



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: 01/31/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MADERA CLAIMS

ALTERNATE NAMES:

MADERO CLAIMS
CONSOLIDATED URANIUM
FRAWLEY
E + E MORGAN PROJECT

GILA COUNTY MILS NUMBER: 89B

LOCATION: TOWNSHIP 1 N RANGE 14 E SECTION 24 QUARTER NW
LATITUDE: N 33DEG 20MIN 05SEC LONGITUDE: W 110DEG 53MIN 30SEC
TOPO MAP NAME: PINAL RANCH - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

COPPER SULFIDE
COPPER OXIDE
URANIUM
MOLYBDENUM
SILVER
GOLD LODE

BIBLIOGRAPHY:

ADMMR MADERO GROUP FILE
ADMMR MERIETZ FILE 2-65 REPORT # 110 MADERA
USAEC 172-480 GILA CTY PRELIM RECONN REPT
1953 P 49
ADMMR BEAR CREEK MINING CO FILE
PETERSON N P GEOL PINAL RANCH QUAD USGS BULL
1141-H 1963 P H-14

09/04/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: MADERA CLAIMS

ALTERNATE NAMES:

MADERO CLAIMS
CONSOLIDATED URANIUM
FRAWLEY
E + E MORGAN PROJECT

GILA COUNTY MILS NUMBER: 89B

LOCATION: TOWNSHIP 1 N RANGE 14 E SECTION 24 QUARTER NW
LATITUDE: N 33DEG 20MIN 05SEC LONGITUDE: W 110DEG 53MIN 30SEC
TOPO MAP NAME: PINAL RANCH - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

COPPER SULFIDE
COPPER OXIDE
URANIUM
MOLYBDENUM
SILVER
GOLD LODE

BIBLIOGRAPHY:

ADMMR MADERO GROUP FILE
ADMMR MERIETZ FILE 2-65 REPORT # 110 MADERA
USAEC 172-480 GILA CTY PRELIM RECONN REPT
1953 P 49
ADMMR BEAR CREEK MINING CO FILE
PETERSON N P GEOL PINAL RANCH QUAD USGS BULL
1141-H 1963 P H-14

PINAL RANCH QUADRANGLE
ARIZONA
7.5 MI. JETTER SERIES (TOPOGRAPHIC)

(GLOBE)

55'

GLOBE 11 MI.
MIAMI 3.2 MI.

280000 FEET (EAST)

R. 14 E. R. 14 E 110°52'30"

33°22'30"



280000 FEET
(EAST)

modern Claims



MOUNTAINS

MADERA PROSPECTS

GILA COUNTY

Interviewed Woody Simmons, Ch. Geol., Miami Copper. Learned Kerr-McGee finished drilling on Madera Mountain, Santa Anna and Ellis properties. They are now drilling SE of Oak Flats about 3 miles east of Superior. The Smith Drilling Co. of Lubbock, Texas is doing the drilling with failing drills. Learned from Bert Reed of Inspiration that Kerr-McGee drilled out about 17,000,000 tons of 0.4% copper on Madera Mountain.
EGW WR 11-27-64

M. A. Hanna considering Madera Property. FTJ WR 11-25-66

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Ellis Group & Madera Prospects

Date Feb. 25, 1964

District ~~Midway District~~ - Gila County

Engineer Lewis A. Smith

Subject:

Location: Secs. 13-14, 21-23, T1S, R14E

Property: The ore now leased or staked by Bear Creek Mining Company includes the Ellis Group and Madera Prospects, and several claims of their own.

The total number of claims is not known.

Work: In 1948, 5 holes were drilled on the Madera Prospects and some work was done on the Ellis vein at the extreme eastern end of this ground.

Part Owners & Lessee: Bear Creek Mining Co. (Kennecott) and W. E. Ellis, of Globe (Ellis Group).

Minerals: Copper and some molybdenum.

Geology: According to Nels Peterson, USGS Bull. 1141-H, the Claims cover an area that consists essentially of a neck of Pinal schist that separates a mass of Schultze granite on the north from another mass of Madera diorite on the south. The Madera Diorite and schist are both cut by Schultze granite porphyry dikes. The schist is mineralized essentially by iron (pyrite) with some copper as chalcopyrite and chalcocite that coats the pyrite and chalcopyrite. Three of the drill holes in the Madera Prospects penetrated through the usual zones characteristic of a typical disseminated sulphide deposit that has undergone weathering, an oxidized and partly oxidized zone of chalcocite enrichment which gradually grades downward into a primary sulphide zone (portore). The sections showed a total length 125 feet that assayed 0.42 percent copper, whereas, the remaining 1000 ft. of length averaged 0.14 percent. Peterson concluded that although the deposit cannot now be regarded as ore its total volume of mineralized material contains a large amount of copper. The other two holes showed disseminated sulphides throughout their lengths, of fairly even copper content, and slight replacement of sulphides by chalcocite. The leached capping indicates a preponderance of iron (pyrite) but locally, where the veins are stronger and more numerous, copper (oxidized) and limonite show more abundantly.

Ref: U.S.G.S. Bull. 1141-H (1963) p. 14

May 7, 1956.

To: Mr. William F. Paine,
Mesa, Ariz.

Examination Ellis (Madero)
Mining Claims.

Pursuant to your request I have made an examination of a certain group of mining claims situated a few miles south of Miami, Ariz.

Claims & Location.

The group consists of 12 unpatented mining claims and is reported to be owned by Mr. William Ellis of Miami, Ariz. It was formerly called the Madero Group. To reach the group one travels 8.4 miles southeasterly from a point on highway 60 opposite the (northerly) turn off to Castle Dome. Via air line the group should be about 4 miles south and slightly west from the town of Miami. The altitude is about 5500 ft.

History.

Past history was not investigated, but it is evident that attempts have been made to sort and ship the better grade copper ore. This is further substantiated by the fact that the waste dump from the main adit and workings contains considerably less tonnage than the workings would have produced.

It was stated and is common knowledge that the mineral formation has never been drilled nor explored at depth.

Geology.

The general terrain consists of a large mass of grano-diorite, which, in fact, is the main structure of the Pinal Mountains. Within this mass, and constituting the economic situation on these claims is a large intrusion of monzonite porphyry carrying copper minerals. The extent of this monzonite body is unknown. There are indications that it is at least a mile north and south, by probably as much east and west. It is generally covered by talus, soil, and vegetative growth so the boundaries are not always distinct - but in any event it is large.

This is the type of monzonite that forms the large low grade copper orebodies in this (Globe-Miami) area, and throughout Arizona. The general reason is that the

magmas which consolidated into that type of rock contained copper which was given off as an end product emanation. The physical characteristics of the rock caused many fine fractures on cooling, which were an excellent host for the copperbearing solutions.

There are many monzonitic intrusions which are entirely unmineralized. Possibly their period and magmatic origin was different. But when we find a monzonite mass, well fractured, and containing copper minerals in the fractures and disseminated in the rock itself it usually portends a large commercial orebody. And such is the case herewith.

Development.

Development consists of a 600 ft tunnel, with a general course northeast, from which a 70 ft winze with an 80 degree dip to the northwest has been put down, and a 60 ft drift to the northeast from the bottom of the winze.

The first 50 - 100 feet in the tunnel is leached monzonite with little or no copper staining. Then staining begins and continues to the face. A few short crosscuts and parallel drifts were run, evidently in search for high grade, and show the same staining and secondary copper minerals.

The walls of the winze are heavily sulphated, and the drift at the bottom shows a combination of oxide and sulphide minerals.

From the start of the staining, through all of the workings, the condition and mineralization is similar. There are high grade spots of course, most of which have been gouged out, but generally speaking the condition is uniform and typical of similar zones in our large "porphyry" mines.

Assays.

No attempt was made to sample the mine and indeed such would be quite impossible, or inaccurate, except by drilling. I was shown the trenches where a few check samples were taken and they were as follows:

- (1) In bottom near face of adit. 8 ft. (enlargement of tunnel). Copper 2.90 %.
- (2) Shallow hole in main adit where high-graders had taken out ore. Margin left. 3 ft wide. Copper 3.50%.

(3) Area 5' wide showing no staining, but showing some disseminated sulphides, near face of bottom level.

Copper 1.60%

(4) General cut around face of bottom level. Copper 2.70%.

From the above sample results and from my general judgement I would estimate that the entire mass would assay between 1.50% and 2.00% copper, which is typical but good for such zones in such formations.

Metallurgy.

The ores in the oxidized zone should be readily amenable to leaching. The copper minerals are mostly carbonates but there is no lime nor apparent calcite in the ore. Nor none of the low grade chrysocollas. The sulphides, whether primary or secondary, would be readily amenable to flotation, as per our big copper mines.

In between, there will be a mixed zone that will bring some problems - but not insurmountable. Inspiration and others are successfully using a combination leach/flotation process which attains excellent extraction on such mixed ores.

Mining Facilities.

General facilities for an economic operation are unusually good. A general location near the big mines of the Globe-Miami area creates a labor pool of experienced miners, some of whom prefer to work "out in the hills" (but not too far from town). Water for a moderate sized plant can no doubt be obtained from drilled wells within reasonable distance. Timber, even of saw size is abundant on the claims. A Custom Smelter is situated about 12 miles away by road and would buy beneficiated products, or crude ore if it were not too high in alumina. The Topography of the mineralized area is such that (a) a large amount of preliminary exploration can be done by tunnels, and (b) a very large tonnage could be mined before the open pit operation would get down to normal ground level.

General Economics.

While an orebody of open pit size and grade is probable it is by no means proved. If such an orebody were developed the probable operating costs and profits

are too well known to require estimate or discussion. May it suffice to say that such orebodies are profitable when containing less than 0.75% copper, and would continue to be profitable even though the price of copper dropped considerably.

Let us consider however that this orebody does not have such dimensions and must be mined by underground methods and in a smaller way.

On a basis of 500 to 1000 tons per day, underground mining, I would estimate operating costs and profits as follows on a 1.5% copper ore:

Straight leaching:

30# copper @ 80% extraction, @ 34¢ lb		\$8.16 per ton.
Mining	1.50	
Milling	2.50	
Other	1.00	
	<u>5.00</u>	
	Profit	<u>3.16</u>

Sulphide flotation:

30# copper, @ 90% extraction, @ 34¢		\$9.18
Mining	1.50	
Milling	2.50	
Other	1.00	
	<u>5.00</u>	
	Profit	<u>4.18</u>

Combination leach float:

Mining	1.50	
Milling	3.00	
Other	1.00	
	<u>5.50</u>	
30# copper, @ 80% extraction. @ 34¢		\$8.16
		<u>5.50</u>
	Profit	<u>2.66</u>

The present copper market is 46 ¢ per lb. It is unusually high and it is not generally considered that it will remain that high. The above estimate of 34¢ is based on a market price of about 38¢, the difference being in the freight, refining and marketing of the metal. And 38¢ is considered a conservative estimate for the future.

So it appears that anything over 1.0% copper content should be profitable ore, and all evidence indicates an ore mass considerably higher than that.

Recommendations.

A preliminary survey should be made to outline roughly the monzonitic intrusion, accurately map the present workings, and the topography in and about the mineralized area. Such a survey would cost about \$2000.

Then a tunnel site should be selected, as low as feasible, but within the ore formation, and a tunnel driven through the heart of the mineralization. A raise should be run to connect with the present winze (thus the need for the accurate survey) and two sets of long crosscuts run at right angles to the new tunnel. Such development work would total about 2500 ft and cost about \$30.00 per foot.

It would be difficult and expensive to drill this formation from the surface because of the broken condition. But it is my opinion that drilling would be feasible from such underground workings. Diamond drill holes could be put down either vertically or at desired angles, from points on this adit/crosscut pattern, to thoroughly prove the dimensions and assay value of the orebody. Probably 10,000 feet of such drilling should be planned at an estimated cost of \$5.00 per foot.

