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Arizona Department of Mines and Mineral Resources Mining Collection

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COPPER WORLD MINE MOHAVE COUNTY

Stuart R. Kaplan is Pres. of Standard Copper and V.P. of Standard Industries. Corres. 4-29-66

Attempted to visit Copper World but a truck blocked the road. Standard Copper Co., a subsidiary of Standard Industries, 120 Wall St., New York City, are rehabilitating the mine and mill. All the copper wire and motors had been stolen. Mr. Weldon Fulghum is the engineer in charge and lives in Kingman. Mr. Fulghum said they expect to mine 300 tpd. Heavy media separation is to be used ahead of the flotation circuit which will handle an estimated 100 tpd. FTJ WR 5-6-66

Mr. Joseph Sirgo who will be at 124 Spruce, Kingman, tells me that he is the mill supt. at the Copper World starting this week. GWI Note 5-27-66

"As you probably know, we have leased the Copper World property from the University of Arizona and our new operating company, Standard Copper Corp., will be in production within the next two weeks."
Taken from corres. Stuart Kaplan, V.P. Standard Industries 6-23-66

Standard Copper Corp. of New York has rehabilitated the Copper World mine and mill and is mining and milling about 300 tpd. FTJ QR 7-8-66

Standard Copper - Copper World - is mining and milling but not at full capacity. Zinc concentrates are shipped to New Jersey Zinc, Bartlesville, Oklahoma and copper concentrates to Douglas. FTJ WR 9-9-66

Visited Standard Copper Co. office. They are having water trouble and expect to drill another hole for water. Mining and milling has been cut back. FTJ WR 11-4-66

Visited Standard Copper office. Weldon Fulghum said they were having water shortage problems, but he hoped to arrange with a nearby ranch to strengthen the supply. Work is on a 1 shift basis. FTJ WR 1-7-67

Visited Standard Copper office. Weldon Fulghum, manager, has moved to Canada and Joe Sirgo is the new manager. William Lundby is geologist. Mine is operating 2 shifts and mill 3 shifts. FTJ WR 3-10-67

Standard Copper increased their operation at their Copper World mine but had not reached full capacity. FTJ QR 4-5-67

Interview with Joe Sirgo at Standard Copper. The State Mine Inspector's office has been giving them some worries over unsafe practices. Operations at their Copper World mine is on 6 days/wk. mining and milling about 85 tpd. FTJ WR 5-5-67

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COPPER WORLD MINE MOHAVE COUNTY

Visited Standard Copper Corp. office - Joe Sirgo was in Tucson. Office secretary said they had made some additions and changes in the mill that is expected to increase capacity. FTJ WR 7-7-67

Visited Standard Copper office. Martin N. Pollock, vice president of Standard Copper, is acting manager replacing Joe Sirgo. FTJ WR 9-8-67

Interview with Mr. Pollock who is in charge of the Copper World. They are having water shortage trouble and are working at 50% capacity. FTJ WR 11-10-67

Visited Standard Copper office. They have shut down (out of ore) and are trying to dispose of office and miscellaneous equipment. FTJ WR 1-5-68

According to Bathrick, Copper World ore said to run 3% Cu and 12% Zinc. The property reverts back to the University of Arizona. FTJ WR 3-8-68

Active Mine List Nov. 1967 - 50 men

Roberts Mining Co. have taken over the Copper World property east of the Antler. Work is mostly sampling. Road in poor state so did not attempt to go to mine. Roberts Mining Co. is incorporated in Nevada. FTJ WR 9-5-69

Visited Roberts Mining Co. office. Interview with Thomas Roe, vice president and comptroller, who said they were doing cleanup work and evaluating the Copper World mine. Their address is P.O. Box 56, Yucca, Arizona 86438 and 225 W. Winton Avenue, Suite 106, Hayward, California 94544. FTJ WR 11-7-69

Interviewed Tom Miche, project supt. Milling near capacity at Antler and sampling the Copper World. Miche wants to know where to sell tails as a soil supplement. FTJ WR 3-6-70

Visited the Antler Mine office - was told they were mining about 30 tpd from Copper World. Ore hard to get and not too good grade. FTJ WR 5-8-70

Interviewed Tom Miche who said that ore from the Copper World was hard to get and of lower grade than anticipated with bad ground, etc. FTJ WR 7-11-70

Standard Metals Corp. was mining copper-zinc ore from the Copper World and the Antler mines and milling ore at their mill near Yucca. FTJ QR 7-1-70

Standard Metals Corp. were milling copper-zinc ores from the Antler mine and the Copper World mine at the rate of 250 tpd. They are prepared to take custom ore but so far such ore has not been released. FTJ Annual Report 6-30-70

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COPPER WORLD MINE MOHAVE COUNTY

George Tweedy siad that Standard Metals had abandoned the Copper World, also a Mr. Page is now resident manager replacing Tom Miche. Dale Thompson, mine supt., Hall Thorne, mine foreman. FTJ WR 8-21-70

Active Mine List May 1970 - 65 men - T. A. Miche, Proj. Mgr. Standard Metals Corp.

Standard Metals abandoned Copper World lease. FTJ WR 9-4-70

It is rumored the Copper World mine has been sold. GW WR 8/27/74

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COPPER WORLD MOHAVE

Steve E. Tima, Tima Oil & Mining Co., was in for copies of our publications. He stated that he has completed purchase of the Copper World Mine from the U of A. He has an exploration company interested in the property. He further said that the 150 ton flotation mill on the property is fully operational. KAP WR 9/30/75

RRB WR 4/1/88: Steve Tima, 2242 E. Lincoln Dr., Phoenix, Arizona 85016, 955-3535 reports that he is the owner of the Copper World (file) Mohave County.

Date Printed: 10/29/93

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

Ken A. Phillips, Chief Engineer Date: October 29, 1993

Information from: **Steve Nolte and Larry Toppenberg**

Company: Desert Wide Properties

Address: 3330 N. Dobson Road # 8
City, State ZIP: Chandler, Arizona 85224
Phone: 602-838-6631

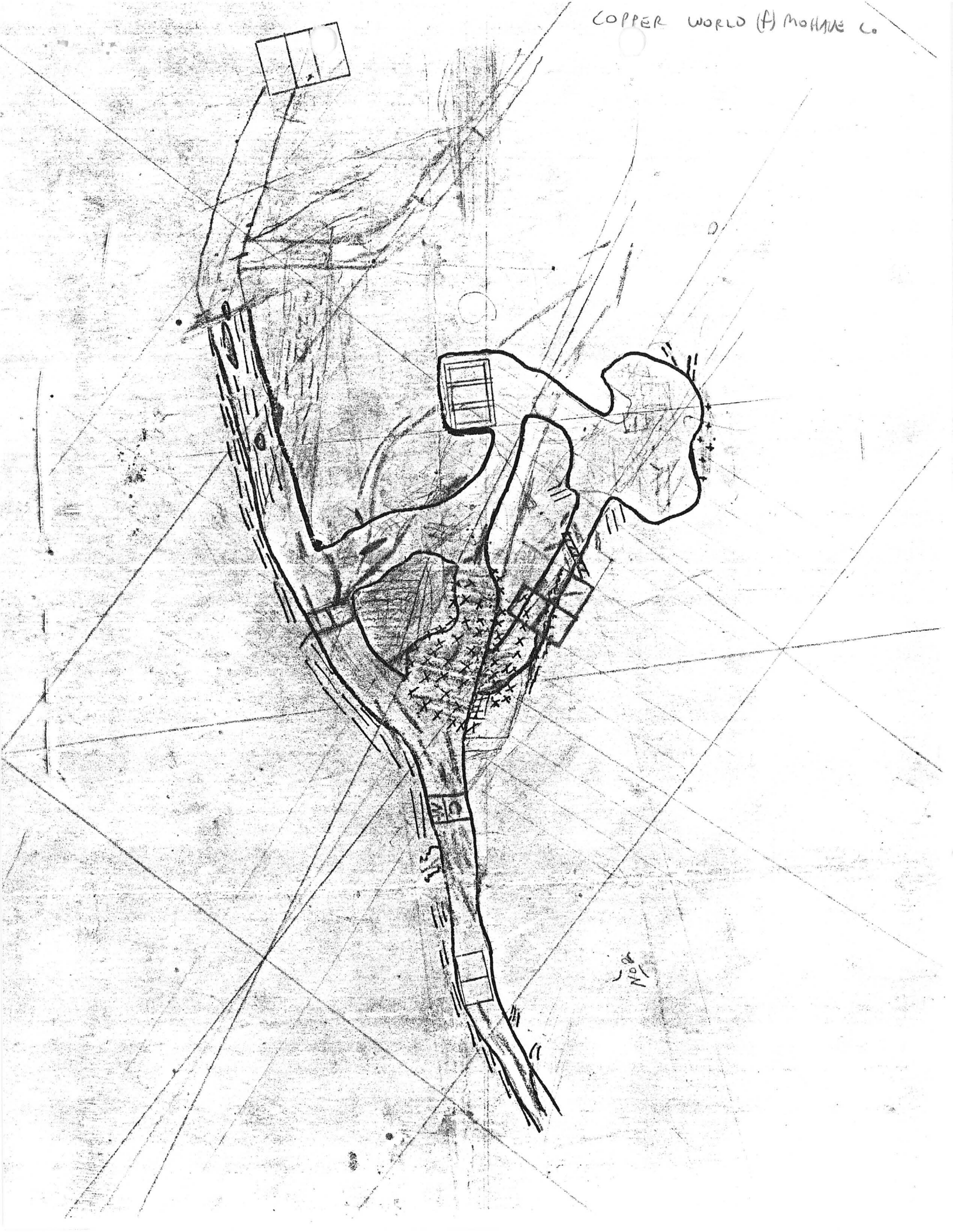
MINE: **Copper World**

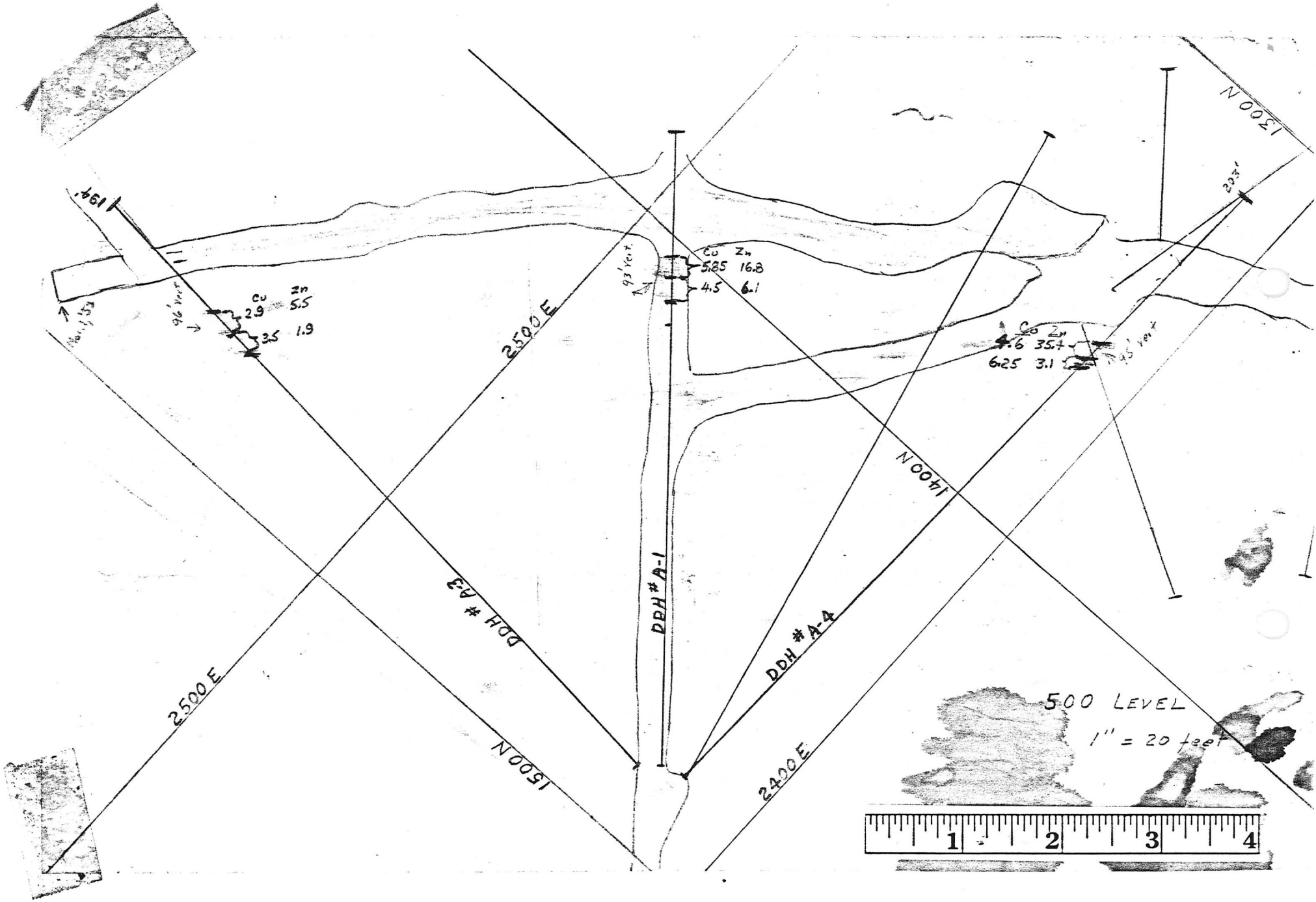
ADMMR Mine File: Copper World Mine file
County: **Mohave**
AzMILS Number: **515A**

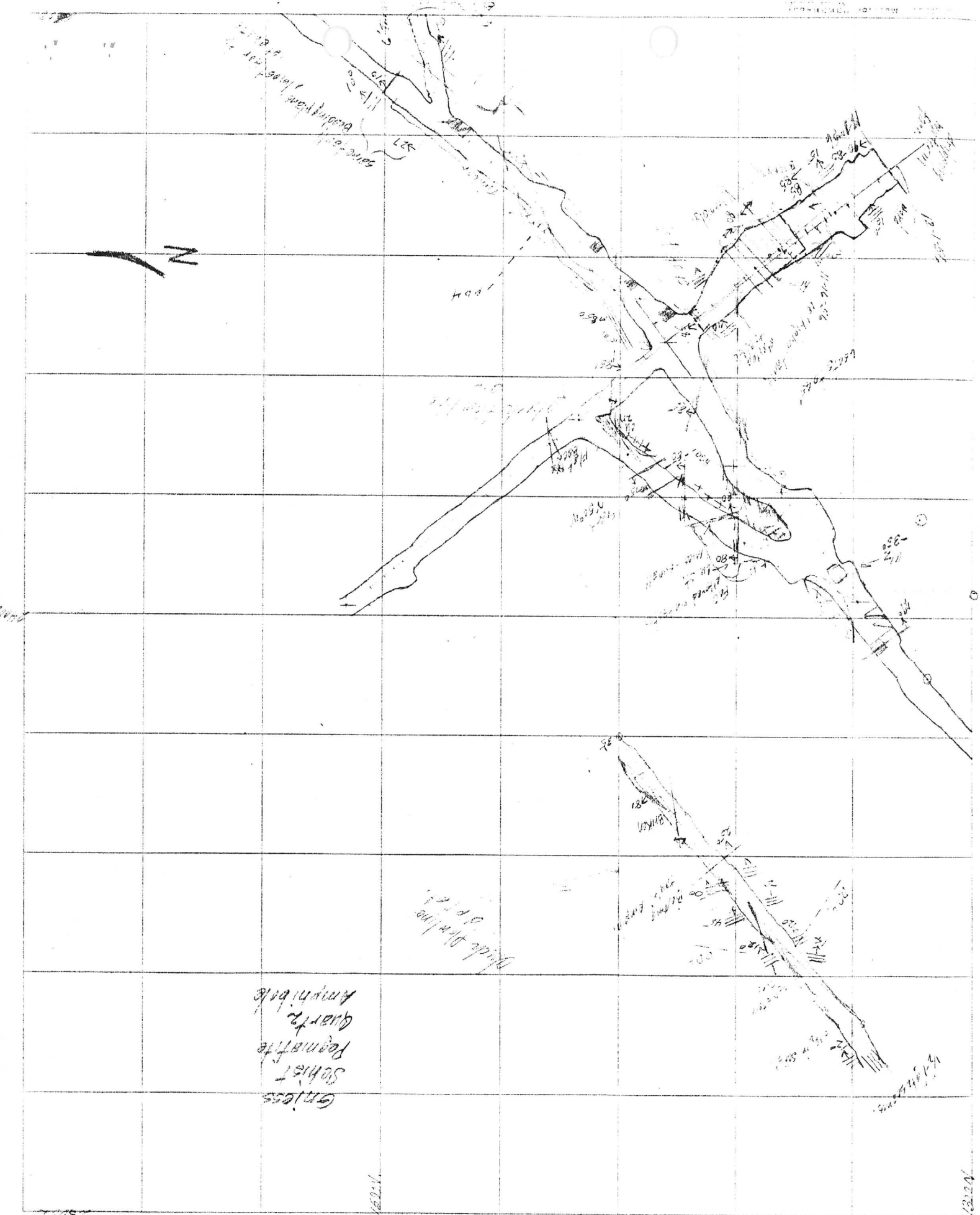
SUMMARY

Steve Nolte and Larry Toppenberg, brokers with Desert Wide Properties, 3330 N. Dobson Road #8, Chandler, Arizona 85224, phone 602-838-6631, represent a client interested in investing in a mine. They have been approached by Steve Tima, Tima Oil and Minerals of Chandler, to invest in his properties including the Copper World Mine. Tima purports the Copper World Mine is a world class copper deposit containing about 1.7 million tons of 4.75 % copper and 8-10 % zinc, and that production can be by open-pit with heap leach SX-EW production of copper. Messrs Nolte and Toppenberg are willing to try to get some option time to independently test some of his statements.

Ken A. Phillips, Chief Engineer Date: October 28, 1993


COPPER WORLD (A) MOHAVE Co.

