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08/15/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: COPPER GIANT GROUP

ALTERNATE NAMES:

JUMBO
GREENWAY-ALBERT PROPERTY

PIMA COUNTY MILS NUMBER: 536

LOCATION: TOWNSHIP 13 S RANGE 6 W SECTION 15 QUARTER NE
LATITUDE: N 32DEG 17MIN 46SEC LONGITUDE: W 112DEG 52MIN 09SEC
TOPO MAP NAME: AJO - 15 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
COPPER

BIBLIOGRAPHY:

ROMSLO, T.M., & ROBINSON, C.S., 1952, COPPER
GIANT DEPOSITS, USBM RI 4850
USBM FILE 463.2/14053
ADMMR FILE DATA
ADDITIONAL CLAIMS IN T13S-R6W, SEC. 10 & 11
ADMMR COPPER GIANT FILE
ADMMR CORNELIA GROUP FILE
AZBM FILE DATA CIRCA 1973
ADMMR BLUESTONE CLAIMS FILE
MILS AJO EXTENSION

Cornelia Group (file)

See: Greenway Albert File in Confidential drawer

Property No. 6—GREENWAY-ALBERT PROPERTY

Property is located some 3 miles from the Phelps-Dodge, New Cornelia open pit operation at Ajo, Arizona. Its geological structure consists of Monzonitegranite and volcanics of various ages which have been faulted by two major faults referred to as the Concentrator Faults, which strikes north located northeast of the New Cornelia copper deposit and the Black Mountain fault which strikes north 10° east lying to the southeast of the New Cornelia copper deposit. The Black Mountain fault is exposed on part of the Greenway-Albert property. The amenability of this ore to hydrometallurgical systems of copper recovery make this property attractive for a leaching operation. The most abundant copper mineral is chrysocolla with some malachite. There are 68 claims in 1360 acres and negotiations are underway with a major mining company. *Knox-Ariz. Corp. Rpt. 1971*

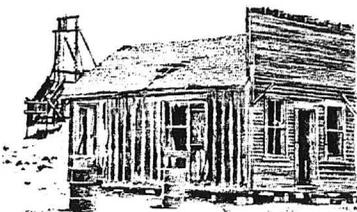
1987, there has been a moratorium on issuing new mineral leases and renewing existing ones. The uncertainty regarding the future royalty rate has been the cause of consternation for the mining industry, as well as the Department, but there is optimism that the situation will soon be resolved.

Oil and gas rental income has dropped markedly during the past 5 years as a result of the industry slump. If oil or gas were ever discovered on State land, the Trust would receive a minimum of 12 1/2 percent of the market value of the oil or gas produced.

Mineral-material royalties have grown steadily during the past 5 years. Resources in this category include sand, gravel, rock, building stone, riprap, cinders, decomposed granite, topsoil, and any other mineral material used in the construction industry. After the Land Department receives an application to purchase mineral materials, it conducts an appraisal and the material is sold at public auction to the highest bidder. Revenue is guaranteed on each lease be-

cause the company must pay an annual minimum royalty. Rentals from mineral-material operations greatly increased in 1987-88 when the department began basing the rental figure on a percentage of land value. Total revenue from the sale of mineral materials during the past 5 years is only slightly less than that received from mineral-lease royalties.

Total revenues from subsurface leasing for the current fiscal year are expected to surpass those received in 1987-88. The continuing high price of copper has allowed several companies to increase production. This is excellent news for the industry, as well as the beneficiaries of the State Trust.



NEW AZGS PUBLICATION

The following publication may be purchased from the Arizona Geological Survey (AZGS), 845 N. Park Ave., #100, Tucson, AZ 85719. For price information on this and other publications, contact the AZGS office at (602) 882-4795.

Welty, J.W., and Schnabel, Lorraine, 1989, Bibliography for metallic mineral districts in Gila, Maricopa, Pinal, and Yavapai Counties, Arizona: Open-File Report 89-1, 123 p.

This report is the fourth in a series of county bibliographies for metallic mineral districts in Arizona. The others, Circulars 24, 25, and 26, were published by the AZGS in 1986. Nearly 1,600 citations are included in this compilation. The report has been open-filed to permit timely access to the public. After editing and printing, it will be released as a circular.

AZGS Accepts BOM Diamond- Drill Core

In early March 1989, the Arizona Geological Survey accepted a donation of nearly 32,000 feet of diamond-drill core from the U.S. Bureau of Mines (BOM). The core comes from 13 separate properties across the State (Table 1). The core was shipped from the BOM Twin Cities Research Center, where it had been stored, by the Minnesota Air Guard to Davis-Monthan Air Force Base in Tucson and then trucked to the Mission Unit of ASARCO Inc., where it remains in temporary storage. We thank members of the Minnesota Air Guard; Davis-Monthan personnel; Robert Willard, BOM Twin Cities Research Center; Michael Greeley, BOM State mineral specialist; and James Litchenthon, mine superintendent at the Mission Unit; for their generosity in enabling the AZGS to accept and store this drill core. Information about the geologic setting and logs for each drill hole can be found in the references listed in Table 1. For localities with no listed references, no published information is available. Please call our office (602-882-4795) to make an appointment if you wish to examine any of this core.

Table 1. Listing of BOM diamond-drill core localities.

Mineral District	Mine Name	Commodity Sought	Total Footage ¹	Number of Holes	Reference ²
Ajo	Copper Giant	Cu	1,400	2	Romslo and Robinson (1952)
Apache Iron	Apache Iron	Fe	1,200	15	Stewart (1947)
Artillery Peak	Maggie Canyon	Mn	3,700	69	Kumke and others (1957)
Big Bug	Iron King	Cu	600	4	n.a.
Christmas	Christmas	Cu	3,700	7	Tainter (1948)
Cochise	Keystone	Cu, Zn	10,800	18	Romslo (1949)
Helvetia	King in Exile	Cu	100	1	n.a.
Hualapai	Antler	Cu, Zn	2,100	6	Romslo (1948)
Lakeshore	Lakeshore	Cu	200	1	Romslo (1950)
Pima	Esperanza	Cu	1,450	3	Tainter (1947)
Tiger	Crown King	Cu	1,400	3	n.a.
Wallapai	Cerbat	Pb, Zn	2,800	8	n.a.
Wallapai	Civitation	Cu	3,400	6	n.a.

¹ Total footage is rounded off to the nearest 100 feet drilled.

² "n.a." indicates that no references are available for this core.

References

- Kumke, C.A., Ross, C.K., Everett, F.D., and Hazen, S.W., Jr., 1957, Mining investigations of manganese deposits in the Maggie Canyon area, Artillery Mountain region, Mohave County, Arizona: U.S. Bureau of Mines Report of Investigations RI 5292, 87 p.
- Romslo, T.M., 1948, Antler copper-zinc deposit, Mohave County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4214, 14 p.
- 1949, Investigation of Keystone and St. George copper-zinc deposits, Cochise County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4504, 21 p.
- 1950, Investigation of Lake Shore copper deposits, Pinal County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4706, 24 p.
- Romslo, T.M., and Robinson, C.S., 1952, Copper Giant deposits, Pima County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4850, 9 p.
- Stewart, L.A., 1947, Apache Iron deposit, Navajo County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4093, 88 p.
- Tainter, S.L., 1947, Amargosa (Esperanza) molybdenum-copper property, Pima County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4016, 15 p.
- 1948, Christmas copper deposit, Gila County, Arizona: U.S. Bureau of Mines Report of Investigations RI 4293, 58 p.

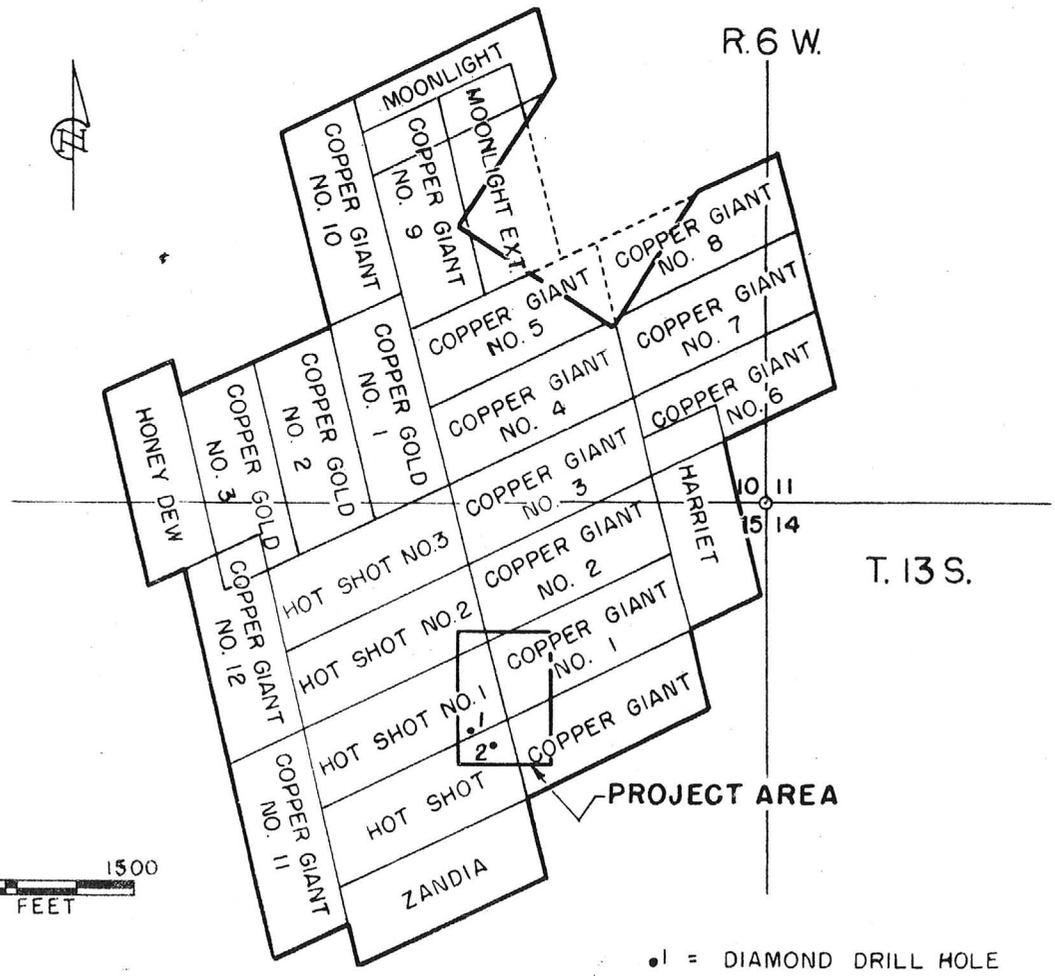
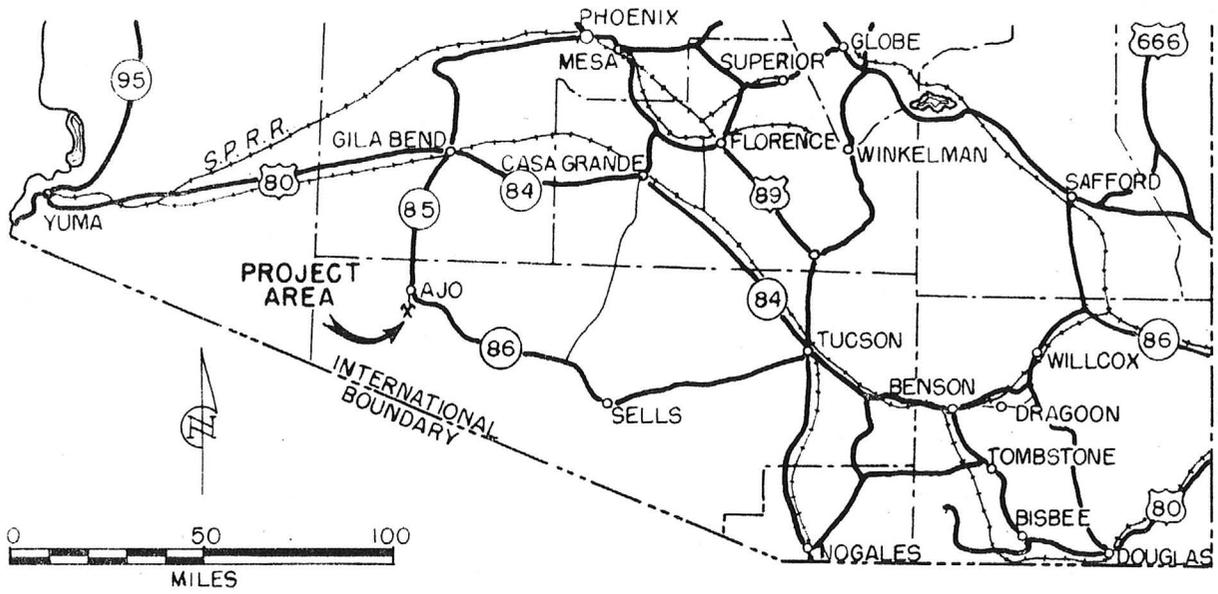


Figure 1.- General location and claim maps, Copper Giant deposits, Ajo mining district, Pima County, Arizona.