Such a program would explore and semi-develop an area containing over 20 million tons. I do not mean to infer that such should all be ore, but the outlines and value of a probable large orebody should be definitely determined.

Metallurgical tests should be made on the various characters of ore and continued as new ore is developed.

Conclusion.

The property has the earmarks of a large low grade porphyry copper deposit, and thoroughly warrants an exploratory and development program such as outline above.

Respectfully Submitted,

Chas. H. Dunning,
May 8, 1956.

Richard E. Mieritz
MINING CONSULTANT

February 22, 1957

De Soto Copper Corp.
Rm 340
411 North Central Ave.
Phoenix, Arizona

RECOMMENDED EXPLORATION
MADERA PROPERTY
GILA COUNTY, ARIZ.

Dear Mr. Frawley:

The following is my recommended exploration program for the Madera Property. It has been designed to primarily maintain a low expenditure, to obtain the maximum information on which to justify an indicated reserve and grade and to permit step phasing in the event early results are negative to our present thoughts.

Phase 1

Repair road, minimum cat rental	\$	300.00
Air, Water supply,		
Compressor, pipe, 2" air	max. \$	2500.00
1" water		
Diamond drill-600 foot min. AX @		
\$8.00/ft	\$	4800.00
Sampling, max. @ 50¢/ft	\$	300.00
Supervision and Expenses	\$	1000.00
Total Phase 1	\$	8900.00

Phase 2

Diamond drill-600 ft. AX @ \$8.00/ft	\$	4800.00
Sampling, max. @ 50¢/ft.	\$	300.00
Supervision and expenses	\$	1000.00
Total Phase 1 and 2	\$	11600.00

Phase 3

Diamond drill-400 ft. AX @ \$8.00/ft.	\$	3200.00
Sampling, max. @ 50¢/ft.	\$	200.00
Supervision and expenses	\$	650.00
Total Phase 1 to 3	\$	19050.00
Say	\$	20000.00

Phase one would include drilling two holes about 500 feet in from the portal, one crosscutting the schistosity to the right and one to the left. If the suspected mineralization did not come up to expectancy, the program could be abandoned at this point.

-2-

If phase one gave fine results, phase two should be completed by drilling two holes in each direction from the drift about 250 feet in from the portal. Similarly if this phase falls off, it is doubtful that phase three should be completed. Phase three should be completed if phase two is successful.

An expanded program can be more fully evaluated upon completion of the previous three successful phases.

I recommend the above program be put into operation as soon as time permits.

Very truly yours,

cc

R. E. Mieritz

Richard H. Mieritz

MINING CONSULTANT

February 22, 1957

De Soto Copper Corp.
Rm 340
411 North Central Ave.
Phoenix, Arizona

Madera Property
Gila County, Arizona

Dear Mr. Frawley:

Accompanied by Messrs. Turley and Ellis, I visited the Madera Property in Gila County, Arizona. The short examination was completed on February 16, 1957.

The property is located about 7 airline miles southwest of Miami and about the same distance north-east of Ray and in an area of considerable mineralization. The country rock is primarily the Pinal schist with extrusive granitic igneous rocks to the east.

It is my opinion the property should be optioned if a satisfactory deal is possible. With a minimum exploration program and expense, a low grade (.8 to 1.0%) disseminated ? copper reserve of considerable magnitude could be inferred, possibly indicated.

The property itself is developed by a 600 foot adit, a 40 foot cross-cut, a 65 foot interior shaft plus some stoping on a well mineralized fissure.

The examination revealed the possibility of disseminated copper within the schist zone. Although the drift parallels the schistosity, the previous sampling of the adit on the right wall indicates the presence of copper mineralization at a remarkable consistent level gradewise. The crosscut to the east also maintains such mineralization. Whether this mineralization will crosscut the schist to any great extent must be determined by some drilling.

It is my thought that four well spaced drill holes from the drift, two to the east and two to the west would either justify additional drilling or kill the project with a minimum expenditure. These flat angle holes should be drilled approximately

-2-

250 feet and 500 feet from the portal of the adit. These holes should approximate a 300 foot total depth. A minus 45° angle hole should also be drilled approximately 300 feet from the portal and in an easterly direction as a crosscutting and depth intersecting objective. This hole could assume a 400 foot depth.

The entire project should not exceed a \$20,000 expenditure including drill costs, sampling and assaying, supervision and expenses and necessary equipment rental for air and water. A small amount of road work might be necessary. A spring of border line capacity could possibly supply the required demand for drilling, is located a hundred feet or so below the portal of the adit.

Mr. Manning Cox had previously examined the property and thought well of it as I do. Two samples were assayed for copper. Sample M-1 is a scoop sample from the dump and M-2 consisted of small hand samples or specimens of the "deadest" rock from the adit. The results are as follows:

M-1 ---	0.54%
M-2 ---	0.06%

The copper content of the samples and the material in the adit is predominantly sulphides. The main fissure itself does carry some oxide copper.

This type prospect could be turned quite easily if the tonnage and grade would uphold itself.

Very truly yours,

R. E. Mieritz

cc

Richard E. Mieritz

MINING CONSULTANT

March 10, 1957

Mr. E. G. Frawley
Rm 340
411 North Central Ave.
Phoenix, Arizona

Madero Prospect
Gila County, Arizona

Dear Mr. Frawley:

Since you have approved early exploration of the Madero Prospect, the wheels have been turning in that direction.

Boyles Bros. Drilling Company was contacted for their drilling prices on the basis of their furnishing the necessary drilling equipment etc, plus the required air power, air and water lines and obtaining the water and bringing to the mine, or in other words, the complete job.

The attached letter from Mr. J. Roberts of Boyles Bros. is self explanatory. I am sure you will feel as I that these prices and conditions are extremely satisfactory. As a result I have advised Mr. Roberts to proceed as soon as possible.

Mr. Roberts advised me this date that he will start to mobilize on Tuesday, March 12. Two days will be required to move in and set up, thus, drilling will commence on Thursday of this week.

Arrangements will be made with Magma Copper Assay Office to assay our samples for total copper. The price will be one dollar per sample. Results of samples brought in in the morning will be out the same afternoon. Control will therefore be very good.

My assistant will be "on the ground" to supervise the operation, prepare the core etc. Some temporary help may be required.

I will prepare some core boxes to be used on the project since there is not ample time to have same carpenter prepare same. We shall only need two or three for this project. I have also ordered 1000 cardboard core boxes for use on this project and also on the De Soto and Blue Bell.

Madero Prospect

March 10, 1957

-2-

The pickup truck was obtained and my assistant will be using same on the Madero Project. Both he and I are, we believe, easy on vehicles and not in the habit of mistreating same, particularly the property of someone else.

You will be advised of the progress made at the project by a semi-monthly progress report, the first of which will be for the period to March 15th.

Sincerely yours,

cc:ManningCox

R. E. Mieritz

Richard E. Mieritz

MINING CONSULTANT

March 13, 1957

Mr. E. G. Frawley
Room 340
411 North Central Ave.
Phoenix, Arizona

MADERO PROJECT
PROGRESS REPORT
March 1 to 15, 1957

Dear Mr. Frawley:

Herewith is a semi-monthly progress report covering activities of the project for the period March 1 to 15, 1957.

GENERAL:

Since acquisition of the property we have done much towards getting the project under way. Preliminary work such as geologic mapping, sample equipment procurement and map preparation have been accomplished.

A representative of Boyles Bros. drilling company visited the property in order to provide us a firm bid on a drilling rate per foot and any other costs necessary for them to complete the work of drilling the required holes.

GEOLOGIC MAPPING:

The 600 foot adit has been Brunton-tape surveyed and mapped geologically. A map has been prepared of same.

A geologic mapping of the surface is being continued as time permits.

DIAMOND DRILLING:

The drill crews moved into the property on Thursday of this past week and started to drill the west hole at a small minus angle. The direction of this hole is 3.72° W. and is about 10 to 15 feet from the face of the adit.

The sampling procedure used here will approximate that which has been outlined for the De Soto work as described in my March 10, 1957 report on the De Soto Exploration.

Very truly yours,

cc: Manning Cox

R. E. Mieritz

STURTEVANT MILL COMPANY

PARK AND CLAYTON STREETS
DORCHESTER, BOSTON 22, MASS.

CABLE ADDRESS "EMERYSTONE" BOSTON

ACCEPTANCES, PAYMENTS AND SETTLEMENTS MADE ONLY AT BOSTON OFFICE

AIR MAIL

March 18, 1957

Mr. R.E.Mieritz
307 East Indian School Road
Phoenix, Arizona

Dear Sir:

We thank you for your telegram of March 18, covering parts for Jaw Crusher.

The Serial Number you referred to is for a 2 x 6 Jaw Crusher furnished in 1908 but you also stated it is a 2 x 4 machine and therefore we are at a loss to know what machine you have. # 0253

We are enclosing drawings 1006 of the 2 x 4 Crusher and Drawing 83 for the 2 x 6 Crusher from which you can properly identify your machine and also the parts you require to repair your Crusher.

Very truly yours,

STURTEVANT MILL COMPANY

D.E. Morrison

D.E. Morrison - Order Dept.

DEM G

Drawings 1006
83

Richard E. Mieritz

MINING CONSULTANT

March 28, 1957

Mr. Lawrence D. Sheldon
Box 1685 Hackney Ave.
Globe, Arizona

Dear Larry:

As a reminder please send in your time card on the morning of the 30th and also on the morning of the 14th each month so we will receive it in short order so we can return to you the check for your time.

Also I would like you to call me collect at my home phone on the night of the 31 of this month to advise me the depth of the hole at the end of night shift on the 30th. I will need this for my report. My home phone is Crestwood 4-6950. Call collect between 8:00 and 9:00 P.M. I will also need this information on the 16th of each month and the end of each month.

One other thing, the assayer complained about the amount of grease on the core and in the sludge. The drillers like to use grease in their drilling. Would you please advise them that I have asked you to tell them to eliminate the grease. The use of grease causes havoc with the assaying.

If at anytime you need us urgently, call me at home or at the office. You might give us a telephone number at which we may be able to reach you or leave word for you to call us.

Sincerely yours,

R. E. Mieritz

at Tucson, Arizona
March 21, 1957

Memorandum for R. E. Mieritiz:
Subject: Madero Exploration

For the purpose of a record I wish to set down the things we discussed in connection with Madero Exploration.

1- Claims- Ellis was to stake the north open ground in the name of Turley for protection to this deal. If he objects to staking them in Turleys name, stake them in yours and assign to De Soto Copper.

2- Drilling- I think the two west holes have somewhat better chance than the east holes but think one east and one west should first be drilled. Sludge must be caught but can be discarded where core recovery in terms of five or ten foot runs is above say 75%. I think that composites on Moly, gold and silver for say each 50 foot section will suffice and total copper in not over ten foot runs. There is no need to prepare a graphic core log such as you have previously done in churn drilling. Be sure that in splitting the core the man uses a little judgement to roughly split the visible mineralizaion. I understand you plan to save one half the core in marked and sealed boxes. The other half may be bucked down thru a pulverisizer and then re split for assaying and checks. The assayer should be instructed to save all rejects for later metallurgical work.

3- Mapping - Mr. Puttuck ought to get a compass- tape survey of the area immediately over the tunnel to tie in the mineralized outcrops , especially along the old Miami road and the Maimi churn drill hole. He ought to extend this coverage to include the area where he has noted mineralization in the Madero Diorite. Either you or I ought to discuss this project with Nels Petersen of the U. S. G. S. at Globe. With Frawleys and Ellis permission we ought to offer the drill results to him, not as a matter of trading but of cementing good relations for future information.

Unless you disagree with with these plans, in which case please talk it over with me, I will expect you to carry them out.

