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PRINTED: 11/20/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LONDON ARIZONA GROUP

ALTERNATE NAMES:
- O'CARROLL CLAIMS
- LONDON SHAMROCK
- BALL COPPER
- KULLMAN-MCCOOL GROUP
- BRICK GROUP
- REAGEN PROPERTY
- LONDON RANGE
- CURTIN SHAFT
- HUMPHREY PROPERTY
- FINCH
- BARKING SPIDER
- D AND H

GILA COUNTY MILS NUMBER: 6

LOCATION: TOWNSHIP 4 S RANGE 15 E SECTION 28 QUARTER E2
LATITUDE: N 33DEG 03MIN 15SEC LONGITUDE: W 110DEG 48MIN 40SEC
TOPO MAP NAME: HAYDEN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- COPPER
- LEAD
- GOLD
- SILVER
- ZINC
- VANADIUM
- MOLYBDENUM
- PERLITE
- SPECIMENS OXIDES

BIBLIOGRAPHY:

- ADMMR LONDON ARIZONA GROUP FILE
- ADMMR "AZ IND MIN" 1978, P. 31 PUBLICATION
- WEED, W H "MINES HNDBK" VOL. 13, P 389; 1918
- ADMMR A L FLAGG VANADIUM RPT BK 2 & 8
- ADMMR "MOLY OCCUR AZ" 1978 P 16 PUBLICATION
- KOSCHMANN A H & M BERGENDAHL "PRIN. AU PROD DIST US" USGS PP 610, P. 38; 1968
- ADMMR LONDON-GILA GROUP FILE SEE MAP

CONTINUED ON NEXT PAGE

CONTINUATION OF LONDON ARIZONA GROUP

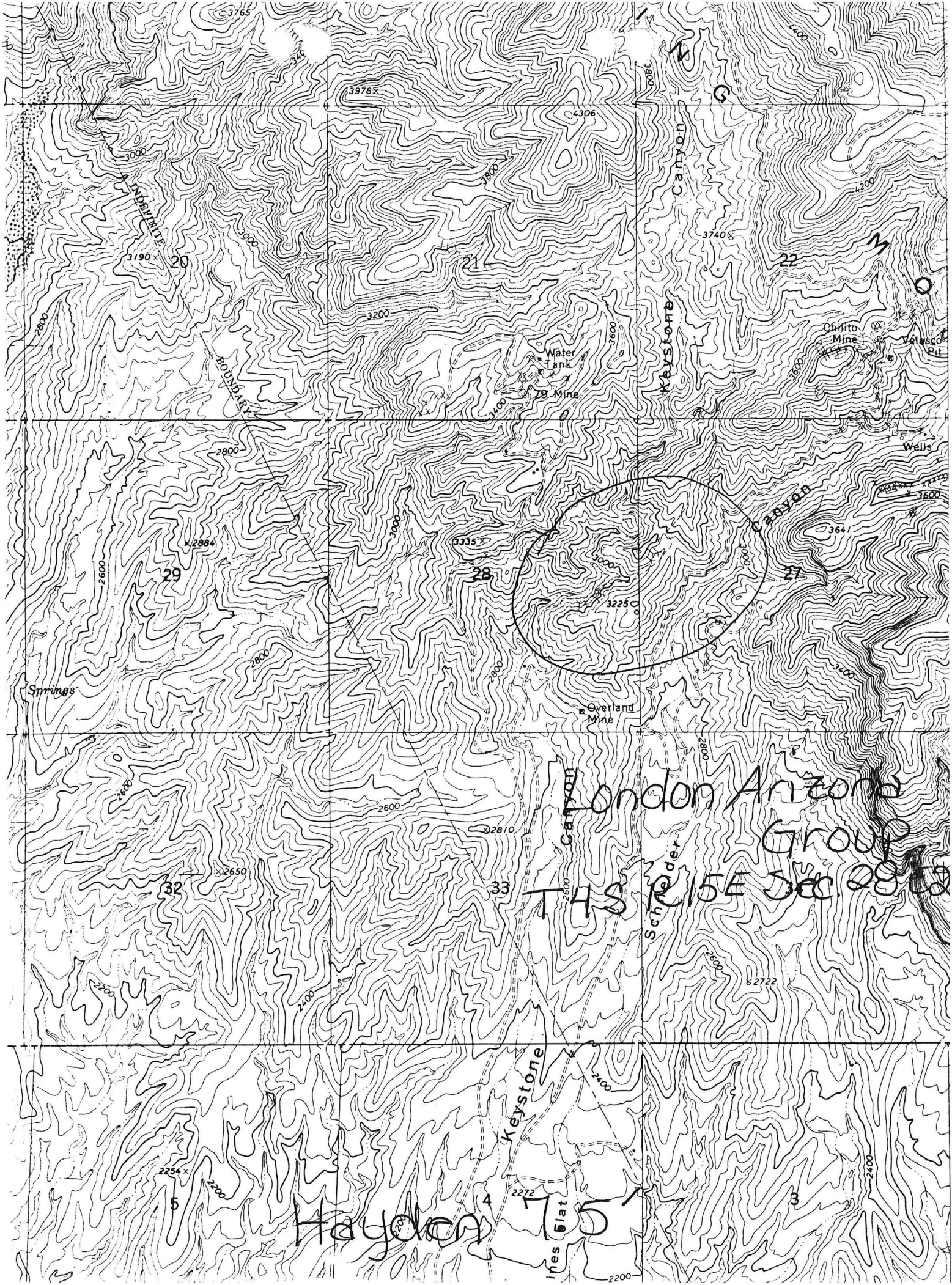
AZBM BULL 158, "AZ LEAD & ZINC DPSTS" P 81
USAEC 172-480 GILA CTY PRELIM RECONN RPT.
1953, P 165
CLAIMS EXTEND INTO SEC 27
ROSS, C. ORE DEPOSITS OF THE SADDLE MTN AND
BANNER MINING DIST. USGS BULL. 771 P.61 + 65

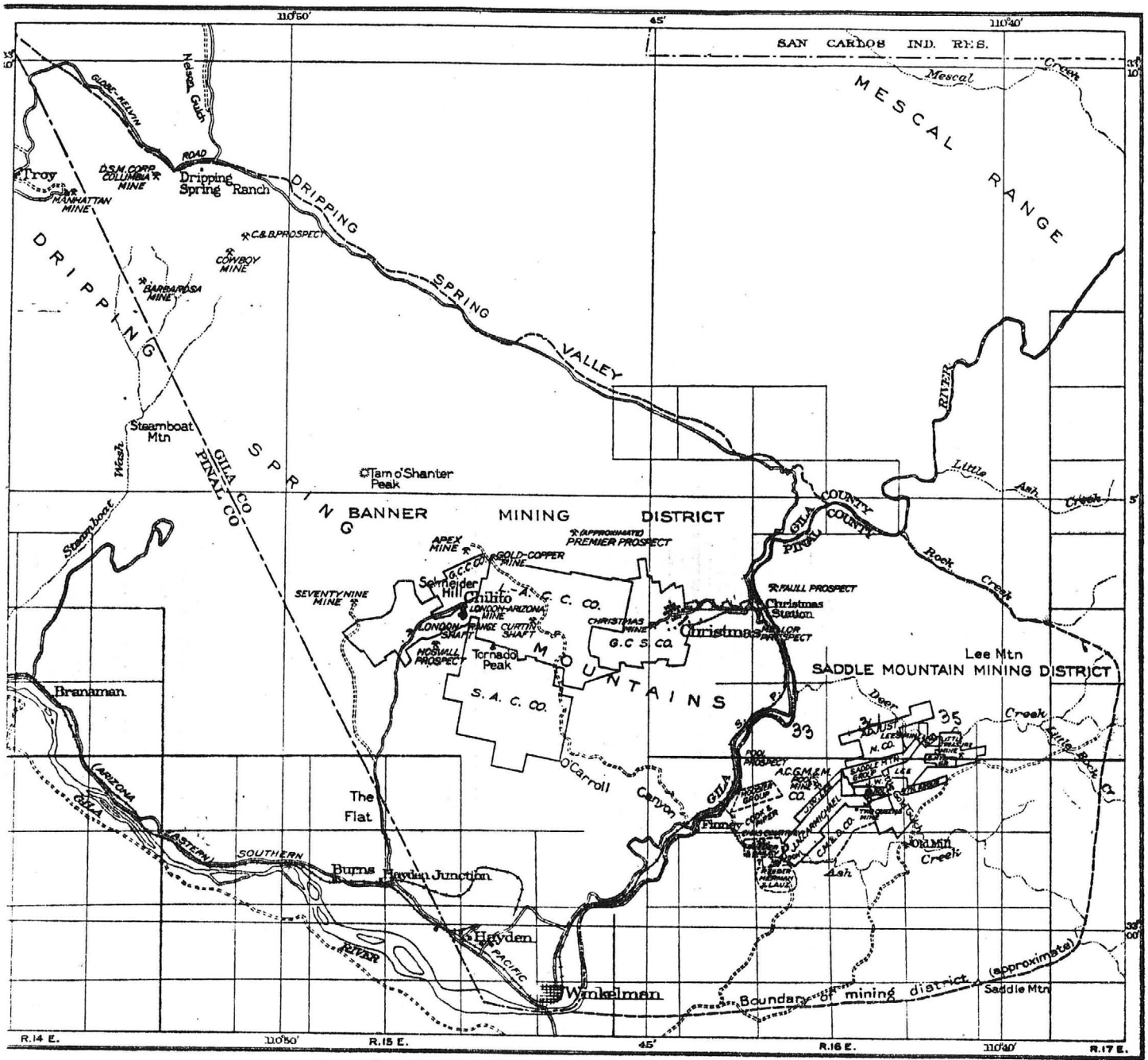
From the USGS MRDS DATA DDS 20

London – Arizona Mine

RECNO	M002098
REC_TYPE	S
REP_DATE	83 05
FIL_LINK	USBM 004 007 0465
REP	PETERSON, JOCELYN A
REP_AFF	USGS
SYN	LONDON-RANGE, LONDON-SHAMROCK, BRICK GROUP, O'CARROLL CLAIMS, BALL COPPER CO, CURTIN SHAFT
DIST	BANNER DISTRICT
COUNTY	GILA
STATE_CODE	AZ
CTRY_CODE	US
PHYS	12
DRAIN	15050100
LAND_ST	40
QUAD1	HAYDEN
Q1_SCALE	24000
ELEV	3600 FT
UTM_N	3657740
UTM_E	519250
UTM_Z	+12
ACC	ACC
TOWNSHIP	004S;
RANGE	015E;
SECTION	26, 27;
SECT_FRACT	NW/4 SEC 26, NE/4 SEC 27
MERIDIAN	G&SR
POSITION	4 MI N OF HAYDEN ON NW SIDE OF TORONADO PEAK, 1/2 MI S OF CHILITO
SITE	LONDON-ARIZONA MINE
LAT	33.0597
LONG	-110.7939
CTRY_NAME	UNITED STATES
COMMOD	AU AG CU PB ZN BI MO
ORE_MAT	COPPER CARBONATES, MALACHITE, CERUSSITE, CHALCOCITE, ANGLESITE, SM ITHSONITE, HEMIMORPHITE, WULFENITE, RHODOCHROSITE, GALENA
MAJOR	PB CU AG
MINOR	ZN AU
TRACE	MO BI BI
PROD	S
LOC_STRUCT	FAULT COMPLEX
STATUS	6
DISC	WATSON
YR_DISC	ABOUT 1880
YRLST_PROD	1950
EXPL_COM	IN 1913 THE LONDON-ARIZONA CONSOLIDATED COPPER CO MERGED LONDON-R ANGE, LONDON-ARIZONA, O'CARROLL & BALL SHAFTS, AND CURTIN (HUMPHREY) S HAFT, BUT SOME WERE LATER SPLIT. 132 UNPATENTED CLAIMS. OTHER OPERATOR S INCLUDED TORONADO GOLD MINING CO, DAVID HARTLEY, J.W. WRIGHT
DEP_TYPE	VEIN, REPLACEMENT
DEP_FORM	IRREGULAR
DEP_SIZE	S
QUAD250	MESA
DEPTH_WK	325
D_W_U	FT
LEN_WK	3000+

L_W_U	FT
DWORK_COM	180 FT SHAFT ON LONDON-RANGE; 325 FT CURTIN SHAFT; SOME SHALLOW S HAFTS. OVER 1500 FT OF DRIFTS, TUNNELS, CROSSCUTS
MIN_AGE	TERT PROBABLY 63 M.Y.
NORE_MINS	ANDRADITE GARNET, SPECULARITE, QUARTZ, VESUVIANITE, FE-OXIDES, MAGN ETITE, ANHYDRITE, GYPSUM
ORE_CNTL	CHOCOLATE FAULT, BASE OF MARTIN FORMATION
CONC	OXIDATION
HRU_AGE	DEV|DEV
HRU_NAME	PERCHA SHALE|MARTIN FORMATION
NAME	PETERSON, JOCELYN A
DATE	05/01/83
CONT_CODE	NA
GEOL_COM	LONDON-ARIZONA ORE DEPOSIT PROBABLY REPRESENTS THE OUTER PERIPHERA L ZONE OF A MAJOR ORE BODY WITH THE PORTIONS TOWARDS THE MAIN INTRU SIVE CONTACT BEING ERODED AWAY
GEN_COM	THIS REPORT REPRESENTS A MERGER OF ORIGINAL RECORD M002098 WITH RE CORD M030431 OF JAN WILT IN MOLYBDENUM FILE, CONTACT PERSON T.G. THEOD ORE, USGS. SEE CURTIN OR HUMPHREY FOR INFORMATION ON ADJOINING MINE ; INFO.SRC : 1 PUB LIT; 2 UNPUB REPT
REF	ROSS, 1925, USGS BULL 771|BANKS & KRIEGER, 1977, USGS MAP GQ-1391|EASTLICK, 1968, GRATON-SALES VOLUME, P 1191-1210|ABGMT-USBM FILE DATA
CONT_NAME	NORTH AMERICA
STATE_NAME	ARIZONA
WORK_TYPE	U
AP_ITEM	ORE|ORE
AP_ACC	EST|EST
AP_AMT	1.00000|6.00000
AP_U	TON|TONS
AP_YEAR	1913|1916
AP_GRADE	16% ORE|4.5% ORE
CP_ITEM	ORE|CU|PB|ZN|AG|AU|ORE|PB ORE|ZN ORE
CP_ACC	ACC|ACC|ACC|ACC|ACC|ACC|ACC|ACC|ACC
CP_AMT	0.74200|18.449|123.919|1.50000|2.92600|0.00200|15.443|1.01600|0.05100
CP_U	TONS|LBS|LBS|LBS|OZ|OZ|TONS|TONS|TONS
CP_YEAR	?|?|?|?|?|?|PRE 1925|PRE 1925|PRE 1925
AP_SOURCE	RANSOME, 1923; ROSS, 1925; EASTLICK, 1968
AP_COM	$1,050,000 PRODUCTION BETWEEN 1912 & 1928
COMMOD_TYP	M
DATE_ISSUE	95/5/18
PROF_ID	100
PROF_LOC	100
PF_COMMOD	100
PROF_EXPL	75
PFDESC_DEP	50
PFDESC_WRK	100
PROF_GEOL	71
PROF_REF	100
PPROD_RESV	26
PROF_ALL	80
HR_AGE_MV	DEV
HR_TYPE_MV	SHALE LIMESTONE
AR_AGE_MV	TERT
AR_TYPE_MV	QUARTZ DIORITE PORPHYRY DIKES (ALSO TERMED RHYODACITE PORPHYRY)
TYPE	R
AFFIL	USGS
DEP_CODE	11000
HUC	15050100


Keystone Canyon
Keystone Canyon
Water Tank
79 Mine
Chrito Mine
Velasco Pit
Wells
Overland Mine
Springs
BOUNDARY
INDEPENDENCE
London Arizona Group
T4S R15E Sec 28
Hayden 7 1/2
20
21
22
27
28
29
32
33
4
5



PROPERTY MAP OF THE SADDLE MOUNTAIN AND BANNER MINING DISTRICTS

USGS Bull. 771
Plate X

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA
PINAL COUNTY
Near Ray
Finch mine

RAY PIT (sedona card) MILS #142A
19-AKA's
RAY mine (file)

MM5778 Microcline Feldspar Xls.
MM5777 Microcline feldspar Xls. in matrix

G.14 county
(London-Arizona granite file)

MM N 141 Mottramite
N 143 "

MILS #6
12-AKA's

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

Gila Co.

Barking Spider Mine
(formerly Finch Mine)

MM-8041 Wulfenite, Vanadinite, Descloizite
8042 Quartz on Wulfenite
8043 Calcite, Quartz, Wulfenite
7445 Mimetite after Vanadinite (Micromount)
8013 Wulfenite, pendant
8014 " "
8015 " "
9399 Vanadinite
5679 Plumbojarisite
5680 Plumbojarisite

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

Card # 1
K 832 Serpierite xls

ARIZONA
GILA COUNTY
DH CLAIM
DH CLAIM MILS#L

12. AKA's
London Arizona Group (fld)

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM-K163 Cerargyrite

Pinal County

Banner Mining District
London -Arizona Group

MILS # 6
12-AKA's
London Arizona Group

Az Republican 7/30/09

FINCH MINE 7-24-62 GILA COUNTY
North-of Hayden

ZINC, MOLY, VANADIUM & LEAD ???

Lee Hammons has some specimens which came from a "FINCH" mine somewhere in GILA Co. he was told.

See: Lapidary Journal, Sept. 1980, Page 1278
Barking Spider Claim (green card)

1. Kullman-McCool Mining Company (Reagan Camp)
2. Gila County, Arizona
3. Martin Fishback
4. W. R. Jones
5. Visited September 22, 1948
6. Lead-silver-zinc-copper
7. This place is small, but it is working. Might keep an eye on it. Of no interest - revisit to check opinion.
8. _____

* * * * *

REPORTS ON THE

LONDON - ARIZONA GROUP

REPORT OF FINDINGS

MARKET ANAYLSIS

EVALUATION OF ORE DEPOSIT

KULLMAN – McCOOL MINING CLAIMS aka "REAGAN GROUP"

GILA COUNTY, ARIONZA

PREPARED FOR

REAGAN TRUST; LESLIE OXLEY AND JOAN DE WITT TRUSTEES
c/o KULLMAN-McCOOL MINING COMPANY
2143 W. KEIM
PHOENIX, ARIZONA 85015

BROKER REFERENCE

APA REALTY – ALPHA "JOE" CHENEY BROKER

PHONE: (602) 841-4998

PREPARED BY EARL E. RUNTE
MINERAL MANAGEMENT ASSOCIATES
28828 NORTH 63RD STREET
CAVE CREEK, ARIZONA 85331
PHONE: (602) 585-3504

NOVEMBER 1997

MINERAL MANAGEMENT ASSOCIATES

Earl E. Runte – Lead Associate

Consultant*Expert Witness*Resource Developer

MMA Experts Consult in All Disciplines of Mining*Environment*Soil Amendment

November 22. 1997

Reagan Trust
Leslie Oxley and Joan DeWitt Trustees
Kullman-McCool Mining Company
2143 West Keim
Phoenix. Arizona 85015

RE: Report of Findings on Kullman-McCool Mine
Hayden. Arizona

Dear Ladies:

Pursuant to your authorization to conduct a study of the subject property and report to you. I am submitting the following Report of Findings. This report gives my opinion of the quality of the mineral reserve and the overall market options for sale of the property.

This report is confidential and is intended for use of the Trust and your broker APA Realty.

I have made a number of recommendations but want to emphasize the importance of a current review of the mineral maps by a qualified expert.

Please review this report scrupulously and take time to make carefully thought-out decisions. I encourage you to seek advice from other experts and by all means, consider the advice of your accountant and attorney.

If you have questions or if I can be of further help please contact me.

Sincerely,

Earl E. Runte
Consultant

Phone: (602) 585-3504 **28828 N. 63rd Street** **Fax: (602) 585-3504**
Cave Creek, Arizona USA 85331

KULLMAN - McCOOL REPORT

TABLE OF CONTENTS

PART I

PART II

PART III - ADDENDUM

PART I

DESCRIPTION OF SUBJECT PROPERTY

LOCATION:

The property is on the Hayden Quadrangle approximately five miles Northwest of Hayden, Arizona.

A graded road four miles long extends North to the property from Highway #177 at a point two and one-half miles West of Hayden.

LEGAL:

The Reagan Mine is made up of twenty-one (21) lode mining claims (Brick Nos. 1-12, and Lead-Silver Nos. 1-9).

The claim block is in Sections 20, 21, 22, 23, 26, 27, 28, 29, 32, 33, 34 and 35 of Township 4 South, Range 15 East, Gila County, Arizona.

This is in the Dripping Springs area of the Banner Mining District.

FLOOD PLAIN:

The Flood Plain is not designated in this area but the claims along Keystone and Schneider Canyons are subject to flooding during storms and the spring run-off.

HIGHEST AND BEST USE:

Mining: These are unpatented lode mining claims leased from the Bureau of Land Management, Department of the Interior.

PURPOSE OF THIS REPORT

The Reagan Trust, Trustee of the assets of the KULLMAN – McCOOL Mining Company is considering sale of the Subject Property.

The client Reagan Trust, has asked for a report on the unpatented lode mining claims known as the Reagan Group and located in Gila County, Arizona. Maps and detailed legal descriptions are found elsewhere in this report.

The KULLMAN – McCOOL Corporation was formed in 1927. Mr. C. L. Orem, Mining Engineer, began to report on the Reagan Group Prospect in 1939 and later took over the project. He did considerable reporting in 1953 but no extensive excavation was done. Orem recommended that core drilling and blocking was needed. From 1973 until 1979 Phelps Dodge leased the claims from KULLMAN – McCOOL. In 1973 Phelps Dodge conducted drilling exploration identifying reserves of several minerals and it is that data and mapping that serves as the basis for "Conclusions and Recommendations" as contained in this report. We cannot however, make final recommendations until the Geological Maps have been reviewed by a qualified expert.

STATEMENT OF CONTINGENCIES AND LIMITING CONDITIONS

1. The use of this report is determined by THE REAGAN TRUST AND APA REALTY and should be used with discretion.

2. This report is an opinion based upon the information that was available to the author and is an opinion only. Anyone using this report should seek opinions of other experts and make judgements after considerable research.

3. These contingencies apply but are not limited by the following.

   A. It is assumed that the title to the property is good including access.

   B. It is assumed that the KULLMAN – McCOOL Mine is, has been, and will be operated within the law, complying with all Federal, State and local laws, ordinances and regulations. It is further assumed that the KULLMAN – McCOOL Mine will continue to be operated by prudent and financially sound managers.

   C. It is assumed that there are no undisclosed toxic or hazardous materials present on the property or in the reserve of ore.

   D. It is assumed that the quantities of ore as projected by various experts are reasonably accurate. No estimate of the quantity or quality of the ore in reserve or the water supply is made or inferred.

4. The interest of Earl E. Runte in this property owned by KULLMAN – McCOOL Mine or the Reagan Trust is limited to the contract and agreement to produce this report.

SUMMARY OF IMPORTANT DATA

TITLE

Title to the KULLMAN - McCOOL unpatented lode claims is held under provisions of the mining laws dating back to 1886 (as amended). Currently the mineral rights are leased while the surface remains the property of the Bureau of Land Management, Department of the Interior. In the past the claims were held by performing certain assessment work and the payment of $10.00 per claim for filing fees. Currently the claims are leased for an annual payment of $100.00.

Due to this increase many lessees throughout the West have declined to pay the leases and the claims have reverted to the BLM or Forest Service but have not been withdrawn from entry. The result is that more than 150 claims in the immediate area are available for location.

MINERALS

Since World War II the demand for certain minerals has changed drastically. The predominant minerals in the KULLMAN - McCOOL group is lead and zinc with occurrence of copper, silver, and collector specimens of gem and other stones.

The KULLMAN - McCOOL property is located in a mining district that has for many years provided a large amount of the copper ore for world demands. Some of these mines are running out of high grade copper ore. On the other hand, new "environmentally friendly" methods of separating the copper from the ore have been developed. These new methods not only lower the production cost but make vast quantities of copper available from mine waste that is stockpiled on the surface.

GOOD NEWS/BAD NEWS

The good news is that the KULLMAN - McCOOL claims adjoin claims held by ASARCO. ASARCO is negotiating for surface rights to these claims, not for mining but to use the surface for mill sites and deposit of waste and possible settling ponds. A review of the environmental impact study is in order to see how this plan might effect the subject property.

The bad news is that ASARCO has acquired most all the property they need in the area of the KULLMAN - McCOOL.

The KULLMAN - McCOOL claims are bordered on the North by the "79" mine. ASARCO bought nine claims on the East of the "79". The "79" has passed through quite a number of owners. The current owner acquired the remaining 20 claims for $100.00 per claim.

POTENTIAL GOOD NEWS

In the early 1970's Phelps Dodge conducted two studies of the KULLMAN - McCOOL and adjoining claims. These documents reveal more definition of the mineral reserves than all the previous documentation. A qualified, independent geologist should review these studies before a decision is made on the sale of the property.

PART II

KULLMAN - McCOOL MINE

KULLMAN - McCOOL

NARRATIVE REPORT

The SUMMARY OF IMPORTANT DATA in Phase I highlights the essence of this report. Following is an explanation of how we arrived at the Conclusions and Recommendations.

Since the Reagen Trust is considering sale of the subject property we will focus on the assets and equities KULLMAN - McCOOL owns. We will discuss the options available for marketing the property.

In our letter to Joe Cheney, APA REALTY, on October 28 we outlined the scope of our investigation, which we copy below.