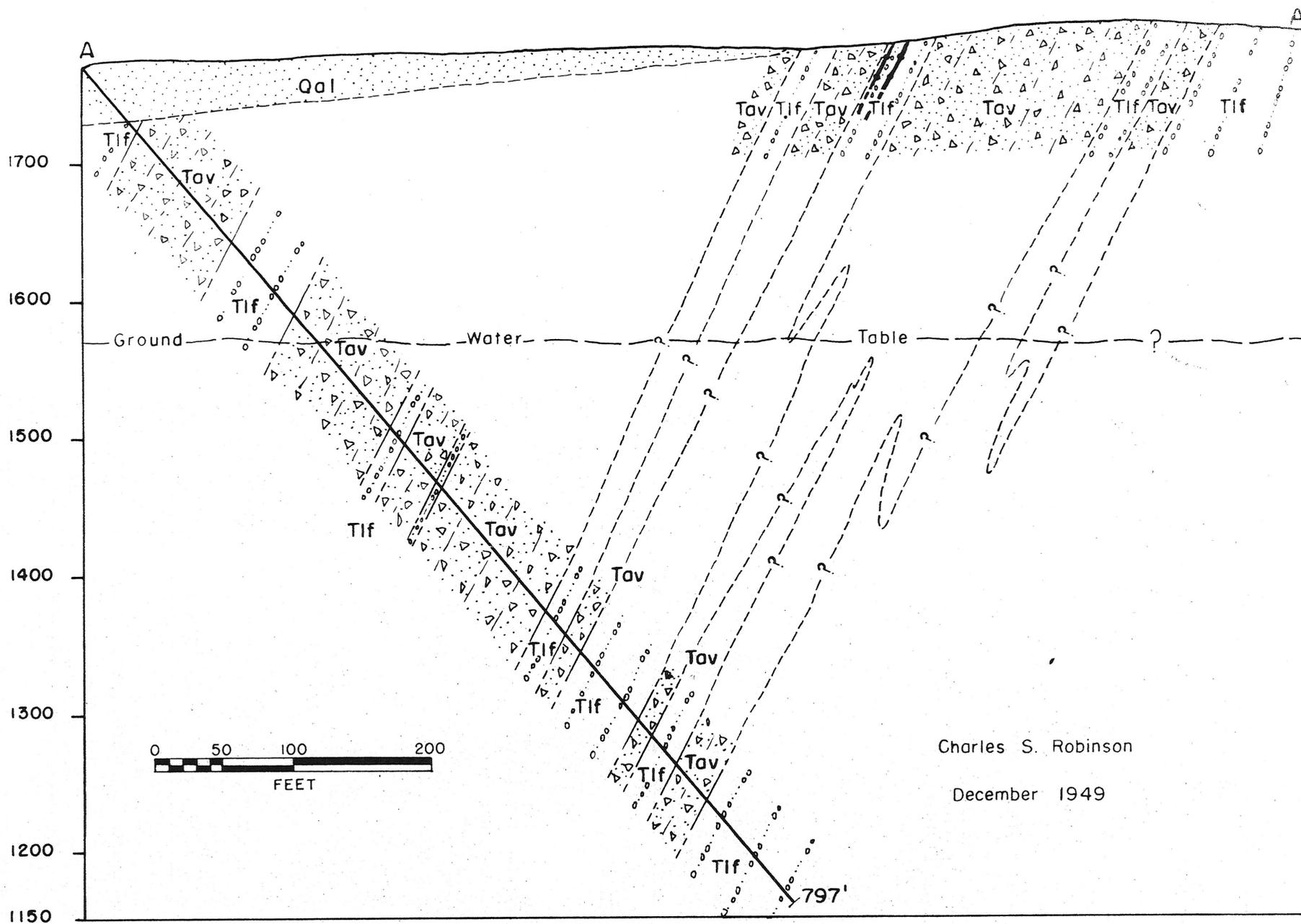


Figure 4. - Geologic section A-A', through diamond drill hole No. 1, Copper Giant Project, Ajo mining district, Pima County, Arizona.

43

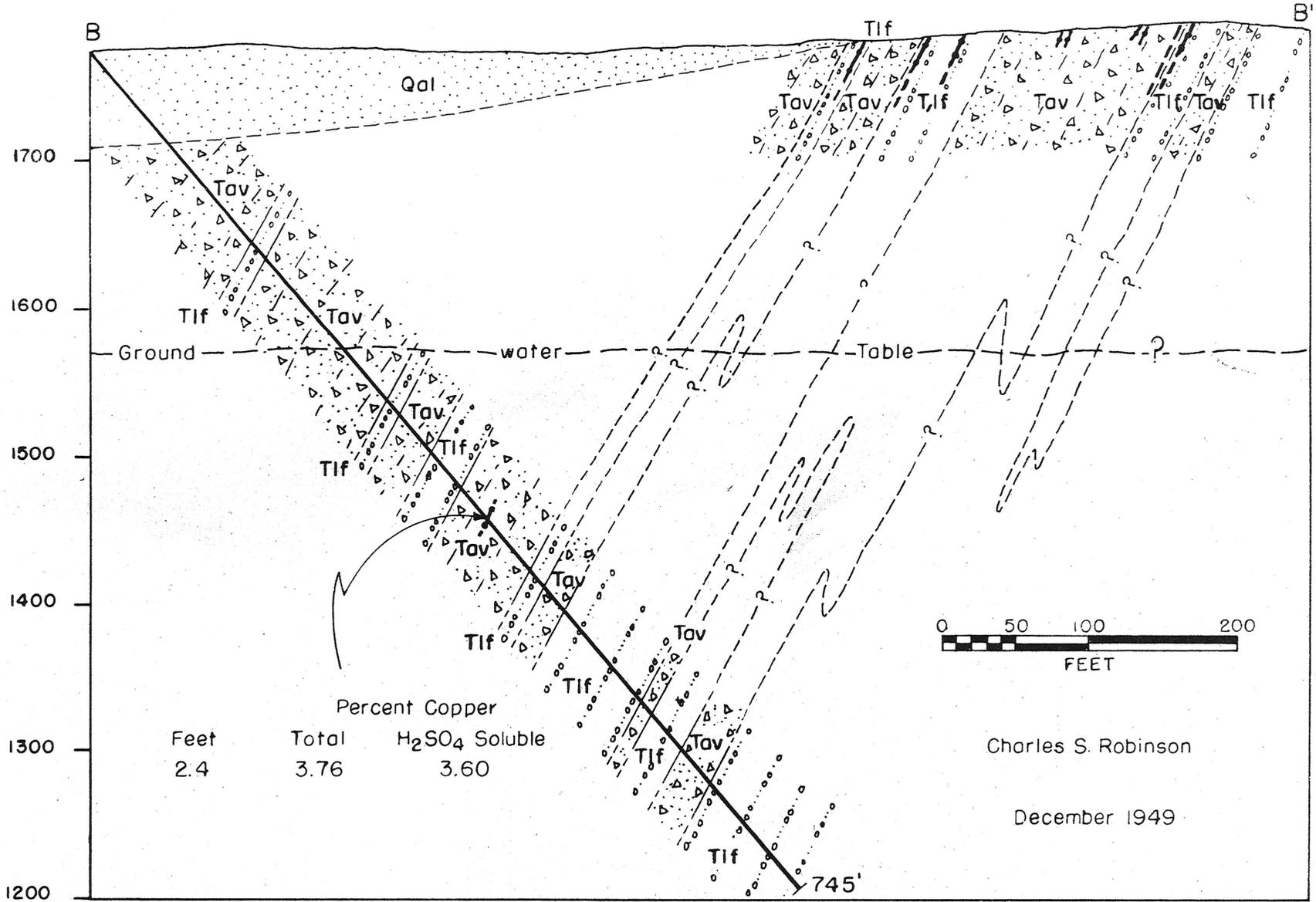


Figure 5.- Geologic section B-B', through diamond drill hole No. 2, Copper Giant Project, Ajo mining district, Pima County, Arizona.

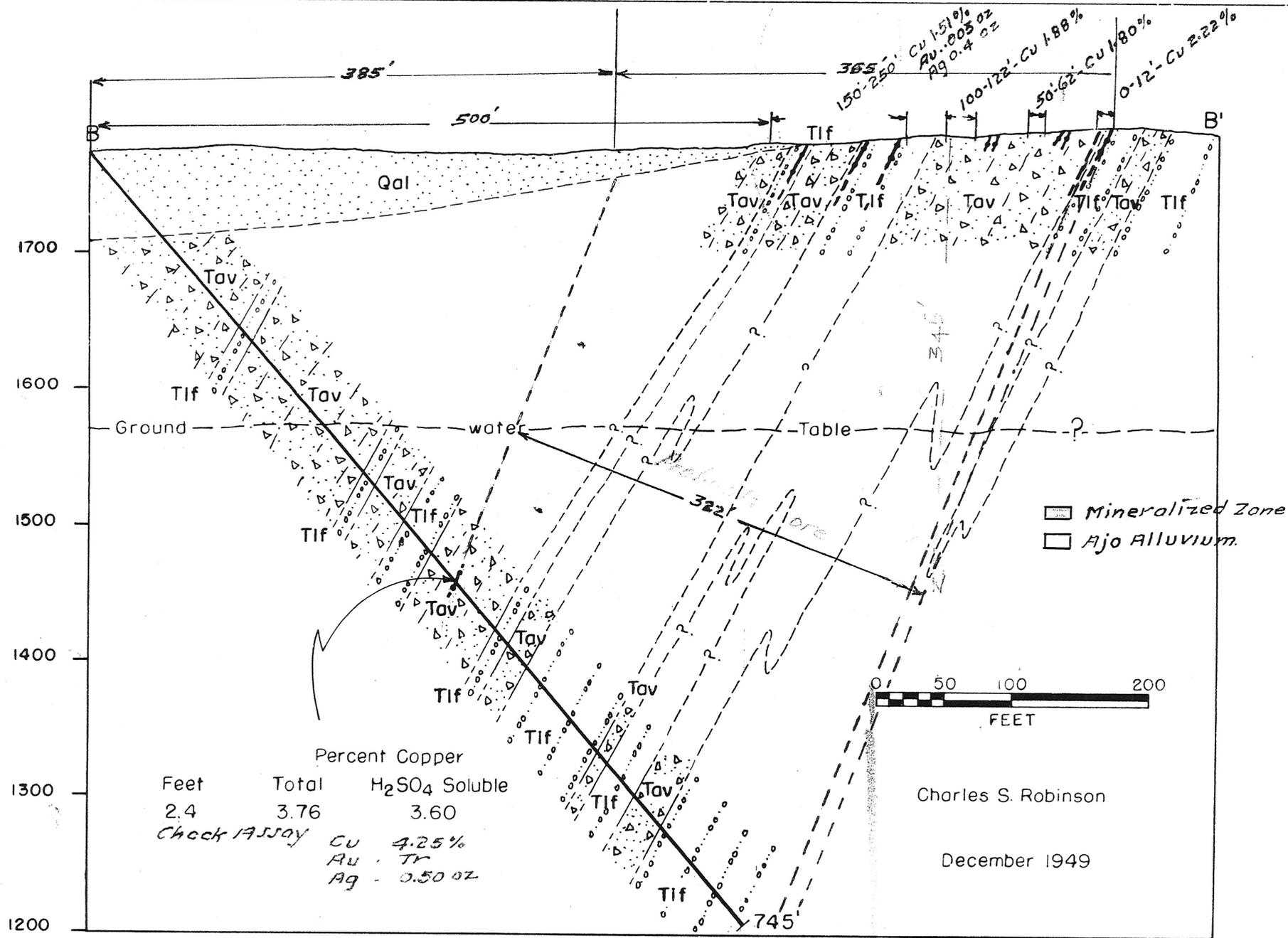


Figure 5.- Geologic section B-B', through diamond drill hole No.2, Copper Giant Project, Ajo mining district, Pima County, Arizona.

