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PRINTED: 12/17/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CAVE MINE

ALTERNATE NAMES:

CAVE MOUNTAIN
SILVER PLUME
CAVE CANYON
SNOW DROP
CAVE CREEK

COCHISE COUNTY MILS NUMBER: 116

LOCATION: TOWNSHIP 23 S RANGE 20 E SECTION 33 QUARTER SW
LATITUDE: N 31DEG 22MIN 58SEC LONGITUDE: W 110DEG 21MIN 20SEC
TOPO MAP NAME: MILLER PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

LEAD
ZINC
COPPER
GOLD

BIBLIOGRAPHY:

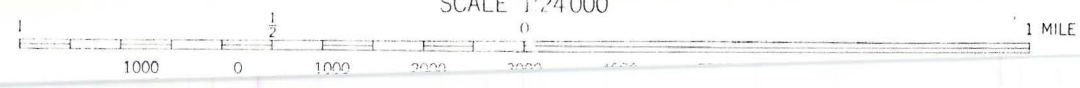
ADMMR CAVE MINE FILE
AZBM BULL. 158, P. 40
AZBM BULL. 187, P. 65



(MONTEZUMA PASS)

TASS R 20 E Sec 33

SCALE 1:24000



CAVE MINE

COCHISE COUNTY

MG WR 3/11/83: Visited the Cave Mine, Cochise County. There is no activity. There is a 2-room cabin and a compressor shed; both are in good condition. Comprising this property are apparently four unpatented claims: Charlotte, Emma, Glenda, and Toloc. The BLM microfiche shows the owner of these claims to be Charlotte Cooke, P.O. Box 1168, Benson, AZ 85602.

Marvin Combs, Operator of the Cave Mine in the Huachuca Mountains, Cochise County, came to the office to report harassment by the State Mine Inspectors' Office, and some difficulties with the Sierra Vista Forest Service Office. I reported the harassment to the State Chief Deputy Inspector and suggested to Combs that he conduct all business with the Forest Service on a written basis so that all commitments become a matter of record, containing the signature of the Forest personnel making the commitment. VBD WR 1/3/77

VBD WR 9/11/75: Bruce Burris, son of Ted Burris, who owns the Long Shot Mine near Arivaca, is financing the reopening of the old Cave Mine in SW4 Sec 33, T23S, R20E. Frye will manage and operate the mine. A dozer owned and operated by John Wray of Arivaca was stripping to bedrock to open a caved adit. I asked if the Forest Service had been notified and they responded no. I gave them a copy of Pertinent Data for New Operations and suggested they notify the Forest Service immediately, as well as the State Mine Inspector. Burris became abusive and I told him that I worked to help small mine operators where possible. He cooled off but became abusive again and I finally told him that his attitude was real bad and I didn't think anyone could help him. He seems to feel that he personally is paying the salaries of all government employees, who are all bad and in office specifically to cause him troubles. John Frye left to talk to the Forest Service in Sierra Vista. I later called the Forest Service and after examination, a tentative conclusion was made to require the mine operator to restore and reseed the stripped area, and to require a plan of operation to be submitted immediately. Burris refused to give me the name of the mine, as well as names and addresses of owners from whom he supposedly had leased the property. The Cave mine is or was composed of the following five lode claims: Cave Mountain, Cave Creek, Cave Canyon, Silver Plume and Snow Drop. According to Arizona Bulletin 187, page 65, the Cave Mine has produced some 565 tons of lead, zinc, copper, silver ores in 1946 and 1947. Burris said the adit face of the property contained three feet of lead, zinc, and silver ore which Tonto Mining and Milling Company had agreed to mill. The mine is in the Hartford Mining District of Cochise County.

VBD 2/25/76: Marvin Combs has completed purchase of Bruce Burris' interest in the Cave Mine in the Huachuca Mts, Cochise County. He plans to make peace with the Forest Service and immediately "catch up" a caved area in the mine before the summer rains start.