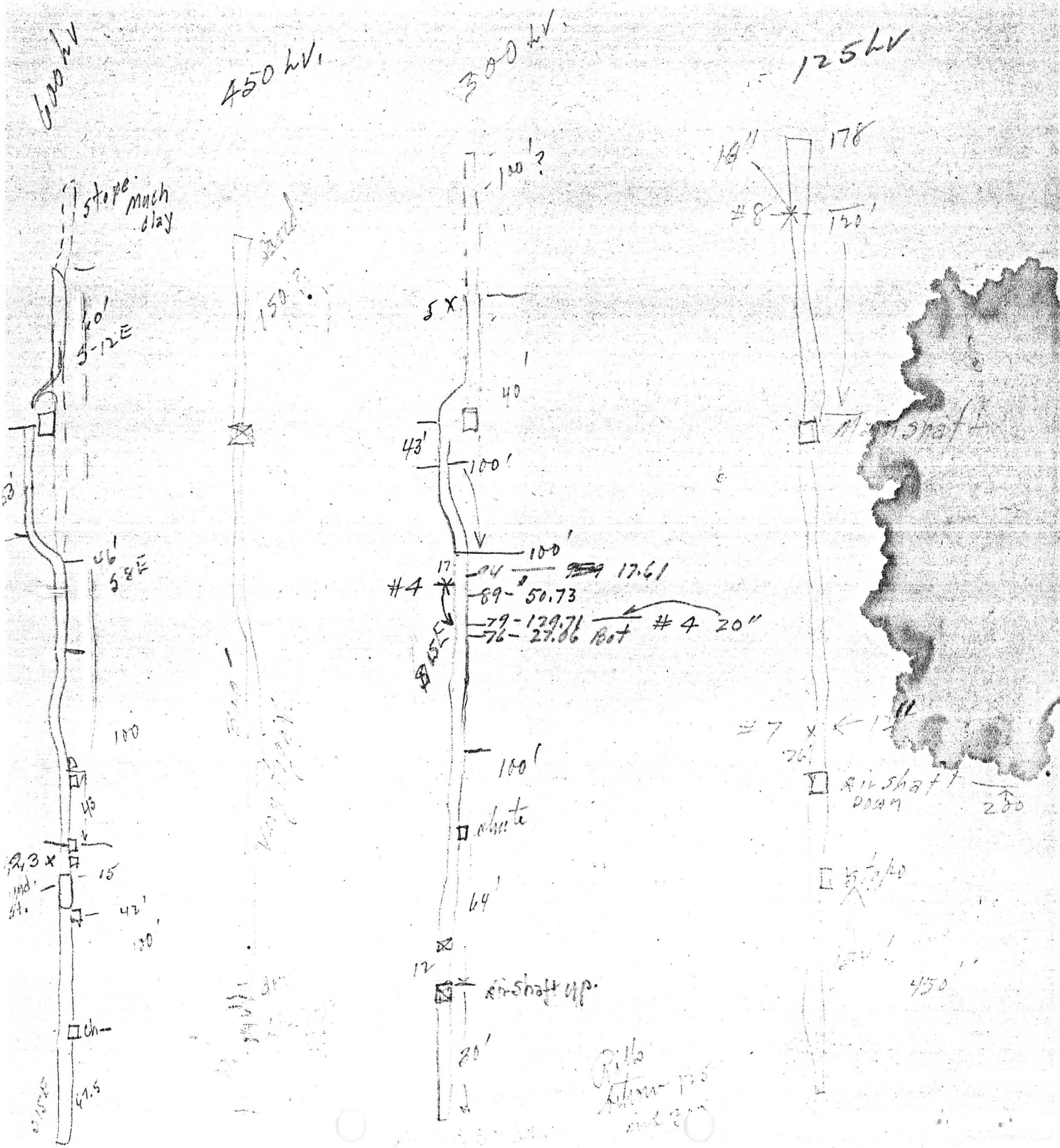

1300N
1400N
1500N
2500E
2500E
2400E
DDH #A-3
DDH #A-1
DDH #A-4
194'
233'
96' Year
93' Year
45' Year
Cu Zn
2.9 5.5
3.5 1.9
Cu Zn
5.85 16.8
4.5 6.1
Cu Zn
4.6 35.7
6.25 3.1
500 LEVEL
1" = 20 feet
1
2
3
4

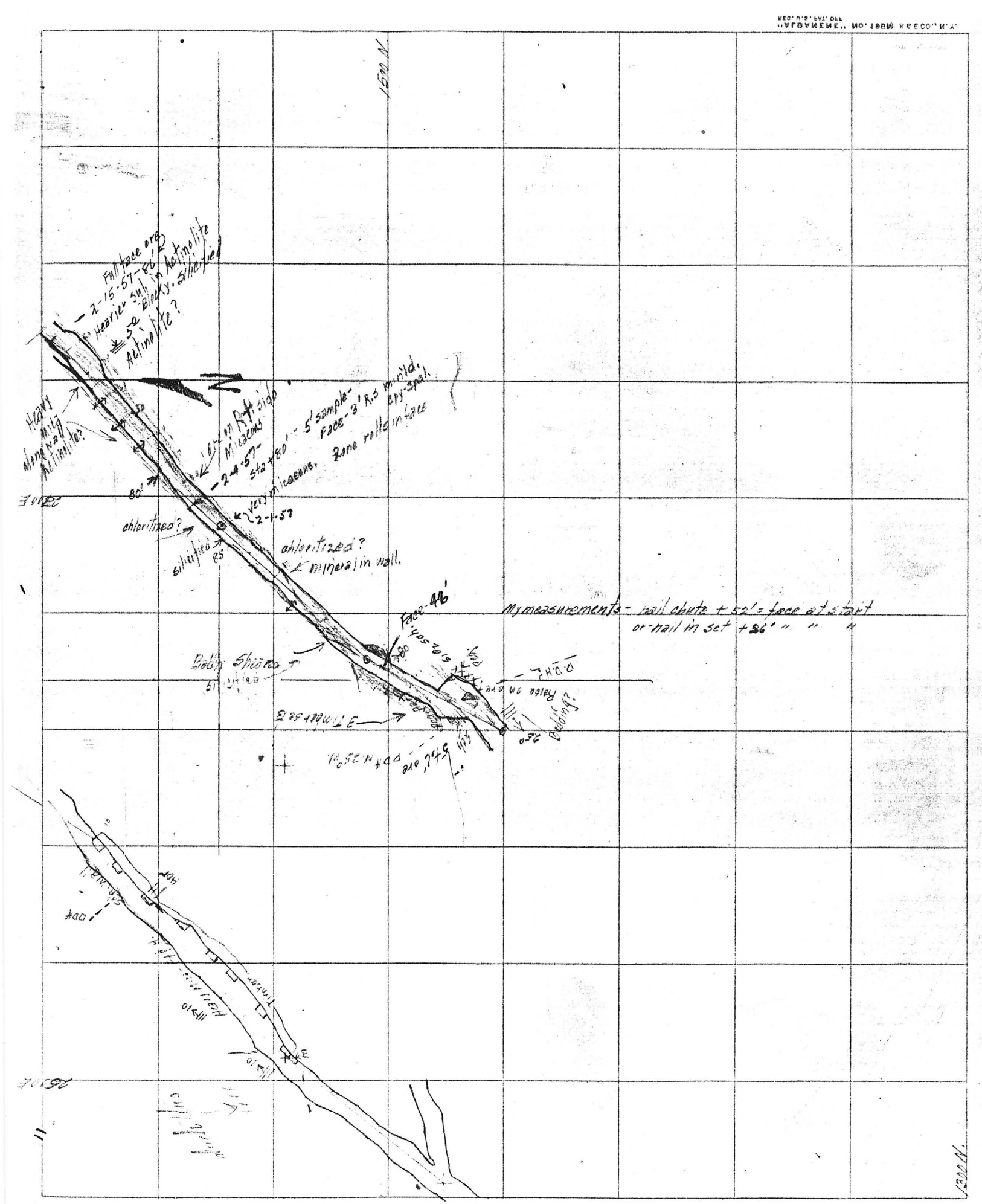


MINE Copper Work LOCATION LEVEL 502 bar

GEOLOGY BY SURVEY SCALE DATE

#6 - Grab sample - before Dec.



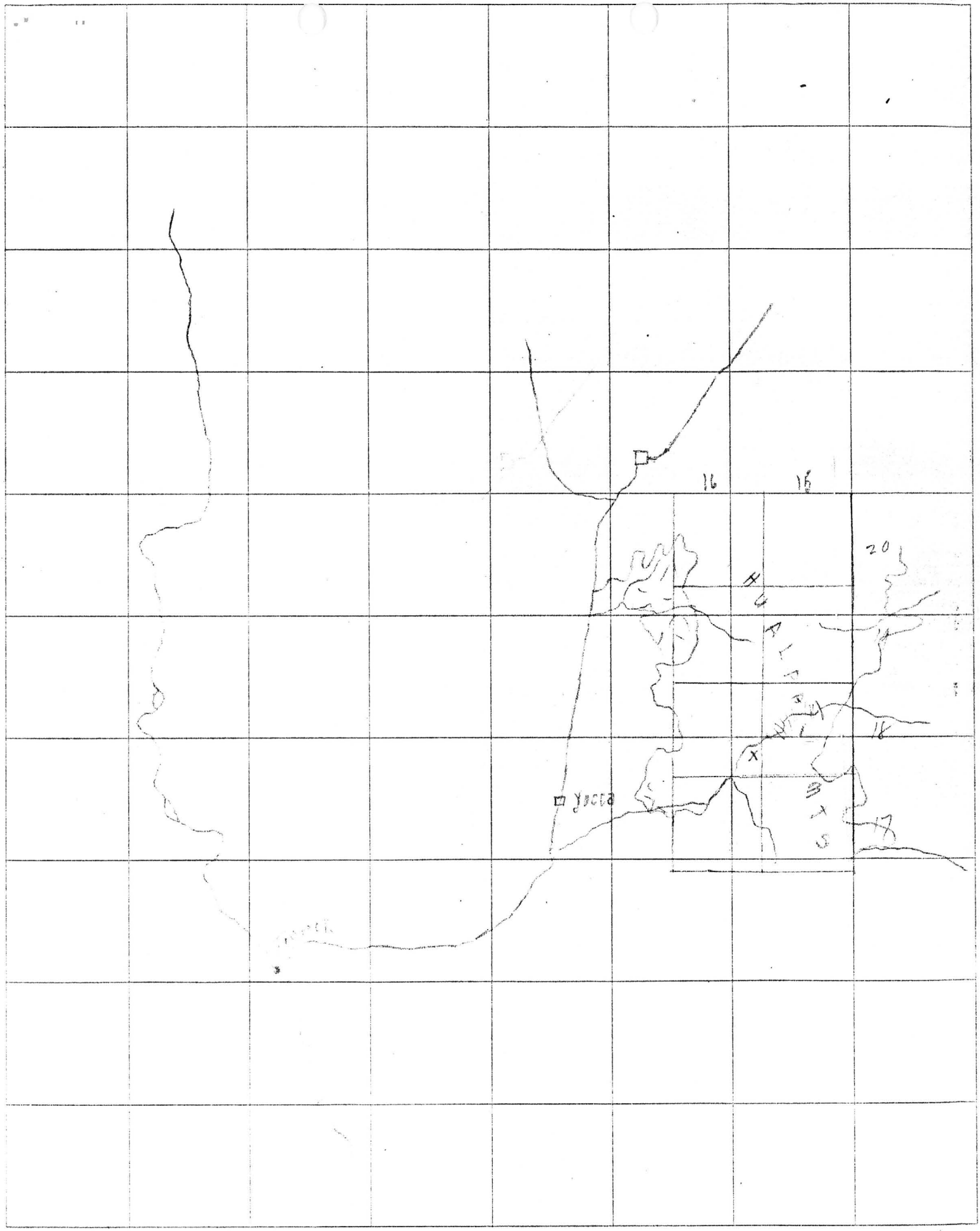


MINE_____ CATION_____ LEVEL_____

GEOLOGY BY_____ SURVEY_____ SCALE_____ DATE_____

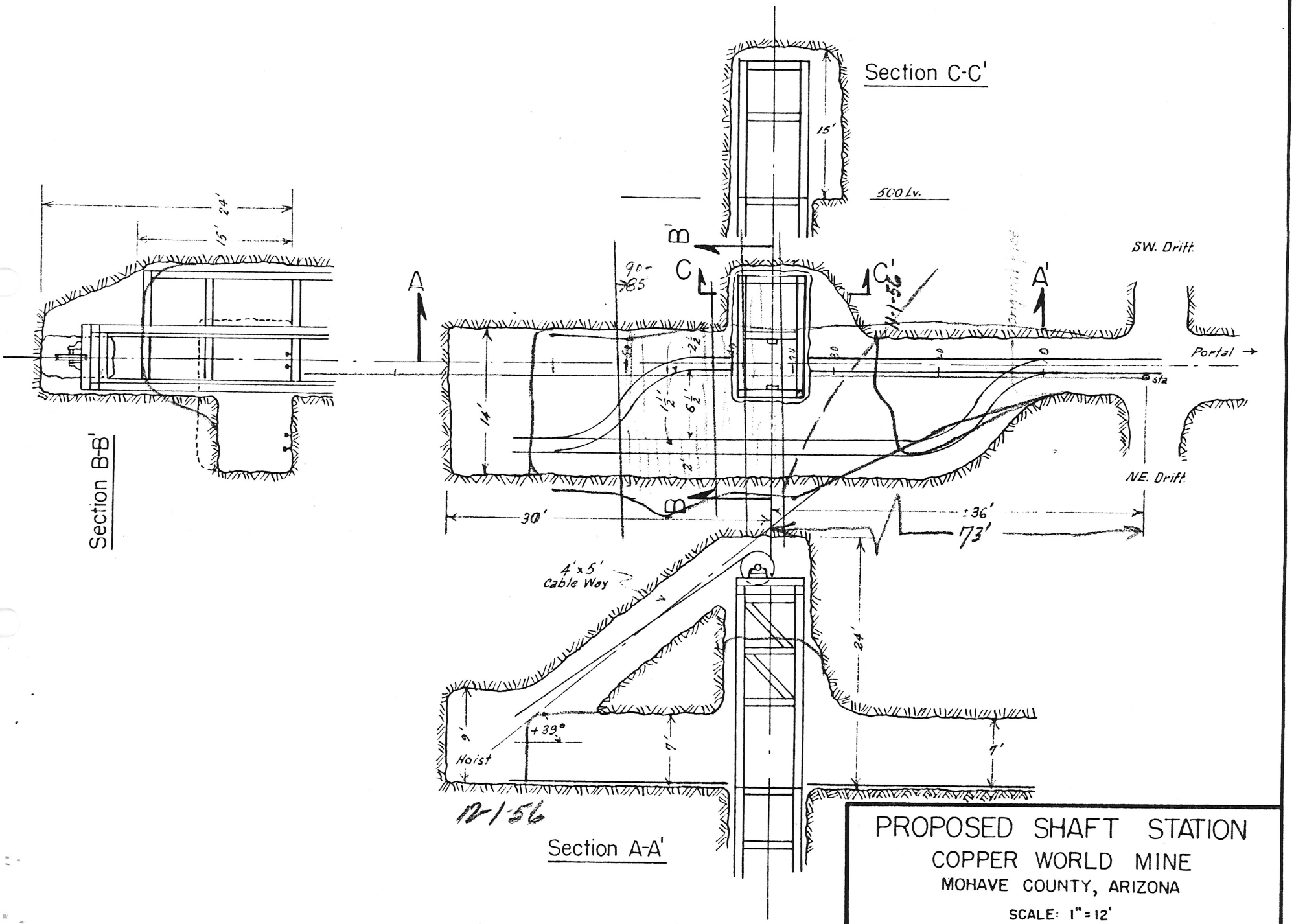
GEOLOGY BY _____ SURVEY _____ SCALE _____ DATE _____

MINE _____ LOCATION _____ LEVEL _____



MINE_____ LOCATION_____ LEVEL_____

GEOLOGY BY_____ SURVEY_____ SCALE_____ DATE_____



PROPOSED SHAFT STATION

COPPER WORLD MINE

MOHAVE COUNTY, ARIZONA

SCALE: 1" = 12'

OCTOBER 12, 1956

R.E. MIERITZ

COPPER WORLD MINE

OPERATOR'S REPORT

MILL OPERATIONS

DATE 11.13 195 3

SHIFT Day

TIME	Tons Per Hr.	% SOLIDS		Gm. CaCN	CC Z-3	Gm. Thio.	CC M1B		Gm. Lime	CC CuSO4	CC 301	CC M1B			Lbs. Balls
		B. M.	Class.												
6	336	56	27												
	324	58	29												
7	264	54	24												
	300	54	27												
8	2.70	58	31												
	264	58	28												
9	288	58	31												
	259	58	29												
10	2.64	58	25												
	2.58	59	30												
11	3.00	60	30												
	310	60	31												
12															
1															

pH CU. _____

pH ZN. _____

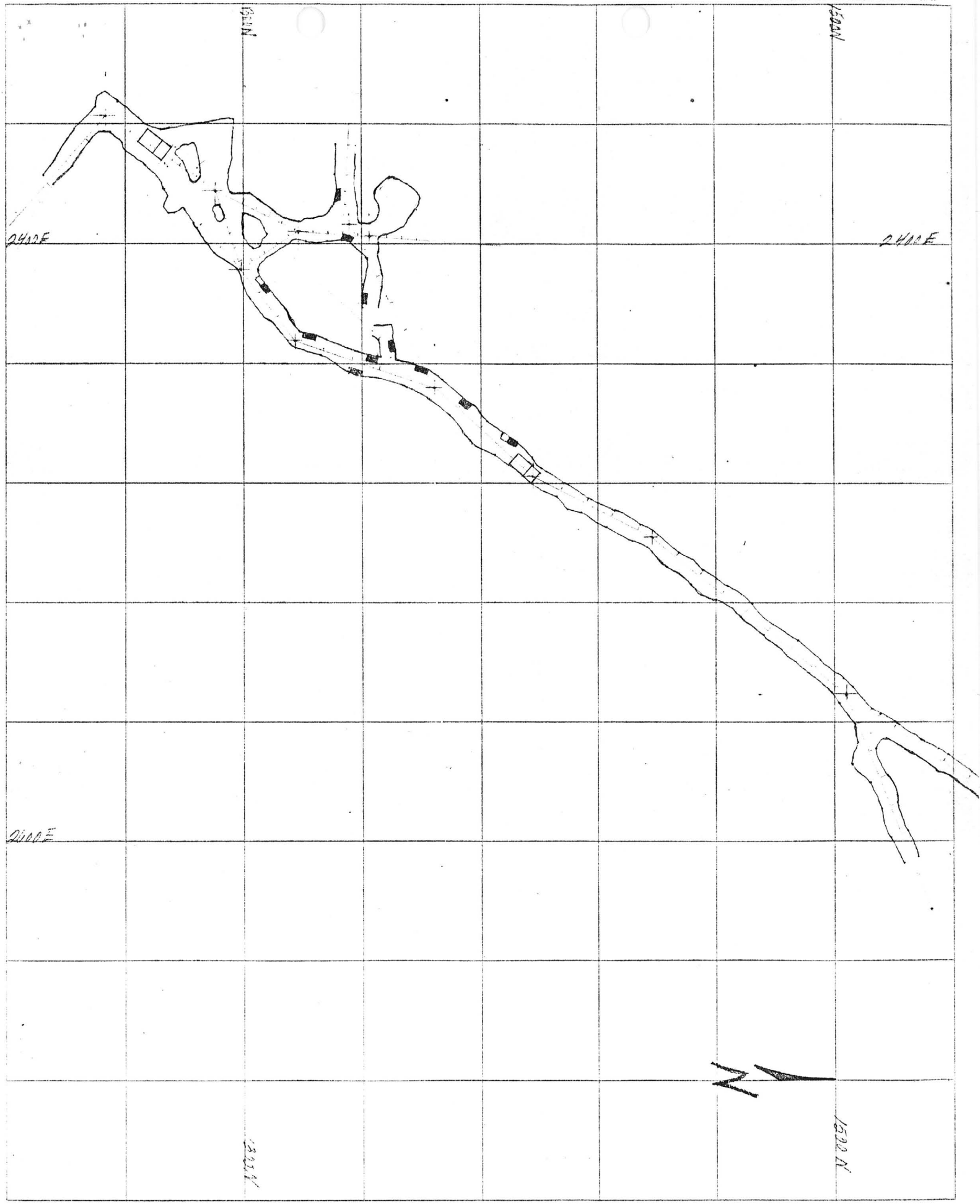
BALL MILL DOWN _____ TO _____ CAUSE _____

