



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

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: 12/17/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CACTUS DEPOSIT

ALTERNATE NAMES:

PINTO SHAFT
HAMILTON SHAFT
ARIZONA NATIONAL COPPER SHAFT
CAMBIOR

GILA COUNTY MILS NUMBER: 126B

LOCATION: TOWNSHIP 1 N RANGE 13 E SECTION 36 QUARTER E2
LATITUDE: N 33DEG 23MIN 05SEC LONGITUDE: W 110DEG 58MIN 50SEC
TOPO MAP NAME: INSPIRATION - 7.5 MIN

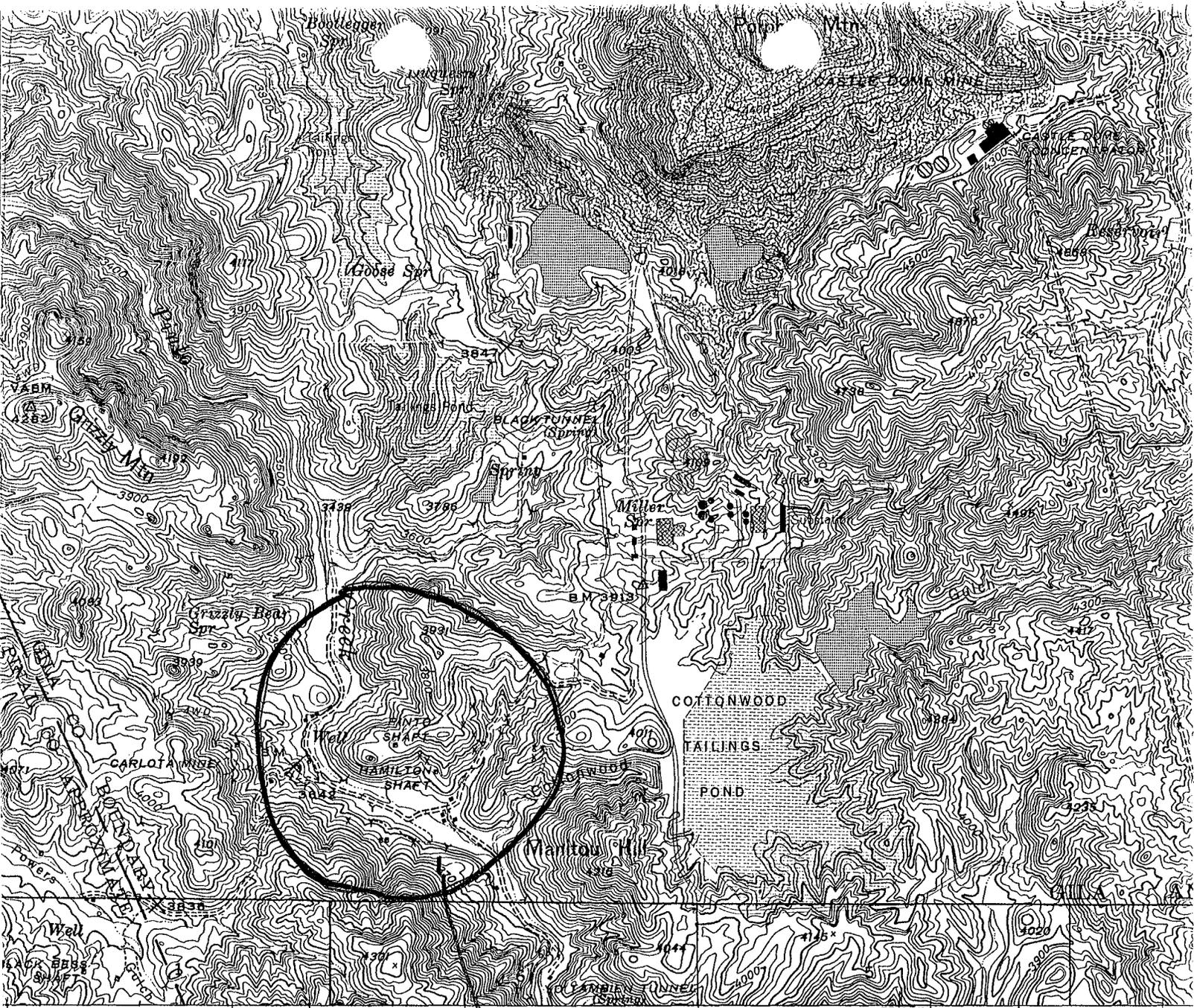
CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER SULFIDE
COPPER OXIDE

BIBLIOGRAPHY:

ADMMR CACTUS DEPOSIT FILE
ARIZONA MINING JOURNAL, FEB 1, 1922, P. 19
PETERSON N P GEOL & ORE DEP GLOBE-MIAMI DIST
USGS PP 342 1962 P 95-97, P139
EXTENDS TO SEC 25-T1N R13E & SEC 31 T1N R14E
CARLOTA COPPER PROJECT DRAFT EIS, 8/1995 420P
CARLOTA COPPER PROJECT FINAL EIS VOL. I, II,
AND III, AND RECORD OF DECISION, 6/1997



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by planetable surveys 1945

Projection and 10,000-foot grid ticks: Arizona coordinate

system, east zone (transverse Mercator)

300-meter Universal Transverse Mercator grid, zone

12N

based on the predicted North American Datum 1983

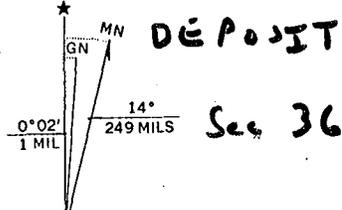
Move the projection lines 2 meters south and

2 meters east as shown by dashed corner ticks

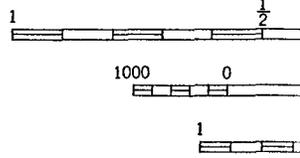
There may be private inholdings within the boundaries of

