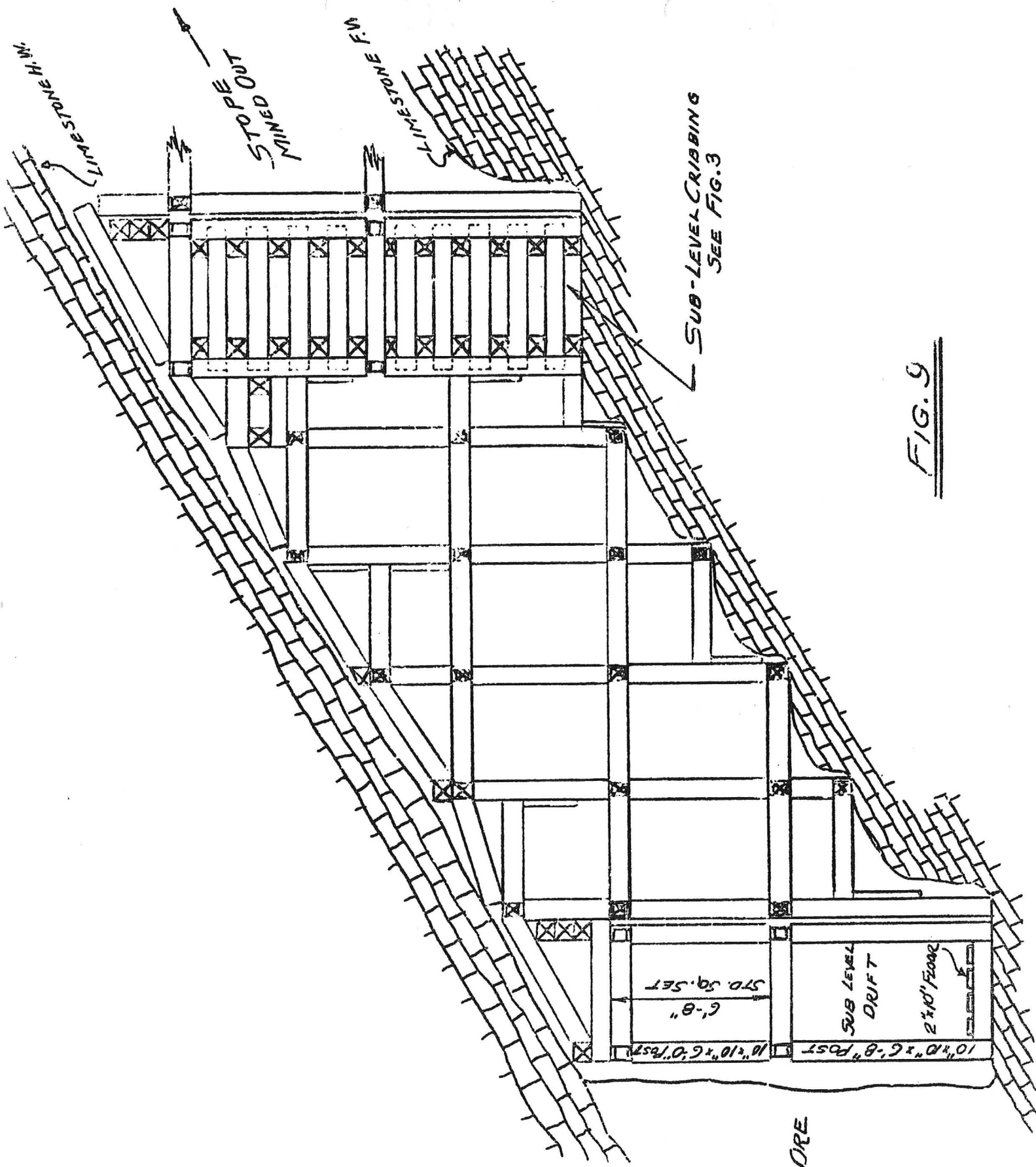


FIG. 9

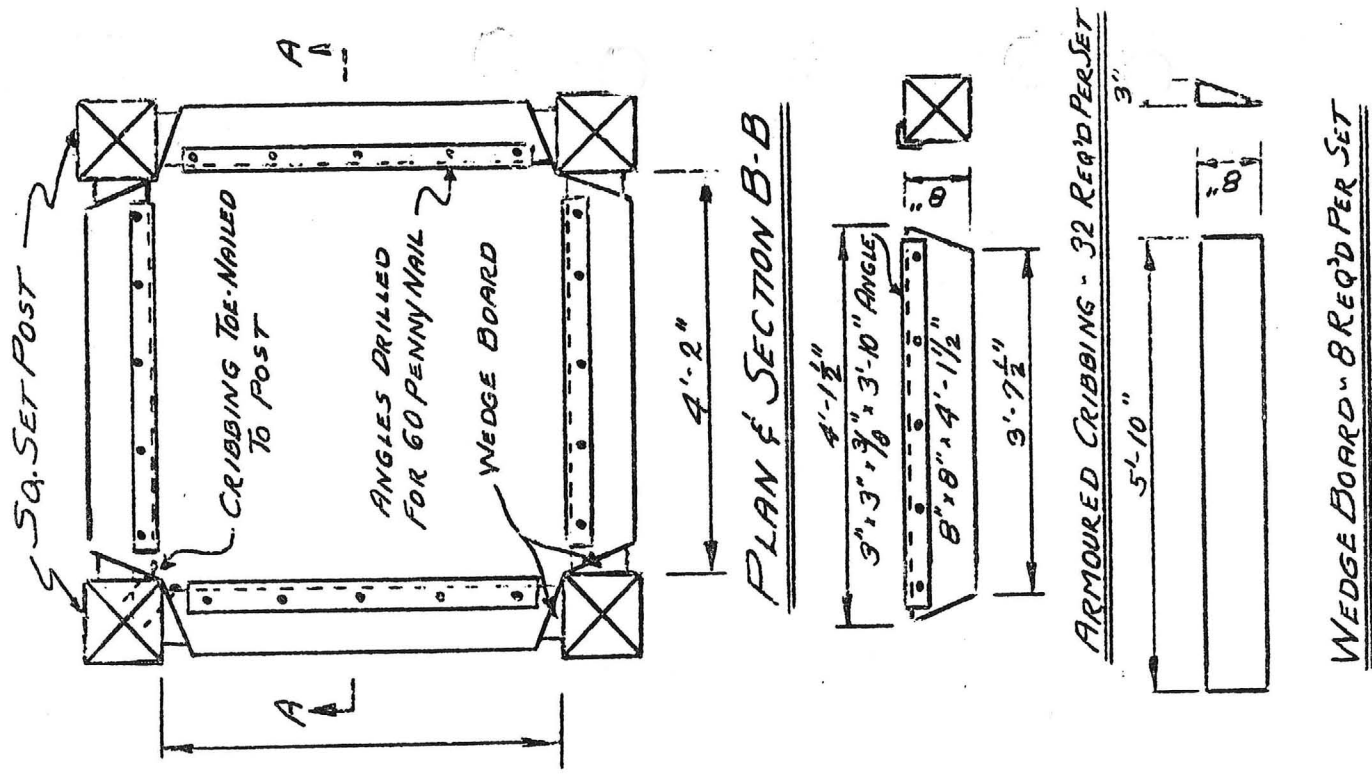
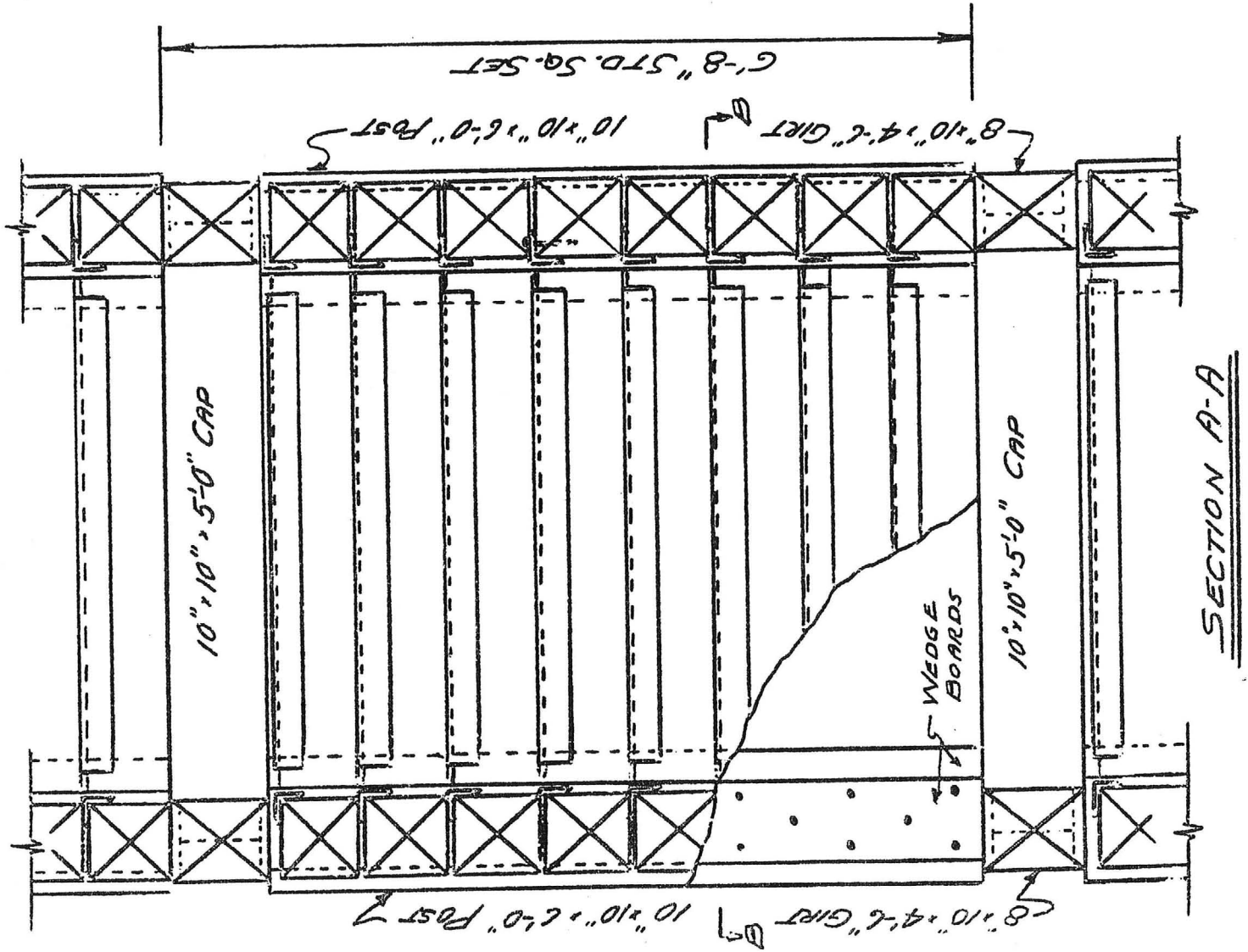


FIG. 10





## RESOLUTION COPPER SPONSORS INTERNATIONAL MIGRATORY BIRD DAY CELEBRATION

On May 8, 2004, more than 50 bird enthusiasts joined Resolution Copper, Arizona Game and Fish Department, Arizona Bird Conservation Initiative, Audubon Arizona, Boyce Thompson Arboretum and Partners in Flight to celebrate International Migratory Bird Day. Participants enjoyed a guided bird walk through the Arboretum grounds, an avian photography class and Noon Bird Field Guides 101. Over 30 species of birds were identified. Visitors also had a chance to see a hawk, peregrine falcon, burrowing owl and other native birds from the Arizona Game and Fish Department's Wildlife Center at Adobe Mountain. Event posters and calendars were sold with all proceeds benefiting the Wildlife Center. The event was an exciting day for the whole family to get out and enjoy nature. It was also a wonderful opportunity for Resolution Copper to learn more about the important avian habitat in and around its operations.

Since the event, Resolution Copper is working with the Arizona Game and Fish Department, Audubon Arizona and other experts to discuss opportunities to enhance the ecological values of the mining company's private lands. Resolution Copper looks forward to next year's celebration and to working together with these very important partners.



Bruno Hegner, vice president and general manager of Resolution Copper, along with IMBD event staff, makes friends with a vulture.



Participants learn the "how to" in avian photography.

## RESOLUTION COPPER, SUPERIOR STUDENTS ENJOY A NIGHT AT THE BALLPARK

On Friday, May 7, more than 50 students and staff from Superior Junior/Senior High School enjoyed a great night at Bank One Ballpark courtesy of Resolution Copper. Students and faculty from the school and Resolution Copper Company personnel watched the Arizona Diamondbacks take on the Montreal Expos. The tickets, donated by Resolution Copper, were given to academic achievers, student athletes, little leaguers and other top performers on and off the field. Though the Diamondbacks were defeated, the night out was a home run for everyone who attended.

SUMMER 2004

MAGNA (H) P.M.A.



Take me out to the ballgame: Superior students and Resolution Copper personnel at the Bank One Ballpark.

## RECLAMATION WORK UNDERWAY AT WEST PLANT SITE

As project manager, Resolution Copper has begun work on an extensive rehabilitation project on the West Plant Site. The hard work of company personnel and local contractors is showing tangible results.

