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PRINTED: 08/29/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HILLTOP MINE

ALTERNATE NAMES:
HAND

COCHISE COUNTY MILS NUMBER: 11

LOCATION: TOWNSHIP 16 S RANGE 30 E SECTION 32 QUARTER SE
LATITUDE: N 31DEG 59MIN 07SEC LONGITUDE: W 109DEG 17MIN 21SEC
TOPO MAP NAME: RUSTLER PARK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
LEAD
ZINC SULFIDE
SILVER
COPPER OXIDE
GOLD LODE
MOLYBDENUM
CADMIUM DELETERIOUS?
TUNGSTEN

BIBLIOGRAPHY:
KEITH, S.B., 1973, AZBM BULL. 187, P. 52
ADMMR HILLTOP MINE FILE
BRITTAIN, R. L, U OF A THESIS, 1954
USGS BULL 1385-A, 1973
THE MINES HANDBOOK, 1918, P 381
PAPKE, K.G., U OF A THESIS, 1952
USBM 1940 MINERALS YEARBOOK
USGS MAP I-1312, 1982

USBM MLA 12-93

HILLTOP MINE COCHISE COUNTY

T16S, R30E. Sec 32
T17S, R30E Sec 5

Mines Handbook Vol. XII 1916
USBS Bulletin 1385-A, p. 53
AEC 172-478 p. 21

RI 5650 1960

ABM Bull. 125 p. 85
" " 187, p. 30

See: Maps in map cabinet upstairs

Geology and Ore Deposits of the Eastern Portion of Hilltop Mine Area
Geology Files (Thesis, 1952,UOFA by E. G. Papke)

Arizona Mining Journal March 1918 p. 21; June 1917 p. 18; August 1919, p. 16; December 1919, p. 31; January 1920 p. 33; April 1, 1922, p. 13.

Mineralogical Record, Volume 14, #2, Pg. 121-126, Arizona-IV

Bigsby, Philip R., (MLA 1-83) "Mineral Investigation of the North End Roadless Area, Cochise County, Arizona" P. 4, 7, & Table 1 Geology file

Brittain, R. L. , 1954, Geology and Ore Deposits of the Western Portion of the Hilltop Mine Area, Cochise County, Arizona: unpublished M.S. Thesis, University of Arizona, Tucson, 97 p.

SAVE

HILLTOP @ COCHISE

C4

HILLTOP MINE MAP INVENTORY: OF ADMR

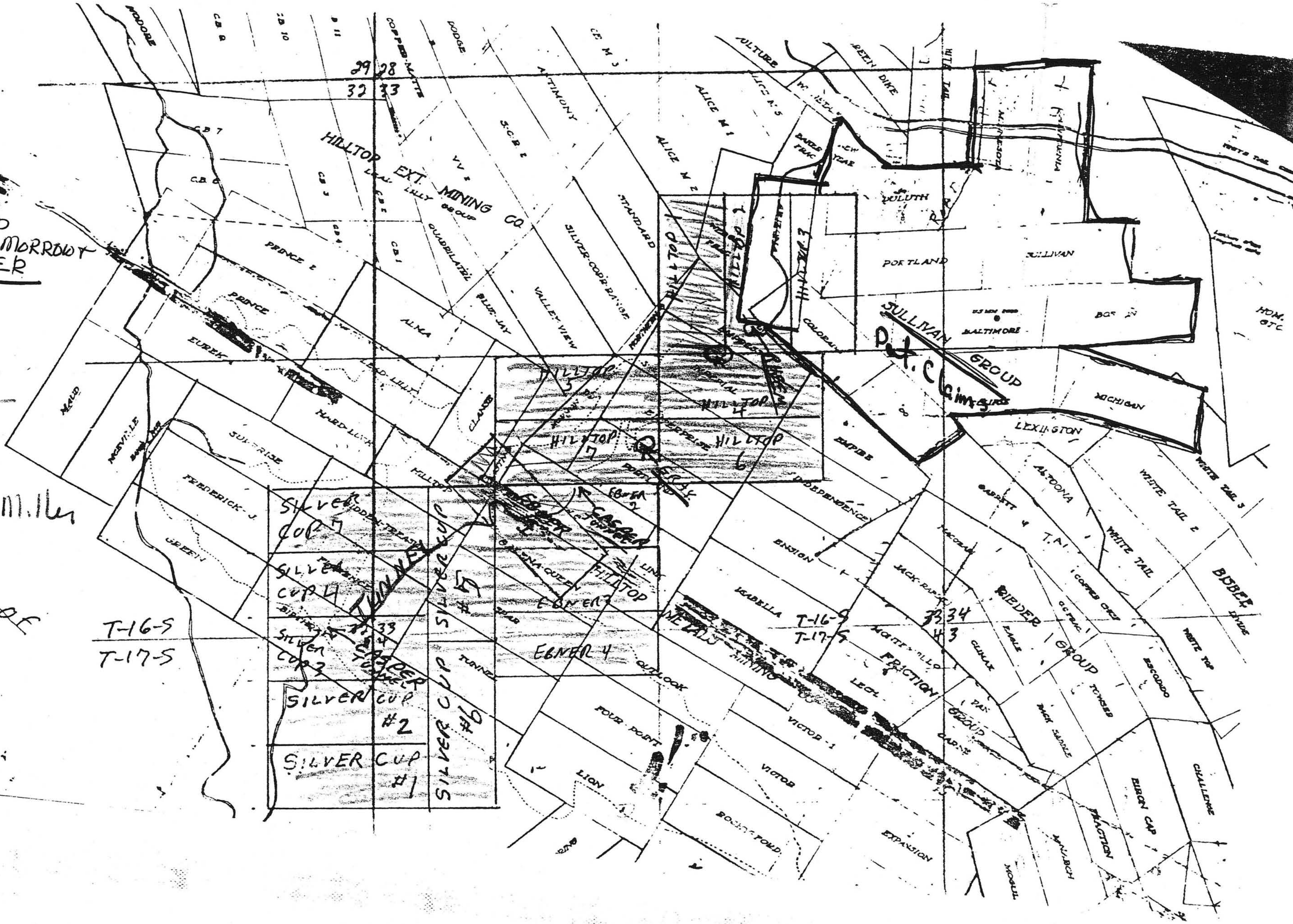
MAP#:	SIZE:	ON:	SUBJECT:	SCALE:	DATE:
MAP01	30X30	PARCHMT	RHEM ADIT LEVEL	1"=50'	AUG-SEPT. 1950
MAP02	21X55	PAPER	KASPER ADIT (E)	1"=500'	AUG-SEPT. 1950
MAP03	30X30	PAPER	SURFACE, GEOL/WORK	1"=500'	APRIL 1938
MAP04	21X55	PAPER	SAME AS MAP02		
MAP05	30X30	PAPER	SAME AS MAP01		
MAP06	30X30	PAPER	KASPER TUNNEL (E)	1"=50'	MARCH 1938
MAP07	30X30	PAPER	GRAY TUNNEL	1"=50'	MARCH 1938
MAP08	30X30	PAPER	RHEM TUNNEL	1"=50'	MARCH 1938
MAP09	30X30	PAPER	KASPER TUNNEL (W)	1"=50'	MARCH 1938
MAP10	38X27	PAPER	HILLTOP CLAIM MAP/WK'S	1"=500'	NOV. 15, 1949
MAP11	22X19	PAPER	GRAY LEVEL-KASPER STOPE	1"=20'	9/7/55
MAP12	38X27	PAPER	SAME AS MAP10		
MAP13	12X19	CANVAS	HILLTOP MINE-F.B. HYDER	1"=500'	JULY 10, 1923
MAP14	38X27	PARCHMT	SAME AS MAP10 & MAP12		
MAP15	09X11	PAPER	GRAY	1"=50'	
MAP16	09X11	PAPER	GRAY-HILLTOP STOPE		
MAP17	09X11	PAPER	KASPER	1"=50'	
MAP18	10X20	PARCHMT	GRAY-RHEM DDH INFO		
MAP19	09X11	PAPER	GRAY STOPE ASSAY	1"=20'	10/02/53
MAP20	09X11	PAPER	SAME AS MAP19		
MAP21	23X30	PARCHMT	VERT. GEOL. RHEM-BLKSM.	1"=50'	AUG-SEPT. 1950

- [illegible] CLAIMS: SULLIVAN GROUP RALPH WAYNE MORROW AUDREY MILLER

- CLAIMS OF Charles Ebner

Claims of G. Miller Audrey Miller

USED MAPS OF ASPEN, RHEEM, Gray & BLACKSMITH TUNNELS

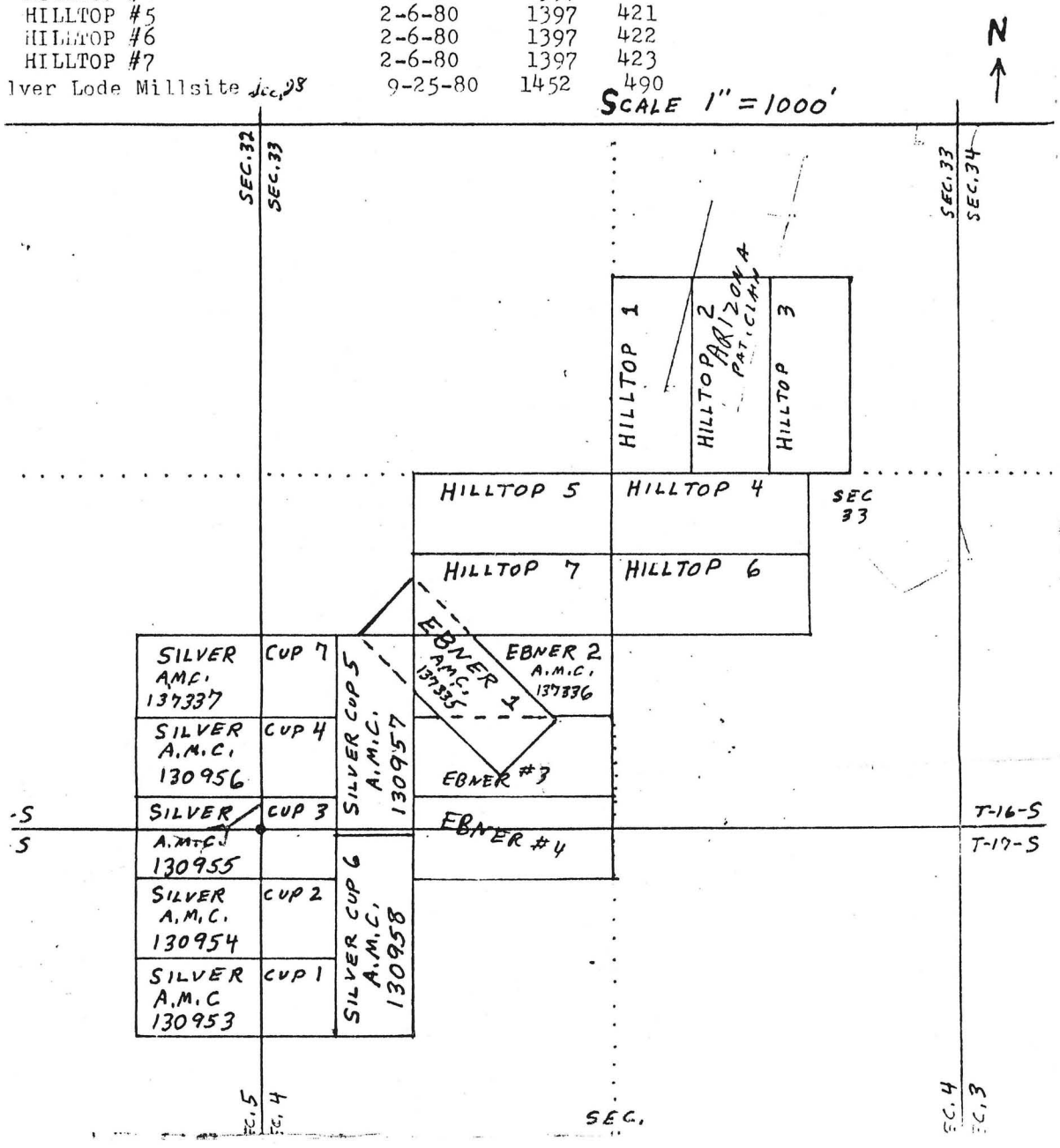


LOcated 1981
by Charles J. Ebner
P.O. BOX 699, Douglas, Az. 85607

CLAIM NAME	LOCATED	RECORDED	BOOK	PAGES	No.	A MC No.
SILVER CUP #1	5-22-81	5-26-81	1509	289-290	10766	AMC-130953
SILVER CUP #2	5-22-81	5-26-81	1509	291-292	10767	AMC-130954
SILVER CUP #3	5-22-81	5-26-81	1509	293-294	10768	AMC-130955
SILVER CUP #4	5-22-81	5-26-81	1509	295-296	10769	AMC-130956
SILVER CUP #5	5-22-81	5-26-81	1509	297-298	10770	AMC-130957
SILVER CUP #6	5-22-81	5-26-81	1509	299-300	10771	AMC-130958
EBNER #1	7-18-81	8-4-81	1526	109-110	16003	AMC-137335
EBNER #2	7-18-81	8-4-81	1526	111-112	16004	AMC-137336
SILVER CUP #7	7-18-81	8-4-81	1526	113-114	16005	AMC-137337

Located in 1980 by Guy Miller & Audrey Miller
P.O. BOX 167 PORTAL, AZ. 85632

HILLTOP #1	2-6-80	1397	416-417
(Map)	2-6-80	1397	417
HILLTOP #2	2-6-80	1397	418
HILLTOP #3	2-6-80	1397	419
HILLTOP #4	2-6-80	1397	420
HILLTOP #5	2-6-80	1397	421
HILLTOP #6	2-6-80	1397	422
HILLTOP #7	2-6-80	1397	423
lver Lode Millsite Sec. 28	9-25-80	1452	490



THAT PORTION OF MR. LERCHEN'S REPORT QUOTING THE BERKEY GEOLOGY WAS COPIED, ONE COPY BEING GIVEN TO MR. MURPHY AND ONE BEING SENT TO MR. LEON W. DUPUY AT HILLTOP, AT MR. MURPHY'S REQUEST.

3-14-40 OC

Mr. Morton has original Lerchen report.
11/19/43 - a.c.

4-12-74

"mo from

JERRY W. IRVIN
Field Engineer
Department of Mineral Resources
STATE OFFICE BUILDING, TUCSON, ARIZONA

TO: Hilltop Mine

Operator - H.R.M. Investment Co
7030 E. Broadway Tucson 85710
Mine Mailing address
Rte 1 Bx 14 Douglas Az.
John Brisley Supt.
Note: Brother-to Ralph.

ENT OF MINERAL RESOURCES
State of Arizona
eral Building, Fairgrounds
PHOENIX, ARIZONA

PHOENIX, ARIZ.
JUL 8
7-PM
1958

North Hill-Top Extension Mining Company

~~San Simon~~ Portal

Arizona

Unknown at
Portal, Ariz.

