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Arizona Department of Mines and Mineral Resources Mining Collection

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04/25/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: MOHAWK MINE

ALTERNATE NAMES:

PIMA COUNTY MILS NUMBER: 176

LOCATION: TOWNSHIP 18 S RANGE 15 E SECTION 23 QTR. NW
LATITUDE:N 31DEG 51MIN 34SEC LONGITUDE:W 110DEG 47MIN 00SEC
TOPO MAP NAME: SAHUARITA - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
COPPER-(M)SULFIDE-PRIMARY
SILVER-(M)SULFIDE-COPRODUCT
ZINC-(M)SULFIDE-BYPRODUCT
GOLD-(M)LODE-BYPRODUCT
BERYLLIUM-RECOVERABLE

BIBLIOGRAPHY:
MINERALOGY OF AZ. P. 21
S.B KEITH, AZBM BULL. 189, P. 127, 1974
ADMMR MOHAWK MINE FILE
USGS BULL. 582, P. 115
USGS PP 381, P. 103
ADMMR ROSEMONT DEVELOPMENT FILE
ADMMR GUNSIGHT PROJECT FILE

ADMMR MAP - UPSTAIRS - FLAT FILE - DRAWER 6 -
MOHAWK SILVER-ZINC PROJECT

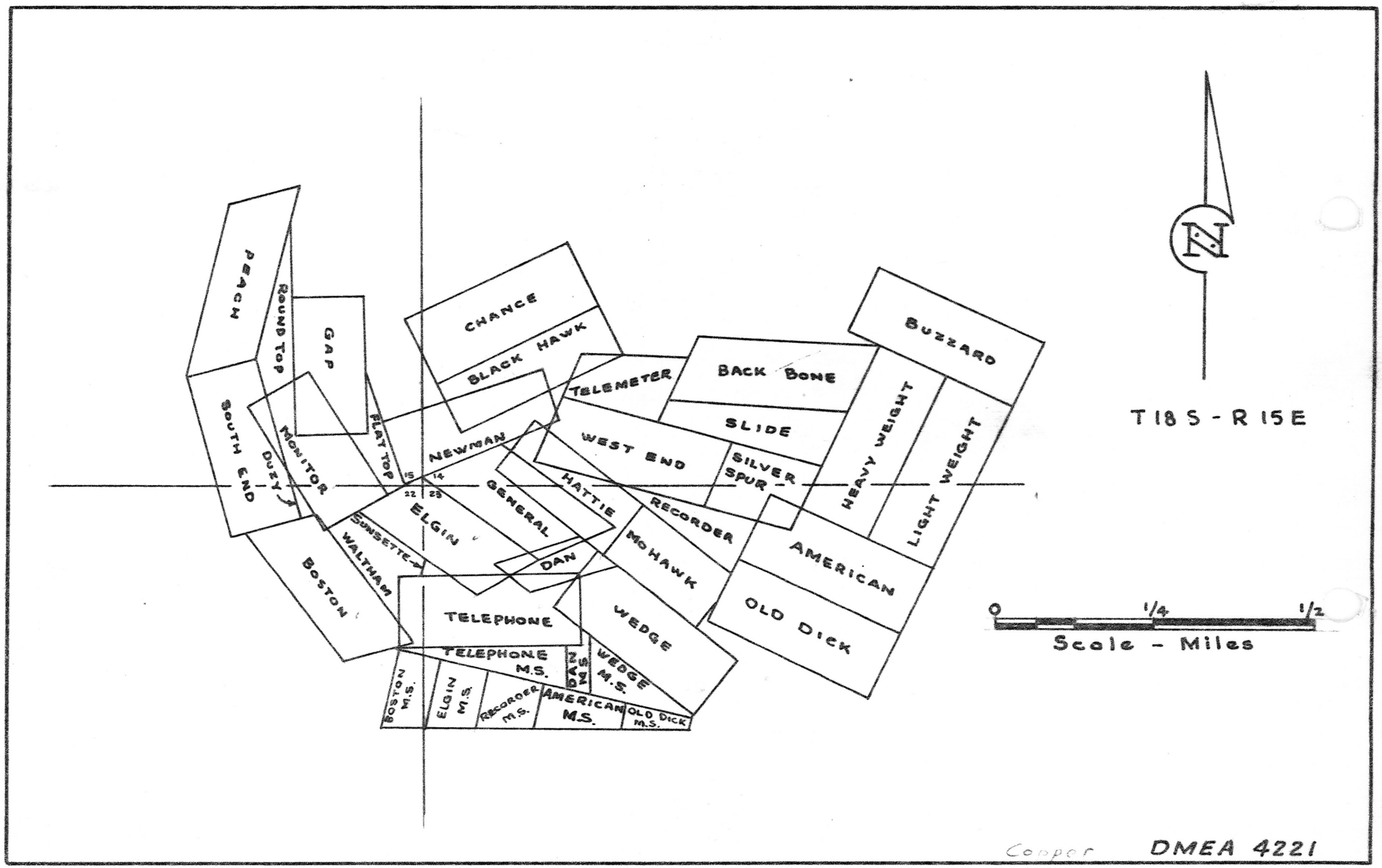
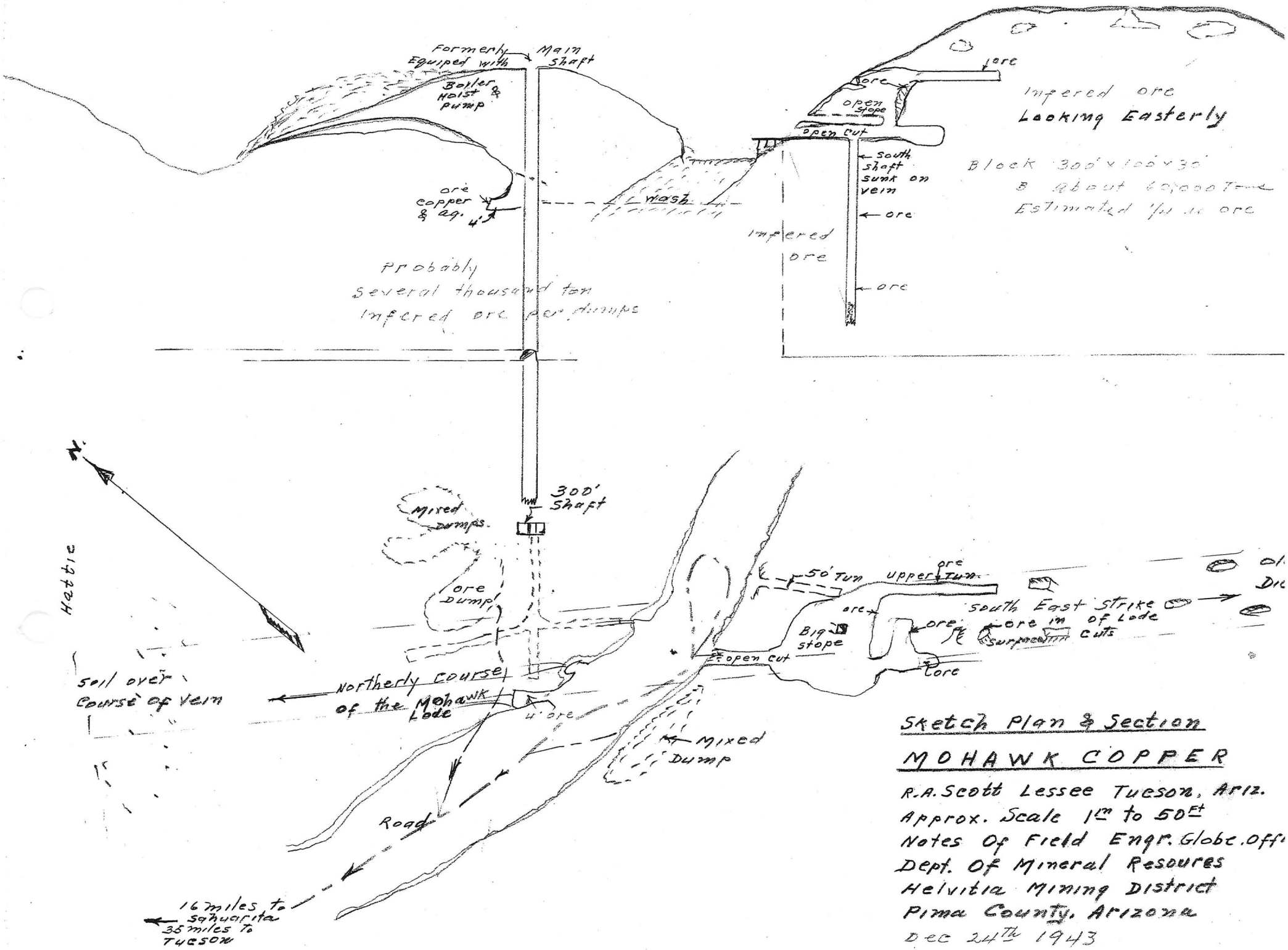