Sincerely,



Manning W. Cox , for
WISSER AND COX

CC: EGERAWLEY

Richard E. Mieritz

MINING CONSULTANT

April 1, 1957

Mr. E. G. Frawley
Rm. 340
411 North Central Ave.
Phoenix, Arizona

MADERO PROJECT
PROGRESS REPORT
March 15 to 30, 1957

Dear Mr. Frawley:

Herewith is the semi-monthly report covering activities of the project for the above noted period.

The only activity of concern is the diamond drilling now in progress.

DIAMOND DRILLING

After a short delay, actual drilling of hole No. 1 was started on March 23, 1957. Hole No. 1 is being drilled in a N. 72° E. direction at a minus 4 degree angle at a station about 10 feet back of the face of the 600 foot adit. This hole is being drilled approximately at right angles to the strike foliation of the mineralized schist.

Depth of the hole at the end of the period was 210 feet.

Previous Total	0 feet	210	
Advance for period	<u>210 feet</u>	sh 11-1	210
Total footage to date	210 feet	11-2	<u>270</u>

DIAMOND DRILL HOLE No. 1

The entire advance for the period has been limited to this hole.

The hole was collared BX size and reduced to AX size at 10 feet. Core recovery varies considerably, from 100 percent to as low as 12 percent. Although I have not arithmetically averaged the recovery, an average of 50 to 55 percent is indicated on the attached assay-core recovery log.

The mineralization thus far penetrated is erratic and is primarily concentrated on fine hair line fractures and to a lesser degree as disseminations. The hole thus far proves that mineralization does extend to some breath but its tenure is presently sub-marginal.

Apr. 1, 1957

-2-

An arithmetic average of the core assays for the first 160 feet indicates approximately 0.4% copper content. Only a guess could be made as to the ratio of oxide to sulphide copper thus far encountered.

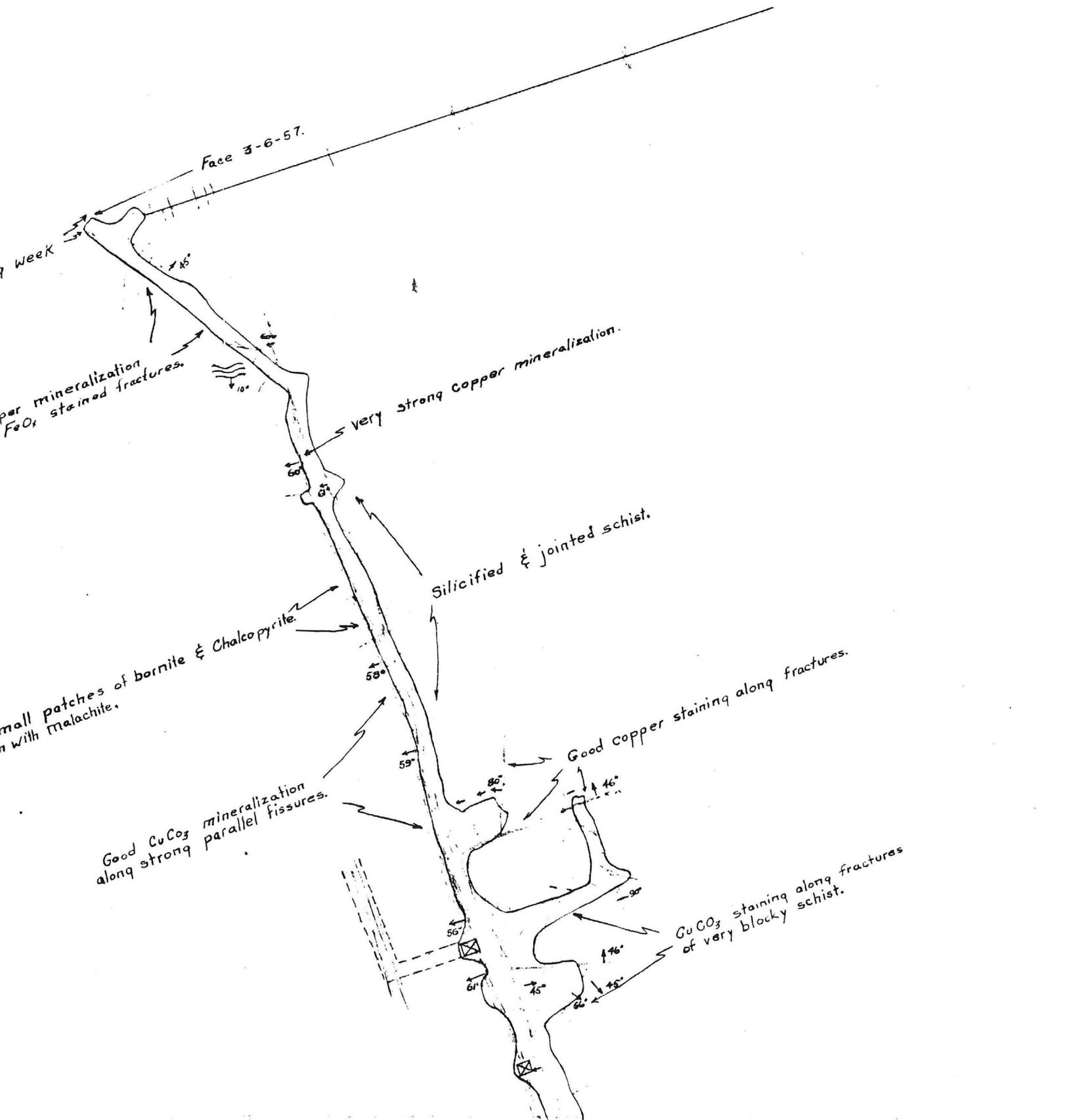
A complete analysis will be made upon completion of the hole.

The attached map and assay schedule will indicate the progress made.

Very truly yours,

R. E. Mieritz

cc:Manning Cox



Core %-coppe
 Rec. Core Slag.

Madero - Hole No 1

Core	%-coppe	Slag
0.18	5	
0.40	10	
0.20	15	
1.76	20	
0.22	25	
0.36	30	
0.40	35	
0.62	40	0.80
0.22	40	0.80
0.12	45	0.80
0.16	50	0.55
	55	
0.46	60	0.45
0.60	65	0.50
0.08	70	0.35
0.54	75	0.25
0.44	80	0.30
0.44	85	0.94
0.40	90	0.88
0.30	95	0.46
0.26	100	0.76
	105	
0.29	105	
0.20	110	
	115	0.58
0.44	115	0.58
	120	0.54
0.18	125	
0.10	130	
0.16	135	
0.08	135	
0.16	140	
0.30	145	
0.24	150	
0.26	155	
	160	
	165	
	170	
	175	
	180	
	185	
	190	
	195	
	200	
	205	
	210	
	215	
	220	
	225	
	230	
	235	
	240	
	245	
	250	
	255	
	260	
	265	
	270	
	275	
	280	
	285	
	290	
	295	
	300	

Richard E. Mieritz

MINING CONSULTANT

April 22, 1957

Mr. E. G. Frawley
Room 340
411 North Central Ave.
Phoenix, Arizona

MADERO PROJECT
PROGRESS REPORT
April 1 to 15, 1957

Dear Mr. Frawley:

Herewith is the semi-monthly report covering activities of the project for the above noted period.

Activity on the project during the period is concerned with diamond drilling of holes M-1 and M-2.

DIAMOND DRILLING:

Drill hole M-1 was completed on April 4th at a depth of 300 feet. Drill hole M-2 was started on the 6th of the month and advanced to a depth of 248 feet by the end of the period. Hole M-2 is being drilled at a minus 4° in a S. 72° W. direction approximately at right angles to the foliation of the mineralized schist.

The following table indicates the footage drilled during the period.

Previous total - M-1	210 feet
Advance for period M-1	90 feet
" " " M-2	248 feet
Total footage to date	<u>548 feet.</u>

DIAMOND DRILL HOLE M-1

This hole was collared at a flat angle in the east wall of the drift a few feet back of the adit face. The objective was to test the strength of mineralization which was thought to exist as disseminations and as crack or fracture fillings in the schist. The copper mineralization encountered thus far is primarily associated with thin quartz stringers which tend to cut the foliation at a slight angle. Sulphides of copper and iron are minerals present. Occasionally some oxides of copper are visible.

The attached assay-core recovery log indicates mineralization was encountered but the strength of same

does not measure up to what might be considered ore material. The arithmetic average of 58 core samples is .29% copper, that for 45 sludge samples is .50% copper and the combined core-sludge arithmetic average for the entire hole is .38% copper.

DIAMOND DRILL HOLE M-2 :

This hole is being drilled to test the strength of copper mineralization in the schist area to the west of the adit. Assay results and visual examination of the core indicate mineralization of a similar magnitude exists in this area also. Here again the strength is not sufficient to be considered ore material. The 35 core samples representing 210 feet of completed hole average arithmetically .35% copper while 30 sludge samples representing 203 feet of hole arithmetically average .43% copper. The combined core-sludge arithmetic average is .39% copper.

Since the material thus far encountered represents no ore material, no effort has been made to combine the core and sludge assays individually by one of the more accepted methods, such as Longyear's formula. This will however be done upon completion of the project and included in the final report.

The attached assay logs indicate the tenure of the mineralization encountered to date in the two drill holes.

Very truly yours,

cc: Manning Cox
Gene Turley

R. E. Mieritz.

Core of copper
 Rec. Core Slig.

Madero - Hole No 1

	0.18	5	
	0.40	10	
	0.20	15	No
	1.76	20	Sludge
	0.22	20	Samples
	0.22	25	
	0.36	30	
	0.40	35	
	0.62	40	0.80
	0.22	40	0.80
	0.12	45	0.80
	0.16	50	0.55
	0.16	55	
	0.46	60	0.45
	0.60	65	0.50
	0.08	70	0.35
	0.54	75	0.25
	0.44	80	0.30
	0.44	85	0.94
	0.40	90	0.88
	0.30	95	0.46
	0.26	100	0.76
	0.29	105	No
	0.20	110	Sludge
	0.44	115	Samples
	0.44	120	0.58
	0.18	125	0.54
	0.10	130	0.30
	0.10	135	0.22
	0.16	135	0.18
	0.08	140	0.18
	0.16	140	
	0.30	145	No
	0.24	150	Sludge
	0.24	150	Samples
	0.26	155	
	0.26	160	0.45
	0.30	165	No
	0.33	170	Sludge
	0.33	170	Samples
	0.25	175	0.25
	0.25	175	0.35
	0.15	180	0.30
	0.30	185	
	0.30	190	0.37
	0.80	195	0.45
	0.40	200	0.65
	0.25	205	0.50
	0.40	210	0.55
	0.27	215	0.75
	0.25	215	0.75
	0.20	220	0.65
	0.12	225	0.75
	0.15	230	0.50
	0.10	235	0.50
	0.30	240	0.55
	0.18	245	0.35
	0.12	250	0.35
	0.30	255	0.25
	0.15	260	0.45
	0.10	265	0.50
	0.15	270	0.45
	0.15	275	0.50
	0.12	280	0.55
	0.25	285	0.65
	0.20	290	0.50
	0.20	295	0.50
	0.20	300	0.45

Core % copper
 Rec. Core Slde.