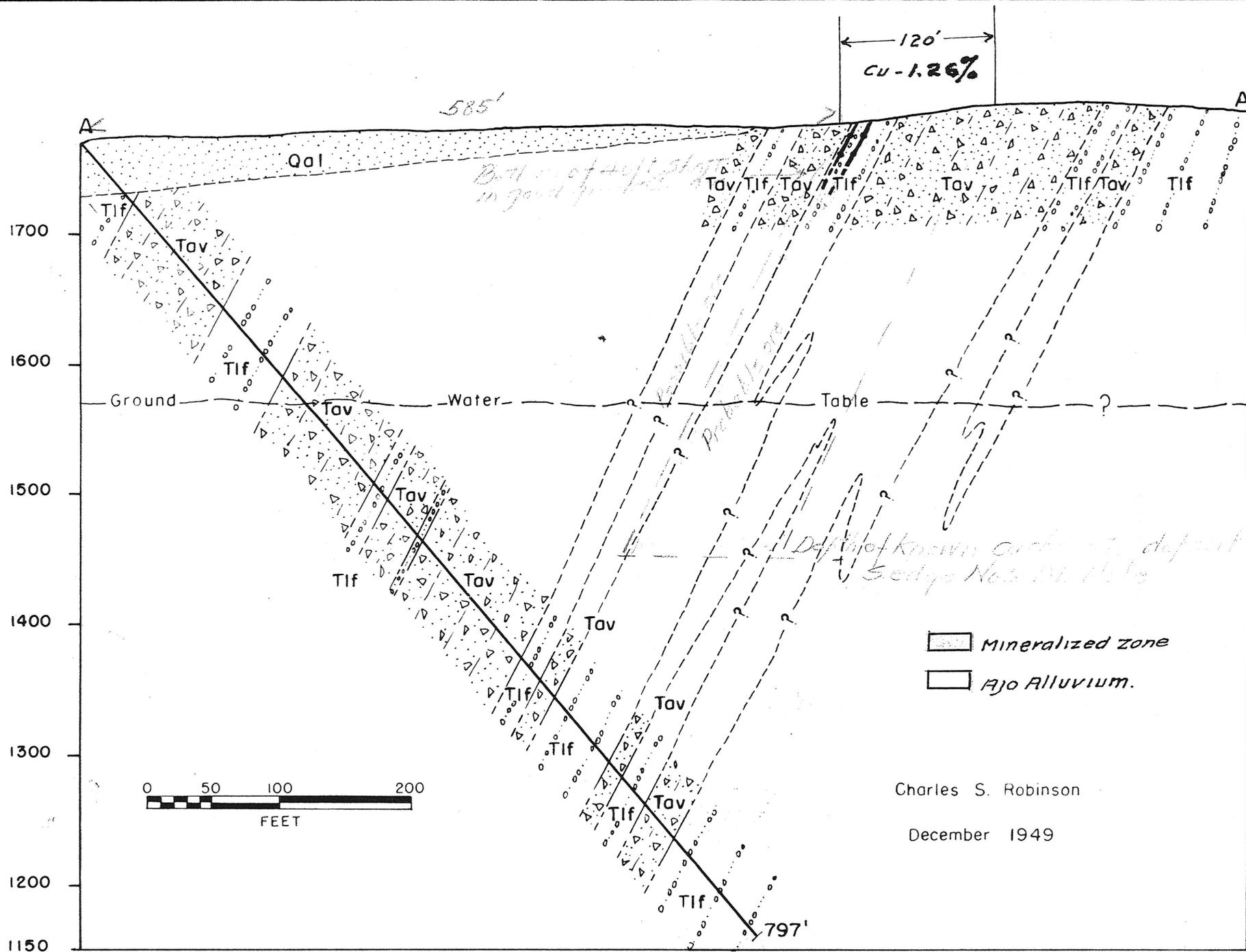
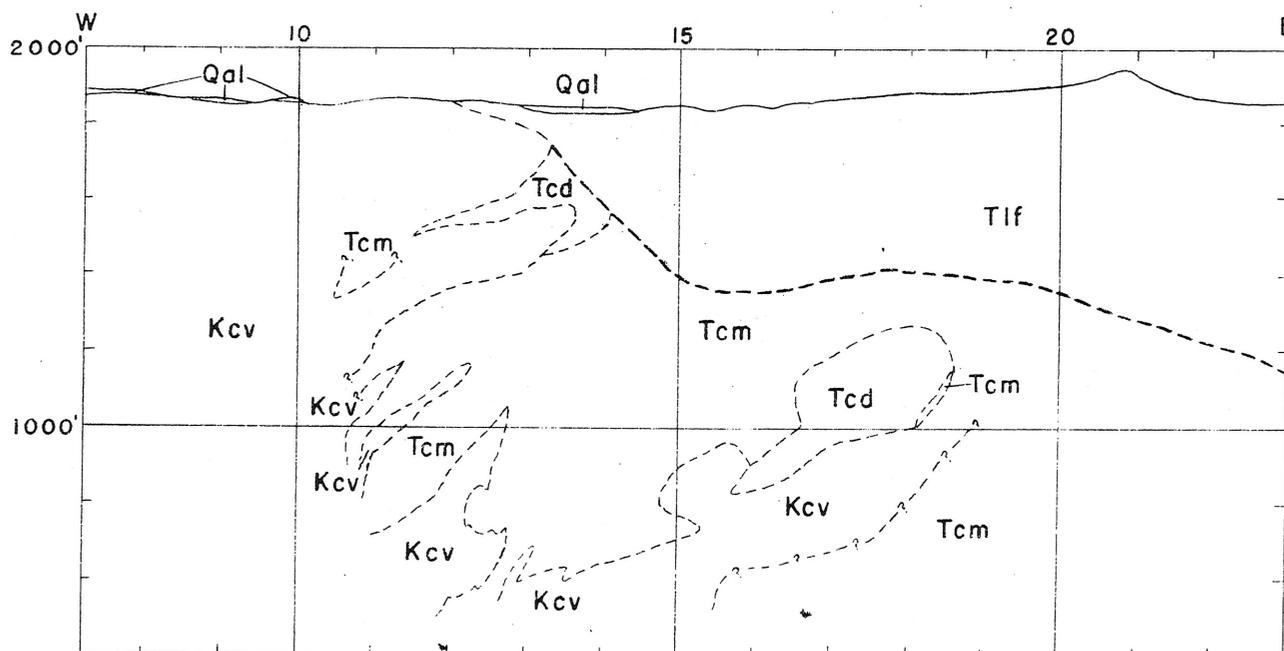


Figure 4. - Geologic section A-A', through diamond drill hole No. 1, Copper Giant Project, Ajo mining district, Pima County, Arizona.



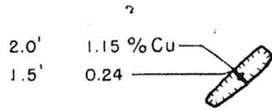
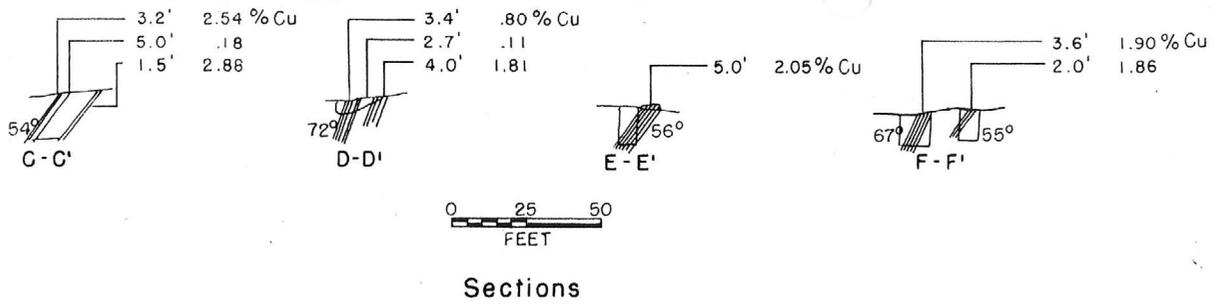
REVISED SECTION THROUGH COORDINATE B

0 500 1000 FEET

EXPLANATION

- Qal
Alluvium
- Tif
Locomotive fanglomerate
- Tcm
Cornelia quartz monzonite
(Main facies)
- Tcd
Cornelia quartz monzonite
(Dioritic border facies)
- Kcv
Concentrator volcanics

QUATERNARY
 TERTIARY
 CRETACEOUS(?)



Feet	Percent Copper	
	Total	H ₂ SO ₄ Soluble
5.0	0.02	
5.0	.12	
5.0	2.11	1.94
5.0	.48	
5.0	.06	
5.0	.03	
5.0	.10	
3.0	1.45	1.28
3.0	.05	
4.0	.92	
3.0	1.28	1.01
3.0	.11	
3.0	.09	
3.0	.90	
6.0	.16	
4.0	.03	
3.0	.01	
2.9	3.25	2.91

Feet	Percent Copper	
	Total	H ₂ SO ₄ Soluble
6.0	0.08	
6.0	.02	
6.0	.02	
6.0	.04	
6.0	.02	
6.2	.11	
3.0	2.06	1.86
3.0	.23	
3.0	.39	
6.0	.58	
6.0	.03	
6.0	.02	
1.0	2.10	1.93
5.0	.16	
5.5	.16	
6.5	2.07	1.86
6.0	.09	
6.0	.05	
8.0	.30	
6.0	.43	
1.0	2.45	2.31
4.0	.04	
6.0	.04	
6.0	.04	
6.0	.01	
6.0	.01	
6.0	.01	
4.0	.06	
4.0	1.65	1.51
6.0	.05	
6.0	.09	
6.0	.01	
4.0	.01	

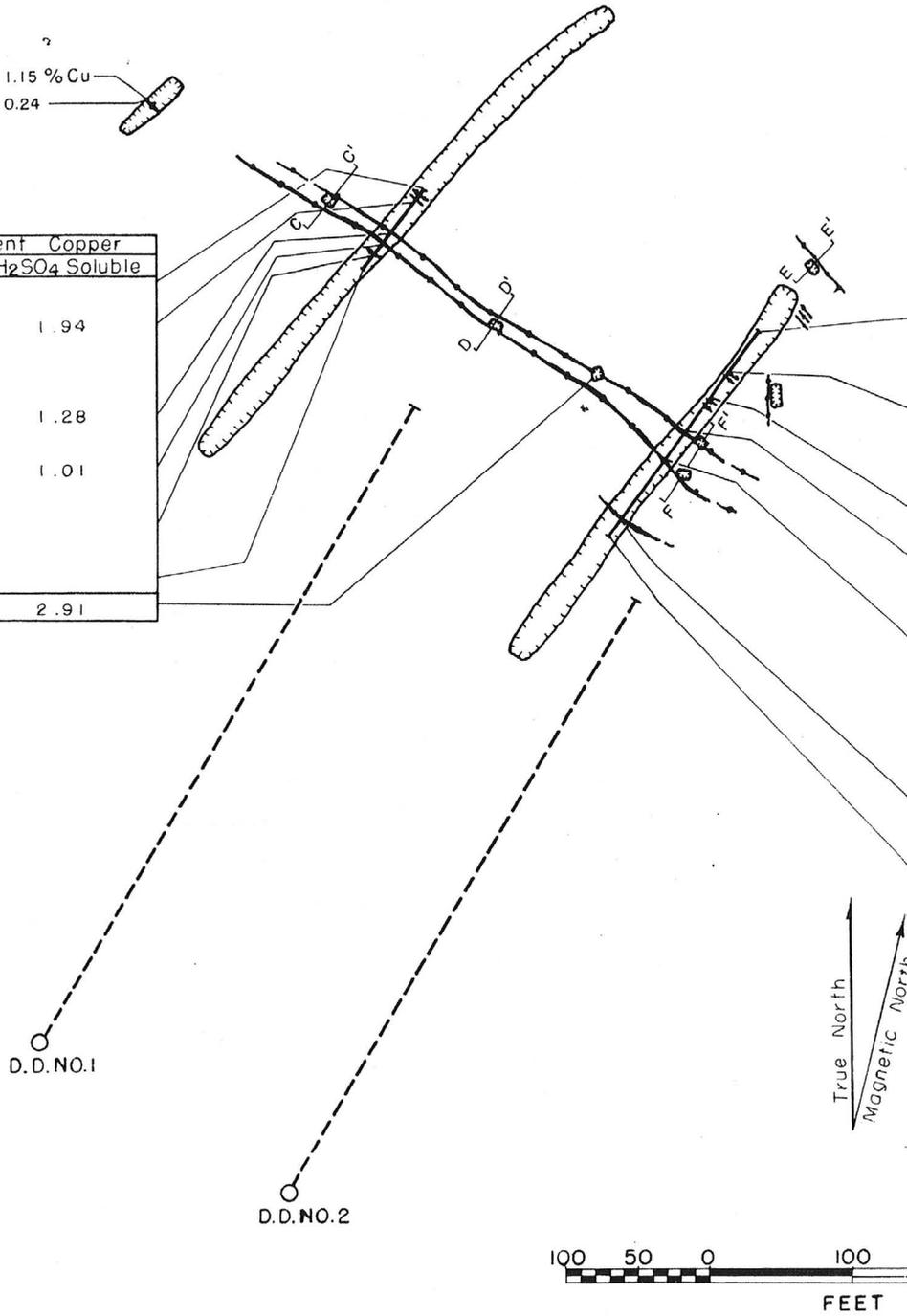


Figure 3.- Assay map, Copper Giant deposits, Ajo Mining Dist., Pima Co., Ariz.

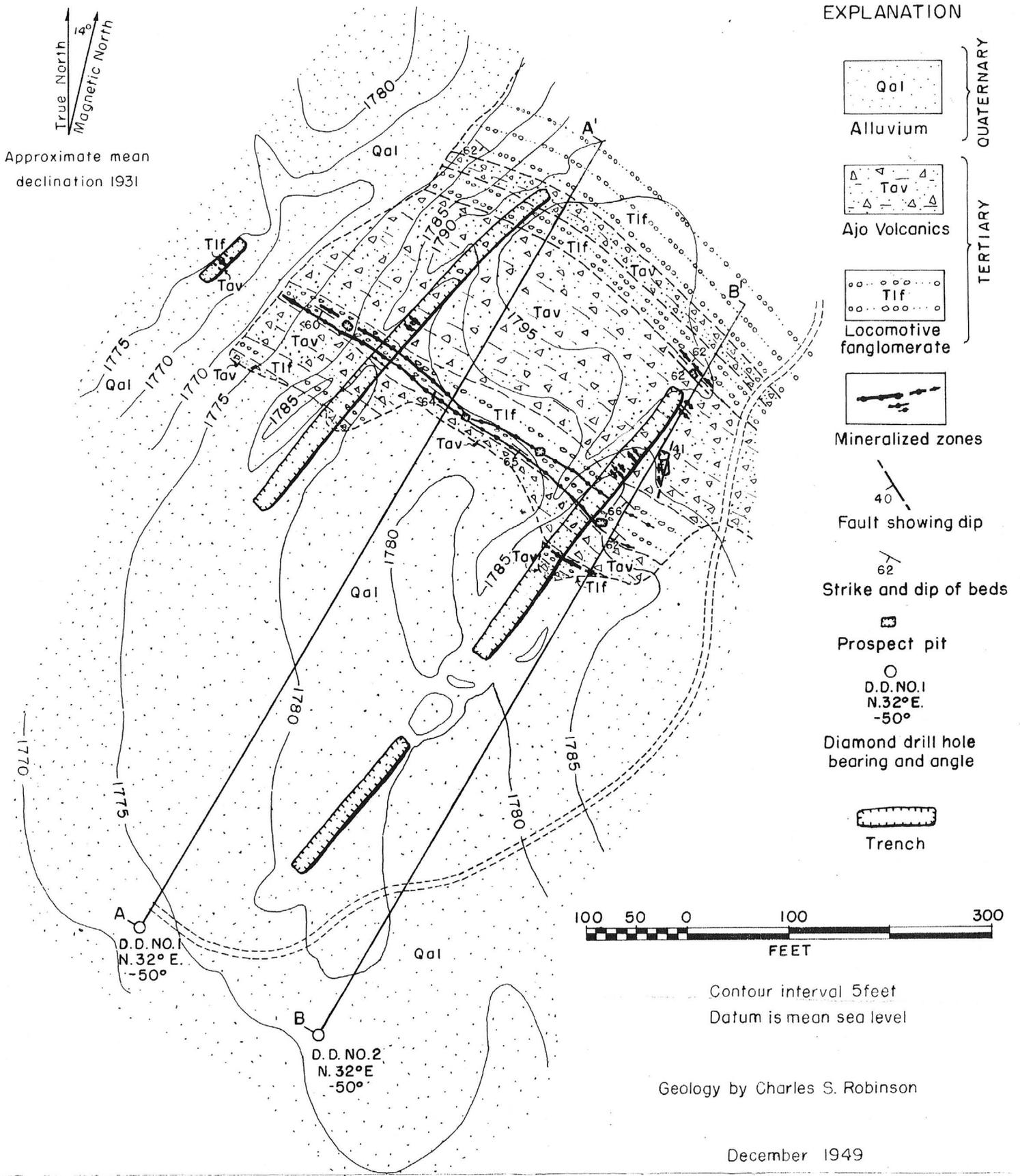


Figure 2.- Geologic map, Copper Giant deposits, Ajo Mining Dist., Pima Co., Ariz.