TOTAL HOURS BALL MILL OPERATION _____ TOTAL TONS ORE MILLED _____

REMARKS _____

BALL MILL OPERATOR _____

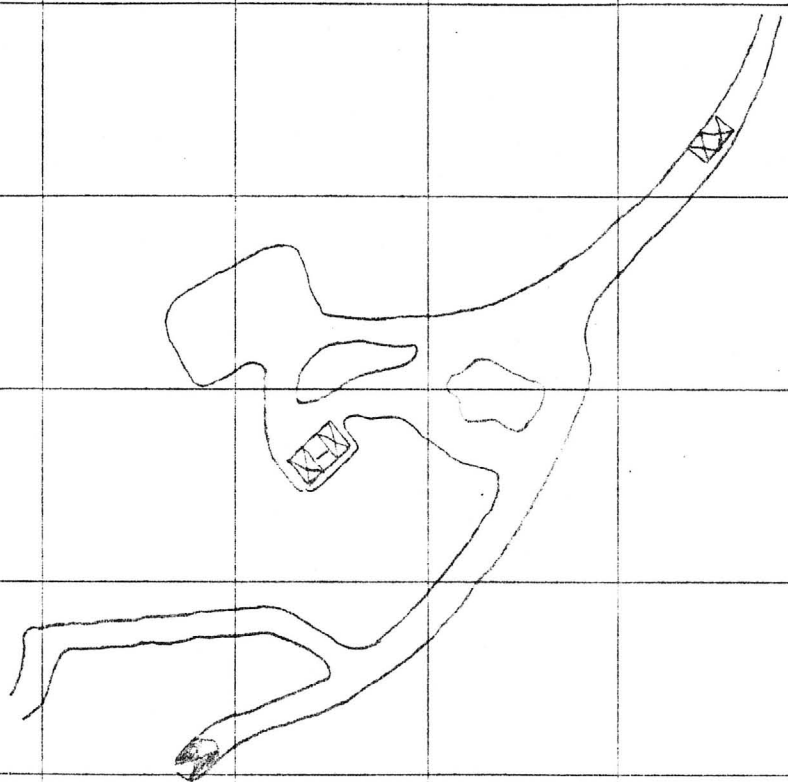
FLOTATION OPERATOR _____



MINE Copperwind LOCATION LEVEL 850 RL

GEOLOGY BY SURVEY SCALE 1"=40' DATE

1500 N.



1300 N

R30 E

R30 E

MINE 300 LOCATION LEVEL

GEOLOGY BY SURVEY SCALE DATE

"ALBANENE" No. 185M K&E CO., N.Y.
REG. U.S. PAT. OFF

1500E

2000E

1500N

1300N

MINE _____ LOCATION _____ LEVEL 850'

GEOLOGY BY _____ SURVEY _____ SCALE _____ DATE _____

May 12, 1957

This is an inventory of equipment at the Copper World Mine, Mohave County, Arizona. The list has been prepared for the Bobcat Mining Co. by R. E. Mieritz.

In use or useable items

1 Electric Motor-Fairbanks Morse 40HP 1200RPM 440 Volts#138857
1 Starter swithc-Allis Chalmbers 50HP#3K3282
1 Line Switch-Trumbull, Type C 50 Hp #40364
1 Electirc Motor- GE 30 HP 1200 Rpm 440 volst $1182646
1 Starter Switch- FM 40 HP #60770
1 Line switch-Trumbull Type C 30HP #40363
1 Triplex pump-Goulds # 3374
1 Line Switch Trumbull Type C. 7½HP # 40361
1 Single drum hoist with 1600 feet 3/8" cable, with GE. grid controls #817394 and Westinghouse motor, Frame 4640 20 HP 440 volt, 27amps/ter. Serial 8060687, 1140 Rpm.
1 Line switch TrumballType C. 30 HP #40363
1 Single drum hoist-gear driven
1 Line Swithh Trumball Type C. #40362
1 Square D Switch (oil-on Crusher)
1 Power saw with GE electric Motor 10HP 440 volss # 4650792
1 Line Switch Trumball Type C. 100 Amp. # 40353
1 Magnetic SwithhGE #177385C3
1 3' x 8' Air receiver with pressure valve
1 3½'x 10' Air Receiver with pressure gauges
1 2½' x 6' Air Receiver.
1 8" blower
300 feet 8 " air pipe (most of it useable)
1 Water Pressure system complet with Duplex pump.
1 Jack Hammer GDS #### # 545
1 Liner GDD 73 #425
1 Liner GDD 73 #122
1 Liner CP 1341-75880
1 Sweden-Tillver 253 Bit Grinder-air
2- Air Legs
1 IR Multivane size A4NN-OJ # A1011
3 Timber saws
2 Mine Axes
1 Sledge Hammer
1 Stoper CP 43 no number
1 Stoper Cp 43 #746
1 Bar 6' with arm, saddle and wrench
1 Bar 6'
1 Bar 4'
1 Slusher 2 drum IR A4 NIXOJ #1011
1 Pacific Hoe 26"
1 Tugger IR H.U. #4144 with 500 ' 3/8 cable
1 Skip
1 Mine bell
4 Oiles
140 feet 1" black pipe
700 feet 2½" air line(tram)
650 feet 12# rail(double) tram.
2 18" Sheave wheels and bearings (top of tram)
1 car Card 24"gauge(tram)
Lot Assay equipment and supplies
1 pulp balance
2 Ore cars 18" roller bearing

1 Anvil, large
1 Leg vise
1 Bench vise
1 Pipe vise
1 Phone
1 Fairbanks Morse Pump Jack, 135 feet 4" water column (Well)
4-12' x 16' cabins
1 12 x 32 office and room
1 16 x 24 Cook House with 12 x14 sleeping room
1 10 x 20 cabin
1 10 x 26 change room
1 20 x 50 compressor and hoist house
1 Timber shed
1 150 ton ore bin
4 Chick Sales
1 double bed and spring
2 double mattresses
25 single beds, scattered all over
4 Oil heaters
2 Letter files
4 office chairs
1 paper punch
1 Cabinet, Kitchen
8 benches, home made.
1 12 cuft gas refrigerator, Servel
1 Electric Hot water Heater, Wesix, 40 gals.
1 6 burner gas range
1 20 gal oil Hot water heater, (Change room)
1 225 gal water tank
1 5000 gal wood water tank
1 200 gal circulating tank, above shop
###
250 ft 3 lead rubber covered waterproof electric cable, (removed from mine and in ###### Mill building)
500 ft 3 wire rubber covered electir cable, as above, in Mill
1 grizzley on ore bin
1 5'x 8' Hirsh Ball Mill
1 36" Akins classifier
1 250 Unit Cell, Denver Sub A.
6 # 18 Denver copper cells
8 # 21 Denver zinc cells
1 3 leaf 6' American Filter with vacumm and blower.
Approx. 1 mile of 2" water line.
2 Bunk houses.
1 Atlas Sweden Jack Hammer #431770
1 GE Manual Starter Cat #2019014G7-K1 HP20-25 440 Volt
1 FB Morse duplex pump, 3x2x4 #46381
Line switches Trumbull Type C. 7½ HP 30amp(several of these)

<u>These items found but not useable</u>

1 Comperssor CP 12 x 10 #7139NSB
1 Compressor Sullivan 11 x 12 #2821 WC 3
1 Motor (field and frame only) GE 20-30 HP 1200 Rpm 440 V. #525327
1 motor 5 HP 1750 RPM 440 volts, #2749838 (in junk pile)
1 button balance, not complete
1 phone, upper levels, in disrepair.
1 swivel chair, broke

Items not found at mine

1 pump circulating 1" #3358-3B with
1 motor Master 1/3 HP 440 volts #14097 with Magnetic Switch.
1 Motor Westinghouse 7½ HP 1200 RPM 440 volts #2366524
1 Motor Westinghouse 7½ HP 850 RPM 440 volts #1238
1 Pump direct connected with
1 Motor Master 2 HP 440 Volt #QC 16970
1 Main Line Switch 2-- Amps.
1 Jack Hammer GDS #687 with cradle.
1 Stoper CP 43
L air Bar 7' with arm and saddle
1 rail bender, aluminum
2 6" roller bearing pulleys
7 air hoses
6 water hoses
2 Card cars 18" gauge
1 Card car 18" roller bearing
2 mine buckets 1200 pd capacity
1 lot blacksmith tools
1 Heavy duty cylinder
1 6HP cooled engine
1 Triplex pump, approx 3" x 6"
1 ton assorteedsteel
Small hand tools
1 double bed and spring
1 electirc heater
1 desk table
1 pencil sharpener
1 airtight heater
1 drafting table and 2 horses
4 small table stands
1 dresser, metal
3 chairs
1 Electric clock, shell only
1 Ruud hot water heater, 40 gal.
1 300 galoil tank
14 heavy rail 5 ft long
1 Brown Lab ball mill

Richard E. Mieritz
MINING CONSULTANT

April 1, 1957

Mr. W. E. Remmers
Bobcat Mining Co.
38 Wee Burn Lane
Darien, Connecticut

PROGRESS REPORT
COPPER WORLD MINE
March, 1957

Dear Mr. Remmers:

The following is a brief report of the activity at the Copper World Mine for the month of March, 1957.

All activity during the month has been confined to advancing the shaft.

SHAFT:

The total depth of the shaft as of April 1, 1957 was 111 feet below the collar. This was an advance of 46 feet for the month of March. About one forth of the working time for the month was lost due to failure of the contractors sump pumps and the necessity to crib and bridge the first 40 feet of the shaft because of air slack of the slips and seams in the schist. I believe it will be necessary to crib the shaft completly before too much time passes. Thus far no major faults or slips have been encountered and none is anticipated, however, the ground at the bottom of the shaft has lost some of its silicification which is creating a softer condition with added possibilities of air slack.

Enclosed is a copy of a letter from Mr. Brittain containing pertinent information regarding the work at the project.

Since all activity was confined to shaft sinking, I did not make my usual inspection trips merely to measure the advance. A trip the middle of this month will be more advantageous.

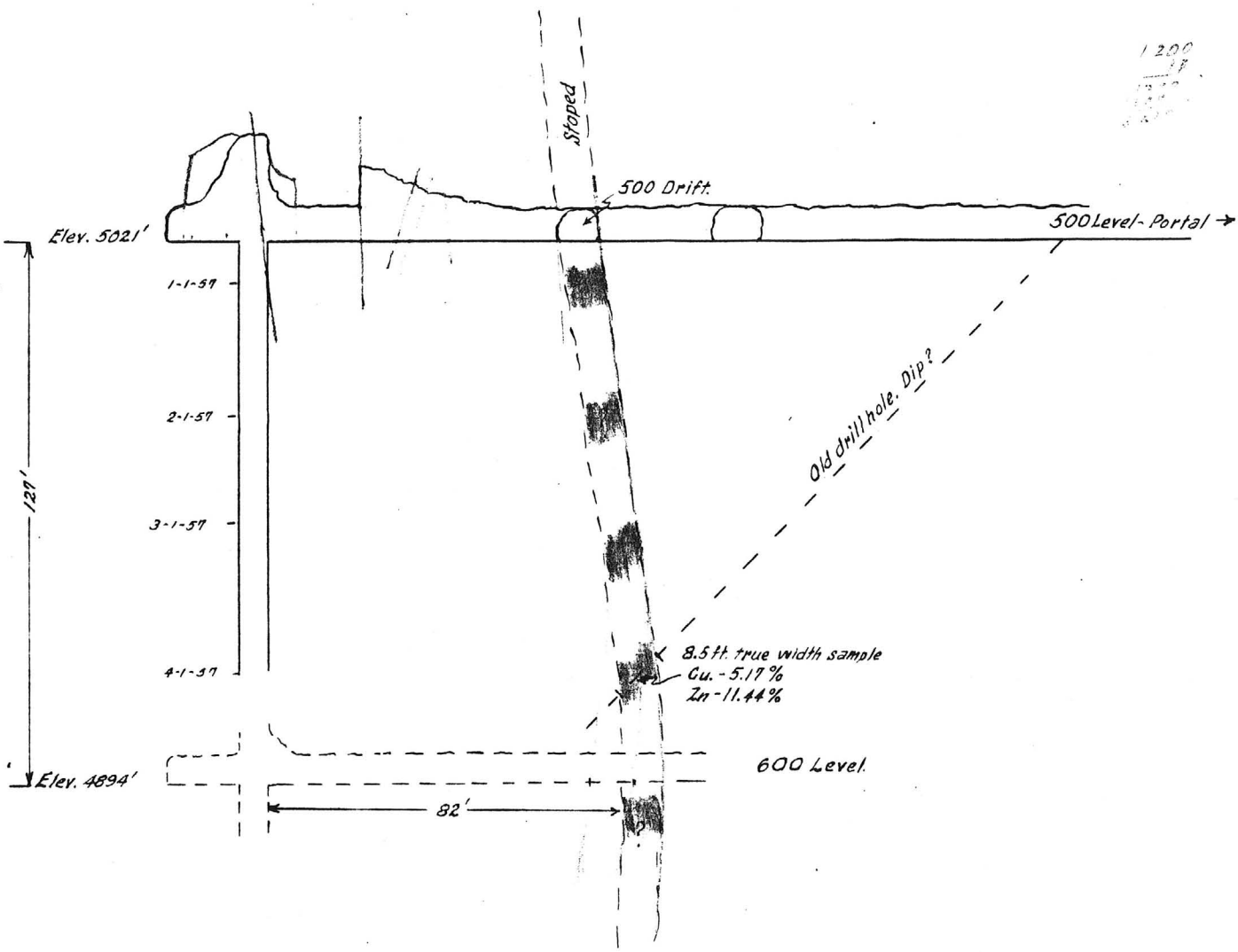
The attached map or section of the shaft, drill hole etc will indicate what has taken place the past month.

Very truly yours,

R. E. MIERITZ

R. E. Mieritz

cc:APCortelyou
WERemmers, 3 copies.



BOBCAT MINING COMPANY

SECTION THRU SHAFT

COPPER WORLD MINE
CEDAR VALLEY MINING DISTRICT
MOHAVE COUNTY, ARIZONA

HORIZONTAL & VERT SCALE
1 INCH = 40 FEET

APR. 1, 1957 R. E. MIERITZ

Richard E. Mieritz
MINING CONSULTANT

March 5, 1957

Mr. W. E. Remmers,
Bobcat Mining Company
38 Wee Burn Lane
Darien, Connecticut.

PROGRESS REPORT
COPPER WORLD MINE
February, 1957

Dear Mr. Remmers:

The following is a brief report of activity at the Copper World Mine for the month of February, 1957.

GENERAL

The much delayed construction of the cattle-guard has now been completed with a resulting pleased approval from rancher Harridge.

Removal of the old trailer blocking the cattle trail, brushing of the trail and repair have also added contentment to rancher Harridge.

Snow run-off and recent rains necessitated some hand-labor for road repair. Future road repairs will require the use of maintenance equipment. The road is passable to autos and supply trucks.

The transformer area had been cleared of brush and rubbish within the fenced area and without for a circumventing 10 foot distance. Such work was completed at my request on the supposition that we would soon require power facilities.

A timber bulk-head was constructed at the bottom of the dump near the change room as a means to confine the mined "mill rock" extracted from the 500 level drift work. This complys with your suggestion during your last visit.

NE DRIFT - 500 Level

The NE drift was advanced 86 feet from the last measured advance of February 4th. The total drift advance is 166 feet. Work on this drift was completed on the last shift of February 15th. Sinking of the shaft was resumed on February 17, the 16th being Saturday, the miners Sunday.

The attached map will show the total advance made in the NE drift. Approximately 100 feet of mineralized material is exposed along the right wall of the drift which varies from one to five feet in width. For the most part, the mineralization has been carried on the right side of the drift because a two foot zone of heavy biotitic, sparsely mineralized and badly broken material abounds adjacent to the hanging or left wall. The particular zone appears susceptible to air slack and could cause undo drift widening and timber support if not removed as part of the normal 5 foot wide drift.

My request for "round" car samples of the material removed was not complied with, thus, none of the exposed 100 feet of mineralization has been sampled. The entire zone should be sampled normal to the drift at 10 foot intervals.

Several slab rounds for a double track and switch were removed at the contractors discretion because the tram length was getting to great.