FIG. - 2A - REVISED CLAIM MAP, LEWISOHN COPPER CORP.
PIMA COUNTY, ARIZONA

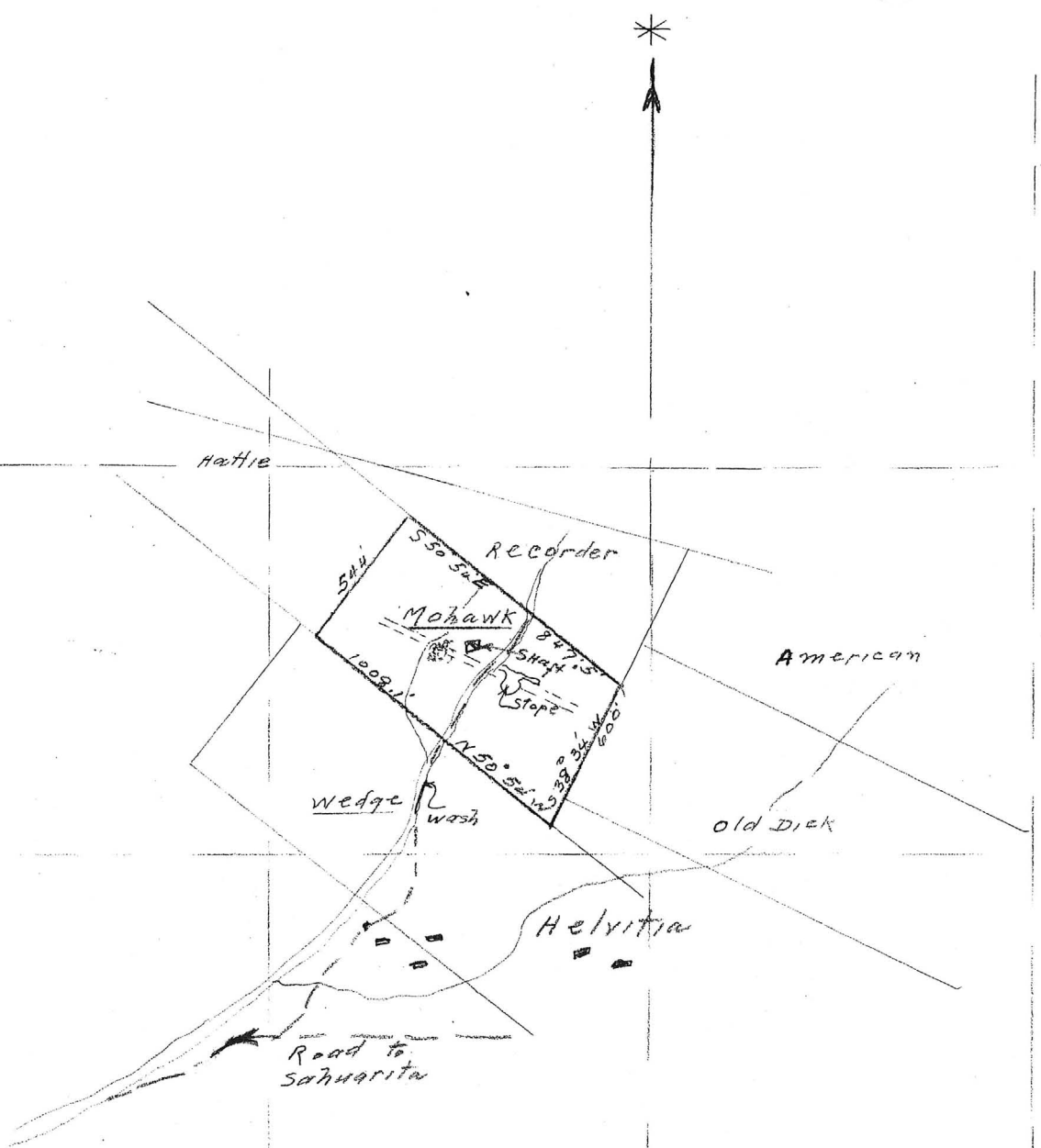


Sketch Plan & Section

MOHAWK COPPER

R.A. Scott Lessee Tucson, Ariz.
Approx. Scale 1in to 50Ft
Notes Of Field Engr. Globe. Offi
Dept. Of Mineral Resources
Helvitia Mining District
Pima County, Arizona
Dec 24th 1943

14



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MOHAWK MINE
Claim Map
Scale 1in To 600 Ft
Helvitia Mining District
Pima County, Arizona.
Globe Field Office
Department of Mineral Resources
Dec. 20th 1943

REPORT COVERING MOHAWK COPPER MINE
LOCATION: HELVITIA MINING DISTRICT
PIMA COUNTY, ARIZONA

By

A. MACFARLANE
Globe, Arizona
Dec.24, 1943

HISTORY

The Mohawk claim was located during the 1870's, long before the Southern Pacific railroad was built from Tucson to Nogales and even prior to the completion of the rail line from Tucson to Benson, thence El Paso and other eastern points. In fact the Helvitia mineral belt was prospected by the Spanish and Indians under the Padres, located in the old town of Tubac, built on the west bank of the Santa Cruze river, as headquarters, from whence the search for silver and gold was carried into the surrounding mountains and canyons, as far back as the 16th century. Small, adobe smelting furnaces, fired with iron wood (Palo Fierro) or charcoal, provided the metallurgy for the rich copper carbonate ores, with silver and gold as part of the ore content. The remnants of these first smelters are still evident.

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Late in last century James Malcomson, a then prominent Mining Engineer, headed a mine examination and acquirement by purchase program, financially backed by Lewishon Brothers of New York. These gentlemen purchased in all about sixty claims from various owners and locators, of then Pima County in the Territory of Arizona. The claims, however, are not all contiguous, but extend in clusters or groups from west to east, the Mohawk being one of the most westerly group. The village of Helvitia is almost adjoining the south east end of the Mohawk claim.

The Lewishons had all their Helvitia-Rosemont claims patented during the years of 1898 to 1902 and their holdings are the oldest patented mining claims of their district.

MINE DEVELOPMENT

Some of the largest and most valuable mineral showings followed the acquirement of the properties by the Lewishons. The Mohawk was amongst these and the following developments and stoping of ores was pursued for a period of six or seven years. A copper carbonate and oxide cropping, fully 40' wide, forming the south east bank of a dry wash, which cuts through this mineral body from east to southwest. This wash or flood water creek divides the surface continuity of the lode into two visible parts: That which is wouthеast of the wash, and the workings and dump north of the creek. The bed of this dry wash is 40' to 60' wide and the sand and detritus floor from 10' to 20' deep. The southerly trend of the mineralization extends from the Southeast bank for about 500' and then enters the Northeast end line of the Old Dick mine of the Helvitia Company.

The Mohawk lode is traceable along its Northwest strike for some 250 feet and again the claim ends on reaching the Southease end line of the Hattie claim of the Helritia Company.

For brevity, the workings will hereinafter be referred to as South and North workings. The South cropping body is developed by two short tunnels and a Glory hole and from the near center of this surface stope a shaft has been sunk to a depth of nearly 100' all on the mineralization.

Several small open cuts made on the South continuity of the croppings, prospected the lode to the end line and into the Old Dick ground.

The North workings consist of a well timbered two compartment shaft, vertical and sunk to a depth of about 300'.

At least two levels have been extended from shaft stations, but no record is available as to the extent of these underground developments.

Approximately 4000 tons of low grade copper ore and waste are now on dumps below shaft collar, and about 20 years ago when I first inspected this mine, evidence of quite extensive ore shipments were apparent.

ORE PRODUCTION

From the foregoing described workings no records are available now dealing with the tonnage or grade of the ore. The Lewishons erected and operated a 60 ton vertical copper smelting furnace at a point called Rosemont, on the east slope and foothills of the Santa Rita range, the Mohawk mine being about 7 miles due west from the Rosemont smelter and connected to same by trail which wound over the range through the King Exile pass, thence down the west slope for 4 miles to the large Glory hole made in the South cropping of the Mohawk lode.