the National or State reservations shown on this map

CACTUS
TIN RISE

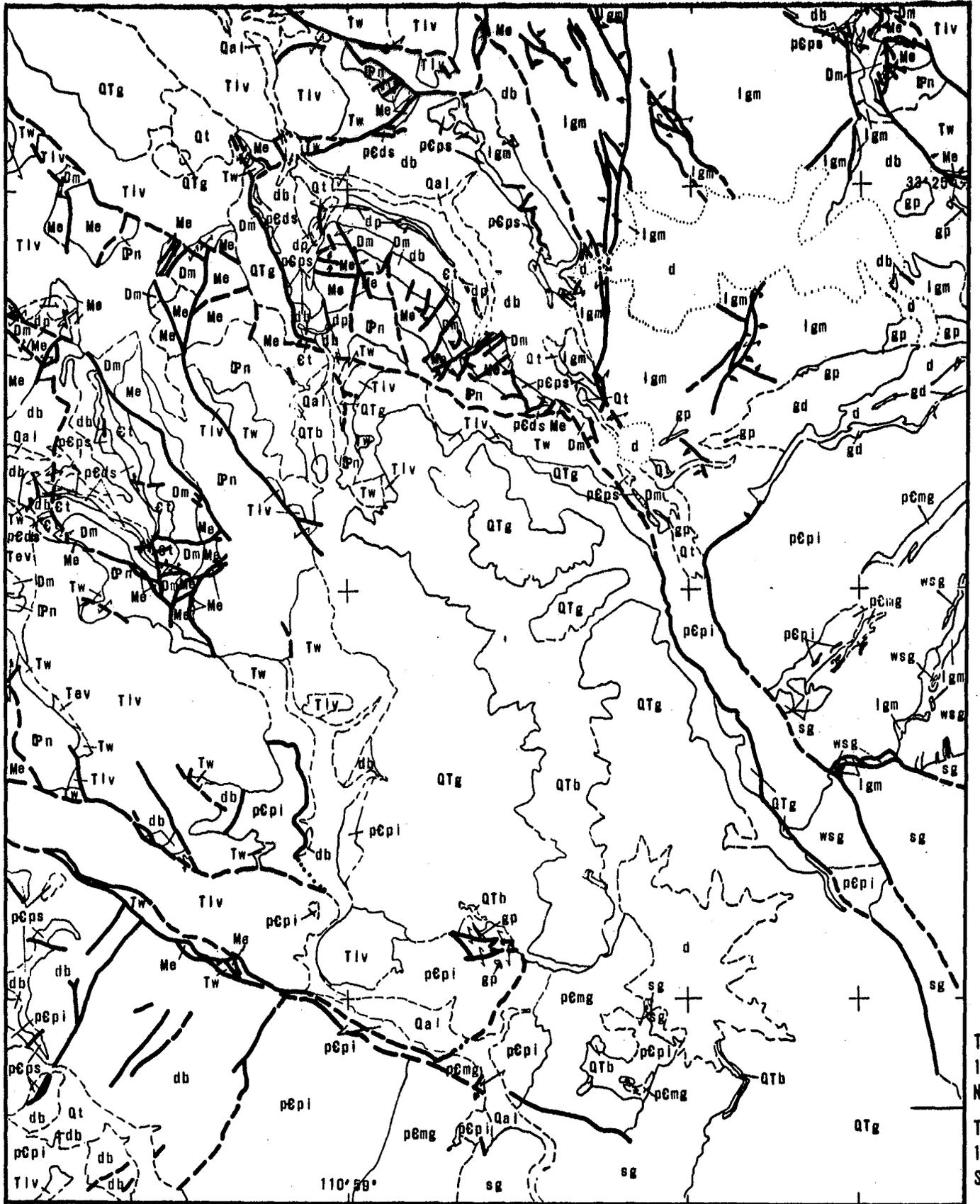


UTM GRID AND 1982 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



INSPIRATION 7.5

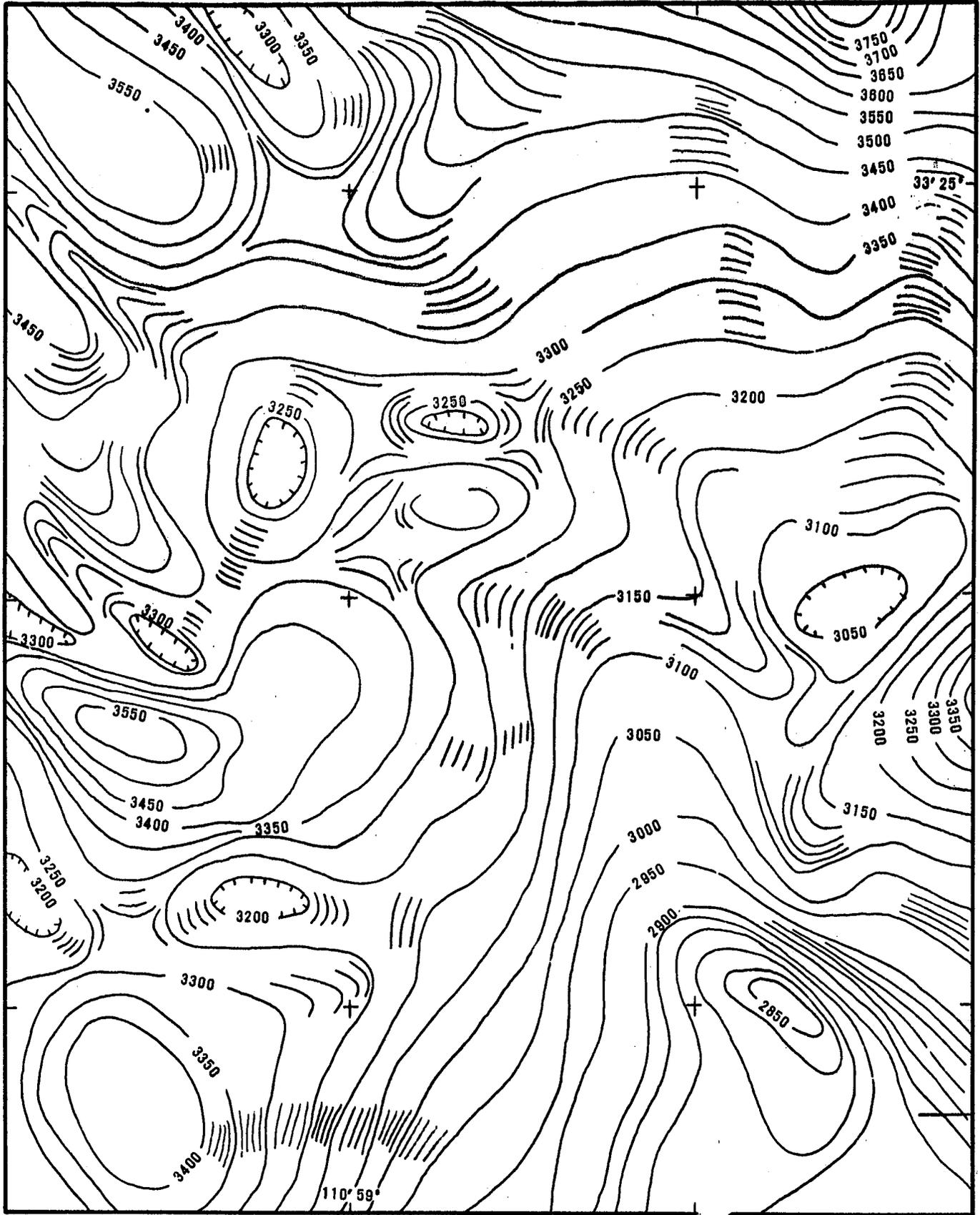
THIS MAP
FOR SALE BY U. S. GEOLOGIC
A FOLDER DESCRIBIN



Peterson, N.P., 1962, Geology and ore deposits of the Globe - Miami district, Arizona: USGS, p.p. 342, pl. 1.

**GEOLOGIC MAP OF THE CACTUS PROSPECT
GILA COUNTY, ARIZONA**

Scale 1" = 2000'