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

July 8, 1958

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

North Hill-Top Extension (Cochise County) silver,lead, gold, 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.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

NAME OF MINE: HILLTOP ✓
OWNER:

COUNTY: Cochise
DISTRICT:
METALS: Pb,Zn

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
10/46	Ralph Morrow, ✓ Douglas	10/46	Developing

HILLTOP

Ag, Pb, Zn

Cochise 2 - 2 S 35, T 16 S, R 30 E

O. O. Mattox, ~~Hilltop~~ unclaimed 9-27-46 '42

MH-21 LEAD, ZINC, SILVER, MOLYBDENUM

20 unpatented claims at 6,000 to 7,500 feet elevation in rugged timbered district, developed by 40,000 feet of underground workings, mainly tunnels in limestone - quartzite formation cut by mineralizing porphyry dikes - an estimated 50,000 tons in sight averaging 3 ounces silver, 15% lead, 5% zinc. Has shipped 11,400 tons. Warrants 50 ton mill. Mining and camp equipment in good shape.

Good graded road - 25 miles to shipping point - ample water and timber available.

For sale at $40,000 on easy terms.

California Mining District, Cochise County, Arizona

OWNER

MATTOX, O. O.,
~~Hkkkkxxxxxxxxxx~~ unclaimed 9-27-46
Sample in ore cabinet

MINE

HILLTOP MINE
Cochise Co.

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

June 30, 1960

Mr. Elmer E. Greenhagen
6510 So. Fairfield Avenue
Chicago, 29, Illinois

COPY

Dear Mr. Greenhagen:

We regret to advise you that the Hilltop Metals Mining Co., of your letter of June 26th, is no longer an active company.

The Arizona Corporation Commission advises that the Company was incorporated September 11, 1916, filed their last report September 11, 1934 and their charter was revoked September 11, 1941 for failure to file further reports.

The Hilltop Mine into which it put considerable money is now owned by the American Zinc, Lead and Smelting Company.

dYours very truly,

FRANK P. KNIGHT,
Director.

FK:lp

Feb 1963 - Continues idle.

May 24, 1944

To Whom It May Concern:

I have examined the Hilltop Mine located at Hilltop, Arizona and I am pleased to say that the property is one well worthy of intensive examination.

I wish to call particular attention to the Blacksmith tunnel where a sizeable ore body has been developed by a 60-foot winze. This ore has not been but should be encountered in the Casper tunnel at about 500 foot lower elevation and offers an excellent chance.

There is one other large ore body opened up in two of the lower tunnels which I believe justifies milling.

Very truly yours,

J. S. Coupal

JSC:LP

May 24, 1944

Mr. H. O. Ward
Hilltop, Arizona

Dear Mr. Ward:

Please pardon my delay in replying to your letter of May 16 but I have been out of the office a good part of the time.

I am enclosing a brief letter of recommendation as far as the property is concerned and hope that it meets your requirements.

With best wishes, I am

Yours very truly,

J. S. Coupal

JSC:LP
Enc.

February 8, 1944

Mr. C. H. Shoemaker
Johns-Manville Corporation
22 East Fortieth Street
New York, New York

Dear Mr. Shoemaker:

Subject: Hilltop Mine, Cochise County

I am enclosing a report on the Hilltop Mine which, in a general way, covers the property.

As for the remarks you quoted, I do not know for certain but my understanding is that the Eagle Picher Company did not go ahead with their operations due to the fact that they were looking for a property which would stand a 300 to 400 ton mill capacity and this property should be probably limited to around 100 tons until additional ore is developed. The Eagle Picher advanced certain monies after a preliminary examination in order to clear title and after a more intensive examination decided that they would not go ahead.

I did examine the property briefly and on one of the upper workings there is a sizeable deposit of lead ores which warrants much more careful examination and I believe it justifies an attempt to find out the downward extension of this ore body which can be readily done as there are workings 400 feet below the outcrop in one of the older tunnels which should be very close to the downward extension of this ore. Also, there are possibilities of a sizeable tonnage of ore in extensions of the ore body from which shipments were made.

I believe the property justifies a careful field investigation by anyone looking to get a lead property.

Very truly yours,

J. S. Coupal, Director

JSC:LP

P.S. I will remember you to Loyde Edmonson the next time I see him and expect it will be within a few weeks.

TELEPHONE
LEXINGTON 2-7600

Johns-Manville

TWENTY-TWO EAST FORTIETH STREET
NEW YORK, N. Y.

February 4, 1944

Mr. J. S. Coupal,
520 Title & Trust Bldg.,
Phoenix, Arizona

Hilltop Mine
Cochise Co., Arizona

Dear Mr. Coupal:

Some parties here in New York are endeavoring to interest us in taking over the Hilltop Mine on a lease and possibly option basis. To get a quick overall idea of the possibilities I asked one of my engineer friends out there about it, and apparently he knows about the property, as I assumed he would.

Below I quote a few pertinent excerpts from his letter:

"The people who own the mortgage on the property are lead-zinc operators and if they believed the mine valuable enough they could work it themselves and get their money back.

"Others who know the property have passed it up although they too could have worked it to their advantage."

Sponsors for the deal are not at all in agreement with the conclusion one might very well draw from these remarks and say it is typical, and I quote "Now, I am not much surprised at this Bisbee engineer's report - as they never come to see this property and make reports from hearsay".

Further it is suggested that you have first hand knowledge of the property in question and ....."Now, if you want to write to a party (engineer) who has been here and went over the property once and only a part of it at that - you write to J.S.Coupal. Just ask him if there is anyone here and etc. Be sure and write him".

That explains this letter and reason for taking the liberty to address you as we have. Anything you have to say will be appreciated.

Very truly yours,

JOHNS MANVILLE CORPORATION

C. H. SHOEMAKER
Consulting Mining Engineer

P.S. Have you seen our mutual friend, Edmonson, of late?

February 2, 1944

Mr. H. O. Ward
Hilltop,
Arizona

Dear Mr. Ward:

Many thanks for your letter of January 28. I will be pleased to send any description or add any information that I can to the New York party who has made inquiry on the Hilltop Mine.

I did mention your property to a group whom I thought would be interested, but they have taken on other properties and were not interested at the time in Hilltop.

I will keep your property in mind and hope to be able to call it to the attention of others.

Very truly yours,

J. S. Coupal
Director

JSC:JES

Hilltop Ariz.

Mr. J. S. Canfal

Dear Mr. Canfal -

Last week I sent your name to a party in New York - as one who had been here & gone Through most of the Hilltop mine.

I do not know if he will write you or not - dont like to bother you - for I do know you are a busy man - but I am so anxious to get this property in action some way.

Have you not found any one by this time who you could interest.

Be glad to hear from you.

Yours sincerely

H. O. Ward.

Hilltop Mine

Hilltop, Ariz.
Oct. 25 - 43

Mr J. S. Canfal
Phoenix, Ariz.

Dear Mr Canfal

I received your letter, the reports & assay sheets, & many thanks for the same, also the copy of the claim map. Those reports which Mr. Clark put out I never send out, as you can see that they are not altogether true.

The price was changed after more development was done & the ore in the Blacksmith was proven 25 ft more down.

I am glad you had a pleasant stay while here, and would be glad to have you stop with me any time you are out this way.

yours truly
H. O. Wand.

P.S.
Hope you get something started soon.

October 19, 1943

Mr. H. O. Ward
Hilltop, Arizona

Dear Mr. Ward:

I am enclosing three prints of the claim map of the Hilltop group together with copies of the Mine Owner's Report on your property which are on file here. I find that these reports contain all of the information regarding your assays, the original of which I am returning together with your sketch.

I wish to thank you for the pleasant stay and will advise you as soon as I have anything definite on your property.

With best wishes, I am

Yours very truly,

J. S. Coupal, Director

JSC:LP
Enc.

Examined mine 10/14 JSC

Killtop, Ariz.
Oct. 1 - 43

Mr. J. S. Coupal
Phoenix

Dear Mr. Coupal

Your letter of Sept. 29th received & would be very glad to have you come here on the morning of Oct. 14 & remain here until afternoon of the 15th Then I can show you a part of the mine. (I mean the Killtop Mine).

I would like to see a government owned mill come in here, unless we could interest some private people who are able to open up & start things to going. Hoping to see you early in the day of Oct. 14. If I can take care of you all here at the Killtop, Camp, Killtop Post Office. Come from Kirkee to Douglas & to Rodeo, N.M. Three miles, or less, first Rodeo you Turn to your left & you will find signs from there on -

Yours Truly
H. O. Wood

June 15, 1943

Mr. C. T. McLendon
Box 483
Wickenburg, Arizona

Dear Mr. McLendon:

I am enclosing the report on the North Hill Top Extension Mining Company.

I have made a copy and have placed it in our files. I hope that we may be able to further investigate it.

Very truly yours,

J. S. Coupal, Director

JSC:kk
Encl.

29 September 1941

Mr. O. O. Mattox,
Hilltop,
Via Rodeo, New Mexico.

My dear Mr. Mattox:

Replying to your letter of September 22, addressed to CO-1, I beg to advise that, due to the fact that all copper production is allocated by the Priorities Division and cannot be earmarked, the party making inquiry for a copper property is no longer interested.

Regretting that I am unable to be of assistance in this instance, and with best wishes, I am

Yours very truly,

J. S. Coupal

JSC-jrf

CO-1

O. O. Mattox
Hilltop, Arizona.
(Via Rodeo, N. M.)

Hilltop, Ariz., Sept. 22, 1941.

Box CO-1
Dept. of Mineral Resources,
518 Title & Trust Bldg.
Phoenix, Arizona.

Dear Sir:

I have a partial interest in a copper, silver and lead mine in this district. I believe it could be operated as a copper property by giving special attention to the copper ore. These ores can be shipped or would make a profitable leaching proposition.

We do not have a very extensive report but the mine is located near a good road and is easy of access. It would require very little time and expense to make a personal inspection.

The property is quite extensively developed and there was quite a lot of pay ore on the dumps last year but I understand considerable of this was shipped last spring by leasors who did some work there to apply to the annual assessment work.

If interested in receiving more information or in visiting the property will be glad to hear from you.

Respectfully Yours,

O O Mattox

O. O. Mattox,
Hilltop, Arizona.
(Via Rodeo, N. M.)

HILLTOP MINES

GOLD HILL MINES
CROW GOLD MINES

HILLTOP, ARIZONA
VIA RODEO, N. M.

Hilltop, Arizona.

October 3, 1940.

Mr. J. S. Coupal,
Dept. of Mineral Resources,
Phoenix, Arizona.

Dear Mr. Coupal:

I received your letter of the 25th of Sept. in answer to mine of recent date addressed to MIS-21.

I was in hopes of being able to have this party visit and inspect the Hilltop mine, as I feel that we have here just such a property as he is advertising for, and you have a report and description which Mr. Mattox filed with your office.

I sincerely wish that anyone who is looking for a silver-lead-zinc mine will come and make a thorough inspection of the Hilltop.

Respectfully Yours,

H. O. Ward

16 July 1940

Mr. O. O. Mattox,
Hilltop, Arizona,
via Rodeo, New Mexico.

Dear Mr. Mattox:

I thank you for your letter of July 10 enclosing additional information on the Hilltop Mine. I also wish to acknowledge receipt of the samples of ore which you so kindly sent.

This information and samples have been placed in our files for future reference.

With best wishes, I am

Yours very truly,

J. S. Coupal
Director

JSC*jrf

679

O. O. Mattox,
Hilltop, Arizona.
(via Rodeo, N. M.)

Hilltop, Ariz., July 10, 1940.

Mr. J. S. Coupal,
Dept. of Mineral Resources,
Capitol Building,
Phoenix, Arizona.

Dear Mr. Coupal:

In reply to your letter of July 6th I am sending you under separate cover some additional information regarding the Hilltop mine. I find we have let most of our best maps showing the tunnels, crosscuts, stopes, winzes, etc. up to date, have been loaned out and not returned.

The map that I am sending was taken, or made before extensive work was done on the Gray and Rhem tunnels but it will give an idea as to locations, etc.

Other papers sent are:
Small map of Geologic cross section through mountain.
A short report or description of the property, together with Report by Eng. Luis D. Huntoon in 1919.
List of assays taken by F. H. Lerchen, of the Eagle-Picher Mining Co.
A general description of the property, and
Owners Mine Report.

I have some smaller maps which give a better illustration of the underground workings and some photographs in El Paso which I will be glad to send the latter part of this month.

We are pricing this entire property, with buildings, power plant, machinery and equipment at $40,000 on easy payments, or will sell for $30,000 without the old power plant and equipment, or we will agree to any reasonable arrangement for the installation of a mill. Or would be willing to sell a one-half interest in the property and assist in installing a mill.

Will mail you later on a few small samples of ore from the Hilltop Mines.

We who know the property well, feel confident that it is a most excellent one for a 50 to 100-ton mill. We are grateful to you and to the Department of Mineral Resources for the interest you are taking in the mining industry in general which promises benefits to each and all of us small mine owners.

Respectfully Yours,

O O Mattox

O. O. Mattox
Owner Hilltop Mines.

M421

3 April 1940

Dr. A. Hyma,
817 Arch,
Ann Arbor, Michigan.

Dear Dr. Hyma:

I am enclosing herewith copy of Field Engineers Report made by Mr. Carpenter on the Hilltop Mine in Cochise County.

I trust that this information may be helpful to you.

Yours very truly,

J. S. Coupal
Director

JSC-jrf

encl.

MEMORANDUM

Tucson, Arizona
March 25, 1940.

To the Director:

Enclosed Engineer's report on the Hilltop Mine. I am also out of Service reports, please send some down.

Miles M. Carpenter,
Field Engineer.

MMC/cp

20 March 1940

Dr. A. Hyma,
817 Arch,
Ann Arbor, Michigan.

Dear Dr. Hyma:

I hope you will pardon my delay in replying to your letter of February 23. Mr. Carpenter did not make an engineers report on the property, but has made a few comments which are as follows:

"I recall our conversation with Mr. Hyma at Douglas, and you will note from my reports that I visited the Hillside Mine Jan. 18 and 19. It is a property with miles of development and some exposures of lead-silver ore, but it is a situation on which a man cannot say anything worth saying without a whole lot more investigation than it is possible for us to give.

"My impression is that it is a marginal property as to quantity of ore and investment required that can be appreaised only by a thorough examination, including not only samplying by some additional development in the ore bodies to get an idea of continuity. It is a certainty that the Eagle Pitcher did not consider that there was enough ore indicated to justify whatever proposition was offered them. You know they did lend Mr. Mattox $14,000 which is long overdue and they could foreclose at any time, I understand, but do not want the property."

Yours very truly,

J. S. Coupal
Director

JSC-jrf

23 March 1942

Mr. H. O. Ward,
Hilltop, Arizona.

My dear Mr. Ward:

I am enclosing herewith a copy of mine owner's report filed with this department covering the HILLTOP MINES in Cochise County, to which has been attached copies of Field Engineers Report and assay sheets.

I am returning herewith the copies of assay sheets which you sent for our information.

I shall be glad to submit these reports to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, and with best wishes, I am

Yours very truly,

J. S. Coupal

JSC-jrf
encls.

February 25, 1942

Mr. H. O. Ward,
Hilltop, Arizona.

Dear Mr. Ward:

I have your letter of February 21 enclosing the report for the Department of Mineral Resources and also the assay sheets.