SHAFT

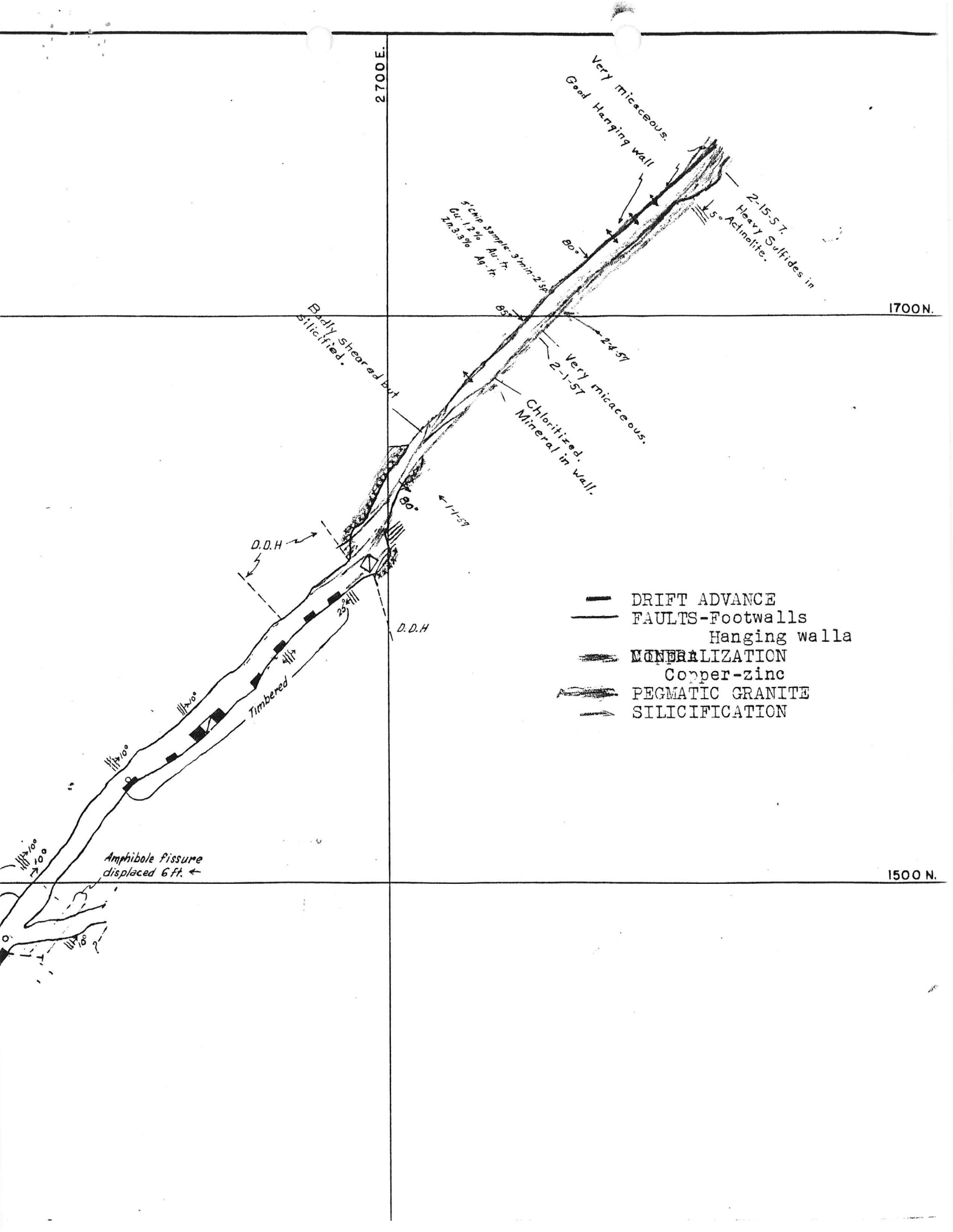
Shaft sinking resumed on February 17th. An advance of 24 feet was measured during the period. The total depth of the shaft is 65 feet of which 42 feet is timbered. Except for a slight decrease in hardness, no material change of rock character has resulted. One strong fracture plane on the SE wall of the shaft was encountered at approximately 40 feet. This particular steep pitching fracture is primarily the source of the major portion of the water encountered thus far. I do not believe the shaft is making more than 2 or 3 gallons of water per minute, or probably 3000 gallons per day.

INVENTORY

A check of the inventory of equipment at the mine has been completed. A retyped inventory will be sent to you as soon as possible.

Very truly yours,

cc: A.C.Cortelyou R. E. Mieritz


2700 E.
1700 N.
1500 N.
Very micaceous.
Good Hanging wall
5' chip sample 3' min-2' sp.
Cu. 1.2%
Au. tr.
Zn. 3.3%
Ag. tr.
80°
2-15-57.
Heavy Sulfides in
Actinolite.
85°
2-4-57
Very micaceous.
2-1-57
Badly Sheared but
Silicified.
Chloritized.
Mineral in wall.
80°
1-1-57
D.D.H
D.D.H
25°
Timbered
10°
10°
10°
Amphibole fissure
displaced 6 ft. ←
18 ?
DRIFT ADVANCE
FAULTS-Footwalls
Hanging walla
MINERALIZATION
Copper-zinc
PEGMATIC GRANITE
SILICIFICATION

Richard E. Mieritz
MINING CONSULTANT

February 6, 1957

Mr. W. S. Remmers
Bobcat Mining Company
58 Tee Burn Lane
Darien, Connecticut

PROGRESS REPORT
COPPER WORLD MINE
January, 1957

Dear Mr. Remmers:

The following is a brief report of activity at the Copper World Mine for the month of January, 1957.

GENERAL:

Unusual ? weather has temporarily slowed the progress to a minor degree during the latter part of the period. A twelve inch snowstorm and cold weather froze the water lines and the present mild temperatures with resulting melting snow has created slippery and rutted road conditions.

A bulkhead has been constructed at bottom of the dump near the change room to protect the change room of damage from the mineralized material which is currently being dumped in the area.

A Kingman electrical contractor of good reputation and experience has been contacted with reference to the necessary installation of power to the shaft station, some lights, etc. We shall make use of some equipment, swithces, transformers etc but we shall not destroy the existing wiring. It is planned to completely remove the three wire conductor cable which existswithin the underground workings, knowingly it will not carry the necessary load and I do not wish to permit stray currents around electric blasting.

SHAFT:

The shaft was deepened to 41 feet, an advance of 31 feet for the month. Lack of timber and the instability of the tugger-clam shell arrangement required a change of plan in the program, namely to temporarily drift NE on the 500 level, until shaft timber and new equipment arrives.

NE DRIFT--500 Lv.

On February 4th I measured an advance of 80 feet from the original face. The advance followed a strong

fault structure accompanied by much heavy schistosity, very micaceous and occassionally silicified in spots. The zone tends to roll both horizontally and vertically, which makes for difficult following. Numerous branch structures are at times more strong than the structure on which we are currently drifting. These structures are, I am sure, part of the system and perhaps a direct resultant feature for the ore deposition.

The true hanging wall(NW), which now has reversed itself and dips SE, has been on the left wall for 45 feet or so. The last 25 feet of advance shows moderate to strong chalcopyrite and sphalerite for 3 feet of the 5 foot face, on the right side. The mineralization I reported by phone a week ago did not carry through any great distance, being about a foot wide on the left wall(NW). I took a five foot chip sample across the face(3 feet of strong mineralization and 2 feet of sparse mineralization) which assayed 1.2% cu and 3.3% zn with a trace of gold and silver. Considering just a three foot width and using the above values, we could credit the strong mineralized portion with a 6 to 7% combined metal content. I advised the contractor to car sample each round while in mineralization, keeping an accounting as to location.

The attached map will indicate the advance for the period and the geologic relationship.

I am more convinced that short hole wall drilling is a must since a pattern resemtling echelon and regular distance spacing is portraying itself on the 500 level.

INVENTORY:

The inventory is slowly being completed as time permits on each trip. There are many items which have not been found primarily due to inadequate descriptions as to serial numbers etc. Many household and office type items have not been found. There is much equipment in the way of switchs, motors, mill equipment, etc which is not listed and I shall prepare an inventory of such equipment.

Through the efforts of Western Machinery Co. in Phoenix, a 52 HP capacity hoist has been located in Albuquerque. I inspected this hoist while in that city and believe it could be used for our purpose. Western Machinery will rent it at $450.00 per month for 90 days, 90% of the rental for that period to apply on the purchase price of $2500.00. The grace period should be ample

to complete the necessary work to provide sufficient information to arrive at a decision of a purchase.

The fact that we may soon be drifting on the 600 level requires that more ore cars be used. The contractor stated he was unable to supply more cars and at present financially restricted, consequently I suggest that permission be granted me to purchase 15 or 20 cars of used quality and price. I currently have a lead on some good used bearinged cars at a price of about $150.00 each. These are located in Kingman.

Very truly yours,

R. E. Mieritz

cc:APCortelyou

3097

op No. 1961 M Feb.5,1957

No. .....

VALUES
Latest Quotation

oz. Gold .....
oz. Silver .....
b. Copper .....
b. Lead .....
b. Zinc .....

THIS CERTIFIES
amples submitted for assay
ntain as follows:

CHAS. A. DIEHL
(Registered)

Arizona Assay Office

Phone ALpine 3-4001
Mr.Richard E.Meritz.
307 E.Indian School Road.

815 North First Street
Phoenix, Arizona
P. O. Box 1148

Short Ton .....2000 Lbs.
Short Ton Unit .....20 Lbs.
Long Ton .....2240 Lbs.
Long Ton Unit .....22.4 Lbs.

MARKS	SILVER PER TON Ozs.	SILVER PER TON Tenths	VALUE PER TON	GOLD PER TON Ozs.	GOLD PER TON 100ths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	% Copper	% Zinc	PERCENTAGE		REMARKS
Gw-1-	Trace			Trace				1.20	3.30			
								5 ft. sample - 5 to 7 of ft.				
								3 ore right side, - 2 ft mid.				
								left side.				

Charges $ 7.80

Assayer ARIZONA ASSAY OFFICE

Richard E. Mieritz
MINING CONSULTANT

January 4, 1957

Mr. W. E. Remmers
Bobcat Mining Company
38 Woe Burn Lane
Darien, Connecticut

PROGRESS REPORT
COPPER WORLD MINE
December, 1956

Dear Mr. Remmers:

The following is a brief report of activity at the Copper World Mine for the month of December, 1956.

GENERAL:

"Cleanup": The "shredded timber" accumulation around the mill building and ore bins has been cleared from its hazardous position. The worker employed for our account was discontinued as of the middle of the month. The contractors combination surface-compressor- and timber framer will tidy up as is needed at the portal, change room etc.

Inventory:

I am completing the inventory as time permits during my usual visits. At present, about 60% has been completed. As each item is identified, a small yellow paint mark is being used to denote its presence, buildings included. Such items as being used by the contractor are so noted, but not paint marked since it would soon wear away or become obscure.

Climate: Little moisture has fallen during the month. Some snow was visible on the very tips of the nearby peaks and an occasional drizzle was present during my last trip, January 3, 1957.

Accounting: Contractors and consulting invoices along with property payments were paid before the years end.

EXPLORATION:

Shaft Station: No level advance was made during the month. The level outline remains the same as indicated in the previous report. The headroom above the shaft and the ropeway have been removed. The headroom has been completly timbered, tuggers and crown sheaves installed and a spill

way installed to facilitate loading cars using the clam shell as the mucking unit for the shaft.

The shaft has actually been sunk 10 feet but the broken muck has not been removed until everything above the level is in readiness. The contractor advised he would start mucking the shaft on nite shift of January 3.

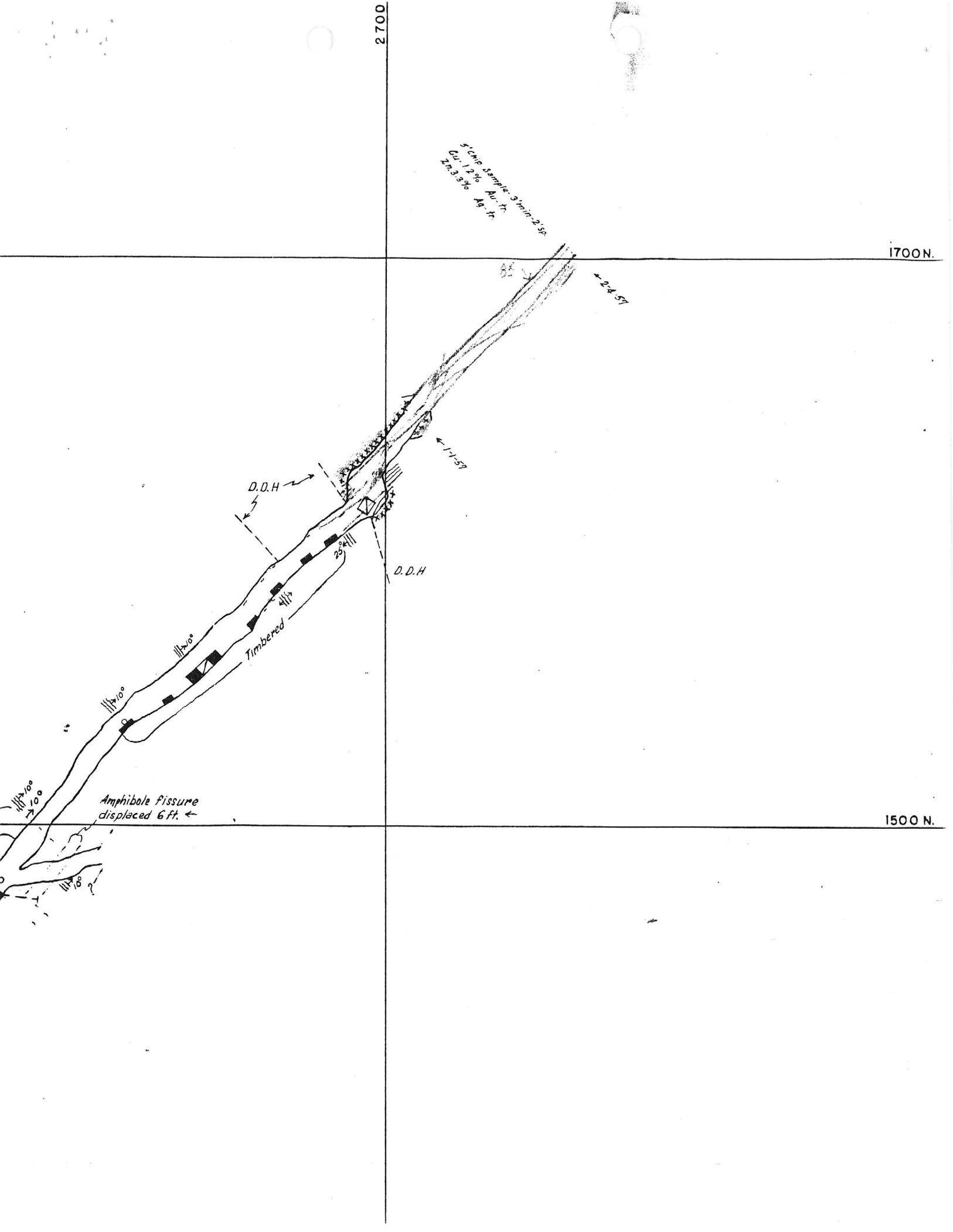
Shaft sinking should now continue in earnest, reaching the 600 foot level towards the later part of the month.

A shaft station of similar design but of reduced size will be used for the sixth level. Depth of sump to be sunk will be dependent on the amount of water encountered while sinking to the level. I do not believe more than 25 feet will be necessary.

Very truly yours,

R. E. Mieritz

ccAPCortelyou
Jcoples Mr. Remmers.


2700
1700N.
1500 N.
5' Comp Sample- 3' min- 2' sp.
Cu. 1.2%
Zn. 3.3%
Au. tr.
Ag. tr.
2-4-57
1-1-57
D.D.H
D.D.H
Timbered
Amphibole fissure
displaced 6 ft.

Richard E. Mieritz
MINING CONSULTANT

December 3, 1956

Mr. W. E. Remmers
Bobcat Mining Company
38 Wee Burn Lane
Darien, Connecticut

PROGRESS REPORT
November, 1956
COPPER WORLD MINE

Dear Mr. Remmers:

The following is a brief report of activity at the Copper World Mine for the month of November, 1956.

GENERAL:

Cattle Guard: The form for the cattle guard entrance to the mine road has been completed. Cement for the concrete foundation has been purchased and the iron gratting from an old county cattle guard has been brought to location. Mr. Harridge is apparently pleased we are conducting this work even though it is being accomplished at an irregular rate as time permits.

"Cleanup": Intermitent and irregular efforts are continuing to clean up the "shredded timber" accumulation around the mill building.

Camp: Several contractor employees have rehabilitated a few of the cabins for living quarters.

A climatic feeze just before Thanksgiving caused sume of the water lines to burst. Same have been repaired.

EXPLORATION:

Shaft Station: The 13 foot advance reported last month indicated good ground could be expected since the rock seemed quite silicified. This however was not the case, since the round immediately after encountered extremely shattered loose rock. The resulting condition is created by a serries of closed spaced faults traversing the crosscut for some 25 feet(station plus 26 to 51 feet). At one point, station plus 51 feet, at wall of vertical fault, the back climbed to 18 feet above rail elevation.

Unfortunately I did not learn of this situation until my next visit during the middle of the month. Ob-

viously the shaft could not be placed where planned. I therefore requested the contractor to narrow the advance to 5' x 7' crossection to make sure of what was ahead. I again made a vist on November 21 to check the encountered condition. Although some fractures of weak to moderate strength were encountered SE of the vertical fault, the ground is more silicified and blocky as confirmed also by the increased drilling time and the increased number of holes required for blasting. A shaft location has been selected at station plus 73 feet to overcome any influence of the vertical fault. The ensuing weeks work and prior advance provides the current outline as shown on the attached maps.

The existing crosscut face shows signs of moisture, a small"drip" near the right face is the only sign of falling moisture although much of the face is wet. This could dry up in a very short time.

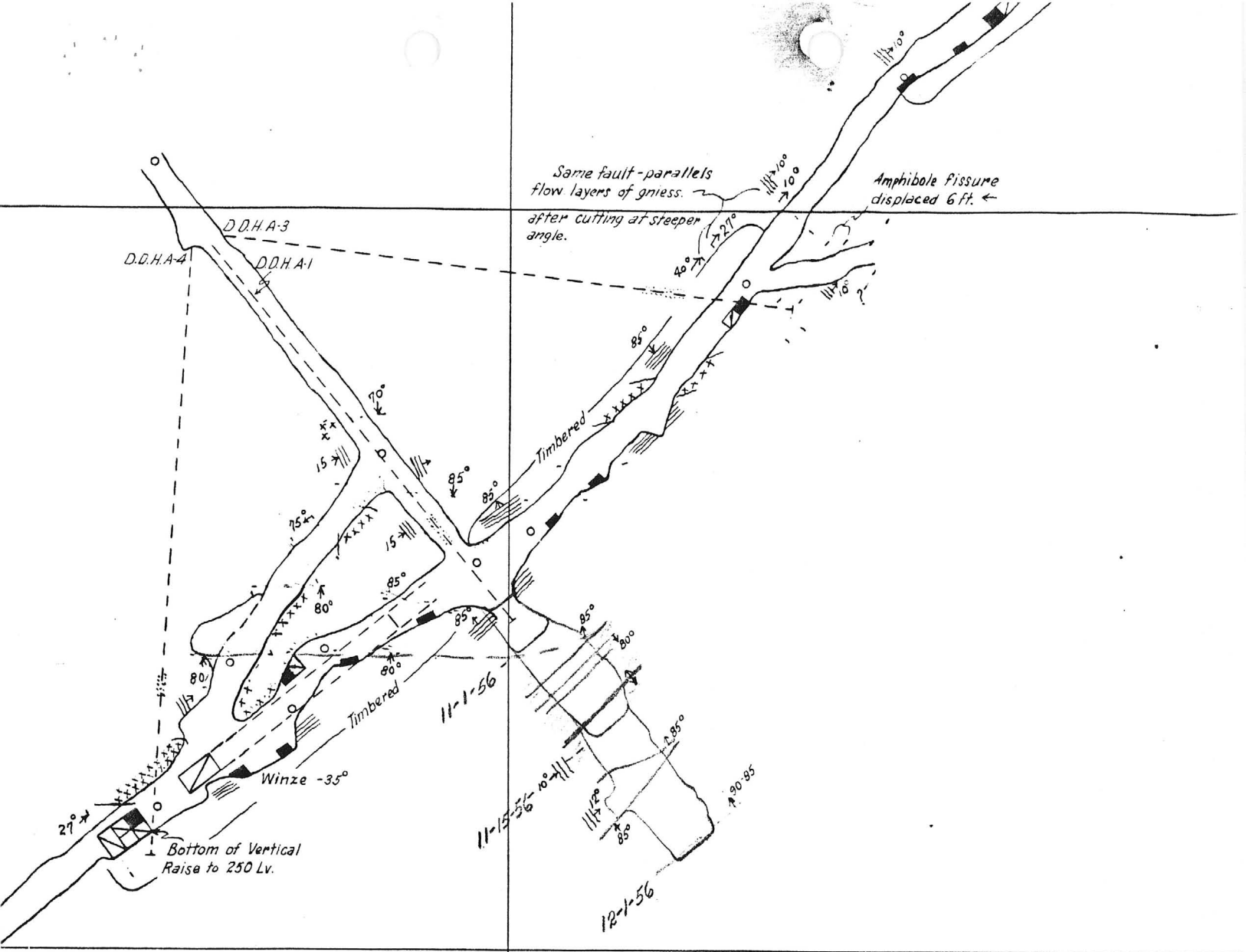
One round of the shaft head room has been extracted. The back is 14 feet above rail elevation.