The current restoration plan not only allows the company to be proactive in managing potential environmental issues on the West Plant Site, but also gives Resolution Copper an opportunity to support the town's revitalization efforts and enhance its aesthetic beauty. Enhancements include strengthening the water conveyance channels and impoundment spillways, upgrading the system's water treatment capabilities and generally improving the water-carrying capabilities of the entire system in the event of an unusually large storm.

Albo Guzman, Dalmolin Excavating and their crews are local contractors that have been and will continue to be an integral part of the reclamation efforts and long-term cleanup.

In the fall, Resolution Copper will begin work on its second initiative that involves closing open workings that remain from previous mining operations. This will be done in an environmentally responsible manner, allowing for the free movement of bats, snakes and other creatures, while providing a safer site.



Pre-construction view.



Stabilization wall construction in lower 3-4 channel.

Resolution Copper (H)  
Magma Heights (H) Pinal  
Contact

Jennifer Russo, 602.956.0223, ext. 15  
Corporate Communications Director



## NEWS RELEASE

### **Resolution Copper Transitions to Managers of Resolution Project; Commencement Celebration Set for May 18**

SUPERIOR, Ariz. — Resolution Copper announced today its official transition to manager of the Resolution project, a joint venture between Resolution Copper Company and BHP-Billiton. The company takes the helm after crossing the \$25 million mark.

"This project will have significant direct and indirect economic benefits for Superior throughout the operational life of the mine," said Bruno Hegner, vice president and general manager of Resolution Copper. "This transition will allow us to further our partnership with the residents of the Town of Superior and continue to identify mutually beneficial ways that we can work together on issues of concern."

Resolution Copper will continue further environmental and geotechnical evaluations of the property. During the remainder of 2004, the company will undertake two voluntary remediation projects at an investment of nearly \$2million dollars. One of those projects will involve closing adits, tunnels and other workings that remain from previous mining operations. The second initiative will focus on improvement of housekeeping and stormwater retention capabilities on the West Plant Site near town.

To commemorate the transition to manager of the Resolution project, the company will host an ice cream social on Tuesday, May 18, from 4:30 –6:30 p.m. to dedicate their new office at the West Plant Site. Guests will enjoy live entertainment from local favorite Sipie and His Big Band Sound. Treats will include delicious ice cream, plus face painting and balloon sculpting for the kids. There will be a special ribbon cutting ceremony at 5 p.m. The West Plant Site office is located at 102 Magma Heights, just east of town. There is not cost to attend this event.

- # # # -

## MAGMA MINE

KAP WR 7/31/87 cont; Mr. Flores reported that they have been selling sporadic lots of decorative stone to landscapers. Of particular interest has been white crystalline limestone or marble. Some of the material is a massive aggregate of 1/4" clear calcite crystals.

---

NJN WR 6/3/88: Pete Reblitz reported that the Magma Mine (file) Pinal County is currently reprocessing tailings to produce iron pyrite. This operation is employing about 30 people.

---



MAGMA COPPER COMPANY

SUPERIOR BRANCH

KAP WR 12/6/85: Magma Copper Company is trying to find another company to operate the Magma Mine at Superior. They feel a small company could probably operate the mine profitably and they don't want to shut off the pumps and flood the mine.

---

NJN WR 4/24/87: It was reported that Newmont (c) is still trying to sell the Magma Copper Mine (file) at Superior, Pinal County. They are anxious to sell it due to the apparent groundwater problem associated with the tailings. They would like the purchasers to assume liability for the groundwater problem.

---

KAP WR 7/31/87

Met with Frank Flores, Manager, Magma Mine (file), Pinal County regarding industrial mineral development at their property holdings in Superior. They have known deposits of limestone and clay, plus a stockpile of copper smelter slag and copper mill tailings containing pyrite and hematite in addition to an idle underground high grade copper-gold-silver mine which should probably have never been shut down. They also have a favorable geologic environment for the discovery of wollastonite and garnet deposits. A list of information to obtain was made and a return visit planned for the following week. Information on a variety of subjects was obtained from Mr. Flores:

Magma is planning to begin drilling the limestone deposit on the hill directly to the north of the mine surface plant. Drill pads have already been constructed. They are considering a 600 ton per day lime plant of which 300 tons could be used by Magma Copper Company. They have also contacted possible joint venture partners to develop the limestone.

The Magma mine continues to sell pyrite recovered from old mill tailings. The Magma mill is operated as needed to produce the pyrite. It is sold through a broker primarily to glass companies where it is used to manufacture golden brown glass. One customer for glass in bottles is Coors Brewery.

Magma is planning a pilot milling test to recover hematite from the Magma mine tailings. Hematite is used in making cement. Initial tests by cement companies have been favorable. The milling test is to determine if an acceptable product can be made on a full scale basis. It is planned that a hematite concentrate and a pyrite concentrate can both be produced during the operating period of the mill.

The Magma Mine property in Superior has a argentiferous manganese deposit containing 20,000 tons and assaying 12 tr.oz./ton silver and 25%-30% manganese. There is additionally many times more which runs 6 tr.oz./ton silver.

MAGMA COPPER COMPANY

On the north end of the Black Hills the Magma Copper Company has staked 38 limestone placer mining claims and are applying for patent. The limestone has been drilled extensively for metallurgical tests to ascertain if it meets the fluxing requirement at the San Manuel mine. G. Wainright has the contract for stripping the limestone, grinding it, and trucking it to the San Manuel smelter. REL WR 8/28/73

---

On to Magma mine at Superior and interview with Mr. Miller, General Manager. They are making full use of the new shaft and adit and are nearly up to capacity. FTJ WR 10/11/73

---

Mine visit - Magma mine office. GWI WR 6/24/76

---

Bob Lansing advised that Les Acton has terminated from Magma's Superior Division and is now working for Freeport Minerals in Indonesia. VBD WR 9/30/76

---

NJN WR 9/17/82: From Frank Harris, Public Relations Officer with Magma Copper Company the following information was received. The current operating level at the Superior Mine is the 4,682 foot level and the deepest workings there are at 4,873 feet. At San Manuel the 2,675 foot level is presently being mined while the shaft shared with the Kalamazoo goes to 4,200 feet.

---

The Narrow-Gage Scout of Casper, Wyoming in the issue of June 1983 reported that Magma Copper Company with a closed-down copper operation at the Superior Division, and curtailed mining at the San Manuel Division, is still a significant precious metals producer. Precious metal grades at the San Manuel mine are 0.002 ounces gold per ton and 0.029 ounces silver per ton. At the Superior mine the grades are 0.02 ounces gold and 0.06 ounces silver per ton.