	0.25	5	1.15
	0.95	10	1.15
	0.12	15	0.55
	0.35	20	0.40
	0.50	25	0.65
	0.30	30	0.60
	0.55	35	0.55
	0.15	40	0.55
	0.15	45	0.65
	0.15	50	0.45
	0.30	55	0.40
	0.20	60	0.40
	0.40	65	0.40
	0.40	70	0.50
	0.45	75	0.45
	0.30	80	0.45
	0.40	85	0.40
	0.40	90	0.40
		95	
	0.65	100	0.20
	0.25	105	0.30
	0.30	110	0.35
	0.32	115	
	0.45	120	0.30
	0.25	125	0.35
	0.20	130	0.25
	0.20	135	0.
	0.20	140	
	0.20	145	
	0.55	150	
	0.65	155	0.55
	0.30	160	0.45
	0.25	165	0.55
	0.40	170	0.35
	0.30	175	0.20
	0.25	180	0.20
	0.35	185	0.20
	0.50	190	0.20
	0.15	195	0.15
		200	
		205	
		210	
		215	
		220	
		225	
		230	
		235	
		240	
		245	
		250	
		255	
		260	
		265	
		270	
		275	
		280	
		285	
		290	
		295	
		300	

Madero - Hole No. 2

35/1229

20 1205

200 15 2520

70%

25M 11-56

Boyles Bros. Drilling Compan
SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Day Date 3-13-57
Hole No. _____ Location _____
Depth at end of shift - - - - - feet
Depth at beginning of shift - - - - - feet
Distance drilled - - - - - feet
Amount of core recovered - - - - - feet
Distance reamed for casing - - - - - feet
.....Casing put in - - - - - feet
.....Standpipe put in - - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Cleared road of rocks
& unloaded equipment

Butler - Stewart
Operator.

Time Slip

Date 3-13 Shift Day Hole No. _____
Driller Butler - Stewart
Helper Lynch

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

25M 11-56

Boyles Bros. Drilling Compan
SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Day Date 3-14-57
Hole No. _____ Location _____
Depth at end of shift - - - - - feet
Depth at beginning of shift - - - - - feet
Distance drilled - - - - - feet
Amount of core recovered - - - - - feet
Distance reamed for casing - - - - - feet
.....Casing put in - - - - - feet
.....Standpipe put in - - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Carried part of
equipment into drift,
hauled compressor
had water line to
drill site.

Butler - Stewart
Operator.

Time Slip

Date 3-14 Shift Day Hole No. _____
Driller Butler - Stewart
Helper Lynch - Mr. Keenan

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

25M 11-56

Joyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Day Date 3-15-57
 Hole No. _____ Location _____
 Depth at end of shift - - - - - feet
 Depth at beginning of shift - - - - - feet
 Distance drilled - - - - - feet
 Amount of core recovered - - - - - feet
 Distance reamed for casing - - - - - feet
 _____ Casing put in - - - - - feet
 _____ Standpipe put in - - - - - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Repaired and laid
air-line to drill site.
Carried rest of equipment
to drill site.

Butler - Stewart
Operator.

Time Slip

Date 3-15 Shift Day Hole No. _____
 Driller Butler - Stewart
 Helper Synch - M. Remon

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

25M 11-56

Joyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Day Date 3-16-57
 Hole No. _____ Location _____
 Depth at end of shift - - - - - feet
 Depth at beginning of shift - - - - - feet
 Distance drilled - - - - - feet
 Amount of core recovered - - - - - feet
 Distance reamed for casing - - - - - feet
 _____ Casing put in - - - - - feet
 _____ Standpipe put in - - - - - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Finished setting up
and repaired lines.

Butler - Stewart
Operator.

Time Slip

Date 3-16-57 Shift Day Hole No. 6-39
 Driller Butler - Stewart
 Helper Lynch - M. Remon

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

Boyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Day Date 3-18-57
 Hole No. M-1 Location Madevo Prop
 Depth at end of shift - - - - - feet
 Depth at beginning of shift - - - - - feet
 Distance drilled - - - - - feet
 Amount of core recovered - - - - - feet
 Distance reamed for casing - - - - - feet
 Casing put in - - - - - feet
 Standpipe put in - - - - - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Tried to start supply pump I was unable to do so. Called Mech. no swing shift.

Butler
Operator.

Time Slip

Date 3-18 Shift Day Hole No. M-1
 Driller Butler
 Helper Lynch

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

Boyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Day Date 3-19-57
 Hole No. M-1 Location Madevo Prop
 Depth at end of shift - - - - - feet
 Depth at beginning of shift - - - - - feet
 Distance drilled - - - - - feet
 Amount of core recovered - - - - - feet
 Distance reamed for casing - - - - - feet
 Casing put in - - - - - feet
 Standpipe put in - - - - - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Mech. brought another pump out. Valves were stuck in it. Was able to get going for swing shift

Butler
Operator.

Time Slip

Date 3-19 Shift Day Hole No. M-1
 Driller Butler
 Helper Lynch

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Swing Date 3-19-57
Hole No. M-1 Location Madero Prop.
Depth at end of shift - - - - 19 feet
Depth at beginning of shift - - - - 0 feet
Distance drilled - - - - - 19 feet
Amount of core recovered - - - - 14 feet
Distance reamed for casing - - - - feet
AX Casing put in - - - - 10 feet
Standpipe put in - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL
0	10	10	BY
10	19	9	AX

REMARKS:
Collared hole at
10'

Stewart
Operator.

Time Slip

Date 3-19 Shift Swing Hole No. M-1
Driller Stewart
Helper McKenna

CHARGE NO.	HRS.	COMMENTS
1	8	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Day Date 3-20-57
Hole No. M-1 Location Madero - Prop
Depth at end of shift - - - - 55 feet
Depth at beginning of shift - - - - 19 feet
Distance drilled - - - - - 36 feet
Amount of core recovered - - - - 32 feet
Distance reamed for casing - - - - feet
Casing put in - - - - feet
Standpipe put in - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL
19	55	36	AX

REMARKS:

Butler
Operator.

Time Slip

Date 3-20 Shift Day Hole No. M-1
Driller Butler
Helper Bynek

CHARGE NO.	HRS.	COMMENTS
1	8	

25M 11-56

Boyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Swing Date 3-20-57
 Hole No. M-1 Location Madero-Prop
 Depth at end of shift - - - - 81 feet
 Depth at beginning of shift - - 55 feet
 Distance drilled - - - - - 26 feet
 Amount of core recovered - - 22 feet
 Distance reamed for casing - - feet
Casing put in - - feet
Standpipe put in - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL
55	81	26	AY

REMARKS:
 Helper dropped
 rod on driller's toe

Stewart
 Operator.

Time Slip

Date 3-20 Shift Swing Hole No. M-1
 Driller Stewart
 Helper McKennon

CHARGE NO.	HRS.	COMMENTS
1	8	

25M 11-56

Boyles Bros. Drilling Compan SALT LAKE CITY 15, UTAH Shift Report

Job De Soto - Miami No. 6-39
 Shift Day Date 3-21-57
 Hole No. M-1 Location Madero-Prop
 Depth at end of shift - - - - feet
 Depth at beginning of shift - - feet
 Distance drilled - - - - - feet
 Amount of core recovered - - feet
 Distance reamed for casing - - feet
Casing put in - - feet
Standpipe put in - feet
 Cemented - - - - - feet
 Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: Had to go to Xmas
 after short rods "etc" to
 drill slusher pin hole. Helper
 fixed flat on power wagon
 & cleaned up.
 No night shift. Dr.
 would not release Stewart
Burles
 Operator.

Time Slip

Date 3-21 Shift Day Hole No. M-1
 Driller Burles
 Helper Lynch

CHARGE NO.	HRS.	COMMENTS
5	8	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Day Date 3-22-57
Hole No. M-1 Location Madevo Probe
Depth at end of shift - - - - - feet
Depth at beginning of shift - - - - - feet
Distance drilled - - - - - feet
Amount of core recovered - - - - - feet
Distance reamed for casing - - - - - feet
.....Casing put in - - - - - feet
.....Standpipe put in - - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS: 4 hrs. repairing pump
(Valves stuck) 4 hrs. repairing
water rail line.

Butler
Operator.

Time Slip

Date 3-22 Shift Day Hole No. M-1
Driller Butler
Helper Byrnes

CHARGE NO.	HRS.	COMMENTS
<u>5</u>	<u>8</u>	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Swing Date 3/22/57
Hole No. Location
Depth at end of shift - - - - - 99 feet
Depth at beginning of shift - - - - - 81 feet
Distance drilled - - - - - 18 feet
Amount of core recovered - - - - - 16 feet
Distance reamed for casing - - - - - feet
.....Casing put in - - - - - feet
.....Standpipe put in - - - - - feet
Cemented - - - - - feet
Drilled Cement - - - - - feet

Geology

FROM	TO	FEET	MATERIAL
<u>81</u>	<u>99</u>	<u>18</u>	<u>AX Core</u>

REMARKS:

Hewart
Operator.

Time Slip

Date 3/22/57 Shift Swing Hole No.
Driller Hewart
Helper Harold

CHARGE NO.	HRS.	COMMENTS
<u>1</u>	<u>8</u>	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job POST MIAAMI No. _____
Shift DAY Date 3-23-57
Hole No. _____ Location _____
Depth at end of shift - - - - 123 feet
Depth at beginning of shift - - 121 feet
Distance drilled - - - - - 2 feet
Amount of core recovered - - 10 3/4 feet
Distance reamed for casing - - _____ feet
Casing put in - - _____ feet
Standpipe put in - _____ feet
Cemented - - _____ feet
Drilled Cement FROM 111-121-10 feet

Geology

FROM	TO	FEET	MATERIAL
121	123	2	AX CORE

REMARKS:

AIR HOSE BROKE
REPAIRED AT 3.45

[Signature]
Operator.

Time Slip

Date 3-23-57 Shift DAY Hole No. _____
Driller [Signature]
Helper [Signature]

CHARGE NO.	HRS.	COMMENTS
1	5	
3	3	
<hr/>		
	8	

Boyles Bros. Drilling Compan

SALT LAKE CITY 15, UTAH
Shift Report

Job De Soto - Miami No. 6-39
Shift Swing Date 3-25-57
Hole No. M-1 Location Madero - Projo
Depth at end of shift - - - - _____ feet
Depth at beginning of shift - - _____ feet
Distance drilled - - - - - _____ feet
Amount of core recovered - - _____ feet
Distance reamed for casing - - _____ feet
Casing put in - - _____ feet
Standpipe put in - _____ feet
Cemented - - _____ feet
Drilled Cement - - - - - _____ feet

Geology

FROM	TO	FEET	MATERIAL

REMARKS:

No work as I
could not get repairs
for Air hose.

[Signature]
Operator.

Time Slip

Date _____ Shift _____ Hole No. _____
Driller _____
Helper _____

CHARGE NO.	HRS.	COMMENTS

De Soto Copper Corp
 Rm. 340
 411 - M. 23rd St.
 Phoenix, Ariz.

Magma-Copper Company
 ASSAY CERTIFICATE "A"

Date 3/28/57

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
1	Core Hole #1 0-	0.18						
2	" " 10	0.40						
3	" " 15	0.20						
4	" " 19	1.76						
5	" " 24	0.22						
6	" " 29	0.36						
7	" " 34	0.40						
8	" " 39	0.62						
9	" " 43	0.22						
10	" " 48	0.12						
11	" " 55	0.16						
12	" " 62	0.46						
13	" " 66	0.60						
14	" " 71	0.08						
15	Sludge " 34-39	0.80						
16	" " 43	0.80						
17	" " 48	0.80						
18	" " 55	0.55						18

Madero

CHIEF CHEMIST

De Soto Copper Co.
 Rm - 340
 411. n. Central
 Phoenix, Arizona

Magma Copper Company
 ASSAY CERTIFICATE "A"

Date 3-29-57

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
Sample #24	Cone No. #1-71-76	0.54						
25	" " 81	0.44						
26	" " 86	0.44						
27	" " 90	0.40						
28	" " 95	0.30						
29	" " 103	0.26						
30	" " 108	0.29						
31	" " 111	0.20						
32	" " 124	0.44						
33	" " 126	0.18						
34	" " 131	0.10						
35	" " 136	0.16						
36	" " 139	0.08						
37	" " 143	0.16						
38	" " 151	0.30						
39	" " 154	0.24						
40	" " 161	0.26						
41	Sludge 81-86	0.94						18

Maduro

M. E. Lewis
 CHIEF CHEMIST

De. Soto Copper Co.
 Rm-340
 411- n. Central
 Phoenix Ariz

MAGMA COPPER COMPANY
 MILL ASSAY CERTIFICATE

DATE 4-11-57

NO. <i>Scraps</i>	LOCATION	CU. %	AG. OZ.	AU. OZ.	CA.O %	SI.O2 %	%MOISTURE	REMARKS
73	Hole M1 Sludge 232-234	0.25						
75	" " Core 209-214	0.27						
76	" " " 214-218	0.25						
77	" " " 218-221	0.20						
78	" " " 221-226	0.12						
79	" " " 226-232	0.15						
80	" " " 232-236	0.10						
81	" " " 236-241	0.30						
82	" " " 241-246	0.18						
83	" " " 246-251	0.12						
84	" " " 251-258	0.30						
85	" " " 258-263	0.15						
86	" " " 263-269	0.10						
87	" " " 269-274	0.15						
88	" " " 274-279	0.15						
89	" " " 279-284	0.12						

M-16

M. B. Gami

ASSAYER

De Soto Copper Co
 Rm. 340
 411-7 Central.
 Phoenix Ariz.