When we have had the opportunity of making a copy of the assay sheets we will return them to you. It may be several days before we can have these copies made as you probably appreciate that the Governor vetoed our appropriations and we have only the limited facilities provided by donations from members of the Arizona Small Mine Operators Association.

It would strike me that, under the present conditions and the war demand for lead and zinc, this would be a property well worthwhile going after a government loan for erection of the necessary plants. They need lead and zinc so badly that they are undoubtedly going to extend the loans and it would really be a patriotic effort for a person to apply for government money and get the mine into production in that way. Your property is one that has a production record, a good history, and, should make an attractive proposition for government money under present conditions.

There should be a very good opportunity for lead and zinc mines due to the new premium prices, but, of course, we still have the same job of attracting the buyer to look into it.

With kindest personal regards, I am

Yours very truly,

CHARLES F. WILLIS, Chairman
Board of Governors

CFW:MH

Kilton, Ariz.
2-21-42

Mr. Charles F. Willis
Thams Ariz.

My dear Mr Willis

I am returning this report also an assay sheet which was made by the Eagle Pichers Engineer. which please return to me.
I hope this is a big help to you in landing a buyer for us.
Now Mr Lenchen said he believed this could be developed to a 150 ft / possibly a 200 ton property but not to a 400 ton as they were looking for to supply their mill which as you know is idle at Ruby. They wanted to move that here but thought this mine to small.
Now there are several small mines close by that could supply several tons pr day.
Glad to hear from you at any time & please return the assay sheet. I shall also ask you to please not refer any one to the Eagle Pichers, as they dont care to be bothered with this.

Yours
A. O. Ward

Ward

18 February 1942

Mr. H. O. Ward,
Hilltop, Arizona.

My dear Mr. Ward:

Replying to your letter of February 16, I am enclosing herewith a blank mine owner's report, which I should suggest that you fill out in detail and return to this office so that information may be available on your lead-zinc property. Please give as much detailed information as possible - the more information contained in the report the better chance we have of interesting capital in the mine.

Upon receipt of this report, I shall be glad to submit a copy of it to anyone making inquiry for a property such as yours.

Assuring you of my desire to be helpful, and trusting that you will return the report as early as possible, I am

Yours very truly,

Charles F. Willis
Chairman, Board of Governors

CFW-jrf
encl.

Hilltop Ariz.
2-16-42

Mr. Sam Coupal
Phoenix

Dear Sir - I received the card from A.S.M.O. today & note you will be in Douglas on the 20th I am sorry I can not be present for I would like to meet you & hear what you have to say.

Now we have here a good lead zinc & a deposit of Molybdenum ore that is all defense metal, & we wish to sell this to some one, it is a great milling proposition & at present prices can ship some but need a mill as we all have water comes from lower tunnels.

If you can send some one who buys will be glad to make you a present of a commission on the sale.

Several miles of tunnels plenty of ore cut by drifts & crosscuts. Power plant & dwellings, cottages & etc.

would be glad to hear from you as this ought to move now & get to working.

Yours
Howard

P.S.

Did you meet a Mr. Selfridge from Boston who was in Tucson two weeks ago looking for a mine property. I heard of him from a friend in Boston but was too late.

Could you give me the names of some good mining Engineers who get buyers for properties or any one else who deal in mines in Phoenix or Tucson or any where else.

Thanking you kindly

Yours

February 17, 1942

Mr. H. O. Ward,
Hilltop, Arizona
Via Rodeo, New Mexico.

Dear Mr. Ward:

Your letter of February 12, addressed to the Phoenix Chamber of Commerce, has been referred to me for reply.

I am wondering if you have your lead, zinc, molybdenum property listed with the Department of Mineral Resources as this is the first step in getting it presented to the possible market. I am enclosing a blank form for this purpose.

Please keep in mind in filling our this report that the person who is looking for a mining property decides from the information given in that form whether he will look further into it and send his engineers or make a personal examination. In other words, this report must be sufficiently attractive and completely presented so as to encourage further investigation, yet at the same time quantities and values must not be exaggerated.

We are very confident that with the bonus prices to be paid on lead and zinc there will be a considerable demand for promising properties and it is advisable that we have full data on hand.

Trusting that we will hear from you, I am

Yours very truly,

CHARLES F. WILLIS, Chairman
Board of Governors

CFW:MH
Enclosure

The attached communication is referred to you for your attention.

Your cooperation in furnishing the information requested will be appreciated by us.

Phoenix Chamber of Commerce
48 North First Avenue
Phoenix, Arizona

Phone 3-6161

FEB 14 1942

Hilltop, Ariz.
2-12-42

Chamber of Commerce
Phoenix

Dear Sirs,— We have here an Extra good milling property of lead, zink & molybdenum ore & wish to get in touch with some one who could place it on the market. Will you please give me the names of some good mining engineers Allso any one else you suggest. Thanking you kindly

I remain
H. O. Ward
Hilltop, Ariz.
Via Rodeo, N. M.

Phoenix, Arizona, 20 March 1940

M E M O R A N D U M

To Miles M. Carpenter:

In your confidential memorandum of February 25 regarding the Hillside Mine, you state that you visited the property on January 18 and 19.

In a letter dated February 23 from Dr. A. Hyma he asked for our engineers report on that property.

From your notes, I wish you would write up your report so that I may forward it to Dr. Hyma, and have it for our files as a record.

J. S. Coupal, Director

JSC-jrf

UNIVERSITY OF MICHIGAN
ANN ARBOR

DEPARTMENT OF HISTORY

February 23, 1940

Mr. J.S. Coupal
Department of Mineral Resources
Phoenix, Ariz.

Dear Mr. Coupal:

Our departments of mineralogy and geology are very much interested in the Hilltop Mine. We feel that our university should have this mine for summer school courses and some mining operations.

Since the climate up there is so wonderful in summer, we need such a place. The only summer school camp we have now is in Wyoming. There are no minerals near that camp worth mentioning.

The dean of our literary college, Mr. Edward Kraus, is one of the nation's foremost authorities on crystals and gems. I told him about the forthcoming article in the Arizona Highway Magazine describing some of the Wulfenite crystals in the Hilltop mine. He knows the collector in Portland, Oregon, who has placed a standing order for the whole output of the crystal specimens. My friend, Mr. J.B. King, 1125 Tenth St, Douglas, tells me that the National Geographic Society has even sent a man to his house inquiring about this.

Sincerely yours,

A. Hyma

P.S. Please remember to send us your report a.H.

Phoenix, Arizona, 24 February 1940

M E M O R A N D U M

TO MILES M. CARPENTER:

I have just received a letter from Mr. Hyma, who is interested in the Hilltop property. You will recall our conversation with him at Douglas. At the time, I believe you said that you would look over the property and make a report. This is quite out of the way at present, and unless there are other properties to look over in that district, I do not see how you can afford the time to go over there - particularly since Mr. Hyma writes that he might like to spend the summers there and do work more or less as a pasttime. If your plans include a trip there, however, to look at other properties, it might pay to render a report to Mr. Hyma.

I have just heard from Mr. E. J. Belleau, and he is expecting to be in Phoenix within a short time. He states that he has capital ready to purchase small lots of tungsten, molybdenum, and vanadium concentrates. I know there are others in the market for these same products, but please keep in mind that Belleau also is in the market, and he will call upon you as soon as he arrives.

J. S. Coupal, Director

JSC-jrf

[illegible]rch
Ann Arbor, Mich.
February 20, 1940

Mr. J.S. Coupal
Department of Mineral Resources
Phoenix, Ariz.

Dear Mr. Coupal:

I wish to thank you for your kind letter of February 15th.

What you say is quite correct and to the point, but I did not receive the report about the Hilltop Mine that you and Mr. Carpenter said I could have. As you have just remarked yourself, one must have the opinion of a field engineer before he can know what to do with a mine.

I did not wish to give you the idea that I had discontinued my interest in that mine. The buildings certainly have some value, and I thought that certain persons like myself could spend the summers there and do some work more or less as a passtime. Such a place would have more value for me than for the Eagle-Picher Co.

Since Mr. Mattox did not keep his contract with that company, and since the company merely wants to get its money back, I am thinking that my friends and I would be the logical party to keep the property in good condition.

So please do not forget to send me some kind of a report as the result of Mr. Carpenter's investigation. Even if the mine is absolutely no good, that is worth knowing.

Very truly yours,

A. Hyma

15 February 1940

Mr. A. Hyma,
817 Arch St.,
Ann Arbor, Michigan.

Dear Sir:

I thank you for your letter of February 6, and I am sorry to note the difficulties which you have encountered on the Hilltop Mine. Mining is rather serious work, and a lot of work is started where people are not well informed and do not call in an engineer who is familiar with that particular type of work. There is a lot of hopeful wishing done regarding mining operations, and often times it results in rather poor business judgment. We are particularly anxious in this state to attract new capital, and difficulties such as you have encountered naturally do not encourage new money to come in. However, most of those difficulties can be overcome if one will put the same thought into mining plans that they do into other business arrangements.

If we can be of any help to you in any particular way, we shall be glad to do so. However, if vague agreements are entered into and difficulties arise, it becomes a personal matter which is beyond our scope.

With best wishes, I am

Yours very truly,

J. S. Coupal
Director

JSC-jrf

817 [illegible]b St.
Ann Arbo , Mich.
February 6, 1940

HYMA

Mr. J.B. Coupal
Department of Mineral Resources
Phoenix, Ariz.

Dear Mr. Coupal:

I was happy to hear that Mr. Miles M. Carpenter of your department visited the Hilltop Mine as he had promised to do, and that he found promising veins of ore.

In order that outside capital may be found for the operation of this mine I would greatly appreciate a copy of Mr. Carpenter's report, or else some other kind of a report.

What puzzles and troubles me a great deal, however, is the human factor I have had to deal with. Although I am reluctant to bother you with some details, we must consider all factors involved in mining operations. Since I have had most of my difficulties with the men who induced me to spend my money all too freely, I come to you for some advice as well as recommendation for changes.

First of all, Mr. O.O. Mattox, the owner of the Hilltop Mine, harped on the subject that he had found a German in Mexico to whom he had intrusted the management of his mine in Mexico. This man invested $1,000, and I should do the same, in which case I would also manage a mine and mine the ore. This idea seemed reasonable to me, and I went along with Mr. Mattox until I had spent about $1,200 cash. We made out a primitive kind of a contract, which stated that I was to receive one-half of the profits from the mining operations. However, it was gradually revealed to me by carefully prepared stages that the Eagle-Picher Lead Co. had informed Mr. Mattox that I was to have no permission to sell any ore. Although Mr. H.O Ward for several weeks had vaguely spoken of the time when the mortgage loan of the Eagle-Picher was to expire, Mr. E.D. Morton told me in Tucson one day that it had already expired. Nevertheless, that fact was of no great importance, since the Eagle-Picher Lead Co. was willing to wait for a considerable period for outside capital to come in and relieve Mr. Mattox. My business was, so I learned afterwards, not to mine and sell ore but raise capital. I thought that I was to be a manager and after having conducted profitable operations, would induce some of my wealthy friends in Detroit (one of whom had previously invested over $35,000 in a company I had founded in Ann Arbor, Mich.) to invest whatever amount was necessary. This I could have done had I not been interfered with.

We had at the mine two former students from the College of Mines at El Paso, Texas. Mr. Mattox had given them an opportunity to get practical experience. They agreed to compensate Mr. Mattox for providing them with board and room with whatever labor they could provide. I took this arrangement over on October 28, 1939. But they became so seriously interested in the mining of lead ore that in my opinion they should earn more than merely board and room. So we finally went in despair to Tucson and told Mr. Morton of the Eagle-Picher Co. about our plans. We were told that we would have permission to mine a total of 35 tons of ore, in order that we would have some funds with which to operate. I provided the young men with a gyratory crusher and with various amounts of cash. We never made any definite arrangement about wages, since they were not working for wages, but to get practical experience. But now I am shocked to learn that, after I spent over $600 in their behalf, I must pay them $525 in wages due them so they argue in a letter. This is what the mining laws of Arizona presumably state. It does not matter, they argue, what the arrangement was that they had made with Mr. Mattox and myself. They must have full wages for every day spent at the mine, plus the proceeds from the carload of lead ore.

Now I have raised the question what I am to get for my work and my $1,200. Mr. Mattox says the money is gone and I cannot recover any of it except in the form of commissions for selling the mine for him. The men who worked for me can think only of how much more they can force me to pay them, and Mr. Mattox can think only of how much my friends can pay him. Nobody seems to be interested in my state of mind when I perceive that I have been swindled out of my money, partly through fraud, partly through threats from the men employed by me. One threatened to cut my throat, another to burn my house, etc.

It seems to me that a person in my position could not possibly be persuaded to raise outside capital for a mine so foolishly managed as the Hilltop Mine has been run recently. I have some very influential friends in Douglas, Ariz. who have promised me that they will go a long way to see that my interests are protected. Since all my ready cash is now gone, the two former students think they are about to punish me through the state government of Arizona. For that reason as well as for some others I have written you this letter. I am curious to know whether your state wants to prevent capital from being invested in it. I gathered from some of your comments that Arizona was interested in having both fine citizens and a wealth of capital. I believe that you are right.