---

NJN WR 9/27/85: Dan Maxwell (c) of New Mexico visited and reported Frank Florez (c) mine manager at Newmont's (Magma's) Superior Mine (f) along with a group of investors will try to lease or purchase the mine from Newmont and operate it.

---

MAGMA COPPER CO.

---

Active Mine List - May 1970 - 1125 men - C. R. Sundeen, Gen. Mgr.

Active Mine List - Oct. 1970 - 1125 men - C. R. Sundeen, Gen. Mgr.

---

The Magma Copper Co. continues development of their new orebody northeast of Superior. The new shaft was 2050 ft on March 17, 1971, and was progressing much faster since the water had been controlled. Although mine production has decreased somewhat, the smelter has operated at near capacity supplemented by some "cons" received from Inspiration Copper Co.  
GW QR 4-8-71

---

Mr. Sundeen of Magma Copper Co. said the new shaft was 2700 ft and that the long crosscut was being finished (a couple hundred ft of tail-room beyond the loading point). The Superior smelter will be closed in July, 1971. GW WR 6-21-71

---

Directory of Mining - August 1971 - 1200 men

---

The Magma Copper Mine of the Magma Copper Company was closed for about half the period due to the strike; however contract work on the new shaft and cross-cut continued. GW QR 9/71

---

Interview with Keith Stayley at Magmas' office in Superior. Some changes in operating personnel which are noted on active mine list. FTJ WR 6/15/72

---

Magma continued sinking their east shaft and also expanding and modernizing their crushing and concentrate plants for increased production. FTJ QR 3rd $\frac{1}{4}$  '72

---

Magma Copper at Superior continued development and exploration, besides mining ore. FTJ 4 $\frac{1}{4}$  '72

---

Active Mine List - October 1972 -- (1971 figures, Smelter capacity 670,000 T, Electrolytic Ref. Cap. 200,000 T, 14,975,910 T Ore, 83,328 T Cu San Manuel-----427,681 T. Ore, 17,804 T Cu --Superior Division)

---

To Superior and called on Magma Copper. Keith Staley in conference and Bob Skiba out of town, but nothing new to report. FTJ 12/14/72

---

To Superior, Magma mine office. Bob Skiba away from office and also Keith Staley. FTJ WR 2/15/73

---

Went to Superior Magma office and visited with Keith Staley and Bob Skiba. FTJ WR 6/15/73

---

Magma mine at Superior expects to have their new facilities - mine and mill - in full production by the end of September, 1973. FTJ Annual Report 6/28/73

---

## MAGMA COPPER CO.

Magma Copper Co. and Newmont continued their drilling at Copper Creek.

Magma Copper Co. San Manuel Division announced the purchase of the Kalamazoo orebody for \$27,000,000.

Phelps Dodge Corp. has acquired the approximate equivalent of 1000 claims south of Magma's Copper Creek exploration, on which much geophysical activity is evident.  
GWI QR 4-1968

---

Magma Copper Co. is planning to purchase the Kalamazoo copper properties of Quintana Minerals, Ltd. Kalamazoo, a Texas partnership, for \$27 million. The property, which adjacent to Magma's San Manuel property in Arizona, is believed to contain more than 500 million tons of ore averaging more than 0.7 percent copper. Size and grade of the orebody is similar, to San Manuel's. It lies about 2500 ft. below the surface, compared with present mining depths at San Manuel of 2075 ft. This addition to ore reserves should enable Magma to substantially increase San Manuel's mine capacity above the current 40,000 tpd. One plan under consideration would put the mining rate at 60,000 tpd.  
Mining Congress Journal April 1968 p. 6

---

Mine visit - Magma Copper Co.'s Copper Creek Project - one drill going. GWI WR 6-30-68

---

Mine visit of possible new shaft for Magma Copper Co. at the Potato Patch between Superior and Globe. GWI WR 7-13-68

---

Active Mine List May 1970 - 1125 men - C.R. Sundeen, Gen. Mgr.  
Active Mine List Oct. 1970 - 1125 men - C.R. Sundeen, Gen. Mgr.

---

The Magma Copper Co. continues development of their new orebody northeast of Superior. The new shaft was 2050 ft. on March 17, 1971 and was progressing much faster since the water had been controlled. Although mine production has decreased somewhat, the smelter has operated at near capacity supplemented by some "cons" received from Inspiration Copper Co. GW QR 4-8-71

---

Directory of Mining - August 1971 - 1,200 employees

---

The Magma mine of the Magma Copper Company continued production throughout the period and work progresses on sinking the new shaft, east of Superior; the long cross cut has been completed. GW QR 2/72

---

MAGMA COPPER CO.

Active Mine List Oct. 1969 - 1125 men - C. R. Sundeen, Gen. Mgr.

The Magma Copper Co. has announced that a large copper refinery will be built at San Manuel. After the new smelter addition is completed the Superior Smelter will be closed and Magma mine concentrates shipped to San Manuel. The new state highway from Benson to Mammoth will go by the mine company offices at San Manuel, as a result of this relocation, the hiring office will be moved to a new addition being built to the company offices. Shaft sinking of the two new shafts is being carried on at a rapid rate, at the end of this quarter the 3C shaft was below 2160' and the No. 5 shaft below 1520'. GWI QR 9-1969

---

Went to Magma office - had a short visit with Mr. Sundeen, who said tunnel work, etc. as expected. FTJ WR 2-20-70

---

Magma Copper Co. is continuing expansion work at the San Manuel mine. Another smelter stack has been started. Sinking of the two new shafts at the mine is continuing. GWI QR 2-27-70

---

Active Mine List May 1970 - 1125 men - C. R. Sundeen, Gen. Mgr.

Visited with Mr. Sundeen, Mgr. of Magma Copper Co. He says his mine production hasn't increased appreciably this year but the smelter thru-go is larger due to the custom concentrates. The cross-cut on which boring began last November is approximately 4000 ft. from the portal with 5000 ft. to go. The new shaft is about 800 ft. deep at this time and will, of course, be to the elevation of the cross-cut long before the cross-cut is finished. Considerable mechanical difficulties have been experienced with the boring machine. GW WR 6-19-70

---

At Superior Magma Copper Co. continues to operate at maximum capacity. The 9000 ft. cross-cut is about 45% completed; it is being bored 12- $\frac{1}{2}$  ft. in diameter. The shaft with which the cross-cut will connect lacks about 500 ft. of being to the necessary depth. GW QR 7-1-70

---

Mr. Mercer the owner of the Mercer Ranch reports that a fire destroyed the old headframe and shaft timbering at the Magma mine. GWI QR 6-30-70

---

Mr. Sundeen of Magma Copper Co. was in conference but he took a minute to say their new shaft was at 1150 ft. after having cut stations at the 800 and 1100 levels.