It was reported that a bulldozer was working on a mining claim upstream from the D'Albino Ranch on Ida Canyon. I drove there and met Bruce Burris and John Frye on the property. Burris, son of Ted Burris, who owns the Long Shot mine near Arivaca, is financing the reopening of the old Cave mine in SW $\frac{1}{4}$ Sec. 33, T23S R20E. Frye will manage and operate the mine. A dozer owned and operated by John Wray of Arivaca was stripping to bedrock to open a caved adit. I asked if the Forest Service had been notified and they responded no. I gave them a copy of Pert. Data and suggested they notify the Forest Service immediately, as well as the State Mine Inspector. Burris became abusive and I told him that I worked to help small mine operators where possible. He cooled off but became abusive again and I finally told him that his attitude was real bad and I didn't think anyone could help him. He seems to feel that he personally is paying the salaries of all government employees, who are all bad and in office specifically to cause him troubles. John Frye left to talk to the Forest Service in Sierra Vista. I later called the Forest Service and after examination, a tentative conclusion was made to require the mine operator to restore and reseed the stripped area, and to require a plan of operation to be submitted immediately. Burris refused to give me the name of the mine, as well as names and addresses of owners from whom he supposedly had leased the property. The Cave mine is or was composed of the following five lode claims: Cave Mountain, Cave Creek, Cave Canyon, Silver Plume and Snow Drop. According to Arizona Bulletin 187, p. 65, the Cave Mine has produced some 565 tons of lead, zinc, copper, silver ores in 1946 and 1947. Burris said the adit face of the property contained three feet of lead, zinc and silver ore which Tonto Mining and Milling Company had agreed to mill. The mine is in the Hartford Mining District of Cochise County. VBD WR 9/11/75

Wilbur Petrie, brother-in-law of Frank Carmella, and Marvin Combs stopped at the office to discuss the Cave mine in the Huachuca Mts. Petrie and Combs have made a deal on the mine, but sellers did not tell them that the Forest Service would require restoration and reseedling of a stripped area, nor that Mine Inspectors warned prior operators of dangerous conditions. I suggested they make peace with the Forest Service and file an operating plan. I also suggested they call the Mine Inspector's office and then take samples to Tonto Mining and Milling to assure a market for the ores. VBD WR 2/2/76

VBD WR 2/25/76 - Marvin Combs has completed purchase of Bruce Burris' interest in the Cave Mine in the Huachuca Mts., Cochise County. He plans to make peace with the Forest Service and immediately "catch up" a caved area in the mine before the summer rains start.

Dave Rabb and I visited the Cave mine in the Huachuca Mts. Marvin Combs has purchased the lease and option held by Frye and Burris from the owner, Mrs. Cecil Cook. There is little ore in sight, and cost of catching up caved areas in the main tunnel is estimated at \$5,000 to \$10,000. Dave Hartley has a trac drill on the property drilling exploration holes less than 100 feet in depth. If sufficient ore can be developed, Hartley will build a small mill. VBD WR 3/11/76

Box
Alhambra
California

5 November 1949

C. H. Dunning, Director
Department of Mineral Resources
Mineral Building
Fairgrounds
Phoenix, Arizona

533 T. 23 E 20 N

Dear Sir:

We are writing to you, at the suggestion of Mr. Charles F. Willis, State Secretary of the Arizona Small Mine Operators Association.

We have control of mining claims in the Cave Creek Canyon area in the Haachuca Mountains and are interested in mine operators who would operate these mines on a percentage basis.

Perhaps you can submit the names of those who would be interested.

The following information was taken from the production schedule of a former operator in 1948.

Metals and their percentage:

Lead	.1325
Zinc	.09
Silver	.01
Gold	.005
Copper	.125

Method of their operation:

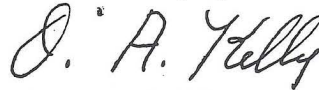
Explosion and hand loading - Two men employed.

Returns:

Gross return per ton	34.49
Tons per car (50)	1,724.50
Less 40% recovery	1,034.70
Cars per month (8)	8,277.60
Less freight \$3.50 per ton	1,400.00
	<u>6,877.60</u>
Less milling \$7.00 per ton	2,800.00
	<u>4,077.60</u>
Less royalty	407.76
	<u>3,669.84</u>
Less wages	1,750.00
	<u>1,919.84</u>
Less miscellaneous	500.00
	<u>1,419.84</u>
Less reserve for development	354.96
	<u>1,064.88</u>
Net per month before taxes	1,064.88
Net per year before taxes	12,778.56
Less taxes (income)	2,398.22
Net per annum after taxes	10,380.34

Your cooperation and suggestions will be appreciated
and we hope to hear from you soon.

Sincerely yours,



O. A. Kelly

OAK:kc

Enclosures: Excerpts from engineering report on Cave
Canyon Mine.