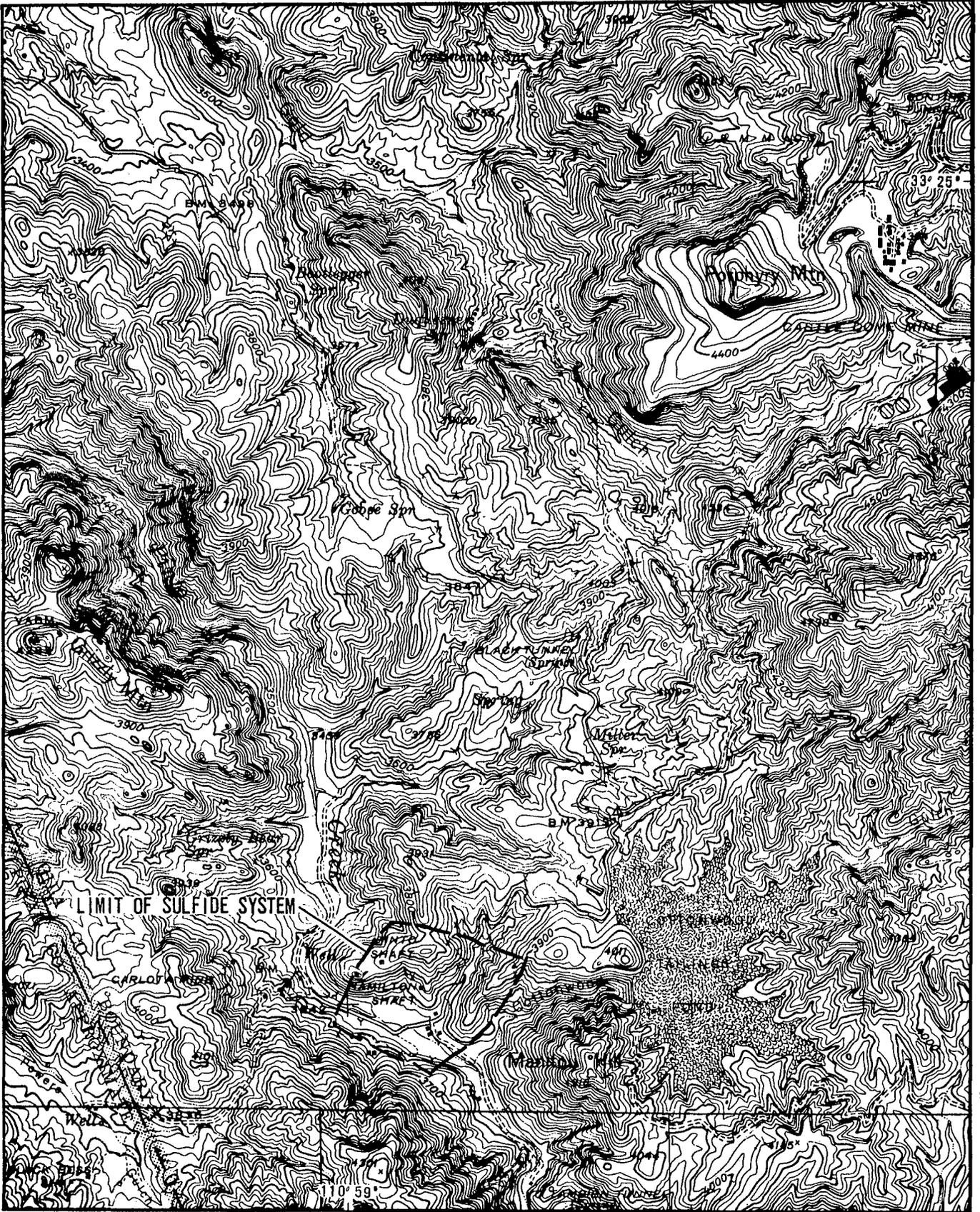


Aeromagnetic map of Area 4, Ray - Superior, Arizona:
 BCMC Geophysics Div., no. U-3.304(1), 1954.

**AEROMAGNETIC MAP OF THE CACTUS PROSPECT
 GILA COUNTY, ARIZONA**

Scale 1" = 2000'
 Contour interval 10 and 50 gammas

TC 500', FI 1/4 mile, NS.



Topography from the Inspiration quadrangle, Arizona: USGS, 1947.

TOPOGRAPHIC MAP OF THE CACTUS PROSPECT
GILA COUNTY, ARIZONA

Scale 1" = 2000'

CACTUS DEPOSIT

GILA COUNTY

HM WR 4/8/88: A report on the Cactus property, Gila County was obtained for the file. The property is part of Magma's Pinto Valley holdings. An addition to the copper reserve base appears warranted.

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA
GILA COUNTY
N.W. OF MIAMI
PINTO CREEK
CACTUS MINE

MM K601 Malachite
MM K602 Malachite
MM K599 Malachite
MM K600 Malachite

MILS # 126 B
3. AKA
Cactus Deposit (file)

 **CARLOTA COPPER COMPANY**

October 2, 1997

HMC
↓
steff
↓
N.B. (f/o) GILA
CARLOTA
CACTUS (A) GILA

Mr. Mason Coggin
Director
Arizona Department of Mines
1502 W. Washington
Phoenix, AZ 85007

RE: Carlota Copper Project, Miami, Arizona

Dear Mason:

The Carlota Copper Project has moved to the next stage in the NEPA process. Since the final Environmental Impact Statement and Record of Decision were published on July 29, 1997, the 45-day appeal period ended on September 15, 1997. As of that date, appeals were filed with the Forest Service on the Record of Decision by the following five appellants:

- Citizens for the Preservation of Powers Gulch and Pinto Creek (Deborah Ham, Don Zobel, Donna Goodale, Ken Kilpatrick)
- The Sierra Club (Grand Canyon Chapter), the Maricopa Audubon Society, and the Southwest Center for Biological Diversity
- Mineral Policy Center (one-page appeal incorporating the Citizens' appeal)
- American Rivers (one-page appeal incorporating the Citizens' appeal)
- L.W. Hardy, Richard G. Amado, Lupe Gaona, and the heirs of John V. Bustamante, Jr. (This appeal is actually a mining claim conflict which should be resolved in another forum.)

After the September 15 appeal deadline, the Forest Service had 15 days in which to meet with the appellants to try to work out a compromise on the issues. These meetings were held on Monday, September 29 and were non-productive. The opponents were not willing to discuss compromise issues, but seemed to be gathering ammunition for a future court action. Also beginning on September 15 is the 45-day period in which the Forest Service must respond to the appeals--this period ends on October 31, 1997.

Carlota Copper Company

8101 East Prentice Avenue, Suite 800, Englewood, Colorado 80111
303-694-4936 Fax 303-773-0733

Mr. Mason Coggin
October 2, 1997
Page Two

Felicia Marcus (the EPA Region IX Administrator), other EPA officials, and Colonel Robert Davis (Corps of Engineers) visited the Carlota site on September 5. The EPA is still reviewing the EIS, and discussions are continuing with them regarding their areas of concern, including mitigation measures. Another meeting among the EPA, Forest Service, Corps of Engineers, and Carlota was held on October 1 in Los Angeles. We remain hopeful that a compromise can be reached that will be satisfactory to both Carlota and the EPA.

On a positive note, Cambior USA (parent of Carlota Copper Company) recently received the Bureau of Land Management's **Health of the Land Award** for its work at the site of the Valdez Creek placer mine in Alaska. This award was presented by Pat Shea, BLM director, and is a national award that recognizes individuals and groups who have made use of federally-managed lands in the US and done an exemplary job in restoring them to their natural state. The enclosed photographs show the results of Cambior's reclamation efforts.

The **Health of the Land Award** reflects Cambior's commitment to protect and preserve the environment. We intend to maintain the same commitment at Carlota, from construction to closure, and strongly believe that the Carlota Copper Project has been well planned and will be a successful operation in all aspects.

I will continue to keep you informed on Carlota's progress toward becoming a producing copper mine.

Sincerely,



Sherry Ellebracht
Government and Public Affairs

Enclosure

Arizona Dept. Mines and Mineral Resources

Verbal Information Summary

Mine: Carlota, Cactus, Eder North and South
Engineer: Nyal J. Niemuth

Counties: Gila and Pinal
Date: February 16, 1996

Summary of comments made by Bob Walish, Manager for Cambior d.b.a. in Arizona as Carlota Copper Company at the Maricopa Section AIME meeting February 15, 1996.