C O P Y

Tucson, Arizona.
February 4, 1924.

Mr. Joseph A. Hunter
Tucson, Arizona.

Dear Sir:

In response to your request for my written opinion as to your claims near the New Cornelia Mine at Ajo, which I recently examined.

I observed the exposures of carbonate ore in about ten locations and assessment holes on these claims about three miles south of Ajo.

The ground is flat and largely covered with wash and conglomerate, but wherever holes were sunk, as I observed, carbonate ore was exposed.

This ore appears identical with that in the steam shovel pit of the New Cornelia Mine.

I took several samples, the assay results of which are noted below:

This property, being located so near the New Cornelia Mine and the appearance of the ore and its occurrence being so similar, I believe that you are justified in your opinion that drilling operations will show that you have on this ground a deposit of carbonate ore, subject to treatment by the leaching process, sufficient in quantity to justify the necessary mining operations.

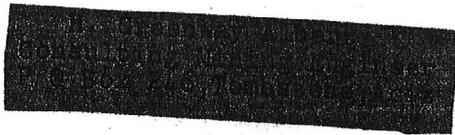
At the time I examined this property and took various samples, I was, of course, unaware of what they would run but concluded that if they went 2% or better, my decision on the property would be decidedly favorable.

I have had these samples assayed by Jacobs, of Tucson, and the general average was about 2-1/2 per cent copper.

Considering the location and the nature of the ore, my opinion of the property is very favorable.

Yours truly,

THOS. FRASER.



MILES M. CARPENTER, E.M.
Mining Engineer
Tucson, Arizona

(COPY)

February 29, 1924.

Mr. Joseph A. Hunter,
Tucson, Arizona.

*Name changed - now Copper Giant
Group.

My dear Mr. Hunter:

*

Your Jumbo Group/ of claims lies about two and one-half miles south of the steam shovel pit of the New Cornelia Copper Company in a group of low hills flanked on the east and the west by higher mountains. The survey of the proposed railroad from Ajo to the Gulf of California crosses your property.

Beginning near the south rim of the steam shovel pit the surface formation is conglomerate and recent wash. I do not know the extent to which this ground has been explored by drilling, nor have I any data on the underlying rocks. In occasional spots the conglomerate is more or less brecciated and copper stained.

On the Jumbo Group are several exposures of rock strongly resembling the monzonite porphyry of the New Cornelia Copper Company's Copper Hill ore body. These exposures are but a few square yards in extent and are surrounded by the same type of conglomerate and wash. The rock is heavily charged with copper carbonates and where opened by the few shallow workings, have a steep dip and a variable strike.

A typical sample of this ore, taken on the Jumbo Claims (my Sample No. 180) shows 5.42% copper. A general sample from a pit near by, of the shattered and copper-stained conglomerate (my Sample No. 179) showed 3.61% copper.

A rough laboratory leaching test on these ores showed the following extractions from a thirty hour contact with a 2% sulphuric acid solution.

Sample No. 179, Conglomerate ore - 94%
" No. 180, Monzonite ore - 83%

My impression of your claims, gained on this brief inspection, is decidedly favorable. I wish to emphasize my statement that these claims are worthy of further exploration with the statement that the conditions are unusually favorable for opening up a copper property of real magnitude. I consider this by far the most promising surface showing south of the New Cornelia Steam Shovel Pit.

As preliminary recommendations for the handling of this property:

Before beginning active development on your claims you should locate any vacant ground that is adjacent to your claims and secure as much of the occupied ground as you can get on reasonable terms, holding same pending results of your development work. Do not make the mistake of beginning development work with too little ground.

Sink a system of pits through the conglomerate, beginning near the monzonite exposure. If the thickness of the overlying formation is considerable, then a system of diamond drill holes should be used instead of pits. In any event, diamond drills should be used freely for all deeper exploration.

As soon as the development is carried far enough to expose the formations, have a thorough geological study made, correlating your findings with the data in the district.

The Proximity of your property to the New Cornelia plant, over a good route for road or rail construction, and the fact that you have showings of high grade leaching ores, puts you in a very favorable position. I understand that the New Cornelia Copper Company is ready to take up the treatment of outside carbonate ores. From the condition of your property, it is entirely feasible to maintain shipments of a considerable quantity during your exploration work, thus cutting down the large amount of capital that is usually required to develop a copper property.

I repeat that you have, in my judgment, an unusually promising prospect, and one which should appeal strongly to conservative mining people.

Very truly yours,

(Signed) Miles M. Carpenter, E.M.

Miles M. Carpenter, E.M.

MMC:S

copy

BRIEF OUTLINE

THE COPPER GIANT GROUP.

This property consists of 25 claims, an area of about 500 acres, lying about two miles south of the big New Cornelia Mine of the Phelps-Dodge Company at Ajo, Pima County, Arizona. Elevation 1800 feet in a desert region, where a great variety of cactus, shrubs and desert growth is about. There are many small trees of the Mesquite, Ironwood, Palo Verde and Catspaw varieties.

The mining area is very similar to the New Cornelia, almost flat except for some small hills and lying between higher hills to the east and west. The ore foundation is one continuous body of low grade ore interspersed by dykes, bands and various size bodies of richer ore. The general formation is monzonite porphyry. Some conglomerate and various kinds of porphyries.

The ore is not only identical in appearance to that of the great New Cornelia Mine just north of the Copper Giant Ground, but also has the same values in copper, gold and silver, with a tendency to slightly higher values.

The similarity in formation and ore to the New Cornelia is so marked and is becoming so very much more so as development continues, that it appears to be simply a continuation of the New Cornelia ore body, which is now shown to be up towards a hundred million tons of commercial ore. The New Cornelia mine has been in production since 1916, when it was taken over by the Calumet and Arizona Mining Company under the management of John C. Greenway. Its ore possibilities prior to a diamond drilling program were not very much more impressive than the Copper Giant is now, but the New Cornelia Mine under John C. Greenway's management, and with Ira B. Joralemon as its chief engineer, was developed into a property which has paid dividends for over 29 years and has enough ore in sight to work for 30 or 40 years more. Its present handling of ore is about 25,000 tons a day, but this is being increased considerably. Their operations are so economically run that the gold and silver content pays practically all costs, leaving the copper as profit to take care of depletory reserves, charges of other natures, taxes, and dividends, so the dividends will probably have a life of 50 years and more. The disclosed mineralized ore body in the Copper Giant is, roughly speaking, about 3/4 of a mile long by a half mile wide. Within this area are about two hundred shafts, cuts and trenches, all in good ore. No deep sinking has as yet been done, but it is reasonable to expect that such a large ore body will go to considerable depth. There are already a number of diamond drillholes in the New Cornelia ore body one thousand feet deep and still in ore. In all other big mining camps in Arizona it has been proven that the big commercial ore bodies extended to far greater distances than even the most optimistic dreamed when the camps opened up.

This was true of Bisbee, Globe, Miami, Ray, Jerome, Clifton and Morenci. Now the Copper Giant promises to prove another great low grade mine.

In these big low grade mines, of course, there are often very large bodies of quite high grade ore. This was true of the New Cornelia and its two great Glory Holes, where hundreds of thousands of tons of ore ran from 10% copper up, with high corresponding values in gold and silver. Some of these are

likely to be found with exploration on the Copper Giant ground which would make it a producing, paying mine almost overnight.

But its most attractive feature is that here is another potential big low grade producer, which comes up just as these possibilities in the United States seem to be very scarce, and just at a time when this country needs to be assured of a self-sufficient supply of domestically produced copper.

Apparently here another big low cost copper producer is coming into being to increase the importance of the Ajo district which the New Cornelia Mine has already made one of the greatest United States mines.

Every foot of work done on the Copper Giant indicates that here is an extension of the New Cornelia ore body, formed at the same time, under similar conditions, in the same general formation and carrying approximately the same values. Few, if any, of those now living will see these ore bodies exhausted.

As one who has seen in his life time the far extension of nearly all the big mines in Arizona to surrounding ground beyond the supposed limits of commercial ore, I feel sure that the same is true of the Ajo District, and that its true extent is as yet envisioned by few.

(Joseph A. Hunter)
(Signed)

EXHIBIT A-8(b)

Assays from 25 samples taken in 200 and 600 foot zones
 Copper Giant show average of 3.03% Cu
 15 cut samples: 200 and 600 foot zones " " " " " " " 2.66% "
 10 grab samples " " " " " " " " " 3.58% "

200 Foot Zone

	<u>Width</u>	<u>Cu. %</u>	<u>Au. Oz.</u>	<u>Ag. Oz.</u>		
Pit No.1, E.Side	6.5 ft.	2.65%	Not Run			
" No.1, S "	5.0 "	0.90%	" "			
" No.2	3.0 "	2.25%	" "			
" No.3	5.0 "	2.85%	" "		9 Cut samples show average of 2.86% cu. over average width of 4.8 feet	
" No.4	5.0 "	5.20%	" "			
" No.5	5.0 "	2.70%	" "			
" No.6	5.0 "	3.40%	" "			
" No.7	3.0 "	2.30%	" "			
" No.8	6.0 "	3.55%	" "			
(9 Cut Samples)	<u>43.5 ft</u>	<u>25.80%</u>				
Pit No.9 Dump	Grab	2.05%	Not Run			4 Dump Grab
" "	"	3.20%	" "		Samples show	
" "	"	4.07%	Trace	0.38	average of	
" "	"	<u>4.02%</u>	"	0.42	3.33% Cu	
(4 Dump Grab samples)		<u>13.34%</u>				
13 samples		39.14%	show average of 3.01% Cu.			

600 Foot Zone

	<u>Width</u>	<u>Cu. %</u>	<u>Au. Oz.</u>	<u>Ag. Oz.</u>		
Pit No. 24	2.0 ft.	3.05%	Trace	0.40		
25	4.5 "	2.30%	"	0.30		
26	2.2 "	1.35%	"	0.30	6 cut samples average 2.35% Cu. over avg. width of 2.3 ft	
27	0.9 "	1.40%	"	0.40		
28	2.2 "	1.85%	"	0.20		
29	2.0 "	<u>4.20%</u>	"	0.20		
(6 Cut samples)	<u>13.8 ft.</u>	<u>14.15%</u>				
25 Dump	Grab	5.00%	Not Run			
26 "	"	3.25%	" "			
Pits	"	4.70%	" "		6 Grab samples average 3.75% Cu.	
Dumps	"	3.43%	Trace	0.36		
"	"	3.54%	"	0.23		
"	"	<u>2.60%</u>	"	0.61		
(6 Grab samples)		<u>22.52%</u>				
12 samples		36.67%	show average of 3.05% Cu.			

C O P Y

EXHIBIT A-8(b)

Assays from 25 samples taken in 200 and 600 foot zones

Copper Giant show average of 3.03% Cu.
 15 Cut samples; 200 and 600 foot zones " " " 2.66% "
 10 grab samples: " " " " " " " 3.58% "

		200 Foot Zone				
		Width	Cu.%	Au.Oz.	Ag. Oz.	
Pit No. 1, E. side		6.5 ft.	2.65%	Not run		
" No. 1, S. "		5.0 "	0.90%	"		
" No. 2		3.0 "	2.25%	"		
" No. 3		5.0 "	2.85%	"	9 cut samples show average of 2.86% Cu. over average width of 4.8 feet.	
" No. 4		5.0 "	5.20%	"		
" No. 5		5.0 "	2.70%	"		
" No. 6		5.0 "	3.40%	"		
" No. 7		3.0 "	2.30%	"		
" No. 8		6.0 "	3.55%	"		
(9 cut samples)		43.5 ft.	25.80 %			
Pit No. 9 Dump	Grab		2.05%	Not run		4 Dump grab samples
"	"		3.20%	"	show average of	
"	"		4.07%	Trace	3.33% Cu	
"	"		4.02%	"		
(4 Dump Grab samples)			13.34%			
13 samples			39.34%		show average of 3.01% Cu.	

		600 Foot Zone			
		Width	Cu.%	Au Oz.	Ag. Oz.
Pit No. 24		2.0 ft	3.05%	Trace	0.40
25		4.5 "	2.30%	"	0.30
26		2.2 "	1.25%	"	0.30
27		0.9 "	1.40%	"	0.40
28		2.2 "	1.85%	"	0.20
29		2.0 "	4.20%	"	0.20
(6 Cut samples)		13.8 ft	14.15%		
25 Dump	Grab		5.00%	Not run	
26 "	"		3.25%	"	
Pits	"		4.70%	"	
Dumps	"		3.43%	Trace	0.36
"	"		3.54%	"	0.23
"	"		2.60%	"	0.61
(6 Grab samples)			22.52%		
12 Samples			36.67%		show average of 3.05% Cu.

Name:		PHELPS DODGE CORPORATION											Douglas, Arizona		
		(reduction works)											April 29, 1947		
H. GREENWAY ALBERT		Assay and Analysis Certificate													
Smelter	Shipper	Gold	Silver	Cop.	Lead	SiO ₂	Al ₂ O ₃	Fe	CaO	NgO	S	Zn	As	Sb	Bi
Lot	Lot	ozs	Ozs	%	%	%	%	%	%	%	%	%	%	%	%
200' zone	H28	Tr	0.42	4.02	0.3	64.6	13.7	3.5	0.7	0.80	nil	0.7	Nil	Nil	Tr.
600' "	H29	tr	0.36	3.43	0.3	68.8	13.0	3.9	0.9	0.91	0.1	0.7	nil	nil	Tr
NC	H30	nil	tr.	4.52	0.3	69.8	12.7	2.0	0.8	0.40	nil	0.6	nil	nil	tr

REMARKS: 200' and 600' represent samples taken from these 2 zones on the Copper Giant Claims. NC represents carbonate ore taken from New Cornelia open pit of the Phelps Dodge Corporation property at Ajo, 3 miles to the north.

NOTE: The similarity of these samples tends to bear out Hunter's belief that the two deposits are related (see Hunter Report attached).