Sincerely yours,

A. Hyma

Hilltop Mine (F)
Cochise

Modified MRDS record from USGS DDS 20 10/2002

RECNO	M002167
REC_TYPE	S
REP_DATE	83 05
REP	PETERSON, JOCELYN A
REP_AFF	USGS
SYN	DUNN SHAFT, BLACKSMITH SHAFT, KASPER TUNNEL, RHEM ADIT,
GRAY	
DIST	CALIFORNIA DISTRICT
COUNTY	COCHISE
STATE_CODE	AZ
CTRY_CODE	US
PHYS	12
DRAIN	15040006
LAND_ST	41
QUAD1	CHIRICAHUA PEAK
Q1_SCALE	62500
ELEV	6400 FT
UTM_N	3539930
UTM_E	661650
UTM_Z	+12
ACC	ACC
TOWNSHIP	017S;
016S;	
RANGE	030E;
030E;	
SECTION	03, 04, 05; 32, 33, 34;
MERIDIAN	G&SR
POSITION	6 MI NW OF PARADISE; ABOUT 26 MI S OF SAN
SIMON	
LOCATION	NEAR HAND'S PASS ; INFO FROM LAND.ST :1964
SITE	HILLTOP MINE Fig3
LAT	31.9856
LONG	-109.2889
CTRY_NAME	UNITED STATES
COMMOD	PB ZN CU MO AG AU W CD AS
AS	
ORE_MAT	GALENA, CERUSSITE, SPHALERITE, CHALCOPYRITE, WULFENITE, SCHEELITE, PYRITE, ANGLESITE, SMITHSONITE, MAGNETITE, AZURITE, CHRYSOCOLLA, MALA CHITE, PSILOMELANE, PYROLUSITE, ARSENOPYRITE, COPPER, GOLD, SILVER
GAD	2-5 OZ/T AG, 10-25% PB, 5-15% ZN, 0.1-5.61% CU, 10-12%
FE,	
	2-10% M N
MAJOR	PB CU MO ZN
MINOR	AG

TRACE	AU W CD AS AS
PROD	S
LOC_STRUCT	NE-SW FAULTS
STATUS	6
YR_DISC	1881
OPER	QUEEN MINING CO (1973)
EXPL_COM	PREVIOUS OWNERS/OPERATORS INCLUDE AMERICAN ZINC, LEAD, & SMELTING CO, HILLTOP SILVER LEAD MINES CO, HILLTOP METALS MINING CO, PIEDMONT MINES INC, HILLTOP MINING & DEVELOPMENT CO; HIDDEN TREASURE CLAIM WAS FIRST LOCATED IN DISTRICT-NOW PART OF HILLTOP MINE
DEP_TYPE	FISSURE VEIN, REPLACEMENT
DEP_FORM	LENSES, SHOOTS, POCKETS, CHIMNEYS
MAX_LEN	110
M_L_U	FT
MAX_WID	50
M_W_U	FT
DEP_SIZE	S
DDESC_COM	LOCALLY PIPES OF MASSIVE SULFIDES (1-6 FT DIA) FOLLOW FRACTURES I NTO LIMESTONE FOR DISTANCES OF UP TO 50 F T
QUAD250	DOUGLAS
DEPTH_WK	1500
D_W_U	FT
LEN_WK	20,000
L_W_U	FT
DWORK_COM	EXTENSIVE WORKINGS OPEN CUTS, SHORT ADITS; KASPER TUNNEL 3,000 FT WITH 6,000 FT OF WORKINGS; GRAY TUNNEL 2,000 FT WITH 3,000 FT OF WORK INGS; RHEM TUNNEL 3,700 FT WITH 3,000 FT OF WORKINGS
NORE_MINS	GARNET, EPIDOTE, CHLORITE, CALCITE, CLINOZOISITE, QUARTZ, WOLLASTON ITE, GYPSUM, TREMOLITE, LIMONITE
ORE_CNTL	BRECCIATION ALONG FAULTS & FISSURES IN QUARTZITE AND LIMESTONE
ALTER	OXIDATION PARTICULARLY IN VEINS IN QUARTZITE
NAME	PETERSON, JOCELYN A
DATE	05/01/83
CONT_CODE	NA
GEN_COM	THIS REPORT REPRESENTS A MERGER OF ORIGINAL RECORD M002167 WITH RE CORD M030559 OF JAN WILT IN MOLYBDENUM FILE, CONTACT PERSON T.G. THEOD ORE, USGS ; INFO.SRC : 1 PUB LIT; 2 UNPUB REPT
REFERENCES	KEITH, 1973, ABM BULL 187, P. 52|ABM FILE DATA|ABM BULL 140, P. 91|Brittain, 1954, M.S. THESIS, UNIV OF AZ (Western Portion)|Burnham 1959, New Mexico Bur Mines and Mineral Res., Metallogenic Provinces of Southwestern United States and Northern Mexico, P. 30|Dale et al, 1960, USBM RI 5650

	Tungsten Deposits of Arizona, p 17-18,|PAPKE, 1952, M.S. THESIS, UNIV OF AZ (Eastern Portion)
CONT_NAME	NORTH AMERICA
STATE_NAME	ARIZONA
WORK_TYPE	B
CP_ITEM	PB|AG
CP_ACC	EST|EST
CP_AMT	5000.|78.000
CP_U	LBS|OZ
CP_YEAR	1924-1928|1924-1928
AP_COM	SHIPMENTS BY BURRO & WAGON IN 1880'S. SEVERAL CARLOADS TO EL
	PASO 1902-1906. ABOUT 30,000 TONS OF BASE METAL SULFIDE ORE PRODUCED FROM E ARLY 1910'S TO ABOUT 1954
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	42
PROF_REF	100
PPROD_RESV	13
PROF_ALL	75
HR_AGE_MV	MISS - PERM
HR_TYPE_MV	LIMESTONE AND QUARTZITE
AR_AGE_MV	TERT
AR_TYPE_MV	PORPHYRY AND FELSIC DIKES MONZONITIC TO DIORITIC STOCK 1.5 MI SE
TYPE	R
AFFIL	USGS
DEP_CODE	11100
HUC	15050201

HILLTOP MINE COCHISE COUNTY

CJH WR 8/28/81: Phone Call: To Mr. Charles Ebner, P.O.Box 699, Douglas, AZ 85607. Tel: 364-4965 in response to a letter received in Phoenix DMR and referred to Tucson DMR. The letter requested a mine map of the Hilltop mine, California District, Cochise County. Told him that I couldn't find a map, but we do have a good mine file on the property containing some DMR engineers' reports and descriptions of workings. He and his geologist will visit the Tucson office. Mr. Ebner is working with the claimants of the Hilltpp #1 thru #7 group and the Sullivan Group of Patented Claims, A Mr. and Mrs. Miller and A Ralph W. Morrow. Mr. Edner is trying to map some of the workings which are in bad shape with poor air and many caves.

HILLTOP MINE Do Not Reproduce COCHISE

Field interview with Ralph Morrow at Hilltop with G. Walker and W. Hirt. GWI WR 3/18/75 also: Mine visit at Blacksmith tunnel at Hilltop; not presently working.

Lead ore is being produced from the Hilltop mine, Blacksmith tunnel, by a man anmed Crocker. VBD WR 9/23/75

Dave Baughman, El Tigre mine, said that Tamco Mining and Milling Company has acquired by lease and option the Hilltop mine and the King of Lead Mine and have taken over the holdings of Nonco (Now or Never Mining Co.) at the El Tigre Mine. Tamco is presently reopening a shaft from the Blacksmith tunnel at the Hilltop mine. Ore encountered in the shaft assays 30 percent lead according to Baughman. VBD WR 10/3/75

PAY DIRT for October 27, 1975

Ralph Morrow said Tamco Mining Co. had stopped work at the Hilltop mine. VBD WR 1/26/76

HILLTOP MINE

Do Not Reproduce

COCHISE COUNTY

Visited Hilltop mine and interviewed Mr. Ralph Morrow. He lives on an adjoining patented claim that he owns. GWI WR 6-11-66

Visited Hilltop mine - no activity - Mr. Ralph Morrow reported a Mr. Munoz drilling near Paradise but could not locate him. GWI WR 3-18-67

Mine visit - Hilltop Mine - Ralph Morrow reports that John Pursley has a lease on Hilltop mine with 2 men working near Blacksmith tunnel. GWI WR 5-18-68

Mr. John Pursley leased 20 claims from the Hilltop owners and had three men working the latter part of May. GWI QR 6-1968

Mine visits to Hilltop mine tunnel, Sec. 5, T17S, R30E - no activity - Blacksmith tunnel, sec. 33, T17S, R30E - no one around, work being done. GWI WR 9-14-68

John Pursley of Douglas is still doing some work at the Blacksmith tunnel of the old Hilltop mine. GWI QR 3-1969

Visited the Hilltop mine - gate locked. GWI WR 2-7-70

Visited Hilltop mine - no activity. GWI WR 10-10-70

Ed Moore, HRM Investment Corp., 7030 E. Broadway, 85710, 886-5310, has option and lease on Hilltop mine in Chiricahuas and expects to mine soon. GWI WR 1/17/74

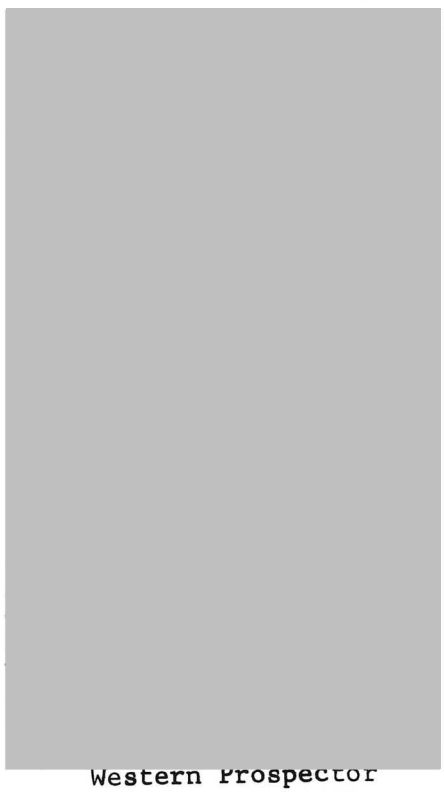
Mine visit at Hilltop mine, Blacksmith tunnel that is now being worked, information from Raplh Pursley. Ore (Pb) was being dumped in bin. GI WR 3-27-74

HILLTOP MINE COCHISE

Do Not Reproduce

During the year the HRM Investment Co. of 7030 E. Broadway, Tucson, started cleaning a winze from the Blacksmith tunnel of the Hilltop mine. It is reported that they are shut down as of the first of July, 1974. GWI AR 73-74

Went to the El Tigre and Blacksmith Tunnel (Hilltop mine) where no one was working. Ralph pursley in charge of work at both places says that the Blacksmith is closed until they can finance the mining of the lead ore in the shaft. He reported that Longyear was going to drill 2 holes into the El Tigre vein, that they were sampling the vein and if results were satisfactory the silica silver would be shipped to Douglas for flux. GWI WR 11/26/74



Western Prospector
& Miner, Jan. '75

PAY DIRT for January 27, 1975

HILLTOP MINE

CHIRICAHUA MOUNTAINS
Cochise County, Arizona.
---o---

O. O. Mattox, Owner,
Hilltop, - Arizona.
---o---

LOCATION:

The property is located on a high ridge of the Chiricahua Mountains in Cochise Co., Arizona at an elevation of 5900 feet to 7800 feet above sea level. The present holding is a group of 20 unpatented claims. The main camp at the lower part of the property on the east side of the mountain is 22 miles from the Railroad station of Rodeo, N. M. and 25 miles from San Simon, Arizona.

GEOLOGY:

The geology of the property has been studied and reported in detail by Dr. Berkley, of Columbia University.

The mass of the ridge in which the mine is located is carboniferous limestone, the same beds as at Bisbee, much tilted and in places crushed and ~~xiiixed~~ crumpled. Many stratas are altered by contact metamorphosim to a hard silicious rock without much change in appearance.

The crest of the ridge has been determined by a cherty bed of limestone resting on a bed of quartzite which is quite persistent and varies normally from 20 to 60 feet in thickness.

A transvers fault within this property throws the Quartzite bed from 600 to 900 feet varying with depth. The mountain is underlain by an igneous intrusion from which dikes and sills have broken up through the limestone. These dikes occurx most prominently in the vicinity of the great transverse fault.

DEVELOPMENT:

A report made by F. B. Hyder, in 1923 gives a very accurate description of the development and ore occurrances up to that date, and is as follows: (Considerable work was done after this date up to 1926.)

"Upwards of 25,000 feet of development work has been done.

"The crest of the ridge varies in elevation from 7450 at the ~~mark~~ north to 7800 at the south end of the property. Near where the transverse fault cuts off the quartzite at an elevation of 7220 the Blacksmith tunnel starting on the east slope opened up three chimneys of rich ore which were worked up to the surface.

"At an elevation of 6750 the KASPER level, composed of a tunnel clear through the ridge and 3500 feet of drifting on the quartzite is the most completely developed in the mine.

"More than 20 ore bodies are exposed in and along the quartzite on this level and chutes are being installed preparatory to stoping. While the grade of ore exposed varies from 5 % to 50 % lead and up to 20 Ounces silver, it seems probable that a considerable tonnage may be expected from these ore bodies of a grade averaging between 20% and 30% lead and 4 to 6 ounces silver.

(Note:--The fact that in 1925-26 11,424 tons of ore were shipped which averaged exactly 5.24 ozs. silver and 23 % lead proves that Mr. Hyder is a very competnet engineer or a "mighty good guesser.") He goes on to say:

"The company's engineers estimated 9000 sq. ft. of quartzite ore bodies cut on the Kasper level."

A great deal of additional development work was done in the Gray Tunnel at an elevation of 6465 feet and in the lower, or Rhem tunnel at an elevation of 6050 feet, after Eng. Hyder's report was made.

A number of good ore bodies were encountered in the Gray the pricipal one being located in the north end of the drift. Eng. M. E. Clark estimates that this ore deposit is approximately 25 feet long by 4 feet wide with and average value of 2.5 silver, 11.70 lead and 8.04 zinc and can easily be cleaned to almost double this. There is also a good body in the Gray in the south drift which is near the chute down to the Rhem. Here the silver, lead and zinc values are much higher but the ore deposit somewhat smaller.

In Raise No. 1 in the Rhem tunnel a large body of shipping ore is located and at the extreme north drift the face of the tunnel is in fairly good milling ore but the quantity has not been determined. It is also estimated by engineers that the Rhem tunnel should be driven at least 300 feet further into the mountain in order to reach the quartzite ledge where ore deposits are likely to occur at that great depth, and go far towards adding vlaue to the property.

CONSLUSION:

In concluding his report Mr. Hyder states that he thinks it possible to produce up to fifty tons of good ore per day but until further development is done between the levels on the ore shoots themselves, the period during which such a rate may be maintained cannot be predicted with any probability. Since this assertion was made a great deal of additional development has been done but the ore was high grade and shipped and practically nothing but milling ore is left in sight.

In 1930 Ira B. Joralmon visited the Hilltop and investigated surveys and plans to raise from the Gray to the Kasper to come up under the good lead stopes just below the Kasper. This work should develop and make accessible several thousand ton of oxidized ore similar to that which was shipped.

It is probably that most engineers would advise some additional development in order to determine the size of the exposed ore bodies before beginning the installation of a mill, but there are a number of good faces of ore where work can be commenced at once with heavy production. On a whole there is little or no ore blocked out but the tunnels have driven through several good deposits, and sizeable ore bodies are very evident in a number of the raises and winzes.

On a whole the property has speculative possibilites and is an attractive enterprise. Various engineers who have made a casual inspection have estimated that 50 tons of ore daily can be counted on at the start and this production could very easily be increased up to 100 tons or even more.

Anyone desiring to visit this property will find accommodations and be given every assistance possible.

Hilltop, Arizona, July 1st, 1940.

O. O. Mattox.

COPY

Assay Results of Character Samples Taken in Hilltop Mines by F.H.Lerchen From December 14, 1937 to April 19, 1938.