Details of the Planned Mining Operations

The mine will use 17 cubic yard hydraulic shovels paired with 150 ton haul trucks. The mine will use the higher maintenance hydraulic shovels due to their speed to help with truck utilization on the short hauls. Strip ratio will be 2-1 waste to ore. Pit slopes will be 42 degrees. Mining rates will be 20,000 tons per day and 49,000 ton per day waste. Ore will be crushed to 2" minus. At first the heap leach pad will be loaded with trucks latter only by conveyors. The leach pad will be divided into 4 quadrants to optimize water evaporation and production during periods of heavy rains. The Cactus deposit will be mined first, then Carlota. The Eder deposits will be started to be mined round years 10 to 13 of the projects planned 18 year life. At the end of mining in the Cactus area, waste from Carlota will be dumped in it. This waste will also serve to divert Pinto Creek out of the pit.

The ultimate recovery of copper is estimated to be 90%. Leaching of mainly chrysocolla will consume 36 lb. of sulfuric acid per ton of Cactus breccia. Recovery of cathode copper will be by SX-EW. The Mount ISA process using stainless steel starter sheets has ben licensed.

At \$1.00 per pound of copper the following are operating cost estimates: power will be 11 cents per pound, taxes 10 cents and parts and supplies 28 cents. Direct wages for the 300 employees will be \$10 million annually, other amounts will be taxes and fees \$ 3 million and Arizona purchases will be \$28 million.

Permitting Comments

The plan of operations was originally original filed February 1992 to begin the NEPA process. Final EIS should be out by April 1996. A few months of appeals are expected after that before construction will begin. Army Corps of Engineer 404 permits are being required for both the Pinto Creek drainage (runs through the Cactus and Carlota combined pit) and Powers Gulch (site of the heap leach pad).

The cactus that was supposedly endangered, a variety of hedge hog, is believed now to have been introduced from Mexico by the Soledad (sp) Indians for its hallucinogenic properties. It has been found now in the tens of thousands in this area and in an area of eastern Arizona that Phelps Dodge is permitting near the Morenci Mine.

Total investment is planned to be \$152 million before production begins and \$37 million has been invested to date in exploration , obtaining baseline data, and on archeological and environmental permitting.

The U.S. Forest Service has never before permitted a major mine in Arizona and this learning experience has been part of the reason for the slow progress.

Still to be excavated are 37 Indian sites, expected cost of the archeological study of these sites is \$1.2 million

Construction

Once all permits are in hand, hopefully by August 1996, an accelerated construction schedule planned to take 13 months will begin.

08/28/92

ARIZONA COPPER RESERVES

COMPILED BY

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

PROPERTY:

CARLOTA

OPERATOR\OWNER:

Cambior Inc.
8101 East Prentice Avenue #800
Englewood, CO 80111
303-773-0733

LOCATION INFORMATION:

TOWNSHIP 1 N RANGE 13 E SECTION 36
COUNTY - Gila AZMILS - 126A
DESCRIPTION - 7 miles west of Miami (Next to Pinto Valley)

ORE TYPE AND RESERVE INFORMATION:

Acid Soluble - 92 MILLION TONS AT 0.44% Cu

SOURCES:

Reported by Cambior August 1992.

COMMENTS:

Includes Cactus and Eder North and South deposits.

02/03/92

ARIZONA COPPER RESERVES

COMPILED BY

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

PROPERTY:

CACTUS

OPERATOR\OWNER:

Cambior, Inc.
4949 South Syracuse #4200
Denver, Co 80237
303-694-4936

LOCATION INFORMATION:

TOWNSHIP 1 N RANGE 13 E SECTION 36
COUNTY - Gila AZMILS - 126B
DESCRIPTION - 7 miles west of Miami (Next to Pinto Valley)

ORE TYPE AND RESERVE INFORMATION:

Mixed - 10 MILLION TONS AT 0.70% TCu
RESERVE INFO - Mixed - (Cutoff at 0.2%)

SOURCES:

Cactus Prospect Report - ADMMR Cactus file

COMMENTS:

Drilling during 1989-90 identified 50 MT resource at .5% TCu combined with Carlotta - Gary Parkinson of Westmont at 91 AIME Meeting

CARLOTA (F) GILA

John Kan

CAMBIOR

COMMUNIQUE ▲ COMMUNIQUE ▲ COMMUNIQUE ▲ COMMUNIQUE ▲ COMMUNIQUE ▲ COMMUNIQUE

PRESS RELEASE

FOR IMMEDIATE RELEASE

Montreal, August 19, 1991

CAMBIOR INC. ACQUIRES WESTMONT MINING

^{make CARD}
Cambior Inc. ("Cambior") is pleased to announce that it has concluded a transaction with Costain Minerals Inc. whereby Cambior USA Inc., a wholly-owned Cambior subsidiary, has acquired all the shares (100%) of Westmont Mining Inc. ("Westmont"). At the close of the transaction, Westmont owned the Carlota copper project and exploration properties in Idaho and Nevada. Cambior paid a sum of US\$10,000,000 on closing of the transaction, and Cambior USA has undertaken to pay an additional amount of US\$5,000,000 if and when the Carlota project goes into commercial production.

The Carlota copper project is the principal asset acquired through this transaction. Easily accessible by road, the property is located in the Miami region of Arizona, in the United States. The 205-claim property covers approximately 4,000 acres and is located close to large copper deposits.

The Carlota project includes four copper-oxide deposits with proven and probable mining reserves of 53,660,000 tons grading 0.45% Cu. A minimum grade of 0.15% was used in the calculation of these reserves.

Preliminary studies indicate that the copper-oxide ore would be mined by open pit. The ore would be crushed and heap leached. Recovery of the copper from the sulfuric acid solution would be achieved by solvent extraction and electrowinning (SX-EW). This relatively new technology is being increasingly used to extract copper from oxide deposits, as it results in substantially lower capital and operating costs.

A pre-feasibility study has estimated the capital cost of putting the project into production at US\$45 million. The mining rate was fixed from the outset at 5,000,000 tons per year. The waste-to-ore ratio will average 2.35:1 throughout the life of the project. Production is expected to average over 19,000 tons, or 38,000,000 pounds, of copper per year over the 11-year mine life. Operating costs will be US\$0.51/lb Cu.

The cost of the acquisition, including the additional amount to be paid once commercial production begins at the Carlota project, is US\$73 per ton of recoverable copper.

10-15-91 08:02

Work will be carried out on the project to complete the exploration phase and obtaining the required environmental permits. A feasibility study is expected to be completed in 1993.

Corporate Reorganization

Subsequent to this transaction, Louis P. Gignac, President and Chief Executive Officer of Cambior, is pleased to announce the following appointments: Mr. Alex F. Bissett, President of Westmont Mining, has been named Senior Vice President of Cambior's American operations, and will be in charge of the Valdez Creek Division, the Carlota copper project and other development projects in the United States. Mr. Raynald Vézina assumes the post of Senior Vice President of Canadian operations and Mr. Jean Boissonnault has been named Senior Vice President of exploration for all Canadian, American and overseas projects. This acquisition is an integral part of our expansion into the United States.

Cambior is a major Canadian gold producer with interests in eight mines in production. The company expects to produce about 320,000 ounces of gold in 1991.

- 30 -

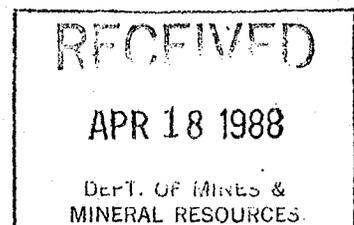
Source: Cambior Inc.