EXHIBIT A-8(b) continued B-4 (a)

200 Ft. Zone

Proposed location for Open Pit Mining Operation where nine Cut Samples taken over an average width of 4.8 feet show an average of 2.86% Cu.

Breakdown of Costs and Credits on 2.86% Cu. ore after completion of primary stripping:

2.86% equals 57.2 lbs. cu. per ton		
Less	8.0 "	Smelter Deduction
Net	<u>49.2 "</u>	@ 18.975 equals \$9.34
Less, Treatment and penalties		4.00
Net paid by Smelter		<u>\$5.34</u>
Less: Freight, Ajo to Douglas		<u>2.20</u>
Net Smelter Returns		3.14
Premiums: 5¢ plus 1¢ equals 6¢ per lb. on 97% of wet assay of cu:		
57.2 x .97 equals 55.4 lbs @ 6¢ " "		<u>3.32</u>
Net Smelter returns plus premiums		\$6.46
Estimated cost of secondary stripping, mining, sorting and loading \$7.50		
Trucking 7 miles to Ajo Rail- head	<u>.70</u>	<u>4.00</u>
		<u>\$2.46</u>
50¢ a ton allocated to explora- tion and development program		<u>.50</u>
		\$1.96
Royalties 10% of net Smelter Returns		<u>.31</u>
Estimated net profit per ton with Preme		\$1.65

THE COPPER GIANT COMPANY

This property consists of 25 claims, an area of about 500 acres, lying about two miles south of the big New Cornelia Mine of the Phelps Dodge Company at Ajo, Pima County, Arizona. Elevation 1800 feet in a desert region, where a great variety of cactus, shrubs, and desert growth is about. There are many small trees of the Mesquite, Ironwood, Palo Verde and Catsclaw varieties.

The mining area is very similar to that of the New Cornelia - almost flat, except for some small hills, and lying between higher hills to the east and west. The ore formation is one continuous body of low grade ore, interspersed by dikes, bands and various-sized bodies of richer ore. The general formation is monzonite porphyry, some conglomerate and various kinds of porphyries.

The ore is not only identical in appearance to that of the great New Cornelia Mine just north of the Copper Giant ground, but has the same values in copper, gold and silver, with a tendency to slightly higher values.

The similarity in formation and ore to the New Cornelia is to marked and is becoming so very much more so as development continues, that it appears to be simply a continuation of the New Cornelia ore body which is now shown to be up towards a hundred million tons of commercial ore. The New Cornelia mine has been operating since 1916 in production when this property was taken over by the Calumet and Arizona Mining Company, under the management of John C. Greenway; its ore possibilities were not very much more impressive than the Copper Giant is now, but the New Cornelia Mine, under Greenway's management and with Ira B. Joralemon as its chief engineer, was developed into a property which has paid dividends for over 20 years and has enough ore in sight to work for 30 or 40 years more. Its present handling of ore is about 25,000 tons a day, but this is being increased considerably. Their operations are so economically run that the gold and silver content pays practically all costs, leaving the copper as profit to take care of depletory reserves, charges of other natures, taxes and dividends, so the dividends will probably have a life of 50 years and more. The disclosed mineralized ore body in the Copper Giant is roughly speaking about $3/4$ of a mile long by a $1/2$ mile wide. Within this area are about two hundred shafts, cuts, and trenches, all in good ore. No deep sinking has as yet been done, but it is reasonable to expect that such a large ore body will go to considerable depth. There are already a number of diamond drill holes in the New Cornelia ore body one thousand feet deep and still in ore. In all the other big mining camps in Arizona it has been proven that the big commercial ore bodies extended to far greater distances than even the most optimistic dreamed when the camps opened up.

This was true of Bisbee, Globe, Miami, Ray, Jerome, Clifton and Morenci. Now the Copper Giant promises to prove another great low grade mine.

In these big low grade mines, of course, there are often very large bodies of quite high grade ore. This was true of the New Cornelia and its two great Glory Holes, where hundreds of thousands of tons of ore ran from 10% copper up, with high corresponding values in gold and silver. Some of these are likely to be found with exploration on the Copper Giant ground, which would make it a producing, paying mine almost overnight.

But its most attractive feature is that here is another potential big low grade producer, which comes up just as these possibilities in the United States seem to be very scarce, and just at a time when this country needs to be assured of a self-sufficient supply of domestically produced copper.

Apparently here another big low cost copper producer is coming into being to increase the importance of the Ajo district, which the New Cornelia mine has already made one of the greatest United States mines.

Every foot of work down on the Copper Giant indicates that here is an extension of the New Cornelia ore body, formed at the same time, under similar conditions, in the same general formation and carrying approximately the same values. Few, if any, of those now living will see these ore bodies exhausted.

As one who has seen in his own lifetime the far extension of nearly all the big mines in Arizona to surrounding ground beyond the supposed limits of commercial ore, I feel sure that the same is true of the Ajo district, and that its true extent is as yet envisioned by few.

Joseph A. Hunter

Continental Diamond Drilling Company

INCORPORATED

DRILLING CONTRACTORS

1205-1206 PACIFIC NATIONAL BUILDING

LOS ANGELES, CALIFORNIA

Manufacturers of

CONTINENTAL DIAMOND CORE DRILLS
AND SUPPLIES

Canadian Office:

ROUYN, PROV. QUEBEC, CANADA
J. M. GIBEAU, MANAGER

June 3rd, 1931

Mr. H. Greenway Albert,
Tucson, Arizona.

Dear Sir;

Enclosed please find two copies of diamond drilling contract to cover work on your property near Ajo, Arizona.

You will probably note that the price quoted is slightly in advance of the regular drilling price for that region. The reasons for this advance are:

- #1 The small amount of drilling involved
- #2 Absence of a water supply near at hand
- #3 A certain amount of road work necessary
- #4 Transportation of drill crews to and from Ajo daily.
- #5 Possibility of encountering heavy wash material or overburden.

We are personally familiar with conditions near Ajo, as we have done considerable diamond drilling around that vicinity.

It is possible that you may get a lower price quoted you by some smaller irresponsible firm, but you will have no assurance that they would go through with your work; and in all probability it would cost you a good deal more in the long run.

Trusting that you will consider this contract favorably, I am,

Yours very truly,

Continental Diamond Drilling Co.

By

C. L. Lindhe

Continental Diamond Drilling Company

DRILLING CONTRACTORS

1223 PACIFIC NATIONAL BANK BLDG.
LOS ANGELES, CALIFORNIA

IN ACCOUNT WITH H. Greenway Albert Aug 3 1931
Offo Ariz.

DIAMOND DRILLING AT _____ MINE FROM July 15th TO July 31 1931

Hole No. <u>2</u>	from <u>30</u> to <u>500</u>	<u>470</u> feet @ \$ <u>6.00</u>	per foot—\$ <u>2820.00</u>
Hole No. <u>"</u>	from <u>500</u> to <u>600</u>	<u>100</u> feet @ \$ <u>6.25</u>	per foot—\$ <u>625.00</u>
Hole No. <u>"</u>	from <u>600</u> to <u>635</u>	<u>35</u> feet @ \$ <u>6.50</u>	per foot—\$ <u>227.50</u>
Hole No. <u>"</u>	from <u>Concreting</u>	<u>80 hr</u> feet @ \$ <u>3.00</u>	per foot—\$ <u>240.00</u>
Hole No. <u>"</u>	from <u>Concret</u>	_____ feet @ \$ _____	per foot—\$ <u>30.80</u>
			<u>Total 3943.30</u>

*Paid Aug 3rd 1931
Continental Seaward
Drilling Co.
By P. L. Lindeke*

Continental Diamond Drilling Company

1223 Pacific National Bank Building, Los Angeles, Calif.

I. THIS AGREEMENT made and entered into this 5rd day of June, 1931,
by and between H. Greenway Albert
of Tucson, Arizona, party of the first part,
and the CONTINENTAL DIAMOND DRILLING COMPANY, of Los Angeles, California, party of
the second part,

WITNESSETH:

II. In consideration of certain payments hereby agreed to be made by the said first party to the
said second party, the second party agrees to drill, sink or prospect with a Diamond Core Drill in
or near Ajo, Arizona

at sites to be selected by the said first party, to a depth not to exceed five hundred
(500) feet in any one hole, and subject to certain
conditions hereinafter mentioned.

III. The said second party agrees to use for the above described work one Diamond
Core Drill and men skilled in operating the same, and to deliver only to such person as the said
first party may designate by written order, all core taken out of said prospect holes. Size of core to
be approximately (AS) 1 3/16 inches in diameter.

The said first party shall provide suitable boxes if he desires to save the core or sludge,
and may have a representative at the drill at all times to remove and take charge of said core or
sludge samples. No information whatever regarding the records and results of this prospecting is
to be given to any other party without the written consent of the said first party.

~~IV. The said first party agrees to pay to the said second party the sum of
Dollars (\$) _____
for each and every foot sunk or drilled by it from the surface to a depth of five hundred (500) feet:
Dollars (\$) _____
from a depth of five hundred (500) feet to a depth of six hundred (600) feet:
Dollars (\$) _____
from a depth of six hundred (600) feet to a depth of seven hundred (700) feet:
Dollars (\$) _____
from a depth of seven hundred (700) feet to a depth of eight hundred (800) feet:
Dollars (\$) _____
from a depth of eight hundred (800) feet to a depth of nine hundred (900) feet: and
Dollars (\$) _____
from a depth of nine hundred (900) feet to a depth of one thousand (1000) feet.~~

~~Six dollars (\$6.00) per foot for 1000 feet; or Five and 95/100 Dollars (\$5.95)
per foot for a full 1200 feet; or Five and 75/100 Dollars (\$5.75) per foot for
a full 1500 feet of drilling. There shall be an advance of twenty five cents
(\$0.25) per foot for each hundred feet, if any one hole is advanced beyond the
depth of 500 feet.~~

V. The party of the first part shall have the right to terminate this drilling at any time provided
that should he so terminate it before a total of one thousand
(1000) feet have been drilled,
shall pay the party of the second part in full for one thousand

(1000) feet of drilling: the party of the second
part being hereby guaranteed work amounting to six thousand

and to furnish the said second party at the location of the herein-described prospect holes, free of charge, an ample supply of water and power for the proper prosecution of the herein-described work. The party of the first part agrees to pay the party of the second part, one dollar (\$1.00) per foot above regular drilling price for stand-piping through wash and surface material, when necessary

Should the party of the first part fail to furnish power or water, or locate sites as hereinabove agreed, or by any other cause for which is responsible, delay the operation of the said Diamond Drill, shall pay the party of the second part at the rate of Dollars (\$.....) per day for each day, or part thereof, that the operation of the said drill is delayed by such failure.

VII. The party of the first part also agrees to transport, free of charge, the drilling outfit of the second party from the nearest railway station to the location of the first prospect hole, and from one prospect hole to another, and back to the nearest railway station, on the completion of the work under this contract.

VIII. It is hereby agreed that if it should become necessary to use casing or cement in any drill hole to prevent caving, save water, recover sludge, or for any other reason to successfully complete drilling any hole, the said first party shall pay for such casing or cementing operation at the actual cost of doing the work and for materials used.

IX. If any standpipe or casing is left in any drill hole at the option of the first party, the said first party shall pay for such materials at actual cost.

If it should become necessary to put in foundations or use barges for any drilling on lakes or rivers, it is hereby agreed that such foundations will be put in, or the barges furnished, by the party of the first part.

X. It is hereby agreed that should a cavity, or loose and caving material be encountered in any drill hole at a depth which would prevent successful drilling, the party of the second part does not guarantee to drill or sink said drill hole to any specified depth, but will drill or sink as deep as is practicable under the conditions, and the party of the first part shall pay for every foot actually sunk or drilled.

XI. The party of the first part agrees to make payments in conformity with the terms heretofore specified, between the 15th and 25th of each month for all footage drilled during the first half of the month, and between the 1st and 10th of each month for all footage drilling during the last half of the previous calendar month.

The party of the first part further agrees to deposit in the Bank of a sum equal to per cent. of the amount guaranteed in clause of this contract, together with a copy of this contract; said sum being payable by said bank to the party of the second part for any payment not made at time specified in this contract.

XII. The second party hereby agrees to protect its employees with compensation and or liability insurance in accordance with the laws of Arizona.

XIII. The party of the second part hereby agrees to commence the herein described work within twenty days from the date hereinabove written; but the party of the second part shall not be responsible for delays caused by strikes, lockouts, railroad accidents or blockades.

XIV. It is expressly agreed that there are no promises, agreements or understandings outside of this contract, and that no agent has any authority to obligate the CONTINENTAL DIAMOND DRILLING COMPANY, by any terms, stipulations or conditions not herein expressed, and that this contract may be altered only by the written consent of both the parties hereto.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals For the Party of the First Part: For the Party of the Second Part:

Accepted by By Title

Accepted by CONTINENTAL DIAMOND DRILLING COMPANY By *C. L. Linde* Manager President

Date Accepted Date Accepted

Continental Diamond Drilling Company

DRILLING CONTRACTORS

1223 PACIFIC NATIONAL BANK BLDG.
LOS ANGELES, CALIFORNIA

IN ACCOUNT WITH H. Granway Albert July 17th 1931
Ajo.

DIAMOND DRILLING AT Cornelia MINE FROM June 25 TO July 15 1931

Hole No. <u>1</u>	from <u>0</u>	to <u>501</u>	<u>501</u> feet @ \$ <u>6.00</u>	per foot—\$ <u>3006.00</u>
Hole No. <u>1</u>	from <u>0</u>	to <u>85 Stand Piping</u>	<u>85</u> feet @ \$ <u>1.00</u>	per foot—\$ <u>85.00</u>
Hole No. <u>2</u>	from <u>0</u>	to <u>30</u>	<u>30</u> feet @ \$ <u>6.00</u>	per foot—\$ <u>180.00</u>
Hole No. <u>2</u>	from <u>0</u>	to <u>16 Stand Piping</u>	<u>16</u> feet @ \$ <u>1.00</u>	per foot—\$ <u>16.00</u>
Hole No. <u>1</u>	from <u>Stand pipe left in hole</u>	to <u>8.5</u>	feet @ \$ <u>.75</u>	per foot—\$ <u>63.75</u>
<u>Total</u>				<u>\$ 3350.75</u>

Paid July 17th 1931
Continental Diamond
Drilling Co.
By C. L. Luedke



DEPARTMENT OF THE INTERIOR
INFORMATION SERVICE

GEOLOGICAL SURVEY

For release April 22, 1949

SUPPLEMENTARY GEOLOGIC REPORT ON AJO DISTRICT, ARIZONA, RELEASED

Director W. E. Wrather of the Geological Survey today announced the release in open file of a brief supplement to U. S. Geological Survey Professional Paper 209, "The Ajo mining district, Arizona," by James Gilluly.