Work will progress on the shaft headroom and sinking during the coming period.

Sincerely yours,

R. E. Mieritz

ccAPCortelyou


D.D.H.A-3
D.D.H.A-4
D.D.H.A-1
Same fault - parallels flow layers of gniess. after cutting at steeper angle.
Amphibole fissure displaced 6 ft.
Timbered
Timbered
Winze -35°
Bottom of Vertical Raise to 250 Lv.
11-1-56
11-15-56
12-1-56

Richard E. Mieritz
MINING CONSULTANT

November 2, 1956

Mr. W. E. Remmers
Bobcat Mining Company
38 Wee Burn Lane
Darien, Connecticut

PROGRESS REPORT
October, 1956
COPPER WORLD MINE

Dear Mr. Remmers:

The following is a brief report of activity at the Copper World Mine for the month of October, 1956.

GENERAL

Road: The bad spots on the mine road have been surfaced using a caterpillar loader and truck. Present condition of the road is such that passenger car travel is slow but easily accomplished. Unless destroyed by "unusual" precipitation, no additional repair will be required for the duration of the planned exploration program. Additional work however, will be required to accomodate a future heavier traffic schedule if and when such becomes a reality.

Change Room: The small building immediately to the east of the mill has been repaired with a new floor, lined with plaster board and the necessary plumbing and heating fixtures repaired and installed. I would recommend purchase and installation of a fire extinguisher within or immediately outside the building.

Cleanup: A general "cleanup" is being continued by the compressor-surface man who will concentrate his efforts around the mill building, change house and portal area, including the "shredded timber" accumulation. The portal area appeared to be quite presentable and hazardless during my last visit.

Dead Work: The following pre-exploration dead-work has been accomplished during the month.

(1)-Rehabilitate the dump trestle and track.
(2)-Cleanup and repair of the crosscut and track.

(3)-Cleanup and repair of NE drift track, removal of muck near face of NE drift, timbering of the area and strengthing of some bad timber sets in the drift.
(4)-Cleanup in part the SW drift to use same for powder storage.

EXPLORATION

Shaft Station: Actual work on the shaft station started on Monday, October 29, with two shifts. As of the end of the month the advance was 13 feet as indicated on the attached sketch.

A three shift schedule started on November 1st.

Drift work had been delayed due to the late arrival of the compressor, October 25th, and the necessity to repair and replace some air line.

Advance should now be made at a normal rate.

Influence of the ore structure and possible fault projection indicate some timbering may be necessary in the station, that we may also have to place the shaft a few feet southeast along the center line and make other minor changes as we progress.

LEGAL: A chance meeting with Mr. Dye provided information regarding lease rental on acreage for mill and camp site and patented claim taxes. A check with Mr. Burgess indicated he was not aware nor advised to make the proper payments. I called Messrs. Owens and Jenks regarding this matter since I was advised by Mr. Dye that the lease rental was due November 1st and the claim taxes due November 5th.

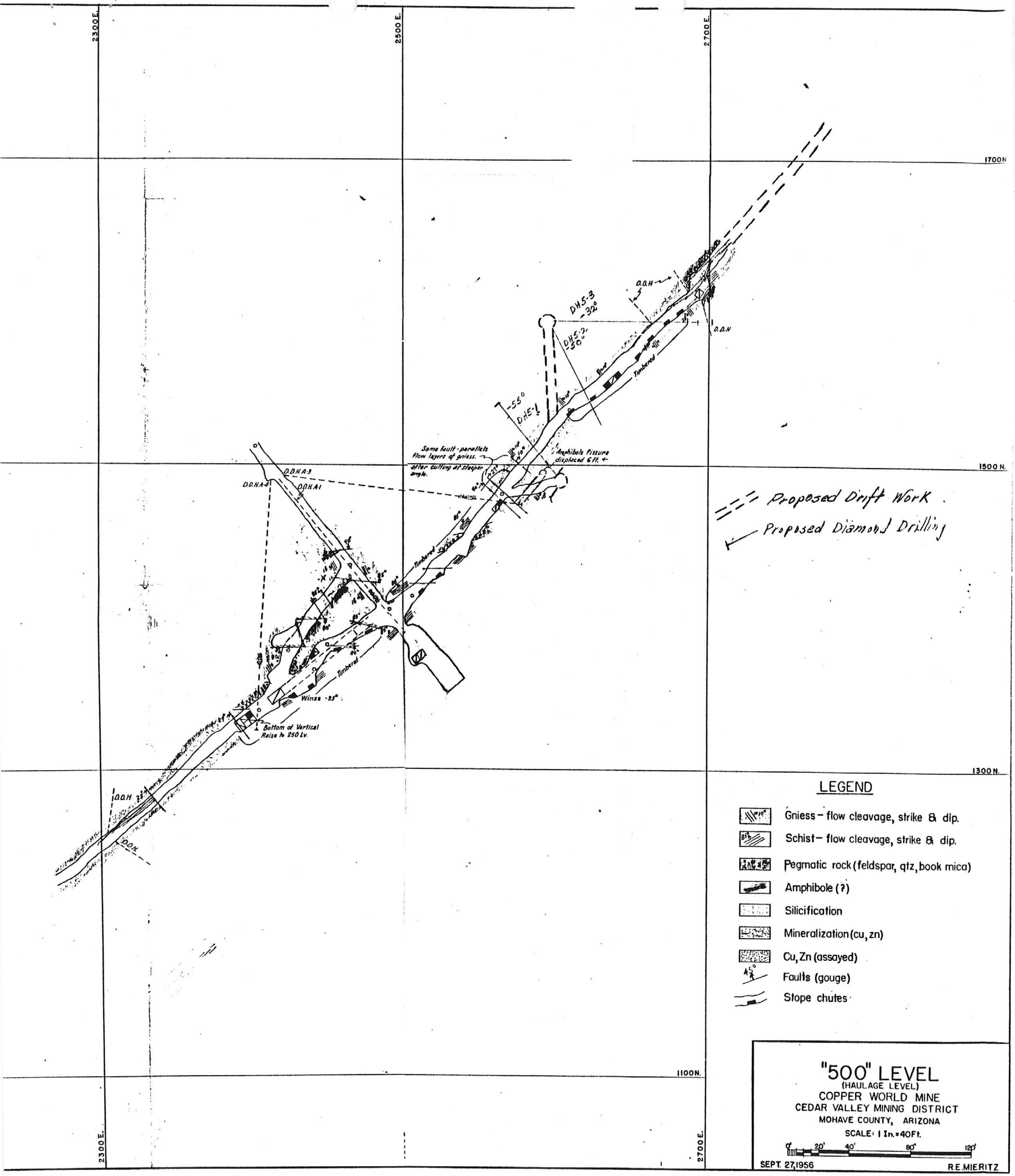
Considering the urgency of the matter, Mr. Burgess and I agreed payment was necessary without authorization, at least for now. Mr. Burgess advised he would make the necessary payments and advise you of same by letter.

I have prepared an extra copy of this report since partners are involved and that you may wish to retain the original for your files and circulate the copy.

Sincerely yours,

R. E. Mieritz

cc:
APCortelyou



"500" LEVEL
(HAULAGE LEVEL)

COPPER WORLD MINE

CEDAR VALLEY MINING DISTRICT

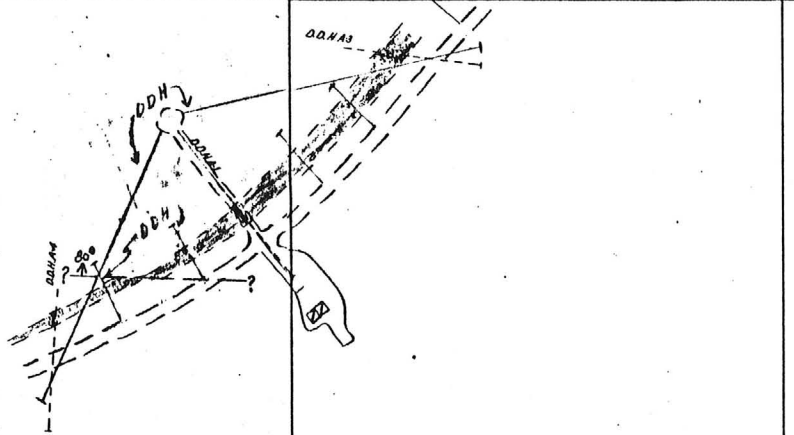
MOHAVE COUNTY, ARIZONA

SCALE: 1 In. = 40 Ft.

0' 20' 40' 80' 120'

SEPT. 27, 1956

R.E. MIERITZ



1700 N.

1500 N.

1300 N.

1100 N.

2300 E.

2500 E.

2700 E.

LEGEND

Proposed Drift Work

Proposed Diamond Drilling

"600" LEVEL

COPPER WORLD MINE

CEDAR VALLEY MINING DISTRICT

MOHAVE COUNTY, ARIZONA

SCALE: 1 In. = 40 Ft.

0' 20' 40' 80' 120'

OCT. 9, 1956

R.E. MIERITZ

COPPER WORLD MINE
EXPLORATION PROGRAM

October 23, 1956

500 Level Exploration

Shaft: The proposed location appears to be wisely chosen since a possible projection of a strong steeply dipping N*S fault exposed in the ore zone might pass just north of the chosen position. The hanging wall side of fault is extremely "rotten" as evidenced in the ore zone. We can be protected by non-existance of this fault in the shaft area or by the fact that we would be in the footwall where the rock appears more substantial.

NE Drift: Our initial discussion included possible plans to extend the NE drift about 200 feet. The exact timing of this work was not decided, consequently I believe it advisable to consider same at this time as it would provide us information, negative or positive, in advance of driving the NE drift on the 600 level. Little is know about the 2nd NE ore shoot below the 500 Lv, therefore, I suggest the following program--after the shaft station is completed and while sinking is advancing--

(1)-drive a 60 foot crosscut for a drill station in hanging wall as shown on map.
(2)-when crosscut is completed advance NE drift 100 feet on zone.
(3)-while crosscut is being driven, drill hole #5-1 normal to strike of zone and at a -55° for approximately 90 feet to intersect zone about 50 feet below the 500 level.
(4)-while NE drift is being advanced, drill hole #5-2 at -50° for about 80 feet and drill hole #5-3 at -32° for 105 feet in directions as shown.

This information should be had in advance of NE drifting beyond the # 1 ore shoot on the 600 level since the variable NE dipping fault caused at least a 6 foot displacement as is evidenced in the short east crosscut.(fault indicated with note on map.)

SW Drift: Although SW drifting was mentioned during discussion of the initial program, I have not considered this work since my mapping in this drift is not complete. I shall soon concentrate on this phase.

600 Level Exploration

Shaft Station: The shaft station at this level will approximate the outline of that on the 500 level with the exception of a reduced tail room. See 600 level map.

The original exploration plans on this level call for crosscutting from shaft to ore zone; drift NE and SW on the

ore zone and crosscut 40 feet northwesterly away from the ore zone into the hanging wall for a diamond drill station from which down angle holes may be drilled to penetrate the ore zone at some depth below the 600 level. The physical characteristics of the ore and rock matrix, the underground water and previous mining indicates timber is required when an opening in the ore zone is made. A similar condition in the ore zone can be assumed for drifting on the 600 level. Advantages of drifting on the zone are obvious, however, our costs per foot are therefore increased by $8.00.

Since a 200 foot strike length in the #1 ore shoot is already indicated by the three drill holes, a substantial saving of timber cost would be had if the following suggested plan could be considered and adopted:

(1)-drift parallel to the ore zone but 5 to 7 feet in the foot wall as shown on the attached level map.(Would provide good haulage way. Chutes and entries to stopes from this drift also.)

(2)-Utilize timber cost saving to diamond drill short (35 foot maximum) low angle up holes into the ore zone at 20 to 30 foot centers for grade samples and structure.

(3)-extend the station crosscut into the hanging wall of the zone some 40-45 feet for a diamond drill station.

(4)-drill steep inclined holes to intersect zone approximately 100 feet below the 600 level.

(5)-advance NE drift in a parallel projected direction for approximately 200 feet beyond #1 ore shoot providing drill holes 5-1, 5-2 and 5-3 indicate mineralization below the 500 level in this area or provided also if mineralization is encountered through our efforts of extending the NE drift on the 500 level.

(6)-drill short low angle up holes into the hanging wall at predetermined stations for grade and structure.

A timing schedule between drift work and drilling could easily be established so as not to delay or interfere one operation with the other.

I have requested the contractor to advise me the cost per foot for EX and AX size, short hole drilling, maximum 35 foot depths. These costs should not exceed 60 to 70 % of the costs quoted in the contract because of greater drilling time, smaller machine etc.

R. E. Mieritz
October 23, 1956

B.S. Bk. Fs.	Bearing	L. med.	Elev.	Latitude	Departure		Hor. Dist.
3 4 → 5	S 38° 56' E	180° 00'	5028.79	77.21 S	62.38 E	plug	99.26
4 5 → 6	S 39 59 E	178° 57' R.	5029.50	30.30 S	25.41 E	Timber	39.54
4 5 → 5-1	S 35° 33' W.	254° 29' R.	5027.71	57.60 S	41.16 W.	Timber	70.79
5 5-1 → 5-3	S 25° 48' W.	170° 15' R	5029.32	38.86 S	18.78 W.	Timber	43.16
6 ← 6-2 6-4	N. 41° 19' E	161° 12' R	5030.24	66.50 N	58.46 E.	Timber	88.54
6-2 (gone) 6-4 → 6-6	N. 37° 48' E.	176° 29' R	5030.80	55.84 N	43.31 E.	Timber	70.61

Copper World Mine
Survey Stations - 500 Lv. Adit.
From J. T. Jordan
Oct 20, 1956

COPPER WORLD MINE
EXPLORATION PROGRAM

October 23, 1956

500 Level Exploration

Shaft: The proposed location appears to be wisely chosen since a possible projection of a strong steeply dipping N*S fault exposed in the ore zone might pass just north of the chosen position. The hanging wall side of fault is extremely "rotten" as evidenced in the ore zone. We can be protected by non-existance of this fault in the shaft area or by the fact that we would be in the footwall where the rock appears more substantial.

NE Drift: Our initial discussion included possible plans to extend the NE drift about 200 feet. The exact timing of this work was not decided, consequently I believe it advisable to consider same at this time as it would provide us information, negative or positive, in advance of driving the NE drift on the 600 level. Little is know about the 2nd NE ore shoot below the 500 Lv, therefore, I suggest the following program--after the shaft station is completed and while sinking is advancing--

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(4)-while NE drift is being advanced, drill hole #5-2 at -50° for about 80 feet and drill hole #5-3 at -32° for 105 feet in directions as shown.

This information should be had in advance of NE drifting beyond the # 1 ore shoot on the 600 level since the variable NE dipping fault caused at least a 6 foot displacement as is evidenced in the short east crosscut.(fault indicated with note on map.)

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600 Level Exploration

Shaft Station: The shaft station at this level will approximate the outline of that on the 500 level with the exception of a reduced tail room. See 600 level map.

The original exploration plans on this level call for crosscutting from shaft to ore zone; drift NE and SW on the

ore zone and crosscut 40 feet northwesterly away from the ore zone into the hanging wall for a diamond drill station from which down angle holes may be drilled to penetrate the ore zone at some depth below the 600 level. The physical characteristics of the ore and rock matrix, the underground water and previous mining indicates timber is required when an opening in the ore zone is made. A similar condition in the ore zone can be assumed for drifting on the 600 level. Advantages of drifting on the zone are obvious, however, our costs per foot are therefore increased by $8.00.

Since a 200 foot strike length in the #1 ore shoot is already indicated by the three drill holes, a substantial saving of timber cost would be had if the following suggested plan could be considered and adopted:

(1)-drift parallel to the ore zone but 5 to 7 feet in the foot wall as shown on the attached level map.(Would provide good haulage way. Chutes and entries to stopes from this drift also.)

(2)-Utilize timber cost saving to diamond drill short (35 foot maximum) low angle up holes into the ore zone at 20 to 30 foot centers for grade samples and structure.

(3)-extend the station crosscut into the hanging wall of the zone some 40-45 feet for a diamond drill station.

(4)-drill steep inclined holes to intersect zone approximately 100 feet below the 600 level.

(5)-advance NE drift in a parallel projected direction for approximately 200 feet beyond #1 ore shoot providing drill holes 5-1, 5-2 and 5-3 indicate mineralization below the 500 level in this area or provided also if mineralization is encountered through our efforts of extending the NE drift on the 500 level.

(6)-drill short low angle up holes into the hanging wall at predetermined stations for grade and structure.

A timing schedule between drift work and drilling could easily be established so as not to delay or interfere one operation with the other.

I have requested the contractor to advise me the cost per foot for EX and AX size, short hole drilling, maximum 35 foot depths. These costs should not exceed 60 to 70 % of the costs quoted in the contract because of greater drilling time, smaller machine etc.

R. E. Mieritz
October 23, 1956

Richard E. Mieritz
MINING CONSULTANT

October 13, 1956

Mr. W. E. Remmers
Bobcat Mining Co.
38 Wee Burn Lane
Darien, Connecticut

Dear Mr. Remmers:

Receipt of Mr Cortelyous' October 9th letter has prompted the preparation of the attached diagramatic drawing to more readily provide you a picture of a proposed shaft station.

