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PRINTED: 08/28/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HILLTOP EXTENSION CLAIMS

ALTERNATE NAMES:

CIMARRON CLAIMS
ARIZONA HILLTOP MINES
SLIMS WORKINGS

PINAL COUNTY MILS NUMBER: 687A

LOCATION: TOWNSHIP 10 S RANGE 3 E SECTION 8 QUARTER W2
LATITUDE: N 32DEG 34MIN 11SEC LONGITUDE: W 112DEG 04MIN 50SEC
TOPO MAP NAME: VEKOL MOUNTAINS - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER SULFIDE
SILVER
SILICON
LEAD
ZINC

BIBLIOGRAPHY:

Extension Claims
~~ADMMR HILLTOP MINE FILE~~
ADMMR FILES

NAME OF MINE: HILLTOP		COUNTY: PINAL <i>W</i>	
		DISTRICT: VEKOL MTS.	
		METALS: PB Cu, Ag, Au.	
OPERATOR AND ADDRESS:		MINE STATUS	
DATE: 5/1/44	Box 1123 P. Hinshaw/Casa Grande Gerald Remington, 936 Grand View St., L.A.6, associated with Hinshaw under name of R & H Mining Co.	DATE: 5/1/44	Shipping
		7/44	Developing
		7/45	Idle

Sample from Surface between Tenney Tunnel
and Slim's Upper workings - taken 7/13/47

\$ <u>Au</u>	<u>Ag</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>
\$ 0.35	5.58oz.	—	5.41%	1.10%

Car Sample - Ore from Slim's Workings
Car shipped 7/18/47 -

<u>Au</u>	<u>Ag</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>
\$ 2.10	8.64g.	1.90%	12.05%	3.15%

E. A. JACOBS, SR.

Phone 130-R

30 So. Main

JACOBS ASSAY OFFICE

REGISTERED ASSAYERS

BEN P. JACOBS

Phone 1064-W

P. O. Box 1889

Duplicate

Certificate No. 45803

By Mr. Geo A. Ballman

Tucson, Arizona, June 14th

194 7

Sample Submitted by Mr. Dept of Mineral Resources - State Fair Grounds

SERIAL	SAMPLE MARKED	GOLD Ozs. per ton ore	GOLD Value per ton ore *	SILVER Ozs. per ton ore	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	<i>Jmc</i> Per cent Wet Assay
			\$				
<u>113733</u>	<u>#1</u>	<u>003</u>	<u>1 05</u>	<u>3 0</u>	<u>0 66</u>	<u>7 9</u>	<u>0 4</u>
<u>34</u>	<u>2</u>	<u>0 25</u>	<u>8 75</u>	<u>7 5</u>	<u>3 70</u>	<u>9 3</u>	<u>3 3</u>
<u>35</u>	<u>3</u>	<u>0 12</u>	<u>4 30</u>	<u>4 1</u>	<u>0 22</u>	<u>6 2</u>	<u>0 2</u>
<u>36</u>	<u>4</u>	<u>002</u>	<u>0 70</u>	<u>3 6</u>	<u>0 44</u>	<u>3 1</u>	<u>0 2</u>
<u>37</u>	<u>5</u>	<u>002</u>	<u>0 70</u>	<u>3 3</u>	<u>2 49</u>	<u>5 8</u>	<u>0 5</u>
<u>38</u>	<u>6</u>	<u>003</u>	<u>1 05</u>	<u>11 9</u>	<u>3 43</u>	<u>17 8</u>	<u>2 9</u>
<u>39</u>	<u>7</u>	<u>001</u>	<u>0 35</u>	<u>1 4</u>	<u>0 98</u>	<u>3 9</u>	<u>0 3</u>
<u>40</u>	<u>8</u>	<u>004</u>	<u>1 40</u>	<u>29 5</u>	<u>4 38</u>	<u>11 5</u>	<u>3 4</u>
<u>41</u>	<u>9</u>	<u>001</u>	<u>0 35</u>	<u>1 0</u>	<u>0 54</u>	<u>3 4</u>	<u>0 4</u>
<u>42</u>	<u>10</u>	<u>002</u>	<u>0 02</u>	<u>1 8</u>	<u>8 6</u>		

* Gold Figured \$ 35.00 per oz. Troy

Charges \$ 47.50

Very respectfully,

Ben P. Jacobs

Hilltop #1

16 ft. in #1 cut

Au, Ag, Cu, Pb, Zn 6/8/47

Chg to Dept. Min. Res.