Sample No.	Description	Silver Ozs. Per Ton	Lead %	Zinc %	Copper %	Iron %
1	In place 1st E.Dr.Kasper tun.	16.00	65.80	0.20	0.18	4.80
2.	Buried in Kasper Tun.West side	9.00	32.10	28.60	0.09	3.00
3.	Sulp.dump Rhem audit Garnet	34.00	9.60	0.40	0.08	20.10
4.	Base ore,garnet gangue Gray D.	3.00	15.80	3.30	2.36	11.18
5.	Heavy black sulphide Gray Dump	7.60	35.00	21.10	0.50	2.30
6.	Float red,above Kasper tunnel	0.50	9.10	- -	- -	- -
7.	Ore in place 29' (E Sample #1)	1.20	10.50	0.90	1.00	- -
8.	5.5' cut NW face Blacksmith Adit	5.60	40.00	6.00	0.20	8.70
9.	6.0' cut continuation Sam.#6	0.80	16.00	4.50	0.60	3.40
10.	5.0' out back Dr. 6' Se.8&9	2.10	22.30	7.10	0.07	2.40
11.	14" out H.W. 22' SW from 8 "9	1.70	14.60	10.30	0.08	3.30
12.	Chute 5N. NW. Dr. Gray Audit	1.40	23.30	10.00	0.12	1.70
13.	Near raise extreme NW. Dr. Gray T.	1.40	29.00	13.20	3.26	3.10
14.	3' cut outcrop surface Blacksmith	1.40	16.30	9.00	0.10	- -
15.	Selected dumps surface " "	2.60	28.30	6.10	0.08	- -
16.	Ore dump Fife Audit	6.50	43.80	3.10	Tr.	- -
17.	Chutes G.1 & 2 S,SE,Dr.Gray Audit	0.30	9.60	0.90	Tr.	29.10
18.	Carbonates red H.W.below Grey Audit	1.80	40.60	1.30	- -	- -
18A.	10" cut base raise NW.Drift Gray	Tr.	30.40	10.70	2.30	3.20
19.	Blotches side Dr.150' NW #18 A	1.60	20.30	10.54	5.60	- -
20.	Disseminated ore in dump Rhem Adt.	0.80	7.00	1.10	Tr.	0.50
21.	Confirmation rejects Sample #3	2.30	1.80	- -	- -	- -
22.	Confirmation rejects Sample #5	7.20	32.00	- -	- -	- -
23.	Coned fines ceib plat. Rhem Dump	9.00	4.30	1.00	- -	- -
24.	Broken (over) from above, coarse	15.80	6.20	1.20	- -	19.20
25.	Fines loading platform Rnds Pase	10.30	34.40	9.60	- -	- -
26.	Coarse ore " " Hands "	5.80	23.90	25.20	- -	- -
27.	10th shovel Sam. base ore Rhem (workings - - - cut in dump)	10.00	5.40	0.60	0.25	9.90
28.	50' ft. depth winge Blacksmith 6½' (across SE face and winze)	6.00	21.30	12.60	- -	- -
29.	Boulders ore in muck Chute #5 Sun Sta. No. 23 SE, Kasper Drift	3.60	35.00	5.90	- -	- -
30.	Ore in place NW Winze Chute #1 Station #12 SE,Drift Kasper	2.20	24.40	2.30	- -	- -
31.	From muck in Chute #2 North	41.00	48.10	0.40	0.18	- -
32.	Massive pyrite bedding plans top 165' raise No. 1 Rhem tun.	3.20				
33.	Selected ore in place raise No.1 165' Rhem tunnel	16.40	21.00	9.30		
34.	6" ore in place back stope near raise from Gray Adt.Kas. Lvl.Se.	8.40	36.80	17.00	0.12	
35.	Under outcrop. Long Dump N.shaft	35.20	41.60	- -	- -	
36.	8" cut ore N.side shaft Long D.	41.40	57.00	0.20	Tr.	
37.	Asstd. ore dump Long Tun. Claim	27.20	43.60	0.50	- -	
38.	Outcrop Sur. above SE.Dr.Kas.T.	0.50	7.70	0.20	- -	
39.	A Selected ore in place Sur. Sta. C113 NW Drift Rhem Tunnel	24.40	19.90	4.90	- -	
40.	Bedded ore in place, 18" cut extreme NW. Workings Rhem Tun.	1.80	14.60	0.40	Trce.	

COPY

Assay Results of Character Samples in Hilltop Mines by F.H.Lerchen, From December 14, 1937 to April 19, 1938

Sample No.	Description	Silver Ozs. Per Ton	Lead %	Zinc %	Copper %	Iron %
41.	Dumps old workings W.side along trail above camp-shallow workings	8.20	36.50	2.70		
42.	Shallow shaft Sur.Sta.18,Blacks.	13.00	54.70	0.60		
43.	5' open cut Sur.Blacksmith	3.20	16.10	17.70		
44.	Open chute and shaft dump ore Sur. Stations 14-15-16 Blacksmith	7.60	41.30	11.00		
44A.	18" cut Oxi. S.side XO.SE Gray Wrk. Sur.Sta.216 55 Deg.W.29.00'	5.60	39.80	17.20	1.20	
45.	Narrow high G.S. side XC, SE Gray Wk. Sur.Sta.216 S.30 Deg.W. 39.00'	7.00	38.40	16.00	Trace	

Assay Results of Cut Samples Taken in West Workings Gray Tunnel - Hilltop Mines February-March-April 1936. BY F. H. Lorchen

(Sample cuts surveyed and mapped and marked in workings)

Sample No.		Sta. No.	Feet Cut	Silver Ozs.	Lead %	Zinc %	Copper %
201	Horizontal S.Side 15' S.W. Sur.	0212	4.09	3.90	15.80	1.00	- -
202	" " " 9' " "	"	5.10	1.00	3.60	2.80	- -
203	" " " 4' " "	"	5.70	0.30	11.40	9.80	- -
204	" " " 16' S/E "	0211	5.00	2.80	5.50	1.00	.06
205	" " " 12' " " "	0212	5.00	0.02	8.10	1.10	.05
206	" " " 15' " "	"	5.00	Trc.	0.40	0.60	Trce.
207	" N. " 15' " W. "	"	5.20	1.00	20.40	9.20	- -
208	" N. " 12' S. "	"	5.00	0.50	11.00	11.80	- -
209	Across Back 13' " "	"	5.20	Trc.	5.20	3.40	0.08
210	" " 9' S.E. "	"	6.00	0.10	2.20	2.40	Nil.
211	Across ramp floor Raise #3N		4.00	2.00	17.20	3.80	1.38
212	" " 5' above Sam.#211		3.00	0.50	6.20	3.40	0.36
213	" face " 9 (SE #212		2.90	0.05	11.20	4.80	Trc.
214	Black cutwidth ore Sur.	0212	3.90	0.70	12.80	8.60	Nil.
215	" " 19' S.E.		4.70	Nil.	1.00	13.30	Nil.
216	Horizontal W. Side 20 S.E. Sur.	0212	4.90	0.30	1.20	0.40	Trc.
217	" " " 25' S.E. Sur.		5.70	0.30	3.60	0.60	Nil.
218	" " " 30' " "	"	5.10	1.10	16.90	4.10	0.37
219	" " " 34' " "	"	4.10	1.20	7.10	3.60	Trac.
220	" " " 38' " "	"	5.10	2.30	28.80	3.40	Trac.
221	" " " 42' " "	"	4.60	1.40	23.10	7.00	0.10
222	" " " 47' " "	"	5.40	0.20	4.80	2.70	Trac.
223	" " " 52' " "	"	5.00	0.60	6.60	7.60	Trac.
224	Across Back 42' " "	"	6.60	1.00	5.70	0.60	Trac.
225	" " 27' " "	"	4.40	0.20	5.10	2.30	"
226	" " 55' " "	"	4.90	0.10	1.10	0.40	"
227	" " 19' S.W. "	"	4.20	0.10	0.50	0.30	"
228	Horizontal E.Side 10' S.E. "	0211	5.00	0.60	4.30	7.10	"

COPY

Sample No.						Sta. No.	Feet Cut	Silver Ozs.	Lead %	Zinc %	Copper %
229	Vertical N.	Side	24'	S.W.	Sur.	0208	5.80	2.30	1.70	0.70	Trac.
230	" E.	"	17'	S.W.	"	0210	5.00	1.60	1.30	0.20	"
231	" S.	"	15'	S.W.	"	0205	5.10	0.80	3.80	0.40	"
232	" E.	"	12'	S.W.	"	0210	4.90	1.90	0.60	0.50	"
233	" N.	"	18'	S.W.	"	0206	4.80	2.30	1.50	0.40	"
234	" E.	"	25'	S	"	0210	5.60	10.80	7.90	0.50	"
235	" S.	"	20'		"	0206	5.40	5.90	9.90	1.60	"
236	Across Back		3'	S.E.	"	0210	5.00	2.10	1.80	1.30	"
237	"	"	16'	S.W.	"	0208	6.00	0.40	0.50	0.60	0.64
238	"	"	13'	S.W.	"	0210	5.50	2.30	2.40	0.30	Trac.
239	Brow Back Dr.Raise		4n		"	0213	4.00	1.30	9.60	5.40	0.46
239	Check Out						4.00	2.70	11.20	2.40	0.83
240	Vertical S.	Side	9'	E.	(near(	0215	5.70	3.60	6.30	2.60	0.64
241	Across back Spad #1		37'	E.		0215	3.40	4.00	3.70	1.80	0.64
242	" "		31'	E.		0215	3.00	6.60	5.70	2.40	0.28
243	Vertical S.	Side	25'	E.	Sur.	0216	3.30	4.80	8.00	5.80	0.36
244	Across Back		18'	E.	"	0215	3.50	2.90	10.40	6.30	0.20

(None of these samples give more than a trace of Gold).

245	Across ramp Raise #4N	42'	E.		0215	2.00	1.30	12.60	11.90	2.12
246	Across back & Vert.	43'	E.		0215	3.70	5.50	20.00	23.60	1.54
247	Across Back	52'	E.		0215	3.10	3.10	1.50	0.03	0.08
248	Vertical E.Side	15'	E.		0215	3.10	0.60	8.80	5.50	1.28
249	Vertical S.Side	3'	S.		"	5.00	0.90	9.20	1.10	0.01
250	" " "	9'	W.		0213	5.60	1.20	5.50	1.00	0.54
251	" S."	12'	E.		0215	4.00	0.90	9.00	5.50	0.18
252	" S."	21'	"		"	5.40	3.50	6.10	2.50	0.01
253	" E."	15'	W.		0213	3.10	1.60	7.10	0.90	0.10
254	" " "	20'	"		"	3.40	1.40	11.80	1.30	0.08
255	" E."	1'	W.		0216	4.10	0.60	6.40	3.60	0.41
256	Raise #3 N.up	13'	N.	Side		4.00	0.80	13.80	7.90	0.10
257	" #5 N.up	15'	N.	"		4.20	3.10	13.70	21.00	0.15
258	Vertical & Back E.	25'	W.	13		3.10	1.90	13.90	1.70	0.14
259	" S.Side	11'	E.		0219	3.00	1.20	12.50	9.80	0.13
260	Across back	6'	E.		0219	2.50	1.00	13.90	7.30	0.15
261	Horizontal S.Side	12'	E.		0215	5.00	0.60	7.60	5.20	0.82
262	Vertical S.Side	½'	E.		0219	5.10	9.10	8.20	0.90	0.07
263	Across Back	5'	E.		0215	3.10	1.00	7.80	7.10	0.27
264	" "	6'	W.		0219	2.80	1.30	3.40	0.30	0.08
265	" "	30'	W.		0213	3.50	1.80	2.50	0.20	0.06
266	Vertical W.Side	35'	W.		0213	3.70	1.70	8.60	0.50	0.14
267	Across E.Side Raise #5 N.up	20'				3.80	3.	21.80	27.80	.64
268	Across N.Side Raise #3 N.up	18'				2.00	0.90	12.20	11.80	1.66
269	Across W.Side Raise #5 N.up	20'				2.90	2.30	20.40	12.70	0.17
270	Horizontal N.Side	1'	E.		0212	1.02	8.20	8.20	3.80	0.10
271	Vertical S.Side	30'	S.		0202	6.10	0.80	6.60	7.00	0.06
272	" " "	35'	S.		0202	5.20	2.60	1.40	0.50	0.11
273	" " "	25'	S.		0202	5.00	2.70	11.20	6.00	0.09
274	" " "	20'	S.		0202	2.50	0.50	9.60	4.60	0.08
275	" " "	13'	W.		0206	5.60	1.80	14.50	12.70	0.80
276	Across back	46'	S.		0202	4.90	1.00	5.40	5.20	0.05

SAMPLE NO.	Description		Sta. No.	Feet Cut	Silver Ozs.	Lead %	Zinc %	Copper %
277	Vertical S. Side	6' W.	0206	6.70	0.80	7.50	9.40	0.05
278	" " "	1' W.	0206	6.20	1.80	6.20	8.70	0.04
279	" " "	6' E.	0206	5.10	2.80	19.30	17.00	0.31
280	" N. "	1' E.	0206	2.60	0.80	3.90	5.50	0.06
281	Across back	5' E.	0206	4.60	2.40	6.00	14.20	0.08
282	Vert.& across back side	10' E.	0206	5.10	2.00	5.90	6.20	0.10
283	" S. side	15' E.	0200	5.20	0.90	5.60	3.60	0.06
284	" & back	10' W.	0219	4.80	0.50	0.30	0.50	0.05
285	Across back	65' E.	0217	3.60	5.00	6.40	11.00	0.05
286	Raise 5 N. up	27' N.side		5.10	1.60	14.50	12.30	1.36
287	" 5 N. up	27' S. "		2.70	1.60	4.80	4.00	0.94
288	Ore selected from gob from R. 1. N.course				12.00	27.90	0.80	Trc.
289	Ore selected from gob from R. 2 N. course				3.50	14.40	2.10	0.07
Note:Average of 87 cut samples					1.78	7.56	5.22	0.24

Samples 293 "C eck Cut" and 288 and 289 were excluded in determining average above.
BY F. H. LERCHEN, May 20, 1938.

Assay Results of Channel-Cut and Stope-Fille (gob)
Samples Taken in the Kasper Tunnel Workings of the Hilltop Mines, Cochise County, Arizona, March-April, 1938
BY F. H. Lerchen

(Samples cuts surveyed, and mapped, and marked in workings; stope fill (gob) Samples consisted of selected coarse ore and "grab" fines).