Generally this plan may be a might more elaborate than the next three or four months work calls for but it does reflect thoughts projected to future production. The planned 4' x 5' cable way could be used as a future ore bin if skip hoisting becomes desirable. The double track arrangement will accomodate 10 to 12 one ton empty cars; out of the way of loaded cars, will also permit empty car backside entrance to cage; pushing loaded car ahead and would provide the hoistman a clear view of the shaft, etc. Car trammer-shaft tender has a hazardless, short access to both sides of cage. A hoist room height of 9 feet is required for an elevated floor to permit the hoistman a clear view over mine cars when the 4' x 5' cable way is converted to an ore bin. (orange pencil lines)

This plan will be discussed with the contractor on October 15th when I travel to the mine for the semi-monthly visit. We shall, unless advised to the contraryof suggested changes, proceed with the submitted proposed plan.

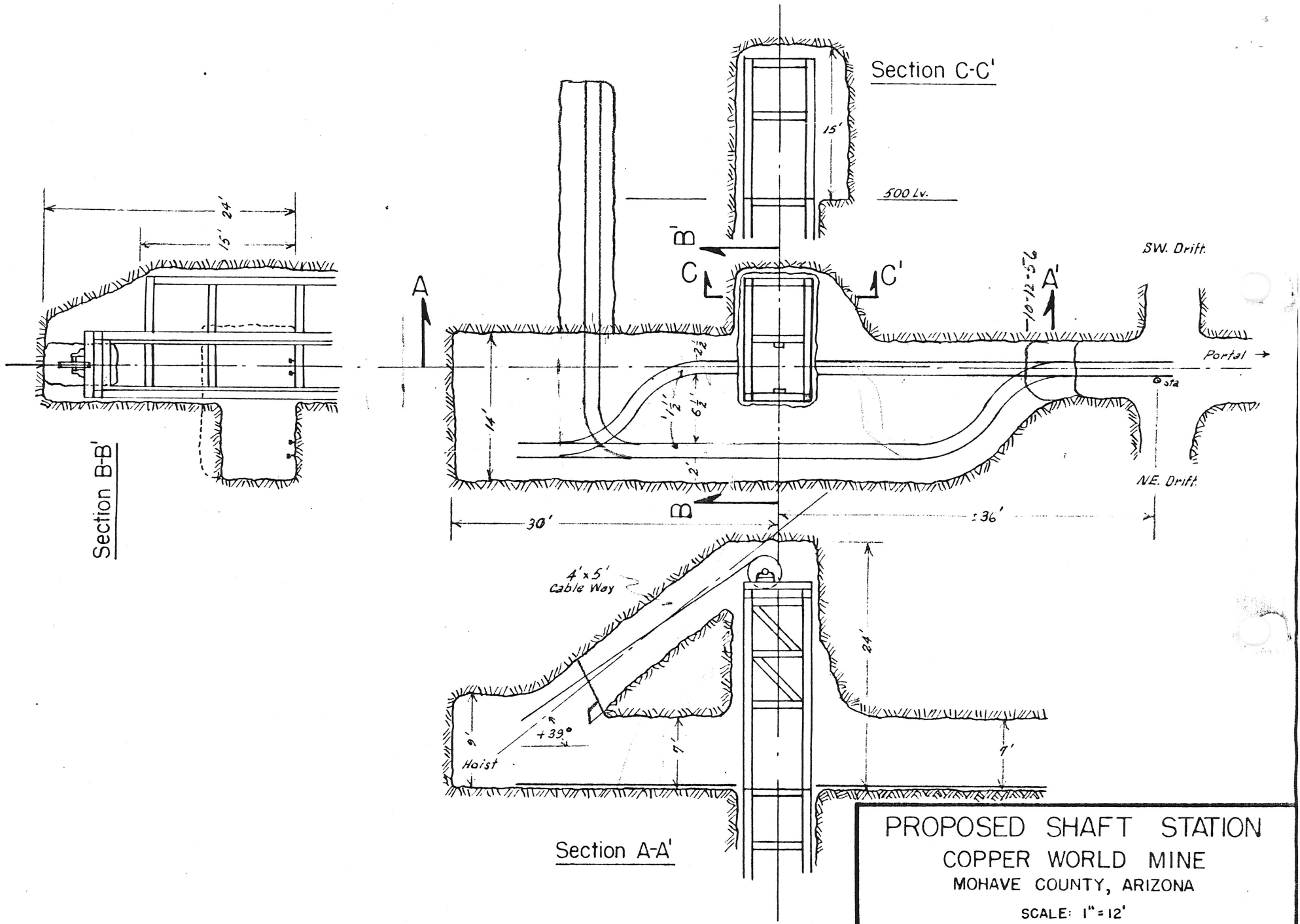
The existing crosscut face is indicated on the drawing by the red ink line and date. The first round of the crosscut to the shaft station will more than likely be drilled on Oct. 15 or 16.

In the event you wish to contact me, I shall be at the Hilltop Motel in Kingman on Monday nite and shall return to Phoenix the evening of October 16th.

Sincerely yours,

R. E. Mieritz

cc.
Attach: Proposed shaft station(drawing)
A. P. Cortelyour-attach.
Brittain-Hendrickson-attach.



PROPOSED SHAFT STATION

COPPER WORLD MINE

MOHAVE COUNTY, ARIZONA

SCALE: 1" = 12'

OCTOBER 12, 1956

R.E MIERITZ

AGREEMENT

THIS AGREEMENT, made and entered into this 26th day of September, 1956, between BOBCAT MINING COMPANY, a partnership, 38 Wee Burn Lane, Darien, Connecticut, hereinafter referred to as Permitter and/or Lessee, and BRITTAIN-HENDRICKSON MINING CO, INC., of 891 East Alta Vista, Tucson, Arizona, hereinafter referred to as "contractor":

W I T N E S S E T H:

1. Scope of Work to be Performed:

The work to be performed under this Agreement comprises drifting, shaft sinking, station cutting, diamond drilling and/or other optional work on the Copper World Mine, Mohave County, Arizona, all to be done and performed in good and workmanlike manner.

2. Duration of this Agreement:

Contractor agrees to start the work to be performed under this Agreement at once and shall expeditiously prosecute the work to completion, unless this Agreement is terminated by either party. It is fully understood and agreed that either party may terminate this Agreement and further prosecution of the work at any time, upon ten (10) days written notification of such intention to the other party.

3. Contractor's Obligations:

Contractor shall furnish all equipment, materials, tools, supplies, labor, and supervision necessary for the full and complete performance of the work with the exception of machinery and equipment that shall become a part of the permanent installation of the property involved.

4. Qualification and Independence of Contractor:

It is fully understood that contractor in the performance and carrying out of the terms of this Agreement, is an independent contractor, and not an agent or employee of the Lessee, and that Lessee shall have no direction or control as to the method of performance of the work, being concerned only with the results accomplished.

5. Accident Prevention, Liability, and Insurance:

(a) Accident Prevention: Contractor shall take all safety precautions and furnish and install all safeguards necessary for the prevention of accidents and fires, and shall comply with all laws and regulations in regard to these matters.

(b) Liability: Contractor hereby assumes the entire responsibility and liability for any and all damage, loss or injury of any kind or nature whatsoever, to person or property, caused by or resulting from contractor's or its subcontractor's execution of the work, and, accordingly, contractor agrees that it will indemnify and hold harmless the Lessee from all and any claims, loss, damage, charge or expense to which Lessee may be subjected by reason of any act, regulation, omission, or default on the part of contractor or any of contractor's agents, servants or employees.

(c) Insurance: Contractor shall provide for the payment of Workmen's Compensation Benefits to all employees employed on or in connection with the work covered by this Agreement and shall provide Liability Insurance.

6. Price:

Lessee shall pay to contractor, and contractor shall accept as full payment for the work performed by it under this Agreement the following:

(a) Mobilization: A mobilization fee of SEVEN HUNDRED ($700.00) DOLLARS to cover the cost to contractor for moving in labor, equipment, fuel and supplies necessary to begin work.

(b) Drifting: (1) Present level drifts: The price for present level 5' x 7' drifts will be THIRTY-TWO AND $.50/100 ($32.50) DOLLARS per linear foot and EIGHT ($8.00) DOLLARS additional per linear foot if timber is required for the support of ground. (2) Future level drifts: For 5' x 7' drifts below the present workings the price will be THIRTY-SEVEN AND $.50/100 ($37.50) DOLLARS per linear foot and EIGHT ($8.00) DOLLARS additional per linear foot should timber be required to support the ground.

All drifts shall have twenty pound track on 18" gauge and be on grade. 2" victaulic air line and 1" water line will be installed.

(c) Shaft Sinking:

(1) Dry: The price for a two compartment shaft of 5' x 5' compartments inside timber will be NINETY-FOUR ($94.00) DOLLARS per vertical linear foot. This price will be for a completely timbered shaft of 8" x 8" timber with 2" lagging, and will include 2" airline, 1" water line, guides, vent line, and bearer sets at the collar and at each station or at one hundred foot intervals vertically in the shaft.

(2) Wet: Should water be encountered to require pumping in the shaft, an additional FIVE ($5.00) DOLLARS per linear foot for each 100 gpm or fraction thereof will be paid by owner to cover the pumping costs.

(d) Station Cutting or Authorized Over-breaking:

The price for stations, pockets, hoisting facilities and other authorized overbreak will be $.85/100 ($.85) cents per cubic foot. Stations will be timbered to adequately support the ground.

(e) Diamond Drilling:

The following prices will prevail for diamond drilling.

(1) 1000' minimum:

EX core hole to 350 feet	$3.95	per foot
AX " " " " "	4.46	" "
BX " " " " "	5.00	" "
NX " " " " "	5.50	" "
Cementing if required	7.75	per hour

Casing left in hole to be paid for at contractor's cost.
Reaming: 60% of cost of hole size desired.

(2) Under 1000':

If less than 1000' is required, owner will pay a mobilization and demobilization fee of $400.00

(f) Optional Work:

Optional work such as road repair, clean-up, retimbering, machinery installation and repair will be at cost plus ten per cent (10%) of cost and costs shall include the following:

(1) labor and supervision

(2) overhead on labor and supervision at thirteen per cent (13%) of payroll with the following breakdown:

2% Social Security

2.7% Unemployment Security

7.78% Workmen's Compensation Insurance

0.52% Liability Insurance

(3) all equipment, supplies, fuel, and materials;

(4) transportation of same

(5) bookkeeping and accounting

(6) equipment rental

7. Terms of Payment:

Contractor shall submit to Lessee or its agent invoices covering all work performed semi-monthly on the first and 16th days of each month, together with vouchers and statements necessary or required by Lessee in support of such invoices. Payment for the work covered by such invoices shall be made within five (5) days following receipt of such by the owner.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

BOBCAT MINING COMPANY, a partnership

By_____

_____

_____

_____

Permittee and Lessee

BRITTAIN-HENDRICKSON MINING CO., INC.

By: _____
ARTHUR HENDRICKSON, President

_____
DALE BRITTAIN, Secretary

P.O. Box 5238
Tucson, Arizona

December 15, 1955

Sherwood B. Owens
4052 Calle de Jardin
Tucson, Arizona

Dear Mr. Owens:

The following is a brief resume of information available and information obtained during the examination of the Copper World Mine, Yucca, Mohave County, Arizona.

The Copper World Mine is located approximately 17 miles east of Yucca, Arizona, in the Cedar Valley Mining District, Township 18 North, Section 25, Range 16 West, Mohave County.

Yucca is the nearest shipping point. The nearest source of supplies is Kingman, Arizona. There is a good graded road to the property with the exception of the last mile which needs some grading. The camp buildings and boarding house located at the mine are in fair state of repair and can be rehabilitated at a minimum cost.

This mine was worked from 1942-1946 by Dye & Bathrick, a partnership. Their mining was done between the 190 foot and 250 foot levels. The 60 foot vertical distance they mined produced a total tonnage of 13,990 tons of crude ore that averaged 3.62% Cu and 11.2% Zn. Since they did not have a mill, this tonnage was shipped to custom mills with most of it going to Shattuck Denn in Bisbee, Arizona. They worked under a Government loan and were one of the few Arizona mines to make a 100% return.

The mine was under lease and option to Omega Metals Co. from 1948-49. They did considerable development work on the property and had just gotten into operation when metal prices dropped in 1949. When Omega Metals Co. took over the property the lowest level was the 250-foot level. Most of the known ore was stoped out above this level. A 250-foot vertical diamond drill hole was drilled, starting in the ore on the 250-foot level, and it remained in ore to the 450-foot level. Due to a steep side hill slope, the ore zone on the 500-foot level could be reached by a 730 foot crosscut adit. During the time that Omega Metals Co. held the property they ran this crosscut to the ore zone and drifted 120 feet each way on the ore. They also started a vertical raise from the 500 foot level to the 250 foot level. This was started on the diamond drill hole. The ore from this development plus a small tonnage from stoping was milled at the Boriana Mill. About 2500 tons of ore from this development was milled and averaged 3.0% Cu and 10.5% Zn.

The last company to operate the mine, the Mountain States Metals Company, completed the main #1 raise to the 250-foot level and developed two main sub-levels between the 250 foot and 500 foot levels. They drifted a total of 290 feet to the northeast from the main crosscut and haulage on the 500 foot level and 145 feet to the southwest from the crosscut. There were two main ore shoots encountered in this drifting. The ore shoot over the main crosscut is the only one on which extensive mining has been done to date. The ore zone to the northeast is new, only partially developed and mined. The sub-level development is also shown on the attached maps.

Production to December 31, 1952, was 29,846 tons of crude ore averaging 3.47% Cu and 10.8% Zn. Since this date 2040 tons of crude ore has been produced from the northeast orebody averaging 4.4% Cu and 5.7% Zn. An additional 4,000 tons has been mined from the levels above the 500 foot and has averaged 3.50% Cu and 10.0% Zn, making total recorded production from the mine 35,886 tons.

The ore zones on the 500 foot level have been as large as the zones on the upper levels and the grades nearly the same. The copper values have increased in proportion at lower levels.

Three diamond drill holes have been drilled from the 500 foot level to intersect the ore zone on the 600 foot level, the lateral extension along the strike being 400 feet between the holes. It is noteworthy that there was no dimunition in the width of the ore zone in this 100 foot downward extension, same averaging 7.3 feet in width at the 600 foot level. It is particularly important to note that the grade continues to hold its own or even show considerable improvement. The average for the three drill holes is 4.1% Cu and 10.8% Zn. These three drill holes are the only drilling or work of any nature whatsoever that has been done on the 600 foot level. Other than the three drill holes mentioned, the only other work of any nature that has been done below the 500 foot level is a 50-foot incline winze which is sunk in ore as a downward extension of the northeast ore shoot. Geologically, there is no reason why the ore in this mine will not continue to depth.

A DMEA application has been submitted requesting a 165-foot winze from the 500 foot level in the footwall side of the ore,

15 feet of this to be for a sump and pocket. It is also requested that 290 feet of drifting be done to the northeast and 110 feet be done to the southwest. This has been submitted to the U.S. Bureau of Mines, a Docket Number assigned, and the project approved. The shaft is to be two compartment 5 x 10 feet with one compartment for a skip and one for pipe and manway. The drifts are to be 5 x 7 feet. Some crosscutting will be required from the shaft to intercept the vein before drifting is started. The Mountain States Metals Company's cost per foot has been $36.00 for drifting, and they estimated cost per foot of $93.00 for shaft sinking. These cost figures were accepted by the Bureau of Mines and short form contract will be issued on that basis. The total loan requested and approved is $29,745.00 with a 50% Government participation.

There is a 100-ton flotation mill on the property which will require an expenditure of about $6,000 to place in top operating condition. The estimated value of this mill is $100,000.

Approximately $3,000 will be required for camp rehabilitation in the event decision is made to house men at the mine. It would be my recommendation they they be housed at Yucca at their own expense.

Approximately $1,000 will be required for repair and surfacing of the road.

The present inventory of mining and office equipment is $20,000 and is sufficient for initial operations.

A comprehensive examination of the upper levels of the mine discloses the presence of a considerable quantity of minable ore, readily available, of good commercial grade. This ore is of the

same general grade as that produced from the mine in the past. There is ore of this grade at various locations throughout the upper workings, but for the purpose of evaluating this property I have confined my estimates to those proven, blocked-out ore bodies contained between the 250 foot and the 350 foot levels. These ore blocks are large and readily accessible for mining. It is estimated that these ore blocks alone contain a minimum of 10,000 tons of commercial ore.

It should be pointed out that no real exploration or development program has ever been outlined or carried forward in this mine. All work has consisted of following or mining known ore. There is a large unexplored area in both directions along the strike above the 500-foot level which can well contain major ore bodies.

Wollastonite was associated with the outcrops leading to the discovery of the presently mined orebody. Intermittent outcrops of wollastonite are present in the surface showings to the northeast. These showings should definitely be explored at medium depth as they could possibly lead to the discovery of additional ore zones. The proof of this assertion can be seen in the discovery of the northeast orebody on the 500-foot level. This was a completely blind ore deposit discovered by the only true exploration project ever carried forward in the mine.

The Apparent Tonnage below the 500-foot level as shown by drill holes A-1, A-3 and A-4 is 17,000 tons. For purposes of calculation I have therefore adopted a conservative grade of 4.0% Cu and 10.0% Zn as the average. With Apparent Tonnage of 17,000 tons of this grade, the Indicated Tonnage is 31,000 tons of 4.0%

Cu and 10% Zn. The Inferred Tonnage is 80,000 tons of 3.5% Cu and 9.0% Zn.

Estimated value per ton of ore at 4.0% Cu and 10.0% Zn, assuming a 90% mill recovery, and basing on a net copper price of 33 cents per pound (present price is 43¢) and a net zinc price of 11 cents per pound (present price is 13.5¢) is $37.50. The cost of transportation, freight, smelting and refining will approximate $12.50 per ton, thus returning $25.00 per ton to the mine. The estimated cost per ton for mining and milling, and as indicated by the past production figures, can safely be put at $13.00 per ton. Mountain States Metals Company produced a considerable tonnage in 1953 at overall cost for mining and milling of $12.00 per ton.

After deduction for transportation, freight, smelting, refining, mining and milling costs, ore of the grade listed at the above metal prices, which are well under today's market, can be reasonably estimated to return a net profit of $12.00 per ton.