Hilltop #2

20 ft across open cut

Au, Ag, Cu, Pb, Zn

6/9/47

Hilltop #3

Iron Quartz in

40' open cut

6/8/47

Chg to Dept Mineral
Resources
Phoenix

Hilltop #4
Sample from #3 cut
Au, Ag, Pb 6/8/47

Hilltop #5
Upper Slim workings
8'
Au, Ag, Cu, Pb, Zn 6/8/47

Hilltop #6
Sample from
Slim tunnel
Au, Ag, Cu, Pb, Zn
6/8/47

#7

North side fault
on outcrop - West end
Au, Ag, Cu, Pb, Zn

6/9/47

#8

Winze in Lela Tunnel
3' cut

Au, Ag, Cu, Pb, Zn

6/9/47

Hilltop #9

Across 60 ft. of
100' North outcrop

6/10/47

Av, Ag, Cu, Pb, Zn

#10

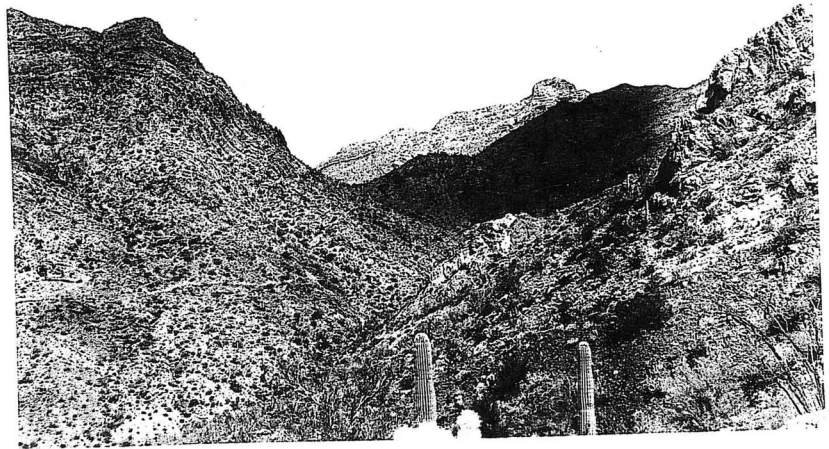
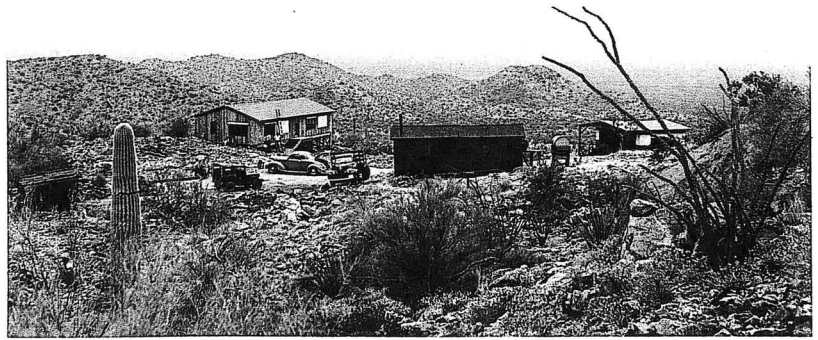
Mogut -

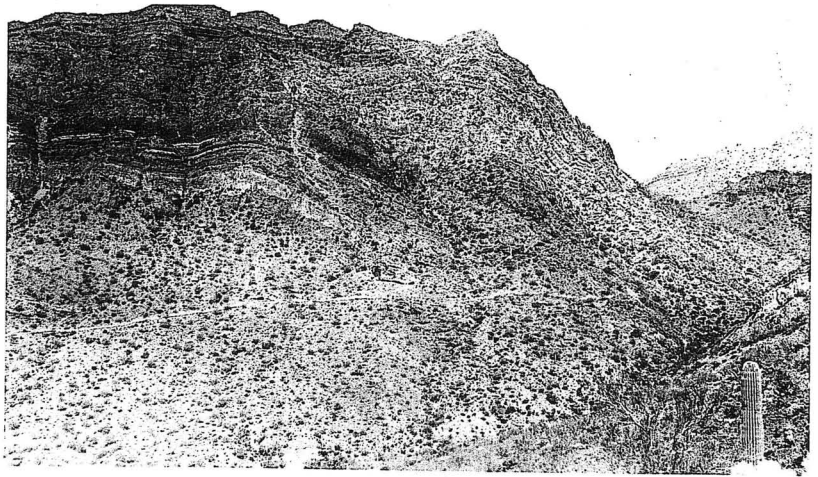
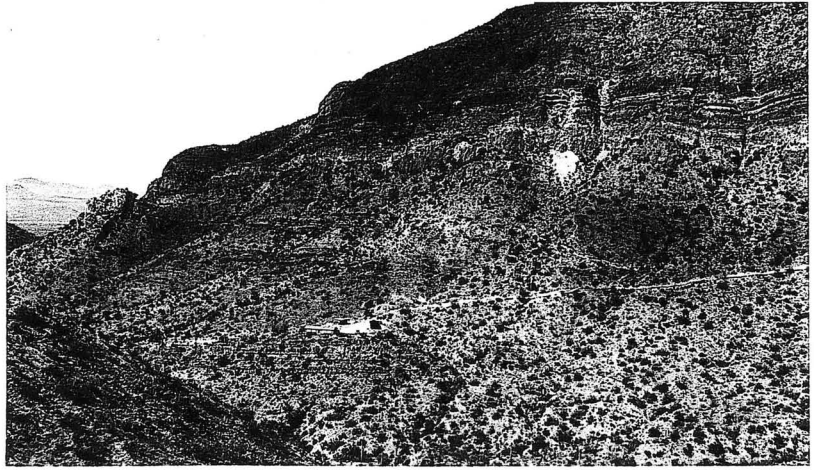
3 ft. H. Grade

of 12 ft veins

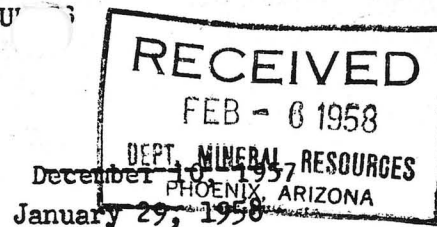
Av, Ag, Pb

6/10/47





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



To the Owner or Operator of the Arizona Mining Property named below:

↓ ARIZONA HILLTOP MINES COPPER, LEAD, ZINC
(Property) (ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

↓ MOORE & ROMLEY
811 FIRST NATIONAL BANK BUILDING
PHOENIX, ARIZONA

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

*It died before it
was born. We spent \$20,000
and got nothing. Cypration lead too.
↓ Agents Hilltop Mines
Joe Moore ✓*

Pinal

ARIZONA HILLTOP MINES

519 TITLE & TRUST BUILDING
PHOENIX, ARIZONA

August 19, 1947

Mr. H. W. Wolcott
Department of Mineral Resources
State Fairgrounds
Phoenix, Arizona

My dear Mr. Wolcott:

This will acknowledge receipt of your letter of August 16, with reference to your recent visit to the Hilltop Mine near Casa Grande. I wish to renew my expression of appreciation for your visit and your letter.

I am enclosing assay certificate of Arizona Testing Laboratories showing assays of the carload of ore now being shipped as well as that of the sample that Patterson brought down from a place lower down on the hill where he has put in a few shots.

Yours very truly,

✓
ARIZONA HILLTOP MINES

↓
By

James A. Moore
President

JRM/mb
1 enc.

*

Conference with Richard Clemans, attorney for the owners and a minor stockholder, in Casa Grande - Sec. 8, T10S, R3E - W $\frac{1}{2}$ Sec. 8

Superior Oil Company has a rig drilling the Hilltop Extension Claims (Nos. 1, 3-6, and Cimarron Nos. 3, 4 claims) recorded in Dockets 79 (p. 174, 176, 179) and 126 (p. 72, 73) The claims are owned by a group consisting of Albert L. Wilson, Sybil M. Wilson, Mildred LaFleur, Ira Wagon, Paul Hinshaw and Cora McDonald, all of whom, except Mildred LaFleur, are from Casa Grande. According to Al Wilson, part of the road is very bad, but Superior plans to improve this section soon. Victor Verity and Leo N. Smith, attorneys, handled the transaction for Superior Oil through Richard Clemans, attorney for Federal Mine Company, Inc. Verity's office, 902 Phoenix Title Bldg., 177 N. Church St., Tucson, Arizona 85701. The option price is reportedly \$75,000 but whether this is the total price was not known. Memo LAS 5-18-66

Conference with Mr. Osborne, field engineer for Newmont

Osborne stated that Superior Oil is still drilling at the Hilltop Extension. Memo LAS 6-7-66

Conference with D. H. Osborne, of Newmont, Casa Grande

Osborne said that Superior Oil, who were drilling at Hilltop Extension (Federal Mines of Casa Grande, owners) Richard Clemans, agent - had ceased work there. Memo LAS 9-21-66

Conference with Frank McDonald, field engineer for Phelps Dodge at Jack Rabbit mine

Phelps Dodge is flying magnetometer and running I.P.'s on the Hilltop Extension and doing some field mapping. Superior Oil drilled one test hole and moved off 6 weeks ago or less. Memo LAS 10-4-66

Garth Black was in and states he and his brother, Clarence, have lease-option on this and other nearby properties as representing Lee Corp., 3100 Mowry Ave., Suite 410, Fremont, Calif. 94538

LM 5-26-69

*

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

FILED
JUL 14 1965

Mine HILLTOP MINE Date 5/19/65
District Vekol Mtn. Dist. Pinal County Engineer Lewis A. Smith
Subject: Conference with Al Wilson, Casa Grande, 5/19/65.

PROPERTY: About 20 claims (unpatented).

LOCATION: Sec. 8, T10S, R3E. (Approx).

OWNERS: Paul Hinshaw, Casa Grande, Al Wilson, Casa Grande, Tom Corley,
no address, ~~partly owned by Tom Corley~~

WORK: Cuts and location pits.

ACCESS: No road approaches closer than 2 miles but a cheap road could be built
along the little valley that parallels the ridge on the west and which comes out not
far from the Vekol Mine.

MINERALS: Copper, Silver, Silica.

SAMPLES: A general sample across the outcrop assayed 1.4 oz. silver to the ton,
and 1.14 percent copper, and 88 percent silica. The geology is similar to the Vekol,
according to Wilson. The claims are, in part, owned by Tom Corley (address not known).