For more information, contact : Robert LaVallière
Manager, Public Relations
Montreal
Tel.: (514) 878-3166

overlay
do not staple

MILS 1266

CACTUS PROSPECT
GILA COUNTY, ARIZONA



CACTUS PROSPECT
GILA COUNTY, ARIZONA

EXPLANATION

Qal	Alluvium	}	QUATERNARY
Qt	Talus		
QTb	Basalt	}	QUATERNARY AND TERTIARY
QTg	Gila Conglomerate		
Tlv	Later volcanic rocks, dacite	}	TERTIARY(?)
Tev	Earlier volcanic rocks		
Tw	Whitetail Conglomerate		
sg	Schultze Granite	}	TERTIARY OR CRETACEOUS
gp	Schultze Granite, granite porphyry		
dp	Diorite porphyry		
db	Diabase		
lgm	Lost Gulch Quartz Monzonite		
gd	Granodiorite in Gold Gulch		
wsg	Willow Spring Granodiorite		
Pn	Naco Limestone	}	PENNSYLVANIAN
Me	Escabrosa Limestone	}	MISSISSIPPIAN
Dm	Martin Limestone	}	DEVONIAN
Et	Troy Quartzite	}	CAMBRIAN
pEds	Dripping Spring Quartzite	}	PRECAMBRIAN
pEps	Pioneer Formation and Scanlan Conglomerate		
pEmg	Granite on Manitou Hill		
pEpi	Pinal Schist		
d	dump and tailings pond		
r	reservoir		

(Apache
Group)

 fault, showing direction of dip

PORPHYRY COPPER PROBABILITY STUDY
OCCURRENCE DESCRIPTION OUTLINE

I. SULFIDE SYSTEM

A. Name Cactus County Gila State Arizona

*B. Length: Exposed 2000 ft; Extrapolated 3000 ft.

*C. Width: Exposed 2000 ft; Extrapolated - ft.

*D. Azimuth of Elongation none °; Sulfide Concentration nd Vol. %

E

Capping (circle one for each)

Oxidized Capping	<u>yes</u>	no		no data
Leached Capping	<u>yes</u>	no		no data
Intensity in Outcrop	subtle	apparent	<u>obvious</u>	no data
Color	<u>red-brown</u>	maroon	bleached-yellow	no data

*F. Absolute Age (m. y.); Min. nd; Max. _____; Average _____
Relative Age (bracket): nd

*G. Drillholes

post-Precambrian post-Diabase (T-K or Precambrian)
pre-Tertiary Whitetail cgl.

1. Maximum Depth nd 200'+(?) ft.

2. Comments _____

*H. Geologic Setting (age, host rocks, intrusive relationships, oldest to youngest formations, contacts, alteration halo to core zone).

(See back of page)

I. Reference:

McRae, O. M., and Nielsen, R. L., 1969, Porphyry Copper Data Report-- Globe-Miami Mining District, Gila Co., Arizona: KEI-GRD.

*Note: See Rules and Conventions.

Geologic Setting

Lower Precambrian Pinal Schist is intruded by Lower Precambrian Granite-on-Manitou-Hill, overlain by Upper Precambrian Apache group and Paleozoic sediments which are intruded by Tertiary-Cretaceous Diabase (? Precambrian). These rocks are overlain by Tertiary Whitetail conglomerate, Dacite, Gila conglomerate and Tertiary-Quaternary Basalt.

The deposit measures 1600'x1300'x200'. Supergene effects extend 100 to 1000 beyond the orebody.

Alteration

Total lateral extent unknown because of postmineral faulting

Pinal Schist is highly silicified, locally sericitized.

Foliation has been destroyed in the most highly altered schist.

Sulfide System Name Cactus

II. Diagnostic Reconnaissance Characteristics

A. District Prospect Zoning Outside of Sulfide System

1. Prospects/Mines none

Metal/Type	Min. Diam. (feet)	(M) Mines (P) Prospects	Rock Types	Deposit Types
Cu ✓	6,000	M	fault breccia, diabase fault zone	
Pb-Zn				
Ag-Au				
Mn				
Other Mo ✓	13,000	P	granite	muscovite veins
Other				

B. Dike Swarms

Rock Types	none			
Length (ft.)				
Width (ft.)				
Azimuth (°)				
Age				
* Spatial Rel.				
Contacts				
Other				

*C. Important Regional Structures (other than dike swarms)

Type	Graben	thrust fault	
Length	10,000 +	7,000+	
Azimuth (°)	295	30°	
Recognition Factors	Slivers of Paleozoic and other rocks in faulted margins	abrupt change from altered to fresh rock	
Age	postmineral	postmineral	
Spatial Rel.	includes mineralized rock	cuts off base of mineralized rock	
Contacts	broad fault zones	located, brecciated mineralized (secondary)	
Other	partly cut off by thrust at depth	source unknown	

*D. Other Reconnaissance: (See back of page)

Reconnaissance

Mineralization is confined by faults on 3 sides and on the bottom.
Covering Dacite on the west.

The bottom thrust fault apparently moved in a northerly direction,
suggesting a possible origin of this faulted-off segment to the south-
southwest.

Deposits in the district seem to be localized near the Pinal Schist-
Schultze granite or Lost Gulch q. m. contact wherever these rocks
are adequately exposed by a horst.

Sulfide System Name Cactus

III. Center of Mineralization (zone of best copper)

A. Name Cactus deposit

*B. Copper Mineralization

1. Type	*%	Av. Grade	Rock Type	*Other Data
a. Primary				nd
b. Enriched ✓	100	low	Pinal schist	cut off at base by Cactus fault
c. Skarn (replacement)				
d. Oxide				
e. Mixed ✓			"	Significant amounts of ore

2. Current Mineral Inventory

a. Tons 10,000,000; Av. Grade 0.7 %; Cutoff 0.2? %

b. Other Credits _____

3. Past Production

a. Tons none; Av. Grade _____ %; Cutoff _____ %

b. Other Credits _____

C. Cover

1. 100 % Exposed at time of discovery

2. Projected Post Mineral Cover

a. Thickness (ft.) Dacite about 1300' thick, east of Castle Dome

* b. Formations White tail conglomerate, Dacite, Gila cgl., basalt

* c. Estimated Δ elevation of base of cover to top of cc blanket (ft.) _____
400-350' base of Dacite to top of cc
from cross-section

3. Premineral Cover

a. Thickness (ft.) none

b. Formations _____

Sulfide System Name Cactus

IV. Aeromagnetic Expression of Sulfide System or Mega-District

- A. Type Intrusive-- possibly unrelated to sulfide system.
-
- B. Magnitude 500 Gammas, Line Spacing 1/4 mile
Clearance 500 feet
- C. Source
1. Length 4,000 ft. Width 3,000 ft. Azimuth 330 °
 2. Susceptibility $2,000 \times 10^{-6}$
- D. Diagnostic Character WITHOUT Geology coherent, smooth character
-
- E. Diagnostic Character WITH Geology over diabase outcrop-- diabase
may be source.
-
- F. Other Geophysical Expression no data
-
- G. Reference BCM Ray-Superior Survey
Ross, H. P., 1969, Ray-Superior and Globe-Miami, Pinal and Gila
Counties, Arizona-- Review of Aeromagnetic Data: KES-GDO
Report, Nov.
- H. Comments on Quality of Data: Detailed, high quality-rough topography
made draping at 500 feet difficult.