---

Active Mine List Oct. 1970 - 1125 men - C. R. Sundeen, Gen. Mgr.

Mr. Sundeen says the water problem in Magma's new shaft is under control now and they are cutting the 2,000' level station. GW WR 2-19-71

---

William Huthmacher said Magma turned his ore down because of high alumina and low silica. GW WR 3-29-71

---

MAGMA COPPER CO.

Mine visit to Magma Copper Co., Frank Hoagland, office manager - employment level would not be known for a few weeks. GWI WR 3-30-68

---

Interview with R.N. Webster - Geologist - Magma Copper Co., Superior

Production is now about 1400 tons per day on a 6 day operating basis. There are 1030 men employed, of which about 700 are underground workers.

They are pleased about the number of men returning to work. The only shortage is in mechanics. CLH Visit April 15, 1968

---

Active Mine List Nov. 1967 - 1100 men  
Active Mine List April 1968 - 1030 men

The reverberatory furnace at the Magma Copper Co. smelter in Superior has been completely rebuilt. The new materials required to make the repairs were under heat from March through March 21, shortly before production resumed at the end of the strike. Taken from Pay Dirt April 29, 1968

---

Mine visit - Possible site of new shaft for Magma Copper Co. at the Potato Patch between Superior and Globe. GWI WR 7-13-68

---

Active Mine List Oct. 1968 - 1030 men

Visited Magma office - clearing and preparing for tunnel work. FTJ WR 3-28-69

---

Active Mine List April 1969 - 1082 men - C. R. Sundeen, Gen. Mgr.

The Magma Copper Co. is continuing exploratory drilling for copper ore 15 miles east of its San Manuel Mine in Arizona. The property is in the Galiuro Mountains and drilling thus far has indicated some deep lying low grade copper bearing material. Taken from Skillings May 24, 1969

---

Magma is readying for new shaft east of present mine - road reaches site - clearing being made for new plant. JHS Conf. 7-18-69

---

Stockholders of Newmont Mining Corp. and Magma Copper Co. have approved a previously announced plan for Newmont to acquire the 19.4 percent minority interest in Magma through an exchange of stock valued at about \$73 million. Magma will then become a wholly-owned subsidiary of Newmont.

Taken from Mining Congress Journal June 1969 p. 13

---

Clearing the area and its access for the new Magma mine plant and shaft is being pushed. The Cementation Co. has the contract for the new 4800 ft. shaft. Preparatory work has been started on the new adit to intersect this shaft. This adit about 9000 feet long, will be bored after a preliminary 200 feet or so of conventional driving to accommodate the boring machine. JHS 4th QR 1968-69 Aug/69

---



MAGMA COPPER MINE, MILL & SMELTER

PINAL COUNTY  
PIONEER DIST.

Conference with Wm. Webster, Geologist.

Mr. Webster reported that no further discoveries had been made in the replacement area since those that were announced in the 1962 annual report. However, the development of those bodies is progressing with satisfactory results.

Memo - LAS - 3-25-64

---

Conference with Wm. Webster, Chief Geologist and G. L. Augustadt, Gen. Mgr. 10/21/64.

The new stoping method for the East orebodies (north of main vein) (footwall replacement bodies in Martin Limestone), is showing some improvement, although it is still costly. The principal ore bodies range from 19 to 60 feet thick and dip 30 deg. The low angle of dip causes all ore to be removed by slusher since it will not flow on less than a 37-40 degree slope. The stopes are gobbled with wet tailings. The bodies that are 20 feet, or less, in thickness permit the use of stulls to hold the ground until it is gobbled. Those over 20 feet are now, in some cases, being top-sliced, stopes and affiliated raises (usually inclined) are lagged and lined with burlap to hold the wet tailings, where they must be maintained. The width and height of stope sections in the different sized ore bodies vary according to the character of the ore and its area and thickness. The ore is enclosed as sulphides in a fractured specularite to red hematite gangue that is pre-sulphide. The average grade of the ore is less than 5 percent copper (4.74 percent in 1963) and contains appreciable gold and silver (0.029 oz Au and 1.03 ounces silver, to the ton, 1963). One of the problems seems to be due to a considerable lag of time while the ore face is cleared of ore in order to begin drilling the next round. This is, in part, being overcome by the developing of more producing places and the fact that additional ore areas are being developed. Nevertheless, the development cost of such ore bodies is relatively high. The wet tailings seem to harden with settling, sufficiently, against a solid rock face, to permit mining of the rock up to the gob without it being necessary to use burlap with the lagging.

MEMO LAS 10/21/64

---

Conference with Bernard Van Voorhis, Chief Engineer 2/17/65.

Mr. Van Voorhis said that the Superior Division was now breaking even this year. The labor force has now become better acquainted with the mining methods used in the East ore bodies and technical procedures have also been improved. However, unless an appreciable profit can soon be realized it may be necessary to shut down. As has been the case for the past two years, reserves are just being used up. Due to the dip of the ore bodies away from the main access shaft, the haulage distances are bound to increase. Much thought has recently been given to the possibility of sinking another haulage shaft in the footwall area, but there are serious objections to this even though it would eliminate congestion and shorten the haulage distances. The cost of such a shaft would be large. The grade of the ore is good at present.

MEMO LAS 2/17/65

On April 30, 1962, San Manuel Copper Corporation, wholly-owned subsidiary of Magma Copper Company, transferred all its property and assets to Magma Copper Company and was dissolved as a separate corporation. Magma assumed all debts and liabilities of the subsidiary, and is continuing its business and operations as the Magma Copper Company, San Manuel Division.

Taken from MINING WORLD, July, 1962, p 43

---

MEMO

MAGMA COPPER MINE, MILL & SMELTER

PINAL COUNTY  
PIONEER DIST.

Conferences were held with Van Voorhis, Augustadt, and Webster. Nothing, other than routine operations, is going on. 1100 men are employed in the Mine, Mill and Smelter. A conference with Van Voorhis relative to the creation of a mining method to fit a particular situation in the footwall areas was discussed. Magma is buying part of their flux from Guzman and Schwartz who are operating the Northstar Mine. They supplement this with silicious material from the Magma Mine.

MEMO-LEWIS A. SMITH - 9-20-62.

Rumors had been floating around Superior that Magma was planning to drill part of their newly acquired Bellmont Mine property. Wilson said no plans for this mine had been formulated. He also stated that considerable development work, on the new room and pillar system in the footwall replacement bodies, was well under way. These orebodies pitch to the southwest at 35 to 40 degrees and this means that the stope sections will be staggered vertically. New developments, as to reserves, are satisfactory.

MEMO-Lewis A. Smith, Interview with Wm. Webster, at Superior-11-21-62.