*

1. Hilltop Mine
2. Pinal County, Arizona
3. James R. Moore, Phoenix
4. W. R. Jones
5. December 9, 1948
6. Lead-copper-zinc
7. "Entirely too small and too weakly mineralized to justify the large expenditure of capital necessary to prospect the area. Furthermore, it is practically inaccessible, devoid of water for drilling, and inconveniently situated with respect to highways and railroads. The day is bound to come when raw materials are so scarce that this place may be explored in desperation, but I doubt that it will be for another score or more."
8. _____

* * * * *

TELEPHONE 3-6272

**ANALYTICAL AND CONSULTING CHEMISTS
ASSAYERS, MINING ENGINEERS
823 EAST VAN BUREN STREET**

ASSAY CERTIFICATE

PHOENIX, ARIZONA, August 18 194⁷

Mr. H. N. Wolcott
Department of Mineral Resources
Phoenix, Arizona

WE HAVE ASSAYED THE SAMPLES RECEIVED FROM YOU AND FIND THE RESULTS AS FOLLOWS:

GOLD FIGURED AT \$35.00 PER OUNCE.

LAB. FORM 2

SILVER FIGURED AT \$ 0.90 PER OUNCE.

[illegible]

RESPECTFULLY SUBMITTED,

ARIZONA TESTING LABORATORIES

BY

Claude E. McLean

ASSAYING

CHARGES \$ 2.00 Paid Mail

**ANALYTICAL AND CONSULTING CHEMISTS
ASSAYERS, MINING ENGINEERS
823 EAST VAN BUREN STREET**

ASSAY CERTIFICATE

PHOENIX, ARIZONA, August 16 1947

**M Arizona Hilltop Mines,
c/o Mr. James R. Moore,
Phoenix, Arizona**

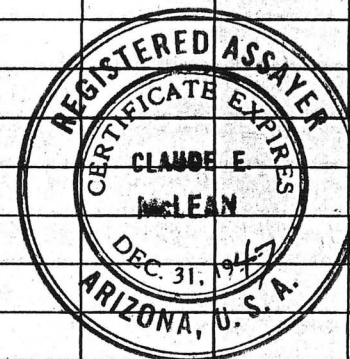
WE HAVE ASSAYED THE SAMPLES RECEIVED FROM YOU AND FIND THE RESULTS AS FOLLOWS:

GOLD FIGURED AT \$ 35.00 PER OUNCE.

SILVER FIGURED AT \$ 0.90 PER OUNCE.

LAB. FORM 2

LAB. NO.	SAMPLE	GOLD		SILVER		PERCENTAGES		
		OZ. PER TON	VALUE	OZ. PER TON	VALUE	COPPER	LEAD	Zinc
65746	Lower Slim Hilltop	0.01	\$0.35	6.20	\$5.58	None	5.41%	1.10%
47	Carload from Slim	0.06	2.10	9.60	8.64	1.90%	12.05%	3.15%



RESPECTFULLY SUBMITTED,

ARIZONA TESTING LABORATORIES

Claude E. McLean

ASSAY

CHARGES \$ 8.00

JAMES B. TENNEY
MINING ENGINEER AND GEOLOGIST
1070 N. Mountain Avenue
TUCSON, ARIZONA

Hilltop
Pinal Co

REPORT ON HILLTOP MINE,
VEKOL MOUNTAINS, Vekol
PAPAGO INDIAN RESERVATION, PINAL COUNTY, ARIZONA

CONCLUSION:

The two major ore zones at this mine, known respectively as Slim's workings and 1-2-3 workings, are associated with exceedingly strong mineralization and ideal structural features for the existence in depth of large ore bodies. In both of these occurrences there are pockets of ore of high enough grade to yield a fair profit is shipped direct under War markets. The ore as a whole should yield a grade sufficiently high to be highly profitable under normal market conditions, if milled in a moderate sized concentrator. There is little doubt that enough water could be developed within a few miles of the camp in the flat desert to the South and South-east to operate a concentrator of up to 300 tons daily capacity. There is every reason to hope for the existence of at least 500,000 tons of highly profitable concentrating ore.

Enough work has been done in the two ore zones to prove up to a point where lower tunnels for permanent development and eventual extraction are amply warranted. Of the two lower tunnels necessary, that one to develop Slim's workings involves less capital and should, therefore, be done first in order to facilitate the mining of high grade pockets during the War to help finance the venture. The cost of this preliminary work on Slim's workings should not exceed \$35,000 and enough net profit from the mining and shipment of high grade pockets should yield a net profit of at least \$100,000, making a net, over and above the cost of development, of \$65,000.

The work to prove up the 1-2-3 workings and to make this zone accessible will cost about \$68,000. This work should not be delayed long, as the ultimate possibilities of this ore zone are very great and will affect materially the plans for the size of the final plant necessary to beneficiate the two ore zones by concentration.

*

The area at the North-west corner of the property which was considered by Mr. Hyde and associates as an attractive area to drill, is in my opinion, of little potential value, and not worthy of diamond drilling. Diamond drilling of the main ore zones is out of the question due to the extreme brecciation of the limestone. It is very doubtful if more than 10% core would be recovered and delays would be frequent due to abrupt changes from soft lime to hard chert and to the probable frequent occurrence of small caverns.