The Cactus Development Company

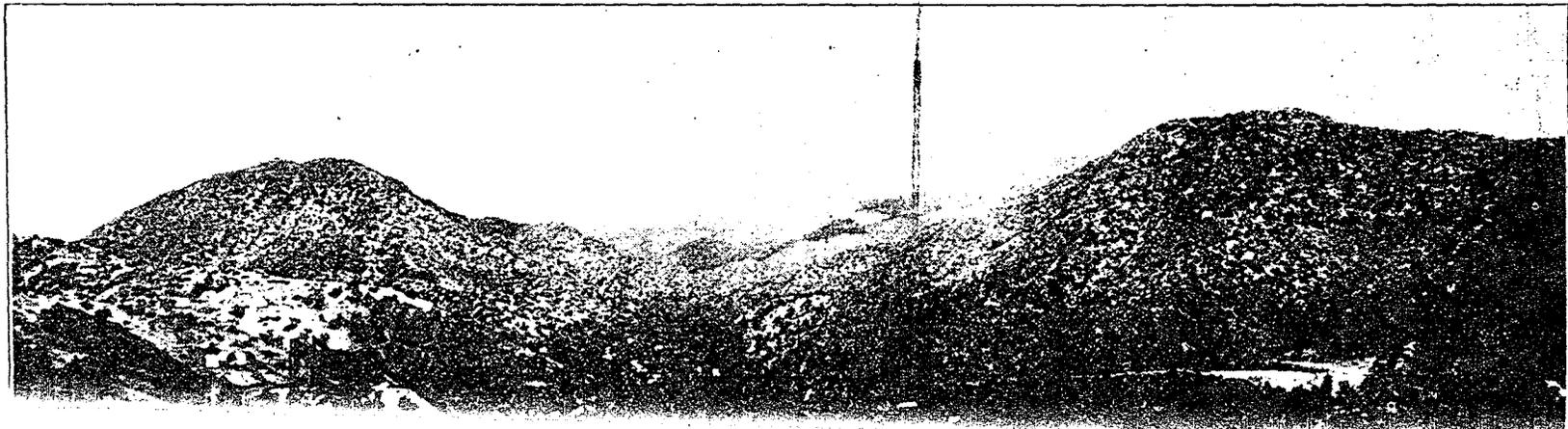
TO THE average person, the term, "mining camp," brings a mental picture of a sprinkling of nondescript shacks over barren hills and in desolate canyons. Here, he thinks, is found the acme of cheerlessness. His recollections of scrawny burros and attenuated dogs wandering or lolling about amid the squalor of grassless and treeless back yards and still more unattractive streets, bring with them, as a rule, no redeeming feature. Yes, he will agree that a mining camp is a place to sojourn in for a brief and wretched period, if necessity compels, but to make a home in,—never!

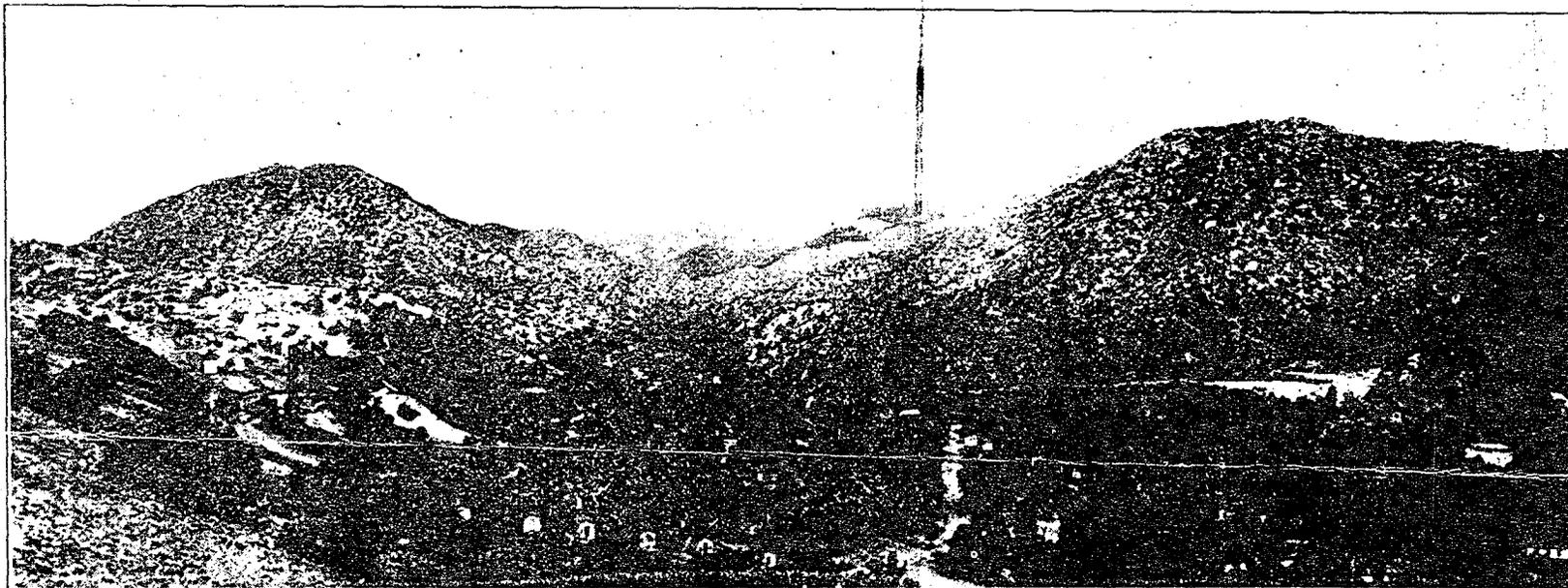
The person with this preconceived notion of a mining camp will most decidedly reconstruct his ideas on seeing Crowley City, the settlement that has grown up in the past year around the workings of the Cactus Development Company located about fifteen miles west of Globe.

Coming down over a rather steep but well made trail leading over the hills from the eastward, the traveler to Crowley City sees a number of neat white cottages nestling among the dark green foliage of lofty, luxuriant live oaks. Following the trail for a few moments longer in its course along the Pinto creek, he emerges suddenly out of the trees and undergrowth of mesquite and manzanita that line its banks into the more open space where lies the camp. It is

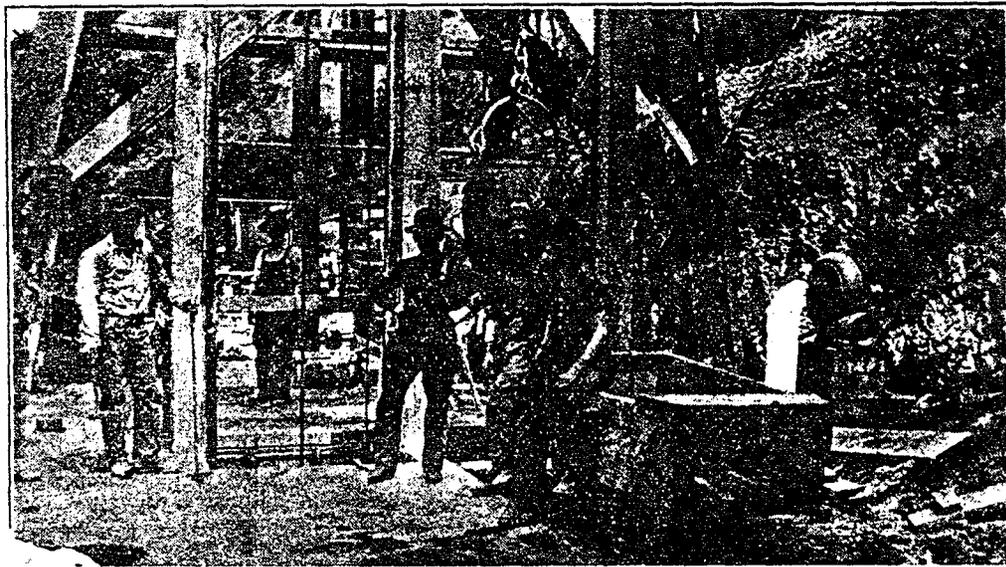


Con Crowley, the Original Locator of the Cactus Mine, Sitting Beside His Cabin at Crowley City of Which He was the Founder. Con Crowley is One of the Oldest Prospectors of Globe and Has a History that Reads Like Romance.