RECAPITULATION

Cost to Place Property in Production:

Road	$ 1,000.00	
Rehabilitate Mill	6,000.00	
Rehabilitate Mine	2,000.00	
Development Cost- 50% of DMEA Project	15,000.00	
Crosscutting	2,000.00	
Payroll & supplies first month	3,000.00	
Machinery	2,500.00	
Contingencies	3,500.00	
Total Costs		$35,000.00
Present Assets:		
Mill	100,000.00	
Inventory	20,000.00	
Total Present Assets		120,000.00
Net Assets (exclusive of purchase price and ore reserves)		$ 85,000.00

Net Assets - Forward	$ 85,000.00
Estimated profit at 33¢ Cu and 11¢ zinc from proven ore above the 500-foot level-10,000 tons @ $9.75 per ton net	97,500.00
Estimated profit at 33¢ Cu and 11¢ Zn from proven ore in block of ground between 500 and 600 foot levels as contained between drill holes - 17,000 tons @ $12.00 per ton net	204,000.00
Estimated NET VALUE on above basis	$ 386,500.00

CONCLUSION

From the data available and from the information obtained by physical examination, this property definitely appears to be a substantial potential producer. The extent of the ore bodies below the present worked area has been explored only to the 600 foot level. The orebody below this zone has never been delimited. The possible existence of additional ore shoots to the northeast and southwest are apparent from surface showings. These areas are strictly virgin. It is my firm belief that the present known ore reserves can be greatly augmented by a comprehensive exploration program. It is my recommendation that you make immediate acquisition of the property.

Sincerely,

L. G. MARSHALL
Consulting Engineer
License No. 1920

April 24, 1954

Approximate inventory list of equipment at Copper World Mine, Yucca, Arizona. This list was made about a year ago and some items have been added and some discarded or replaced.

1 Compressor - Chicago-Pneumatic 12 x 10 No. 7139 N. S. B.
1 Compressor - Sullivan 11 x 12 No. 2821 W. C. 3
1 Pump - Circulating 1 " - No. 3358-3B with
1 Motor-Master 1/3 h.p. 440 Volts. No. 14097 with Magnetic switch.
1 Electric Motor - Fairbanks-Morse - 40 HP 1200 RPM 440 Volts #138857
1 Starter Switch - Allis Chalmers - 50 HP No. 3K-3282
1 Line Switch - Trumbull Electric-Type C. 50 HP No. 40364
1 Electric Motor - General Electric 30 HP 1200 RPM 440 Volts, #1182646
1 Starter Switch - Fairbanks-Morse 40 HP No. 60770
1 Line Switch - Trumball Electric-Type C. 30 HP No. 40363
1 Triplex Pump - Goulds No. 3374 with
1 Motor - Westinghouse 7½ HP 1200 RPM, 440 Volts, No. 2366524
1 Line Switch - Trumball Elect-Type C. 7½ HP No. 40361
1 Single Drum Hoist - 1600 feet 3/8 Cable with
1 Motor - General Electric 20-30 HP 1200 RPM 440 Volts #525327 with grids and control box.
1 Line Switch - Trumball Electric Type C. 30 HP No. 40363
1 Single Drum Hoist - Gear Driven with
1 Motor - Westinghouse 7½ HP 850 RPM 440 Volts No. 1238
1 Pump - Direct connected with
1 Motor - Master - 2 HP No. QC 16970, ? RPM 440 volts, with magnetic switch.
1 Line Switch - Trumball Electric Type C - 20 HP No. 40362
1 Square "D" Switch
1 Line Switch - Trumball Electric Type C - No. ? 7½ HP 30 amp.
1 Main Line Switch - 2-- Amps.
1 10 K.W. 440-220-110- Volt Transformer - No. ?
1 Power Saw - with
1 Motor - General Electric 10 HP 440 volts No. 4650792
1 Line Switch - Trumball Electric Type C 100 Amp. No. 40353
1 Magnetic Switch - General Electric No. 177385563
1 3' x 8' Air Receiver with pressure valve.
1 3½'x 10' Air Receiver with pressure gauges.
1 2½'x 6' Air Receiver
1 8" Blower with
1 Motor - 5 HP 1750 RPM 440 Volts, No. 2749838 with magnetic switch.
300 feet 8" air pipe.
1 Water Pressure System - Duplex Pump Complete
1 Jack Hammer - GDS #687 with cradle
1 Jack Hammer GDS # 545
1 Liner - GDD73 #425
1 Liner - GDD73 #122-1 1/8" round and 1" Hex Chucks

2-AIR Legs

1 Stoper - CP 43 - No.Number)
1 Stoper CP 43 No. 746) Spare parts for all machi
1 Stoper CP 43)
1 Air Bar 7' with arm and saddle
1 Rail Bender, Aluminum
1 Bar 6' with arm, saddle and wrench
1 Bar 6'
1 Bar 4'
1 Slusher 2 drum I.R. A4 NIXOJ #1011
1 Pacific Hoe 26"
2 6" Roller Bearing Pulleys
1 Tugger I.R. H.U. #4144 500' 3/8 cable
1 Skip
1 Mine Bell -
7 Air Hoses
6 Water Hoses
4 Oilers
140 feet 1" black pipe
700 feet 2½" air line tubinh
650 feet 12 lb. track, 24" guage
2 18" Shive wheels and bearings.
1 Car-Card 24" guage with extra box and wheels
2 Cars - Card 18" gauge
3 cars 18" roller Bearing
1800 feet (Approx) 3/4" Black Pipe (Spring Line)
2 Mine Buckets 1200 Pound capacity
Lot Assay Equipment and Supplies
1 Pulp Balance
1 Button Balance, not complete
1 Anvil, large
1 Leg Vise
1 Bench Vise
1 Pipe Vise
1 Lot blacksmith tools
3 Phones
1 Fairbanks-Morse Pump Jack
135 Feet 4" Water Column
1 Heavy Duty Cylinder
1 6 HP Colled Engine
1 Triplex Pump, Approx. 3" x 6"
1 Ton of assorted steel
Small hand tools
3 12' x 16' Cabins
1 12 x 32 office & room
1 16' x 24' Cook House with 12' x 14' sleeping and shower room
1 10' x 20' cabin
1 10' x 26' dry room and shower
1 20' x 50' Compressor and hoist house
1 Timber Shed
1 150 ton ore bin - 2 compartments
4 Chick Sales (Out houses)
2 double beds and springs
2 double mattresses
20 single beds
13 single beds
5 oil heaters
1 electric heater
1 desk table
2 letter files -
1 swivel chair -
2 office chairs
1 typing table

1 paper punch
1 pencil sharpener
1 airtight heater
1 drafting table and 2 horses
4 small table stands
1 dresser, metal
4 eating and work tables
1 cabinet-kitchen
3 chairs
6 benches
1 12 ft. gas refrigerator
1 Electric hot water heater 40 gals.
1 Gas range 6 burner
1 Electric clock
1 Ruud hot water heater 40 gal tank
1 Off. hot water heater 20 gal.
1 225 gal. water tank
1 5000 gal. water tank
1 200 gal. circulating tank
1 300 gal. oil tank
250 ft. 3 lead, rubber covered waterproof cable
500 ft. 3 wire, rubber covered
1 Grizzley 4' x 6'
14 heavy rail 5 ft. long
1 Brown Lab. Ball Mill, without motor
1 3' x 5' Hirch Ball Mill
1 36" Akins Classifier
1 250 Unit Cell
6 #10 Denver copper cells
8 #21 Denver Zinc Cells
3 Leaf 6' American filter complete with vacuum and blower.
Pine ore bins and buildings all operating.
Approximately 1 mile of 2" water line

2 Bunk Houses
Bank of three transformers (same as used at Davis Dam on Property).
Additional pumps and water storage tanks for use in operating mill.

Other

2- Transformers
A-2 - 250 kva H.V. 22,000 27,420
22,000 2 ph. 60 cy.

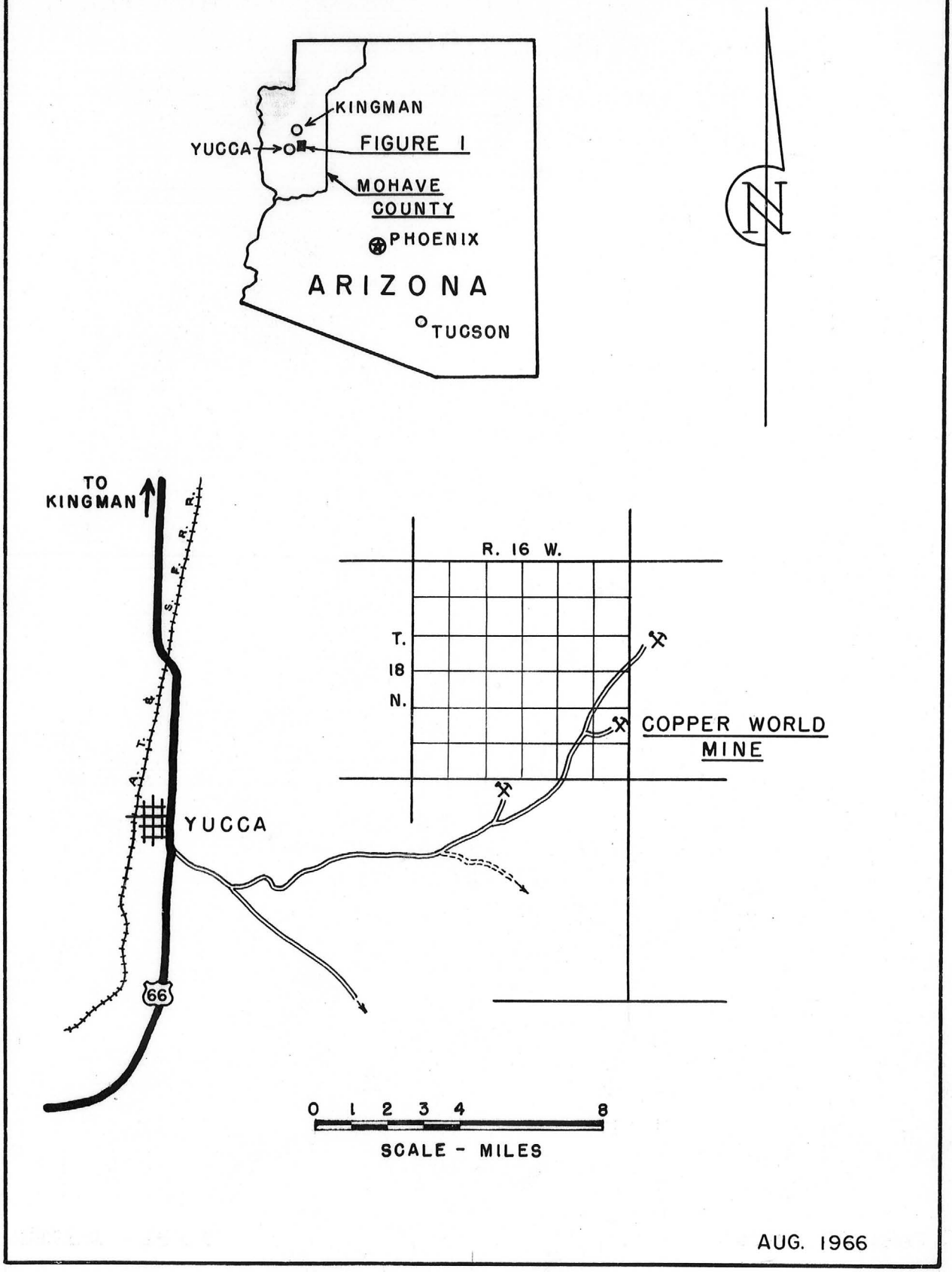
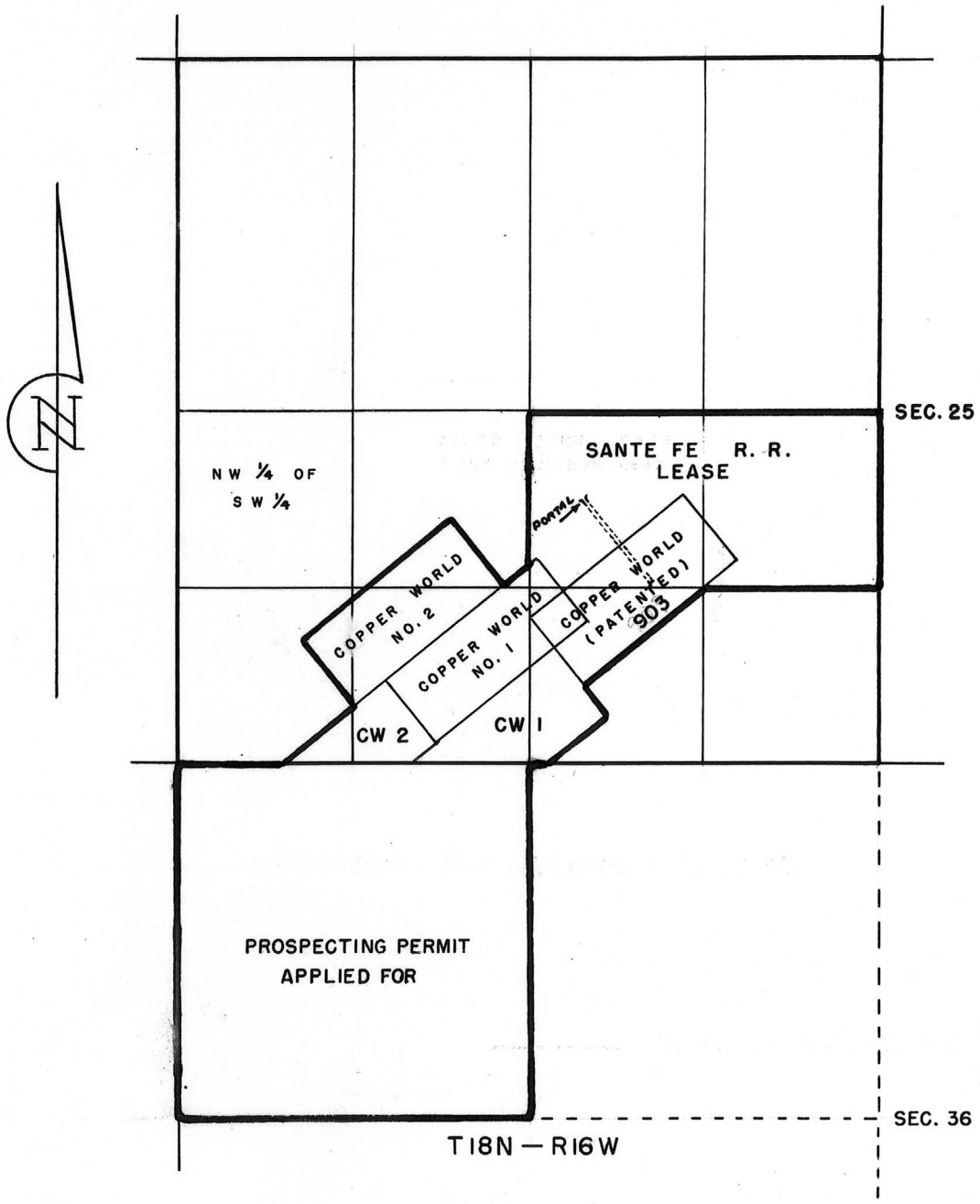


FIGURE 1. - LOCATION MAP - COPPER WORLD MINE
MOHAVE COUNTY, ARIZONA



SCALE - 1" = 1320'