Sample No.	Description		Station	Feet Cut.	Gold Ozs. Per Ton	Silver Oz.P.Ton	Lead %	Zinc. %	Copper %
301	Across vein bottom winze		0314	5.10	Nil.	2.40	10.80	8.60	0.09
302	Across vein (winze)	25½ W.	"	3.00	Nil.	9,40	20.50	0.70	0.14
303	" " "	20'	"	2.00	0.02	12.20	20.60	0.30	0.47
304	" " Collar Winze	17' W.	"	1.50	0.02	7.40	33.00	0.30	0.03
305	Back cut	19' S.	0327	3.00	Tr.	2.80	11.60	5.50	0.13
306	Horizontal S.		"	3.00	Tr.	3.80	19.80	6.40	0.10
307	Selected ore from Stope #4 N.			---	0.02	37.40	43.70	0.02	0.15
308	" " " " #2 N.			---	Tr.	6.40	20.50	7.50	0.27
309	" " " " #3 N.			---	Tr.	11.20	36.20	0.40	0.10
310	" " " " #5 N.			---	Tr.	11.80	39.80	0.40	0.16
311	Horizontal-wall,old Sur.	10' E.	86	5.00	Tr.	2.40	13.00	0.60	0.06
312	" " "	15' W.	86	5.00	Tr.	5.40	18.30	0.50	0.42
313	Back cut, Sur.	3' W.	0328	3.00	Tr.	3.20	11.80	0.20	0.11
314	Horizontal Wall	16' W.	0328	5.00	Tr.	0.40	8.40	3.10	Tr.
315	Pace drift	37' W.	0329	2.00	Tr.	4.80	18.50	0.30	Tr.
316	Back out	15' E.	"	3.00	Tr.	9.60	27.10	0.40	0.05
317	" "	5' W.	"	3.00	0.02	6.80	35.40	0.30	0.10
318	Horizontal	36' W.	0327	3.00	0.04	23.40	38.10	0.80	0.06
319	Back out,Old Sur.	12' N.	84	3.00	Tr.	5.00	21.80	1.00	0.33
320	Fines from gob in #4 N.stope			---	Tr.	2.80	8.10	0.40	Tr.
321	Vertical cut south W.	110' Sur.	7	1.00	Tr.	0.30	7.70	10.80	0.07
322	" " "	3' Sta.	6	1.00	Tr.	3.60	20.10	14.60	3.51
323	" " "	12' Sur.	6	1.00	Tr.	3.80	20.40	24.10	4.21
324	" " "	157' "	7	1.00	Tr.	0.30	13.40	1.90	1.58
Average 19 cut samples per assays above						5.67	19.96	4.23	0.60

Control assay certificates of Hawley & Hawley, Assayers, Douglas, Arizona, in the files in the office of the Hilltop Mines, Hilltop, show shipments of 231 cars of ore, principally from the Kasper Tunnel Workings, made in the years 1924-25-26, show, for the tonnage of 11,424 tons shipped:

	Silver Per Ton	Lead Per Ton	Zinc %	Copper &	Iron %
Note: The average of 87"cut" samples in	Tr.	5.24	23.06	8.06	0.347
Gray workings give	1.78	7.56	5.22	0.24	
Shipments of 231 cars of ore (11,424) tons mainly from the Kasper workings 1924-1926	5.24	23.06	5.06	0.35	16.20
Blacksmith workings The average of 19 cut samples in Kasper workings	5.67	19.96	4.23	0.60	

Memo. by F. H. Lerchen, Tucson, Arizona, May 21, 1938.

Description	Gold Ozs.	Silver Ozs.	Lead %	Zinc %	Copper %
1st Con.jog of Rhem dumps 5/39 HH	.005	19.2	8.7		
Sorted Power House,washed 4/39 CF		18.4	12.5	15.0	
Tun.west side,Op.E.S. " "		2.4	12.8		
Galena 1st Drf.S. in Kasp.3/39		63.6	72.0		
Con.in box E.S. old jig "		9.4	49.		
Lot 2¼ tons by Carlton 5/38 HH		7.3	42.2	10.00	.52
Lot 5 tons by Taylor 3/39 HH		2.4	18.8	7.0	
Lot 4 " " 3/39 "		3.1	19.2	4.5	.28
Gen.Howard E.Mo. 1 33% 9/39 HH					
Con. Osb. Jib " 15.7 9/39 CF		12.0	52.0		
Con.Prof. " 11.5 1/40 HH					
Select Fines Vn. 11.0 9/39 CF					
Ed.Salv.Bot. B.S.Winz 8 ft 9/38 CF		1.0	16.3	18.2	
Salverson 15 ft.up Winz 4 ft.9/38		2.7	21.6	12.2	
Rhem Dump by Bacon 8/38 CF		6.3	4.3		
1st mined by Carl, B.S. 8/38 "			22.9	22.6	
E.E.Tun. B.S.Dump 11/37 CF		1.5	16.00		
" " " " " "		1.9	19.9		
Power N.vein Gen. 6/38 CF		2.6	16.7		
Rhem Dump open cut "		10.7	5.4		
Kasper 1st E.Dr.Lerchen 12/37	.02	16.0	65.8		
Ore buried Dump " (S.portal S.side Kasper)		9.0	32.0	28.6	
Sul.Rhem Tun.by Lerchen 12/37 CF	.02	34.40	9.8	.4	
Tailings jib course 7/39 CF		.6	2.8		
" " Hoch-fines " "		.8	5.2		
Con.Jib.1st one-half car 8/39 CF		2.2	24.1		
Kasper 4 ft.vein under trk upper part Mo.Deposit 9/39 CF		13.7	35.5		
B.S.Lump jiged fines " "		1.6	19.4		
Con.Jiged Hyma Mo.Silver 10/39 CF		5.0			
Taylor 3 tons to H.& H. 3/39		10.4	34.6	8.5	
Kasper Gray talc M.tun. 6/39	.055	1.3			
" galena 1st B.Drift 5/39 CF		5.6	39.3		
Rhem gen.fines from job " "		21.2			
Above B.S.in cans Dump near wire fence 5/39 CF		11.8			
Gen.4 sams dumps old wrks above BS long vein		4.7			
Rhem,dump jib con. 5/39 CF		6.9	3.2		

Cont'd.

		Gold	Silver	Lead	Zinc	Copper
Rhem dump jib.con.	5/39 CF		10.3	4.3		
Eligio galena from Kasper	5/39 CF		4.9	31.3		
Jerrel-Parks No.1 Lerchen		.01	5.0	47.3	.50	

Records of ore shipments from Hilltop

Year	Tons	Ag	Pb.	Cu.	Ins.	Fe.	CaC	En.	Sul.
1924	4366	5.5	24.0	.25	27.0	12.5	4.0	7.0	3.0
1925	4105	5.0	23.0	.40	32.0	10.0	2.5	9.5	2.5
1926	2890	4.5	20.0	.55	32.0	12.0	4.0	8.0	1.0
(1926 Hilltop Extension)	131	10.0	27.0	.30	28.0	10.0	2.0	10.0	3.0 -

DEPARTMENT OF MINERAL RESOURCES

MH-21 State of Arizona

FIELD ENGINEERS REPORT

Date: March 25, 1940.

Mine: HILLTOP MINE

Engineer: Miles M. Carpenter, E. M.

District: California, Cochise County

Location: P. O. Hilltop, Ariz. North end Chiricahua Mts.

Former Name:

Owner: O. O. Mattox

Address: Hilltop, Arizona

Operator: Same.

Address:

President:

Gen. Mgr:

Mine Supt: M. E. Clark

Mill Supt:

Principal Metals: Silver-Lead-Zinc

Men Employed:

Production Rate: Not established.

Mill - Type & Cap:

Power - Amt. & Type: 300 H.P. Snow Diesel Engine direct connected to A.C. Gen. in good steel structure power house.

Operations - Present: Packing ore from Blacksmith upper tunnel and attempting to concentrate in an improvised Jig.

Operations - Planned: Depend on financing.

Number Claims, Title, etc: Twenty unpatented lode claims on Coronado National Forest

Description - Topog. & Geog: In northern end Chiricahua mountains at elevation of 6,000 to 7,500 feet, on steep rugged mountain side with oak, juniper and pine trees. Ideal for cross cut tunnel.

Mine Workings - Amt. & Condition: 40,000 ft. of crosscut tunnels, drifts, raises and winzes in good condition, distributed as follows from upper to lower:

Blacksmith tunnel - 400 ft. - Drifts 600 ft.
Fife " 1000 ft. - Drifts 500 ft.
Kasper, 3600 ft. main, 1000 ft. short - 4600 ft. Drifts - 4600 ft.
Gray tunnel -2000 ft. - Drifts 2500 ft.
Rhem " 3840 ft. - Drifts 2000 ft.
700 ft. raise from Rhem to Gray to Kasper.

Note: Kasper tunnel runs entirely thru mountain.

(over)

Geology & Mineralization: The mass of the mt. is limestone varying considerable in character, cut by narrow porphyry dike. A wider band of quartzite (60 to 80 ft.)located called "Hilltop quartzite" outcrops near the crest of the mt. and like the dikes is parallel to the lorigen axes of the mt. Most of the ore occurs in the "quartzite" though small showings of galena are in limestone. Ore occurs both as sulphide and oxidized mineral of lead and zinc sulphides predominating. Some molybdate and vanadate.

Ore - Positive & Probable, Ore Dumps, Tailings: Probable ore 50,000 tons averaging 3 oz. Ag. 15% Pb. and 5% Zn. according to the estimate of M. E. Clark. There are many showings of ore in sight in the various workings, 40 separate ore bodies, counted by the management. The largest ore body noted was about 150 ft. in length, and 4 ft. in width.

Mine, Mill Equipment & Flow Sheet: No mill. Mine equipment fairly complete.

Road Conditions, Route: Good graded roads 25 miles to San Simon, Ariz. and 25 miles to Rodeo, New Mexico. Both are railroad stations. Rodeo is on U.S. H'way 80, San Simon is on State H'way 86.

Water Supply: About 300 gals. per minute flowing from lowest tunnel.

Brief History: Bought in 1912 by Hilltop Metal Mining Co. Almost $1,000,000. spent on property and 11,400 tons ore shipped in '24 - '25 - '26. Averaging 5 oz. Ag. 23% Pb. and 8% Zn. Corporation failed and during the depression property went into hands of present owner.

Special Problems, Reports Filed: Complete reports, maps, etc. are available at the mine.

Remarks: This property has had an unusually large amount of development, but is still not exhaustively explored. There appears to be foundation, in partly developed ore for the tonnage shown above and a small mill, say 50 tons daily capacity seems in order for serious consideration.

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

For sale. Price $40,000. Easy terms.
O. O. Mattox, Hilltop, Arizona.
M. E. Clark, Willard Hotel, Tucson, Arizona.

Signed: MILES M. CARPENTER, E. M.

Miles M. Carpenter

MH-21

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

Date: February 12, 1942

1. Mine: HILLTOP MINES

2. Location: 25 miles from San Simon, Arizona; 75 miles from Douglas, Arizona; 25 miles from Rodeo, New Mexico, and 54 miles from Lordsburg,N.M.

3. Mining District & County: California Mining District, Cochise County,Arizona.

4. Former Name:

5. Owner: O. O. Mattox

6. Address (Owner): Apartado 113,Torreon, Coah., Mexico.

7. Write: H. O. Ward,

8. Address: Hilltop, Arizona.

9. President, Owning Co:

9A. President, Operating Co:

10. Gen. Mgr:

14. Principal Minerals: Lead, Zinc, Silver and Molybdenum.

15. Production Rate: 231 cars - 11424 tons were shipped in years 1924-25 and 26.

16. Mill - Type & Cap:

17. Power - Amt. & Type: There is a 320 HP Twinn Snow Diesel Engine in Power Plant. Power Plant is 40x60, steel const., galv. iron building equipped - Switch board, water softner and filter a large air compressor.

18. Operations - Present: None.

19. Operations - Planned: April 1st, 1942.

20. Number Claims, Title, etc: Twenty unpatented claims.

21. Description - Topography & Geography: In northern end Chiricahua mountains at elevation of 6,000 to 7,500 feet, on steep rugged mountain side with oak, juniper and pine trees. Ideal for cross cut tunne.

22. Mine Workings - Amt. & Condition: Blacksmith tunnel elevation 7,220 ft. - 150 ft. long with ore body 35'x8 to 12' wide; has winze from tunnel level 60-70' deep all in ore. Kasper tunnel over 3500' long - elevation 6750'; long drifts and crosscuts - cuts several veins and bodies of ore. Grey tunnel, elevation 6450', over 3500 ft. long, drifts and crosscuts; has plenty of ore. Rhem tunnel, elevation 6050', over 3800 ft. drifts and crosscuts; has good ore in different places. 5 - 8 miles of tunnel work done. The three long tunnels are connected by an over pass whereby ore can be thrown in at the Kasper level and taken out at the Rhem 700 ft. below. Surface outcrops have been cut at all levels.

(over)

23. Geology & Mineralization: The mass of the mountain is limestone varying considerable in character, cut by narrow porphyry dike. A wider band of quartzite (60 to 80 ft.) called "Hilltop quartzite" outcrops near the crest of the mountain and like the sikes is parallel to the lorigen axes of the mountain. Most of the ore occurs in the quartzite though small showings of galena are in limestone.

24. Ore - Positive & Probable, Ore Dumps, Tailings: There are several hundred thousand tons of mill ore in the dumps. The ore is cut in each tunnel, but neither one of the long tunnels have been driven north under the Blacksmith ore body. An engineer,who spent 4 months here, said he believed 150 and possibly 200 tons per day could be developed.

24A. Dimensions and Value of Ore body: The Blacksmith tunnel has an ore body of about 35' long and 8' to 12' wide; has a winze down about 60'-70', all in ore. I have no measures on Kasper, but will say from 18" to 4' and 6'. 45 cut samples from Gray averages in width 4'-3". Rhem has ore bodies 18" to 3-4 ft.

25. Mine, Mill Equipment & Flow-Sheet: Power plant equipped, Twinn Snow Diesel, 326 HP. A large compressor and all equipped in plant. 25 ore cars; rail in all main tunnels.

26. Road Conditions, Route: 22 miles from Highway 86; also 22 miles from Highway 80. Turn south 3 miles east of San Simon at checking station, 22 miles of good graded dirt road.

27. Water Supply: Water comes from Rhem tunnel, enough for domestic use and a 50 ton mill. 1/2 mile below mine where the mill should be set is water in gulch - a big underflow at 15-20' below surface.

28. Brief History: Am enclosing assay sheet.

29. Special Problems, Reports Filed: The great need here is a mill and there are several small mines near here which could be handled in some way and ore brought to this mill and increase the tonnage a lot. We have a warehouse; store room, 16 - 2 & 3 room cottages; one lovely 7 room (large rooms) dwelling; modern office and assay office.

30. Remarks: The Blacksmith ore body is worth the price we ask for the whole mine. A person has got to see this and go over it several times to realize what it is. One engineer went over the mine 4 times and said he could work with a 50 ton mill for two years above the Kasper level to the top of mountain.

31. If property for sale - Price, terms and address to Negotiate: Price $50,000.00. Address H. O. Ward, Hilltop, Arizona.

32. Signature: (Signed) H. O. WARD, Hilltop, Arizona.

It has been told to me by people who claim to know that there are 5 to 8, and some say 8 to 10, miles of tunnel work here and the old company spent one-half million dollars here.

MH-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date March 25, 1940

Mine Hilltop.

Engineer Miles M. Carpenter, E. M.

District California, Cochise County.

Location P. O. Hilltop, Ariz.
North end Chiricahua Mts.

Former name

Owner O. O. Mattox.

Address Hilltop, Arizona.

Operator Same.

Address

President

Gen. Mgr.

Mine Supt. M. E. Clark.

Mill Supt.

Principal Metals Silver-Lead-Zinc.

Men Employed

Production Rate Not established.

Mill: Type & Cap.

Power: Amt. & Type 300 h.p. Snow Diesel Engine direct connected to A.C. Gen. in good steel structure power house.

Operations: Present Packing ore from Blacksmith upper tunnel and attempting to concentrate in an improvised Jig.

Operations Planned Depend on financing.

Number Claims, Title, etc. Twenty unpatented lode claims on Coronado National Forest.

Description: Topog. & Geog. In northern end Chiricahua mountains at elevation of 6000 to 7500 feet, on steep rugged mountain side with oak, juniper and pine trees. Ideal for cross cut tunnel.

Mine Workings: Amt. & Condition 40,000 ft. of crosscut tunnels, drifts, raises, and winzes in good condition, distributed as follows from upper to lower:

700 ft. raise from Rehm to Gray to Kasper.