MAGMA COPPER COMPANY
 MILL ASSAY CERTIFICATE

DATE 4-11-57

NO. Sample	LOCATION	CU. %	AG. OZ.	AU. OZ.	CA.O %	SI.O2 %	%MOISTURE	REMARKS
90	HMI Core 284-289	0.25						
91	" " 289-290	0.20						
92	" " 295-300	0.20						
94	Hole M2 " 0-10'	0.25						
95	" " 10'-15'	0.95						
96	" " 15'-22'	0.12						
97	" " 22-28	0.35						
98	" " 28-32	0.55						
99	" " 32-38	0.30						
100	" " 38-43	0.55						
101	Hole M1 Shdgs 241-246	0.35						
102	" " 246-257	0.35						
103	" " 257-258	0.25						
104	" " 258-263	0.45						
105	" " 263-269	0.50						
106	" " 269-274	0.45						M-16

M. B. Harris
 ASSAYER

De Soto Copper Co.
 Rm. 340
 411 - n. Central
 Phoenix, Ariz.

Magma Copper Company
 ASSAY CERTIFICATE "A"

Date 4-18-57

No. Sample	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
128	M-2-Sludge - 10-15	1.15						
129	" 15-22	0.53						
130	" 22-28	0.40						
131	" 28-32	0.65						
132	" 32-37	0.60						
133	" 37 -42	0.53						
134	" 42-47	0.53						
135	" 47 -51	0.65						
136	" 51-56	0.45						
137	" 56-61	0.40						
138	" 61-66	0.40						
139	" 66-71	0.40						
140	" 71-76	0.50						
141	" 76-85	0.45						
142	" 85-88	0.45						
143	" 88-97	0.40						
144	" 97-105	0.20						M-18
145	" 105-110	0.30						

M. B. Davis
 CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

De Soto Copper Co
Rm- 340
411 - n Central
Phoenix.

Date 4-18-57

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
146	Hile M-2-Sludge-110-116	0.35						
148	" " 121-129	0.30						
149	" " 129-136	0.35						
150	" " 136-141	0.25						
152	" " 156-163	0.55						
153	" " 163-164	0.45						
154	" " 164-172	0.55						
155	" " 172-180	0.35						
156	" " 180-185	0.20						
157	" " 185-190	0.20						
158	" " 190-194	0.20						
159	" " 194-203	0.15						
160	" One - 141-145	0.20						
161	" " 145-150	0.20						
162	" " 150-156	0.55						
163	" " 156-163	0.65						
164	" " 163-169	0.30						M-18
165	" " 169-172	0.25						

M. B. Gami
CHIEF CHEMIST

De Soto Copper Co
 Rm - 340
 411- N. Central
 Phoenix, Ariz

Magma Copper Company
 ASSAY CERTIFICATE "A"

Date 4-22-57

Sample No.	LOCATION & REMARKS	CU %	AG OZ	AU OZ				
151A	Wk M ₂ Sludge 150-156	0.65						
150A	" " 141-145	0.30						
147	" " 116-121	0.45						
151m-2	" " 145-150	0.35						
172	" " 203-210	0.20						
173	" " 210-216	0.25						
174	" " 216-221	0.25						
175	" " 221-226	0.20						
176	" " 226-231	0.25						
177	" " 231-238	0.25						
178	" " 243-248	0.25						
179	" " 248-254	0.30						
180	" " 254-258	0.30						
181	" " 258-263	0.25						
182	" " 263-268	0.35						
183	" " 268-271	0.40						
184	" " 271-276	0.25						
185-m-2	276-281	0.25						

M 18

M. B. Hani
 CHIEF CHEMIST

De. Soto Coppaco
 Rm - 340
 411 - N. Central
 Phoenix, Ariz.

Magma Copper Company
 ASSAY CERTIFICATE "A"

Date 4-22-57

Sample No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
54	Chip every 5' 1/2" x "600" Level	0.20						
189	Hole M ₂ Core 210-216	0.25						
190	" " 216-221	0.15						
191	" " 221-226	0.25						
192	" " 226-231	0.35						
193	" " 231-238	0.40						
194	" " 238-243	0.40						
195	" " 243-248	0.20						
196	" " 248-254	0.25						
197	" " 254-258	0.40						
198	" " 258-263	0.20						
199	" " 263-268	0.15						
200	" " 268-271	0.20						
201	" " 271-276	0.25						
202	" " 276-281	0.20						
203	" " 281-289	0.15						
204	" " 289-297	0.15						
205	" " 297-301	0.10						

Det. 1
 M - 17
 18

W-B Lewis
 CHIEF CHEMIST

De Soto Copper Co
Rm. 340
411 - N. Central
Phoenix,

Magma Copper Company
ASSAY CERTIFICATE "A"

Date 4-24-52

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
6-1		0.25						
6-2		0.10						
6-3		0.25						
6-4		0.40						
6-5		0.75						
6-6		0.65						
6-7		0.70						
6-8		0.20						
6-9		0.80						
6-10		0.40						
6-11		0.30						
6-12		0.50						
6-13		0.60						
6-14		0.15						
6-15		0.10						
6-16		1.15						
6-17		0.25						
6-18		1.70						

De Soto
18

M. B. Mann
CHIEF CHEMIST

De Soto Copper
Rm 340
411 - W. Central
Phoenix,

Magma Copper Company
ASSAY CERTIFICATE "A"

Date 4-24-57

No.	LOCATION & REMARKS	CU %	AG OZ	AU OZ				
6-19		2.80						
6-20		1.15						
6-21		0.15						
6-22		0.10						
6-23		0.10						
6-24		0.30						
6-25		0.55						
6-26		0.75						
6-27		0.15						
6-28		1.00						
6-29		0.25						
6-30		0.10						
6-31		0.15						
6-32		0.20						
6-33		0.15						
6-34		0.20						
6-35		0.15						
6-36		0.10						

De Soto
18

M. B. Davis
CHIEF CHEMIST

De Soto Copper Co.
 Rm - 340
 411-77 Central
 Phoenix, Ariz.

Magma Copper Company
 ASSAY CERTIFICATE "A"

Date 4-18-52

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
56	Half M1 - sludge	121-126	0.30					
57		126-131	0.22					
58		131-136	0.18					
59		136-139	0.18					
60		154-161	0.45					
61		167-172	0.25					
62		172-176	0.35					
63		176-184	0.30					
64		184-191	0.37					
65		191-197	0.45					
66		197-201	0.65					
67		201-205	0.55					
68		205-210	0.55					
69		210-218	0.75					
70		218-221	0.65					
71		221-226	0.75					
72		226-232	0.50					
73		232-236	0.50					

M-18

M. B. Davis
 CHIEF CHEMIST

De Soto Copper Co.

Rm. 340 -

411 N. Central

Phoenix, Ariz.

Magma Copper Company

ASSAY CERTIFICATE "A"

Date 5-1-57

Sample No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
6-49		0.10						
6-50		0.10						
6-51		0.10						
6-52		0.10						
6-53		0.10						
6-54		0.10						
6-55		0.10						
6-56		0.05						
6-57		0.05						
6-58		0.05						
6-59		0.60						
6-60		2.85						
6-61		3.60						
6-62		1.20						
6-63		0.45						
6-64		1.45						
6-65		0.90						
6-66		0.40						

R
18

M. B. Harni
CHIEF CHEMIST

De. Soto Copper Co
Rm-340
411-77 Central
Phoenix, Ariz.

Magma Copper Company
ASSAY CERTIFICATE "A"

Date 5-1-52

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
6-67		1.00						
6-68		0.10						
6-69		0.10						
6-70		0.15						
6-71		0.10						
6-72		0.10						
6-73		0.15						
6-74		0.05						
6-75		0.10						
6-76		0.10						
6-77		0.10						
6-78		0.15						
6-79		0.10						
6-80		0.10						
6-81		0.10						
6-82		0.05						

D
16

M. B. Kani
CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

Desota Copper Co.

Date 1-13-52

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
206	DD Hole M-3 ^{From To} 00'-10'	0.30						
207	10'-14'	0.20						
208	14'-18'	0.15						
209	18'-27'	0.15						
210	27-32	0.20						
211	32'-40'	0.35						
212	40'-46'	0.15						
213	46'-51'	0.15						
214	51'-56'	0.20						
215	56'-62'	0.15						
216	62'-66'	0.15						
217	66'-70'	0.15						
218	70'-74'	0.20						
219	74'-79'	0.25						
220	79'-87'	0.40						
221	87'-92'	0.20						
222	92'-100'	0.30						
223	100'-107'	0.45						

Madero Mine

M. G. Lewis
CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

Desoto Copper Co.

Date 5-13-52

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
224	DD Core M-3 ^{From To} 107'-110'	0.41						
225	110'-115'	0.31						
226	115'-120'	0.30						
227	120'-125'	0.10						
228	125'-130'	0.31						
229	130'-135'	0.30						
230	135'-142'	0.35						
231	142'-149'	0.15						
232	149'-154'	0.20						
233	154'-160'	0.25						
234	160'-167'	0.15						
235	167'-172'	0.30						
236	172'-176'	0.30						
237	176'-182'	0.10						
238	182'-189'	0.20						
239	189'-190'	0.65						
#6-83	5' Channel Main Hoopage	0.20						
6-84	Level	0.30						

M-30
M-110

Desoto Mine

M. B. Blain

CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

De Soto Cu. Co.

Date *5-13-57*

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
<i>#6-85</i>	<i>5' channel top No</i>	<i>0.50</i>						
<i>6-86</i>	<i>Adit. Main x cut</i>	<i>0.15</i>						
<i>6-87</i>		<i>0.15</i>						
<i>6-88</i>		<i>0.25</i>						
<i>6-89</i>		<i>0.20</i>						
<i>6-90</i>		<i>0.15</i>						
<i>6-91</i>		<i>0.30</i>						
<i>6-92</i>		<i>0.75</i>						
<i>6-93</i>		<i>0.75</i>						
<i>6-94</i>		<i>0.20</i>						
<i>6-95</i>		<i>0.25</i>						
<i>6-96</i>		<i>0.15</i>						
<i>6-97</i>		<i>0.15</i>						
<i>6-98</i>		<i>0.10</i>						
<i>6-99</i>		<i>0.15</i>						
<i>6-100</i>		<i>0.10</i>						
<i>6-101</i>		<i>0.10</i>						
<i>6-102</i>		<i>0.10</i>						

De Soto Mine

M. Harris (RHS)
CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

DE SOTO Cu. Co.

Date 5-13-57

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
#6-104	5' channel No. 2 dit	0.10						
6-105	Main xcut	0.10						
6-106		0.20						
6-109		0.10						
6-127		0.15						
6-128		0.10						
6-129		0.10						
6-103		0.10						
6-107		0.10						
6-108		0.05						
6-110		0.05						
6-111		0.10						
6-112		0.10						
6-113		0.15						
6-114		0.10						
6-115		0.10						
6-116		0.05						
6-117		0.05						

M. Harris

CHIEF CHEMIST

Magma Copper Company

ASSAY CERTIFICATE "A"

De Soto Cu. Co.