SCOPE

1. *We will research the Title to the property.*
2. *Research current documents at the Department of Mines and Mineral Resources to determine what activity there is in the Banner District.*
3. *Meet in conference with the State Mine Director to get his input.*
4. *Confer with other experts who are working in the area and have comments on the subject property.*
5. *Examine recent geological data to make recommendations as to the condition of the reserves and the type of mining operation that might be used here. This will help us to make recommendations as to the best potential buyer.*
6. *Make preliminary estimates as to the value of the property by using a formula of discounting and also by researching the recent contracts that have been signed in the area.*
7. *Visit the property. We will develop a pictorial report to be used in the future plans for the property.*
8. *Present a report in triplicate covering the above and other important matters that will enable your client to make a reasonable decision.*

THE PROCESS OF INVESTIGATION WITHIN THE SCOPE

I made a number of trips to the BLM and the State Department of Mines and Minerals to review historic documents on the Reagen and other properties in the Banner District. We also discussed the current mining activities with the State Mine Director and other personnel.

Reviewing documents dating from 1927 through 1981, it is evident in that time period and up to 1997 many changes have occurred in the demand, mining and marketing of minerals. The most obvious of these changes is the lack of demand for lead, silver, zinc, molybdenum and vanadium. There is also the factor that large quantities of minerals are available to be recovered from mine waste.

A visit to the area was necessary to take a first-hand look at the property, and speak with industry experts. We wanted to determine if a mining area noted for production of lead and silver ore in the past could be in demand as a copper source.

On October 13, 1997, Joe Cheney and I traveled to Hayden, Arizona, passing through Superior and the Ray Mines Division open pit operation near Kearny. The Ray Mines Division is the principal source of ore for the ASARCO HAYDEN SMELTER.

Our first stop was at the headquarters of ASARCO Incorporated where we spoke with Mr. Edward C. John, Land Agent. He is very knowledgeable of the area and, in fact, had maps of the Reagan Group (KULLMAN - McCOOL), Chilito and 79 Mine ("79") properties on the drafting table when we arrived. He brought us up to date on the activities of ASARCO and other copper producers in the area. Since there are few secrets in the mining business we were able to ask direct questions and receive direct answers.

At this point, the reader will want to check the "Christmas Area Claims Map" that is folded in the back of this report. The reader will note that the Lead-Silver and Brick claims constitute the Reagan Group (KULLMAN - McCOOL). Notice the four claims to the east of the Brick claims named "Spring", "Ethel", "Fanny" and "Drusilla". These four claims were purchased by ASARCO out of the Reagan Group – more of this later. Also note the Chilito claims immediately to the east of the Reagan Group. ASARCO has leased 17 of the Chilitos and Black Eagles and is negotiating a trade with the BLM for the surface rights to these.

Finally, notice the claims to the northwest of Brick #12 and Spring. ASARCO has purchased nine claims out of the 79 Group from Couer Mining Corporation, Couer d'Alene, Idaho. These include: NORTH STAR, BLUE COPPER, BLACK COPPER, PROPHYRY, KEYSTONE, QUARTZITE, SENATOR, and TIP TOP.

At this point it appears that Couer Mining has sold the remaining 20 claims of the 79 Group to Scott Lewis, Sonora Redman Ltd. of Tucson. We have contacted Lewis. It appears he is a part-time miner and vendor of COLLECTOR SPECIMANS and is holding these claims for that purpose. More on this later. These claims join the KULLMAN - McCOOL on the north.

Cypress still retains leases on numerous claims to the east of ASARCO running over to the Christmas Mine.

OVERVIEW OF THE DRIPPING SPRINGS MINING AREA

It is evident that there is some activity in the area mainly by ASARCO. When one considers the cost of maintaining the leases it follows that there must be reasons for ASARCO and CYPRESS to retain these claims. While searching the records I noted one payment of $50,000 representing the annual lease payment on 500 claims. Not all of these claims are in the immediate area but most are in the Banner District. The Claims Map designates the ownership of the various blocks of claims.

UNPAID LEASES

Some leaseholders, mostly family groups, have failed to make lease payments on more than 150 claims since 1993. These are all in the four sections including the KULLMAN - McCOOL claims. Most of these are outside of the general area of the "79", ASARCO, and KULLMAN - McCOOL claims and are large blocks. It is apparent that the increase from the $10.00 annual assessment to $100.00 lease is more than owners will pay for large groups of claims.

Leases on a large block of clams held by the Velasco family have not been renewed. This local family has held most of the claims since the early 1970's – some since 1954. Seemingly, after the death of the family head, the estate dropped many of the claims. In 1994 some of the descendants located a small group of claims in Section 22, near the original Velasco Mine and immediately adjacent to the Chilito Mine.

RECENT LOCATION ACTIVITY

In the past nine months a number of claims have been located within 3-8 miles of the KULLMAN - McCOOL, some by large mining companies.

This information will be shared with Joe Cheney when the Trust decides which approach to use in marketing the property.

RECAP

In our conversation with Mr. John we learned that ASARCO had recently performed considerable exploration on the Chilitos and have blocked out a sizeable ore body at two levels. Eventually when ASARCO completes the trade for the surface rights to the claims mentioned above, they will invest in further exploration and design studies. Mr. John indicated ASARCO plans to use this added property for mill sites and to dispose of mine waste. I believe this was their thinking when acquiring the claims from KULLMAN - Mc COOL and Couer ("79"). **See note below.** [1]

FUTURE MINING OF THE KULLMAN - McCOOL MINING CLAIMS

Mr. John confirmed what the records say about the KULLMAN - McCOOL claims – most dominant minerals are lead and silver, as with the "79", the values of copper being secondary.

Mr. Orem noted gold in Keystone Canyon on the Lead-Silver #4, #3, and #8 as one moves up the canyon. He also noted garnet on Lead-Silver #5.

In our research we reviewed work done by qualified geologists and engineers 1927 through 1981. Most of these papers were from the files of the Trust.

YEAR	QUALIFIED GEOLOGISTS AND ENGINEERS
1927	Martin Fishback
1939	C. L. Orem
1942	Lee Reagan
1953	C. L. Orem
1954	C. L. Orem
1953	Axel Johnson (on 79 Mine)
1953	Axel Johnson (on Chilito Mine)
1961	Lewis A. Smith (on 79 Mine)
1981	Unknown author – done day trip

Typically these experts describe "Mineralized Zones" and provide data on how these zones occurred eons ago. It is not until 1953 that Orem deals with specific, historical exploration and production records. He details the percentages of lead, copper, zinc, and silver. Lead is in the majority with zinc second, then copper and silver.

[1] **This brings up the question of environmental impact on the KULLMAN - McCOOL claims. When it comes to sale time this can be a factor. It could be a reason why ASARCO should buy the KULLMAN - McCOOL property. This should be studied further.**

In 1942 Lee Reagan owner of the KULLMAN - McCOOL at that time, makes a case for vanadium and molybdenum that is present in some of the KULLMAN - McCOOL claims. In 1942 World War II is building and there is a demand for these metals to support the war effort. Late in the war the Federal Government built stockpiles of uranium ore by paying "above market" for vanadium to justify the high cost of co-producing uranium. This continued after the war until mining for uranium stopped, leaving a large oversupply of vanadium and molybdenum.

Molybdenum production peaked in 1985, began to drop and has never recovered. There is enough moly produced as a byproduct of copper to supply the market for years to come.

Vanadium mining in the U.S. basically ceased in 1984. Moly and other metals are cheaper substitutes so there is no reason to count on income from vanadium.

Zinc and lead have both rebounded somewhat with demand for zinc due to the increased use of galvanized metal and the reappearance of chrome. Since it is usually co-produced with lead or copper there is an abundant supply and some metal brokers are encouraging investors to "BUY SHORT" on zinc options since there is a rumor that China will soon unload a large stockpile of zinc.

Of all the minerals that Orem and others talk about, copper ore is the most stable of those that occur in the KULLMAN - McCOOL property.

CURRENT STUDIES

In 1973 Phelps Dodge conducted Boundary Mapping studies of the minerals in the area. This mapping gives us the most accurate picture of the minerals and their position in the KULLMAN-McCOOL property. Phelps Dodge drilled several holes, one on the KULLMAN - McCOOL property. This one is located either on the Lead-Silver #7 or Brick #9. This is designated as BDY 1 on the Geological Map and showed the occurrence of some copper, lead and zinc at several intervals. to a depth of 2,000 feet.

NOTE: Before the Kullman-McCOOL is offered for sale this map should be studied by a qualified geologist.

GOLD AND COLLECTORS SPECIMANS?

GOLD:

Mr. John pointed out an area on Lead-Silver #8 that had been leveled for parking vehicles. For several years a mining club would appear during the spring runoff to pan for gold in the wash. We concluded that a small gold processing operation took place. This is near a well site and with numerous mining clubs "week-ending" all over the State there is the possibility of leasing several claims for small recovery operations. Many of these clubs are quite profitable and take their projects seriously.

COLLECTABLES:

In a period after WWII and up until 1954 several Rock and Gem Collectors leased parts of the "79". They removed a number of rare and semi-rare specimens for sale to collectors. According to some records the Callahan Mining Company, owners of the "79" at the time, cancelled the leases due to vandalism and the danger of working under ground in unsafe conditions. Now the "79" is leased by a "collector" as indicated above.

12:30 P.M. November 20, 1997: I speak with Scott Lewis of Sonora Redman Ltd. on his cell phone in Tucson. Lewis is a third generation geological engineer. He purchased the twenty "79" claims from Couer Mining for $100.00 per claim!! He is a part-time collector along with his partner and is mildly interested in several of the KULLMAN - McCOOL claims that show evidence of wulefsenite.

He has checked out the garnet on the Lead-Silver #5 and feels it is not industrial or gem quality, however this bears looking into, ensuring that this is noted in the ASARCO's Environmental Impact Study.

THE MARKET

Arizona ranks high among the states in production of gemstones, particularly turquoise. We saw some evidence of turquoise but Orem's discovery of garnet on Lead-Silver #5 bears FURTHER STUDY.

THE LEAD-SILVER #5 IS OVERLAPPED BY CHILITO #15, ONE OF THE CLAIMS WHERE ASARCO IS TRYING FOR SURFACE RIGHTS. THIS NEEDS FURTHER INVESTIGATION.

CONCLUSIONS AND RECOMMENDATIONS

Since the goal of the Reagan Trust is to sell the KULLMAN - McCOOL MINING Property we will correlate the information we have developed on the mineral assets with the value of the property to a buyer. Having done this we will recommend the methods of structuring the sale.

VALUES OF THE MINERAL DEPOSIT

Most of the past exploration and production has centered on lead and zinc. The present and future interest is in copper. Lead, zinc and other ores that may produce profitable results could be a factor, as by-products.

The abundant water supply from wells on the KULLMAN - McCOOL property have a distinct value and should be a part of any presentation made to a prospective buyer. If well drilling logs and water test results are available they should be studied.

PHELPS DODGE SAMPLE MAP

Perhaps the most valuable document we reviewed is the Geological and Geochemical Sample Map done by Phelps Dodge in 1971. This map makes some interesting observations along a fault line running from the Lead-Silver #9 throughout the Lead-Silver #7. The Geochemical Analysis Chart of the entire area covered by this map in Parts Per Million is as follows:

Molybdenum	8
Lead	260
Zinc	950
Copper	295

If a case can be made for the KULLMAN - McCOOL as a source of copper it is a study of this map and a report by qualified experts. I have spoken with Geologist John Rud and he will be available in about ten days to review this map and write a brief report. He will not have to visit the property and should be able to complete his study of this and the Boundary Map in one day. I estimate this will cost approximately $600.00. His report can be very important to the value of the property.

CONCLUSIONS

THE SCOPE

1. TITLE. We find no problems but point to the overlap of two or more claims noted on the Claims Map.

2. - 4. Covered in the Narrative Report.

5. GEOLOGICAL DATA. Needs further study by geologist.

6. DATA on quantity and quality of ore reserves is not available but can be partially developed after review by geologists.

7. PICTORIAL REPORT. See Addendum

8. RECOMMENDATIONS. Below

OPTIONS FOR SALE OF THE PROPERTY

1. There is an old axiom in the world of salesmen starting out in the business - - - "call on the guy next door". This may be one approach - - ARSARCO, CYPRESS, or some of the individuals and small companies that are active in the area.

2. We found that a number of corporations have located claims within 3-8 miles of the KULLMAN - McCOOL MINING property within the past nine months. This includes one very large mining company. From this point on we will work with your broker, APA Realty, to assist Joe Cheney and the Reagan Trust to determine how to best market this property to these prospects.

3. Advertise the property in Wall Street Journal and other publications. Prepare a brochure to circulate.

4. Work with other brokers who have buyers for mining properties.

5. Break the claims up, leasing some to Sonora Redman and some to mining clubs, then hold others until ASARCO starts operations. This could be years or never.

NOTE: One should always keep in mind that the KULLMAN - McCOOL property is UNIQUE AND DISTINCT because of location and proximity to the ASARCO property. It also is unique, having good haul roads, a water supply, close to State Highway #177 and a modern processing plant. Therefore, the value of the mineral may not be as important as the uniqueness.

These are the options unless you decide to hold the property for future appreciation. Remember that properties like this may take one or more years to market.

RECOMMENDED STEPS

1. Have the geological data reviewed and get a report.
2. Have broker prepare offering brochure.
3. Decide with broker on which approach to take. Consider leaving the price open and accept offers.
4. Broker will advertise and contact prospects – negotiate contract with aid of experts.
5. Seek advice from your accountant and/or attorney before making any final decision.

I will be available to consult with the Trust and your broker on a fee basis.

Sincerely submitted,

Earl E. Runte
Consultant

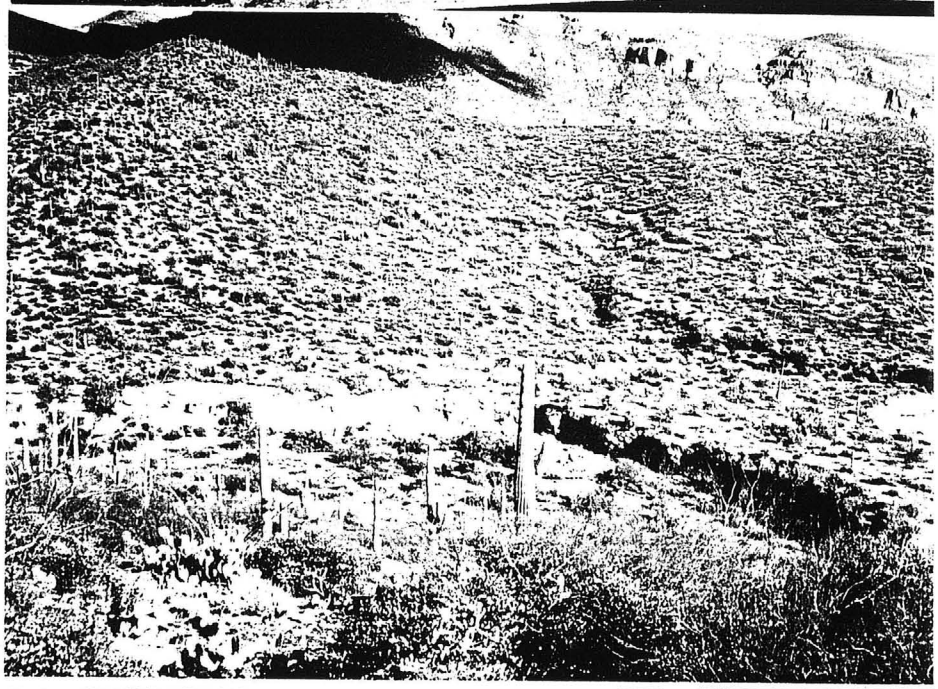
PART III

KULLMAN - McCOOL MINE

ADDENDUM

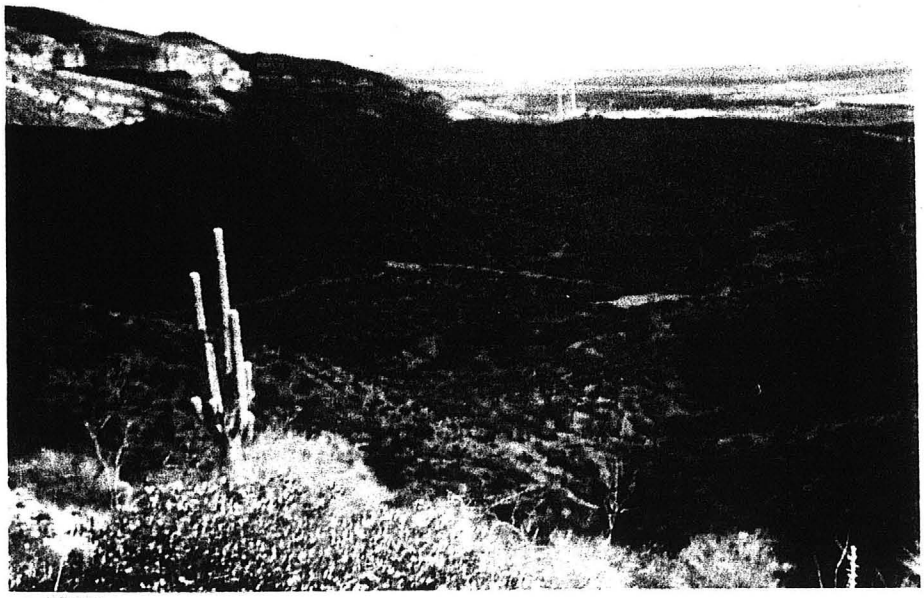
GRADED ROAD LEADING
TO MINE.

LOOKING EAST INTO
KEYSTONE CANYON AS
THE WASH PASSES
THROUGH LEAD-SILVER #4.

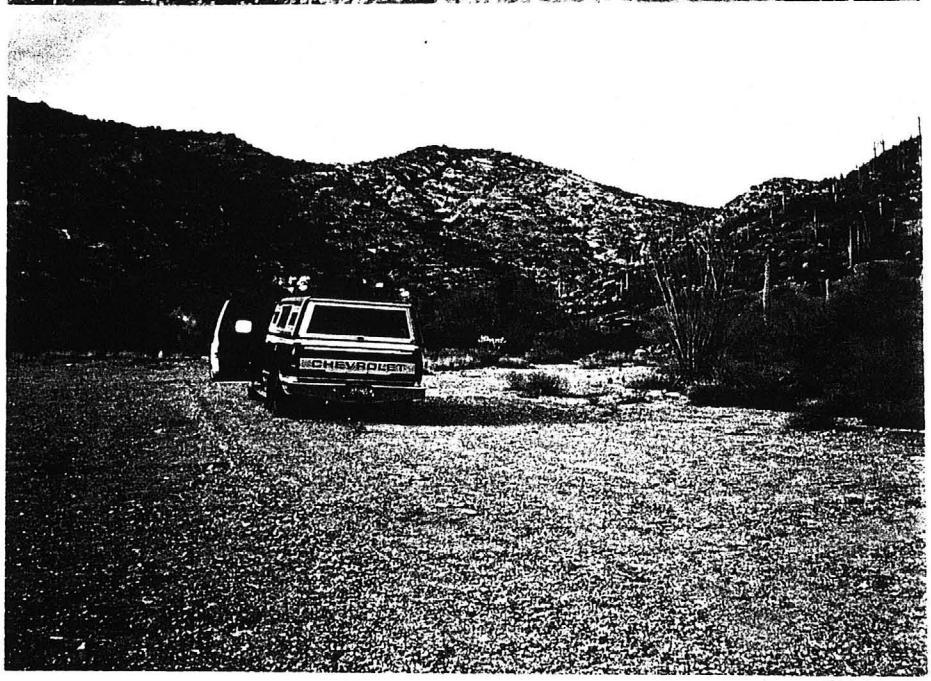


FROM THE WEST BRANCH
OF THE ROAD LOOKING
EAST INTO KEYSTONE.
PAD WAS LEVELED TO PARK
RV'S FOR "WEEK-ENDERS".
WELL SITE IS ON NEXT
INTERSECTION ABOVE.

LOOKING SOUTHEAST FROM LEAD-SILVER #1 TOWARD HAYDEN AND ASARCO SMELTER.



THE "PAD" AS SEEN IN ABOVE PHOTO ONLY LOOKING NORTH TOWARD LEAD-SILVER ON UPPER LEVEL LEFT.



CANYON AT END OF ROAD ABOVE PAD. BRICK #5. OREM NOTED OUTCROPS HERE & THIS IS WHERE PHELPS DODGE INDICATED MINERAL ALONG THE FAULT.

Mineral Economics Corporation
Consulting Mining & Geological Engineers

A RECONNAISSANCE STUDY OF THE REAGAN MINE AREA

Prepared by the Personnel of MINERAL ECONOMICS CORPORATION

Respectfully submitted,

Hale C Tognoni

Hale C. Tognoni, P.E. 2048

100 W. Clarendon/Suite 1260/Phoenix, Arizona 85013/(602)263-0771

REAGAN MINE PROSPECT

Location and General Description

The Reagan Mine Prospect is made up of twenty-one (21) lode mining claims (Brick Nos. 1 through 12 and Lead Silver Nos. 1 through 9). This claim block lies contiguous to the 79 Mine property to the Northwest and is within Sections 17, 21, 22, 23 and 28, Township 4 South, Range 15 East. The property is on the Hayden Quadrangle approximately 5 miles Northwest of Hayden, Arizona. A graded road four miles long extends north to the Reagan Mine Prospect from state highway 177 at a point two and a half miles northwest of Hayden.

> "The Banner mining district is in the southeastern part of the Dripping Springs Mountains, a northwest-trending fault-block mountain range, aligned with the Pinal Mountains to the northeast and with the Tortilla Mountains to the southwest. Structural valleys separating these ranges are deeply filled with lacustrine and fluviatile deposits."[1]

The Reagan Mine lies in the foothills of the Dripping Spring Mountains. The physiography is controlled by two sedimentary fault blocks of different ages separated by the northward trending Keystone Fault with over 2,000 feet of vertical displacement.

The western belt is made up of southward-tilted fault blocks of Paleozoic Sediments intruded by larimide dikes. This belt, which contains both the Reagan and 79 mines, is bordered to the southwest by the northwest-trending Reagan Camp Fault, which brings Quaternery alluvial conglomerate in contact with the paleozoic sediments. The western belt ranges in altitude from about 2,800 feet on the west to 4,200 feet on the north. The topography is rough reflecting the nature of the structural conditions and the weathering nature of the limestones that make up the block.

The block east of the Keystone Fault consists of gently southward dipping beds intruded by diabase as a sill formation and Laramide intrusions ranging from rhyolite to granodiorite as small and large plugs, dikes and sills. The topographic relief is indicative of the bedrock structure, with the elevation ranging from 3,000 feet on the west to the 4,483 feet high Toronado Peak just northwest of the Hayden smelter.

1 John T. Eastick's report on the Banner District in Ore Deposits of U.S. 1933-1967

History and Past Production

The Banner district has been a significant metal producer, the production up to 1964 is summarized by the following synopsis from John T. Eastlicks Report in Ore Deposits of the U.S. 1933 - 1967.

"Most of the ore deposits in the Banner mining district were discovered in the late 1870's and early 1880's, but little ore was produced until after 1900. In the early years of production, the isolated location of the district, together with unstable economic conditions, contributed to the difficulty of maintaining a steady or profitable operation for any length of time.

The total value of mineral production from the district to 1964 is about $26 million. Copper is the principal metal produced, followed by lead and zinc. Gold ore has been mined from the several places, and both gold and silver are recovered as by-products from the copper, lead, and zinc ores. Minor amounts of vanadium have also been found in several prospects. Most of the copper ore deposits are uniform in grade, averaging between 1 to 4 per cent of copper, but local occurrences of oxidized ore containing up to 18 per cent copper were mined in the past. The greater portion of the lead came from bodies of oxidized lead ore that were generally of high-quality, containing from 22 to 24 per cent lead and from 4 to 5 ounces of silver per ton. Production of zinc was mainly from sulfide ores, but several shipments of high-grade zinc carbonate ore are recorded. The gold ore found was rich, but the bodies were small and pockety.

The Christmas mine is the largest in the district and is the only mine operating at the present. Discovered in 1880, the mine is credited with a total production through 1963 of 2,370,700 tons of ore that yielded 89,354,300 pounds of copper. Inspiration Consolidated Copper Company owns and operates the mine as its Christmas Division.

Notable amounts of ore have been produced from other mines in the district. Total production from the Seventy-Nine mine is valued between $3 to $4 million. The Chilito mine is credited with a production of $1,350,000 during World War I, and the London-Arizona mine has a recorded production of $1,050,000 between 1912 and 1928.

Production statistics for the Banner mining district for the years 1905 through 1963 are listed below in Table I".

TABLE I. Gold, Silver, Copper, Lead and Zinc Production in the Banner Mining District 1905 - 1963[1]

	Gold (Ounces)	Silver (Ounces)	Copper (Pounds)	Lead (Pounds)	Zinc (Pounds)	Total (Dollars)
1905-1949	22,689	702,786	68,973,911	34,284,199	4,593,733	$15,877,996
1950	257	6,130	1,352,200	59,200	2,500	304,248
1951	256	10,932	1,658,600	128,000	20,000	446,019
1952	149	7,720	1,359,400	63,100	51,500	359,920
1953	110	4,215	1,252,000	8,500	---	368,102
1954	152	5,153	1,465,400	---	---	442,277
1955	---	129	70,000	12,000	1,788	28,052
1956	3	293	241,400	---	---	102,965
1957	2	522	365,200	34,300	---	115,372
1958	---	---	254,559	---	---	43,833
1959	---	---	1,121,398	---	---	302,349
1960	---	---	334,794	---	---	151,669
1961	---	---	331,016	---	---	82,920
1962	---	---	4,465,319	---	---	1,654,337
1963	---	---	20,232,893	---	---	6,272,197

Lee Reagan who had been producing on the 79 mine in the early 1920's lost the property in a lawsuit. Although he had won the lawsuit as part of the settlement, he had to come up with $16,000 by a certain time and he failed to do so. As a result, the 79 Mine was sold at a sheriff's auction in 1926 to a mine watchman named Gardner.