Wm. Kemp, yet living in Tucson, was the Metallurgist and Smelter Manager and he has stated to the writer that the ores as mixed and smelted contained an average of 7% to 12% copper, a little silver and low gold content.

The Smelter received its ore supply from the Mohawk and Peach claims of the West group, 7 miles distant, also from the King Exile mine about three miles west of the smelter and at near the crest of the pass, and from the Daylight York mines, about two miles south of the smelter and on the east slope of the range. Many pack burros and mules were used in transporting the ores from mines to smelter and wagons hauled to ores of the Daylight mine. No direct road was possible for wagon haulage between the Mohawk Peach claims and the smelter.

This small plant was finally closed during the last of the 1890's. Copper price was low; coke was expensive due to long wagon haul from Benson and as the Lewishon interests acquired the Miami Porphyry Copper and invested large capital in the Miami mine, their Rosemont mines were finally closed before the end of 1908. For the years intervening between 1908 to 1940 it was not the policy of the Lewishons to lease parts of their Rosemont-Helvitia holdings; they paid their taxes continuously, and such machinery as they could use in other ventures was taken off; the old smelter stack and some boiler shells being left on the ground as antiquidated.

The mine timbers in time rotted and some caving resulted, but due to the firm nature of the ground, the most important mine workings are in part now accessible.

RECENT WORK

The estate of the Lewishons and heirs have, within the past two years, granted leases to local miners who are now reconditioning some of the former workings and shipments of both copper and lead-zinc ores are being made.

MOHAWK LEASE

To Robert A. Scott of Tucson was consummated June 9th, 1943, and since acquiring this claim Mr. Scott has employed one or two miners and has shipped a few carlots of copper, mostly won out of the dumps and the old Glory hold of the mine.

As the high grade ores were shipped as mined formerly, the grade of the mixed or reject ores, with but little selection, are now approximately 3% to 4% copper and 2 ounces of silver. See copy of Scott settlement sheets October to December, 1943.

ORE EXPECTANCY

The South surface open Glory hole stope in part 30' wide, shows 3 bands or ore lenzes all of ample mining width, striking southerly and the vein material between these lenses is part commercial grade and part sub ore.

In that block of ground, taken to a depth of 100' below the cropping and for 300' from open cut Southerly, gives a block 300' x 30' x 100' or 900,000 cubic feet, or 60,000 tons.

I would expect that one-fourth of this tonnage would be ore of approximately 4% copper and 2 ounces of silver, and that the 45,000 tons reject will contain over 1½% copper.

North ore body is at present entirely unknown, as repairs to shaft, ladders and timbers and pumping out the water now filling this part of the mine, are required, before an examination can be made.

Approximately 4,000 tons of dump material, part of which contains copper sulphide ores, evidently hoisted from the 100' level and probably the second level, is evidence that the ores found in the drifts from shaft were mostly chalcopyrite.

Shipments to smelter are now being made by the Lessee from part of the shaft dumps. It is noted that these sulphide ores are low in iron and zinc, and in the event of discovering a milling sized body of this type of ore, good concentration results should be attained.

PRESENT ECONOMICS

Due to the accessible location of the Mohawk mine and an excellent easy down grade road for 15 miles, the ores are trucked to rail siding of

Sahuarita at a cost of per ton.	$ 1.10
Rail freight to Hayden Smelter on ores up to $15.00 is per ton	1.40
Smelting charges " " " " 15.00 " " "	3.50
	$ 6.00

Labor and material costs are high now, used in mining the ores, and after the dumps are exhausted and reasonable mine explorations are made to open additional ore reserves, a cost of $10.00 to $12.00 will have to be borne by the ore production.

SMELTER GRADES PER TON

So long as a good price is obtained for copper, this mine with a

small working force can output many tons of 3% to 4.5% copper, by mining the big Glory hole and sorting out the better grade ores.

There are much higher grade ores in a vein or lense striking to the North along the lode hanging wall. The writer took a number of samples of a small open cut there during 1937. These assayed as follows:

Nos.	An.	Ag.	Cu.
1.	.05	2.2	8.36
2.	.09	29.5	29.2
3.	.03	21.4	20.6
4.	.057	16.8	36.04
5.	.077	7.4	16.10
6.	.06	3.2	11.72

These samples were taken on the high grade portion of the lense just under the floor of the wash, and ranged from 1½' to 3' wide.

This ore lense is now covered by sand wash and soil at the north bank of the wash. Mine exploration is required to determine if any quantity of this grade can be opened up at this point.

GEOLOGY

The copper ores of the Helvitia and Rosemont district are stated as replacement bodies in the upper lime strata. The thickness of the limestone is variable, probably 100' or 200' near the west base of the Sta Rita range and upwards of 1500' thick near the top of the range in the vicinity of the King Exile group.

These limestones are much intruded and uptilted by dykes and intrusive bodies of Apalite, Dacite, Andesite and Quartzite and contacts between the limestone and the igneous intrusions are at surface quite frequent. Along these contacts where mineralized croppings are visible, often in bold relief, gossanized gangue as part of the near surface mineralization is also prominent. It is also noted that ores of copper may make in the altered granites, more apparently in the nonzonites and granodiorites underlying the lime strata. The upper ore chutes are copper carbonates and oxides, with some secondary glance and pyrite. The ores found in the basic altered granites are chalcopyrite and pyrite.

The above observations are applicable to the Mohawk claim and the nearby ore bodies of the vicinity. I would expect the ore making agencies to extend for more than 200' in depth within the Mohawk ground. The upper 100' is now a sizeable mine, with visible ore faces of commercial value.

December 6, 1943

Mr. R. A. Scott
South 5th Ave and 19th Street
Tucson, Arizona

Dear Mr. Scott:

I have your letter of December 1 relative to obtaining a field engineer's report on the Mohawk Mine located at Helvitia.