Return envelope

3

a 1

Excerpts from engineering report on Cave Canyon Mines

The older lower tunnel at the Cave mine runs for nearly two hundred feet under and through a loose conglomerate or mixture of small and large boulders with gravel and sand as a filler. For this distance probably not over a depth of sixteen feet from the surface was attained at any point. The early prospectors gophered this tunnel through the boulder-imbbeded formation by shoring and cribbing the overburden with small sprags and timbers cut from nearby woods. At the inner end of the shoring a heavy sulphite ore shoot was encountered, the roof portion of which was largely oxidized lead and zinc with splotches of copper carbonates showing here and there. The tunnel floor merely touched and skimmed the upper edges of this sulphide ore body and continued along for over a hundred feet exposing lead and zinc sulphides along the floor and oxidized material along the roof zone. This mixed ore as taken out forty years ago is still seen heaped upon the old lower tunnel dump.

During Mr. Turner's present operations he caused to be extracted from the mixed ore above the floor level some four carloads of mostly sulphide ore which he shipped to the Shattuck-Denn mill at Bisbee. Because of the small bore and dangerous condition of the old tunnel no attempt has been made by Mr. Turner to sink on this heavy body of ore.

As the water level (and therefore the air level) is approximately at the tunnel floor level, no further oxidation can be expected below that level. So the importance of going down on this fine ore body is apparent. The old tunnel cannot be made safe nor is its size and position proper for active ore haulage. It should be excavated and bodily moved away by bulldozer work, to expose the outcroppings of the lead-zinc-silver ore, following which sinking and underhand stoping on the ore could follow to nominal depths while sinking and development at lower levels could be inaugurated.

While it is an unusual proceeding for a bulldozer to wipe out a tunnel, in this case it can be done in a few hours work. Keep in mind that the entire overburden from tunnel to surface for the distance named, is a boulder-gravel-sand mixture uncemented and easily attacked with plenty of lower ground to which the overburden can be pushed and dumped. It is estimated that two days of bulldozer work at this point would bring to light and directly accessible an obviously large and fine descending body of sulphide ore.

The perpetual flow of water from this level would not be impeded but would be diverted and controlled in its flow along the course of the new excavation.

While the bulldozer is in camp, several access roads from the present canyon road should be put in. One of early importance would be a take-off from near and above the upper old camp, thence around the hill on an easy negotiable grade to -- first, the lead exposure where a blanket outcrop shows a considerable quantity of highgrade lead ore,

much of it ranging over 60% with containing silver values. The extent of this showing in, of course, unknown at this time but the access road to reach it would pass near and under the small dump of another promising outcrop of lead-zinc-copper ore from which it is believed shipping ore could soon be developed.

On past the blanket lead-showing, the access road would attain altitude and within a few hundred yards make accessible the ore from two very promising ore occurrences developed in oxidized lead-zinc of commercial values and apparently only a few feet short of the sulphide zone which must lie beneath.

Below these last described showings and about eight hundred feet up the slope from the main tunnel workings is a broad exposure or expanse of capping of vein-stuff probably two hundred feet wide in cross-section that is not in itself ore but which is definitely ore-bearing material of the same character as that in which the shipping ore below occurs. Occasional up-thrusts of limestone intrusions and copper evidence together with the vestiges of lead and zinc oxides and carbonates throughout the wide expanse, give weight to the belief that under this capping-vein-stuff a huge deposit of sulphide ore is very probable. The lower Cave tunnel now advancing in a face of shipping sulphide ore is headed directly for this great capping on a level seven hundred feet below. It is believed by others as well as the writer, that under this capping will be found the "mother" ore body of the Cave mountain.

The ore occurs as replacement veins cutting marbleized limestone. Probably due to the production of shrinkage cracks in the replacement process, later enlarged by solution of the un-replaced limestone, the veins usually occur at the sides of crystal caves of considerable extent. The general strike of the veins and caves is East-West. The vein matter consists of zinc blende, galena, Chalcopyrite, and some quartz. Oxidation is shallow, not more than 30 feet below the outcrops. The dips of the vein are steep, varying from 60 degrees to 75 degrees to the South. The work to date has demonstrated ore shoots of from 30 to 200 feet in length. Three veins have been uncovered with the probability of the existence of several more parallel veins in a system about 100 feet in width and a length of at least 300 feet and probably considerably more.

The mine has been developed by two tunnels about 40 feet apart. The upper discovery tunnel encountered a cavern 200 feet long, 25 feet in width and 30 feet in height, connected with a second smaller cavern at the eastern end. Along the South side of the cavern is a vein averaging five feet in width which was sampled and averaged 11.9% Pb, 14.6% Zn, with considerable copper and some silver. At the East end of the cavern a second vein in the middle of the cave, all oxidized, continues East. This vein, over a width of 2 feet, yielded 0.3 Pb, and 25.8% Zn. This material would probably turn into sulphide at slightly greater depth.