After his loss of control of the 79 Mine, Lee Reagan went to Miller Wallis (who had located the Brick No. 1 through 12 lode claims in 1923) and bought his claims. Shortly thereafter (1927) Reagan located the lead-silver claims 1 through 9, consolidated the unit with the Brick claims and went off to Texas to finance the project . In Texas he met with a Mr. McCool and C.F. Kulman who both worked for a lumber company in McCamey, Texas. The three of them formed the Kulman-McCool mining company in 1928 and both Kulman and McCool moved to Arizona. McCool died a year or so later and then depression hit and their dream of developing the Reagan Mine was severly hampered.

During the depression and until his death in the late 40's, Lee Reagan drove several small drifts of the surface exposures of several lead-zinc-molybdenum-vanadium veins. The Reagan mine was never sufficiently capitalized like the 79 Mine had been in both 1920 and 1928 and therefore never got off its feet. The daughters of Lee Reagan, keeping their father's dream alive, have maintained the claims and the Kullman-McCool Mining Company ever since his death.

The Kullman-McCool Mining Company leased the Reagan property to Phelps Dodge Corporation from May 1973 to January 1979. Phelps Dodge updated George A. Kiersch's geologic map and also drilled a deep (2,064 feet) core hole on the southwest side of the Reagan Camp fault. It appears from the program they conducted that Phelps Dodge was only interested in a deep porphyry copper and not in a stratabound or replacement massive sulfide deposit.

In June of 1981, Drucilla Lott of the Kullman-McCool Mining Company contacted Mineral Economics Corporation (M.E.C.) to conduct the 1980-1982 assessment work in the form of a report, so that they could market the property to a mining company. M.E.C. was so impressed with the property that it offered to enter into a grubstake agreement with the Kullman-McCool Mining Company to help develop and market the property.

(1) Reprinted from Ore Deposits of the U.S. 1933-1967

Geology

The Reagan Mine - 79 Mine area is within a mile wide and three mile long block of paleozoic sediments bordered by the Keystone Fault on the east and the Reagan Camp Fault on the west. The sediments exposed in the area range from Precambrian to Tertiary in age. These strata and the associated volcanics were described in economic geology by George A. Kiersch as follows:

> "The oldest rock exposed in the Precambrian Mescal limestone of the Apache group. It rests upon intrusive diabase and crops out to a maximum thickness of 140 feet. Above the Mescal are the Middle Cambrian Troy quartzite, thin to thick cross-bedded, pebbly beds approximately 400 feet thick, succeeded by 225 feet of undifferentiated shale and quartzite probably Middle Cambrian; Upper Devonian Martin limestone, consisting of thin beds with some shale 250 to 329 feet thick; Lower Mississippian Escabrosa limestone, a massive cliff-former 440 to 581 feet thick; and Lower Pennsylvanian Naco limestone, thin beds with abundant chert from 385 to 1,000 (+) feet thick. This entire section appears to be conformable, although separated by at least three disconformities.
>
> Isolated erosional remnants of the Gila conglomerate, parts of which are of Pliocene age, crop out within the area. They also occur as extensive valley fill material to the west of Reagan Camp fault. The Gila conglomerate consists of fragments of the local igneous and sedimentry rocks poorly sorted in a sandy and limy cement. South of the Seventy Nine mine it includes typical mineralized material.
>
> Intruded as a sill into the Mescal limestone and as small stringers and irregular apophyses cutting the Troy quartzite is the widespread central Arizona diabase. It crops out immediately east of Keystone fault, where the large fault displacement has exposed the lower part of the stratigraphic section. M.N. Short and others have determined the diabase to be post-Middle-Cambrian and pre-Upper Devonian in age from contact relationships with the Troy quartzite, south of Superior.

Basalt prophyry is present as an intrusive body (sill?) cutting the Naco limestone. Ross has described extensive upper Cretaceous basaltic outpourings and intrusive bodies occurring as dikes and sills in the adjoining area to the east and south. The Seventy Nine mine area basalt porphyry is comparable to that described by Ross and is thus referred to an Upper Cretaceous age."

During the late Cretaceous - early to mid Tertiary time (Laramide) intrusives probably associated with the deep seated Central Arizona batholith intruded fractures created by the Keystone and Reagan Camp faults. Acid intrusions took the form of dikes, sills and plugs, however most prevalent are the dikes that cross the fault block, generally striking N 60° - 70° E. with a high angle dip (70° - 90°). Several of these dikes run nearly continuous in outcrop across the fault block from the Reagan Camp fault to the Keystone fault. The intrusives are generally porphyritic forms of tonolite, rhyolite, granite, granodiorite, quartz monzonite, quartz diorite and diorite.

"A second period of pre-ore faulting followed the emplacement of the dikes. This post-dike and pre-ore faulting consisted of a recurrence of movement along the major north-south faults. The resulting stresses fractured the numerous dikes of the area with a generalshearing of N 70° - 85° E and a tension fracture direction of about N 55° E.

At this time or slightly later, numerous faults having a near N 70° E strike were formed. These faults normally show vertical displacement of the beds; south block generally moving up with respect to the north block. A small part of this movement may be post-ore.

This second period of pre-ore faulting shattered and made permeable the dikes and adjacent favorable limestone beds. Ore solutions closely followed, possibly even before faulting ceased".

Post ore faulting crosses several of the dikes with varying degrees of offset. One notable post ore fault, called the Main fault by Kiersch, is quite large and displaces the 79 ore body several hundred feet vertically. This fault was responsible for bringing the discovery ore body at the 79 Mine to the surface.

Mineral Deposits

The two types of ore deposits mined at the 79 Mine were bed replacement and vein or dike replacement deposits of lead, zinc, silver and some gold. The mineralization is hypogene in nature and falls into the mesothermal temperature range. The bed replacement deposits were hosted by partially shattered Naco limestone surrounding the rhyolite dike (North dike) that was the site of replacement itself. The bed replacement deposits were lead carbonate deposits in excess of 22% lead. The dike replacement ore body consisted mainly of sulfide stringers and veinlets filling the fractured rhyolite dike. The minerals present are base metals sulfides such as pyrite, chalcopyrite, galena, and sphalerite and oxide-carbonates such as cerrusite and anglesite.

The Reagan Mine area which is just 1,000 feet or so southeast of the 79 Mine has very similar geologic conditions. The strata is dipping 35^{o} - 40^{o} in a south southeastern direction. This means that the Reagan Mine area is several hundred feet higher in the strategic section. It is generally thought that the lower members of the Naco formation are more susceptable to mineralization than the middle to upper members. Meaning that if a deposit such as the 79 Mine were to exist within the boundaries of the Reagan claim block it would most likely be found at a greater depth.

The Reagan Mine area has several surface shows of both mineralization and alteration associated with the N 60^{o} - 70^{o} E dikes. The Cretaceous andesite that overlies the Naco formation in the southeastern part of the property is cut by two dikes. Epidote is found filling pores in the andesite quite a distance away from the dikes. Parralleling the dikes just across the andesite Naco limestone contact are two lead zinc veins that have been mined in the past. The veins are shear zones filled with ferruginous gosson and base metal oxides. Samples 1 through 7 were taken from this zone with the results shown in Table 2.

Along these zones there was very little bed replacement away from the vein. Confirming that the locally outcropping member of the Naco limestone is too tight a formation to allow significant percolation of ore soltutions to traverse it.

TABLE 2

		Percentage %					PPM	
Sample #	Sample Type	Copper	Lead	Zinc	Moly	Gold	Silver	Vanadium
1	2 ft. vein Channel	.16%	3.82	28.10	.52	.09	1.0	800
2	6 ft. vein Channel	.58%	2.02	10.10	.40	.07	20.0	380
3	Vein Grab	.17%	6.20	.58	2.30	.28	9.6	120
4	Vein Grab	3.00%	1.24	6.00	.012	.27	2.0	90
5	4 ft. Vein Channel	.18%	.89	.49	.125	.07	5.0	150
6	2 1/2 ft. Vein Channel	.29%	1.52	1.13	.042	.08	8.2	130
7	1 1/2 ft. Vein Channel	.15%	1.51	1.13	.44	.12	2.6	410
8	4 ft. Vein Channel	.37%	3.56	1.14	.026	.07	4.2	70
9	2 ft. Vein Channel	.23%	1.02	.22	.013	.47	15.0	200
10	4 ft. Vein Channel	.01%	.065	.056	.0012	.06	4.0	190

Several hundred feet north there are two N 60° - 70° E porphyry dikes that, like the mineralized north dike of the 79 Mine, are nearly continuous from the Reagan Camp fault to the Keystone fault. A large altered area of limestone (silicified ferruginous gossan) outcrops just to the south of these dikes. This area, according to Kiersch, is very similar to an area of alteration that was directly above (400' vertically) and associated with the massive pyrite deposit in the 79 Mine. Also in this area there is a lead-zinc vein that has been mined in the past. Two northwest trending drifts connect with the zone 50' to 100' below this altered area. At the back of the adits a drift connects them and a 70°, inclined winze was sunk. The winze was inaccessable but a sample of the vein that it followed was taken in the back of the drift, and is represented by sample 8 (See Table 2).

Along the northeastern edge of the Reagan property where the Keystone fault crosses the road there are several diabase dikes that have been mined. Silicified veins are associated with the dikes and samples 9 and 10 (See Table 2) are taken from this area.

The Martin limestone (Devonian) is considered to be the most susceptable formation in Arizona for replacement. John T. Eastlick of Inspiration Consolidated Copper Company feels that the Martin formation, which would be about 1,000 to 2,000 feet deep on the Reagan property, is very likely to contain the largest replacement potential of the area. Two facts point to the likelihood of this potential. First, the Martin is a shaley formation with sufficient permeability to allow slow even percolation. Second, the increased fluid pressure at the greater depth would insure come kind of penetration of the Martin formation by the ore solutions responsible for the surface mineralization away from the shear zone conduits. Therefore, besides the lower Naco formation, the deeper Martin formation is of great interest as an exploration target.

Conclusions

The Reagan Mine property is of great economic interest for the explorationist. Geologic conditions are such that a massive sulfide (lead-copper-zinc-silver) deposit is likely to be found in either the lower member of the Naco formation or the deeper (1,000 - 2,000 feet) Martin formation. To the knowledge of the author, no concentrated exploration drilling effort has ever been conducted to find such a deposit on the Reagan Mine property. A great deal of drilling has been conducted on the adjacent 79 Mine area with the result of developing a large low-grade disseminated zinc deposit in the Naco formation (in addition to the great amount of massive sulfide ore mined at the 79 Mine). However, the Martin limestone has never been sufficiently tested in the 79 Mine area.[1] Therefore, the Reagan Mine property is a significant exploration target.

Future Development Recommendations

A comprehensive exploration program should be conducted on the Reagan Mine area. First, an aerial photo should be taken and a 5' contour interval topographic map made from it. Next, a detailed geological map should be made with particular attention to stratigraphy and structure. Next, a geophysical program should be undertaken (Electromagnetics and gravity) in an attempt to locate anomalies for drill targets. With the increased information from the above work, an exploratory drilling program can be directed. Information produced during the mapping and the drilling itself will regulate both the location and depth of drill holes, but at least 20,000 feet of drilling will be required to give the property a good chance for success.

Aerial Photo and Map	$10,000.00
Geologic Mapping	$40,000.00
Geophysical Program	$50,000.00
Road Work and Drill Pad Preparation	$50,000.00
Core Drilling(20,000 ft. @ $30/ft.)	$700,000.00
Supervision	$100,000.00
	$900,000.00

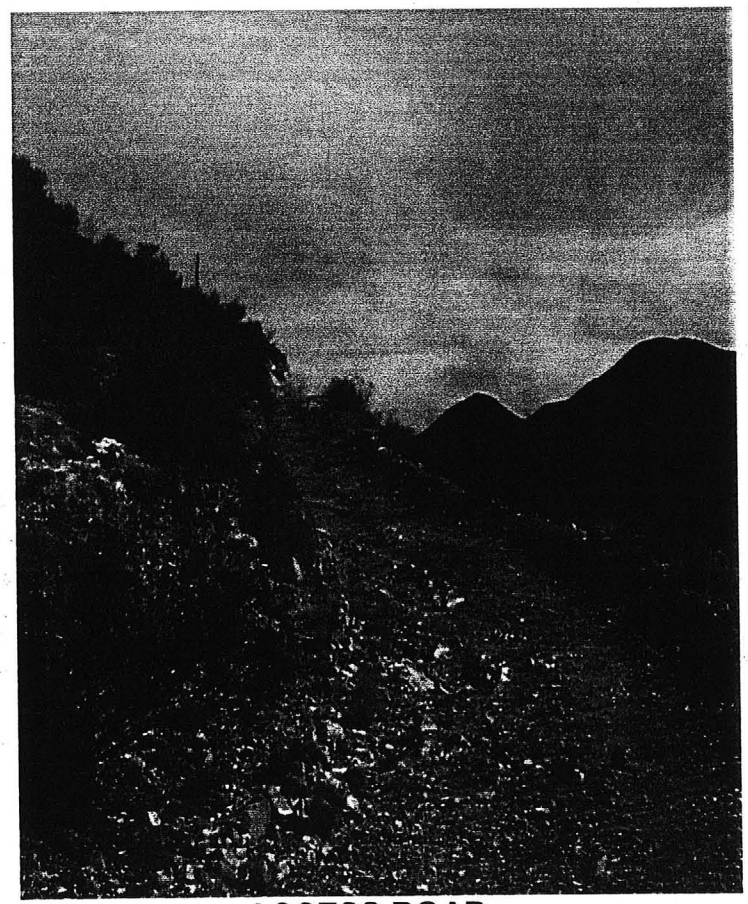
1 Personal communication with John T. Eastlick of Inspiration Consolidated Copper Company, present owners of the 79 Mine.

Township 4 South, Range 15 East
Gila County, Arizona

Geological Evaluation

JOHN O. RUD
Geologist, M.Sc.
December 26, 1997

The Kullman - McCool Mineral Claims



ACCESS ROAD

INTRODUCTION

The Kullman-McCool located mineral claims are situated in Township 4 south, Range 15 east, sections 27 & 28, Banner Mining District, Gila County, Arizona.

Elevations range from 2,600 to 3,800 feet. Access is provided by Arizona State Highway 177, and the 79 Mine road, which runs north, parallel to Keystone Canyon. The Asarco Smelter is located approximately 3.5 miles southeast of the claim group.

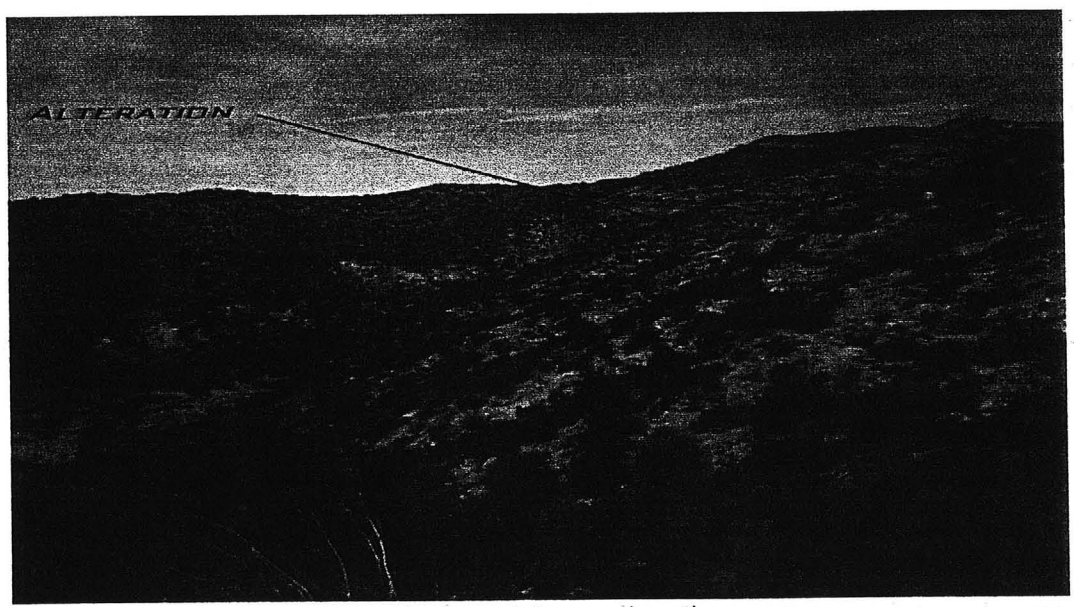
GEOLOGY

In 1971, Phelps Dodge Corporation completed a detailed geologic mapping program in the area of the claim group. A core hole to the depth of 2,064 feet was also completed in the southeastern region of the mineral claims.


Kullman-McCool Mineral Claims
Qtz Monzonite
Andesite
N
Section Corner
22
21
27
28
Dacite
Rhyolite
Rhyolite
Andesite
Dacite

The claims are underlain by the Mescal Limestone formation of Precambrian age. The Mescal Limestone formation is composed of thin-bedded cherty limestone with interbeds of shale. Andesite and dacite porphyry dikes striking northeast with shallow (10 to 40 degrees) dip have intruded the limestone. The intrusives are of Cretaceous age and seldom exceed 50 feet in width.

Within the northwestern part of the claim group a series of rhyolite porphyry dikes have intruded the limestone. This geologic event has been directly linked to the mineralization that occurs in the area. The intrusives and mineralization is believed to be of Laramide (late Cretaceous to early Tertiary) age. The mineralization is marked by gossans with mineralization occurring within the shales of the Mescal limestone formation.



Primary target for exploration

MINERALIZATION

The mineralization in the Kullman – McCool claim groups is situated in or near the rhyolite intrusives of early Tertiary age with the shales and limestone of the Mescal Formation. The rhyolite intrusives produced considerable contact metamorphic effects with the shales and limestones. The mineralization is

reported to be a lower temperature hydrothermal phase of the rhyolitic melt. The mineralizers closely followed along dike contacts and east-west fractures and faults depositing base metal sulfides in favorable horizons of the adjacent sediments and brecciated portions of the rhyolite dikes. Silicate alteration with large red outcrops of the silica breccia is closely associated with the mineralization.

CONCLUSIONS & RECOMMENDATIONS

The Kullman – McCool mineral claims are located adjacent to the 79 mine that has produced over 34 million pounds of lead and 4 million pounds of zinc. The mineralization in the area is directly associated with rhyolite intrusions which crops out in the area of the 79 mine and the Kullman – McCool mineral claims.

Therefore, it is recommended that all exploration efforts be concentrated in the vicinity of the Brick 3, 5, 7, 8, 11, & 12 mineral claims. The area has surface alteration directly associated with mineralization and rhyolite intrusions that crop out presenting an area of exploration that has the potential to contain economic mineralization. (See above Photo)

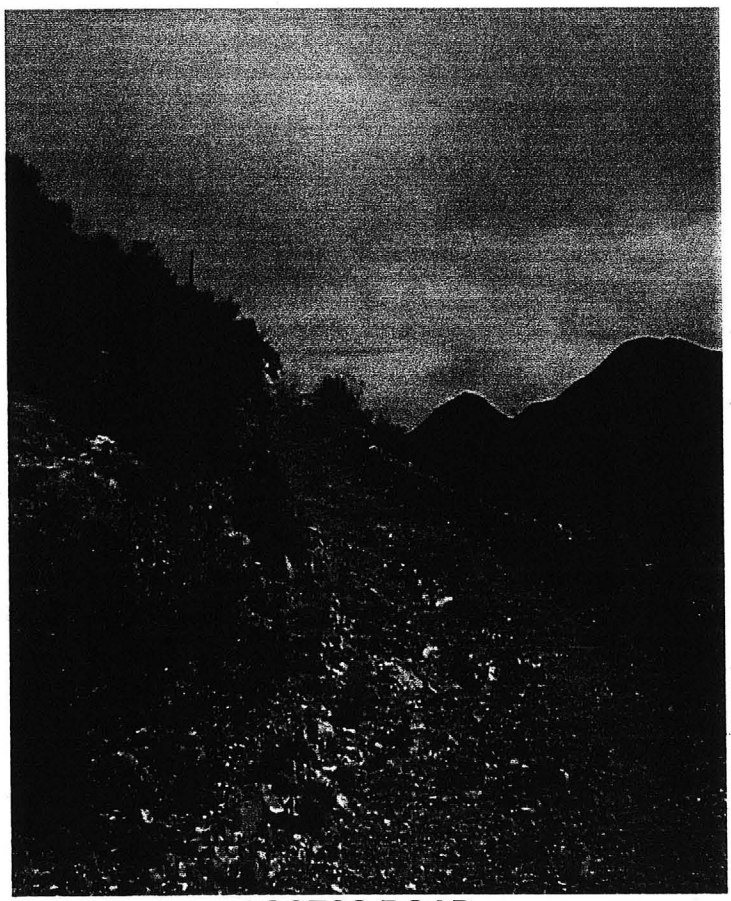
A secondary exploration target is presented in the Drusit, Fanny and Brick 4 & 6 mineral claim area. Intrusions associated with mineralization crop out and may present a target for any future drilling programs undertaken.

Township 4 South, Range 15 East
Gila County, Arizona

Geological Evaluation

JOHN O. RUD
Geologist, M.Sc.
December 26, 1997

The Kullman - McCool Mineral Claims



ACCESS ROAD

INTRODUCTION

The Kullman-McCool located mineral claims are situated in Township 4 south, Range 15 east, sections 27 & 28, Banner Mining District, Gila County, Arizona.

Elevations range from 2,600 to 3,800 feet. Access is provided by Arizona State Highway 177, and the 79 Mine road, which runs north, parallel to Keystone Canyon. The Asarco Smelter is located approximately 3.5 miles southeast of the claim group.

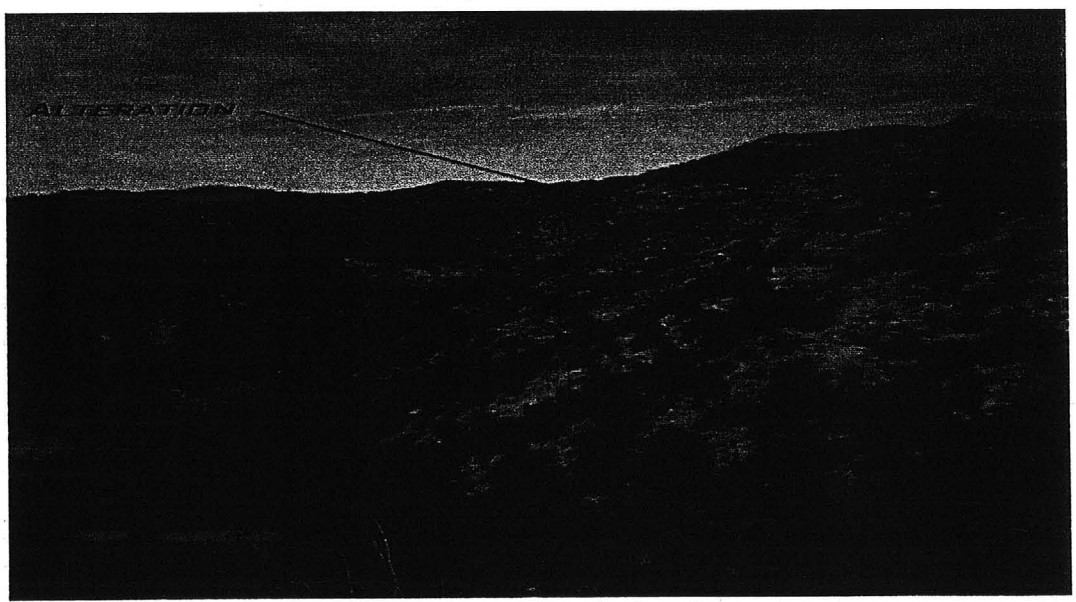
GEOLOGY

In 1971, Phelps Dodge Corporation completed a detailed geologic mapping program in the area of the claim group. A core hole to the depth of 2,064 feet was also completed in the southeastern region of the mineral claims.


Kullman-McCool Mineral Claims
Qtz Monzonite
Andesite
N
Section Corner
22
21
27
28
Dacite
Rhyolite
Andesite
Rhyolite
Dacite

The claims are underlain by the Mescal Limestone formation of Precambrian age. The Mescal Limestone formation is composed of thin-bedded cherty limestone with interbeds of shale. Andesite and dacite porphyry dikes striking northeast with shallow (10 to 40 degrees) dip have intruded the limestone. The intrusives are of Cretaceous age and seldom exceed 50 feet in width.

Within the northwestern part of the claim group a series of rhyolite porphyry dikes have intruded the limestone. This geologic event has been directly linked to the mineralization that occurs in the area. The intrusives and mineralization is believed to be of Laramide (late Cretaceous to early Tertiary) age. The mineralization is marked by gossans with mineralization occurring within the shales of the Mescal limestone formation.



Primary target for exploration

MINERALIZATION

The mineralization in the Kullman – McCool claim groups is situated in or near the rhyolite intrusives of early Tertiary age with the shales and limestone of the Mescal Formation. The rhyolite intrusives produced considerable contact metamorphic effects with the shales and limestones. The mineralization is

reported to be a lower temperature hydrothermal phase of the rhyolitic melt. The mineralizers closely followed along dike contacts and east-west fractures and faults depositing base metal sulfides in favorable horizons of the adjacent sediments and brecciated portions of the rhyolite dikes. Silicate alteration with large red outcrops of the silica breccia is closely associated with the mineralization.