This is in Mr. Ballam's territory and the report really should be made by him - however, if Mr. Macfarlane can make a report on the property without making a special trip we would be glad to have him do so. I will write him today.

With kindest regards, I am

Yours very truly,

CHARLES F. WILLIS, Chairman
Board of Governors

CFW:MH

MEMORANDUM

December 7, 1943

To: A. Macfarlane

From: G. A. Ballam

Subject: Mohawk Mine

R. A. Scott, used equipment dealer of Tucson, has applied for an RFC preliminary loan on the Mohawk Mine in the Rosemont District. Very little information exists on this property and at present due to inaccessibility, none is obtainable. Mr. Lewisohn replied to request for information that during the period 1916-1920, some $250,00 had been produced from Rosemont Mohawk Group, but he could give no breakdown. There is a rather pessimistic writing in Schrader.

Can you express an opinion, Mac?

George A. Ballam
Assistant to the Director

GAB:JES

December 24, 1943

MEMORANDUM

MOHAWK REPORT

TO: Andrew Macfarlane

FROM: J. S. Coupal

We are still holding up a review for application for a loan on the Mohawk property until we hear from you.

Please forward your notes on this as soon as possible.

JSC:LP

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date 2/12/45

Name of Mine Mokaska

Owner or Operator Orville A Traver

Address Salamanca Arizona

Mine Location 15 mi east Salamanca

Filing Information

File System

File No.

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

PRESENT OPERATIONS: (check X)

Production ✓; Development ; Financing ; Sale of mine ;

Experimental (sampling) ; Owner's occasional trip ;

Other (specify)

PRODUCTION: Past and Future.

	Tons
Approx. tons last 3 months	
Approx. present rate per 3 months	
Anticipated rate next 3 months	
If in distant future check (X) here	

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	33 Ford	360	
Light or Service Trucks			
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper

REMARKS: Mileage recommended

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By E. E. Williams

SOUTH 5TH AVE. AND 19TH ST.

PHONE 380

SCOTT'S MACHINE SHOP

PIPE AND MACHINERY YARD

TUCSON, ARIZONA

Dec.1,1943

Mr. C.F. Willis
Arizona Dept. of Mineral Resources
520-528 Title & Trust Bldg.
Phoenix, Arizona.

Dear Mr. Willis:

I have made an application for a $5,000.00 loan from the Reconstruction Finance Corp. on the Mohawk Mine located at Helvitia. I have shipped several carloads of ore to the smelter at Hayden. The RFC office at Phoenix has requested a brief engineer's report on the property and I am writing to request that you kindly give your permission to Mr. MacFarlane to make this report for me. Mr. MacFarlane operated a mining property adjoining the Mohawk and knows the history of this mining camp and is acquainted with the old workings in the Mohawk mine. Mr. MacFarlane visits his mining property about every two weeks and on one of his trips he can spend a few hours examining the Mohawk.

Thanking you, I remain,

Very truly yours,

R.A. Scott

December 6, 1943

Dear Mac:

R. A. Scott who owns the Mohawk Mine at Helvetia is making application for a $5,000 loan. He needs a brief report and I am informed that you know the property well enough so that you can make such a report without a special trip and examination.

If this is correct will you kindly let us have such a report.

Thanking you and with kindest personal regards, I am

Yours very truly,

CHARLES F. WILLIS, Chairman
Board of Governors

CFW:MH

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date 2/10/45

Name of Mine Mohawk

Owner or Operator R. G. Scott

Address 847 So 5th Ave, Tucson

Mine Location 36 mi Southerly from Tucson

Filing Information

File System

File No.

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

PRESENT OPERATIONS: (check X)

Production ✓; Development ; Financing ; Sale of mine ;

Experimental (sampling) ; Owner's occasional trip ;

Other (specify)

PRODUCTION: Past and Future.

	Tons
Approx. tons last 3 months	500,000 # Copper during 1944
Approx. present rate per 3 months	
Anticipated rate next 3 months	7500 tons copper ore next qtr
If in distant future check (X) here	

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars			
Light or Service Trucks			
Ore Hauling Trucks			
Compressors	2 - IR & Schramm 10x12 Sullivan		4500 gal per qtr
Other Mine or Mill Eqpt.			
Hoist	25 HP F.M.		1800
Sat Pump			900
			7200 gal per qtr

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper.

REMARKS:

This is one of the largest Copper producers in the district and application is recommended for approval

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By George A Ballam

NAME OF MINE: MOHAWK Lease

COUNTY: PIMA
DISTRICT: ROSEMONT
METALS: CU

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	R.A.Scott, S. 5th and 19th Sts. Tucson, Arizona	5/1/44	Shipping
		9/45	Developing
			~~Idle~~ Shipping

Banner Mining Co., Box 5605, Tucson, Arizona, has option to purchase this property. 9-6-61

Dec. 20, 1942

MEMORANDUM

Chas. M. Taylor

Pima Co.

To: Director, Dept. Mineral Resources
From: George A. Ballam

During the next week, when I hope to have a day or two in Tucson, I expect to prepare reports on the SENATOR MORGAN MINE at Twin Buttes, and the MOHAWK SILVER MINE in the Rosemont district. Mr. Taylor is making application for a preliminary development loan on the former and a B loan on the latter. I have been over both properties and am waiting for the metallurgical results on 100 tons of Morgan ore milled at the Tucson Ore Milling Co., recently.

In addition, Dr. Eldred Wilson of the Arizona Bureau of Mines will make available for inclusion in the MOHAWK SILVER report information gained in his examination.

Mr. Taylor will not submit either application for a couple of weeks by which time my reports will be in. He is awaiting termination of a lease on the Morgan, and receipt of correspondence from Lewisohn on the Mohawk.