In the lower tunnel, a third vein was followed for a distance of 130 feet, 100 feet of which was oxidized. At the eastern end, about 30 feet of sulphides occur over a width of about 2 feet. Samples of this sulphide yielded an average of 11.6% Pb, and 22.6% Zn, with considerable copper and probably some silver.

In the lower tunnel, work was started to crosscut to the North to cut the larger vein out above on the side of the cave. About 25 feet of further work should be sufficient to cut the vein - 25 feet of drifting and 30 feet of raising would then be enough work to allow for a start of stoping.

Very little ore is strictly blocked, but it is reasonably safe to assume the vein cut in the upper tunnel to extend to the lower tunnel level 35 feet lower. With a width of 5 feet and a length of 250 feet, this block would yield $(250 \times 5 \times 35/10)$ 4375 tons. It is also reasonable to expect considerable ore from other veins, two of which have been cut. It is also reasonable to expect extensions of the veins to the East. At least 2500 additional tons above the lower tunnel can be safely assumed, making a total probable tonnage of about 7000 tons.

An additional tonnage would have to be developed below the lower tunnel. The configuration of the ground does not lend itself to lower tunnel entrances. A shaft would be necessary. In the lower tunnel a stream of water of about 100 gallons of water a minute is now running. Above the limestone block in which the ore occurs, about 150 gallons a minute is now running in Cave creek at the camp-site above the mine. Both flows are said to be a maximum due to the unusually wet weather contact. The probability is that provisions would have to be made if sinking were undertaken, to handle a maximum of about 200 gallons a minute, with a normal flow of about 50 gallons a minute.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date December 6, 1942

1. Mine Cave Creek Mine
2. Mining District & County Cave Creek- Huachuca Mountains
Cochise County
3. Former name
4. Location Cave Creek Canyon-Huachuca
Mountains near d'Albini
Ranch 35 miles from Bisbee
5. Owner Submitted by Geo. Tackard, Boston to
Arizona Eastern Gold Mines Company
6. Address (Owner)
7. Operator
8. Address (Operator)
9. President
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Principal Metals Lead, zinc, copper (silver).
14. Men Employed
15. Production Rate
16. Mill: Type & Cap.
17. Power: Amt. & Type
18. Operations: Present None
19. Operations Planned None
20. Number Claims, Title, etc. 11 unpatented claims. Compact group sufficient work done
to patent.
21. Description: Topography & Geography Elevation between 6000 and 7000 ft. Some timber
22. Mine Workings: Amt. & Condition 2 tunnels - 40 ft. vertically apart. #1 upper tunnel
at 200 ft. enter cavern. 25x30 ft. high. Showing vein - 5 ft. wide in main
cavern and another vein in a minor cavern. Lower tunnel - 130 ft. (100 of which
was oxidized ore)- a 2 ft. vein.

23. Geology & Mineralization is replacement veins in material bed limestone along side of crystal caves. Vein material zinc blende, galena, chalcopyrite and quartz.
24. Ore: Positive & Probable, Ore Dumps, Tailings Ore shoots 30 to 200 ft. long on 3 veins. 5 ft. in width - 11.9% Pb - 14.6% Zn. 2 ft. vein - 0.3% Pb - 25.8% Zn another 2 ft. vein 30 ft. exposed 11.6% Pb - 22.6% Zn.
- 24-A Vein Width, Length, Value, etc. No strictly blocked ore. Probable ore assumed by J. B. Tenney - 7000 tons. With probable extensions in depth in the limestone.
25. Mine, Mill Equipment & Flow Sheet None.
26. Road Conditions, Route Sand road from Bisbee toward Ft. Huachuca then short good road to mine near d'Albini Ranch.
27. Water Supply Cave Creek runs about 150 gallons a minute mine workings. If sinking undertaken should figure to handle 200 gallons per minute. Maximum with normal flow of 50 gallons per minute.
28. Brief History
29. Special Problems, Reports Filed
30. Remarks This property submitted to Arizona Eastern Gold Mines Company by George F. Packard of Boston along with report by James B. Tenney (Tucson) January 24, 1941
31. If property for sale: Price, terms and address to negotiate.
32. Signed.....Notes from J. B. Tenney report.....
33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