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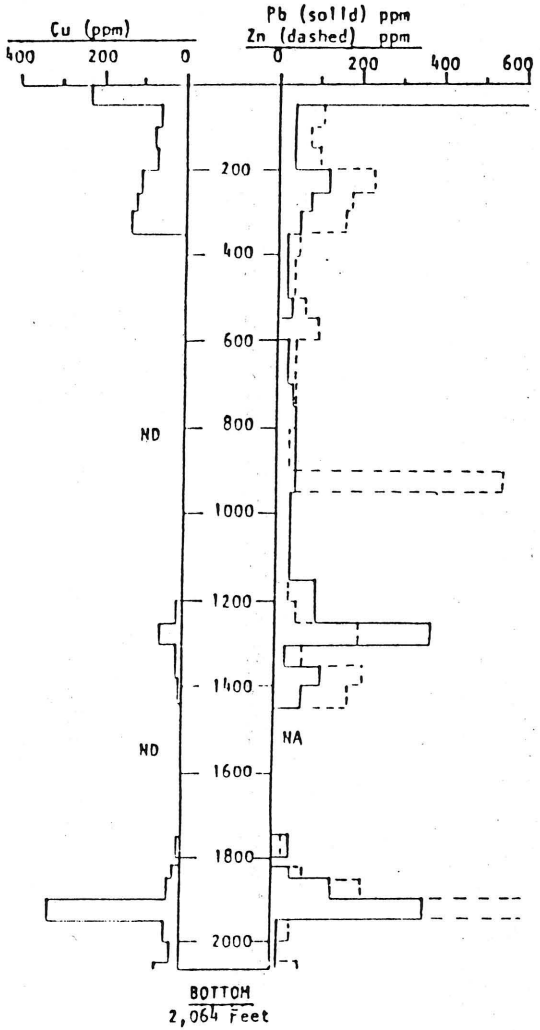
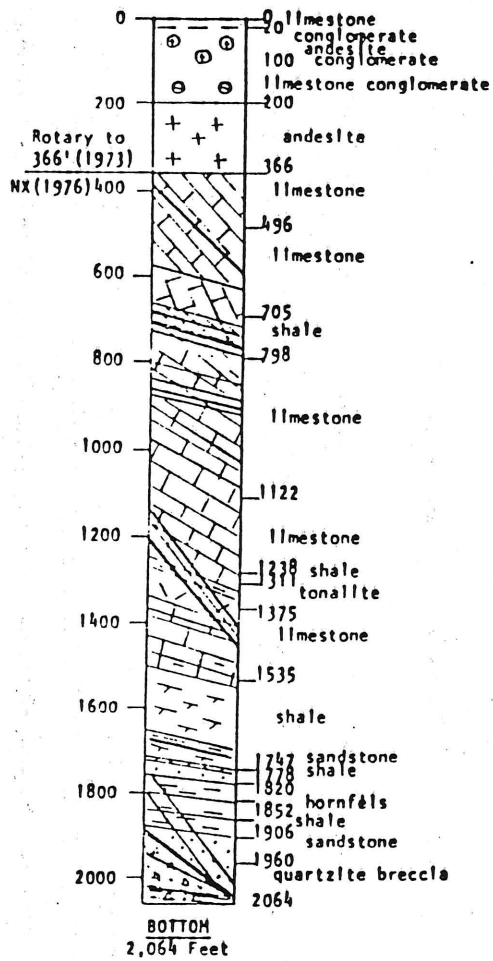
ASSAY LOG

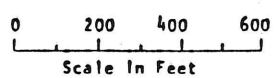


Assay by 50' Intervals

Interval	ppm Cu	Pb	Zn
0- 50	231	625	472
50- 100	66	36	101
100- 150	74	43	79
150- 200	71	40	66
200- 250	102	123	226
250- 300	122	78	176
300- 350	133	54	161
350- 400	2	20	54
400- 450	ND*	25	35
450- 500	"	33	66
550- 600	7	ND	93
600- 650	ND	28	42
650- 700	ND	25	50
700- 750	ND	35	30
750- 800	ND	45	48
800- 850	ND	47	26
850- 900	ND	50	27
900- 950	ND	35	550
950-1000	ND	30	30
1000-1050	ND	32	48
1050-1100	ND	35	28
1100-1150	ND	35	28
1150-1200	ND	90	28
1200-1250	10	100	50
1250-1300	55	375	210
1300-1350	10	25	70
1350-1400	15	110	220
1400-1450	5	65	180
1450-1500	----NA-----		
1500-1550	----NA-----		
1550-1600	----NA-----		
1600-1650	----NA-----		
1650-1700	----NA-----		
1700-1750	----NA-----		
1750-1800	5	40	20
1800-1820	----NA-----		
1820-1850	25	40	80
1850-1900	36	140	219
1900-1950	326	368	1081
1950-2000	40	10	50
2000-2050	20	5	15
2050-2064	55	5	60

GEOLOGIC LOG





Geologic Remarks

Conglomerate (0-20'): basal Cretaceous conglomerate of angular limestone fragments with some andesite; metamorphosed.

Conglomerate (20-100'): basal Cretaceous conglomerate, mostly andesite fragments, some limestone; metamorphosed.

Conglomerate (100-200'): basal Cretaceous conglomerate, primarily limestone fragments, some andesite; metamorphosed.

Andesite (200-366'): Cretaceous andesite flow, part of basal sequence; metamorphosed.

Limestone (366-496'): Permian Naco(?) limestone; dark gray, fine grained. Many sedimentary breccias; cut by calcite veinlets to 1/8". Bedding 40° to core axis. No visible sulfides.

Limestone (496-705'): Mississippian Escabrosa(?) limestone; dark gray, fetid, fossiliferous, shaly in places. Cut by calcite veinlets, bedding 20° to core axis. No visible sulfides.

Shale (705-798'): limy, mottled, green to gray. Dark gray limestone intercalated. Thrust fault zones from 705-708, 729-730, 742-750, and 753-764. Bedding varies from 25° to 50° to core axis. No sulfides present.

Limestone (798-1122'): fine grained, massive, dark gray to gray crystalline, fetid; styolites. Shaly sections up to 10' thick. Bedding 50° to core axis. Limestone cut by calcite veinlets. Thrust faults from 836-837, 864-867, 871-872, 880-882, 883-885, 974-976, 1004-1005, 1007-1008'. No visible sulfides.

Limestone (1122-1288'): gray, fine grained, massive. Cut by stylolites and by hair size veinlets of carbonate. Some fossils. No visible sulfides. Vein from 1285-1286 feet of limestone fragments cemented by manganiferous calcite and a trace of pyrite going to iron oxides.

Shale (1288-1311'): tan to black argillite with limy sections. Several 2" to 3" faults of chlorite, limestone fragments and trace of pyrite.

Tonalite porphyry (1311-1375'): medium grained. Moderate upper epizonal alteration. About 1% pyrite.

Shale and limestone (1375-1747'): shale and shaly limestone. Finely disseminated pyrite to ½%. No visible copper. From 1741-1747 andesite sill, epizonal metamorphism.

Sandstone (1747-1778'): white to gray, calcareous. Up to 2% disseminated pyrite, ½% chalcopyrite.

Shale (1778-1820'): as above.

Hornfels and tactite (1820-1852'): spotted hornfels with clots of disseminated pyrite to 6%. Narrow bands of tactite.

Shale (1852-1906'): spotted shales with clots of epidote, quartz and pyrite. Some sandy laminae. Pyrite to 2%.

Sandstone (1906-1960): white to gray, strongly fractured. Finely disseminated pyrite to 3%, trace of chalcopyrite in hairsize veins.

Quartzite breccia (1960-2064'): fragments of gray quartzite in white limy matrix. Strongly sheared and bleached. Finely disseminated pyrite to 2%. Scattered bands of black shale.

Petrographic Remarks

Limestone (450'): fossiliferous; relatively coarse, partially recrystallized calcite, minor quartz and FeO (stains).

Limestone (697'): fossiliferous; 95% calcite, 4% quartz, 1/2% clay, 1/4% hematite. Minor recrystallization.

Limestone (1000'): crystalline (marble); >95% coarse calcite; hematite stains.

Limestone (1220'): slightly shattered and recrystallized.

Tonalite porphyry (1320'): moderate, upper epizonal alteration; 18% sericite, 7% epidote, 7% calcite, 1% pyrite.

Dolomite (1685'): occasional clay laminae with rare disseminated pyrite. Severely brecciated and cemented with crystalline calcite.

Andesite (1746'): epizonal metamorphism, 1% pyrite.

Hornfel (1897'): epizonal metamorphism, 6% pyrite, 6% epidote, 8% chlorite, 7% sericite, 8% calcite.

Calcareous sandstone (1908'): epizonal metamorphism with hairline fracture veins carrying 3% sphalerite, 1% galena, 2% pyrite.

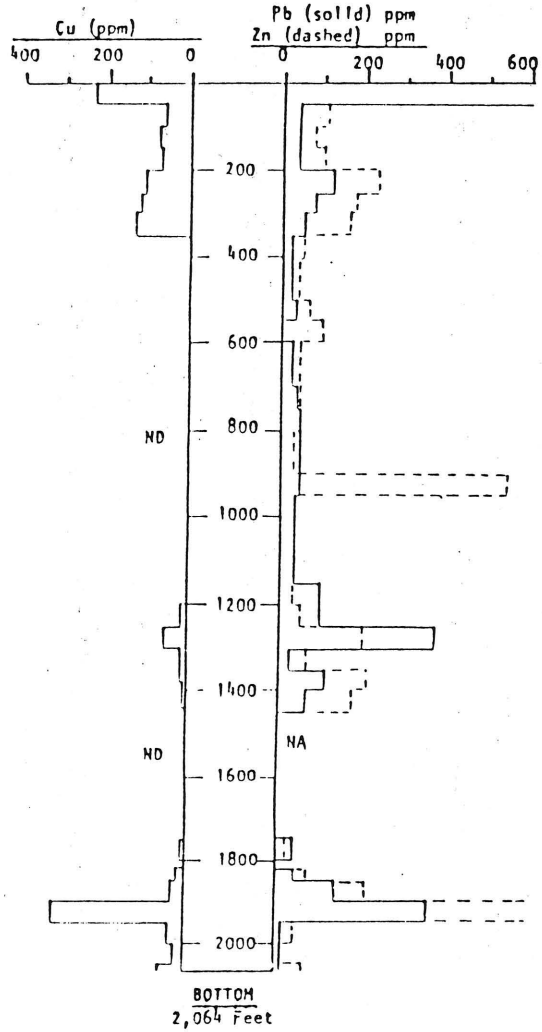
WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

BOUNDARY PROJECT
GILA COUNTY, ARIZONA

Drill Hole BDY-1

SCALE	H.	CONTOUR INTERVAL		REVISIONS
	V: 1"=300'	DATE 12/76	BY. RSL	
SHEET	OF	DRAWING NO		FILE

ASSAY LOG



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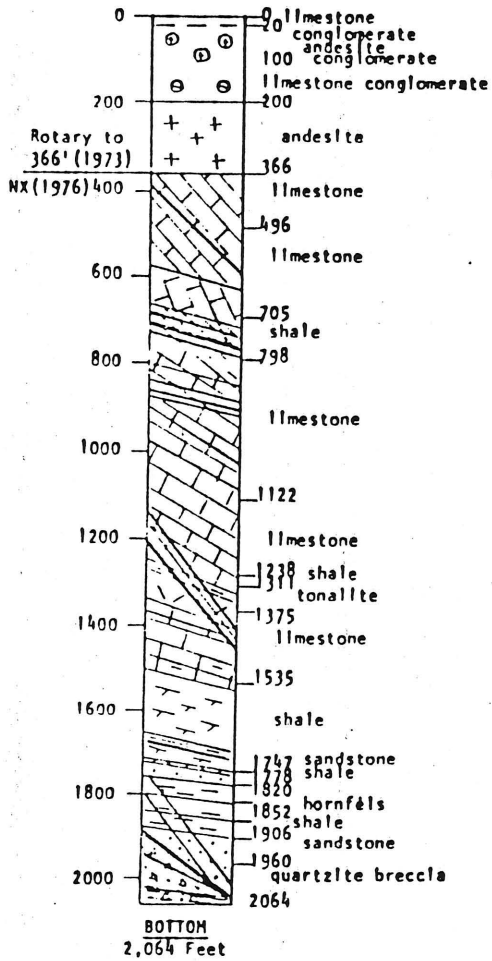

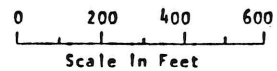

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WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

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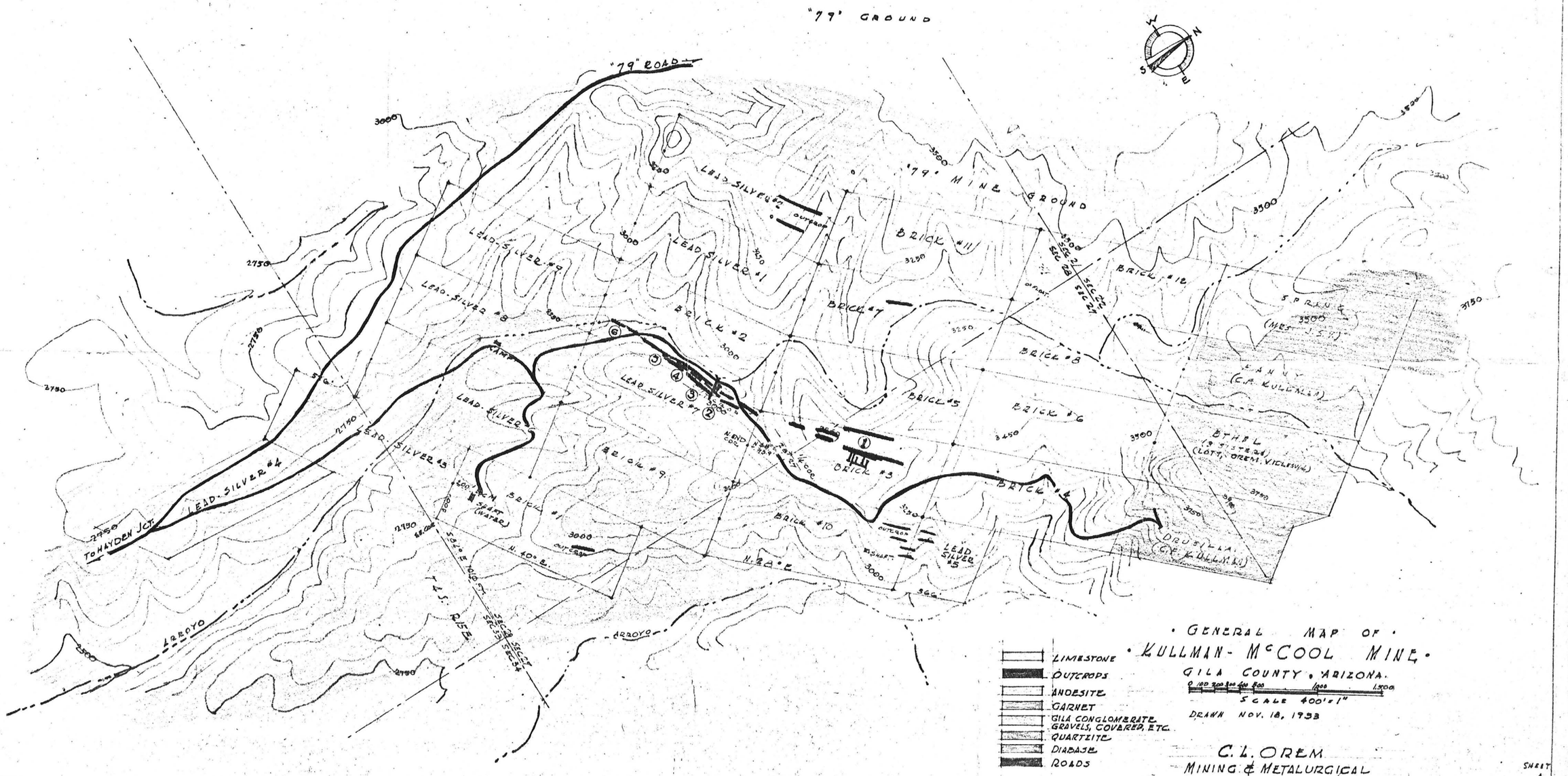
SCALE H.	CONTOUR INTERVAL		REVISIONS
V: 1"=300'	DATE 12/76	BY. RSL	
SHEET OF	DRAWING NO		FILE



LIMESTONE
OUTCROPS
ANDESITE
GARNET
GILA CONGLOMERATE, GRAVELS, COVERED, ETC.
QUARTZITE
DIABASE
ROADS

• GENERAL MAP OF • KULLMAN-McCOOL MINE •

GILA COUNTY, ARIZONA.

0 100 200 400 600 1000 1500

SCALE 400' = 1"

DRAWN NOV. 18, 1933

C. L. OREM
MINING & METALURGICAL ENGINEER & GELOGIST.

Trim

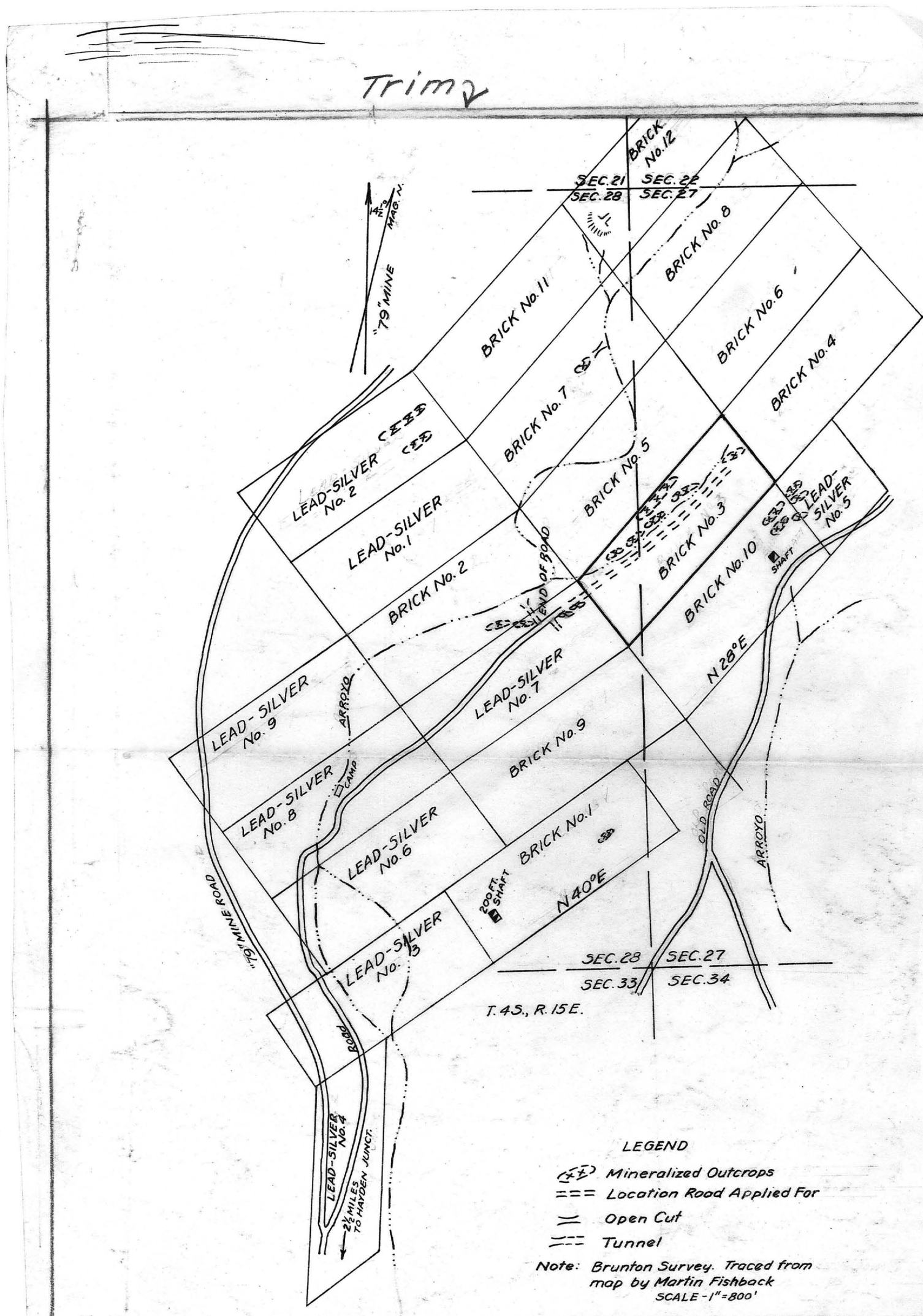


FIG. 1 - CLAIM MAP - KULLMAN-McCOOL MINING CO., GILA COUNTY, ARIZONA

CLAIM MAP - KULLMAN-McCOOL MINING CO., GILA COUNTY, ARIZ
Scale 1" = 800'

Trim

A Roads #83

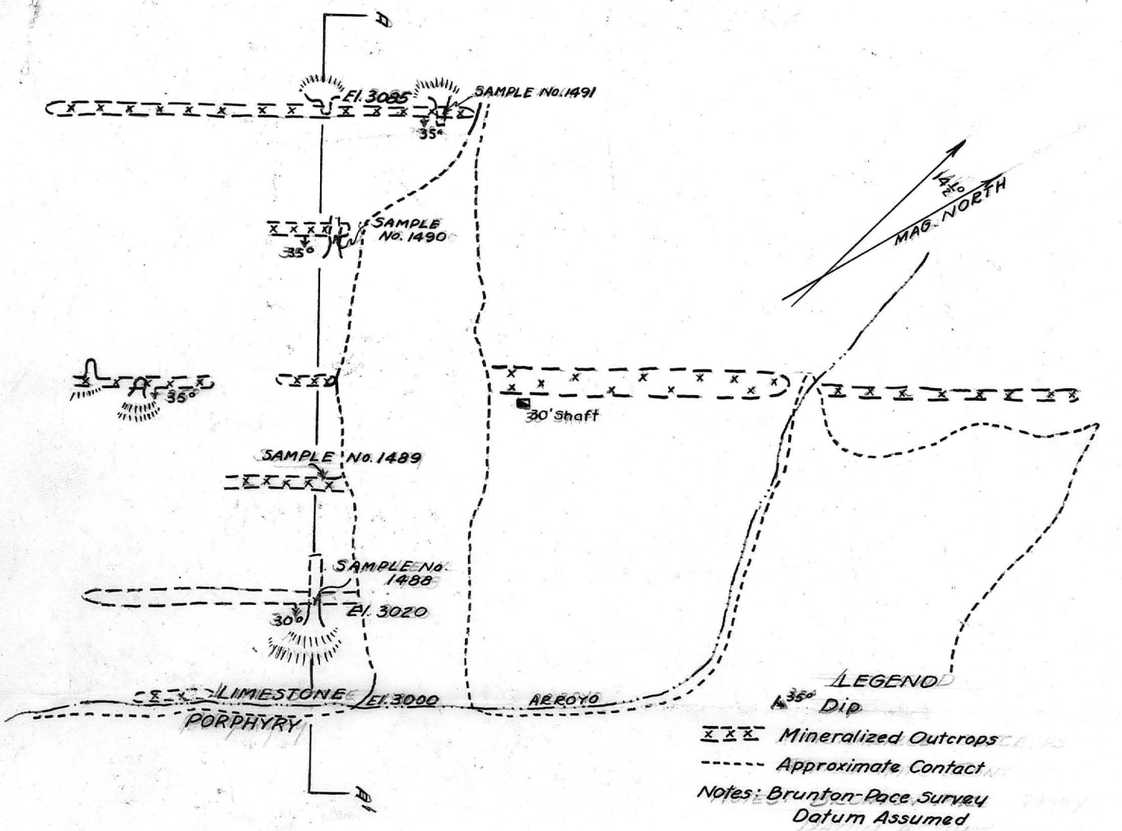
CLA

Fishback

Brick Claims

79

SAMPLE NO.	LENGTH (Feet)	% Cu	% Pb.	% Zn.	Ozs/Ton-Au.	Ozs/Ton-Ag.
1488	4.5	0.02	0.10	0.10	Tr.	0.25
1489	4.0	0.10	1.0	3.4	Tr.	0.85
1490	2.0	1.25	2.8	2.4	Tr.	0.10
1491	4.0	0.50	0.9	1.9	0.005	3.30



PLAN - SHOWING MINERALIZED OUTCROPS - BRICK No. 3 CLAIM
KULLMAN-McCOOL MINING CO., GILA CO., ARIZONA - Scale 1"=50'

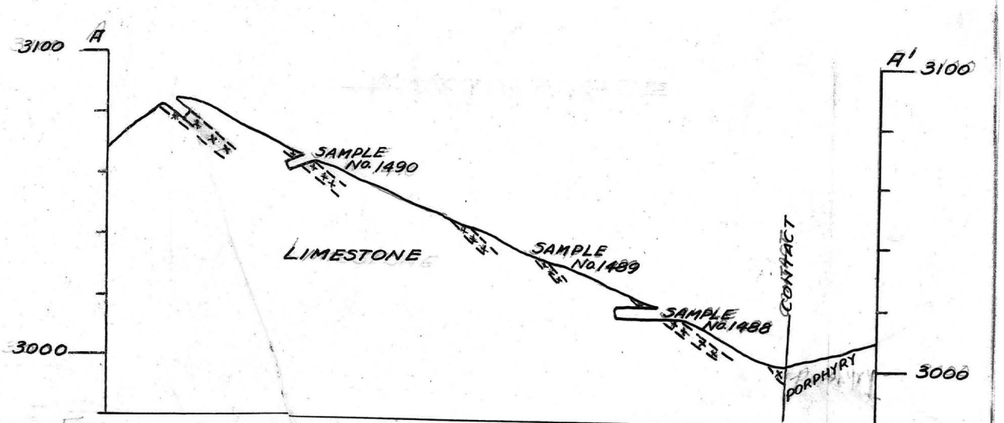
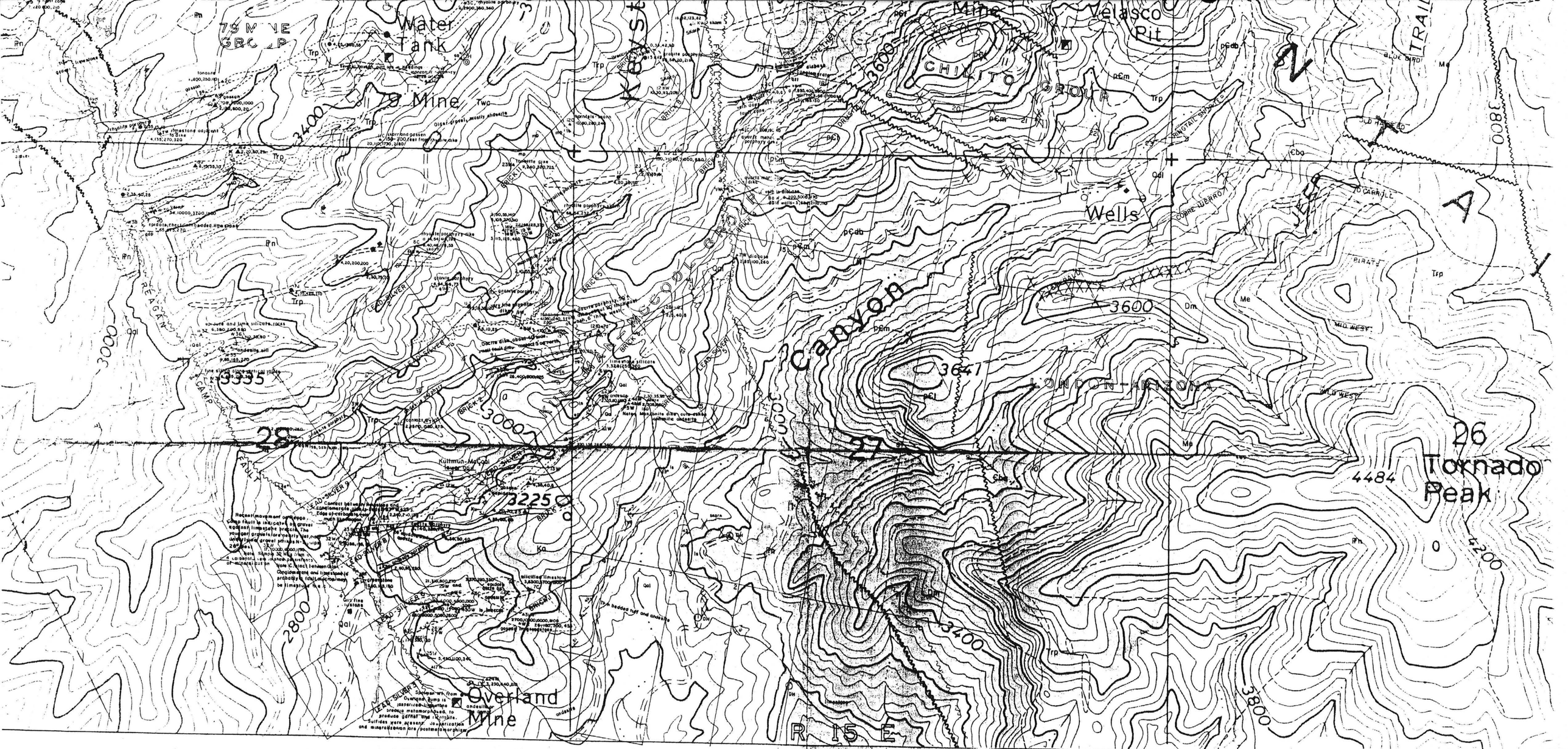


FIG. 2 - CROSS SECTION A-A' - BRICK No. 3 CLAIM - Scale 1"=50'
(Looking Northwest)

PISHBACK



LEGEND

Quaternary

- Qal — Alluvium

Tertiary

- Twc — Whitetail conglomerate
- Trp, etc — Laramide intrusives rhyolite to granodiorite.