MEMO

MAGMA COPPER MINE  
PIONEER DIST., PINAL COUNTY

9-21-61  
Lewis A. Smith

Interview with Bill Webster and Van Voorhis reported that Magma was having troubles with the Forest Service over some fringe claims. It appears that possible ore may be quite deep and more than likely will be lenticular. Drilling would be costly and somewhat a "needle in a haystack" proposition. The underground working will be some time in reaching the area. Webster said some surface indications were good although not showing appreciable metallic content. The whole matter is being referred to Washington officials.

MAGMA COPPER MINE

PIONEER DIST.

PINAL COUNTY

President & General Manager  
Mr. Wesley P. Goss of Magma reported that the main bulkheads were now in and that cracks around the old stope area were yet to be gunited. He is hopeful that the fire area would finally be sealed off in two or three weeks. Fortunately the fire is in an area which previously had been stoped out. The fire had luckily not reached the sulphide areas and had affected very little ore. Bert Steele said it had been rough for a while. Brief conferences with Wm. Webster and Van Voorhis were held. Webster had examined the Iberrian Claims and turned them down. He verified what Charles Iberri had reported earlier, as to occurrence of the veins and ore.

MEMO - LEWIS A. SMITH - 1-23-62

---

1,070 men working, 2-1962 - Garvin L. Augustadt, Gen. Mgr., Magma Copper Co.

---

Date Printed: 11/07/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: Project office at Superior

Company: BHP Copper

Address:

City, State ZIP: Superior, Arizona

Phone: 520-689-2444

MINE: Magma Mine

ADMMR Mine File: Magma Mine

County: Pinal

AzMILS Number: 98A

SUMMARY

The Magma Mine at Superior was contacted as to current status as it was rumored to have 100+ workers underground. The mine is not active or in production, but the pumps are being operated and a six man crew is underground one shift per day to maintain the pumps and keep the workings in a condition to show possible buyers. A surface crew is continuing exploration and drilling from the surface. A total of 26 people are at the property. It was emphasized that mine was neither in operation, a division of BHP, or working.

Ken A. Phillips, Chief Engineer      Date: November 7, 1997

te Printed: 02/23/94

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

Information from: Debbie

Company: American Reclamation  
Address: 2408 Phoenix Avenue  
City, State ZIP: Kingman, Arizona 86401  
Phone: 565-2595

MINE: Mineral Park

ADMMR Mine File: Mineral Park  
County: Mohave  
AzMILS Number: 106A

SUMMARY

Debbie at American Reclamation, 2408 Phoenix Avenue, Kingman, Arizona 86401, phone 565-2595 reported her company is removing the mill at Cyprus-Ammax's Mineral Park Mine.

Ken A. Phillips, Chief Engineer      Date: February 23, 1994

## ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Mine file: MAGMA
2. Mine name if different from above:
3. County: Pinal
4. Information from: Peter Reblitz

Company: Empire Lift

Address: 119 W. Iron Ave.

Mesa, AZ

Phone: 898-4500

5. Summary of information received, comments, etc.:

Mr. Reblitz reports that during a recent visit to the property Magma's Joe Clark reports they have been operating up to 4 days per week reprocessing tailings for various specialty markets. These include glass making, abrasives, and pyrite feed for lead and tin smelters.

Date: October 24, 1988

Nyal J. Niemuth, Mining Engineer

Magma Copper Company  
Page 2

cc: (cont'd)

U.S. Fish and Wildlife Service, Ecological Services  
AZ Game & Fish Dept.  
- AZ Dept. Water Resources  
AZ Dept. of Commerce  
Central AZ Assn. of Govs.  
Pinal County Health Dept.  
State Land Dept.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine MAGMA COPPER CO.

Date February 23, 1967

District PIONEER DISTRICT

Engineer Lewis A. Smith

Subject: Visit and Conference with Wm. Webster, Chief Geologist, and his assistant.

Webster said that exploration drilling in the new Escabrosa ore area was proceeding at a rapid rate and the zone is developing well. Other holes showed an interesting area in the overlying Naco Formation, and one hole penetrated a loose conglomerate that lies over Naco. It now seems probable that the Naco Formation and the overlying conglomerate, in part, may be prospectable. The conglomerate shows fragments of Balsa Quartzsite and two or more types of limestone.

Webster and I wondered if this might be the lower part of the White tail conglomerate, the age of which has not been determined definitely. The White tail is mineralized at Copper Butte, South of Ray, and there is no known reason why it could not here. The mineralization was strongly pyritic but some bornite and chalcopyrite are present.

Superior Magma, due mainly to the increased price of copper, is doing better although the copper heads are seldom more than 5%. 1966 was on the whole, a good year. A new method of gobbing so far has worked well, but it will better be evaluated with more time. The main vein is idle for now. Employment is 1110 people.

---

Visit and Conference with Russell Webster, Chief Geologist. -

Mr. Webster stated that the Escabrosa Limestone replacement bodies had been penetrated by several diamond drill holes. This ore lies between the 2800 and 3600 levels and, so far, within these elevations 3,500,000 tons of 6 percent copper ore is indicated. A cross cut was driven early in 1967 and is now being used to drill below the 3600 level where ore of unknown extent is believed to continue downward. Development drifting has not yet reach this orebody.

The last quarter was marginal in production ore grades and little or no profit appears to have been made.

MEMO LAS 6/21/67

---

Mr. C. R. Sundeen, General Manager, informed me that they are shut down indefinitely pending settlement of the strike in the copper industry. Their normal complement of employees is about 1100, which includes the hospital and railway. The railway now runs two days a week, principally to serve the two perlite producers who ship their product over the Magma Railway.

Mr. Sundeen refused to hazard a guess as to the duration of the strike, except that he fears it may continue for some considerable time yet.

Robt F. Playter

10/18/67

---



DEPARTMENT OF MINERAL RESOURCES  
Mineral Building, Fairgrounds  
Phoenix, Arizona

1. Information from: Hugh Steele Supt. Exploration & visit  
Box M. San Manuel Arizona 85631  
Address: \_\_\_\_\_
2. Mine: Copper Creek project 3. No. of Claims - Patented ?  
Unpatented ?
4. Location: Copper Creek includes Childs Aldwinkel, Copper Prince & Others
5. Sec 11 Tp 8S Range 18E 6. Mining District Copper Creek
7. Owner: Magma Copper Co. or Newmont
8. Address: Drawer "M" San Manuel 85631
9. Operating Co.: Same
10. Address: Same
11. President: \_\_\_\_\_ 12. Gen. Mgr.: \_\_\_\_\_
13. Principal Metals \_\_\_\_\_ 14. No. Employed \_\_\_\_\_
15. Mill, Type & Capacity: \_\_\_\_\_
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☒  
(d) Production ☐ (e) Rate \_\_\_\_\_ tpd.
17. New Work Planned: \_\_\_\_\_
18. Misl. Notes: One drill (Joy) operating.