MC-74

Date 12/6/42

- 1. Mine *Can Creek Mine*
- 2. Location *CAVE CREEK CANYON - HUACHUCA MTS. NEAR D'ALBINI RANCH 35 MILES FROM BISBEE.*
- 3. Mining District & County *CAVE CREEK - HUACHUCA MTS. COCHISE COUNTY -*
- 4. Former name *—*
- 5. Owner *? SUBMITTED BY GEO. TACKARD - BOSTON TO ARIZ. EASTERN GOLD MINES CO.*
- 6. Address (Owner)
- 7. Operator
- 8. Address (Operator)
- 9. President, Owning Co.
- 9A. President, Operating Co.
- 10. Gen. Mgr.
- 14. Principal Minerals *LEAD - ZINC - COPPER (SILVER)*
- 11. Mine Supt.
- 15. Production Rate
- 2. Mill Supt.
- 16. Mill: Type & Cap.
- 3. Men Employed
- 17. Power: Amt. & Type
- 8. Operations: Present *none*

9. Operations: Planned *none*

20. Number Claims, Title, etc. *11 UNPATENTED CLAIMS - COMPACT GROUP SUFFICIENT WORK DONE TO PATENT.*

21. Description: Topography & Geography *ELEVATION ~~AM~~ BETWEEN 6000 & 7000 ft. Some timber -*

22. Mine Workings: Amt. & Condition *2 tunnels - 40 ft. vertically apart - #1 - Upper tunnel - at 200 ft. enter cavern - 25 x 30 ft. high - showing vein - 5 ft. wide in main cavern & another vein in a minor cavern. Lower tunnel - 120 ft. (100 of which has oxidized ore - a 2 ft. vein.*

Geology & Mineralization

Ore as replacement veins in marbleized limestone - also side of crystal car. Pile material Zinc blende, galena, chalcopyrite + quartz.

Ore: Positive & Probable, Ore Dumps, Tailings

Ore shoots 20 to 200 ft long on 3 veins - 5 ft in width - 11.9% Pb - 14.6% Zn.
2 ft vein - 0.3% Pb - 25.8% Zn - another 2 ft vein
Exp. exposed 11.6% Pb - 22.6% Zn.

A. Dimensions and Value of Ore body

No sketch, looked me - Probably ore amount by J. B. Tenney - 2000 tons.
with probably extension in depth in the limestone.

Mine, Mill Equipment & Flow-Sheet

None

Road Conditions, Route

Paved road from Postville toward Ft. Huachuca, then short good road to mine - near Albin's Ranch.

Water Supply

Carr creek runs about 150 gallons a minute. Mine workings - if sinking undertaken should figure to handle 200 gal. per minute - maximum with normal flow of 30 gal. per min.

Brief History

Special Problems, Reports Filed

Remarks

This report, submitted to Arizona Eastern Gold Mining Co. by Geo. F. Packard of Boston along with a report by James B. Tenney (Tucson). Jan. 24, 1941

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

32. Signature Notes from J.B. Tenney report -

Use additional sheets if necessary.

REPORT ON

CAVE CREEK MINE

Huachuca Mountains, Cochise County, Arizona

By

James B. Tenney
Mining Engineer & Geologist

James B. Tenney
Mining Engineer & Geologist
1070 N. Mountain Avenue
Tucson, Arizona.

January 24, 1941

CAVE CREEK MINE
Huachuca Mountains, Arizona

CONCLUSION

The mine has promise of a very considerable tonnage of good grade lead-zinc-copper-silver sulphide ore amenable to treatment by selective flotation. The ore is high enough in grade to stand transportation charges 35 miles by road from the mine to the Shattuck Denn concentrator.

A small outlay of not more than \$2600 should be sufficient to equip the mine and to do the small amount of development work necessary to bring into production from 4500 to 7000 tons of ore which could be mined at a rate of about 25 tons a day (6 to 9 months supply).

To develop a larger tonnage, a shaft and deeper lateral work would be more than ample to keep developments well ahead of production. An ultimate tonnage of at least one hundred tons is possible.

In view of the short haul from the mine to Bisbee it is an attractive venture, as the ore could be trucked at small expense to the Shattuck Denn concentrator, thus eliminating the initial cost of a concentrator at the mine.

LOCATION

The mine is situated to the North of Cave Creek Canyon on the Western slopes of the Huachuca Mountains. It is reached from the Montezuma Pass highway and a short side road off of this highway at the d'Albini Ranch turn-off. The total distance from Bisbee is about 35 miles 25 of which are paved. No excessive grades are encountered.

The elevation at the mine is between 6000 and 7000 feet above sea-level. Ample water flows at all times in Cave Creek to supply needs of a small camp.