Two diamond drill holes, put down south of the New Cornelia pit, furnish data that necessitate some modification of the inferred position of the erosion surface on which the Locomotive fanglomerate was deposited. This brief report includes several revised cross sections and a new map showing structure contours on the base of the Locomotive fanglomerate.

Copies of the supplementary report may be inspected at the Geological Survey office, Room 1033 (Library), Federal Works Agency Building, Washington, D. C., and at the office of the Director, Arizona Bureau of Mines, Tucson, Arizona.

x x x

3210 Macomb St. N.W.,

Washington, D.C.

May 4 - 49

Mr. F. Greenwood Albert,

1203 St. Paul St., Baltimore, Md.,

Dear Greenwood:-

Your letter of the 2nd inst., with enclosures, at hand.

I enclose herewith one of the maps, marked, to denote the position of the two TCM outcrops, west of your groups, same also lying about 1 1/2 miles southwest of the Pit.

I am of the opinion that future explorations will denote the existence of great areas of underlying marlstone beneath the conglomerate capping of your claims, likewise the Blue Star area. Future drilling of the conglomerate area south of the Pit will in my opinion disclose a large tonnage of Conn. marl or -

It was so nice to have seen you, Nancy joins me in kindest regards with the hope of seeing you again very soon - Sincerely yours,

Jack Smith

Continental Diamond Drilling Company

DRILLING CONTRACTORS

1223 PACIFIC NATIONAL BANK BLDG.
LOS ANGELES, CALIFORNIA

IN ACCOUNT WITH St. Greenway Albert Aug 10 1921
Los Angeles

DIAMOND DRILLING AT _____ MINE FROM Aug 1st TO Aug 10 1921

Hole No. <u>2</u> from <u>635</u> to <u>700</u>	<u>65</u> feet @ \$ <u>6.50</u>	per foot—\$ <u>422.50</u>
Hole No. from <u>700</u> to <u>800</u>	<u>100</u> feet @ \$ <u>6.75</u>	per foot—\$ <u>675.00</u>
Hole No. from <u>Cementing</u> <u>53 hrs</u>	@ \$ <u>3.00</u>	per foot—\$ <u>159.00</u>
Hole No. from <u>Cement</u> <u>5 hrs</u>	feet @ \$ <u>1.15</u>	per foot—\$ <u>5.75</u>
<u>Trip to Phoenix with truck for extra drill rods</u>	per foot—\$ <u>53.60</u>
Refund of <u>\$.05</u> per foot in accordance with contract		<u>65.00</u>
		<u>1327.85</u>
		<u>\$1262.85</u>

Paid Aug 10-31
Continental Seaman
Drilling Co.
By C. L. Linder

The Ajo mining district, Arizona

by James Gilluly

In 1928 two diamond drill holes were put down on the Bluestone claims south of the New Cornelia pit at Ajo, Ariz. During the preparation of Professional Paper 209, "The Ajo mining district, Arizona," Mr. Hoval A. Smith offered to make available to the U.S. Geological Survey the records of these drill holes. Unfortunately the information did not reach the author. Again in 1948, after the publication of the Ajo professional paper, Mr. Smith renewed his offer to make the drill records available to the Survey. These holes furnish data that necessitate some modification of the inferred position of the erosion surface on which the Locomotive fanglomerate was deposited. Accordingly, this supplementary note has been prepared. In addition, the following revised sections are included: sections B-B' and C-C' on plate 20; sections through coordinates 9 to 14 on plate 22; and the section through coordinate B on plate 23. Also a new map, plate 21A, has been prepared to show structure contours on the base of the Locomotive fanglomerate and the location of the two drill holes on the Bluestone claims.

The cores of these drill holes were examined in October 1948 by C. A. Anderson and M. P. Peterson of the Geological Survey, and they report mineralized bedrock below the Locomotive fanglomerate. Hole No. 1 is 2,253 feet deep, and the upper 1,492 feet is in fanglomerate. Hole No. 2 is 2,050 feet deep, and the upper 1,668 feet is in fanglomerate. The rock beneath the fanglomerate is highly silicified and sericitized, and locally brecciated. The upper part of the bedrock is oxidized and contains some native copper, limonite, and a few seams of chalcocite. At depths 200 feet below the bedrock surface, primary pyrite and chalcopyrite show no signs of enrichment or oxidation.

Most of the bedrock resembles the Concentrator volcanics, and examination of representative thin sections of the cores confirms this identification. In hole No. 1, at a depth of 2,000 feet, specimens of core resemble diorite porphyry, and this rock may be related to the monzonite intrusive bodies; however, this rock is so altered hydrothermally as to make specific determination impossible.

The bedrock at these depths, beneath the Locomotive fanglomerate, may be part of an upfaulted block or of a buried hill which, after the tilting of the fanglomerate, would now appear as a more gently sloping basal surface of that formation. Although faults have been mapped at intervals along the northern contact of the Locomotive fanglomerate, no evidence has been found for a continuous northern fault contact, and the continuity of geologic boundaries north of the fanglomerate shows that no large fault can there exist. Movement along a fault near the southwest corner of section 27 (pl. 20) has brought the Concentrator volcanics against the Locomotive fanglomerate, but this fault seems to swing southeastward where it can be traced last near the boundary between sections 27 and 34. Hence it would have no effect on the altitude of the base of the fanglomerate as intersected in holes 1 and 2. Overlap of fanglomerate on bedrock is very evident where the contact is exposed. This is shown by the wedging out of the lower beds of the fanglomerate westward along the contact. The combined evidence now available from the drill holes in fanglomerate in this area (see pl. 21A) suggests strongly that the erosion surface on which the fanglomerate was deposited not only has irregularities but also, locally, has a relatively gentle slope. The presence of the bedrock in holes 1 and 2 at a higher elevation than would be inferred from the projection of the erosion surface is evidence that the irregularities, so evident along the strike, also exist down the dip. Although a concealed fault may exist and account for the relations, no fault of adequate displacement has been found.

Possibly future exploration will reveal beneath the Locomotive conglomerate other areas where the bedrock is relatively near the surface. Some of them may be underlain by bedrock sufficiently mineralized in copper and close enough to the surface to constitute minable ore.

H. L. VEATCH

MINING and MILLING

R. F. D. NO. TWO

ROCKY FORD, COLORADO

June 1, 1955

*From
D. Manning, About 2/20*

Mr. G.G. Scroggins
Curve Court
Rocky Ford, Colorado

Dear Mr. Scroggins:

While inspecting different mining properties located in New Mexico and Arizona, I have found what I believe will be a large copper mine when developed.

The property consists of 60 contiguous claims known as the Cornelia-Copper Giant Property. It is located in the Ajo Mining District of Arizona some three miles southeast of the New Cornelia Open Pit Mine now being operated by Phelps Dodge Corporation.

The claims are bounded on the East and South by a range of mountains and on the West by small rolling hills thus forming a basin.

On the small hills covering the western portion of the claims there is a very good showing of copper carbonate ore. The ore has been exposed within 2 feet of the surface in numerous places by shallow pits and trenches for a distance of approximately 2000 feet.

The deepest shaft is 40 feet with carbonate ore all the way down. The bottom of the shaft could not be inspected due to some surface overburden which caved in to the shaft, however there is a 25 foot shaft which shows ore all the way down and in the bottom.

At a depth of 400 feet below the collar of a diamond drill hole core assays ran 3.78 to 4.25 per cent Cu, according to engineer's assay reports. The ore also carries values in Au and Ag which will help defray mechanized mining costs.

East of where the carbonate ore has been exposed close to the surface there is a large pear shaped basin covered by a layer of sedimentaries. All ore dips toward this basin. I believe below the carbonate ore in this basin there will be a large Sulfide deposit of copper ore. Monzonite is the principal host rock in the Ajo Mining District and Andersite is the basement rock. Both Monzonite and Andersite, similar to that found in the New Cornelia Open Pit were said to have been encountered recently in a churn drill hole South of the pear shaped basin.

I believe this property is worthy of a diamond drilling program of at least 12,000 feet of drill holes to be placed at different places over the property.

H. L. VEATCH

MINING and MILLING

R. F. D. NO. TWO

ROCKY FORD, COLORADO

June 1, 1955

There is one place where a stripping operation has uncovered what appears to be a sizeable tonnage of copper carbonate ore that will assay from 2 to 4 per cent copper (according to assays from engineer's reports). I took grab samples which I thought would be a fair average and the assay was 2.48 % copper which equals 49 lbs copper per ton of ore and at 36¢ per lb would equal better than \$ 17.00 per ton.

This ore could be wagon drilled, mined and stock piled. I believe this ore could be shipped to the Ajo Smelter which is located only 6 miles away. Three miles of this road is paved. The other three miles is good country road.

From all I was able to learn the Ajo Smelter is in need of Silica Ore and the above ore runs between 60 and 70 % S.l.O.2 and at 36¢ copper I believe there would be a nice profit with a small capital investment, providing the Ajo Smelter will treat the ore.

This is something which will have to be taken care of before mining operations start, but I am sure the Smelter will demand to know the number of tons of ore per day or week you will be able to truck to them before they will make any commitments. Tons per day can be taken care of by mining and stockpiling.

This operation can be carried on while diamond drilling is being done on other parts of the property.

After equipment is on the property, it will require one to two days stripping. Then with wagon drill and high lift or shovel I see no reason why ore could not be produced within three to four days from starting operation.

Diamond drilling program should be started as soon as possible after production of ore has been started and depth of ore has been proved.

I see no reason why the ore will not have the same depth as the New Cornelia Deposit, but there is, of course, a possibility that it may be only a surge deposit which only drilling will prove.

As stated in this report, this property is worthy of the amount of capital it will require to start production and there is a very good chance to make the property a large producer.

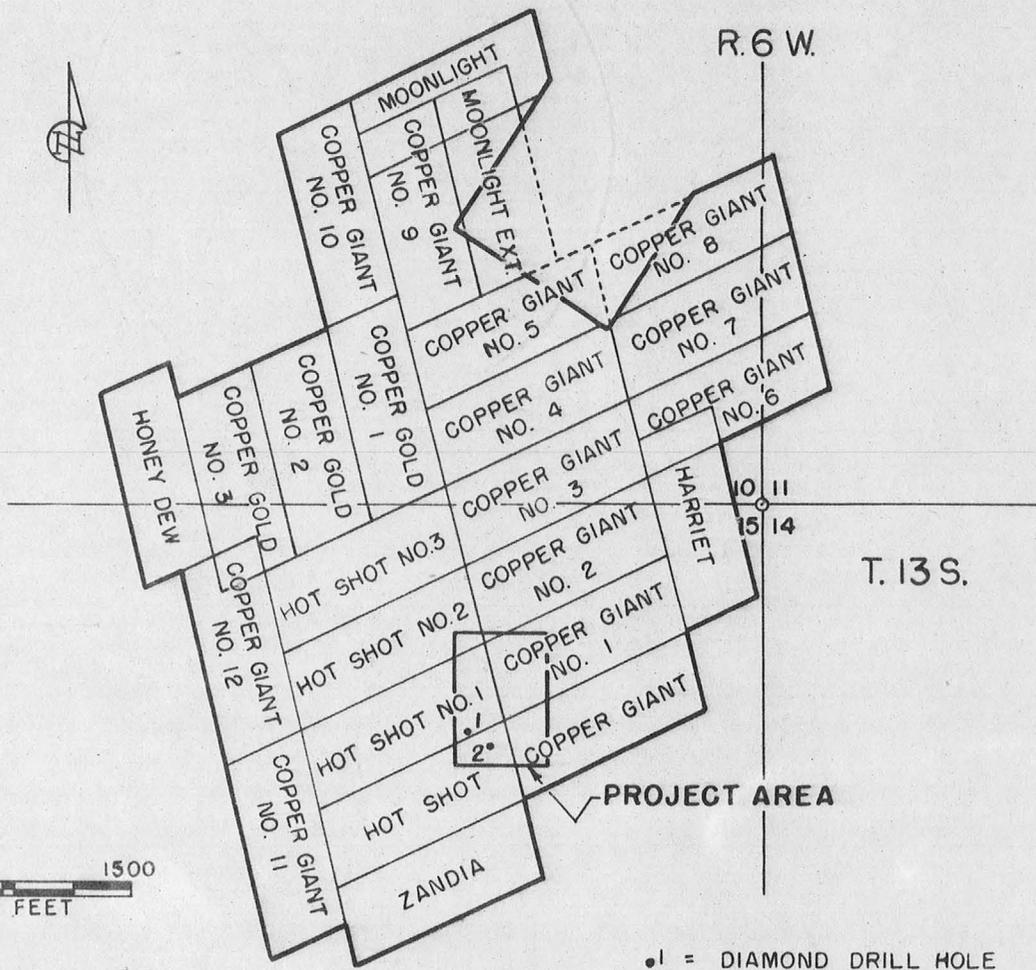
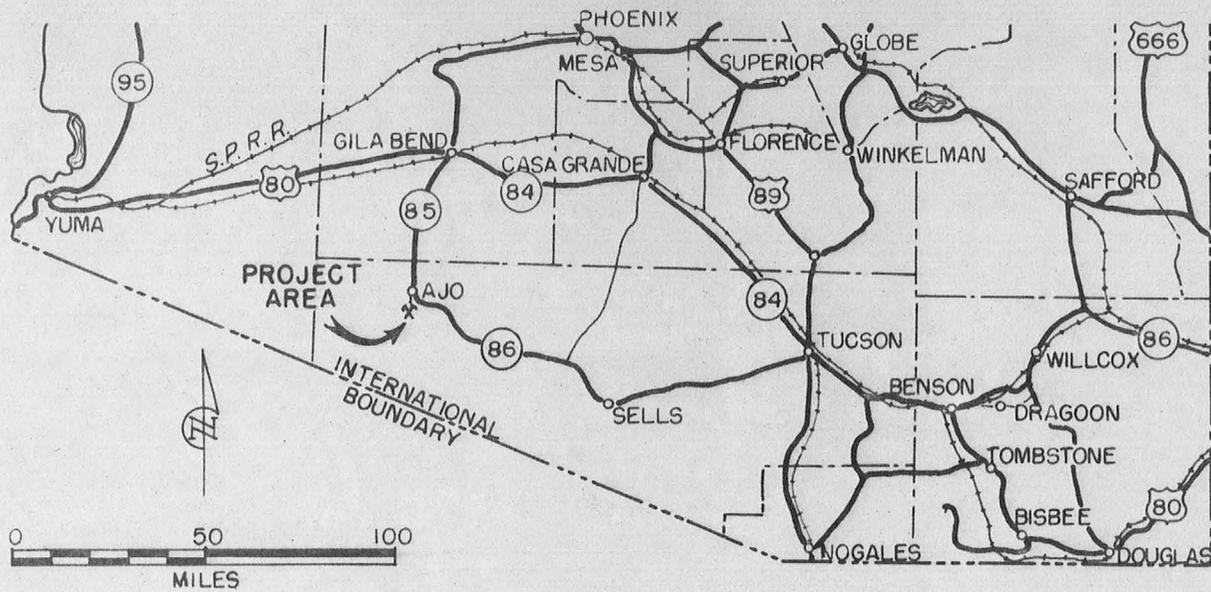
H.L.Veatch
Haciend Huachuca Motel
Tombstone, Arizona Phone 2581

Sincerely



H.L.Veatch

Property Owner: H.Greenway Albert
Phone: Tombstone 2466



•1 = DIAMOND DRILL HOLE

Figure 1.- General location and claim maps, Copper Giant deposits, Ajo mining district, Pima County, Arizona.