Crowley City, the Camp of the Cactus Development Company. The Hamilton Shaft of the Cactus Mine Is Shown on the Left.



Hamilton Shaft on Cactus Development Company.

with misgiving that the word camp is used here, for the impression that one gets on his first sight of the settlement is not one of makeshift and temporary existence. The neat little village has an atmosphere of permanency and peace hovering over it. On seeing it, one is likely to say to himself, "Here lives contentment; here dwells thrift; here the human being that loves God's handiwork better than man's may find a pleasing refuge from the turmoil of cities."

Con Crowley: Pioneer

And in this estimate of Crowley City, the visitor is very near the truth. Just such a man as seeks out the byways of life and avoids the soul-destroying grinding of urban money-mills, where individuality is lost in a struggle for possession, or perhaps, for mere existence, lives in this haunt of earnest energy mingled with peaceful habitation. His name is Con Crowley. Of course, his first name originally had more than three letters. But the people who know Con best have given him this name for every-day purposes, and so it must be written.

Con Crowley was born in the city of Cork, Ireland, December 25, 1844. When he was one year and nine months old, his parents came to America to escape the persecution of the Irish authorities. Crowley, senior, located in Cleve-

land, Ohio. When Con Crowley was fourteen years old, he ran away from home and after some wanderings landed in Lake Superior, Michigan. It was in Michigan that Con gained his first mining experience and training under John D. Ryan's father.

On May 15, 1865, Con was one of a party of 250 men who left Lake Superior bound for Colorado. The trip was made across the prairies with the aid of twenty-five bull teams and a number of horses. The end of this journeying found Con Crowley in Georgetown, Colorado, where he remained until May, 1876, when he set out for Arizona with twenty-five companions. On September of that year Con Crowley reached the little settlement consisting of a few houses which has since grown into the large and prosperous city of Globe. Con always assigns the advance of civilization as his reason for leaving Colorado. Globe district, however, seemed to please him for during the past thirty-three years he has never lived outside its borders.

He prospected here and there over the country. Indians beset his camp from time to time and his escapes from death at their hands were numerous. Others were killed at his side, but Providence let Con Crowley live. For a long time Con lived in Globé. But when again the advance of civilization became too disagreeable, Con moved west. This time, the present Cactus region was his stopping place. There, about twelve years ago, he located a group of claims and set to work on them. Later he sold his interests to the Arizona National Copper Company, which, in turn, sold its holdings to the Cactus Development Company in December, 1908.

In the heart of the little settlement called Crowley City stands Con's cabin. On the ridge-pole fly the "Stars and Stripes." Before the door, grows a tall and peculiar live oak. This tree apparently began its life like any other oak, but in its after life acquired its present peculiarity. About two feet from the ground, it is divided into two large forks. These forks grow up side by side and fifteen inches apart to a height of about 12 feet. At that point they are again connected by a perfectly horizontal growth about 15 inches long and five inches in diameter. From that point upward, the two forks of the tree continue to grow separately. Con's own words, describing his choice of a home site were, "When I saw that tree, I said to myself, 'There goes the cabin'."

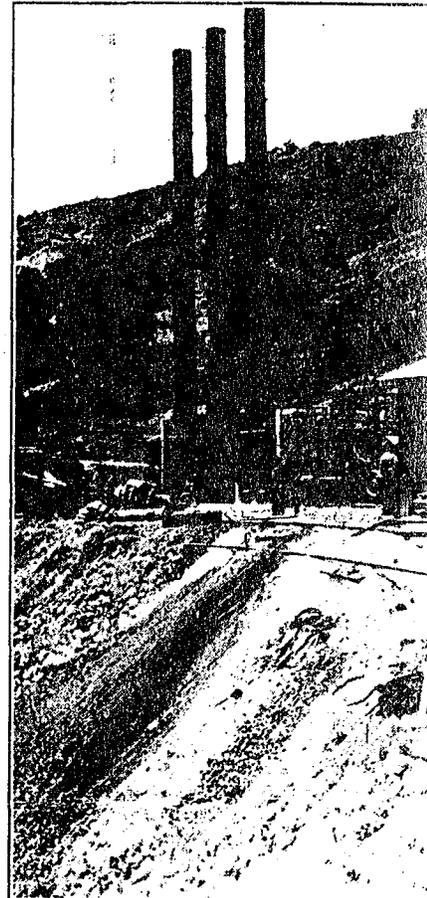
Around Con's home, which is located in the middle of the main street, Crowley City has grown up. Today, it has a population of 150, and of this number of people, fully 100 are workers for the Cactus Development Company. The camp has a large and fully stocked general merchandise store, a postoffice suitable to the needs of the settlement and a good school with 27 pupils in charge of Miss Myrtle MacGregor.

Organization of Company

The Cactus Development Company, which has brought about all the prosperity of Crowley City, was incorporated under the laws of Minnesota in November, 1908, and has its general offices at Duluth. It is capitalized at \$500,000 and all the stock was issued at a par value of \$1. As an indication of the regard which the public has for this comparatively new mining



Hoisting Plant at Hamilton



Boiler Plant at Hamilton Shaft of the Mine. The Pinto Shaft Is on the H.

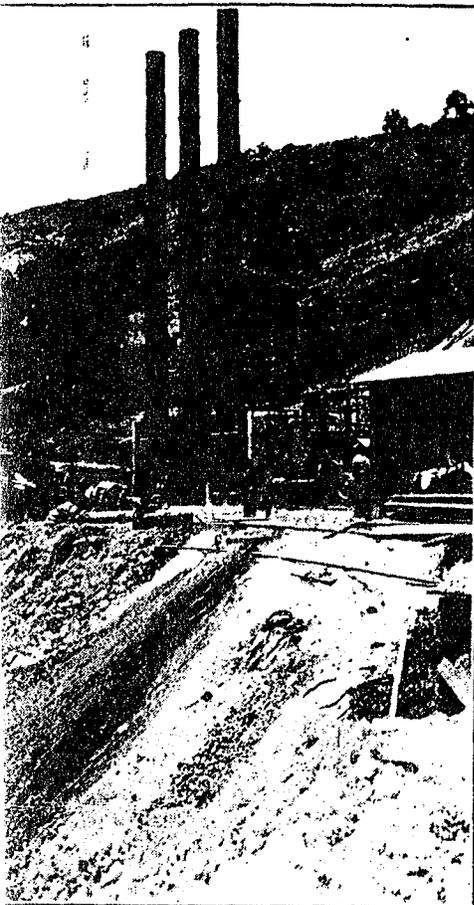


enterprise, it is mentioned the fact that the stock put on the market last year was at 60 cents a share and the prospect is still higher and now better than before.

The officers of the Cactus Development



Hoisting Plant at Hamilton Shaft of Cactus Development Company.



Power Plant at Hamilton Shaft of the Cactus Mine. The Pinto Shaft Is on the Hill.



Development Company.

and other surface improvements. At present the property consists of 38 claims. Part of these were taken over from the Arizona National Copper Company in November, 1908, and the rest are held under bond from the Pinto Copper Company. At present 51 per cent of the Pinto Copper Company's stock is in escrow at Globe and this stock will pass into the possession of the Cactus Development Company as soon as the Pinto shaft, now being sunk, is down to a depth of 500 feet. At present the shaft is over 400 feet deep.