The property consists of eleven un-patented claims in a compact group. More than sufficient work has been done to patent the group if so desired.

ORE CONCURRENCE

The ore occurs as replacement veins cutting marbleized limestone. Probably due to the production of shrinkage cracks in the replacement process, later enlarged by solution of the unreplaced limestone, the veins usually occur at the side of crystal caves of considerable extent. The general strike of the veins and caves is East-West. The vein matter consists of zinc blende, galena, chalcopyrite, and some quartz. Oxidation is shallow, not more than 30 feet below the outcrops. The dips of the veins are steep, varying from 60 degrees to 75 degrees to the South. The work to date has demonstrated ore shoots of from 30 to 200 feet in length. Three veins have been uncovered with the probability of the existence of several more parallel

veins in a system about 100 feet in width and a length of at least 300 feet or considerably more.

MINE DEVELOPMENT

The mine has been developed by two tunnels about 40 feet apart vertically. A sketch map of the work is appended. The upper discovery tunnel encountered a cavern 200 feet long, about 25 feet in width and 30 feet in height, connected with a smaller cavern at the Eastern end. Along the South side of the cavern is a vein averaging five feet in width which was sampled and averaged 11.9% Pb, 14.6% Zn with considerable copper and some silver. At the East end of the cavern, a second vein in the middle of the cave, all oxidized, continues East. This vein, over a width of two feet yielded 0.3% Pb. and 25.8% Zn. This material would probably turn in to sulphide at slightly greater depth.

In the lower tunnel, a third vein was followed for a distance of 130 feet, 100 feet of which was oxidized. At the Eastern end, about 30 feet of sulphides occur over a width of about two feet. Samples of this sulphide yielded an average of 11.6% Pb, and 22.6% Zn with considerable copper and probably some silver.

In the lower tunnel, work was started to cross-cut to the North to cut the larger vein cut above on the side of the cave. About 25 feet of further work should be sufficient to cut the vein. 25 feet of drifting and 30 feet of raising would then be enough work to allow for a start of stoping.

ORE DEVELOPED

Very little ore is strictly blocked, but it is reasonably safe to assume the vein cut in the upper tunnel to extend to the lower tunnel level, 35 feet lower. With a width of 5 feet, and a length of 250 feet, this block would yield $250 \times 5 \times 35 / 10 = 4375$ tons. It is also reasonable to expect considerable ore from other veins to the East. At least 2500 additional tons above the lower tunnel can be safely assumed, making a total probable tonnage of about 7000 tons.

Any additional tonnage would have to be developed below the lower tunnel. The configuration of the ground does not lend itself to lower tunnel entrances. A shaft would be necessary. In the lower tunnel a stream of water of about 100 gallons a minute is now running. Above the limestone block in which the ore occurs, about 150 gallons a minute is now running in Cave Creek at the Camp-site above the mine. Both flows are said to be at a maximum due to the unusually wet weather of the past month. The water in Cave Creek sinks near the limestone contact. The probability is that provision would have to be made, if sinking were undertaken, to handle a maximum of about 200 gallons a minute, with a normal flow of about 50 gallons a minute.

The probability is that the veins (or extensions of the veins as bedded deposits) exists to considerable depths in the limestone. The ore is primary in the tunnel levels so little or no change in tenor would be expected with depth. There is a possibility of at least one hundred thousand tons of ore in the mine.

COSTS

The veins, as so far cut, are well marked with distinct walls. Where caves are encountered, they have stood well for years and should give little trouble in mining. To develop ore ahead of mining would present a problem typical of limestone replacement camps. I should judge that all costs including development and overhead should not exceed \$5 a ton.

The haul to Bisbee, if done regularly on contract, should not exceed \$2 a ton, making a total cost of the ore delivered to the concentrator at the denn mine of not over \$7 a ton.

The initial cost to prepare for mining should be about as follows:

Repair of lower tunnel	\$200
Small compressor	500
Pipe, drills, timber, steel, cars, etc	500
100 ton ore bin	200
80 feet of cross-cutting, drifting, raising	800
Tent houses for crew	200
Miscel.	200
	<u>\$2600</u>

If 4000 tons of ore were mined before sinking were started, and if stoping, traming and current development (extraction costs) were 43, a sum of \$8000 would have been built up out of the charge of \$5 a ton against mining, probably ample to complete and equip a 100-foot shaft and drifts for lower level extraction.