G A Ballam

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine MOHAWK COPPER MINE Date December 24, 1943

District Helvetia Mining District, Pima County Engineer Andrew Macfarlane

Subject: Report

HISTORY: The Mohawk claim was located during the 1870's, long before the Southern Pacific railroad was built from Tucson to Nogales and even prior to the completion of the railline from Tucson to Benson, thence El Paso and other eastern points. In fact the Helvetia mineral belt was prospected by the Spanish and Indians under the Padres, located in the old town of Tubac, built on the west bank of the Santa Cruz River, as headquarters, from whence the search for silver and gold was carried into the surrounding mountains and canyons, as far back as the 16th century. Small, adobe smelting furnaces, fired with iron wood (Palo Fierro) or charcoal, provided the metallurgy for the rich copper carbonate ores, with silver and gold as part of the ore content. The remnants of these first smelters are still evident.

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The Mohawk lode is traceable along its northwest strike for some 250 feet and again the claim ends on reaching the southeast end line of the Hattie claim of the Helvetia Company.

For brevity, the workings will hereinafter be referred to as South and North workings; the South cropping body is developed by two short tunnels and a glory hole and from the near center of this surface stope a shaft has been sunk to a depth of nearly 100' all on the mineralization.

Several small open cuts made on the South continuity of the croppings, prospected the lode to the end line and into the Old Dick ground.

The North workings consist of a well timbered two compartment shaft, vertical and sunk to a depth of about 300'.

At least two levels have been extended from shaft stations, but no record is available as to the extent of these underground developments.

Approximately 4000 tons of low grade copper ore and waste are now on dumps below shaft collar, and about 20 years ago when I first inspected this mine, evidence of quite extensive ore shipments were apparent.

ORE PRODUCTION: From the foregoing described workings no records are available now dealing with the tonnage or grade of the ore. The Lewishons erected and operated a 60 ton vertical copper smelting furnace at a point called Rosemont, on the east slope and foothills of the Santa Rita range, the Mohawk mine being about 7 miles due west from the Rosemont smelter and connected to same by trail which wound over the range through the King Exile pass, thence down the west slope for 4 miles to the large Glory hole made in the South cropping of the Mohawk lode.

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RECENT WORK: The estate of the Lewishons and heirs have, within the past two years, granted leases to local miners who are now reconditioning some of the former workings and shipments of both copper and lead-zinc ores are being made.

MOHAWK LEASE: To Robert A. Scott of Tucson was consumated June 9, 1943, and since acquiring this claim Mr. Scott has employed one or two miners and has shipped a few carlots of copper, mostly won out of the dumps and the old glory hole of the mine.

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I would expect that one-fourth of this tonnage would be ore of approximately 4% copper and 2 ounces of silver, and that the 45,000 tons reject will contain over 1½% copper.

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Labor and material costs are high now, used in mining the ores, and after the dumps are exhausted and reasonable mine explorations are made to open additional ore reserves, a cost of $10.00 to $12.00 will have to be borne by the ore production.

SMELTER GRADES PER TON: So long as a good price is obtained for copper, this mine with a small working force can output many tons of 3% to 4.5% copper, by mining the big glory hole and sorting out the better grade ores.

There are much higher grade ores in a vein or lense striking to the north along the lode hanging wall. The writer took a number of samples of a small open cut there during 1937. These assayed as follows:

Nos.	Au.	Ag.	Cu.
1.	.05	2.2	8.36
2.	.09	29.5	29.2
3.	.03	21.4	20.6
4.	.057	16.8	36.04
5.	.077	7.4	16.10
6.	.06	3.2	11.72

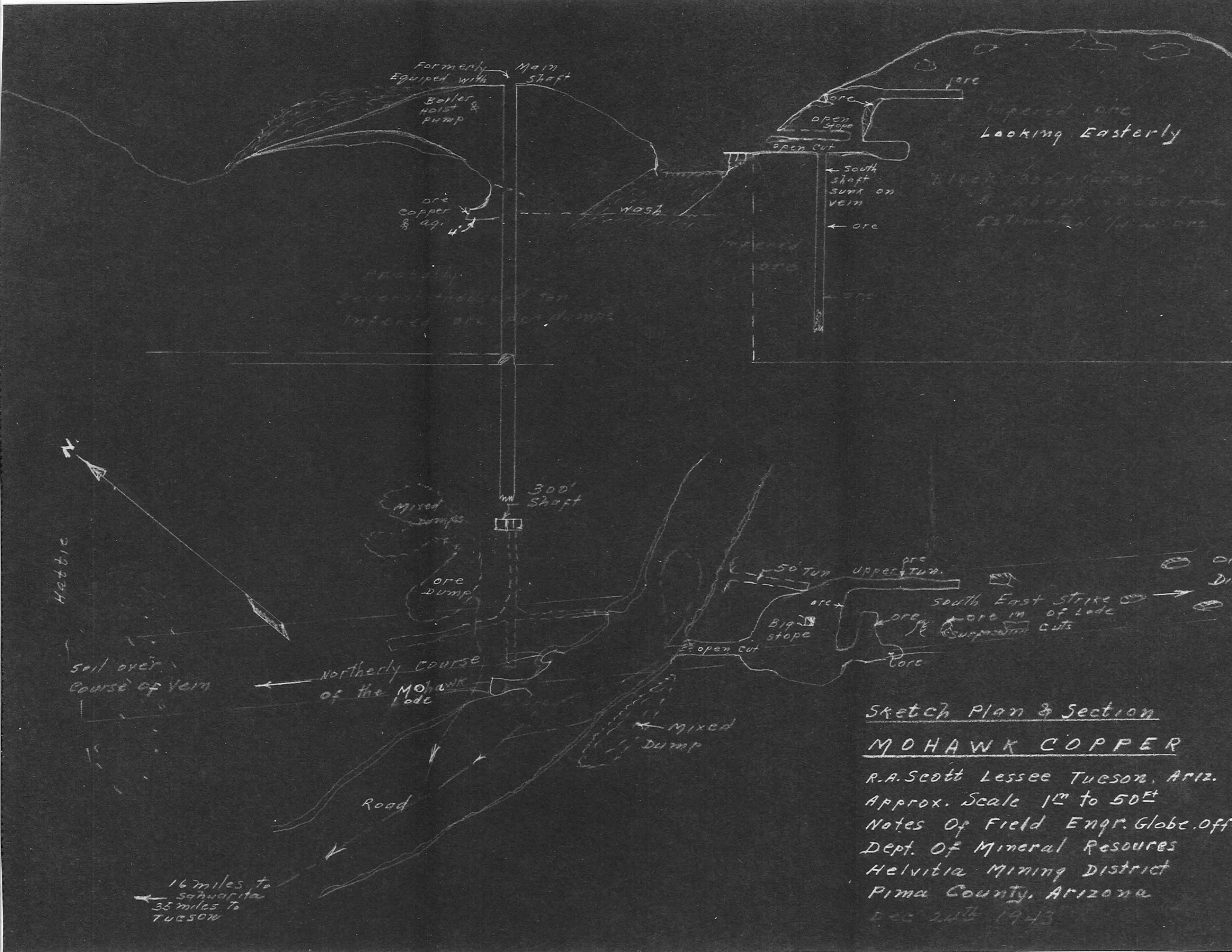
These samples were taken on the high grade portion of the lense just under the floor of the wash, and ranged from 1½' to 3' wide.