Cretaceous

- Ka — Andesite

Pennsylvanian

- Pn — Naco Limestone

Mississippian

- Me — Escabrosa Limestone.

Devonian

- Dm — Martin Limestone.

Cambrian

- €ba — Balsa Quartzite and Abrigo Formation.

Precambrian

- p€t — Troy Quartzite.
- p€db — Diabase
- p€m — Mescal Limestone.

Geologic contact

Faults

6W Sample location

Strike and dip

Geochemical Order in PPM

6 W Sample number
8 Molybdenum
260 Lead
950 Zinc
295 Copper

Geological map from U of A thesis by Geo A ...erach, greatly modified by Gary Christenson and

0 500 1000 1500 feet

WESTERN EXPLORATION OFFICE PHELPS DODGE CORP

79 MINE AREA

GEOLOGICAL AND GEOCHEMICAL SAMPLE MA

SOUTH HALF RAY QUADRANGLE

SCALE	H: 1" = 500'	CONTOUR INTERVAL:	
	V:	DATE: 4-7-71	BY: WJW
SHEET	OF	DRAWING NO:	FILE: C

LEGEND

Pennsylvanian

- Pn — Naco Limestone

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Phelps Dodge Corporation makes no representation or warranty as to the accuracy or completeness of the data or conclusions disclosed hereby. The information is furnished only upon the condition that Phelps Dodge Corporation shall incur no liability on account of your acceptance or use of such information.

Geological map from U of A thesis by Geo A. ...rsch, greatly modified by Gary Christenson and W. J. Walker

0 500 1000 1500 feet

WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

79 MINE AREA

GEOLOGICAL AND GEOCHEMICAL SAMPLE MAP

SOUTH HALF RAY QUADRANGLE

SCALE	H: 1" = 500'	CONTOUR INTERVAL:	REVISIONS
	V:	DATE: 4-7-71 BY: WJW	
SHEET	OF	DRAWING NO:	FILE: Q8-7-34

14
23
R I N G
M O U N
Keystone
Canyon
VELASCO GROUP
San Bernardo Jr
Mine
79 MINE
GROUP
Water
Tank
79 Mine
Chilito
Mine
Velasco
Pit
CHILITO GROUP
Wells
TRAIL
4676
4400
4306
4200
4000
3978
3800
3600
3400
22
T
4
S

R I N G
M O U N T A
Keystone Canyon
VELASCO GROUP
San Bernardo Jr Mine
Chilito Mine
Velasco Pit
CHILITO GROUP
79 MINE GROUP
Water Tank
79 Mine
Wells
TRAIL
T 4 S
4306
3978
4676
3740
21
22
23
14
15
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3800
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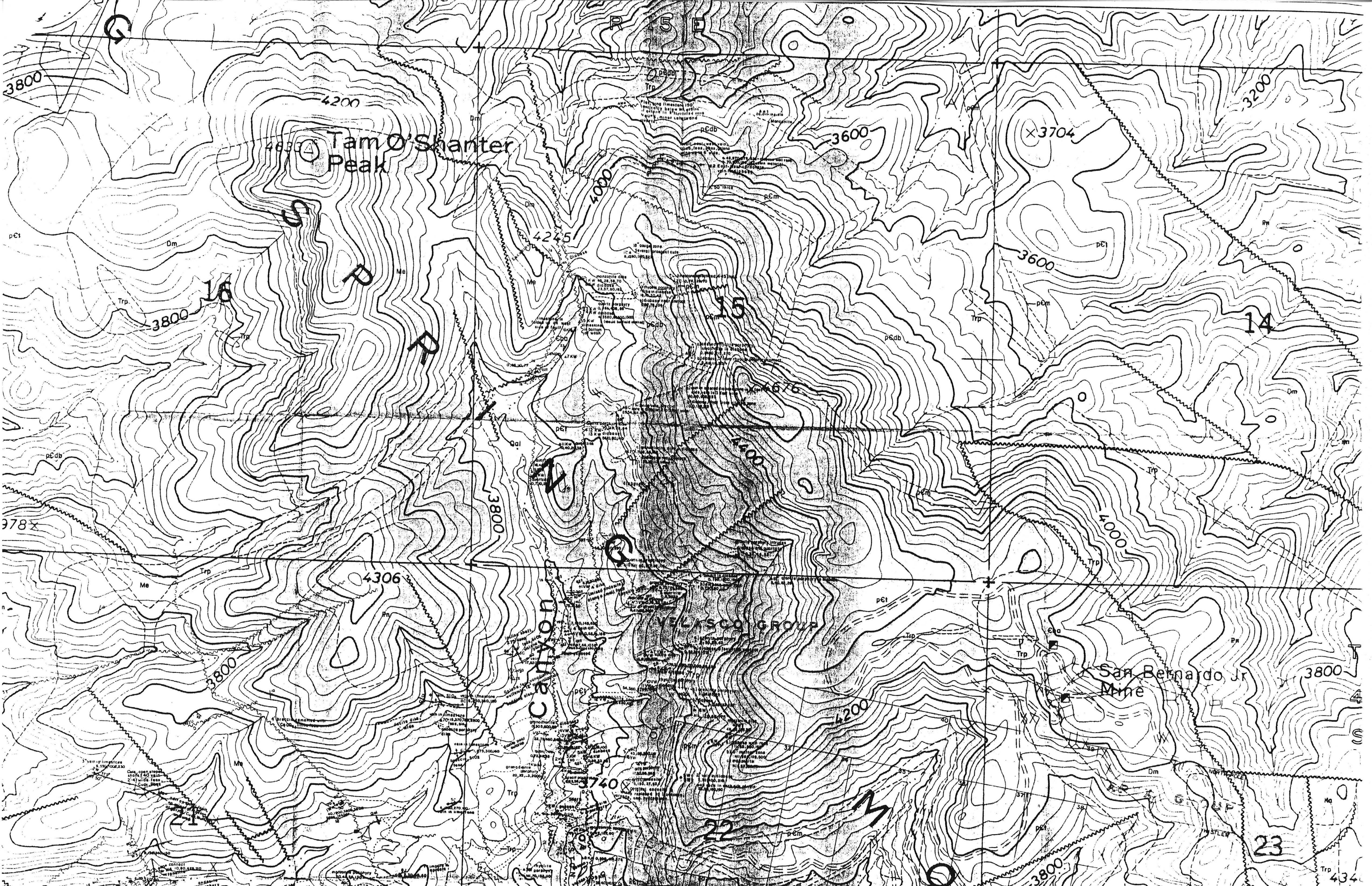
V:	DATE: 4-7-71	BY: WJW	
SHEET OF	DRAWING NO:		FILE: Q8-7-34


R 15 E
Tam O'Shanter Peak
SPRING
Canyon
VELASCO GROUP
San Bernardo Jr Mine
16
15
14
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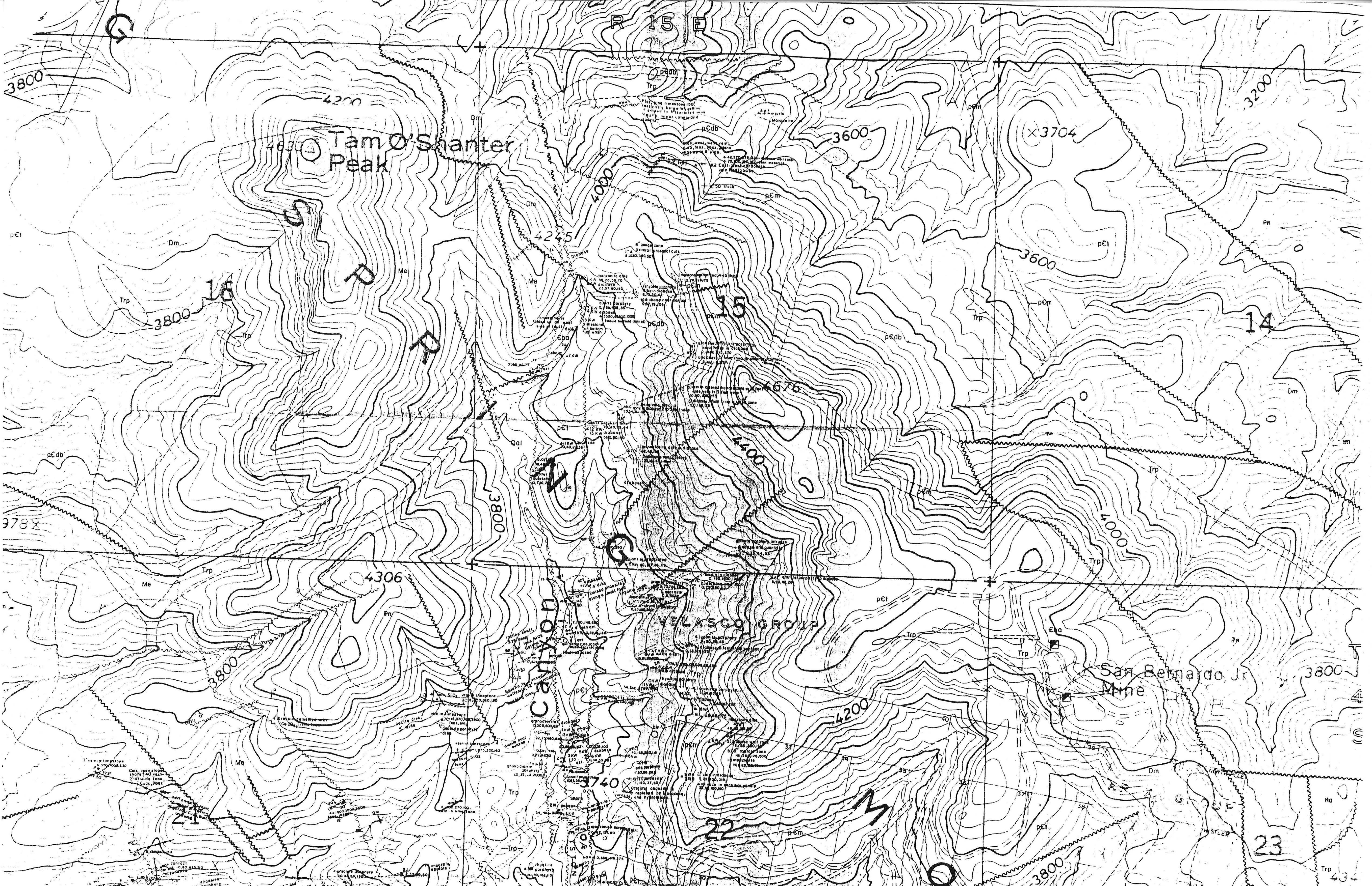
23
4200
3800
3600
4000
4245
3704
3200
4676
4400
4306
3740



R 15 E
Tam O'Shanter Peak
4630
3800
4200
3600
3704
3200
4000
4245
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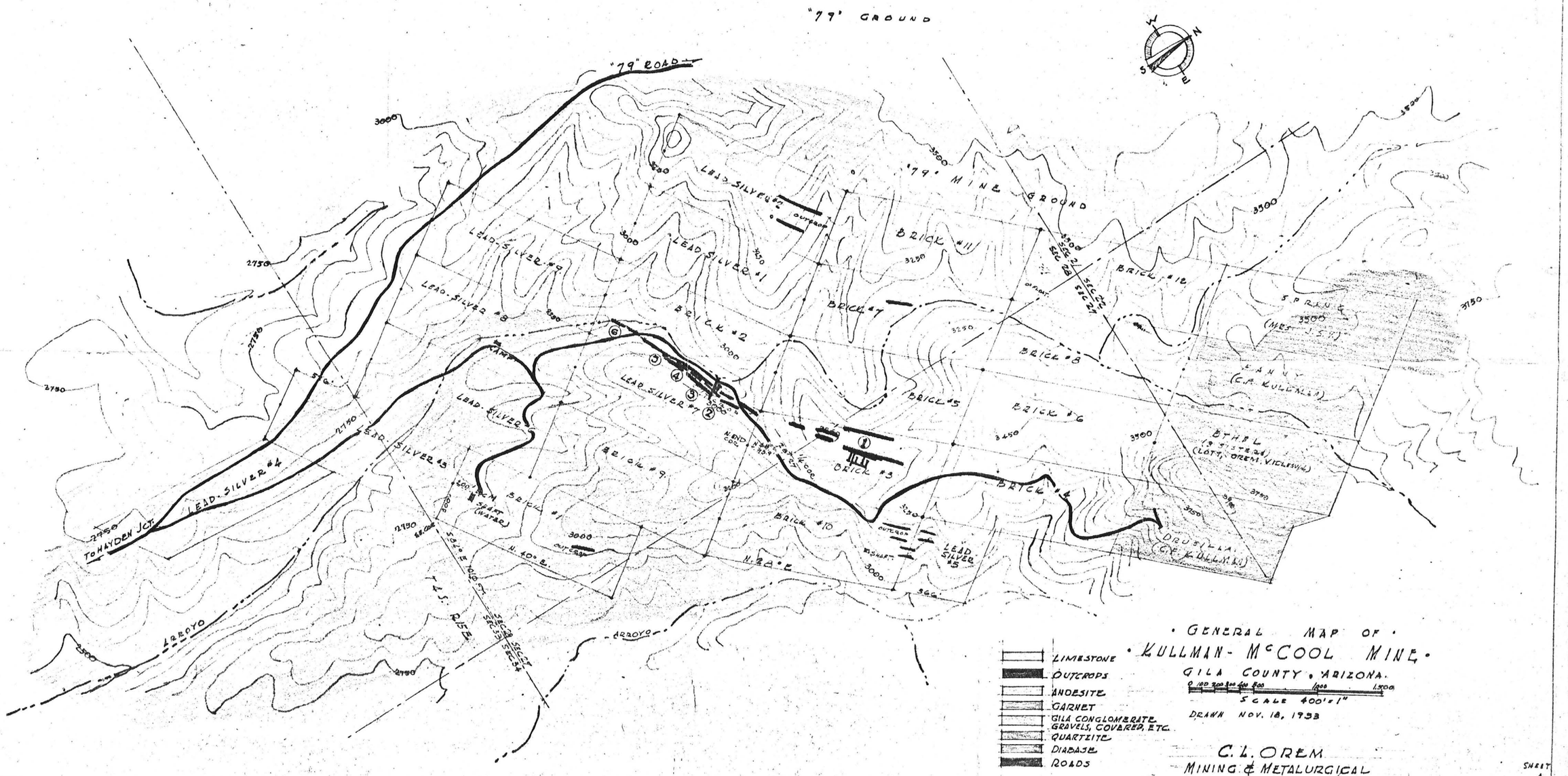
4676
4400
4306
Canyon
VELASCO GROUP
San Bernardo Jr. Mine
3740
22
23



LIMESTONE
OUTCROPS
ANDESITE
GARNET
GILA CONGLOMERATE, GRAVELS, COVERED, ETC.
QUARTZITE
DIABASE
ROADS

• GENERAL MAP OF • KULLMAN-McCOOL MINE •

GILA COUNTY, ARIZONA.

0 100 200 400 600 1000 1500

SCALE 400' = 1"

DRAWN NOV. 18, 1933

C. L. OREM
MINING & METALURGICAL ENGINEER & GELOGIST.

Trim

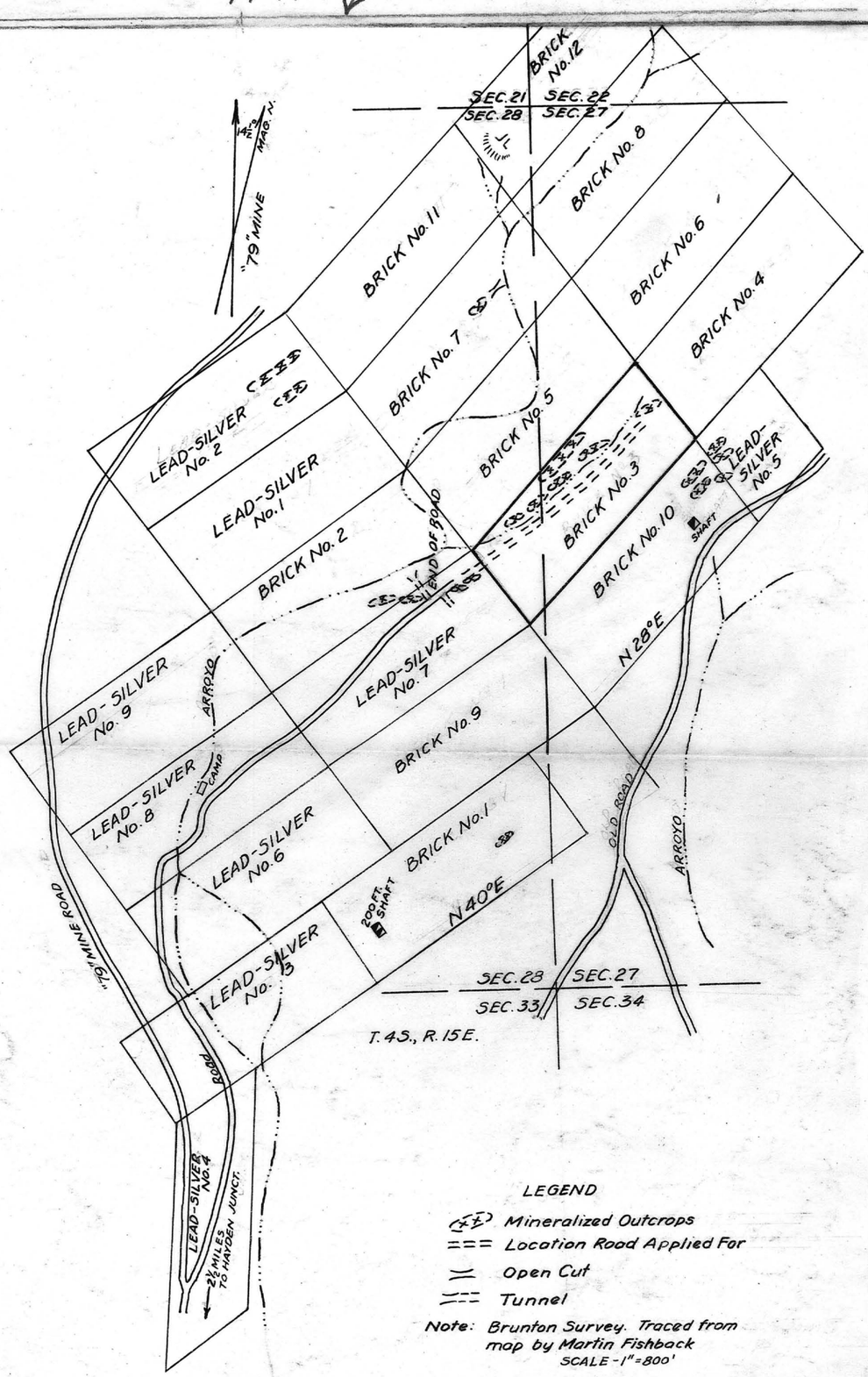


FIG. 1 - CLAIM MAP - KULLMAN-McCOOL MINING CO., GILA COUNTY, ARIZONA

Trim

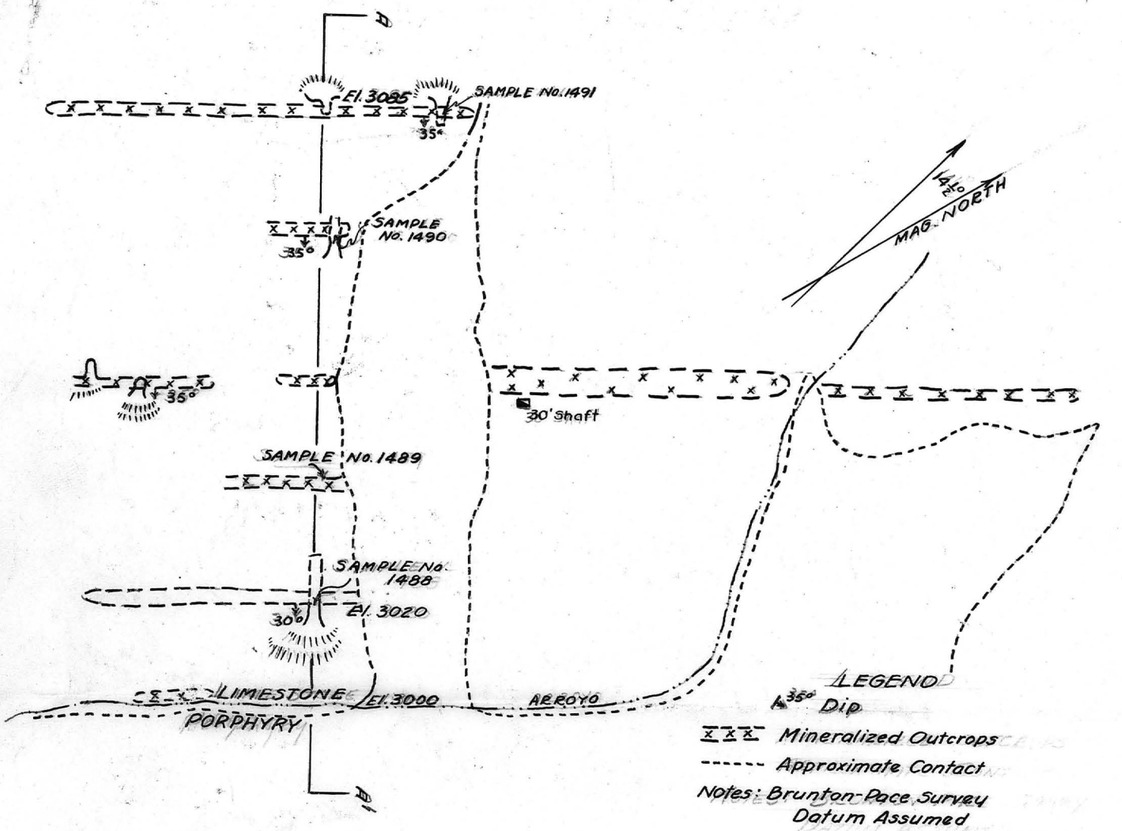
A Roads #83
Brick Claims

CL1

Fishback

79

SAMPLE NO.	LENGTH (Feet)	% Cu	% Pb.	% Zn.	Ozs/Ton-Au.	Ozs/Ton-Ag.
1488	4.5	0.02	0.10	0.10	Tr.	0.25
1489	4.0	0.10	1.0	3.4	Tr.	0.85
1490	2.0	1.25	2.8	2.4	Tr.	0.10
1491	4.0	0.50	0.9	1.9	0.005	3.30