PROFIT

Assuming a grade of 10% pb, 15% Zn, 2% copper and 6 oz of silver, the net worth of such ore in smelter payments after all losses in the concentrator and smelter were taken care of, would be about as follows:-

10% Pb = 200 lbs @ 2 1/2¢	\$6.00
15% Zh = 300 lbs @ 3¢	9.00
2% cu = 40 lbs @ 5¢	2.00
6 oz Silver @ 30¢	<u>1.80</u>
	\$17.80

Against which, costs would be:-

Mining	\$5.00
Trucking	2.00
Milling	3.00
Smelting & freight	<u>4.00</u>
	14.00

Net profit per ton \$ 3.80

With a mining rate of 25 tons a day, the monthly profit would be 26x25x3.80 = \$2470 for a monthly yield of 650 tons.

Presented by

James B. Tenney
Mining Engineer & Geologist

November 3, 1949

Mr. O. A. Kelly
Box 735
Alhambra, California

Dear Mr. Kelly:

Your letter of September 26th has just been referred to this office for reply. I regret that we have no list of parties interested in leasing lead mines at this time. However, since any interested parties would want detailed information on your property, as well as the terms, I suggest that you forward to us as much information as you have available.

To assist you along this line we are attaching a Mine Owner's Report form which we wish you would fill out and return to us.

Yours very truly,

R. I. C. Manning
Field Engineer

RICM:mh
Enc.

cc: Douglas Chamber of Commerce
Douglas, Arizona

*Give to
Mentworth.*

Box 735
Alhambra
California

26 September 1949

Chamber of Commerce
Douglas
Arizona

Gentlemen:

I have control of eleven lead mining claims in the Cave Creek Canyon area in the Hauchuca Mountains, and I am interested in mine operators who would operate these mines on a percentage basis.

These mines have very heavy deposits and are in good location for mining. There is a visible supply of 100,000 tons of high grade ore.

I am desirous of opening mining operations 100 percent, and it should be a very lucrative proposition.

Would you kindly send me the names and addresses of those who would be interested in working these claims.

Very truly yours,

O. A. Kelly
O. A. Kelly

OK:kc

Enclosure

*Saggers
Shura*

December 10, 1942

J.S.

Mr. Neil C. Clark
Heard Building
Phoenix, Arizona

Dear Neil:

I am returning herewith the James B. Tenney report on
the Cave Creek Mine, Huachuca Mountains, Cochise County,
which was submitted to Miss Haskell by George F. Packard,
Boston.

Very truly yours,

J. S. Coupal
Director

JSC:kk
Enclosure

J.H.

October 28, 1942

Mr. Walter Wilson
Portal
Arizona

Dear Walter:

I am enclosing a copy of a letter I have just mailed to Neil C. Clark, regarding the Cave Creek Mine.

I know that you are well acquainted with the district and would appreciate any comments you might have on this property, and regarding this report. Will you look this over and return this report to me at your earliest convenience.

With best wishes and kindest regards, I am

Very truly yours

J. S. Coupal, Director

JSC:BA

NAME OF MINE: CAVE ~~CREEK~~ CANYON
OWNER: Joe McCabe, Spencer Shattuck, *
Bisbee, & assoc.

COUNTY: Cochise
DISTRICT:
METALS: Pb

OPERATOR AND ADDRESS		MINE STATUS	
Date:	E. C. Widby, Box 1375, Tucson, Ariz.	Date:	Developing
5/45	J.W. Turner, Copper Queen Hotel, Bisbee	5/45	Shipping
6/45		12/46	

CAVE CANYON

Pb, Zn

Cochise

2 - 5

23 S ?
T 24 S, R 20 E

J. W. Turner, Copper Queen Hotel, Bisbee

'45

TURNER, J. W.
Copper Queen Hotel
Bisbee, Ariz.

Box 1136, Tucson
See CAVE CANYON - re gas application

5-11-45

Bisbee, Arizona,
Nov. 24, 1927.

Mr. F. H. Lerchen,
Montana Mine,
Arivaca, Arizona.

Dear Mr. Lerchen:

Complying with your request of the 19th. of this month I will give you a brief description of the Cave Canyon Mine, and the terms and conditions under which I will sell the property.

The Cave Canyon Mine consisting of ten mining claims, is situated in the Hartford Mining District, County of Cochise, State of Arizona, and about 35 miles from Bisbee, Arizona.