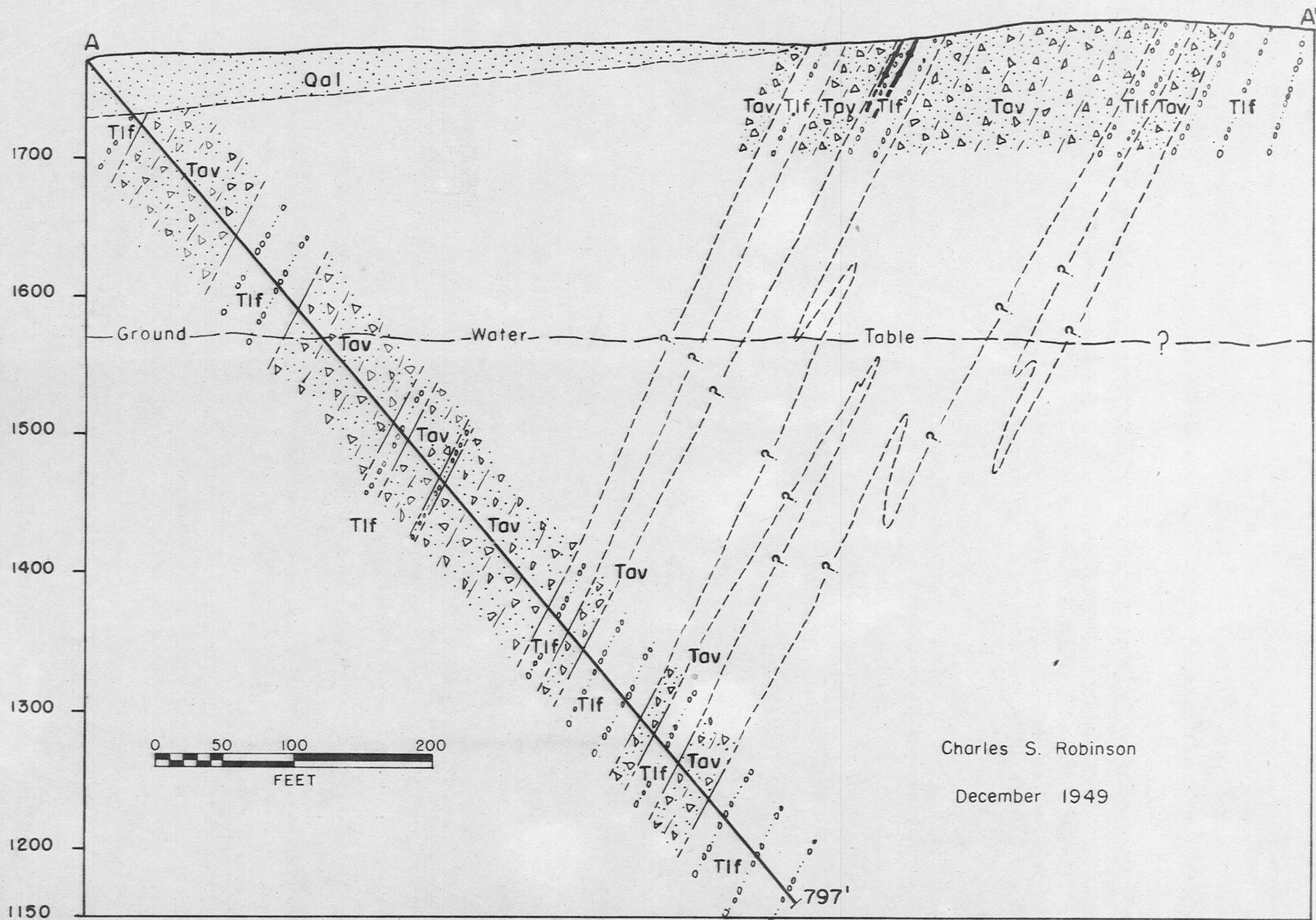


Figure 4. - Geologic section A-A', through diamond drill hole No.1, Copper Giant Project, Ajo mining district, Pima County, Arizona.

34

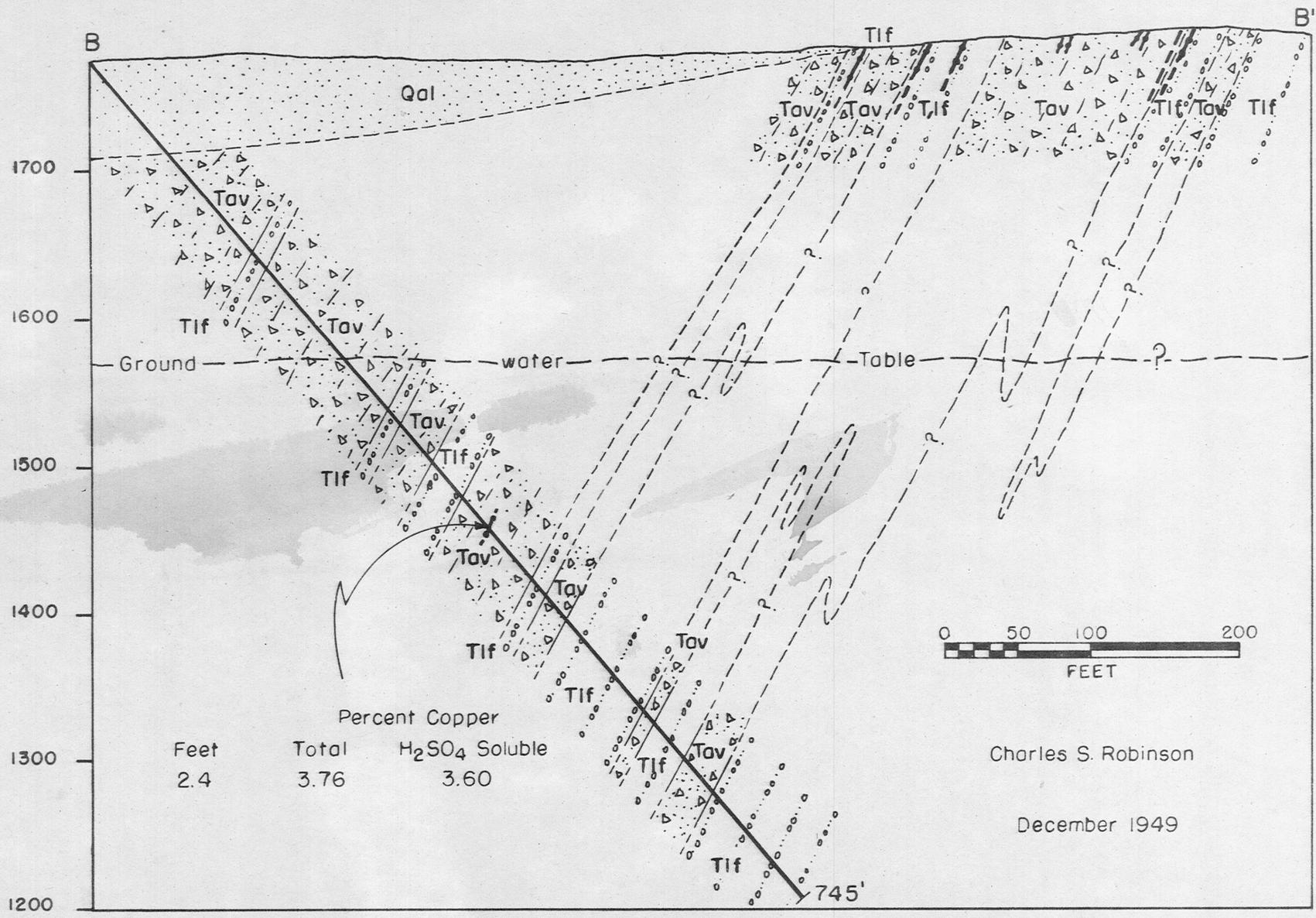


Figure 5.- Geologic section B-B', through diamond drill hole No.2, Copper Giant Project, Ajo mining district, Pima County, Arizona.

32

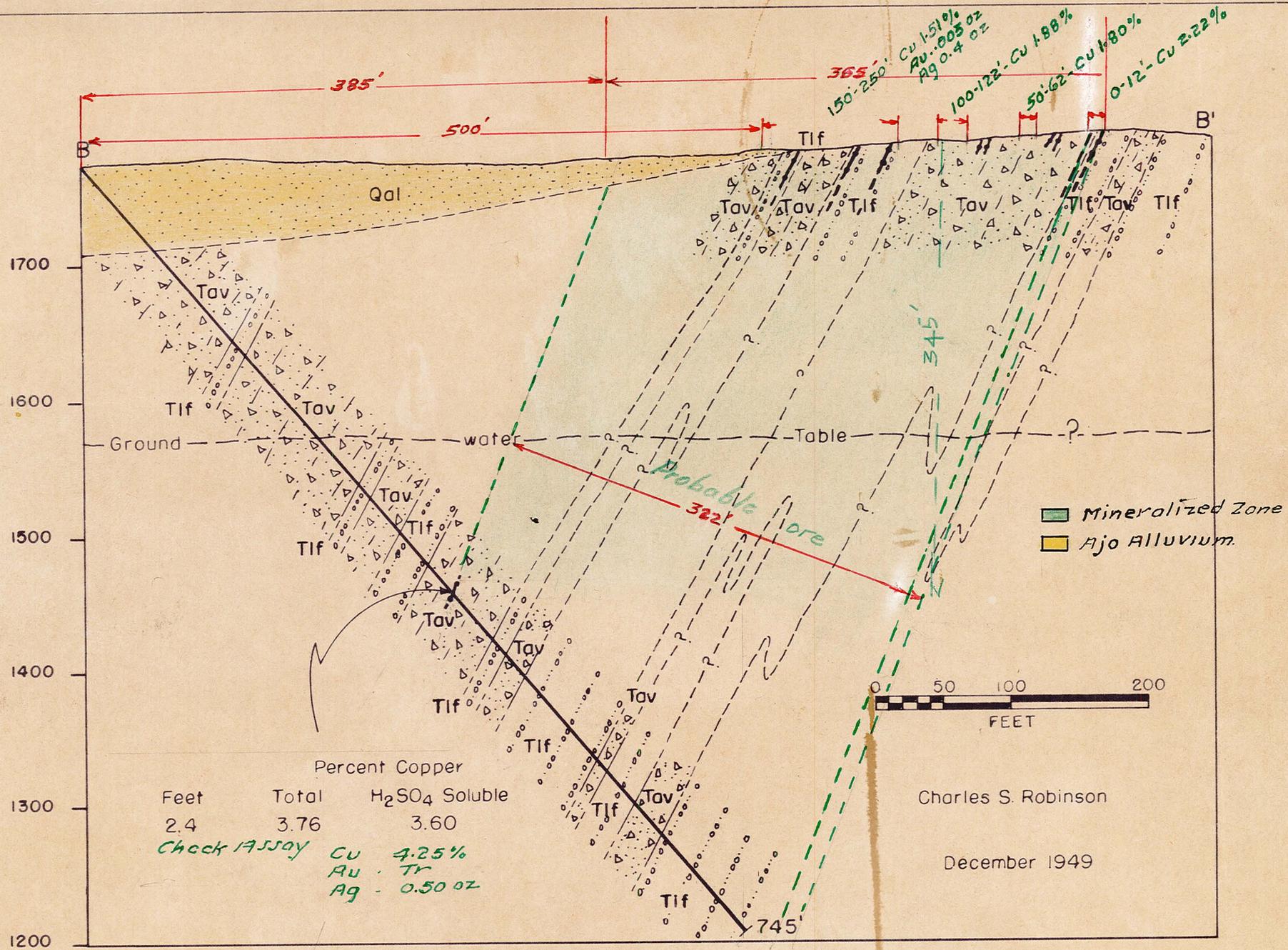


Figure 5.- Geologic section B-B', through diamond drill hole No.2, Copper Giant Project, Ajo mining district, Pima County, Arizona.