PLAN - SHOWING MINERALIZED OUTCROPS - BRICK No. 3 CLAIM
KULLMAN-McCOOL MINING CO., GILA CO., ARIZONA - Scale 1"=50'

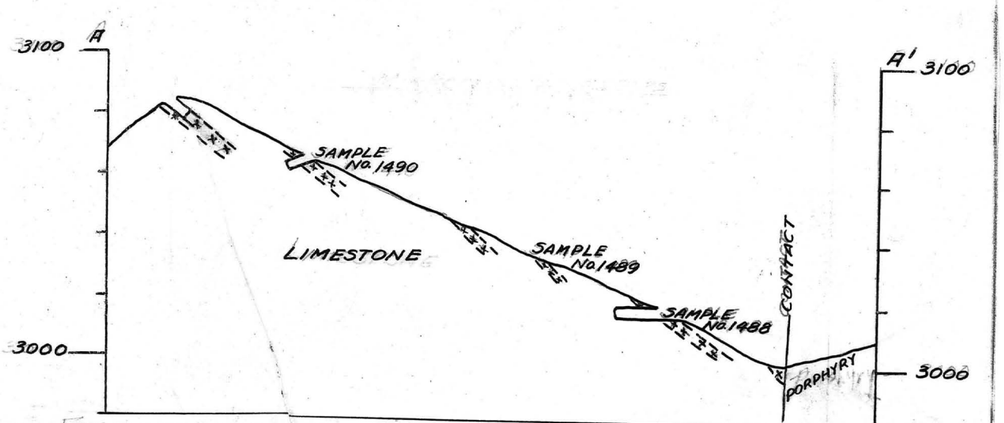
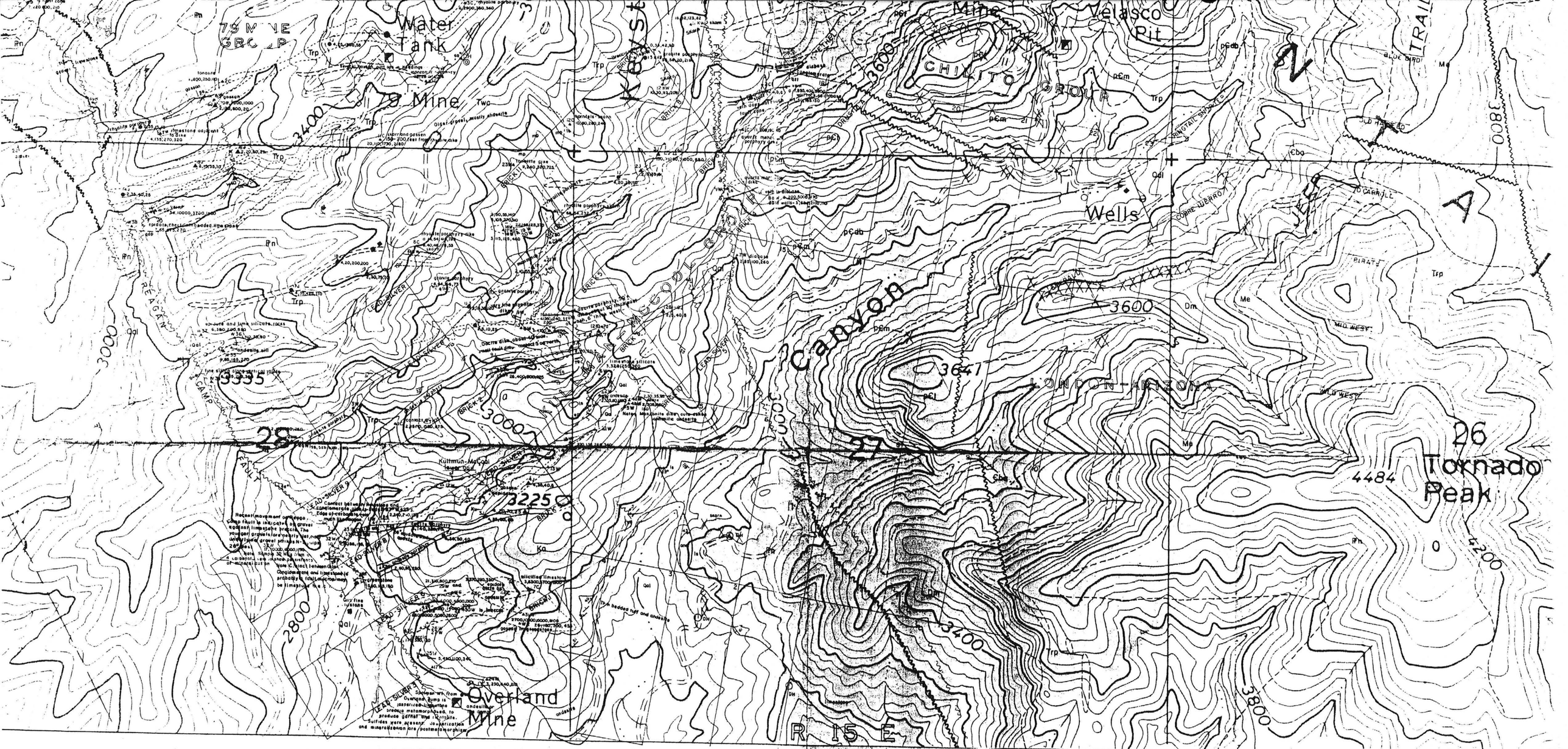


FIG. 2 - CROSS SECTION A-A' - BRICK No. 3 CLAIM - Scale 1"=50'
(Looking Northwest)

PISHBACK



LEGEND

Quaternary

- Qal — Alluvium

Tertiary

- Twc — Whitetail conglomerate
- Trp, etc — Laramide intrusives rhyolite to granodiorite.

Cretaceous

- Ka — Andesite

Pennsylvanian

- Pn — Naco Limestone

Mississippian

- Me — Escabrosa Limestone.

Devonian

- Dm — Martin Limestone.

Cambrian

- €ba — Balsa Quartzite and Abrigo Formation.

Precambrian

- p€t — Troy Quartzite.
- p€db — Diabase
- p€m — Mescal Limestone.

Geologic contact

Faults

6W Sample location

Strike and dip

Geochemical Order in PPM

6 W Sample number
8 Molybdenum
260 Lead
950 Zinc
295 Copper

Geological map from U of A thesis by Geo A ...erach, greatly modified by Gary Christenson and

0 500 1000 1500 feet

WESTERN EXPLORATION OFFICE PHELPS DODGE CORP

79 MINE AREA

GEOLOGICAL AND GEOCHEMICAL SAMPLE MA

SOUTH HALF RAY QUADRANGLE

SCALE	H: 1" = 500'	CONTOUR INTERVAL:	
	V:	DATE: 4-7-71	BY: WJW
SHEET	OF	DRAWING NO:	FILE: C

LEGEND

Pennsylvanian

- Pn — Naco Limestone

Mississippian

- Me — Escabrosa Limestone.

Devonian

- Dm — Martin Limestone.

Cambrian

- €ba — Bolsa Quartzite and Abrigo Formation.

Precambrian

- p€t — Troy Quartzite.
- p€db — Diabase
- p€m — Mescal Limestone.

Geologic contact

Faults

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6 W — Sample number
8 Molybdenum
260 Lead
950 Zinc
295 Copper

Phelps Dodge Corporation makes no representation or warranty as to the accuracy or completeness of the data or conclusions disclosed hereby. The information is furnished only upon the condition that Phelps Dodge Corporation shall incur no liability on account of your acceptance or use of such information.

Geological map from U of A thesis by Geo A. ...rsch, greatly modified by Gary Christenson and W. J. Walker

0 500 1000 1500 feet

WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

79 MINE AREA

GEOLOGICAL AND GEOCHEMICAL SAMPLE MAP

SOUTH HALF RAY QUADRANGLE

SCALE	H: 1" = 500'	CONTOUR INTERVAL:	REVISIONS
	V:	DATE: 4-7-71 BY: WJW	
SHEET	OF	DRAWING NO:	FILE: Q8-7-34


14
23
T 4 S
3978
4306
4676
4400
4200
4000
3800
3600
3400
22
VELASCO GROUP
San Bernardo Jr. Mine
Canyon
Keystone
79 MINE GROUP
Water Tank
79 Mine
Chilito Mine
Velasco Pit
CHILITO GROUP
Wells
TRAIL

R
I
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M
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T
A
Keystone Canyon
VELASCO GROUP
San Bernardo Jr Mine
Chilito Mine
Velasco Pit
CHILITO GROUP
79 MINE GROUP
Water Tank
79 Mine
Wells
TRAIL
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3978
4306
4676
4400
4200
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3800
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3400
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21
22
23

LEGEND

Pennsylvanian

- Pn — Naco Limestone

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- Dm — Martin Limestone.

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- €ba — Balsa Quartzite and Abrigo Formation.

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Geological map from U of A thesis by Gen A ...ersch, greatly modified by Gary Christenson and W. J. Walker

0 500 1000 1500 feet

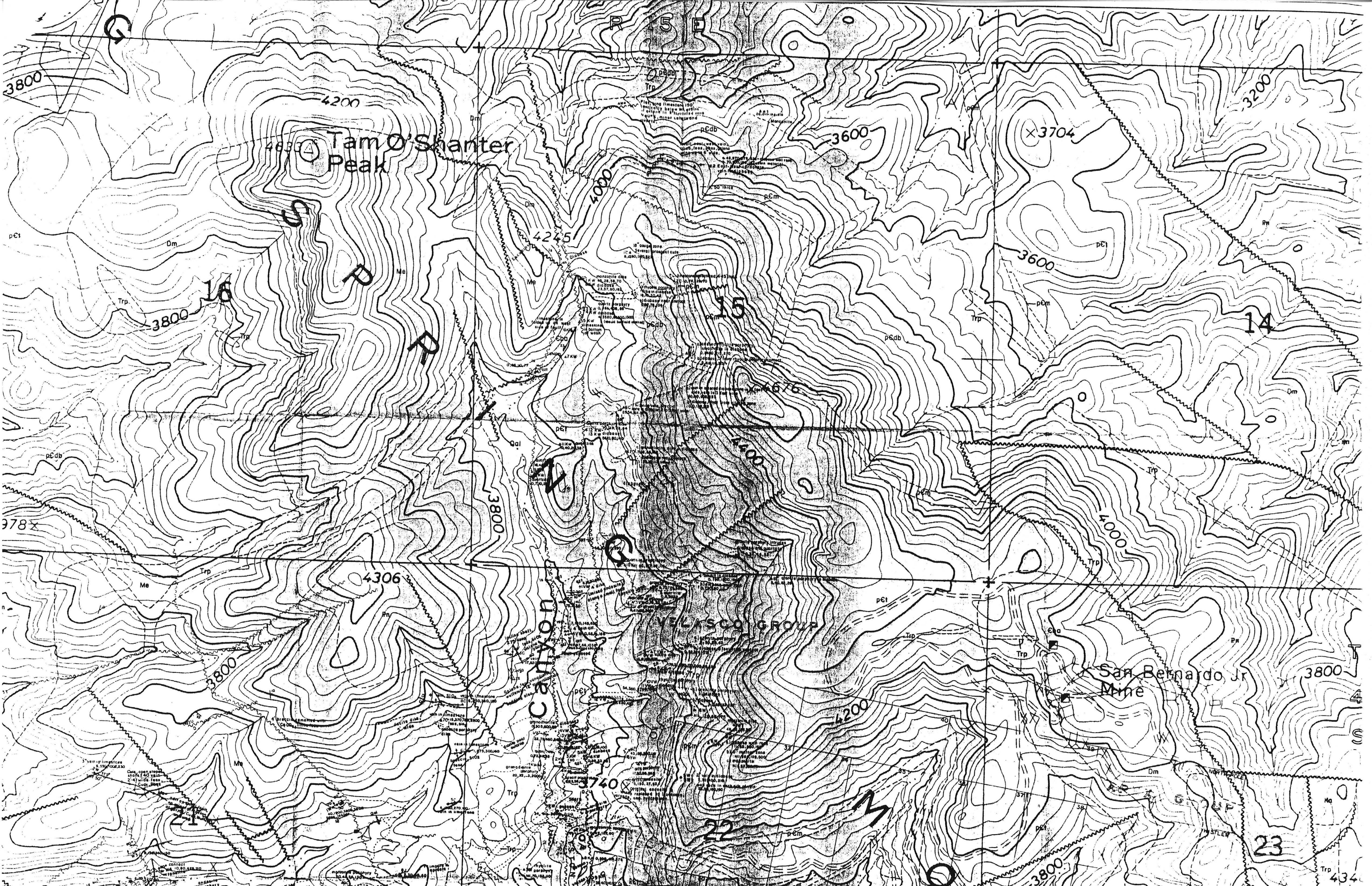
WESTERN EXPLORATION OFFICE PHELPS DODGE CORPORATION

79 MINE AREA

GEOLOGICAL AND GEOCHEMICAL SAMPLE MAP

SOUTH HALF RAY QUADRANGLE

SCALE H: 1" = 500'	CONTOUR INTERVAL:		REVISIONS
V:	DATE: 4-7-71	BY: WJW	
SHEET OF	DRAWING NO:		FILE: Q8-7-34



R 15 E
Tam O'Shanter Peak
S P R I N G
Canyon
VELASCO GROUP
San Bernardo Jr Mine
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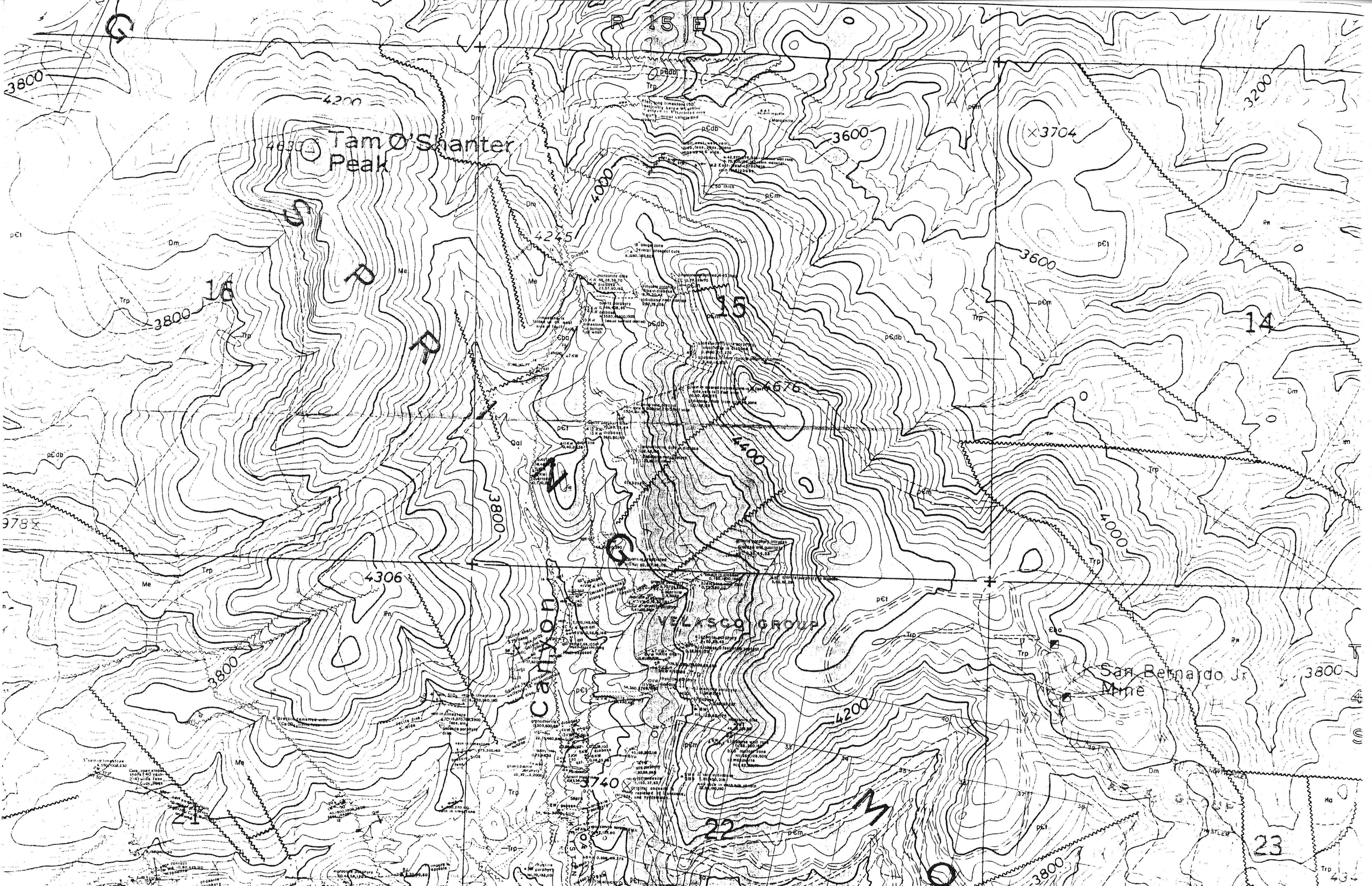

R 15 E
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4245
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14
4676
4400
4306
VELASCO GROUP
San Bernardo Jr Mine
Canyon
3740
22
23

Trip Log - Kullman McKool

13, 198
rsday

6:35 - 8:30 Travel time

We arrived at the Lead Silver #7 claim and sampled the first workings that we came across. The rock type was an alterred limestone with Fe OX minerals present. Wulfenite & silica were also found in the alterred rock. There was some type of contact found here with relatively unalterred limestone being in contact with the black sooty alterred limestone. This contact had an orientation of N 73°E 52°SE. We traveled on to a post marked D. H. #2 and took a 6 foot channel sample across the vein. Actually it was across a vertical fault striking N. 62° E. Deep red hematitic staining was present. Copper oxides and siliceous stringers were found w/i the fault zone. Galena was visible in the siliceous float. Two more samples were taken close by. Another sample was taken at the east end of this drift. We traveled another short distance ≈ 75' northeast to a post marked D.H.#3 which was just north of another drift. We sampled the west end and east end of this drift. I took some pictures of the area and we were fairly certain that we were looking at vanadium. I believe we were still on the Lead-Silver 7 claim. From this point we went approximately 1300 feet northeast along the road to the largest workings encountered during the day. The name of this claim is the Brick #3. We explored the workings and we surprised by the size. Everything was underground here and the surface had been scraped to expose an alterred zone. We sampled underground just east of the 150 foot incline.

We traveled over to the Fanny Claim and sampled the small vein which is associated with the shaft and the drift. It was a quartz or siliceous vein. The wall rock is a pre Cambrian diabase. This was the end of our day @ Kullman - McKool.

5:00

Sammy Thompson (602) 544-1294
1734 W. Tuckey Ln. #1
Phoenix, AZ 85015

Joan DeWitt 602-943-4632
7714 N. 17th Ave.
Phx., AZ 85021

Leslie Oxley 602-242-2890
2143 W Keim Dr.
Phx, AZ 85015

As
KOOLMAN - McKULL INC.

ARE INTERESTED IN SELLING/LEASING

LONDON - ARIZONA GUN CO.

1/29/03

KULLMAN-MCCOOL MINE

GILA COUNTY
T4S R15E Sec 27

DB Information from Visitor: 4/4/84: Jim Vacek (c) 1903 N. 74th Street, Scottsdale, Arizona 85257, called trying to determine the ownership of the Kullman-McCool Mine, Gila County. He would like to contact the owner in order to make arrangements which would allow Mr. Vacek to mine wulfenite specimens. Mr. Vacek has apparently laid out claims and then discovered there is some conflict. The specimens come from the Reagan Group which is part of the Kullman-McCool claims. The wulfenite is reported to be of good quality with the blades coated with druse quartz.

KULLMAN-McCOOL GROUP GILA COUNTY

From: Mines Handbook 1931

Kullman-McCool Mining Company

Address: C.C. Pritchett Mine address: Hayden Junction, Arizona
Best, Texas

Officers: C. J. Kullman, President
C. E. McCool, Vice President
C. C. Pritchett, Secretary.

These three compose the directorate.

Inc. 1928 in Arizona

Property: 20 claims, 12 of which are known as the Brick claims and 8 as the Silver-Lead claims, in the Banner District - Gila County - NE of Kelvin. A prospect partially developed.

Kullman & McCool Mining Co. - address: Hayden Jct., Arizona - Lee Reagan, Pres.-Gen. Mgr.

Property: Group of molybdenum and vanadium claims in Pinal County near Hayden, Arizona

Development: By adit. Late 1936, co reported to have been producing about 25 tons of molybdenum and vanadium ore monthly.

From: Mines Register - 1937

1. Kullman-McCool Mining Company (Reagan Camp)
2. Gila Coun[illegible], Ar[illegible]
3. Martin Fi[illegible]back
4. W. R. Jones
5. Visited September 22, 1948
6. Lead-silver-zinc-copper
7. This place is small, but it is working. Might keep an eye on it. Of no interest - revisit to check opinion.
8. ———

* * * * *

London Dy Group

London Arizona Bullock Box PO 1472
Geo. W & Robt C Wright

Bond & lease 20,000
10% 2 yrs
Net smelter ret 17810 [illegible]
Upper Tay

36 Claims
Lode ufst.
Surveyed for Pat. but not finished posted.

Loc. W 8 [illegible] [illegible] found.
[illegible] of [illegible]
Cabello near 7990

Road rough last 6 miles [illegible] [illegible]
[illegible] [illegible] RR bridge S & [illegible]

Vein [illegible] 60'
[illegible] ?

51

Wentzell Prod

30,000.00

sell for 10,000

1/2 cash bal terms

9g 11.0 X 7.0 X 6.0 cm K-163

MINER[illegible] ...IMEN FOR DEPARTMENT OF LIB... ...D ARCHIVES

(Do not write in this space)

Ore _____

Cabinet _____

No. _____

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.)

Specimen No. 10-2, collected by Newton Wolcott, Field Engineer

Name of ore Gold-silver

Minerals contained Cerargyrite, gold

Gangue Quartz

Depth at which taken 15 feet below surface

Approximate mineral content (in terms of average per ton) Over 3 ozs. gold and about 30 ozs. silver per ton

Name of mine or claim Not known

Group London-Arizona Group

District Banner Mining District

Location (distance and direction by highway from what town 8 mi. north of Winkelman

Owner of property Carriger & Branch Winkelman, Arizona.

Operator Carriger and Branch

Mine active or inactive Active

If inactive, when operated _____

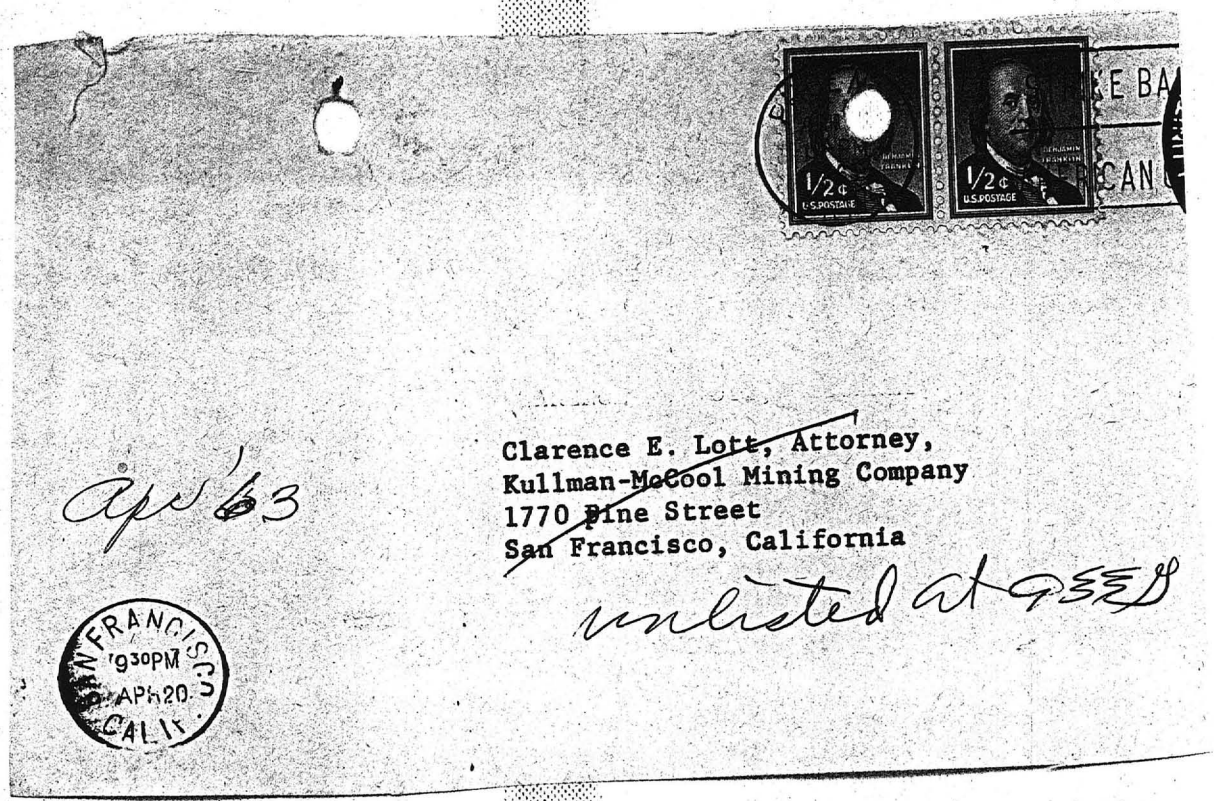
Specimen presented by Orson Branch

Date 9/25/40

Notes (Any general information regarding the history of the property.) This ore is from a new discovery on the London-Arizona Group. Other samples from the same tunnel have assayed approximately 12 ounces in gold.