Blacksmith tunnel-400 ft. - Drifts - 600 ft.
Fife " -1000 ft.- " 500 ft.
Kasper, 3600 ft. main, 1000 ft. short -4600 ft. - Drifts- 4600.
Gray tunnel- 2000 - Drifts -2500
Rehm 3840 ft. " 2000

Note: Kasper tunnel runs entirely thru mt.

(over)

Geology & Mineralization The mass of the mt. is limestone varying considerable in character, cut by narrow porphry dike. Awider band of quartzite (60 to 80 ft.) located called "Hilltop quartzite" outcrops near the crest of the mt. and like the dikes is parallel to the lorigen axes of the mt. Most of the ore occurs in the "quartzite" though small showings of galena are in limestone. Ore occurs both as sulphide and oxidized mineral of lead and zinc, with sulphides predominating. Some molybdate and vanadate.

Ore: Positive & Probable, Ore Dumps, Tailings

Probable ore 50,000 tons averaging 3 oz, Ag. 15% Pb.and 5% Zn. according to the estimate of M. E. Clark. There are many showings of ore in sight in the various workings, 40 separate ore bodies. counted by the managment. The largest ore body noted was about 150 ft. in length, and 4 ft. in width.

Mine, Mill Equipment, & Flow Sheet No mill. Mine equipment fairly complete.

Road Conditions, Route Good graded roads 25 miles to San Simon, Ariz. and 25 miles to Rodeo, New Mexico. Both are railroad stations. Rodeo is on U.S. H'way 80, San Simon is on State H'way 86.

Water Supply Abqut 300.gals. per minute flowing from lowest tunnel.

Brief History Bought in 1912 by Hilltop Metal Mining Co. Almost $1,000,000. spent on property and 11,400 tons ore shipped in '24- '25- '26. Averaging 5 oz. Ag. 23% Pb.and 8% Zn. Corporation failed and during the depression property went into hands of present owner.

Special Problems, Reports Filed Complete reports, maps,etc. are available at the mine.

Remarks This property has had an unusually large amount of development but is still not exhaustively explored. There appears to be foundation, in partly developed ore for the tonnage shown above and a small mill, say 50 tons daily capacity seems in order for serious consideration.

If property for sale: Price, terms and address to negotiate. For sale. Price $40,000. Easy terms.
O. O. Mattox, Hilltop, Arizona.
M. E. Clark, Willard Hotel, Tucson.

MILES M. CARPENTER

Signed MILES M. CARPENTER

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

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

MINE OWNER'S REPORT

Date 2-12-42

1. Mine Hilltop Mines

2. Location 25 m. from San Simon Ariz.
75 m. from Douglas, Ariz.
25 m. from Rodeo
54 m. " Lordsburg } N. M.

3. Mining District & County California Dist. Cochise Co.

4. Former name

5. Owner OO Mallory

6. Address (Owner) Apt 113 Tomson Coahuila Mexico

7. Operator

8. Address (~~Operator~~) write H.O. Ward Hilltop Ariz.

9. President, Owning Co.

9A. President, Operating Co.

10. Gen. Mgr.

14. Principal Minerals Lead, Zink, Silver & molybdenum

11. Mine Supt.

15. Production Rate 231 cars - 11424 Ton was shipped in years 1924-25 & 26

12. Mill Supt.

16. Mill: Type & Cap.

13. Men Employed

17. Power: Amt. & Type
There is a 326 H.P. Twin Snow Diesel Engin in Power Plant - Power Plant is 40 X 60 Steel const. galv. iron building equiped - Switch board, water Softner & filter a large air compressor.

18. Operations: Present none

19. Operations: Planned April 1st 1942

20. Number Claims, Title, etc. 20 unpatented claims

21. Description: Topography & Geography Blacksmith Tunnel Ele. 7220' - 150 ft long with ore body 35' X 8 to 12' wide has winze from tunnel level 60-70' deep all in ore
Kaster Tunnel over 3500' long Ele. 6750' long drifts & crosscuts. - cuts several veins & bodies of ~~ore~~ ore
Long drifts & crosscuts has plenty of ore
Grey Tunnel Ele. 6450' over 3500 ft " " - has good ore in different places
Rhein Tunnel Ele. 6050 over 3800 " " "
5 - 8 miles of tunnel work done.

22. Mine Workings: Amt. & Condition This mine is located on Mt. between Piney Canon & East White Tail canyon
The three long tunnels are connected by an ore pass where one can be thrown in at the Kaster level & taken out at the Rhein 700 ft below. Surface outcrops have been cut at all levels

(over)

23. Geology & Mineralization a [illegible] Tone formation & Ld intrusive hostly sills & a bedded flow of quartzite.

24. Ore: Positive & Probable, Ore Dumps, Tailings There are several hundred thousand tons of mill ore at the dumps. The ore is cut in each tunnel but neither one of the long tunnels have been driven north under the Blacksmith ore body, an Eng. who spent 4 months here, said he believes 150 & possibly 200 tons per day could be developed.

24A. Dimensions and Value of Ore body The Blacksmith tunnel has an ore body of about 35' long & 8' to 12' wide, has a winze down about 60'-70' all in ore. I have no assays on Rasher but will say from 18" to 4' & 6' 43' cut samples from tray averages in width 4'-3" Rhem has ore bodies 18" to 3-4'.

25. Mine, Mill Equipment & Flow-Sheet Power Plant equiped, Twin 8 snow Diesel, 320 H.P. a large compressor & all equiped in plant. 25 ore cars, rail in all main tunnels.

26. Road Conditions, Route 22 miles from highway 86, — also 22 m. from highway 80 Turn south 3 miles E. of San Simon at checking station 22 miles of good graded dirt road.

27. Water Supply water comes from Rhem tunnel, enough for domestic use & a 50 ton mill. ½ m. below mine where the mill should be there is water in gulch - a big underflo at 15'-20' below surface.

28. Brief History an enclosing assay sheet.

29. Special Problems, Reports Filed The great need here is a mill & there are several small mines near here which could be handled in some way & ore brought to this mill & increase the tonnage a lot. We have a ware house, store room, 16-2 & 3 room cottages one lovely 7 room (large rooms) dwelling, modern office & assay office.

30. Remarks The Blacksmith ore body is worth the price we ask for the whole mine. A person has got to see this & go over it several times to realize what it is. One Eng. went over the mine 4 times & said he could work with a 50 ton mill for two years above the Rasher level to the Top of mountain.

31. If property for sale: Price, terms and address to negotiate.
Price $50000, address H.O. Ward Hilltop, Ariz.

32. Signature H.O. Ward

33. Use additional sheets if necessary. It is told to me by people who claim to know that there are 5 to 8 & some say 8 to 10 miles of tunnel work here & the old company spent 1½ million dollars!

MH-21

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date Hilltop, Arizona, 5/15/40
(Via Rodeo, N. M.)

1. Mine Hilltop Mines
2. Mining District & County California Mining Dist. Cochise County, Ariz.
3. Former name
4. Location
5. Owner O. O. Matton ✓
6. Address (Owner) Hilltop, Arizona (Via Rodeo, N. M.)
7. Operator
8. Address (Operator)
9. President
10. Gen. Mgr. H. O. Ward
11. Mine Supt. ✓
12. Mill Supt. ✓
13. Principal Metals Silver, Lead, Zinc ✓
14. Men Employed
15. Production Rate From 50 to 100 tons milling ore per day.
16. Mill: Type & Cap.
17. Power: Amt. & Type 300H.P. electric light and power plant.
18. Operations: Present Mines are idle at the present time.
19. Operations Planned
20. Number Claims, Title, etc. Twenty unpatented claims
21. Description: Topography & Geography Limestone with porphyry intrusions and quartzite leage Mountains are high and covered with heavy timber.
22. Mine Workings: Amt. & Condition Rhem, lower tunnel, elevation 6150, length 3,800 feet with drifts, cross-cuts and stopes; Gray tunnel, elevation 6450 feet, approximate length 3,500 feet with drifts, cross-cuts, stopes and winzes; Kasper tunnel, (cuts clear through the mountain and is open at both ends) elevation 6750 feet, approximate length 3,600 ft. with drifts, cross-cuts, stopes and winzes. Blacksmith, or surface workings, short tunnels and shafts all in ore.

(over)

23. Geology & Mineralization — Limestone with porphyry intrusions and large quartzite ledge. Silver. lead and zinc, with some copper and molybdenum. Ore occurring in fracturs, bodies and veins along the quartzite ledge.

24. Ore: Positive & Probable, Ore Dumps, Tailings — There is considerable milling ore on the old dumps. No tailings.

24-A Vein Width, Length, Value, etc. — Engineers have estimated from 25,000 to 30,000 tons of ore in the main body with an average assay of silver 4 ozs., lead 18% and zinc 8%. Numerous other bodies and veins contain even a better grade of ore.

25. Mine, Mill Equipment & Flow Sheet

26. Road Conditions, Route — Paved highway to within 22 miles of the property and from there on a good graded state road.

27. Water Supply — About 300 gallons per minute from gravity flow from the lower tunnel.

28. Brief History — Property developed by the Hilltop Metals Mining Company from 1916 to 1926. Very small amount of work done since that date. A few ore shipments have been made from assessment work and cleaning out of old workings. The property was purchased outright by the present owner in 1937. The Hilltop Company shipped in 1925-26 11,424 tons of ore averaging silver 5.24, lead 23% and zinc 8%.

29. Special Problems, Reports Filed

30. Remarks — Reports, maps and assay sheets are to be found for inspection in the mine office. Visitors will find accommodations at the mine.

31. If property for sale: Price, terms and address to negotiate. — The price is $40,000(Forty thousand dollars) reasonable terms. Favorable proposition to anyone who will install a mill. Will dispose of a one-half interest for $20,000. terms.

32. Signed.....O.O. Matton, Hilltop, Arizona.....
Via Rodeo, N. M.

33. Use additional sheets if necessary. (Two additional sheets with details.)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

MINE OWNER'S REPORT

Date Hilltop, Arizona, 5/15/40
(Via Rodee, N.M.)

1. Mine Hilltop Mines
2. Location
3. Mining District & County California Mining District, Cochise County, Arizona.
4. Former name
5. Owner O. O. Mattox
6. Address (Owner) Hilltop, Arizona, (Via Rodeo, N.M.)
7. Operator
8. Address (Operator)
9. President, Owning Co.
9A. President, Operating Co.
10. Gen. Mgr. H. O. Ward
11. Mine Supt.
12. Mill Supt.
13. Men Employed 3 to 4
14. Principal Minerals silver, lead, zinc.
15. Production Rate from 50 to 100 tons milling ore per day.
16. Mill: Type & Cap.
17. Power: Amt. & Type 300 H. P. electric light and power plant.
18. Operations: Present Mines are idle at the present time.
19. Operations: Planned
20. Number Claims, Title, etc. Twenty unpatented claims
21. Description: Topography & Geography Limestone with porphyry intrusions and quartzite ledge

Mountains are high and covered with heavy timber.

22. Mine Workings: Amt. & Condition Rhem, lower tunnel, elevation 6150, length 3,800 feet with drifts, cross-cts and stopes; Gray tunnel, elevation 6450 feet, approximate length 3,500 feet with drifts, cross-cuts, stopes and winzes; Kasper Tunnel, (cuts clear through the mountain and is open at both ends) elevation 6750 feet, approximate length 3,600 feet with drifts, cross-cuts, stopes and winzes. Blacksmith, or surface workings, short tunnels

23. Geology & Mineralization Limestone with porphyry intrusions and large quartzite ledge. Silver. lead and zinc, with some copper and molybdenum. Ore occurring in fracturs, bodies and veins along the quartzite ledge.

24. Ore: Positive & Probable, Ore Dumps, Tailings There is considerable milling ore on the old dumps. No tailings.

24A. Dimensions and Value of Ore body Engineers have estimated from 25,000 to 30,000 tons of ore in the main body with an average assay of silver 4 ozs., lead 18 % and zinc 8 %. Numerous other bodies and veins contain even a better grade of ore.

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route Paved highway to within 22 miles of the property and from there on a good graded state road.

27. Water Supply About 300 gallons per minute from gravity flow from the lower tunnel.

28. Brief History Property developed by the Hilltop Metals Mining Company from 1916 to 1926. Very small amount of work done since that date. A few ore shipments have been made from assessment work and cleaning out of old workings. The property was purchased outright by the present owner in 1937. The Hilltop Company shipped in 1925-26 11,424 tons of ore averaging silver 5.24, lead 23% and zinc 8 %.

29. Special Problems, Reports Filed

30. Remarks Reports, maps and assay sheets are to be found for inspection in the mine office. Visitors will find accommodations at the mine.

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

The price is $40,000 (Forty Thousand Dollars) reasonable Terms. Favorable proposition to anyone who will install a mill. Will dispose of a one-half interest for $20,000. Terms.

32. Signature O O Mattox

O. O. Mattox, Hilltop, Arizona.
Via Rodeo, N. M.

33. Use additional sheets if necessary.

MH-21

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
ENGINEERS REPORT

Date: March 25, 1940.

Mine: HILLTOP MINE

Engineer: Miles M. Carpenter, E. M.

District: California, Cochise County

Location: P. O. Hilltop, Ariz.
North end Chiricahua Mts.

Former Name:

Owner: O. O. Mattox

Address: Hilltop, Arizona

Operator: Same.

Address:

President:

Gen. Mgr:

Mine Supt: M. E. Clark

Mill Supt:

Principal Metals: Silver-Lead-Zinc

Men Employed:

Production Rate: Not established.

Mill - Type & Cap:

Power - Amt. & Type: 300 H.P. Snow Diesel Engine direct connected to A.C. Gen. in good steel structure power house.

Operations - Present: Packing ore from Blacksmith upper tunnel and attempting to concentrate in an improvised Jig.

Operations - Planned: Depend on financing.

Number Claims, Title, etc: Twenty unpatented lode claims on Coronado National Forest.

Description - Topog. & Geog: In northern end Chiricahua mountains at elevation of 6,000 to 7,500 feet, on steep rugged mountain side with oak, juniper and pine trees. Ideal for cross cut tunnel.

Mine Workings - Amt. & Condition: 40,000 ft. of crosscut tunnels, drifts, raises and winzes in good condition, distributed as follows from upper to lower:

Blacksmith tunnel - 400 ft. - Drifts 600 ft.
Fife " 1000 ft. - Drifts 500 ft.
Kasper, 3600 ft. main, 1000 ft. short - 4600 ft. Drifts - 4600 ft.
Gray tunnel -2000 ft. - Drifts 2500 ft.
Rhem " 3840 ft. - Drifts 2000 ft.
700 ft. raise from Rhem to Gray to Kasper.

Note: Kasper tunnel runs entirely thru mountain.

(over)

Geology & Mineralization: The mass of the mt. is limestone varying considerable in character, cut by narrow porphyry dike. A wider band of quartzite (60 to 80 ft.) located called "Hilltop quartzite" outcrops near the crest of the mt. and like the dikes is parallel to the lorigen axes of the mt. Most of the ore occurs in the "quartzite" though small showings of galena are in limestone. Ore occurs both as sulphide and oxidized mineral of lead and zinc sulphides predominating. Some molybdate and vanadate.