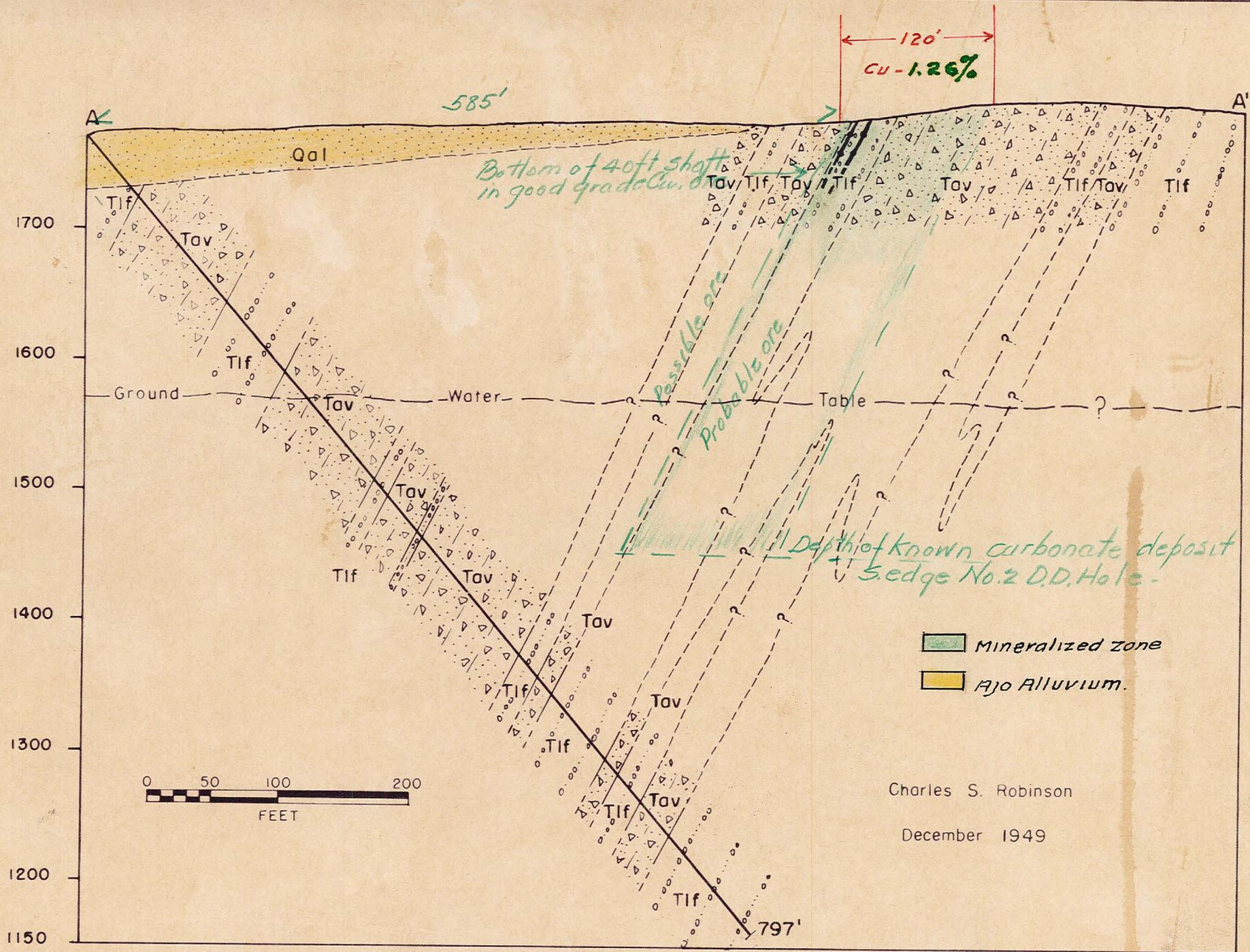
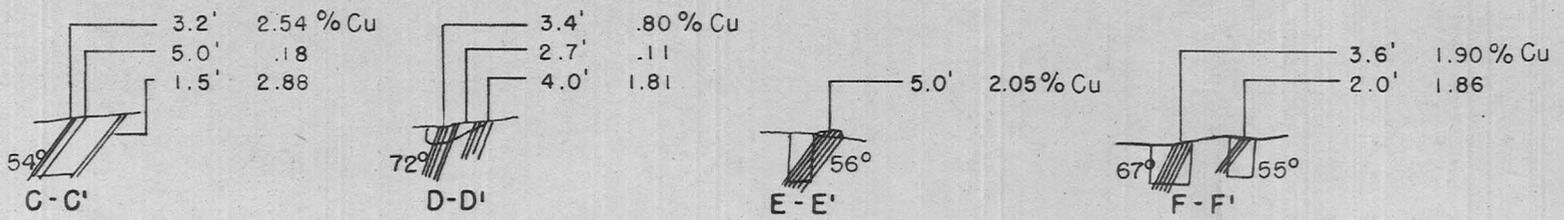
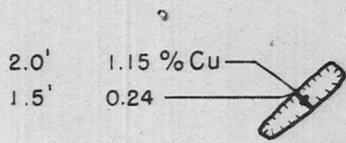


Figure 4 - Geologic section A-A', through diamond drill hole No.1, Copper Giant Project, Ajo mining district, Pima County, Arizona.



Sections



Feet	Percent Copper	
	Total	H ₂ SO ₄ Soluble
5.0	0.02	
5.	.12	
5.	2.11	1.94
3.	.48	
5.	.06	
5.	.03	
5.	.10	
3.	1.45	1.28
3.	.05	
4.	.92	
3.	1.28	1.01
9.	.11	
3.	.09	
3.	.90	
6.	.16	
4.	.03	
3.	.01	
2.9	3.25	2.91

Feet	Percent Copper	
	Total	H ₂ SO ₄ Soluble
6.0	0.08	
6.	.02	
6.	.02	
6.	.04	
6.	.02	
6.2	.11	
3.0	2.06	1.86
3.	.23	
6.	.39	
6.	.58	
6.	.03	
6.	.02	
1.	2.10	1.93
5.5	.16	
5.5	.16	
6.5	2.07	1.86
6.0	.09	
6.	.05	
8.	.30	
6.	.43	
1.	2.45	2.31
4.	.04	
6.	.04	
6.	.04	
6.	.01	
6.	.01	
6.	.01	
4.	.06	
4.	1.65	1.51
6.	.05	
6.	.09	
6.	.01	
4.	.01	

D.D.NO.1

D.D.NO.2

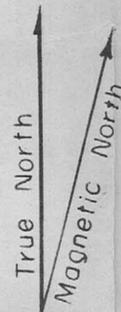


Figure 3. - Assay map, Copper Giant deposits, Ajo Mining Dist., Pima Co., Ariz.

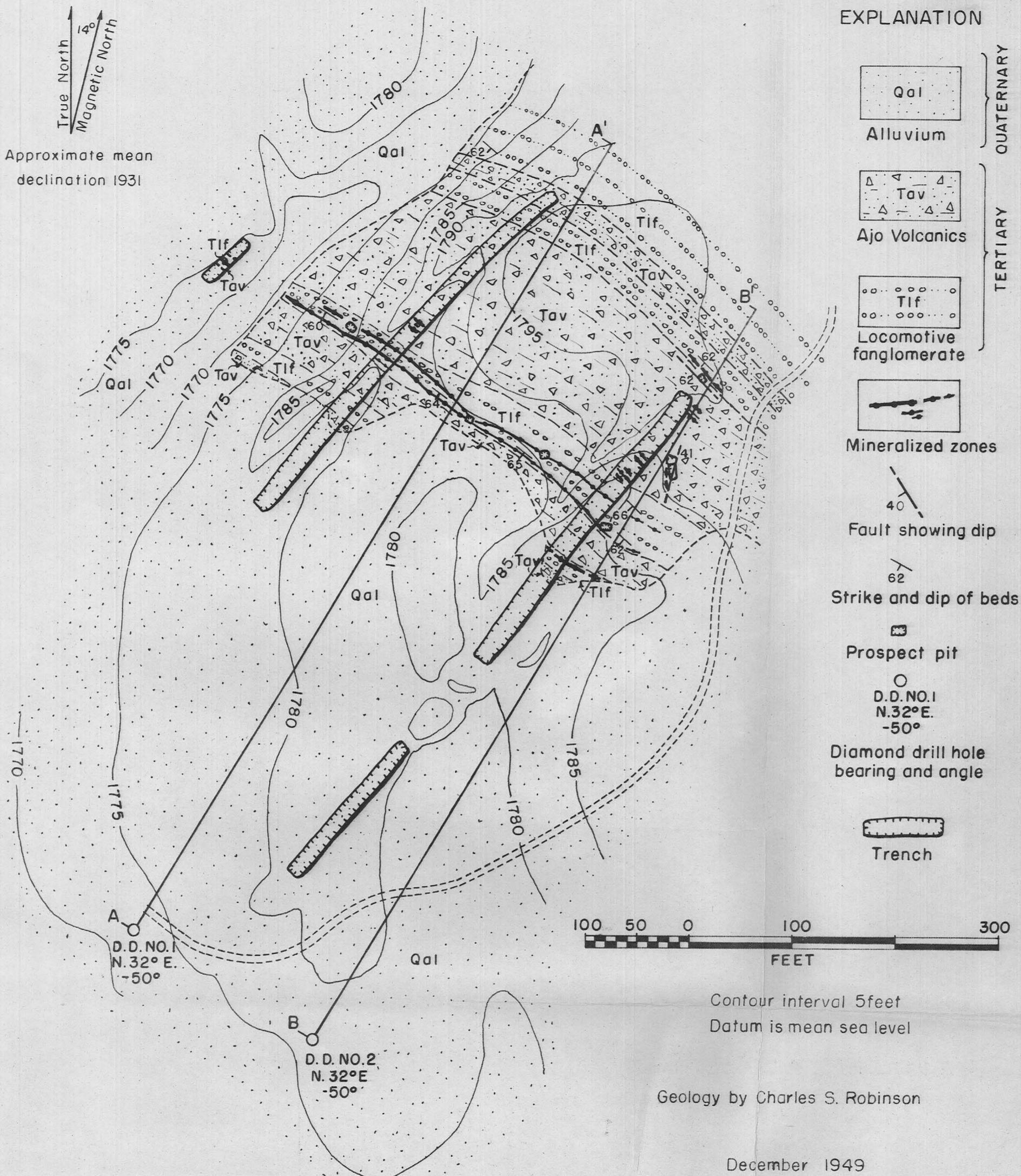
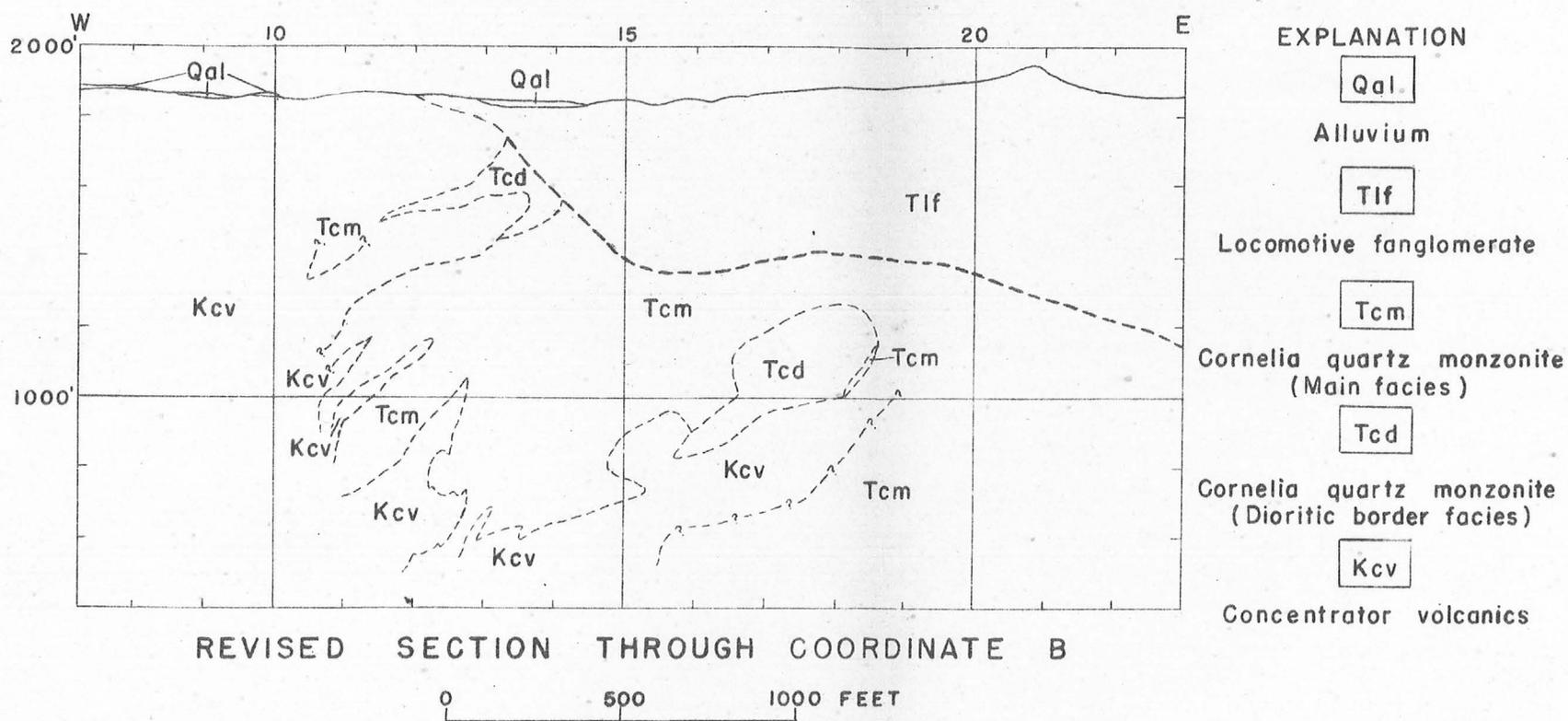


Figure 2. - Geologic map, Copper Giant deposits, Ajo Mining Dist., Pima Co., Ariz.



QUATERNARY
 TERTIARY
 CRETACEOUS (?)