This ore lense is now covered by sand wash and soil at the north bank of the wash. Mine exploration is required to determine if any quantity of this grade can be opened up at this point.

GEOLOGY: The copper ores of the Helvetia and Rosemont district are stated as replacement bodies in the upper lime strata. The thickness of the limestone is variable, probably 100' or 200' near the west base of the Sta Rita range and upwards of 1500' thick near the top of the range in the vicinity of the King Exile group.

These limestones are much intruded and uptilted by dykes and intrusive bodies of Apalite, Dacite, Andesite and Quartzite and contacts between the limestone and the igneous intrusions are at surface quite frequent. Along these contacts where mineralized croppings are visible, often in bold relief, gossanized gangue as part of the near surface mineralization is also prominent. It is also noted that ores of copper may make in the altered granites, more apparently in the monzonites and granodiorites underlying the lime strata. The upper ore chutes are copper carbonates and oxides, with some secondary glance and pyrite. The ores found in the basic altered granites are chalcopyrite and pyrite.

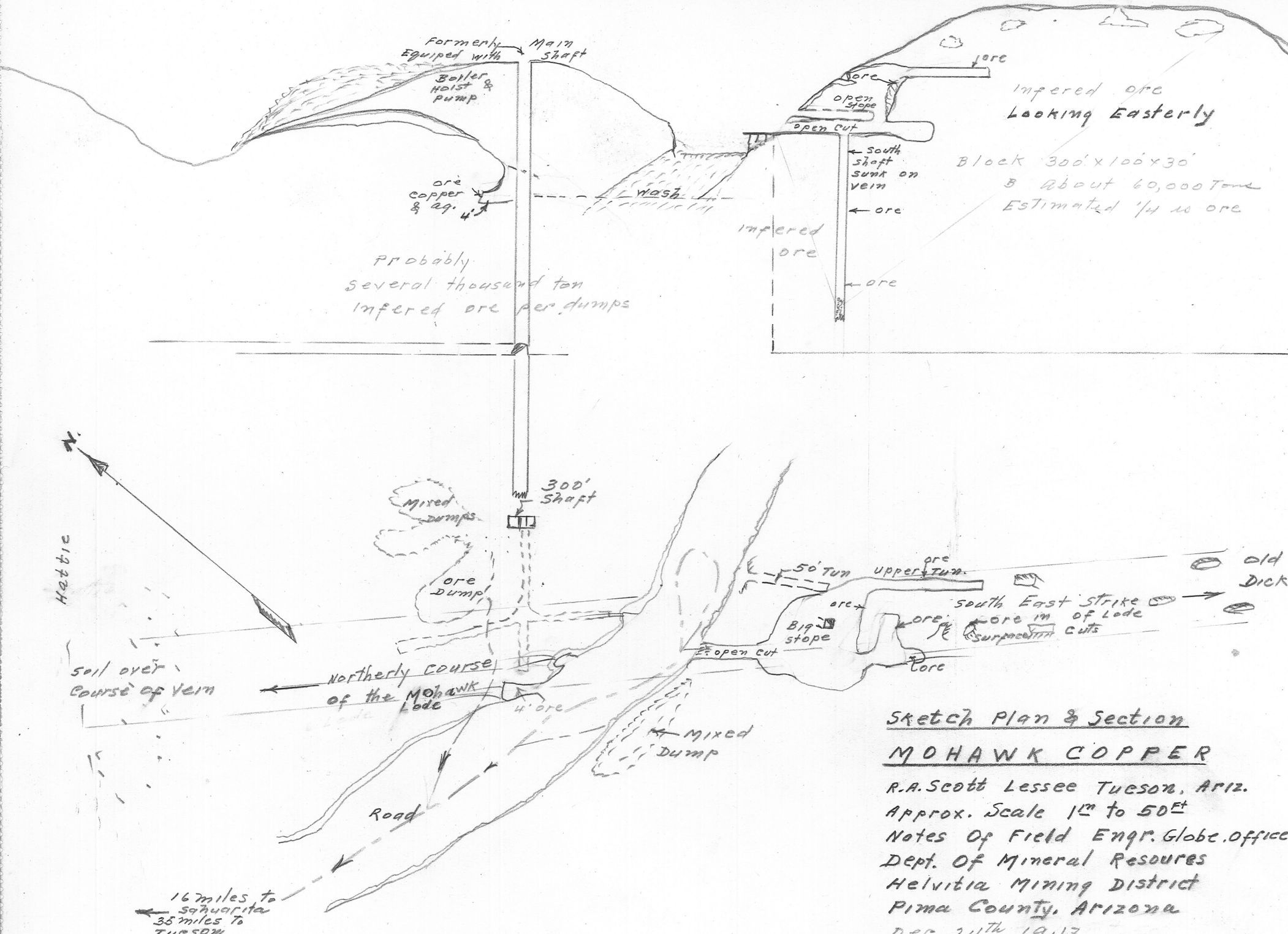
The above observations are applicable to the Mohawk claim and the nearby ore bodies of the vicinity. I would expect the ore making agencies to extend for more than 200' in depth within the Mohawk ground. The upper 100' is now a sizeable mine, with visible ore faces of commercial value.