ACCESSIBILITY:

The property is about 45 miles South-west of Casa Grande. About 40 miles of this distance is over a permanent well maintained highway. The remaining distance of 5 miles more or less can be eventually re-aligned as a good all-weather road, at very reasonable cost.

ORE OCCURRENCE:

The prevailing country rock is a thick series of generally Westward-dipping limestones, calcareous shales and a few quartzites of carboniferous age. The whole series has been highly altered by regional metamorphism so that the limestones are generally marbleized, the shales somewhat schistozed and the few sandstones altered to quartzites.

Cutting this series of sediments are thin dikes and sills of andesite porphyry which are somewhat iron stained and may be distantly associated with the ore occurrences.

The important features governing the larger ore bodies are structural. Sharp folding has yielded highly bracciated limestone or has resulted in wide fracture zones. The intense mineralization of these fractured areas in the limestone has resulted in the two large partly developed ore zones.

SLIM'S WORKINGS:

This ore zone is associated with a fracture zone striking East and West. It was caused by a sharp fold in the strike of the limestone at its Eastward and well marked in the hills to the East of the camp. The fracture zone finally ends to the West about 200 feet West of the workings. This zone was strongly silicified and

*

impregnated with sulphides of lead, copper and a little zinc. On the North and South edges of the zone mineralization extends into the relatively unaltered limestone a short distance as bedded deposits of high grade ore in a generally mineralized mass of highly fractured and silicified limestone. The depth of this zone as so far proved is from eighty to one hundred feet, its width about 150 feet and its length (east and west) about 200 feet. In this block of ground, probably not over 10% could be mined and sorted as shipping ore and of the remaining volume about 75% would constitute profitable concentrating ore. With these assumptions there is reasonably assured, 20,000 tons of high grade and 150,000 tons of concentrating ore.

Under the present conditions of development the ore cannot be mined and shipped at a profit, as it has to be rehandled so often on the way down to the bins on the road that the mining cost is prohibitive.

The work done to date has been very well done. Ore faces have been well exposed and a large tonnage has been assured. It is now time to develop the ore for efficient and cheap mining. To do this it will be advisable to drive a lower tunnel, the portal of which can be made accessible to the road by either building an addition to the present road from its end at the lower ore bin, or by construction of an inclined rail tram from the portal to the present road West of the camp. From a Brunton and tape survey by myself, the tunnel site picked as the most favorable will be approximately 104 feet vertically below the present upper tunnel. It should be driven a distance of about 200 feet to the West to reach the Western end of the zone. While driving this lower tunnel it would be advisable to drive a cross cut of the upper tunnel to the North to get over the lower tunnel and the two should be connected by a raise.

When this preliminary work is completed, systematic work should be laid out to mine the high grade plums and the remaining low grade concentrating ore blocked with cross-cuts and raises on both levels. The cost of such a campaign would be about as follows:

*

200 feet of lower tunnel at \$15	\$ 3,000
80 feet of upper tunnel at \$15	1,200
104 feet of raise at \$25	2,600
New equipment:	
2 larger drifters at \$350	700
2 stoper drills at \$350	700
Road or inclined tram	<u>1,000</u>
Total preliminary	\$10,200

It will then be necessary to drive on both levels about 500 feet of drifts and cross-cuts and 500 feet of raises at a cost of about \$20,00,

Total plus \$5,000 for road work, \$35,200

As this work is progressing over a period of about a year it is probable that about a quarter of the available high grade ore can be mined and shipped. Assuming 5,000 tons shipment at a net profit over mining and haul of \$5, there should be a net profit out of shipments of \$25,000, more than enough to pay for the preliminary work. When the work is all completed and the total of all available high grade ore shipped, the net profit over and above the cost of work should be about \$65,000.

1-2-3 ORE ZONE:

This ore zone is relatively much more inaccessible and will require larger capital to develop to the point where efficient and cheap mining is possible. Its potential size is, however, far greater.

The geological occurrence is here somewhat different from that of Slim's workings. Referring to the plan and vertical section through #2 and #2 outcrops, it is seen that the ore chimneys known as #1, #2, and #3, are on either side of a slumped area of thoroughly broken silicified limestone beneath a synclinal trough of limestone. What caused this slump was probably the shrinkage which accompanied the formation in depth of large replacement ore bodies in the limestone. The mineralization and shrinkage probably took place simultaneously over a long period. On the edge of the mineralized slumped block planes of weakness developed along which chimneys of ore ascended, outcropping as #1, #2 and #3 ore bodies. Between

#2 and #3, the ground is a mass of silicified broken limestone with considerable disseminated galena and oxidized copper minerals present. No bedding can be seen. The width of this zone is over 400 feet and the length from definitely bedded limestone to the West to relatively fresh limestone to the East is about 400 feet. The zone finds topographic expression, as would be expected, in a wide and rugged canyon. The details of the zone as shown on the plan depend on a brunton and tape survey by myself. The proposed lower tunnel is about 187 feet vertically below the outcrop at #1. The topography of the hillside between the portal of this tunnel and the present end of the road is extremely rough. It would not be advisable to construct a road from the present end at the lower bin to the tunnel portal until the tunnel and prospect raises are driven to prove up the ore zone. As can be seen there is a certainty of an intensely mineralized block 400 x 400 feet in area. Each 100 feet of depth would yield about 1.6 million tons. It is quite within the bounds of probability that a half a million tons of ore of the grade of the outcrops at #1, #2 and #3 exist which would constitute very profitable concentrating ore. The work of proving or disproving the zone is, in my opinion, highly advisable.