If more space is desired for notes, use other side.

This specimen is now in the ADMR Museum (see K number).



Apr '63

Clarence E. Lott, Attorney,
Kullman-McCool Mining Company
1770 Pine Street
San Francisco, California

unlisted at 9555

Globe, Ariz.
July 3-47

JUL 5 1947

Chamber of Commerce,
Phoenix, Ariz.

Gentlemen:

I have a copper and silver mine I would like to sell. It is in the Winkelman district about 10 miles from the Hayden smelter. Has been in operation some time. Shipped two car loads in June. The smelter returns sheets show a good profit. The ore at present is opened up about 30 feet in the face. There are 35 unpatented claims, with clear title. About 4000 feet elevation. Would be glad to furnish

further information and show smelter return sheets to prospective buyer.

Would you be so kind as to hand these two letters to any reliable men that might be interested?

Thanking you very much, I am,

Very truly yours

Geo. W. Wright

Box 1472

Globe, Ariz.

JOHN S. VILLESVIK, A. I. A., ARCHITECT
109 NORTH THIRD STREET, YAKIMA, WASHINGTON · PHONE 4677
MAURICE R. SMITH, ASSOCIATE

July 16, 1954

Mr. R. I. C. Manning, Director
Department of Mineral Resources
Mineral Building, Fairgrounds
Phoenix, Arizona

Re: Kullman McCool Mine

Dear Mr. Manning:

Enclosed is additional data on this property consisting of an addendum to Mr. Orem's engineering report, and detail maps, sheets #2 and #3 to accompany the general map, sheet #1.

This information gives further details on the workings and geology of the mine and supplements the material which I left with you several months ago.

Although we have had several inquiries regarding the property, it is still open for lease with option to purchase on the terms set forth in my previous letter.

Yours very truly,

John S. Villesvik

Enclosures:

1 Addendum
2 Maps

JSV:s

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

Letter from Drusilla Reagan Lott, daughter of Lee Reagan, dated July 14th,1953 to A.L.Flagg states:

Fishback Lease cancelled. Property open for negotiations.

Lee Reagan passed away in Yakima, Washington, November 1952.

Further correspondence regarding the property should be addressed to Clarence E.Lott, attorney for the Kullman-McCool Mining Company, at 1770 Pine Street, San Francisco, California.

July 23d,1953,
A.L.F.

THE EAGLE-PICHER MINING & SMELTING COMPANY
MIAMI, OKLAHOMA

INTRA-COMPANY CORRESPONDENCE

TO Grover Duff - Tucson Office DATE April 6, 1951

FROM John W. Chandler - Miami Office

SUBJECT: Exploration Work

Dear Grover:

We are presently compiling a record of all the mines and prospects which we have examined for the Company during the past 10 years.

Starting with 1940, and listing the work done by years, such as 1940, 1941, 1942, etc., we would like to have the following information tabulated:

1. Name of property
2. Location - (State and County)
3. Who it was submitted by
4. Who made the examination
5. Time spent on the examination
6. Metals involved
7. General conclusions drawn from examination
8. Remarks - Under this heading could be shown whether we have done drilling or any other work in addition to the examination. Give brief outline. If the property subsequently became a mine unit and was operated so state.

We do not have a complete file in this office on all properties examined by the Company and we will combine your report with the one being made up from our files to make the final report complete. I would appreciate it if you could put someone on this work until it is completed, sending me three copies of your tabulation.

Best regards,

Jack.

John W. Chandler.

JWC/jm

4-25-51 - Mr. Chandler will send us a list of the properties on which they have reports in their files, and we will then send him the information on the others.

GJD

KULLMAN-McCOOL MINING COMPANY
4250 NORTH 10TH PLACE
PHOENIX, ARIZONA

DRUSILLA REAGAN LOTT, PRESIDENT
JOAN OREM, VICE-PRESIDENT
SIDNEY LEE VILLESVIK, SEC.-TREAS.

LESLIE B. OXLEY, STATUTORY AGENT
CLARENCE E. LOTT, GENERAL COUNSEL

March 3, 1954

Department of Mineral Resources
Mineral Building, Fairgrounds
Phoenix, Arizona

Re: Kullman-McCool Mine

Attention: Mr. R.I.C. Manning, Director

Thank you for the kind interview which you granted me several weeks ago while I was in Phoenix. You requested further information regarding leasing terms. They are as follows:

There are no liens or mortgages against the property and it is open for a ten year lease with option to purchase. The terms being asked are a royalty of 10% on all smelter returns with no specified minimum payment for the first six months, in order to permit the operator to become established. The second six months there shall be a minimum monthly payment of $100.00. The second third years this minimum shall be increased to $200.00 per month. For the fourth through the tenth years the minimum shall be $400.00 per month. The period of the lease will be ten years and a purchase price of $200,000.00 is placed on the property. Of course the operator will take care of the assessment work. If the operator has a substantial investment and is making a good showing, the lease would probably be renewed for five years more. Also in the event of a general depressed market, some reduction in minimum royalties might be considered.

I am also enclosing a map of the property to supplement the report which I sent to you with my letter of January 26th.

We would appreciate hearing about anyone who might be interested and also, please do not hesitate to call on us for any further information.

Cordially yours,

John S. Villesvik

John S. Villesvik
109 No. 3rd St.
Yakima, Washington

JSV:s

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Kuhlman-McCool Mine (formerly Regan Mine) Date June 19, 1953

District Banner District --- Gila County Engineer Axel L. Johnson

Subject: Mine Report ---- Information from Martin Fishback, Lessee.

Location Approximately Sec. 27 -- T 4 S -- R 15 E
Go out on Winkelman-Ray Highway north-west from Winkelman. Turn right about 3 1/2 miles northwest of Winkelman on private mine road, leading to the 79 mine. Drive about 3 1/2 miles north-northeast on this road, turning to the right about 1/2 mile before reaching the 79 mine, and continuing another 1/2 mile on private road. Road good.

Former Name Regan Mine

Owners Kuhlman-McCool Co. (a closed corporation) , Kelvin, Arizona.

Lessees Mr. Martin Fishback and associates
Address Mr. Martin Fishback, Kelvin, Ariz.

Principal Minerals Lead, with small pockets of Copper, and some Vanadium.

Number of Men Employed Not in operation. Closed down March 13, 1953 on account of the low price of Lead, and also o n account of disagreement between the Lessees (Mr. Fishback and 2 others)

Production Rate None at present.

Geology Reported by Mr. Fishback to be the same as the 79 Mine. (Replacements in the limestone formation along faults and fissures, near the contact with the andesite porphyry) Mine adjoins the 79 mine.

Ore Values Mr. Fishback reports 6 to 7 % Lead, with up to 3 % of Vanadium. Zinc negligible. Copper in scattered small pockets.

Mine Workings 6 tunnels with drifts from same.
1 winze --- 125 ft. deep

Proposed Plans Mr. Fishback and associates have made no definite plans for resuming mining operations. Some exploration and diamond drilling has been considered.

Remarks Due to the fact, that Mr. Fishback is very hard of hearing, it was very difficult to get information from him in regard to this mine. Consequently, this report is very incomplete.

KULLMAN-McCOOL MINING COMPANY
4250 NORTH 10TH PLACE
PHOENIX, ARIZONA

DRUSILLA REAGAN LOTT, PRESIDENT
JOAN OREM, VICE-PRESIDENT
SIDNEY LEE VILLESVIK, SEC.-TREAS.

LESLIE B. OXLEY, STATUTORY AGENT
CLARENCE E. LOTT, GENERAL COUNSEL

January 26, 1954

Department of Mineral Resources
State of Arizona
Phoenix, Arizona

Re: Kullman-McCool Mine

Gentlemen:

This property is open for lease with option to purchase and we thought that, due to your intimate knowledge of Arizona mines and mining, that you might suggest the names of individuals or corporations who might be looking for properties of this nature. You may rest assured that your reply would be treated confidentially and we would truly appreciate any suggestions that you might have to offer.

This property was purchased by Mr. Lee Reagan around 1927, who organized the Kullman-McCool Mining Company, an Arizona Corporation for the purpose of developing this property. A small amount of assessment work had been done on it before his time. Mr. Reagan passed away a year ago and his three daughters are his sole heirs.

Due to a combination of circumstances including the depression, World War II and Mr. Reagan's illness since 1938, very little work was done on the mine. The property was leased to Mr. Charles F. Goetz under lease with option to purchase in March, 1947, who operated it for six years in a small way. Mr. Goetz took in as partners with him Mr. Martin Fishback and Mr. George Emmons. Mr. Fishback was quite old and had suffered a stroke and as a result, very little was done by them. Although Mr. Fishback still has faith in the property and requested another two weeks to make a showing, Mr. Goetz gave up the lease last May and at the same time offered to buy the mine. However it was an offer that the directors have not yet wished to accept.

This is a very valuable property as you can see by the accompanying report, and if properly operated, will develop into a fortune.

The officers and directors are interested in securing an operator who will really develop the property and help that you may be able to give us in that direction, will be more than appreciated.

If you should go out to the property you will probably meet Mr. Kullman who lives on the ground and is a small stock holder.

You may address your communications to John S. Villesvik, 109 North Third Street, Yakima, Washington.

Yours very truly,

John S. Villesvik

Enclosures:
A report by C.L. Orem, mining engineer & geologist, dated Dec. 7, 1953.
General Map showing contours, workings and claims, dated Nov. 18, 1953

December 10, 1943

Office of Price Administration
War Price and Rationing Board 81.7.1
137 North Second Avenue
Phoenix, Arizona

Gentlemen:

Lee Reagen, owner and operator of Kullman-McCool Mine, 6 miles from Hayden, is developing, preparatory to producing copper, lead, vanadium and molybdenum ores.

A car registered under the name of Sidney Lee Reagen, his daughter, is in use for transportation of personnel and supplies in connection with this operation.

Applicant is asking for gasoline rations to the amount of 2000 miles per month in connection with this work. This department recommends that such additional supplies be granted.

Yours very truly,

George A. Ballam
Assistant to the Director

GAB:JES

A PRELIMINARY DESCRIPTION OF THE BRICK GROUP OF MINING CLAIMS

LOCATION

The property is situated in the Banner Mining District, Gila County, Arizona, about 4 miles northwest of the town of Hayden, and three miles north of Hayden Junction, a station on the Southern Pacific Railroad. A good mine road connects the property with the railroad and state and county highways. The group consists of 21 unpatented mining claims, about 420 acres, and adjoins the "79" mine.

GEOLOGY AND MINERALIZATION

The property occupies a large and well mineralized area in the paleozoic limestones, which are intruded by many dikes and irregular bodies of igneous rocks (porphyries).

The major portion of the Dripping Spring Range in which this property is situated, is composed of very large fault blocks of limestones that have been tilted at various angles by igneous intrusions and subsidences. These limestones have been mineralized in places on the contacts of the porphyries, in fractures and fissures, and along favorable bedding planes. Extensive faulting has again occurred later than the mineralization.

Every claim of the group shows surface outcrops of ore zones. Some of these are large and intensively mineralized. The largest and one of the best mineralized shows on the Lead Silver No. 9, continues through the Brick No. 2, the Brick No. 3, and on to the Brick No. 4; -- a large and prominent mineral zone cropping for at least 4000 feet lengthwise through the center of the property that is exposed by surface erosional features through a vertical range of better than 400 feet. I do not know how much further it extends as it passes under the Gila Conglomerate (a later formation) and surface debris on the southwest end. All the mineral zones exposed at present are well leached, and in considerable portions of them oxidized ore minerals form commercial ores.

A considerable amount of comparatively shallow surface workings have been done in and about these mineral zones. The ores exposed by these workings and the surface are: Lead molybdate and lead vanadate ores; oxidized lead ores carrying gold and silver; oxidized copper ores carrying gold and silver. In general the bulk of these different classes of ore occur in separate veins and exposures.

While many thousands of tons of commercial ores are exposed by these present surface workings, they are too insufficiently outlined at present by development openings to attempt any close estimate of tonnages and grades of ore. These zones are, however, sufficiently indicated by surface croppings and workings to warrant the assumption that they will be productive of large commercial ore bodies. The type of mineralization, together with the ore exposed by erosional features and the present development openings on the above mentioned large mineral zones through a horizontal distance of over 4000 feet and a vertical range of better than 400 feet, are the strongest assurances that this property will be productive of a very large tonnage of commercial ore. This zone, although covered by surface debris for about 300 feet above the lowest drift tunnel in the gulch, shows practically continuous ore bodies wherever visible on the surface or underground through widths of from 2 to 50 feet. In some places the vein will be too low grade to class as ore and in others too well leached to obtain commercial ores close to the surface.

Over some 600 feet of strike above the present two crosscut tunnels on the Brick No. 2 claim, many faces and shallow workings show almost continuous lenses of ore in larger widths of mineralized material.

This area shows a highly mineralized, fractured, fissured, and altered limestone containing replaced beds of ore and a very strong verticle fissure overlying a steeply dipping quartz-diorite contact fissure that contains ore.

On the lower crosscut tunnel the verticle fissure is 80 feet from the porphyry contact and this contact dips at about 50 degrees toward it. Southwest along this main mineralized zone for several hundreds of feet these two major structures gradually approach each other in strike as it is apparant they do with more depth -- these conditions produce a long wedge of limestone above and adjoining this contact that has the indications of making a very large ore body. The nearer they approach each other on the surface, the more intensely shattered and mineralized is the main mass between them and the larger, more numerous and higher grade are the lenses of high grade ore.

This is simply one area on the property where a comparatively small amount of well placed development from the present openings in it may outline a very large ore body and where this development opens the intersections of these structures with the higher grade beds of ore, -- large high

grade ore bodies can be expected. This area is all high in Molybdates and Vanadates and contains considerable lead.

While the occurrences of lead vanadate and molybdate ores in the oxidized portions of lead veins is not unusual in the southwest, the amounts occurring in these zones on this property are unusually high and will develop into extremely valuable assets.

The lead molybdate and vanadate ores mixed occur through practically all the leached croppings of this large mineral zone. Many of these areas constitute a very good grade of ore.

The percentages of these metals vary in every ore body and as these ores are blocked out and sampled and ore tests run on them and the exact grade of concentrates determined that can be obtained from them, more detailed figures can be obtained on them. It is evident that a large tonnage of this class of ore is exposed on this large mineral zone.

While it is evident from a study of these croppings and workings that these ore zones have been broken and faulted in places, and structural conditions are of prime importance in deposits of this type, in general, careful mapping and well placed underground openings will solve most of such cases well ahead of stoping operations.

There are many thousands of feet of favorable mineralized areas on this property that I believe will yield remarkable results from well directed development.

In addition to these mineral zones in the limestone there are several veins lying between the porphyries. Very little work has been done on them but good widths of leached ore are exposed by shallow surface workings. Indications are that further work on several of these will be productive of very favorable results.

The property is situated in a proven district and adjoins on three sides, mines that have produced large tonnages of shipping ore from identical mineral zones. I have had some experience on one of these (The Old "79" Mine) in following just such ore on the dip of the veins for 300 to 500 feet, where they produced a far more compact, uniform, and higher grade ore, (still thoroughly oxidized); than we had at depths nearer the surface. During this period several hundred carloads were shipped that yielded as high as $3500.00 net smelter returns on a carload.

The average elevation at the property is about 2500 feet, approximately 1000 feet lower than the "79" Mine, and much more accessible.

In general, the limestone formations on the property dip southeast on the northwesterly half of the property and southwest on the northeasterly end, while the southeasterly section is covered by porphyritic intrusions. This dip of formation may place the main mine shaft for much deeper development on these ore zones, somewhere between the present lower drift tunnel in the gulch above camp and the main cross cuts on the same mineral zone on the Brick No. 2. After the structural conditions at depths are ascertained and the size and position of the largest tonnages on lower levels outlined by mine openings, a main vertical shaft can then be placed on the spot best suited to obtain the cheapest underground transportation.

Successful development of this type of deposit requires the correct understanding of the ore occurrences, and preliminary detailed geological mapping, preceding detailed development and mining operation to clarify structural conditions and preclude unnecessary work. Such structural conditions become increasingly clear as additional information is obtained from advancing development.

MINING AND MILLING

Some of the rock cut in development work will be hard silicious limestone, while other portions will be very soft leached vein material and the cost of driving the development openings in the various classes of rock, will vary widely, but it should not average over ten dollars per foot total cost.

The costs of mining vary considerably depending not only on the size, shape, and nature of the ore bodies, and character of wall rock, but also upon the conditions under which the property is operated. Limestone formation, such as compose the bulk of the ground on the property, stand well and often safely permit of mining in large open stopes with little or no timbering. Where fracture or fault conditions do not permit this, modified cut and fill, or timbering methods are applicable. Some of these stopes will permit of shrinkage methods. In general stoping and developing work will require a relatively small amount of timber.

Per ton milling costs, like those of mining, decrease as the tonnage per day increases, other factors remaining constant. Overhead and operating charges per ton ore treated are lower on the larger basis.

The location of the property is excellent for obtaining cheap transportation, low mining and milling costs. These will of course be dependent on the scale of operation.

Ample water for a 50 ton per day plant can be had from the 200 ft. water shaft on the Brick No. 1 claim. For larger scale operations the Gila river lies parallel to the railroad and is only three miles distant by gentle grades from the property.

CONCLUSION

In concluding, I wish to indicate a few points about this property that may help in giving a clearer conception of its possibilities while sizing it up in its present earlier development stages.

The formation is an excellent one for commercial ore bodies. The Devonian and Mississippian sedimentary rocks have proven among the most productive ore horizons in the southwest. This property situated upon these formations, with oxidized and leached mineral zones containing residual ores proven in many places on them, holds forth exceptional opportunities for developing large commercial ore bodies at greater depths from the surface.

For the amount of development work few properties give better promise, and I believe that, adequately financed and efficiently operated, this property will successfully operate for many years.

SIGNED --- C. L. OREM,
Mining Engineer

May 2, 1939

KULLMAN McCOOL MINING CLAIMS

ADDENDUM NO. 1

Adequate engineering data on the property should include:

1. The base map showing outline of the claims and workings, topography and general geology.

2. Sections:

   a. Cross-sections of the formations and openings.

   b. Longitudinal sections.

   c. Sections necessary to show the structure and its deformations.

   d. Sections necessary to clearly show up the mode of occurrence and shape of the ore lenses and mineralized areas.

3. After these are made perspective views can be drawn in the form of stereograms that will give a correct picture of the various mineralized areas occurring on the property, at least to certain depths, which may later be extended and corrected as development proceeds.

4. A correlation of the limestone beds should then be made showing the stratigraphic horizons and the thicknesses of each which are more apt to make high grade ore in the segments that are favorably situated in regard to the mineralized fractures, fissures and dike contacts.

Taking up the sketches made of some of the openings on the property: (I have done no surveying on the property except brief reconnaissance trips over portions of it) (many contact placements and strikes and dips are needed). Detailed reconnaissance trips should be made in all directions far beyond the limits of the property to give a better perspective for detailed mapping.

(2) and (3), Positions on the base map: These positions are shown on a 50 scale in plan and transverse section. These consist of about 400 feet of old openings, described fairly accurately in Mr. Reagan's description of 1941. They show a strong verticle fissure in the limestone from 3 to 10 feet in thickness and a contact with a diorite dike.

The diorite contains little or no quartz here and the mineralization shown on the surface is about the narrowest, being much wider for many hundreds of feet both to the southwest and northeast.

This would be a good place for a prospect winze, vertically down on the fissure from the lower crosscut to explore the approach of this fissure to the diorite contact, and to open replaced beds, and to drift northeast and southwest near the contact when reached. It can be done with less work from this deepest point. The portal of the lower crosscut near the bottom of the arroyo does not allow for dump room, but this could be allowed for by building a short light trestle for mine cars and placing the dump on the opposite hillside to the southwest. Such a winze would allow needed depth before doing lateral work to the southwest and northeast along these important mineral showings. Immediately to the southwest, parallel and branching fissures and replaced and altered bedding planes, upwards of 50 feet in thickness, are exposed by the surface and old workings for several hundred feet along the strike.

(4), Position on Base Map: Along this same fissure to the southwest is a 25 foot shaft with drifts along the fissure and on a branching fissure to the south. Here the limestone is altered over a thickness of over 20 feet. It shows mineralization and alteration between parallel and branching fractures and in the bedding planes and is much wider on the surface than at Positions (2) and (3) and is still widening to the southwest. The porphyry shown in Position (2) may "finger out" in dike form in this direction. This would be a better place to sink a prospect opening than at Position (2), but would require about 50 feet more of work to reach the same depth.

(5), Position on Base Map: This shows replaced bedding planes dipping into the hill near the same fissure. There may be considerable thicknesses of these beds as they intersect the fractures with more depth.

(1), Position on Base Map: This shows two approximately 80 foot shallow tunnels connected with a 100 foot drift near the faces. This drift was on a nearly vertical fracture in the limestone. It dips slightly to the north and carries leached ores that average about 7% lead and 1-1/2% copper with considerable zinc showing in places over a maximum width of 10 to 12 feet. One car load shipped ran 4.4% copper with assays as high as 20% copper. In places oxidized lead ore ran 15 to 20%, but did not average nearly this high.

Both tunnels showed wide alteration but the southwesterly tunnel showed the more intense mineralization, the assays showing several percent in sections. Near this crosscut tunnel the cross fracturing dips to the southwest while at the northeasterly end of the connecting drift the fracturing is to the east.

A 155 foot winze was sunk 55° to the south on what was thought to be the dip of the drift fissure (mineralization was wide here, everything assaying low grade). Actually this winze to the south near the southwesterly crosscut tunnel was away from the fissure of the drift which dips slightly northward. At the 125 foot level a fissure, parallel to the one in the connecting drift above, was drifted on for 105 feet. This also showed ore in places.

Two crosscuts above 50 feet in length were run to the north toward the northerly fissure, but neither extends far enough to reach this fissure.

About 30 feet below this level a third parallel fracture was located and drifted on for about 40 feet.

The surface north above these workings is a flat saddle along the crest of a hogback ridge. It shows a small depressed residual triangular segment of andesite with short inclined cuts or shafts on its northerly and southerly boundaries that show 8 to 10 feet of leached copper ores.

The parallel short slightly northerly dipping fissures exposed by the workings are sparsely mineralized in general, but where the cross fracturing (to the southerly on the southwesterly and to the southeasterly direction on the northeasterly side of the workings) intersects them, thicker lenses of ore

are evident. These show as large croppings of silica breccia well mineralized on the surface that stand up 20 feet above the surface and in a couple of instances are 30 feet across. These factors with the attendant weathering produce a hillside that is covered with gossan float. In a similar way one well mineralized and replaced bed may cover an entire hillside with large manganese and iron stained silica breccias as residual float.

This hillside is also the focal point of considerable faulting that shows in the limestone as a block faulting to the southwest (not quite at right angles to the bedding planes) and is accompanied by twisted limestone beds in the fault planes.

This segment along the saddle therefore has two sets of divergent fracture planes crossing a third set of parallel fissuring in the strike of the limestone blocks.

Unfortunately the operator decided to do the only short horizontal drilling on the property in comparatively unaltered limestone segments away from the divergent fracturing above mentioned and in almost blank spaces on the vertical fractures.

To the northeast a very short distance are several closely spaced northeasterly paralled trending fissures cropping on the strike of the limestone and separated by altered limestone and following this mineralization southerly along the same fractured zone on the northeasterly end, mentioned in describing the structures of the workings above, continuous mineralization is visible (except where covered by andesite) for several hundred feet laterally. Following this southerly trending cross-fracturing for a couple of hundred feet, the tip of a quartz-diorite-porphyry dike is seen in a shallow arroyo, partially covered by surface debris. On the southwesterly side of this porphyry and alongside it, is a 30 foot width or better of gossan, with heavy iron and manganese oxides showing. There is no work done here and this area across 150 feet or better

may be shown up with comparatively little work. Much further to the north and east large diabase sills are exposed and copper, gold and silver ores have been mined along both upper and lower boundaries and in connection with tongues of dikes and accompanying fractures (also in fissures in the Diabase).

On the northeasterly end of this group the paleozoic (probably fairly high in the Pennsylvania limestone), the nose of a diorite dyke, and a block of quartzite (stratigraphically much lower in the sedimentary series than the limestones) abutt the diabase and a half mile width of limestones are exposed. When mapping of the structures are well along and stratigraphic horizons are outlined this may prove a good section for testing by deeper drilling.

Other deposits near this area have been developed as fissure veins and in places considerable production has been made in gold and silver.

To the southward in the andesites (these are underlain by limestones and/or intrusives) and at different intervals extend persistent fault fissures trending easterly and westerly. They carry intermittently small lenses of ore some of which have good gold values. These dip steeply northward and are very large fault blocks in places - 500 to 1000 feet apart. The trend of the closest of these is approaching in strike and dip (as is the diorite dike in the contact in Position (2) as described above) to the strong vertical fissure mentioned in Positions (2), (3) and (4) and may be responsible for the more intense alteration to the southwestward along this fissure.

The area shown as andesite on the surface on the general geological and topographical sketch map of the claims is probably underlain (very shallowly in places to quite a thickness on the down dip side to the southeast) by a thick series of Paleozoic limestones dipping, in general, gently to the southeast; diorite or quartz diorite in dyke and sill form with tips or points making across the limestone or shoulders (in the case of sills) showing a decided change in strike of contact. Sills in the area may range from very narrow lenses to laccolithic proportions.

In places the dikes show a porphyritic texture of almost entirely macroscopic crystals and are heavy in quartz and would be classed as quartz porphyry. In other places the quartz is not so evident. In places light colored acid porphyries are shown although this coloring may be due to some extent to alteration and weathering.

The andesitic material is composed of in general, poorly bedded andesite, andesitic tuffs, breccias and flows and the contact with the sediments does not appear to have any great discordance.

The southeastern part of the claim area covered by these andesites appears to have been depressed and is sheared at intervals by strong east-west fissuring and faulting. To the south they show increasing thicknesses while to the north and east they thin out to nothing as erosion has exposed the contacts.