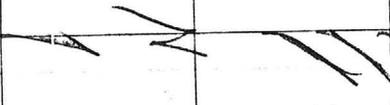
Date 5-14-57

No.	LOCATION & REMARKS	CU %	AG OZ.	AU OZ.				
#6-118	5' channel flat No. 1 dit	0.10						
6-119	main cut	0.05						
6-120		0.10						
6-122		0.10						
6-123		0.05						
6-124		0.10						
6-125		0.10						
6-126	128	0.10						
6-130		0.05						
6-131		0.05						
6-132		0.10						
6-135		0.10						
6-136		0.10						

De Soto
11/11

M. Harris
CHIEF CHEMIST

Scale 1" = 100'



Final Sketch
of the
Diorite

%
Core % coppe
Rec. Core Sldg.

Madero - Hole No. 1

Rec.	Core	Sldg.
	0.18	.5
	0.40	10
	0.20	15
	1.76	20
	0.22	25
	0.36	30
	0.40	35
	0.62	40
	0.22	45
	0.12	50
	0.16	55
	0.46	60
	0.60	65
	0.08	70
	0.54	75
	0.44	80
	0.44	85
	0.40	90
	0.30	95
	0.26	100
	0.29	105
	0.20	110
	0.44	115
		120
	0.18	125
	0.10	130
	0.16	135
	0.08	140
	0.16	145
	0.30	150
	0.24	155
	0.26	160
	0.30	165
	0.32	170
	0.25	175
	0.15	180
		185
	0.30	190
	0.80	195
	0.40	200
	0.25	205
	0.40	210
	0.27	215
	0.25	220
	0.20	225
	0.12	230
	0.15	235
	0.10	240
	0.30	245
	0.18	250
	0.12	255
	0.30	260
	0.15	265
	0.10	270
	0.15	275
	0.15	280
	0.12	285
	0.25	290
	0.20	295
	0.20	300

No
Sludge
Samples

No
Sludge
Samples

No
Sludge
Samples

No
Sludge
Samples

%
Core % copper
Rec. Core Sldg.

Madero - Hole No. 2

	0.25	5	1.15
	0.95	10	1.15
	0.12	15	0.55
	0.35	20	0.40
	0.50	25	0.65
	0.30	30	0.60
	0.55	35	0.55
		40	0.55
		45	0.55
	0.15	50	0.65
	0.15	55	0.45
	0.30	60	0.40
	0.20	65	0.40
	0.40	70	0.40
	0.40	75	0.50
	0.45	80	0.45
	0.30	85	0.45
	0.40	90	0.40
		95	
	0.65	100	0.20
	0.25	105	0.30
	0.30	110	0.35
	0.32	115	
	0.45	120	
	0.25	125	0.30
	0.25	130	0.35
	0.20	135	0.25
	0.20	140	0.
	0.20	145	
	0.55	150	
	0.65	155	0.55
	0.30	160	0.45
	0.25	165	0.55
	0.40	170	0.35
	0.30	175	0.20
	0.25	180	0.20
	0.35	185	0.20
	0.50	190	0.15
	0.15	195	
		200	
		205	
		210	
		215	
		220	
		225	
		230	
		235	
		240	
		245	
		250	
		255	
		260	
		265	
		270	
		275	
		280	
		285	
		290	
		295	
		300	

70%

Diamond Drill Log

Property — Modera Prospect
 Hole Location — Portal + 500' east wall
 D.D. Hole Number — M1
 Date — March 29, 1957

Sample Depth From To	Core Recovery	% Core Recovery	Sludge	Mineralization			Geology
				Cpy	cc	Py Mo Ox	
0.0' - 5.0'	4.5'	90.0%	None	↑			Highly silicified schist, having stringers of CuCo, CuFeS ₂ , FeOx & Mica. Very little dissemination of mineralization.
5.0' - 10.0'	5.0'	100.0%	None	↑			"
10.0' - 12.0'	0.8'	40.0%	None	↑			No disseminated mineralization visible.
12.0' - 15.0'	1.3'	43.3%	None	↑			Very silicified schist having few specks of CuCo, FeOx, CuFeS ₂ .
15.0' - 16.5'	0.4'	26.7%	None	↓			"
16.5' - 17.5'	0.5'	30.0%	None	↓			Good CuCo mineralization from 16.5' to 16.7'. FeOx & CuCo stringers, trace micaceous silicified schist. Very little Cu mineralization in FeOx stringers.
17.5' - 19.0'	0.6'	40.0%	None	↑			Good CuFeS ₂ & FeOx stringers in last 0.2' of core.
19.0' - 24.0'	4.2'	33.0%	None	↑			Few CuCo stringers in very silicified schist. Mineralization very sparse beyond 24.0'.
24.0' - 29.0'	2.4'	48.0%	None	↑			Very few CuCo specks in silicified schist.
29.0' - 34.0'	2.6'	12.0%	Sampled	↑			Very small stringers of CuFeS ₂ .
34.0' - 39.0'	0.8'	16.0%	Sampled	↑			"
39.0' - 43.0'	1.1'	37.5%	Sampled	↑			"
43.0' - 49.0'	2.1'	42.0%	Sampled	↑			Little FeOx mineralization & no Cu visible.
49.0' - 50.0'	0.3'	15.0%	Sampled	↑			Two small blue stringers & few specks CuCo.
50' - 55.0'	0.9'	13.0%	Sampled	↑			Very little CuCo, staining along joints.
55.0' - 58.5'	2.9'	33.0%	Sampled	↑			Few blebs of CuCo in silicified schist.
58.5' - 62.0'	2.6'	74.5%	Sampled	↑			FeOx stringers from 61.5' to 62.0' in almost micaceous silicified schist.
62.0' - 66.0'	1.8'	45.0%	Sampled	↑			One 0.03' stringer CuCo at 62.4' in micaceous silicified schist.
66.0' - 71.0'	1.6'	32.0%	Sampled	↑			Very silicified schist & somewhat micaceous.
71.0' - 76.0'	2.9'	60.0%	Sampled	↑			"
76.0' - 81.0'	3.8'	76.0%	Sampled	↑			Bad specks disseminated through very sil. schist probably FeOx.
81.0' - 86.0'	1.7'	35.0%	Sampled	↑			Very sil.
86.0' - 90.0'	3.5'	88.0%	Sampled	↑			"
90.0' - 95.0'	3.6'	71.0%	Sampled	↑			Core gets much darker at 94.0' = biotite & hornblende. Slightly more increase in biotite.
95.0' - 99.0'	4.0'	100.0%	Sampled	↑			Good copy in highly sil. biotite schist. 95.5' & 96.5'.
99.0' - 103.0'	3.0'	75.0%	Sampled	↑			Sparsely mineralized.
103.0' - 107.0'	4.5'	90.0%	Sampled	↑			Good copy from 105.0' to 107.5' in highly sil. schist.
107.0' - 111.0'	2.6'	97.0%	Sampled	↑			Very dark core - slightly sil.
111.0' - 121.0'	4.5'	45.0%	Sampled	↑			Some what sil. schist. Very coarse stringers cpy of little dis.
121.0' - 126.0'	4.4'	90.0%	Sampled	↑			"
126.0' - 131.0'	4.9'	98.0%	Sampled	↑			"
131.0' - 136.0'	4.9'	98.0%	Sampled	↑			Very sil where mica occurs.
136.0' - 139.0'	2.5'	83.0%	Sampled	↑			Very little dis. Cu Co & CuFeS ₂ .
139.0' - 143.0'	3.3'	82.0%	Sampled	↑			Very dark face - biotite & hornblende or Augite. FeOx good stringers cpy of FeOx.
143.0' - 151.0'	7.0'	88.0%	Sampled	↑			Highly sil.
151.0' - 154.0'	2.0'	66.0%	Sampled	↑			Very little mica.
154.0' - 166.0'	3.0'	43.0%	Sampled	↑			Light colored. Very sil schist. No min. below 155'. Very min. & sil to 166.0'.

	From	To	Rec.	% Rec.	Cpy	Fe ₂ O ₃	Ox	Remarks
No Sludge	161.0	164.5	2.6	74%	↑	↑	↑	Cpy & FeO _x , FeS ₂ & CuCo _x stringers in light Sil. Schist
	164.5	167.0	2.0	80%	↑	↑	↑	"
	167.0	172.0	3.3	66%	↑	↑	↑	"
	172.0	176.0	2.5	63%	↑	↑	↑	Light gray Sil. Schist
	176.0	178.0	1.8	90%	↑	↑	↑	"
	178.0	184.0	2.4	40%	↑	↑	↑	" Very Sil. Schist
	184.0	188.0	3.0	75%	↑	↑	↑	Very light Sil "
	188.0	191.0	1.0	66%	↑	↑	↑	"
	191.0	197.0	5.0	34%	↓	↓	↓	At 192.0 Numerous FeO _x stained fractures in very light highly Sil. Schist.
	197.0	201.0	2.2	52%	↑	↑	↑	Light Sil. Schist good Cpy & FeO _x stained stringers
	201.0	205.0	3.1	77%	↑	↑	↑	"
	205.0	209.0	2.2	73%	↑	↑	↑	Few Cpy & FeO _x stained fractures light Sil. Schist
	209.0	210.0	0.6	60	↑	↑	↑	Highly Sil. schist; numerous oxidized fractures
	210.0	214.0	2.4	60	↑	↑	↑	" " " " "
	214.0	218.0	3.0	75	↑	↑	↑	" " " " Very sparsely mineralized
	218.0	221.0	2.4	80	↑	↑	↑	" " " " " "
	221.0	226.0	1.6	82	↑	↑	↑	" " " " " "
	226.0	228.0	2.2	100	↑	↑	↑	" " " " " "
	228.0	232.0	3.8	95	↑	↑	↑	" " " " " "
	232.0	236.0	3.7	92	↑	↑	↑	" " " " " 232.0 to 236
	236.0	241.0	4.5	90	↑	↑	↑	fair mineralization in fractures. Highly Sil. Schist, sparsely mineralized; 1/4 Cpy stringers 236.0-241.0
	241.0	246.0	3.3	66	↑	↑	↑	" " " " " " " 241.0-246.0
	246.0	251.0	2.4	48	↑	↑	↑	" " " " " " " 1/4 Cpy str. 250.0-251.0
	251.0	253.0	1.8	90	↑	↑	↑	" " " " " " " 1/4 Cpy str. 251.5-252.0
	253.0	258.0	5.0	100	↑	↑	↑	" " " " " " " " 254.0, 254.5, 255.0, 256.0, 258.0
	258.0	263.0	4.0	80	↑	↑	↑	" " " " " " " 258.8, 258.7, 261.0, Three at 262.5
	263.0	269.0	4.5	75	↑	↑	↑	" " " " " " " 263.0, 263.3, 263.6, 268.2
	269.0	274.0	5.0	100%	↑	↑	↑	" " " " " " " 270.2, 270.8, 271.3, 272.0, 272.5, 273.0, 273.51
	274.0	279.0	5.0	100%	↑	↑	↑	" " " " " " " Dark Min - 274.6, 276.1, 276.2, 276.3
	279.0	284.0	4.5	90%	↑	↑	↑	" " " " " " " Two at 279.7, 281.3
	284.0	289.0	4.0	80%	↑	↑	↑	" " " " " " " Very light. - Good Min 287.5 to 289
	289.0	292.0	1.0	100%	↑	↑	↑	" " " " " " " " 289.3, 289.7
	292.0	295.0	4.7	93%	↑	↑	↑	" " " " " " " Str. at 293.0, 194.0, 194.9
	295.0	300.0	4.8	95%	↑	↑	↑	" " " " " " " " 295.5, 298.0, 298.1, 298.2, 298.7, 299.0, 300.0