Date: 1-30-69

[Signature]  
(Signature)

(Field Engineer)



MAGMA COPPER CO.

PIONEER DISTRICT  
PINAL COUNTY

Conferences with Bernard Van Voorhis, Wm Webster, and F. L. Augustadt 6/16/65.

According to these men the Superior operation is "trading dollars" so to speak. It is not known how long this can continue and still maintain adequate reserves. It was also stated that working time at the face would probably not exceed 5 hours per day. The East ore bodies also have a tough ventilation problem.

MEMO LAS 6/16/65

---

Conferences with G.L. Augustadt, Mgr., C. L. Soule, Smelter Supt., Wm. Webster, Chief Geologist and the new Chief Engineer, Fred Crosby.

According to Mr. Augustadt this division made a little money during 1965 and some of the worst "bugs" were ironed out. The grade also held well. Webster said some new ore had been located but it would have to be further evaluated. Flux are was bought from Silver-Belle Martinez and Copper Butte mines. Hubert Steele was recently transferred to San Manuel as Exploration Supt., C.L. Soule is the new Smelter Supt. and Fred Crosby, replaced Van Voorhis who retired last year, as chief engineer.

MEMO LAS 2-16-66

---

Conference with Wm. Webster, 6-22-66

Mr. Webster said that operations were pretty much normal and at least on the black side. The ore body found in the Escabrosa Limestone, well above the present main mining area in the Martin Limestone, opens up a large area of little prospected ground. The Escabrosa zone ore body has not yet been evaluated but looks good as far as the work has gone. Webster said that the smelter is receiving flux from Wingfield at the Silver Bell, Martinez Canyon Dist. This evidently is silicified rock that contains  $3\frac{1}{2}$  to 15 oz. of silver to the ton. The company now is hauling from a new silica pit north and well above the Magma main shaft. Guzman is hauling this and Copper Belle material. McFarland furnishes  $\frac{1}{2}$  to  $\frac{3}{4}$  cars per day of silica flux that runs more than  $1\frac{1}{2}\%$  Cu, from Copper Butte. Mr. J. S. Wise, new General Manager was away.

MEMO - LAS - 6-28-66

---

# DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

## FIELD ENGINEERS REPORT

Mine MAGMA MINE

Date June 23, 1960

District PIONEER DIST., PINAL CO.

Engineer Lewis A. Smith

Subject: Interview with Russell Webster

Mr. Russell Webster, geologist for Magma Copper Corporation, stated that around 40% of their mill ore was now coming from the Martin limestone replacement bodies. Much work is now being done to determine if possible the fracture pattern along which the mineralizing ( replacing) solutions moved to form the replacement bodies. This study has been complicated by the fact that many fractures are obscured or sealed by the massive replacement of the limestone by heavy-massive sulphides which are mainly bornite, chalcopyrite and some secondary chalcocite. (Much of the chalcocite in the Magma vein has previously been considered as hypogene) The problem, if solved, would have much influence on future prospecting to the east and south. The importance of this problem, is emphasized by the increasing mining depths in the Magma vein, and the increasing costs attendant to this depth. Mr. Webster said that most evidence seems to indicate that the mineralizing solutions originated from the Magma vein and spread east.

✓ MAGMA MINE.

\*\*\*\*\*

New ore-body found in the limestone " 2000 ft east of the easternmost ore shoot developed on the main Magma vein."

First replacement ore body of any consequence found in Magma.

Occurs in the Martin limestone -- one of host rocks of the Bisbee district.

See account in the E & M Journal, page 112, June, 1950.

J.E.B.

SDT  
**DEPARTMENT OF MINERAL RESOURCES**

**REPORT TO OPA ON  
ACTIVE MINING PROJECT**

*German & Willis  
Contractors*

Date 3/27/45  
Name of Mine Magma Copper Co.  
Owner or Operator Magma Copper Co.  
Address Superior  
Mine Location Between Magma and Florence

**Filing Information**

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

**PRESENT OPERATIONS: (check X)**

Production.....; Development ☒; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

**PRODUCTION: Past and Future.**

Tons

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months

If in distant future check (X) here

*Very Heavy*

**EQUIPMENT OPERATED:**

Type

Quantity or  
Horse Power

Miles or Hours  
Per Month

Gallons Required  
Per Month

Personal Cars

Light or Service Trucks

Ore Hauling Trucks

Compressors

Other Mine or Mill Eqpt.

1	}	1660	166
1			

**PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.**

*Copper*

**REMARKS:**

*Applicant has a drilling contract with Magma Copper Company and needs certificate and gas to handle this contract*

**ARIZONA DEPARTMENT OF MINERAL RESOURCES**

By

*Chas. H. Dunning*



# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

### Filing Information

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

Date.....

Name of Mine.....

Owner or Operator.....

Address.....

Mine Location.....

### PRESENT OPERATIONS: (check X)

Production.....; Development.....; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

Drilling rig truck

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months.....

Approx. present rate per 3 months.....

Anticipated rate next 3 months.....

If in distant future check (X) here.....

### EQUIPMENT OPERATED:

Type

Quantity or  
Horse Power

Miles or Hours  
Per Month

Gallons Required  
Per Month

Personal Cars.....

Light or Service Trucks.....

Ore Hauling Trucks.....

Compressors.....

Other Mine or Mill Eqpt. ....

Studebaker  
34 truck 2 1/2 ton 1500 mi month

### PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals

Drilling for Magma Copper Co.

### REMARKS:

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By

George A. Ballant

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

### Filing Information

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

Date.....

Name of Mine.....

Owner or Operator.....

Address.....

Mine Location.....

### PRESENT OPERATIONS: (check X)

Production.....; Development.....; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

*Drilling rig & equip*

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months.....

Approx. present rate per 3 months.....

Anticipated rate next 3 months.....

If in distant future check (X) here.....

### EQUIPMENT OPERATED:

Type

Quantity or  
Horse Power

Miles or Hours  
Per Month

Gallons Required  
Per Month

Personal Cars.....

Light or Service Trucks.....

Ore Hauling Trucks.....

Compressors.....

Other Mine or Mill Eqpt. *Drilling rig*.....

*900 gal/mo*

### PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

*Developing water for Magma Copper Co*

### REMARKS:

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.....

*George A. Ballan*

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

### Filing Information

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

Date 2/26/45  
Name of Mine Magma at Oracle  
Owner or Operator Magma Copper Co.  
Address Superior Ariz  
Mine Location New Oracle Ariz.