The work would cost about as follows:

400 feet of tunnel at \$20,	\$ 8,000
400 feet of xes at \$20	8,000
400 feet of raises at \$30	<u>12,000</u>
Total preliminary,	\$28,000
New road to tunnel portal,	10,000
Additional Xcs and raises to block out ore bodies and prepare for stoping,	<u>30,000</u>
Grand Total	\$68,000

If the preliminary work were not encouraging, the road and additional work, of course, would not be done. The cost of the preliminary work would be considerably less than the net profit from the shipment of ore from Slim's workings.

FINAL NECESSARY CAPITAL:

If all the above work should expose large bodies of high grade concentrating ore, it would then become necessary to expend for, say a 250 ton concentrator, water

development, additional road work, camp, etc., etc., from \$300,000 to \$500,000. From the metallurgical test made by Mr. E. H. Crabtree of the University of Arizona, it would appear that the ore is a specially amenable one to flotation with unusually high extractions of all metals. This test was made on the surface ore of #2 outcrop. It is highly probable that if large ore bodies exist at depths below oxidation, even better results would be yielded.

RECOMMENDATIONS:

The Hilltop mine is one of the rapidly diminishing high grade ore occurrences in the United States of America which have NOT been developed and at least partly mined in the past. The reasons why it was not exploited were (1) it was in a very inaccessible part of the State; and (2) its outcrop was badly masked in this particularly arid desert region by 'desert varnish'. The accompanying mineralization and structural distortion are extremely favorable for the existence of large ore bodies. The grade of the outcropping ore is good and the size of outcrops is impressive.

I emphatically recommend the expenditure of the amount of capital indicated in the previous paragraphs as an unusually worth-while venture.

Presented by

JAMES B. TENNY, E. M.

Mining Engineer and Geologist

*

Hill Top Mine Co
Los Angeles, Calif.

August 10, 1943

As requested I am dictating a brief statement on two only of the main ore showings on the Hill Top Mine, 45 miles southwest of Casa Grande, Arizona.

The group consists of 32 claims, only a small area and two ore showings will be considered in this statement, designated as first workings, (original) and "Slim's" workings. These are located on a lime mountain that rises approximately 900 feet above the floor of the wash and the camp; elevation of same 1900 feet. First workings elevation 2550; "Slim's" workings approximately 2350 and approximately 400 ft. south of first workings, and is located on precipitous east slope. The mountain and immediate area is lime. Strata is made up of beds from a few feet in thickness to as much as 20 feet; varies in color, prevailing dip ten degrees northwest; no major faulting is apparent.

North of this area there is an east west intrusion that has caused brecciation along the contact, and folding and distortion of strata.

First workings were not examined on recent trip. Previous examinations and mapping by writer gave an estimate of 5000 tons of available ore, combined values cu.au.pb. and ag., no zn, \$35.00 per ton.

✓ "Slim's Workings" consist of 3 ore showings, designated as lower tunnel, middle and upper workings, located about 1,000 ft. west of camp and 400 feet above. On Slim's lower workings there is a 40 ft. tunnel driven west, from which a 3 ft. cross cut was driven north from a point 34 ft. in from the portal. This tunnel is driven on a fracture in the strata standing nearly vertical. This fracture or fissure has acted as a channel for enriching solutions hypogene. This drift left the ore on the north side of drift. Bottom shows ore up to and where ore left the drift, and was again exposed in the short cross cut. Sample No. 9 was cut on 30 inches near right cross cut, but entire width was not exposed. Assayed by Eisenhauer this sample ran au, 18%; cu 1.4%, pb 9.3%, zn-3.25%, ag. 6.1 oz. Floor of drift near portal 30 inches, no delimit lines. Au. 35%, ag. 5.2 ozs., pb. 19.9%, cu. 2.6%, zn. 13.01%.

*

Slim's Middle Workings, 35 feet above Slim's Lower Workings, on same fracture, ore shows in fracture, and for 20 feet north on a bedding there is exposed 12 inches of ore on the floor and 30 inches of soft brecciated material above the ore. A faulting is apparent as the same fracture appears 20 feet north of its projected position in Slim's upper workings, 55 feet above Slim's lower workings.

At Slim's upper workings there is an ore fact, (Sample No. 8) not out of assay office, 10 feet high and 14 feet north and south, where no work has been done other than to freshen it up. It is apparent that all three of Slim's workings are on this same fracture, and all show ore of same or similar character.

To estimate even approximately the tonnage above any projected drift in this ore body is impossible without first determining width of ore in Slim's lower, middle and upper workings, where delimit lines have not been exposed, and only 30 inches of ore could be sampled, even though it was apparent that the width was greater. A few feet above the portal and a few feet north there is exposed ten feet of quartz of milling grade, lying on a slip that dips south 45 degrees and should be but a few feet north of the drift on its floor level.