AUG. 1966

FIGURE 2.-CLAIM MAP - COPPER WORLD MINE
STANDARD COPPER CORPORATION

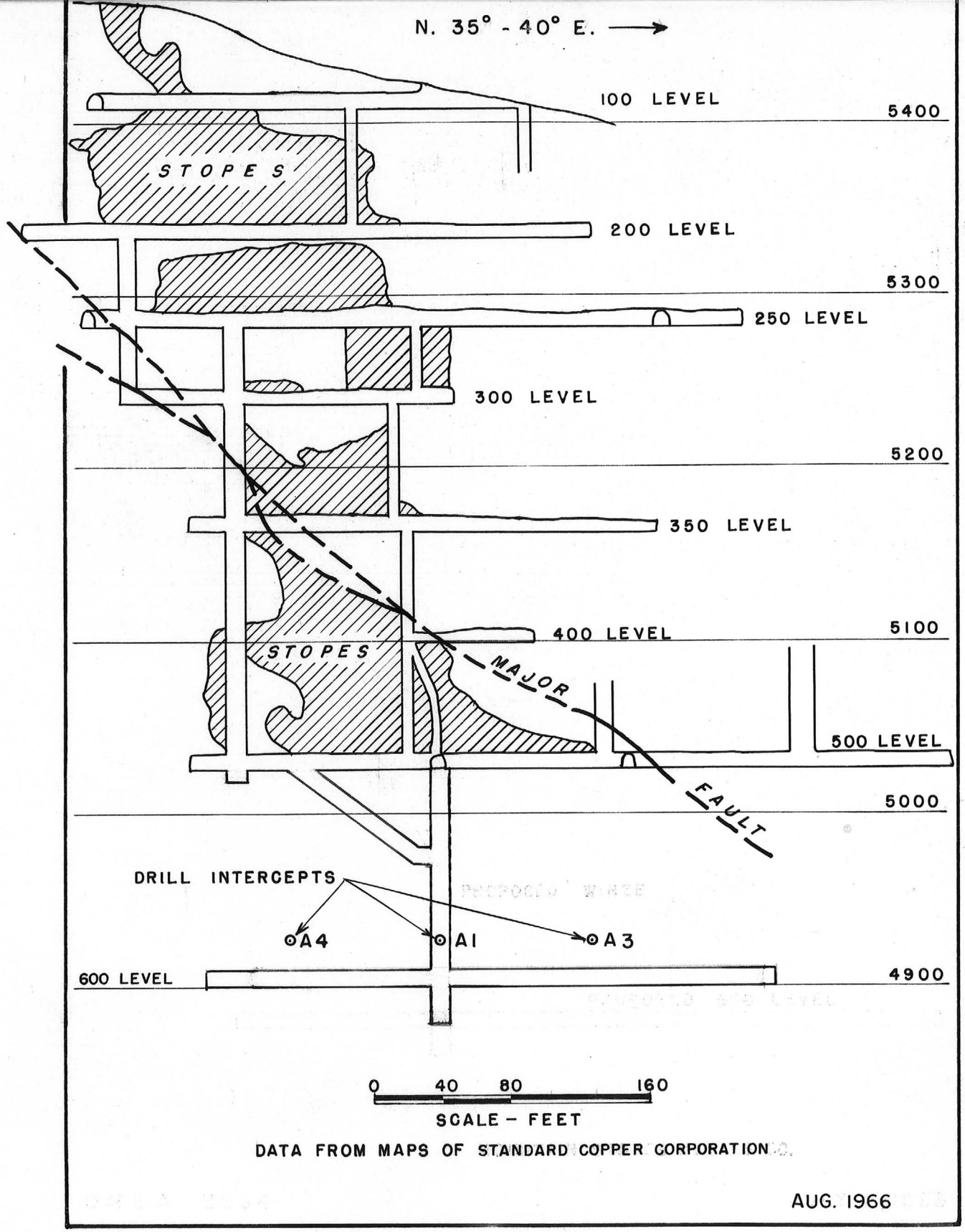


FIGURE 6.- LONGITUDINAL PROJECTION OF WORKINGS COPPER WORLD MINE

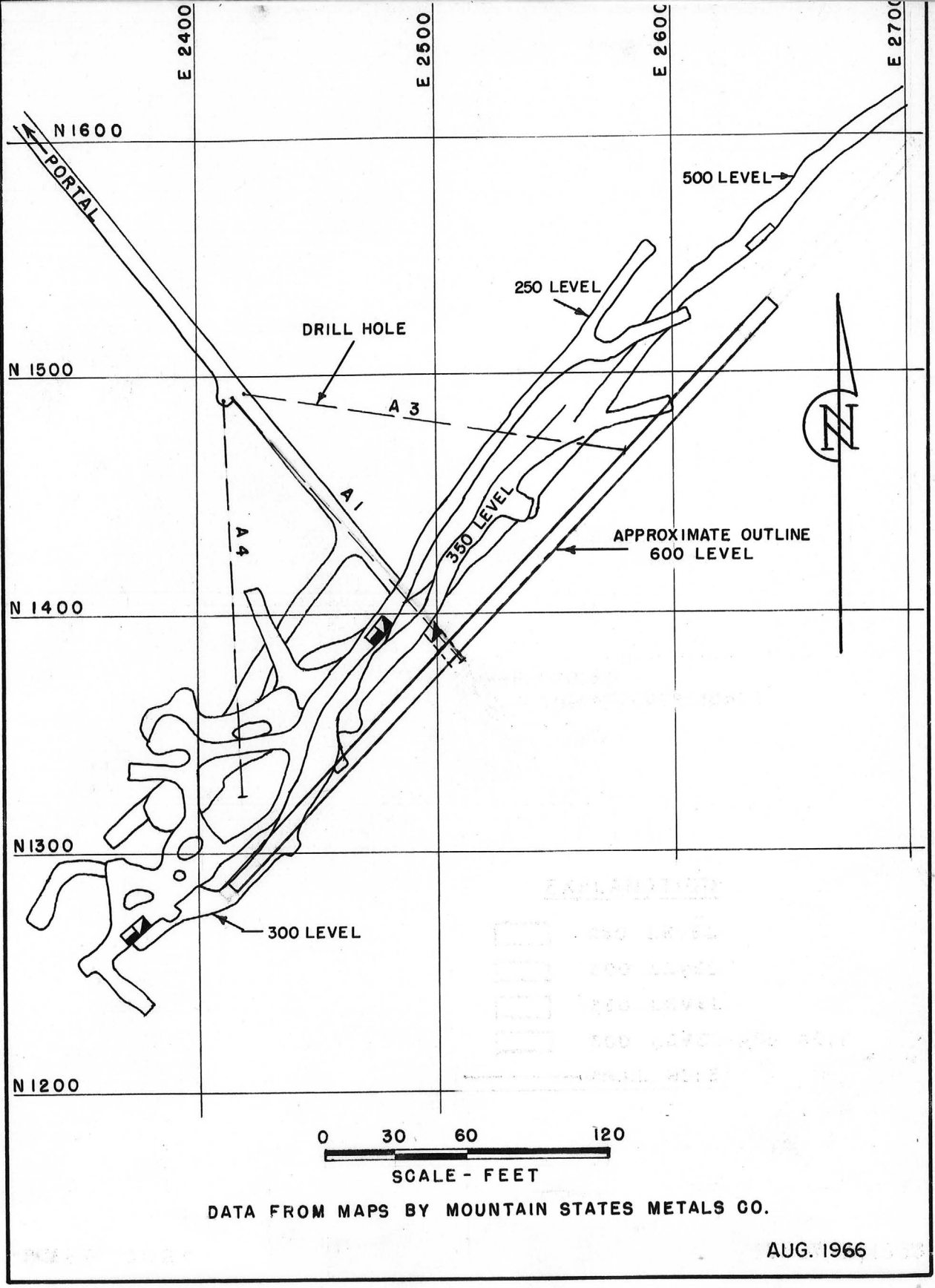
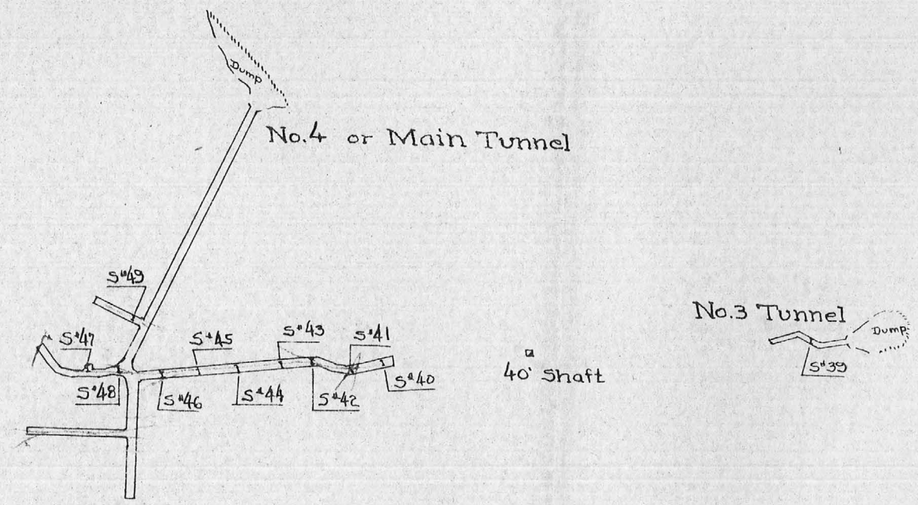


FIGURE 5. - LEVEL PLAN, COPPER WORLD MINE



Sample No	Width	% Cu	Oz Au	Oz Ag	% Zn	
39	18"					Oxidized
40	14"	-	Tr	.84	35.9	Widest part, 20' sulphide lense
41	12"	-	Tr	.80	33.7	Irregular sulphide, partly leached
42	19"	-	Tr	.52	30.8	Sulphide lense in Vein
43	43"	5.84	Tr	.80	29.4	Mixed sulphides
44	17"	5.02	Tr	.68	40.7	Sphalerite breccia, partly leached
45	60"	4.31	Tr	.88	40.2	Solid Sulphide
46	15"	2.65	Tr	.80	5.4	Poor siliceous sulphide Vein
47	15"	10.4	Tr	1.28	-	Do - Hanging split
48	65"	11.3	Tr	1.24	32.4	Sulphide & altered granite
49	10"	4.40	Nil	.64	33.2	Solid Sulphide, Hanging Vein
50	26"	.88	Tr	.84	-	Qtz lense with Sulphide

Brunton Survey

COPPER WORLD CLAIM

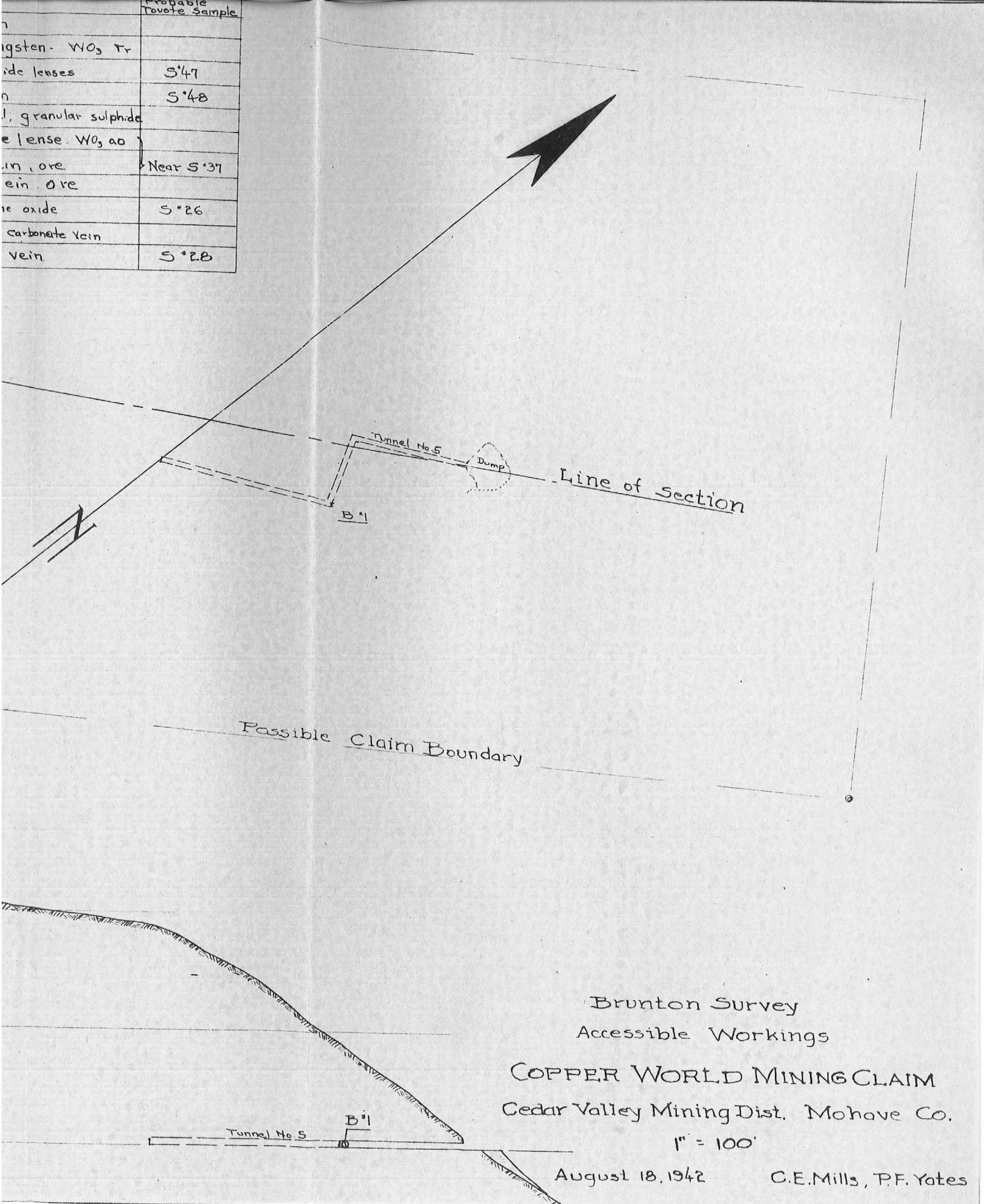
Cedar Valley Mining Dist. Mohave Co.

1" = 100'

August 27, 1916 W. Tovote

(Traced from Original Sketch 9-3-42 P.F.Y.)

	Probable Povote Sample
n	
igsten - WO_3 Tr	
ide lenses	S'47
n	S'48
l, granular sulphide	
e lense. WO_3 ao	
in, ore	Near S'37
ein. Ore	
ie oxide	S"26
carbonate Vein	
Vein	S'28



Brunton Survey

Accessible Workings

COPPER WORLD MINING CLAIM

Cedar Valley Mining Dist. Mohave Co.

1" = 100'

August 18, 1942 C.E. Mills, P.F. Yates

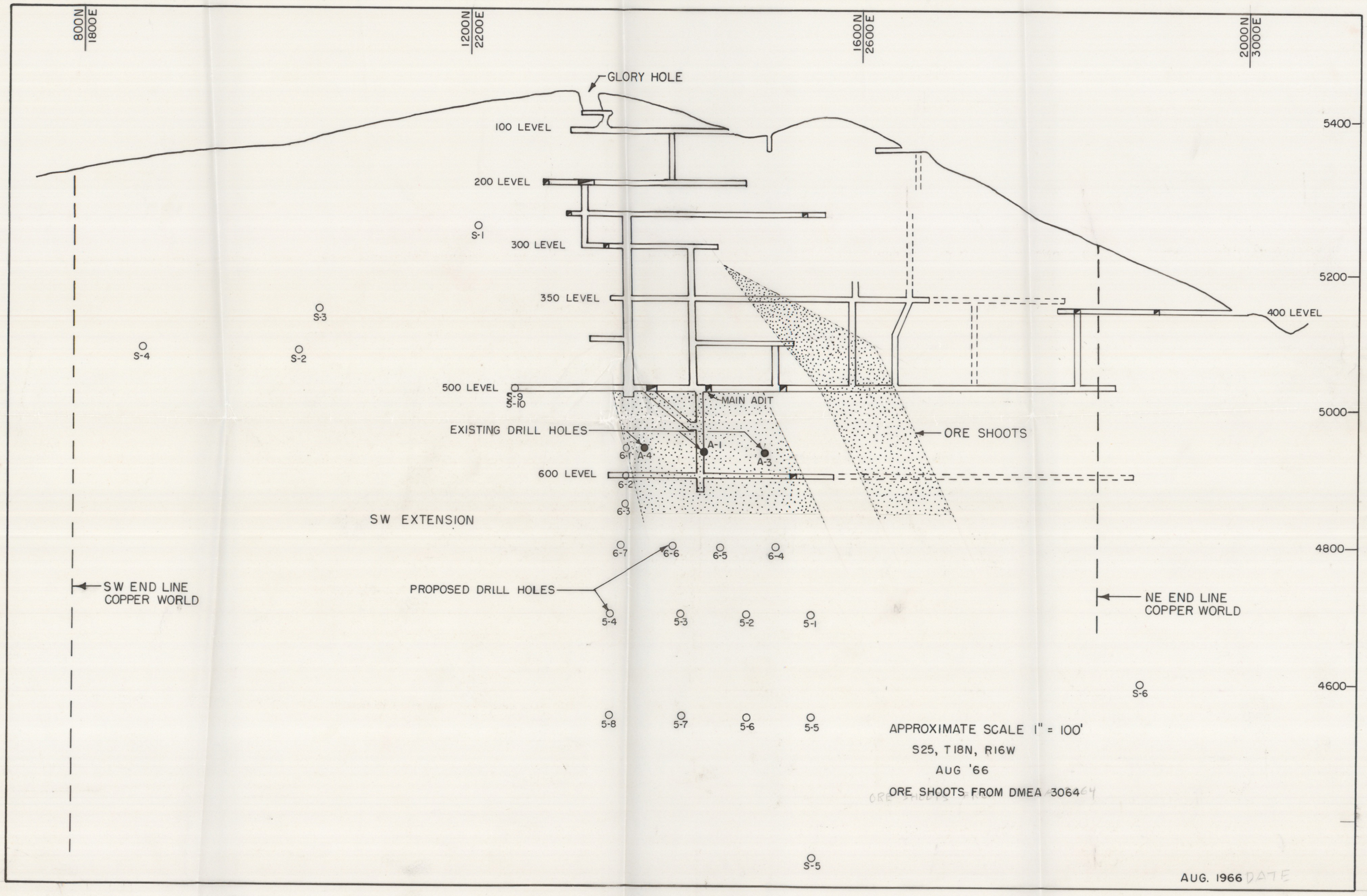


FIGURE 4.- Longitudinal Section Showing Proposed Drilling and Development, Standard Copper Corp., Mohave County, Ariz.

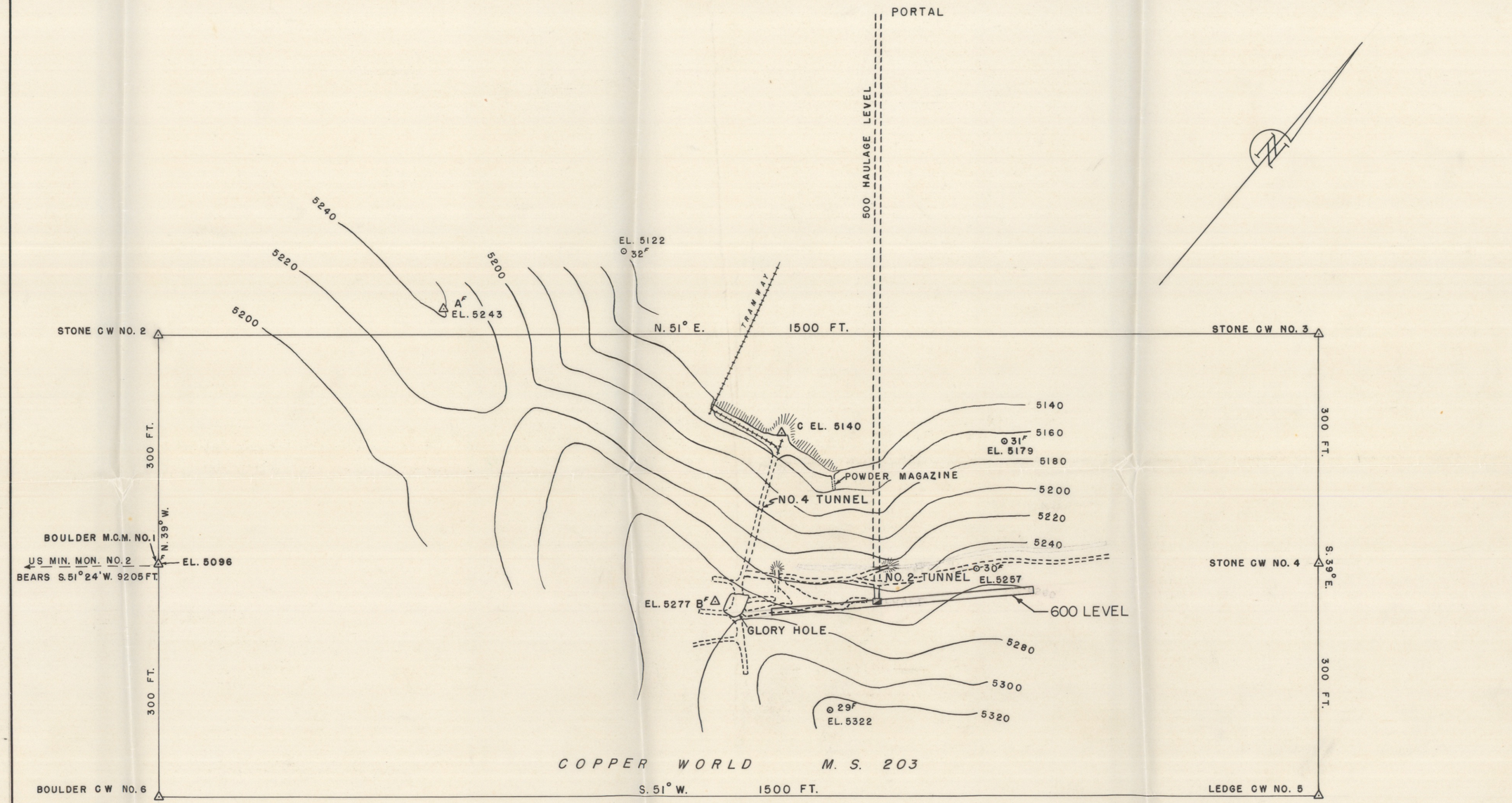


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FIGURE 3.- PARTIAL TOPOGRAPHIC MAP

COPPER WORLD MINE

CEDAR VALLEY MINING DISTRICT

MOHAVE COUNTY, ARIZONA

SCALE 1 IN. = 100 FT. CONTOUR INTERVAL 20 FT.