In general over a considerable area in a portion of this part of Arizona, fissuring and intruding porphyries in andesitic breccias, tuffs, conglomerates and flows, offer opportunities to develop larger base metal deposits in sedimentary areas below, where the covering rocks are not too thick a series, as apparently the covering cretaceous formations lie directly on the Paleozoic limestones. In other sections, many thousands of feet of Mesozoic (formations not as favorable as a host rock as the Paleozoic limestones) occupy this position. The mineralization is basically, probably, contact-metamorphic in origin.

Christmas lying several miles to the northeast has a large quartz diorite dike and an ore body in the adjacent Paleozoic limestones. There the mineralization shows typical heavy contact silicates and the tabular beds are garnetized in proximity to the igneous dike. There approximately a dozen beds in 3 or 4 hundred feet of upper Paleozoic limestone have produced the ore to date. Most of these beds are fairly thin, but 3 or 4 have been massive beds in a series, producing ore up to 60 feet in thicknesses and have been mined extensively. Little or no leaching of the sulfides were possible.

At the "79 Mine" in the early 20's the writer did the early engineering work and we followed metasomatically replaced beds for 300 to 500 feet on the dip. No heavy contact silicates were in evidence. There were 7 replaced beds (3 of which produced the bulk of the ore) and where these intersected an intense vertical fracture zone large lead carbonate ore bodies for widths up to 60 feet wide and stopes up to 100 feet high, extended over 850 feet on the strike.

If present prices for lead ore are considered, at least 15 million dollars in lead ores was produced. Many hundreds of car loads were shipped then on 4-1/2¢ to 7¢ lead. On the surface I can remember a 4 foot bed of high grade lead showing considerable bunches of galena. We thought we would be in sulfides in a short distance. However, at 600 and 700 feet on the dip the ores were higher grade than the surface ores and were pure sand carbonates or massive carbonates and sulfates, although a good portion of these distances were on the dip slopes and the actual vertical distances were not great. No heavy silicates were in evidence and the porosity of the limestones were much greater than in dealing with garnet zones.

Many of the deposits in this area are fissures in the limestone and portions of replaced beds. At one place against a steeply inclined porphyry contact two of the beds made together producing 8 to 12 feet of massive cerrusite, almost crystal pure.

The Miami Copper Company expects to spend a couple hundred thousand dollars in drilling at Chileto (adjoining just northeast of this property). They will drill a disseminated copper showing in the diabase and generally require under present conditions a probability for 30 million tons or more.

Bodies of disseminated ore in the Ray District to the southwest may be characterized in general terms as undulating, flat lying masses of irregular horizontal outline and of variable thicknesses. They generally lack definite boundaries and grade inpreceptably to country rock.

In this preliminary report on this property consideration is given only to metasomatically replaced beds and fissure deposits in the limestones. In general one well mineralized bed or fissure may produce a good high grade ore body. However, the better opportunities are considered to be where the fractures and fissures are multiple and closely spaced and the favorable replaced bedding planes are more than one and especially where the replaced ones are thick bedded.

Intersections of fissures, beds, and contact areas are important. Where development discloses that structure conditions have disrupted any chance for a large ore body, adjacent more favorable areas not subjected to the same features should be explored.

While the deposits are in many instances hidden or partially hidden by cover rocks (such as flows and different stratigraphic horizons) and surface alteration and leaching, the areas herein considered for immediate exploration are immediately in or are closely adjoining positions now exposed on the property.

Probably the most effective development method is to outline the more intense fractured and fissured sections that are well mineralized and then to prospect stratigraphically, for the thicker and more numerous, replaced bed horizons.

CLARENCE L. OREM
Mining & Metallurgical Engineer &
Geologist

April 14, 1954

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date 7-3-47

1. Mine: London Arizona
2. Location: Sec. ..... Twp. 4 S Range 16 E Nearest Town Christmas
   Distance 6 Direction N Road Condition Rough last 6 miles
3. Mining District & County: Banner Gila
4. Former Name of Mine: .....
5. Owner: Geo. W. – Robert C Wright
   Address: Globe, Ariz.
6. Operator: none
   Address: .....
7. Principal Minerals: Cu. Ag.
8. Number of Claims: 36 Lode ✓ Placer .....
   Patented ..... Unpatented ✓ surveyed for patent.
9. Type of Surrounding Terrain: Rough.

10. Geology & Mineralization:

11. Dimension & Value of Ore Body:

See: U.S.G.S. Bul # 771 p 61-62

12. Ore "Blocked Out" or "In Sight":

Ore Probable:

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts		
Raises		
Tunnels		
Crosscuts		
Stopes		

14. Water Supply:

15. Brief History:

16. Signature:

17. If Property for Sale, List Approximate Price and Terms: $30,000 cash & terms

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date March 5, 1941.

Mine Kullman-McCool Group
Engineer Newton Wolcott

District Banner Mining Dist., Gila County.
Location 3¼ miles W of Hayden Junction

Former name (Sometimes called Brick Group) or Reagan Group.

Owner Lee Reagan
Address Hayden Junction, Arizona
C. F. Kullman

Operator
Address

President
Gen. Mgr.

Mine Supt.
Mill Supt.

Principal Metals Molybdenum, vanadium, lead, gold and silver. Copper minor.
Men Employed

Production Rate Not in production
Mill: Type & Cap.

Power: Amt. & Type None

Operations: Present Annual assessment work. One of owners working alone is taking out a small quantity of high grade lead-silver ore.

Operations Planned Owners wish to carry development to greater depth. Also to finance for installation of small plant for concentrating ores now exposed.

Number Claims, Title, etc. 19 unpatented claims on public domain. Title said to be absolutely clear.

Description: Topog. & Geog. The property is located on the lower slopes of the Dripping Springs Range at an elevation ranging from 2500 to 3000 feet above sea level. Drainage is toward the Gila River which is approximately 3 miles south. Hayden Junction, the nearest railroad shipping point, lies a little over three miles eastward. The topography is moderately rough The hills, although not very high, are cut by sharp canyons with steeply sloping sides. Climate is arid, and vegetation very sparse, consisting entirely of low brush.

Mine Workings: Amt. & Condition 1 two compartment vertical shaft. Depth 240 feet. 1 vertical shaft (depth unknown) inaccessible. 1 forty foot vertical shaft, accessible. 1 crosscut 160 feet in length with 60 feet of drift along vein. 300 feet of shallow drifts and tunnels. Also various stopes and miscellaneous surface cuts. The 240 foot shaft is reported to be filled to within 100 feet of the collar with water. Condition of shaft is now known. All of the shallower workings are open and accessible.

(over)

Geology & Mineralization A series of limestone comprise the country rock on the northern portion of the property while the southern portion shows predominating areas of porphyry. A series of veins up to 9 or 10 in number cut both the limestone and porphyry areas. These veins strike EW and NE-SW and range in width from 3 ft. to over 16 ft. Most of the development has been along a mineralized fault in the limestone. This fracture roughly parallels a diorite contact which is 50 ft. or more distant. Stoping has been done at shallow depths along the vein up to a width of 16 ft. at one point. Mineralization consists of a hematite and calcite gangue with considerable amounts of jasper in places. Wulfenite and vanadinite crystals occur throughout

Ore: Positive & Probable, Ore Dumps, Tailings all openings, and in places are concentrated in rich streaks and pockets. Anglesite and cerussite are also present, appearing as a higher grade streak near the center of the vein. Copper carbonates were observed at a few points, but in minor amounts. The owners estimate that this vein will average from 2% up in combined Mo03 and V205 and their estimate appears sound. The vein can be traced for a distance of approximately 3000 ft. on surface, although actual development is limited to a much shorter length. Mr. Kullman

Mine, Mill Equipment & Flow Sheet states that all of the ore thus far exposed shows gold values ranging from 70 cents to $6 per ton in addition to the lead, silver, molybdenum and vanadium contained. The lack of sufficient development work makes any estimate of possible tonnage or grade of ore impossible. A small amount of ore (few carloads) is contained in various dumps on property.

There is no equipment of any sort on property.

Road Conditions, Route Take county highway west from Hayden Junction and turn north at sign which is marked "79 Mine". Approximately 2 miles up this road turn right at sign marked "Reagan Camp" 1/2 mile to camp buildings. The owners have built an excellent road approximately another 1/2 mile from here which reaches the main workings. Inquire at Hayden Junction for route if not sure of directions.

Water Supply Domestic water has been hauled recently for camp purposes. The owners state however that a flow of approximately 50 gallons per minute can be obtained from the 240 ft. shaft, and when freshly pumped this water may be used for both domestic and milling purposes. No attempt has been made to develop any other supply but if such attempts were unsuccessful, there is always water in the Gila River approximately 3 miles distant.

Brief History Mr. Kullman one of the present owners has been on the property for 14 years. He states that they made an abortive attempt to mill some of their ore several years ago; but were unable to prevent extremely high tailings losses, due to poor equipment and lack of knowledge as to proper milling procedure. The effort was finally abandoned and the equipment removed. There has been no work other than development since then.

Special Problems, Reports Filed Mr. C. L. Orem examined this property at one time; but his report is not available. The owners lack the necessary capital to finance deeper development metallurgical tests and a possible mill installation.

Remarks In addition to carrying the present workings to greater depth along the vein in the limestone, there are other veins toward the southern portion of the property which appear to be worthy of investigation. One of these in particular an apparent extension of the Hogwall vein is reported to show interesting gold values at the surface where it has been barely exposed by a shallow cut. This vein is in the diorite.

If property for sale: Price, terms and address to negotiate. The property is for sale or lease on reasonable terms to financially responsible parties. Communicate with the owners.

Signed: Newton Wolcott

Use additional sheets if necessary. Separate sheets on each problem.

(over)

ML-50

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date March 20, 1941.

Mine London-Arizona Group

Engineer Newton Wolcott

District Banner Mining District, Gila County

Location Approx. 6 miles north of Winkelman.

Former name Sometimes known as the O'Carroll property.

Owners (Burns Giffen ---------- Superior, Arizona.
(James Douglas " "
(A. C. Carriger ---------- Winkelman, Arizona

Address

Operator (Orson Branch

Address " "

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Copper, lead, zinc, gold & silver

Men Employed

Production Rate Not in production

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present

Development incidental to annual assessment work.

LONDON ARIZONA
Cu, Au
Gila
Geo. W. - Robt. C. Wright
Globe, Arizona
4-4
T 4S R16E
'47

Operations Planned

Present plans are to open up recent discovery of high grade gold-silver ore, shipping if results warrant. No definite plans stated as to work on the copper and lead-zinc ores.

Number Claims, Title, etc.

36 Unpatented claims, all on public domain. Title has recently been firmly established by court action.

Description: Topog. & Geog. This group of claims is situated in the mountainous country which lies along the crest of the Dripping Springs range at an elevation of between 3500 and 4000 feet above sea level. Slopes vary from gentle to very precipitous. Drainage is toward the Gila River which is approximately 6 miles to the south. Vegetation is sparse, consisting almost entirely of low brush and cactus.

Mine Workings: Amt. & Condition 1 Vertical shaft, 2 compartment, 300 ft. deep. (Caved at 75 feet below collar and inaccessible below that point.)
1- Winze, 50 ft. in depth, open and accessible. 1- Winze, 35 feet deep, inaccessible.
Over 1500 feet of drifts, tunnels and cross-cuts, part of which are open and part inaccessible Also numerous stopes and many surface pits and cuts. Sufficient workings are open to enable at least a fair preliminary examination.

(over)

Geology & Mineralization

A series of limestones underlain by shale sandstone and quartzite [illegible] up [illegible] predominating country [illegible]k i [illegible]is area. These sediments- [illegible]es ar[illegible] cut in places by long and narrow dykes of diorite, with the typical contact mineralization evident along both margins. The limestones are highly altered for varying distances from the contacts, and garnet is much in evidence. The ore minerals are largely of the oxidized types, consisting of copper carbonate cerussite, anglesite and zinc oxides, together with some galena and chalcocite in places. Replacement at certain horizons in the limestones has formed irregular ore bodies which extend out to varying distances from the porphyry contact. Recent development along fissures in the limestone at the north end of the property has disclosed high gold values in a gangue of rotten quartz, hematite and limonite. Assays here have run from a value of $38.50 in gold and silver to as high as 11.9 ozs. gold and 31.5 ozs. silver. Development is insufficient as yet to determine the extent of this ore. At many points, both on the surface and underground, ore of the various types may be seen, but no estimate of tonnage or grade is possible without further development.

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

The hoist and compressor equipment housed at the 300 foot shaft show evidence of having been tampered with, although it probably would not cost a great deal to put them into operating condition again. There is no other equipment on the property.

Road Conditions, Route

The road from Winkelman to the higher portion of the property was extremely rough at the time of visit and practically impassable for modern cars. Could be made passable at little expense. Another road from Hayden to the lower portion of the group is in much better condition and can be easily negotiated. Inquire from owners as to route.

Water Supply

No attempt has been made to develop any water supply for industrial purposes, but there is water developed on the lower claims which is now being used for stock and domestic purposes.

Brief History

This property was located in 1880 and owned for many years by Dan O'Carroll. It is reported to have been sold by him at one time for $300,000. Various operators have worked the property at different times, and records now available show shipments of 15,443 tons of copper ore with an approximate average of 4.5% copper. Grades varied from 2.75% to 18% Cu. There has also been shipped over 1000 tons of lead ore and one shipment of zinc.

Special Problems, Reports Filed

Present owners are up against the usual problem of capital for financing development work.

This property is briefly described in U.S. Geological Survey Bulletin No. 771.

Remarks

Due to the character and large area of ground covered by this group, it was impossible to cover it all in the time available. The copper claims where most of the stoping has been done were not visited at all. Enough showings were seen however to warrant the conclusion that this property should justify a careful and complete examination by anyone looking for a mine of this type.

If property for sale: Price, terms and address to negotiate.

The property is for sale. Communicate with owners for price and terms.

Signed [illegible]

Use additional sheets if necessary. Separate sheets on each problem.

(over)

MR-27

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date 8/21/40

1. Mine Reagan Group

2. Mining District & County Banner Dist. Gila County

3. Former name

4. Location 3 miles N of Hayden Junction. Joins 79 mine on south.

5. Owner Kullman-McCool Mining Co.

6. Address (Owner) c/o Lee Reagan Hayden Junction

7. Operator

8. Address (Operator)

9. President Lee Reagan

10. Gen. Mgr.

11. Mine Supt.

12. Mill Supt.

13. Principal Metals Lead, molybdate and vanadium

14. Men Employed

15. Production Rate

16. Mill: Type & Cap. 25 ton mill desired

17. Power: Amt. & Type

18. Operations: Present None

REAGAN GROUP

Pb, Mo, V

Gila 4 - 4 T 4 S, R 15 E

Kullman-McCool Mng. Co., Hayden Jct., '40

19. Operations Planned Mill planned

20. Number Claims, Title, etc. 15 claims clear title

21. Description: Topography & Geography 2600 feet elevation, foot hills of Dripping Springs Range, Low rolling foot hills

22. Mine Workings: Amt. & Condition Some 500 feet drifts and crosscuts

(over)

23. Geology & Mineralization: Lime porphyry andesite. Contact vein, and replacements in lime. Ores are lead molybdate and lead vanadate.

24. Ore: Positive & Probable, Ore Dumps, Tailings 200 tons in dumps

24-A Vein Width, Length, Value, etc. Ore body 3 to 30 feet wide, crops for 3/4 mile

Over a width of 5-6 V_2O_5 content will run from 2% - 4%

25. Mine, Mill Equipment & Flow Sheet

26. Road Conditions, Route Good road 3 miles to railroad. Water 2000 feet from main work. Good road just completed.

27. Water Supply More than 50 gallons per minute

28. Brief History Property joins 79 mine and will stand up

29. Special Problems, Reports Filed

30. Remarks A series of parallel veins untouched between water shaft and main works

31. If property for sale: Price, terms and address to negotiate. Price $150,000 on easy terms or will lease.

32. Signed Lee Reagan

Hayden Junction, Arizona - Permanent

33. Use additional sheets if necessary. Belmont Court, Phoenix, Arizona - Temporary address

MB-5b

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date September 30, 1940

1. Mine: Brick Group
2. Mining District & County: Banner Mining District, Gila County
3. Former name:
4. Location: 4 Mi. NW of Hayden
5. Owner: A gent - Roscoe Hurst
6. Address (Owner): 1407 W. Washington, Phoenix, Arizona
7. Operator:
8. Address (Operator):
9. President:
10. Gen. Mgr.:
11. Mine Supt.:
12. Mill Supt.:
13. Principal Metals: Lead, Silver, Vanadates and Molybdates
14. Men Employed:
15. Production Rate:
16. Mill: Type & Cap.:
17. Power: Amt. & Type:
18. Operations: Present: None
19. Operations Planned: Depend on financing
20. Number Claims, Title, etc.: 15 unpatented claims - 420 acres
21. Description: Topography & Geography: In foothills - 2500 ft. elevation. Ordinary desert hill vegetation.
22. Mine Workings: Amt. & Condition: $25,000 spent in development which covers a length of 4000 ft. on vein - 400 feet in depth and all accessible

(over)

23. Geology & Mineralizati... Limestone- intruded by igneous (porpnyry) dikes
Dripping Springs Range
Lead molybdates & vanadates - oxidized lead ores carrying gold and silver -
some oxidized copper

24. Ore: Positive & Probable, Ore Dumps, Tailings

Claim thousands of tons of commercial grade ore exposed by shallow workings for range of 4000 ft in length and 400 ft. depth

24-A Vein Width, Length, Value, etc.

3' - 5' feet - 3½% vanadium - with 5% lead - 3½% molybdenium -
50 ft. width of vein in places

25. Mine, Mill Equipment & Flow Sheet

26. Road Conditions, Route
Good mine road to Railroad
adjoins "79" Mine

27. Water Supply Ample water for a 50 ton plant from 200 ft shaft on #1 Claim.
Ample water for larger scale operations on Gila River 3 miles distant

28. Brief History
Spent $25,000 on development

29. Special Problems, Reports Filed

30. Remarks
Report by C. L. Orem - mining Eng. 5/2/39
Believe it can be made a profitable operation

31. If property for sale: Price, terms and address to negotiate.

Roscoe Hurst, Agent, and has a contract for sale - or lease -
See agent for terms

32. Signed.....
Data given by Roscoe Hurst

33. Use additional sheets if necessary.

mm

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

MINE OWNER'S REPORT

Date 8/21/40

Mine Reagan Group

2. Location 3 miles N of Hayden Junction
Joins 79 mine on south.

Mining District & County Banner Dist. Gila Co.

Former name

Owner Kullman-McCool Mining Co.

6. Address (Owner) c/o Lee Reagan, Hayden Junction.

Operator

8. Address (Operator)

President, Owning Co. Lee Reagan

9A. President, Operating Co.

Gen. Mgr.

14. Principal Minerals Lead, Molybdate & vanadium.

Mine Supt.

15. Production Rate

Mill Supt.

16. Mill: Type & Cap.

Men Employed

17. Power: Amt. & Type 25 ton mill desired.

Operations: Present None

Operations: Planned Mill planned

Number Claims, Title, etc. 15 claims, clear title

Description: Topography & Geography 2600 feet elevation, foothills of Dripping Springs Range, Low rolling foothills.

Mine Workings: Amt. & Condition Some 500 feet drifts and crosscuts.

eology & Mineralization — Lime porphyry andesite. Contact vein, and replacements in lime. Ores are lead molybdate and lead vanadate.

re: Positive & Probable, Ore Dumps, Tailings — 200 tons in dump

Dimensions and Value of Ore body — Ore body 3 to 30 ft. wide, crops for 3/4 mile. Over a width of ~~XX~~ 5'-6' V_2O_5 content will run from 2% to 4%.

line, Mill Equipment & Flow-Sheet

oad Conditions, Route — Good road 3 miles to railroad. Water 2000 feet from main work. Good road just completed.

/ater Supply — More than 50 gallons per minute.

rief History — Property joins 79 mine and will stand up

pecial Problems, Reports Filed

emarks — A series of parallel veins untouched between water shaft and main works

property for sale: Price, terms and address to negotiate.

Price $150,000 on easy terms or will lease.

32. Signature (Signed) Lee Reagan
Hayden Junction, Arizona--Permanent
Belmont Court, Phoenix, Ariz. Temporary Address

se additional sheets if necessary.

Trip Log - Kullman McKool

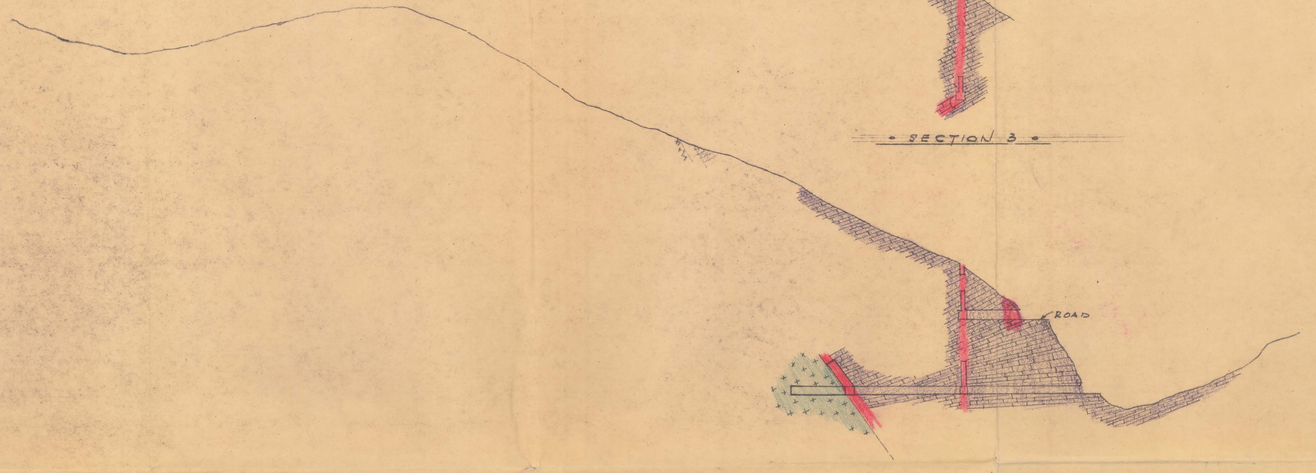
: 13, 198[illegible]
rsday

6:35 - 8:30 Travel time

We arrived at the Lead Silver #7 claim and sampled the first workings that we came across. The rock type was an alterred limestone with Fe OX minerals present. Wulfenite & silica were also found in the alterred rock. There was some type of contact found here with relatively unalterred limestone being in contact with the black sooty alterred limestone. This contact had an orientation of N 73°E 52°SE. We traveled on to a post marked D. H. #2 and took a 6 foot channel sample across the vein. Actually it was across a vertical fault striking N. 62° E. Deep red hematitic staining was present. Copper oxides and siliceous stringers were found w/i the fault zone. Galena was visible in the siliceous float. Two more samples were taken close by. Another sample was taken at the east end of this drift. We traveled another short distance ≈ 75' northeast to a post marked D.H.#3 which was just north of another drift. We sampled the west end and east end of this drift. I took some pictures of the area and we were fairly certain that we were looking at vanadium. I believe we were still on the Lead-Silver 7 claim. From this point we went approximately 1300 feet northeast along the road to the largest workings encountered during the day. The name of this claim is the Brick #3. We explored the workings and we surprised by the size. Everything was underground here and the surface had been scraped to expose an alterred zone. We sampled underground just east of the 150 foot incline.

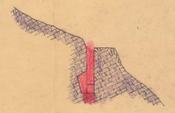
We traveled over to the Fanny Claim and sampled the small vein which is associated with the shaft and the drift. It was a quartz or siliceous vein. The wall rock is a pre Cambrian diabase. This was the end of our day @ Kullman - McKool.

5:00

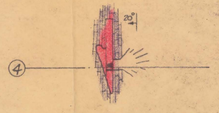


• SECTION 2 •

• SECTION 3 •

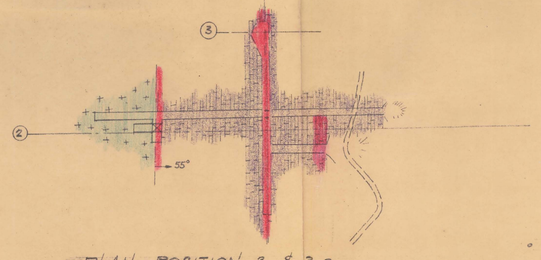


• SECTION 4 •

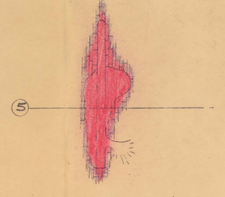


• PLAN - POSITION 4 •

• SECTION 5 •



• PLAN - POSITION 2 & 3 •



• PLAN - POSITION 5 •

DIORITE PORPHYRY
LIMESTONE
MINERILIZATION

• PLAN & SECTIONS OF WORKINGS •
• KULLMAN - McCOOL MINE •

GILA COUNTY, ARIZONA

SCALE 50' = 1"

C. L. OREM
MINING & METALURGICAL
ENGINEER & GELOGIST

SHEET
3

PROPERTY MAP,

KULLMAN-McCOOL M. CO.,

GILA COUNTY, ARIZONA.

Scale 400 ft. = 1 in

Mag. N.

True North

"79" Ground

Brick #8

Brick #6

Brick #4

Brick #7

Brick #5

Brick #3

Lead Silver #1

Brick #2

Arroyo

Lead Silver #7

Lead Silver #9

Brick #9

Brick #1

Lead-Silver #8

Lead Silver #6

Lead-Silver #3

Lead Silver #4

Road

Camp

Old Road

Arroyo

N 40° E

S 84° E 1010 ft

Sec 28

Sec 33

Sec 27

Sec 34

T4S - R15E.