In no case are the ore showings in any of Slim's workings to be limited to 30 inches. The fact that the ore left the drift on the north side, and is exposed again in the north cross cut, without exposing its full width does not permit of an exact statement as to width. The development of the ore headings at Slim's lower workings should make immediately available ore, much of it of shipping grade, and sufficient tonnage to justify mill installation. This is without considering the approximate 5000 tons exposed in first workings.

100 feet of drifting and raise from Slim's lower workings through to Slim's upper workings, with cross cuts, will determine both continuity and values of this ore body as well as prospect bedding deposits along the fracture. It is not to be considered as driving to pick up hoped for ore, but on the contrary is a drive on known exposed and sampled ore; is strictly development, not an exploration venture. There are many other places on the holdings that merit development,

but that subject will not be taken up at this time.

Equipment on the ground consists of compressor, jack hammers, small tools, two trucks, air line laid to all workings; camp equipped to accommodate eight men.

Hoping this will serve you for the time being, I remain,

Very truly yours,

EARL HYDE, E. M.

The writer was on the Hinshaw property when it was first discovered and on several occasions during its development and has a contour map of the first or old workings, a detail map of some old work done on the west side of the mountain as well as other data. Your request gave no time to hunt up these data. Past sampling at First Workings, assay averages, etc., leave in mind no doubt of the grade of the ores in the immediate area.

WORK-SHEET, Hilltop Mine, AUGUST, 1947

<u>PRIORITY</u>	<u>WORKINGS</u>	<u>JOB</u>	<u>COST</u>
A1	✓ Slim's	Cleanup	\$ 20
2		Raise-timbering	100
3		Sampling and assaying	50
3		Surveying and mapping	50
4		Development work, 100 ft	2000
4		Car, tract	200
B1	No. 1	Development work, 100 ft	\$ 2000
2		Sampling and assaying	100
2		Surveying and mapping	100
C1	No. 2	Sampling and assaying	100
1		Surveying and mapping	100
2		Development work, 100 ft	2000
D1	No. 3	Sampling and assaying	\$ 100
1		Surveying and mapping	100
2		Sidehill ledge for trackway	500
3		Development work, 100 ft	2000
E1	Leila Tunnel	Surveying and mapping	\$ 100
2		Sampling & assays (tunnel)	250
2		Timbering raises	500
3		Sampling & assays (raises)	100

Priorities should be followed approximately as above, with exception of Leila Tunnel work, which may be done at any time it is convenient. It is contemplated that priorities A & B be completed during August and September, C in October, and D in November.

In the matter of the northernmost aerial tram it is recommended that the clips be changed on the upper end of the wire-rope tramway-track before this is used further. Clips are now on backwards....the U-bolts should be on the slack side of the rope instead of on the loaded side. The hoisting sheave-wheel is now fastened in place with chains and bolts; it should be more permanently secured. It is my opinion that the Mine-Inspector will forbid the use of this equipment for hoisting and lowering men, even after the above corrective measures have been attended to.

At the present time there are not enough miners on the ground to do the work outlined within the time contemplated. It would be advisable to keep a lookout for good men in advance of actual need along this line. It is believed that Papagoes from the nearby villages could be made into good underground help, particularly as muckers and ore-sorters, as they are intelligent and cooperative when properly supervised.

RL

ROBERT LENON, B.S.E.M.
Mining Engineer and Surveyor
P.O. Box 525 Patagonia, Arizona

July 23, 1947

✓
Mr. James Moore,
519 Title & Trust Bldg.,
Phoenix, Arizona

Dear Mr. Moore:

In accordance with our recent telephone conversation I have visited the Hilltop Mine, spending parts of four days on the ground, and will make the following notes and suggestions for future operations there.

As the ore-bodies are more or less unrelated to each other in occurrence and access it would be well to prove or disprove the grade and tonnage of each body now known in the following order:

- | | |
|----------------------|---------------------------------|
| 1. Slim's workings | 5. Number 4 ore-body (lowgrade) |
| 2. Number 1 ore-body | 6. Leila Tunnel |
| 3. " 2 " | 7. Moore ore-body |
| 4. " 3 " | 8. Pisanno Tunnel |

Ship any ore above \$35 direct to smelter or mill, block out ore less than \$30 for mill-operation, stockpile ore taken out during development. Have mill-tests made when one year's mill-run is blocked out \$35,000 tons for 100-ton mill), sink well in flat and build mill low in mouth of main canyon to serve other ore-bodies without uphill haul.

Make rough surveys and geological maps of areas immediately surrounding ore-bodies before developing same, show all workings and relative elevations on a large scale, keeping a set of similar maps with all assays recorded thereon. Show widths of samples cut, plus all metals determined, on these maps.

Make monthly estimates of work to be done during the next month, including amount of money to be spent on each ore-body (direct costs only). Make monthly list of above for use of superintendent, showing priorities of work subject to revision by arrangement with the Phoenix office.