Ore - Positive & Probable, Ore Dumps, Tailings: Probable ore 50,000 tons averaging 3 oz. Ag. 15% Pb. and 5% Zn. according to the estimate of M. E. Clark. There are many showings of ore in sight in the various workings, 40 separate ore bodies, counted by the management. The largest ore body noted was about 150 ft. in length, and 4 ft. in width.

Mine, Mill Equipment & Flow Sheet: No mill. Mine equipment fairly complete.

Road Conditions, Route: Good graded roads 25 miles to San Simon, Ariz. and 25 miles to Rodeo, New Mexico. Both are railroad stations. Rodeo is on U.S. H'way 80, San Simon is on State H'way 86.

Water Supply: About 300 gals. per minute flowing from lowest tunnel.

Brief History: Bought in 1912 by Hilltop Metal Mining Co. Almost $1,000,000. spent on property and 11,400 tons ore shipped in '24 - '25 - '26. Averaging 5 oz. Ag. 23% Pb. and 8% Zn. Corporation failed and during the depression property went into hands of present owner.

Special Problems, Reports Filed: Complete reports, maps, etc. are available at the mine.

Remarks: This property has had an unusually large amount of development, but is still not exhaustively explored. There appears to be foundation, in partly developed ore for the tonnage shown above and a small mill, say 50 tons daily capacity seems in order for serious consideration.

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

For sale. Price $40,000. Easy terms.
O. O. Mattox, Hilltop, Arizona.
M. E. Clark, Willard Hotel, Tucson, Arizona.

Signed: MILES M. CARPENTER, E. M.

Miles M. Carpenter

DEPARTMENT OF MINERAL RESOURCES
State Mineral Museum
MINE OWNER'S REPORT

MH-21

THE ARIZONA DEPARTMENT OF MINERAL RESOURCES MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE CONTENTS OF THESE DOCUMENTS.

Date: February 1942

1. Mine: HILLTOP MINES

2. Location: 25 miles from San Simon, Arizona; 75 miles from Douglas, Arizona; 25 miles from Rodeo, New Mexico, and 54 miles from Lordsburg, N.M.

3. Mining District & County: California Mining District, Cochise County, Arizona.

4. Former Name:

5. Owner: O. O. Mattox

6. Address (Owner): Apartado 113, Torreon, Coah., Mexico.

7. Write: H. O. Ward,

8. Address: Hilltop, Arizona.

9. President, Owning Co:

9A. President, Operating Co:

10. Gen. Mgr:

14. Principal Minerals: Lead, Zinc, Silver and Molybdenum.

15. Production Rate: 231 cars - 11424 tons were shipped in years 1924-25 and 26.

16. Mill - Type & Cap:

17. Power - Amt. & Type: There is a 320 HP Twinn Snow Diesel Engine in Power Plant. Power Plant is 40x60, steel const., galv. iron building equipped - Switch board, water softner and filter a large air compressor.

18. Operations - Present: None.

19. Operations - Planned; April 1st, 1942.

20. Number Claims, Title, etc: Twenty unpatented claims.

21. Description - Topography & Geography: In northern end Chiricahua mountains at elevation of 6,000 to 7,500 feet, on steep rugged mountain side with oak, juniper and pine trees. Ideal for cross cut tunne.

22. Mine Workings - Amt. & Condition: Blacksmith tunnel elevation 7,220 ft. - 150 ft. long with ore body 35'x8 to 12' wide; has winze from tunnel level 60-70' deep all in ore. Kasper tunnel over 3500' long - elevation 6750'; long drifts and crosscuts - cuts several veins and bodies of ore. Grey tunnel, elevation 6450', over 3500 ft. long, drifts and crosscuts; has plenty of ore. Rhem tunnel, elevation 6050', over 3800 ft. drifts and crosscuts; has good ore in different places. 5 - 8 miles of tunnel work done. The three long tunnels are connected by an over pass whereby ore can be thrown in at the Kasper level and taken out at the Rhem 700 ft. below. Surface outcrops have been cut at all levels.

(over)

23. Geology & Mineralization: The mass of the mountain is limestone varying considerable in character, cut by narrow porphyry dike. A wider band of quartzite (60 to 80 ft.) called "Hilltop quartzite" outcrops near the crest of the mountain and like the sikes is parallel to the lorigen axes of the mountain. Most of the ore occurs in the quartzite though small showings of galena are in limestone.

24. Ore - Positive & Probable, Ore Dumps, Tailings: There are several hundred thousand tons of mill ore in the dumps. The zone is cut in each tunnel, but neither one of the long tunnels have been driven north under the Blacksmith ore body. An engineer, who spent 4 months here, said he believed 150 and possibly 200 tons per day could be developed.

24A. Dimensions and Value of Ore body: The Blacksmith tunnel has an ore body of about 35' long and 8' to 12' wide; has a width down about 60'-70', all in ore. I have no measures on Kasper, but will say from 18" to 4' and 6'. 45 cut samples from Gray averages in width 4'-3". Rhem has ore bodies 18" to 3-4 ft.

25. Mine, Mill Equipment & Flow-Sheet: Power plant equipped, Twinn Snow Diesel, 320 HP. A large compressor and all equipped in plant. 25 ore cars; rail in all main tunnels.

26. Road Conditions, Route: 22 miles from Highway 86; also 22 miles from Highway 80. Turn south 3 miles east of San Simon at checking station, 22 miles of good graded dirt road.

27. Water Supply: Water comes from Rhem tunnel, enough for domestic use and a 50 ton mill. 1/2 mile below mine where the mill should be set is water in gulch - a big underflow at 15-20' below surface.

28. Brief History: Am enclosing assay sheet.

29. Special Problems, Reports Filed: The great need here is a mill and there are several small mines near here which could be handled in some way and ore brought to this mill and increase the tonnage a lot. We have a warehouse; store room, 16 - 2 & 3 room cottages; one lovely 7 room (large rooms) dwelling; modern office and assay office.

30. Remarks: The Blacksmith ore body is worth the price we ask for the whole mine. A person has got to see this and go over it several times to realize what it is. One engineer went over the mine 4 times and said he could work with a 50 ton mill for two years above the Kasper level to the top of mountain.

31. If property for sale - Price, terms and address to Negotiate: Price $50,000.00. Address H. O. Ward, Hilltop, Arizona.

32. Signature: (Signed) H. O. WARD, Hilltop, Arizona.

It has been told to me by people who claim to know that there are 5 to 8, and some say 8 to 10, miles of tunnel work here and the old company spent one-half million dollars here.

FRA' P. KNIGHT, Director

423 Mills Bldg, El Paso, Texas

Hilltop

LEAD-ZINC QUESTIONNAIRE

October 7 1957.

Do you approve of the Emergency Lead-Zinc Committee's seeking relief for the lead-zinc industry and has it your authorization to speak for you? Yes

What Arizona Mines and Mills in the lead-zinc class do you control?

(1) Hilltop

(2)

Which ones are operating? (1) Inactive (2)

If not operating, when shut down? (1) 1956 (2)

Number employed, prior to shut-down, in mine, mill or sections thereof producing lead or zinc ores? (1) 15 (2)

Number so employed on January 1, 1957? (1) 1 (2)

Number so employed on October 1, 1957? (1) 1 (2)

Remarks

Mine to remain closed until metal prices improve

American Zinc, Lead & Smelting Co.
Company

By: R.E. Calhoun
Signature

Please fill in NOW, tear off, and mail to:

Arizona Department of Mineral Resources
Mineral Building, Fairgrounds
Phoenix, Arizona

6-803
(January 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Dale No. 19

SUMMARY REPORT OF MINERALS EXAMINATION

State ARIZ County Cochise Mineral Products Pb, Zn, Cu, Ag, Au, & WO_3

Name of property or deposit Hilltop Mine

Date examined 3/28/57 Engineer V.B. Dale Date of this report 4/22/57

Reason for examination Appraisal of Tungsten deposits, Ariz & N. Mex. Auth. 2078

Engineer accompanied by Herb Fisher Address Hilltop Mine Portal, Ariz.

Extent of property 20 Lode Claims, unpatented.

Owner American Zinc, Lead, & Smelting Co. Address 423 Mills Bldg. El Paso, Texas

Leased or optioned to No one Address

Location of property (be specific) Sec. 32, T. 16S., Sec. 5, T. 17S., R. 30E. (Unsurveyed) G&SRBM

Type of deposit and mineralogy (brief description) Scheelite is in Pyrometasomatic deposit in silicated limestone and quartzite.

Known dimensions of the deposit
Length 60 Ft. Width ± 10 Ft. Depth ± 15 Ft.

Attitude of the deposit (strike, dip, etc.) N 20° W - dip 54° SW.

Possible extensions; correlation of known showings ORE Sheet No. 3 in which WO_3 apparently is found is inaccessible on other levels. This deposit compares favorably with those in the Paradise area.

Mine workings (brief description or attach map or sketch) (indicate whether accessable)
4 tunnels; upper one is 150 ft. in length; other 3 about 3,500 or 4,000 ft. each. These tunnels have about 10,000 ft. of drifts ~~and crosscuts~~ with about 1,000 to 2,000 ft. of raises & winzes. 80% (over) are accessible.

Mining and milling equipment on property 1 IR. oil-Air Compressor; 17X19 engine; 16 1/2 X 13 1/4 X 19 compressor. 1-C.P. compressor, 8 3/8 X 4 3/4 X 5, powered by D13000 caterpillar diesel., 210 CFM Sullivan Compressor. U.S. war surplus motor-generator. IHC Diesel pulling columbia generator 43.8KVA, 35 KW. Muncha motor. 10-20 Cu. Ft. ore cars. Several thousand ft. of 12 lb track and pipe of assorted sizes. Several trucks & many tools. Camp for about 75 men.

Past production (if any) 11,424 tons of % Pb 2.3, Zn 5 and 5.24 oz. ag. prior to 1943. Production since then not known.

Present rate of production (if any) NONE

Sampling (describe briefly, or attach sketch) 1 sample cut 6.3 ft wide at top of 150 ft. raise located about 3300 Ft. from portal of Rhem tunnel, Assayed 0.23% WO_3

Tentative Estimate of Reserves

(Subject to revision when assays are received or after engineering calculations)

Measurable None tons Grade

Indicated 800 tons Grade 0.23% WO_3

Inferred Scheelite occurrence not opened sufficiently to estimate. tons Grade

Mining method (actual or suggested) Cut & Fill

Milling or processing method (actual or suggested) Scheelite is Coarse rough to recover with table or jig.

Processing tests suggested None

Tentative conclusion and decision Some scheelite may be recovered as a by-product from lead ore.

To be accompanied by brief letter giving examining engineer's general impression of the deposit, his impression of the owner, and any other confidential information he may care to submit. Refer to any known prior examinations and reports. May be executed in pencil. Should be mailed within 24 hours after examination is completed.

Send original and one copy to Washington Office.

T. J. Schmitt

PREFACE

The purpose of a map is to give a rapid, if not nearly instantaneous, mental image of the geological and mine conditions. It should approach the effect of a picture or photograph as nearly as possible. Although many complex ideas cannot be represented on a map, in general, explanatory notes are out of place and suggest a weakness in the system of symbols and abbreviations.

When notes must be used abbreviate the words by using consonants largely.

Key to maps - pulled.

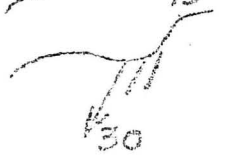
GENERAL LEGEND

Structural Symbols

True, normal strike and dip

True, overturned strike and dip.

Trace of fault with true strike and dip



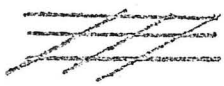
Strike or trace of fault with true strike and dip of striations or "flutings".

Joints (or "shear") with strike and dip.

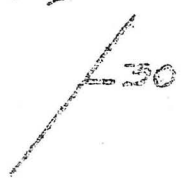
Primary or pyrogenic planar element in igneous rock. See texts for additional related symbols.

Breccia, rubble type, fragments rotated.

Breccia, non-rotated type



Broken ground not classified as breccia



In vertical section. Contact or fault with acute angle of strike with section.

Contacts or faults inferred with spacing of slots increasing with inverse probability.

Key Ore "marker" beds

FA — Fault

GG — Gouge

BR — Breccia

N.B. On line representation of faults note thickness, character etc as:

30
1 3' GG, 2' BR

Age Classifica[illegible]f structure by color

Blue	undifferentiated
Red	pre-ore
Green	Post-ore
Violet	Intermineralization

Colors in general

Use red crayon or ink for ore areas. In general use other reds for igneous rocks, blues and greens for sedimentary rocks, browns for gossans, violets and purples for alteration and yellows and orange for mantle or other superficial rocks.

Primary rocks

AL		alluvium
AN		andesite
DI		diorite
GL		gravel
GR	(+)	granite
IG		undifferentiated igneous
LS		limestone
ML		marble
MR		mantle rocks
PP	(%)	undifferentiated porphyry
QT		quartzite
RY		rhyolite
SH		shale
SS		sandstone
TL		talus

PP Porphyry

N.B. Where rocks are mixtures use compound symbols with predominent composition first. Example: LS-SH. Or make more quantitative if possible. Example: 2/3 LS - 1/3 SH. Many variations are of course possible. A mantle rock predominately granite fragments is written MR-GR. If granite is known to occur below mantle rock write MR(GR). Capital letters are preferrable for all abbreviations.

Post primary (and post-secondary) changes in rocks .

MT	Metamorphosed. General term for the higher grades of metamorphism
AT	Altered. General term for the lower grades of metamorphism.
T	tactite (general term for contact metamorphism)
G	garnet
E	epidote
GE	skarn (garnet and epidote metamorphism)
H	hornfels, hornstone, porcellanite(preferred)
S	Silicified (fine-grained quartz)
CB	Carbonate.

Q	quartzified (coarse quartz)
SC	silication (high grade silicate metamorphism in places equivalent to tactite
CA	calcite
CL	caliche
GS	gossan (high-iron represents massive sulphides)
CG	capping (low-iron represents disseminated ore)
SR	sericite
A	clay (argillite) undifferentiated
CH	chlorite
GA	"clay garnet"
	"ore" sulphide or other primary "valuable" mineralization. Includes secondary sulphides.
	low grade sulphides or other primary mineralization
	"ore" oxidized
	low-grade oxidized

SLS= Sulphides

PY PY	pyrite
GA GA	galena
SP SP	sphalerite
CC CC	Chalcocite
CP CP	Chalcopyrite
BN BN	bornite

N.B. The specific symbols may be used as a littered pattern to cover an area. Thus $\overset{A}{A}\overset{A}{A}A$

Quantity of alterations is expressed by terms strong (ST), moderate (MD) and weak (WK). They can be combined with other symbols and abbreviations, thus: a granite strongly altered is written GR-ST or a shale weakly metamorphosed SH - WK - MT. A quantitative estimate of metamorphism may be written: LS-1/3G, 2/3E. Where the paragenesis is known, the youngest changes are placed successively to the right.

Local Formation Symbols

KA	Cretaceous arkose
KV	Cretaceous volcanic rocks
PSH	Permian, Snyder Hill limestone
PSA	Permian, San Andreas
PY	Yeso
PNN	Pennsylvania, Naco
ME	Mississippian, Escabrosa
DM	Devonian, Martin
CA	Cambrian, Abrigo
CB	Cambrian, Bolsa
PC	Pre-Cambrian