### PRESENT OPERATIONS: (check X)

Production.....; Development ☒; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months

If in distant future check (X) here

New subsidiary  
of Magma Copper

### EQUIPMENT OPERATED:

Type

Quantity or  
Horse Power

Miles or Hours  
Per Month

Gallons Required  
Per Month

Personal Cars

one

1200

120

Light or Service Trucks

Ore Hauling Trucks

Compressors

Other Mine or Mill Eqpt.

### PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper

### REMARKS:

This is a new operation of the Magma Copper Co and the gas above recommended is in addition to their regular <sup>allowance</sup> of 1500 gallons per quarter at Superior, which is also recommended.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By

Chief Dunning



# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

### Filing Information

Date 1/2/45  
 Name of Mine Magma Copper Co. (drilling)  
 Owner or Operator Scott Coburn  
 Address 1760 Yale St, Phoenix  
 Mine Location Tiger, Arizona

File System \_\_\_\_\_  
 File No. \_\_\_\_\_  
 This chart to be used for gallons of gasoline required per month.

### PRESENT OPERATIONS: (check X)

Production \_\_\_\_\_; Development ☒; Financing \_\_\_\_\_; Sale of mine \_\_\_\_\_;  
 Experimental (sampling) \_\_\_\_\_; Owner's occasional trip \_\_\_\_\_;  
 Other (specify) \_\_\_\_\_

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months \_\_\_\_\_

Approx. present rate per 3 months \_\_\_\_\_

Anticipated rate next 3 months \_\_\_\_\_

If in distant future check (X) here \_\_\_\_\_

### EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	_____	_____	_____
Light or Service Trucks	_____	_____	_____
Ore Hauling Trucks	1938 Int 2 ton	_____	750 per mtr
Compressors	1933 " "	_____	_____
Other Mine or Mill Eqpt.	_____	_____	_____

### PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper

### REMARKS:

Mr Coburn is drilling the San Manuel property at Tiger for Magma Copper Co, Superior

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By

George A. Ballam

# DEPARTMENT OF MINERAL RESOURCES

## REPORT TO OPA ON ACTIVE MINING PROJECT

### Filing Information

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

Date Dec 13 - 1944

Name of Mine Magma operation

Owner or Operator Harry Coburn

Address 1760 E. Grand Blvd

Mine Location at Tiger

### PRESENT OPERATIONS: (check X)

Production.....; Development.....; Financing.....; Sale of mine.....;

Experimental (sampling) ☒; Owner's occasional trip.....;

Other (specify).....

### PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months

If in distant future check (X) here

None at present

### EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	.....	.....	.....
Light or Service Trucks	.....	.....	.....
Ore Hauling Trucks	.....	.....	.....
Compressors	.....	.....	.....
Other Mine or Mill Eqpt.	.....	.....	.....

Compressors

Other Mine or Mill Eqpt.

### PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

### REMARKS:

Mr Coburn has contract for 500 ft drilling for magma

Copper Co.

I recommend that 150 gals per mo be allowed

Mr Coburn

### ARIZONA DEPARTMENT OF MINERAL RESOURCES

By

D. C. Fletcher  
Field Engineer - D of M. R.

Corporation m 1/8/68

Magma King Manganese Mining Co.

Charter revoked 9/25/59

Stat Agent and President  
C. J. Kleinman \*  
Security Building

E. L. Humphrey, Sec'y.

Mr. Kleinman resigned before the charter was  
revoked.

STATE OF ARIZONA  
DEPARTMENT OF MINERAL RESOURCES  
MINERAL BUILDING, FAIRGROUNDS  
PHOENIX, ARIZONA 85007



January 9, 1968

C  
O  
P  
Y  
Miss Olivia Wright  
% Hunter M. DePaige  
2721 14th Street, N.W.  
Washington, D. C. 20009

Dear Miss Wright:

The Magma King Manganese Mining Company, according to information from the Arizona Corporation Commission, had its charter revoked on September 25, 1959. Its statutory agent and President, C. J. Kleinman, resigned before the charter was revoked.

Our mail to Mr. Ralph J. Pomeroy in September, 1965 was returned unclaimed.

Hoping that this covers the information requested in your letter of recent date addressed to the Bureau of Land Management, I am,

Yours very truly,

FRANK P. KNIGHT,  
Knitector.

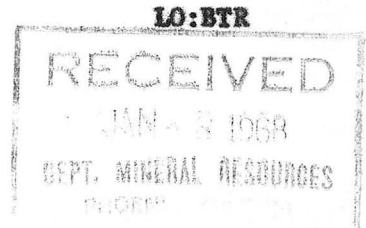
FK:p



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

IN REPLY REFER TO:

Land Office  
3022 Federal Building  
Phoenix, Arizona 85025



January 4, 1968

Miss Olivia Wright  
c/o Hunter M. DePaige  
2721 14th Street, N.W.  
Washington, D.C. 20009

Dear Miss Wright:

This is in reply to your inquiry concerning the Magma King  
Manganase Mining Company.

I do not have any information about the above, but feel sure  
that the State of Arizona, Department of Mineral Resources,  
Minerals Building, Fairgrounds, Phoenix, Arizona 85007, can  
be of some help. Therefore, I am forwarding the above office  
your letter, with a copy of my reply. You should hear from  
them in the near future.

Sincerely yours,

/s/ C. G. Bazan

Chief, Branch of Title and Records

cc: Dept. of Mineral Resources

CBtr

RECEIVED  
LAND OFFICE  
BUREAU OF LAND MANAGEMENT

JAN -4 1968

10:00 A.M.  
PHOENIX, ARIZONA

Bureau of Land Management  
Department of Interior  
230 North 1, Avenue  
Phoenix, Arizona

Gentlemen:

January 1, 1968

I am writing your department to ascertain whether or not it is humanely possible to obtain any information about the mining property which was generally known up to August 1954 as Magma King Manganese Mining Company.

Also, up to that time Mr. Ralph J. Pomeroy was its President and he was located at that time at 547 North Arizona Avenue, Chandler, Arizona. We have wrote Mr. Pomeroy at the above address on numerous occasions, but for some reason unknown to us, he has not been responsive to any of our correspondence since 1954.

Consequently, we would greatly appreciate any semblance of information you can furnish us regarding the Magma King Manganese Mining Company or Mr. Ralph J.... Pomeroy its Former President.

Should your department be unable to furnish any information in connection with this mining property, perhaps, you can refer us to another concern which maybe able to provide us with some tangible information.

Thank you for your courtesy; we remain,

Cordially yours,

Miss Olivia Wright,  
c/o Hunter M. DePaige  
2721 14th Street, N. W.  
Washington, D. C. 20009

Olivia Wright

*Olivia Wright*