Sketch Plan & Section

MOHAWK COPPER

R.A. Scott Lessee Tucson, Ariz.
Approx. Scale 1in to 50Ft
Notes Of Field Engr. Globe. Off
Dept. Of Mineral Resources
Helvitia Mining District
Pima County, Arizona
Dec 24th 1943



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Pima County. Arizona
Dec 24th 1943

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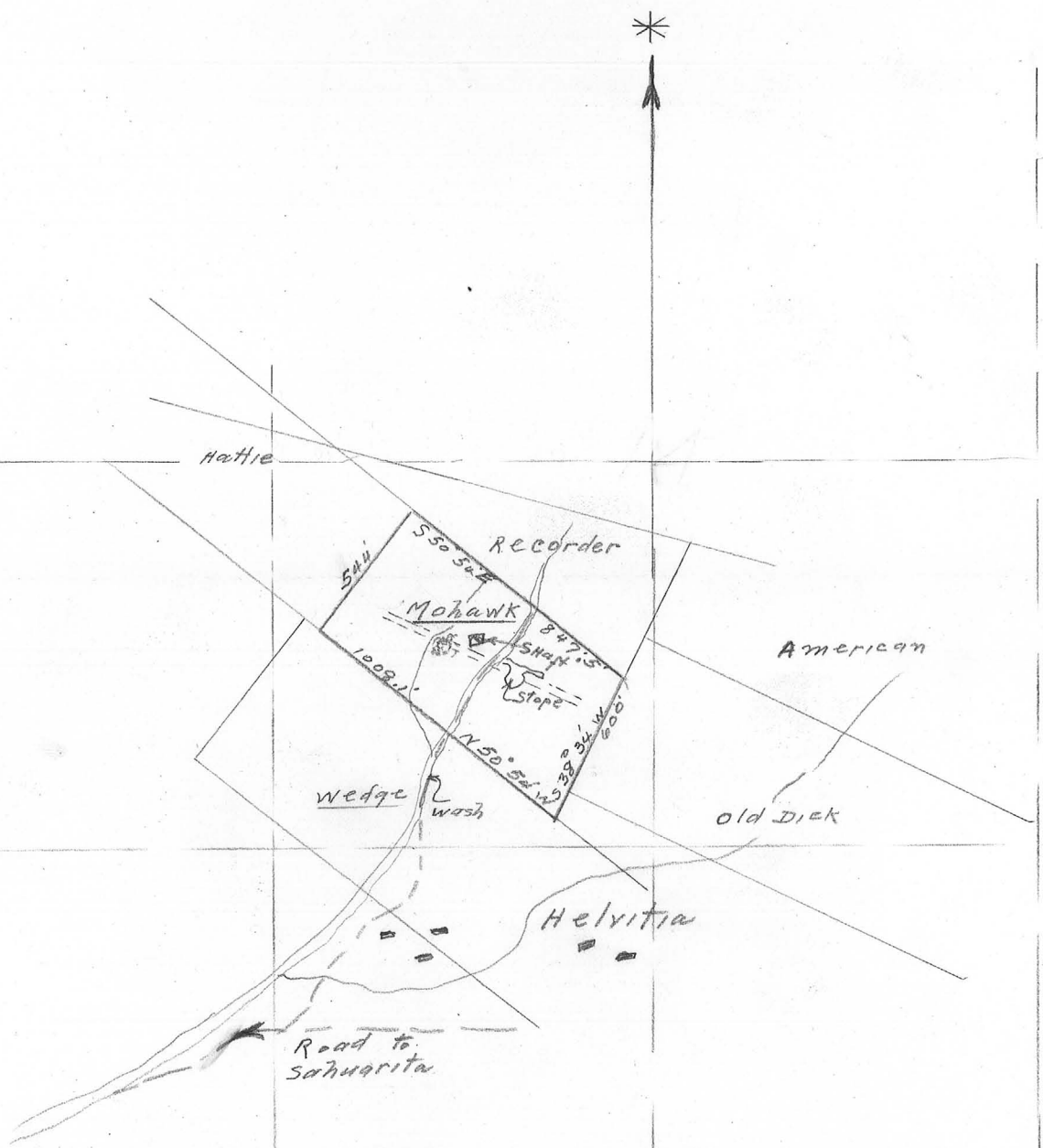

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MOHAWK MINE
Claim Map
Scale 1in To 600Ft
Helvitia Mining District
Pima County, Arizona.
Globe Field Office
Department Of Mineral Resources
Dec. 20th 1943

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MOHAWK MINE
Claim Map
Scale 1" To 600 Ft
Helvitia Mining District
Pima County, Arizona.
Globe Field Office
Department Of Mineral Resources
Dec. 20th 1943