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Mr. James Moore

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7-23-47

Sample each carload of ore and get assay-returns before trucking to railroad. Sample each round of holes in each development-heading, as well as each day's holes in each stope. Record assay-results of above on maps.

Examination of cost-records will show when installation of an assay-office should be economical. Use assayer for sampling and mapping when he can be spared from his other duties.

Lay out tunnels and drifts at elevations such that they will connect on grade if required. Keep level-interval at 75-100 feet, with hillside trackways where feasible for transfer of ores to tramways.

Leila tunnel and Pisanno tunnel should be sampled at intervals of 50-100 feet, with more frequent samples at places that look more interesting than the average, down to 5 foot intervals. Vertical raises from Leila tunnel to surface should be entered and sampled.

At the present time I would recommend the expenditure of \$2-3,000 on each of the five workings shown on the attached work-sheet. As soon as that sum has been expended on each workings activities should be moved to the next-listed ore-body unless ore of shipping-grade remains in the previous ore-body. Sampling and mapping should be kept ahead of contemplated work so as to allow ample time to revise working-plans in advance of actual development.

Respectfully submitted,

Robert Lenon, Reg. Mining Engr.,
State Certificate No. 1221

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August 16, 1947

✓
Mr. James Moore
Moore, Romley & Roca
Title & Trust Building
Phoenix, Arizona

Dear Mr. Moore:

As I promised you during our visit to your Hilltop property, I am submitting herewith a brief memorandum covering my observations and recommendations regarding the conduct of your work on the property. In view of the wide divergence of opinions which you have already received in the form of various reports, I am reluctant to further confuse the issue with my own ideas which are at some variance with those expressed in the several reports. I am sure, however, that it is not your wish to be "kidded" by roseate predictions, and since I have no interest beyond my desire for your success, this will be a frank and honest expression of the impressions which I have received from my brief inspection of your property.

(1) I cannot concur with some of the portions of Tenney's report, both in respect to geologic features and to what he regards as probable ore tonnages. I think that his assumptions of continuity between the various exposures of ore are not justified at present, and that they cannot be justified without considerably more underground work. This is particularly true of that area covering what are known as "Slim's Workings". In no case has there been exposed in these workings any continuous orebody, and until such an exposure can be made, it is dangerous to assume that ore exists. Each of the several small patches of good ore which have been opened up may produce a few tons or a few carloads, but unless there is continuous ore between these patches, the aggregate tonnage will be relatively unimportant. Please note carefully that I am not denying the possibility that reasonably large orebodies may be encountered, but to assume any definite tonnage on the basis of present showings is, I believe, a risky and unjustified bit of optimism. Hyde was more conservative in his statements regarding this area; but it seems to me that he too was somewhat oversold as to the absolute certainty of the ore continuity.

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August 16, 1947

(2) In the area which covers the Hilltop Nos. 1, 2 and 3 orebodies, it appears to me that you have the best chance to develop a substantial tonnage of satisfactory milling ore. There is, of course, no question as to the ore which is exposed in the No. 1 and No. 2 orebodies, but here again it is impossible to predict what will be their ultimate extent. It should be reasonable to anticipate that with prompt and competent mining and shipment of the ore in this area, your investment to date should be repaid with a probable profit.

On the basis of very scanty sampling and the geologic features of its occurrence, your No. 3 orebody appears to offer a good possibility of developing into a satisfactory source of supply for moderate sized milling operations. To that extent I can agree with Tenney's observations; but I most certainly do not believe that he has any good basis for his statement that this orebody probably contains half a million tons of ore of the grade of the outcrops at Nos. 1, 2 and 3. With no development work whatever, and with only a meagre amount of surface sampling, there remains only the geological aspect of the area to indicate what it may be expected to contain. Certainly there is nothing to enable anyone to estimate definite tonnage or grade of ore.

(3) Another area which, in my opinion, deserves careful scrutiny and at least a reasonable amount of preliminary sampling is the ground around the tunnel at the end of the Lela road. While this area does not tie in with your present working plans, it should not be overlooked as a possible source of gold, copper, silver ore. A few well-placed samples would be enough to indicate whether or not any further investigation is justified.

(4) As I told you in camp, it would seem wise to concentrate your efforts for a few weeks in mining and shipping the easily accessible ore from the Hilltop Nos. 1 & 2 orebodies and also any ore which can be gotten easily from the "Slim" area. At the same time, if you can possibly secure an additional miner and mucker, you should get started on the tunnel to prospect the No. 3 orebody.

I am sure that Pat will do an excellent job for you, and I know that he is anxious to get things moving. Just tell him to "get the rock in the box" and turn him loose to do it in any way he sees fit. He has good equipment, he knows his business, and he is not afraid of work.

I hope that what I have said about your property will not cause you to be discouraged - for that is certainly not my purpose. I feel sure that, with intelligent and industrious supervision, your operations can be conducted in such a manner that they will be at least self-supporting. As to whether or not you will develop a large tonnage of ore I simply cannot make any predictions; but I think that the effort to do so is a worthwhile gamble.

Yours very truly,