DD Hole M2

From	To	Core Rec	% Core Rec	Cpy	Fe ₂ O ₃	Min in Core	Remarks	1/4" Stringers
0.0	10.0	10.0	100%	↑	↑	↑	Very Light gray Sil. Sen.	0.5', 1.5', 1.7', 2.2', 3.0, 3.9'
10.0	15.0	1.4	28%	↑	↑	↑	" " " " "	Str at 12.5'
15.0	20.0	2.0	40%	↑	↑	↑	" " " " "	" " 15.2', 19.7'
20.0	22.0	0.8	40%	↑	↑	↑	" " " " "	FoX along several joints
22.0	24.0	1.5	75%	↑	↑	↑	" " " " "	" " " "
24.0	26.0	2.0	100%	↑	↑	↑	" " " " "	" " " "
26.0	28.0	1.7	85%	↑	↑	↑	" " " " "	" " <u>Good Short Mic.</u>
28.0	30.0	2.0	100%	↑	↑	↑	" " " " "	" " 29.5'
30.0	32.0	2.0	100%	↑	↑	↑	Light gray Sil. Sch.	" " 30.0, 30.3, 31.0, 31.5'
32.0	33.0	1.0	100%	↑	↑	↑	" " " " "	" " 32.5'
33.0	38.0	5.0	100%	↑	↑	↑	" " " " "	" " 33.1, 33.5, 34.0, 34.8, 35.2, 35.8, 36.0, 37.0, 37.5'
38.0	41.0	2.3	72%	↑	↑	↑	Light gray Sil. Sch. Highly brown	" " 39.5' - good Stringer
41.0	43.0	1.8	90%	↑	↑	↑	" " " " "	" " 42.0'
43.0	45.0	1.8	90%	↑	↑	↑	Dark " " " " "	" " Several CoX Str 43.4'
45.0	47.0	1.3	60%	↑	↑	↑	" " " " "	No FoX 46.3'
47.0	49.0	1.5	75%	↑	↑	↑	Light " " " " "	" " 47.1'
49.0	50.0	0.8	80%	↑	↑	↑	" " " " "	" " 49.5', 49.9'
50.0	51.0	0.75	75%	↑	↑	↑	" " " " "	" " 50.5'
51.0	52.0	1.0	100%	↑	↑	↑	" " " " "	" " CoX 15.2 to 15.2'
52.0	55.0	3.0	100%	↑	↑	↑	" " " " "	" " " "
55.0	60.0	5.0	100%	↑	↑	↑	" " Very Sil & Micaceous	FoX Along joints; Str at: 55.4, 55.5, 56.5, 59.7'
60.0	61.0	1.0	100%	↑	↑	↑	Light gray Sil. Sch.	" " 61.0'
61.0	63.5	1.5	60%	↑	↑	↑	" " " " "	" " 61.3, 61.5, 61.8'
63.5	66.0	2.0	80%	↑	↑	↑	" " " " "	" " 65.0, 65.2'
66.0	69.0	2.5	83%	↑	↑	↑	" " " " "	" " 67.0, 67.2'
69.0	72.0	3.0	100%	↑	↑	↑	Dark gray " " Mica	" " 69.5, 69.7, 69.8'
72.0	76.0	4.0	100%	↑	↑	↑	" " " " "	" " 70.0, 70.2, 73.5, 74.3'

6/11

11/11

DD Hole M-2

From	To	Core Rec	% Core Rec	Cpy	FeS ₂	O _x	Remarks	Stringers at
76	77	0.10'	100%	↓	↑		Light Sil. schist	76.1; 76.5
77	81	2.4'	60%	↓	↓		" " " Mica in place	77.9, 78.0, 78.1, 78.2
81	82	0.4'	40%	↑	↑		" " " " " "	None
82	85	1.0'	33%	↑	↑		" " " " " "	82.1
85	88	2.7'	90%	↑	↓	↑	" " " Very little Mica, last 1.0' highly broken & O _x	85.0 = O _x , 85.3, 85.2, 85.6, last 1.0' oxide
88	93	5.0'	100%	↑	↑	↓	Med light schist, little Mica.	88.6 = O _x & Cpy, 89.8, 90.2, 90.5
93.0	95.0	2.0'	66%	↑	↑	↓	" " " " " "	93.1, 93.2 = O _x , 93.5, 94.5, 94.6, 94.7
95.0	97.0	1.0'	50%	↑	↑		" " " " " "	95.7
97.0	100.0	None	0%					
100.0	105.0	0.8'	16%	↑	↑		Light Sil schist, somewhat broken FeO _x along joints	
105.0	107.0	1.5'	77%	↑	↑	↑	Med. light Sil. schist, mica	106.8
107.0	110.0	2.0'	66%	↑	↑	↑	Light Sil schist last 1.0' highly Brk	107.0, 107.2
110.0	112.0	2.0'	100%	↑	↑	↑	" " " Jarne Mica	110.0, 110.2, 110.7
112.0	116.0	2.5'	60%	↓	↓	↓	" " " " " "	112.1, 112.5, 113.0
116.0	118.0	0.7'	35%	↓	↓		" " " " " "	None visible
118.0	121.0	2.8'	93%	↓	↓		" " " " " "	" "
121.0	123.0	1.7'	85%	↑	↑		" " " " " "	122.0
123.0	124.0	1.0'	100%	↑	↑		Very light Sil schist, little Mica	None visible
124.0	127.0	3.0'	100%	↑	↑		" " " " " "	125.0,
127.0	131.0	3.8'	95%	↑	↑		" " " " " "	130.0, 128.0
131.0	136	3.8'	76%	↑	↑		" " " highly broken	Several fr. 135.0 to 136.0
136.0	141.0	2.0	90%	↑	↑		" " " " " "	" " 140.0, 141.0
141.0	143.0	1.8	90%	↓	↓		" " " " " "	few extremely small seams.
143.0	145.0	1.2	90%	↑	↑		FeO _x along fractures	
145.0	145.0	1.2	90%	↑	↑		Very light gray Sil schist; mica	Stringers at: 143.0 to 143.5; 144.7
145.0	150.0	3.0	60%	↑	↑	↓	" " " " " "	145.2, 149.8.
150.0	154.0	3.2	80%	↑	↑		" " " " " "	151.0, 152.1, 152.2
154.0	154.0	3.2	80%	↑	↑		Good Stringers 152.0 to 153.0	152.3, 152.4, 152.7, 153.0, None 153-154
154.0	156	1.5	75%	↑	↑	↓	Light gray Sil schist	Str. at 155.0,
156.0	157	0.8	80%	↓	↓		" " " " " "	156.3,
157.0	161	1.5	38%	↓	↓		" " " " " Mica	No Stringers
161.0	163	2.0	100%	↓	↓		" " " " " "	" "
163.0	164	0.9	90%	↓	↓		" " " " " "	" "
164.0	169.0	1.6	40%	↑	↓	↓	Dark gray sch. much Mica	O _x min last 0.4'
169.0	172	3.0	100%	↑	↓	↓	Med " " Mica	Str at: 171.8
172	177	4.7	94%	↑	↑	↓	" " " " " "	Dis O _x min. thru core.
177	177	4.7	94%	↑	↑	↓	" " " " " "	Str at 172.3, 176
177	180	2.3	77%	↑	↑		O _x min in 173.0 to 174.0.	
180	180	2.3	77%	↑	↑		Light Sil. sch. Highly frac. Mica	No Stringers
180	185	4.0	80%	↑	↑		" " " " " Mica	Str 185.5, 188.0
185	189	3.2	80%	↑	↑		" " " " " "	188.4, 188.8
189.0	190	0.9	90%	↑	↑		" " " " " Mica	No Stringers

DD Hole M-2

From	To	Core Rec	% Core Rec	Core	Fo	Co	Loc	Remarks	1/4' Core - 2 cuts
1900	1920	0.3	30%					Light gray Sil. Sandstone	No stringers
1920	1960	1.0	25%	↑	↑			" " " " " "	1921
1960	1980	0.5	25%	↓	↓			" " " " " "	1962
1980	2000	0.9	45%					Very light Sil. Sandstone	Fo ₂ stain only
2000	2030	0.2	15%					" " " " " "	No stringers
2030	2050	0.4	20%	↓	↓			" " " " " "	2031 = Small St.
2050	2080	0.5	17%					" " " " " "	Fo ₂ stain along fr.
2080	2100	None	0%						
2100	2130	1.2	43%					Very light gray heavy Sil. Sand.	No stringers
2130	2160	1.2	43%					" " " " " "	Fo ₂ stain along fracture
2160	2210	0.8	18%					" " " " " "	2162
2210	2260	2.0	40%	↑	↑			" " " " " "	"
2260	2310	4.0	80%	↑	↑			" " " " " "	2270
2310	2340	1.8	60%					" " " " " "	232.5
								Mica	231.5, 233.5
2340	2380	2.7	68%	↑	↑			" " " " " "	"
2380	243	3.6	72%	↑	↑			" " " " " "	Little Fo ₂ 239.0, 239.1
2430	248	5.0	100%	↑	↑			" " " " " "	247.0
2480	2510	1.3	43%					" " " " " "	None
2510	2540	1.4	47%					" " " " " "	"
2540	2580	3.7	43%	↓	↓			" " " " " "	254.2, 255.7, 255.8, 256.5
2580	2630	4.0	80%	↑	↑			" " " " " "	259.2
2630	2680	2.8	50%					" " " " " "	None
2680	2710	2.2	73%					" " " " " "	None
2710	2740	1.2	40%	↑	↑			" " " " " "	273.5
2740	2760	0.5	25%					" " " " " "	one fracture
2760	2810	1.1	22.0%					" " " " " "	None
2810	2840	1.4	47.0%					" " " " " "	"
2840	2890	3.8	76.0%					" " " " " "	"
2890	2920	0.8	36.0%					" " " " " "	"
2920	2970	2.6	53%					" " " " " "	"
2970	3010	2.0	50.0%					" " " " " "	"

///
///
///

///
///
///

DD Hole M. 3

From	To	Core Rec.	% Core Rec.	Core	FeS ₂	Qtz	Min. Core	Remarks	Qtz % Py Str.
0'	5'	4.3'	86%					Dark gray Sil. Sch. Mica bands	1.0, 1.2
5'	10'	4.1'	82%					" " " " " "	7.0, 8.5, 9.6, 10.0
10'	12'	1.3'	65%					" " " " " "	11.8
12'	14'	2.0'	100%					" " " " " "	12.7
14'	18'	2.5'	63%					" " " " " "	14.5
18'	20'	1.7'	85%					" " " " " "	17.3
20'	22'	2.0'	100%					Very light gray Sil. Sch. " "	20.1, 21.7
22'	27'	2.0'	40%				None	" " " " " "	None
27'	32'	4.4'	88%					" " " " " "	27.4, 31, 33.0, 33
32'	35'	2.8'	94%					" " " " " "	FeO & CuO ^{34%} along fr
35'	40'	4.7'	94%					" " " " " "	35.6, 35.7, 38.1, 40
40'	43'	2.7'	93%				None	" " " " " "	None
43'	46'	2.0'	66%					" " " " " "	"
46'	51'	3.2'	64%					" " " " " "	47.0
51'	56'	4.0'	80%					" " " " " "	55.9
56'	59'	1.5'	38%				None	Med gray " " " " " "	None
59'	62'	1.1'	37%					" " " " " "	"
62'	66'	2.1'	52%					" " " " " "	"
66'	70'	1.7'	43%					" " " " " "	67.1, 67.3
70'	74'	4.0'	100%					Light gray " " " " " "	70.3, 71.5, 71.6,
74'	79'	3.5'	70%					" " " " " "	75.0
79'	81'	1.6'	80%					Very Light gray " " " " " "	81.0
81'	82'	1.0'	100%				None	Very light gray " " " " " "	None
82'	87'	4.0'	80%					" " " " " "	82.5, 83.0, 84.4
87'	88'	1.0'	100%					Dark gray " " " " " "	86.0, 86.8
88'	92'	4.0'	100%					Very light gray Sil. Sch. little mica	89.3, 90.4, 91.0
92'	95'	3.0'	100%					" " " " " "	92.1, 93.6, 93.7, 93.1
95'	100'	5.0'	100%					" " " " " "	95.9, 97.0
100'	105'	4.0'	80%					" " " " " "	104.5
105'	107'	2.0'	100%					" " " " " "	105.5, 105.8
107'	108'	0.4'	40%					" " " " " "	107.5
108'	110'	2.0'	100%				None	" " " " " "	None
110'	115'	5.0'	100%					Gray Sil. Sch. quartz. Some Mica	112.0, 112.7, 112.6
								Good Sulfide Min.	112.9, 114.7, 114.8
115'	120'	5.0'	100%					" " " " " "	115.8, 117.0, 117.5
								Good Sulfide Min.	117.8, 119.8
120'	125'	5.0'	100%				None	Very light Highly Sil. Sch. Some Mica	None
125'	130'	3.5'	70%					" " " " " "	125.2, 127.0
130'	135'	3.5'	70%				None	" " " " " "	None
135'	138'	1.0'	33%					" " " " " "	135.2
138'	142'	3.0'	100%					" " " " " "	138.8
142'	144'	0.4'	20%				None	" " " " " "	None
144'	147'	1.2'	25%				None	" " " " " "	None
147'	149'	1.5'	75%				None	" " " " " "	None
149'	154'	5.0'	100%					Dark gray Sil. Sch. Much Mica	149.5
154'	160'	3.0'	50%					" " " " " "	159.0
160'	162'	2.0'	100%					" " " " " "	160.2, 161.4, 161.5
162'	167'	4.5'	90%					Very Dark gray, Highly Sil. Sch. Mica	164.0