The adjoining properties of the Cactus Development Company's land are those of the Crown Point Copper Company, Pinto Creek Mining & Smelting Company, Old Dominion Copper Mining & Smelting Company, the Castle Dome Mining Company, the Globe Standard and the Calumet & Globe.

By February 4, 1909, the fifty buildings, including offices, stores and dwellings, making up Crowley City had been completed and work was at that time begun on the Hamilton shaft, located on the hill just east of the camp. By April 22, the Hamilton shaft was 530 feet deep, and at that depth, sinking was stopped and crosscutting and drifting were begun on the third, fourth and fifth levels. The drifts were run east and west from the shaft and the crosscuts have a general northerly and southerly direction. The crosscuts are being run from the drifts every 200 feet, so that, eventually, the land will be cut by them into 200 foot squares. In this way, a thorough exploration of the property will be made. So far, more than 1,000 feet of crosscuts have been run on the third, fourth and fifth levels.

The first ore in the Hamilton shaft was encountered at a depth of 220 feet. From this point down for 100 feet, this ore prevailed. Its average value in copper was 2.5 per cent. Both the Hamilton and Pinto shafts have two compartments. Each compartment is 4.5 feet wide by 5 feet long.

Sinking at the Pinto shaft was begun August 1. Previous to that time, the shaft had been put down for about 45 feet. During August, the drillers on the Pinto made a record that is believed to excel any other in North America for sinking a two compartment shaft with fifteen men employed in three shifts a day of five men each. In that month, 194 feet of sinking were done. The shaft is now over 400 feet deep. It has been the custom of the Cactus Development company to give a bonus of \$1 a foot to each driller for every foot over 100 that they sink in a month. This generous provision has resulted in some phenomenally fast work. It can be seen, therefore, that over \$1,400 was paid out by the company in such bonuses during the month of August. On the 541 level, the Pinto shaft will be connected by a drift with the 400 level of the Hamilton.

The Cactus Development Company began to instal new equipment at the Hamilton shaft May 1, 1909. Since that time, a modern and serviceable plant has been put up. The Pinto shaft is equipped with a single drum hoist by steam power. At the Hamilton shaft there is a double drum hoist. A new air compressor was installed there about September 1. The power plant consists of three return tubular boilers of 100 horse power each. A ventilating system has been in-

enterprise, it is well to mention the fact that the stock put on the market last December at 60 cents a share is now selling at about \$5 and the prospects for still higher values are now better than ever before.

The officers of Cactus Development Company are: W. A. Eaton, president; C. W. Pritchett, general manager; C. M. Thorsen, chief clerk; W. H. Hamilton, mechanical engineer, and R. High-tower, foreman.

The Cactus Development company took possession of its first group of claims on Pinto creek December 1, 1908, and a force of men was immediately put to work on the camp buildings

stalled throughout the drifts and crosscuts of the Hamilton shaft. It consists of 1,500 feet of ventilating pipe connected with a No. 5 Buffalo exhauster.

The Cactus Development company is now figuring on the installation of a larger plant but as yet no definite plans have been perfected. The erection of a smelter at Crowley City has been rumored through Globe district from time to time, and it is not at all improbable that a large reducton and smelting plant would prove profitable to the Cactus Development Company. Surely, its advantage to the mining region in which the Cactus mine is located would be immense, and it requires no great stretch of the imagination to foresee a very populous and thriving little city growing up, in the next few years, on the present site of the Cactus camp. The Cactus mine has already developed ore bodies extensive and rich enough to insure it of becoming one of the chief producers of Globe district and this, too, with comparatively shallow workings. What the future exploration of the property along the lines planned by the management will develop remains to be seen, but it is

safe to assume that the ore will be proven of great extent and of increasing value as greater depth is attained and more lateral work is accomplished.

Field Management

The Cactus Development Company has an exceptionally able field management.

The development of the Cactus property has been directed by General Manager C. W. Pritchett, who is widely known both in Arizona and in the states as a thoroughly experienced mining expert. One of Mr. Pritchett's many creditable qualities is his unqualified faith in Globe district as a mining region. Mr. Pritchett has been intimately connected with the growth of several of the strongest mining companies of the west, and the high regard in which he is held by the people of Globe district is only the natural tribute accruing to him from his achievements. The Cactus Development Company is more than fortunate in having in charge of its affairs a man of Mr. Pritchett's ability and personal qualities. The reputation of Superintendent T.

W. Hamilton, both as a man and as an experienced mine manager, is so well known in Globe district that eulogy is futile. C. M. Thorsen, on whom the responsibility for the business detail in connection with the mine rests, has a record as an able and indefatigable worker that anyone might well be proud of. The important mechanical department, including the purchase, installation and supervision of all machinery making up the mine plant, is admirably superintended by W. H. Hamilton, who, in addition to his mechanical knowledge, has had a broad experience in mining as well. R. Hightower, foreman of the Cactus mine, has acquired a wide knowledge of the details of mine work in that best of schools, actual experience. The results he has obtained in the accurate execution of plans and in the maintenance of the respect of the men who work for him are a good testimonials of efficiency as could be desired. If the Cactus mine becomes the foremost producer of the outlying part of Globe district, much of the credit for that event will be due to the men who are so faithfully giving its management their earnest and unremitting attention.

THE GIBSON COPPER COMPANY

A MEMORIAL to the industry and perseverance of two men is the Gibson Copper mine of Globe district, Arizona. Situated sixteen miles by wagon-road from the city of Globe, the town of Gibson, which has grown up around the mine, is one of the most attractive camps in the territory. There are, in all, about forty buildings including dwellings, stores, boarding houses, bunk houses and stables. All are strongly built and painted white, and in their setting of towering hills partially clad in green foliage, make a picture that the passerby invariably stops to view.

The village of Gibson, and a number of the most substantial business blocks of Globe, owe their existence to the wealth turned out by the Gibson mine, one of the most remarkable mining properties of Arizona in that, from the grass-roots, it has not only paid expenses, but also has yielded a large income to its owners.

About eight years ago, Sam L. Gibson and William Henderson began operations on a small scale on the Summit claim, one of the tracts now included in the property of the Gibson Copper company. The two men had little with which to begin work. Their capital consisted of \$90 in cash and two broncos. On the single claim on which operation was begun they held a bond for \$1,000.

J. L. Alexander, directors. The acting officers of the company are also included in the directorate.

The underground developments on the Gibson property consist of two shafts, one inclined and one vertical, and four tunnels. The inclined shaft, which was the first one put down, is 600 feet deep and has six levels established. The new vertical shaft is to be the main working shaft for the Gibson mine henceforth. Through this shaft all the ore will be taken from the mine and access afforded for supplies and employes. This shaft is now 244 feet deep, and will ultimately be connected with the third level of the inclined shaft.

On the Gibson property there are five known veins in all and two of these are close together. On the main ledge, which shows in several sur-

1,300 feet, but has not been drifted on lower than the third level. Altogether, there are fully two miles of drifts and crosscuts in the main underground workings of the Gibson mine.

The equipment of the inclined shaft consists of three 30 horse power boilers and a steam hoist.

The vertical shaft of the Gibson mine, now sunk to a depth of 244 feet, has three compartments, each of which is 4 feet wide by 5.5 feet long. The surface plant of this shaft is modern and complete in every detail. The plant includes two 200 horse power boilers of Stirling make, a Sullivan compound air compressor, capable of running ten machine drills, and a 14 by 16 double-drum hoist, with a substantial gallows frame newly built. To carry off the smoke from the hoisting plant, a stack 3.5 feet in diameter and