DD Hole M-3

From	To	Core Rec	% Core Rec	Core	Core	Core	Remarks	Quartz & Clay-Fels Stringers etc.
167'	172'	50'	100%	↕	↕		Very light gray highly Sil. Sph. Mic.	1680, 1693, 1700
172'	176'	2.7'	68%	↕	↕		" " " " " "	1704, 1740, 175.1
176'	178'	1.2	60%	↕	↕		" " " " " "	176.1
178'	182'	1.3	30%	↕	↕		" " " " " "	178.2
182'	187'	2.0	40%	↕	↕	None	" " " " " "	None
187'	191'	3.5	38%	↕	↕		" " " " " "	187.1, 187.7, 188.2, 190
191'	196'	4.0	80%	↕	↕		Very Good 1/4" Stringers	191.2, 192.0, 192.7, 193.8, 194.2

Diamond Core Drilling
Mining
Quarries
Shaft Sinking
Tunnel Driving



CONTRACTORS—ENGINEERS
General Offices
1321 South Main Street Phone 84-4401
SALT LAKE CITY 15, UTAH

March 9/57

Reply to:

COPY OF MADERO CONTRACT

Mobilization & demobilization -----\$ 200.00

	AX	BX
Drilling 0 to 200 ft	4.60	4.90
200 to 400 ft	4.90	

Reaming if necessary all sizes 2.30 per foot

Cementing if necessary 9.10 per hour plus cost of cement

A shift rate of 70.00 per eight hour shift will be charged for moving compressor from unloading point to portal, laying air and water lines, moving equipment into tunnel and setting water tanks.

Compressor will be charged for at cost, including fuel and supplies.

We plan on collaring holes BX and drilling AX.

Thanks for calling on us, it is greatly appreciated.

Very Truly Yours

A handwritten signature in cursive script that reads 'J.E. Roberts'.

J.E. Roberts
District Mgr. Arizona Division

1321 South Main St.

SALT LAKE CITY 15, UTAH

Phone HUter 4-4401



DIAMOND DRILLING CONTRACTORS

ENGINEERS — GEOLOGY

INVOICE DATE: **March 31/57**

ORDER NUMBER:

DeSoto Copper Corporation
Room 340-411 North Central
Phoenix, Arizona

INVOICE NUMBER:

CONTRACT: **6-39 Miami**

TERMS:

LOCATION: **Madero Prospect Miami, Arizona**

FOR CUSTOMER'S USE ONLY	
REGISTER NO.	VOUCHER NO.
TERMS APPROVED	RATE APPROVED
CALCULATIONS CHECKED	
FOOTAGE CHECKED	
ADJUSTMENTS	
ACCOUNTING DISTRIBUTIONS	
AUDITED	FINAL APPROVAL

HOLE NO.	FROM	TO	FOOTAGE	RATE	TOTAL
M-1	Mobilization & demobilization				200.00
Drilling	BX	0	10	4.90	49.00
"	AX	10	200	4.50	874.00
"	AX	200	10	4.90	49.00
	ment time		26 hrs	9.10	236.60
	Cement used (lumnite)		1 sack	7.50	7.50
	Rental on compressor		19 days	17.70	336.30
	Deisel fuel purchased				64.20
	Unloading & setting compressor, laying Air & water lines				
	moving equipment in tunnel & setting water tanks 6 shifts			70.00	420.00
					\$ 2236.60

Paterson Compressor
\$531.00/mo
30
231
210
210

\$17.70/day

Richard F. Mieritz

MINING CONSULTANT

May 13, 1957.

Mr. E. G. Frawley
Room 340
411 North Central Ave.
Phoenix, Arizona

MADERO PROJECT
PROGRESS REPORT
April 16 to 30, 1957

Dear Mr. Frawley:

Herewith is the semi-monthly report covering activities of the project for the above noted period.

Activity on the project was limited to diamond drill holes M-2 and M-3. Hole M-2 was drilled at a minus 4° in a S 72° W. direction. Hole M-3 was a vertical hole at a location approximately midway between the portal and face of the adit. Hole M-2 was completed at a depth of 300 feet while hole M-3 was completed at a depth of 196 feet.

The following table indicates the footage drilled during the period.

Previous total		548 feet
Advance for period	M-2	52 feet
" " "	M-3	196 feet
Total footage to date		<u>796 feet</u>

DIAMOND DRILL HOLE M-2

This hole was collared at a flat minus angle in the west wall of the drift a few feet back of the adit face. The objective was to test the strength of mineralization on the west side of the mineralized fissure zone. The copper mineralization encountered in the hole is primarily associated with thin quartz stringers and compares to the results obtained in drill hole M-1.

DIAMOND DRILL HOLE M-3

This vertical hole was collared in the floor of the adit approximately midway between the portal and face of the adit, opposite the inclined interior shaft. The objective of the hole was the diorite contact which surface-wise was exposed approximately 50 feet lower in elevation than the portal with an assumed dip towards the mine workings. As evidenced on the surface, the diorite was weakly mineralized with some chalcopyrite and pyrite. The drill hole was stopped at 196 feet without encountering the diorite.

Madero
Progress Report

May 13, 1957

-2-

Stopping of this hole concluded exploration at the project.

The drill contractor has removed all of his equipment. All our sampling equipment has been removed and taken to my office for storage until it can be put to use on another project.

A report will be submitted to you complete with drill logs, assays, maps, etc.

Very truly yours,

ccManing Cox
Gene Turley

R. E. Mieritz.

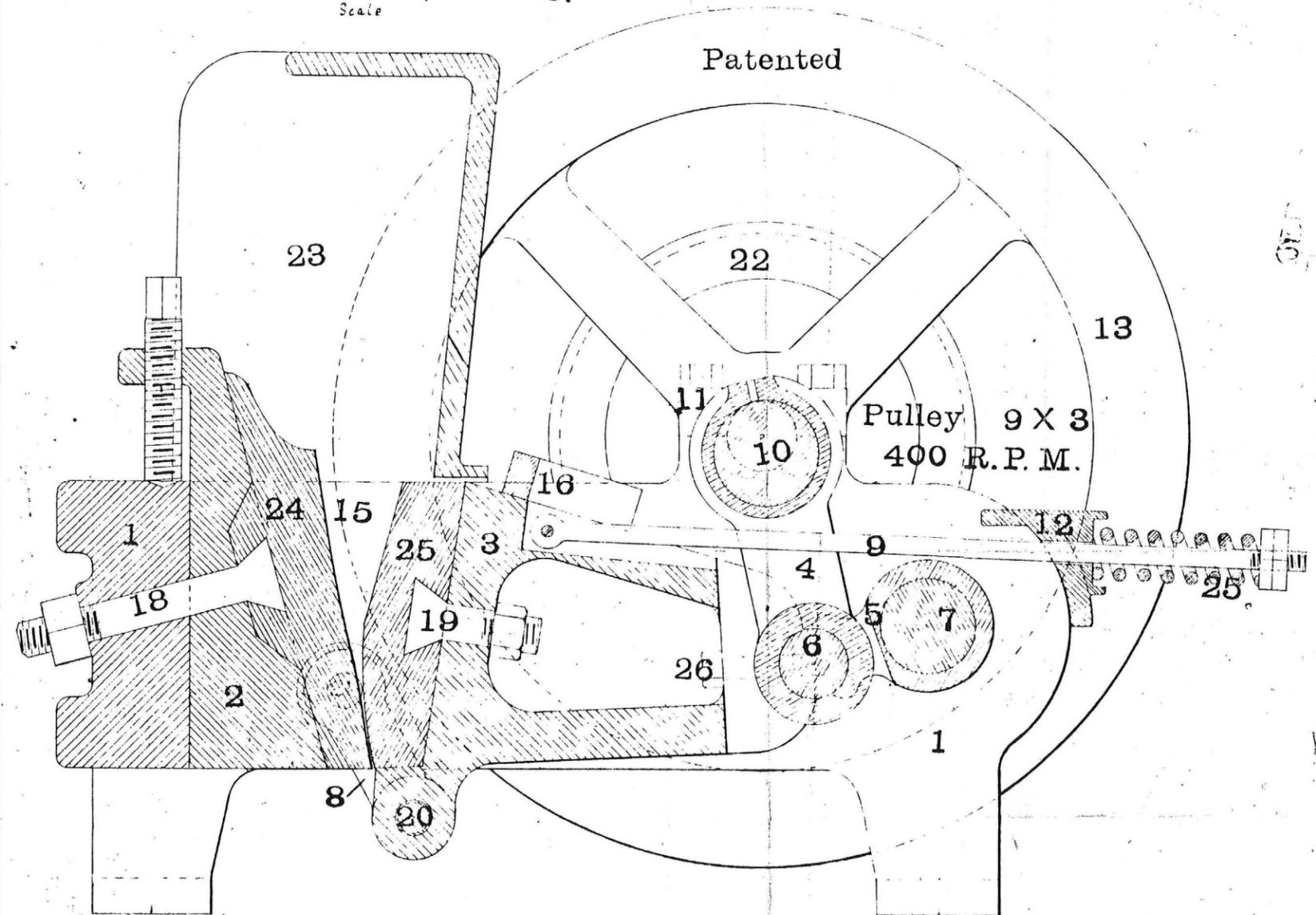
LABORATORY CRUSHER

Mfrd. by

STURTEVANT MILL Co.

BOSTON, MASS.

Scale



List of numbered parts of 2X4" Crusher.

1	Frame	10	Eccentric Shaft	19	Swing Jaw Bolt
2	Wedge	11	Bearing Cap	20	Lower Link Pin
3	Swing Jaw	12	Spring Bar	21	* Upper Link Pin
4	Connecting Rod	13	Fly Wheel	22	Fulley
5	Toggle	14	* Fly Wheel Key	23	Hopper
6	Toggle Pin	15	Shield	24	Fixed Jaw Plate
7	Connecting Rod Pin	16	Spring Rod Shield	25	Swing Jaw Plate
8	Link	17	* Fly Wheel Handle	26	Swing Jaw Toggle Bolt
9	Spring Rod	18	Fixed Jaw Bolt	27	Spring

* Parts not shown in the Drawing

Pat. No. 1000