About 600 feet of development work has been done on one ore shoot. An ore shoot varying in width from a few feet to over 8 feet has been opened up for a distance of 250 feet. The ore is lead and zinc carrying small values in Copper gold and silver. For a distance of 40 feet and an average width of 3 feet the ore averaged over 50% combined lead and zinc and about 4% Copper. Near the face of the main heading in the tunnel a 5 foot sample assayed 20.5 % zinc, 12.8 lead, 3.3% copper, 1.5 oz. silver and .02 gold. At this point in the tunnel the face is about 150 feet below the surface. A second vein about 12 feet to the right of the main ore shoot has been encountered. The floor of the tunnel at that point is about 175 to 200 feet below the surface. This second vein increased in one round from a few inches to about 2 feet. No more advance has been made on this vein. A sample taken at random from this vein assayed 30% lead and 3% zinc. Did not have it assayed for silver.

About 40 feet north of the main ore shoot there is an other ore shoot. A 30 foot prospect shaft sunk on this ore shoot shows three feet of solid lead zinc sulphide, running 35% lead and 25% zinc. In this 3 feet there is considerable Galena free of zinc. Getting back to the main heading it might be well to mention here that lifters near the face of the main tunnel drilled in high grade lead. A sample of the drillings from one of the lifters assayed 66.3 percent lead. This was in the bottom of the lifters and the extent of this ore could not be determined.

On the East end of the property a silver vein has been followed with a tunnel for 180 feet the vein varies in width from a few inches to about 18 inches in width. The ore will run from 30 oz. silver to 100 oz. in silver and will carry on an average of \$5.00 in gold, also a few percent in lead.

The lead zinc ore and the lead ore occurs as shoots and replacement bodies in the limestone. The mineralization is confined very closely to large underground natural caves. Some of these caves are over 300 feet long and as much as 100 feet in width. One cave I have never been able to find the end of it. It is several hundred feet long. One cave above the tunnel has been prospected and in the hanging wall an ore shoot varying in width from 4 feet to 8 feet and over 100 feet long has been exposed. A six foot sample taken across the face of a crosscut in the Hanging wall ran 20% zinc 15% lead, 1.8%Cu., and 1.8oz. silver.

Most of the ore is in the sulphide form and mill tests

have demonstrated beyond a doubt that the ore is amenable to separation and concentration. The Phelps Dodge Metallurgical Department made tests on a representative sample and obtained very favorable results, by differential flotation. Satisfactory results were also obtained by gravity concentration. By flotation tests over 97 per cent extraction of the lead was obtained, and 82 percent of the zinc. The test were just preliminary.

There is a considerable tonnage of ore indicated, and I believe a sufficient tonnage to warrant the erection of a small roughing plant. There is ample water for mining and milling purposes, and an abundant supply of mine timber. The nearest railroad point is about 8 miles, with a down hill haul all the way to the loading station. There is just about one mile of road to be worked on and can be repaired at a low cost. There is a road built directly to the mine dump. With a small mill the property could be made to pay immediately.

As the Phelps Dodge Mining Company have announced their intention of building a lead-zinc mill in the near future, a market for the lead and zinc ore will be near at hand.

A considerable amount of development work has been done at numerous places on the property and some ore opened up. A total of over 2000 feet of work has been done on the property in all.

Geological conditions are favorable for ore deposition. The ore bearing rock is limestone of the same age as that found in Bisbee. The limestone block has been uplifted and tilted at an angle of about 60 degrees, by a porphyry intrusion. The porphyry has uplifted and in some case intruded the lime, and dykes have followed the bedding planes of the limestones. There is a wide zone of contact metamorphism, in which products of contact metamorphism such as garnet, vesuvianite, and other complex silicates. The ore capping is a manganese. The main ore shoot occurs in and along a fracture in the limestone and about 50 feet or more from the zone of contact. The mineralization is without doubt primary, and should continue with depth. All indication point to a large ore body underneath the large cave. I believe that the property warrants further development, and the expenditure of not too large a sum may bring in a large mine.

I will sell this property on a three year lease and bond basis. Purchase price \$200,000. payable as follows:

\$10,000.00 cash payment down. You to receive your proportional commission on \$5000., and the remaining \$5000. to be paid in full on the property to the original owners.

\$10,000. 6 mo. from date, you and your associates to receive your proportional commission on the full amount of the \$10,000. payment.

\$10,000. One year from date, and the balance of the payments to be made as mutually agreed upon by the buyers and myself. You and your associates are to receive a commission of \$50,000. for consummating the deal. However your commission will be paid to you as the payments are made on the property by the purchasers, and the full \$50,000. for commission is not to be paid to you until the full purchase price has been paid.

The above terms you understand are subject to change if it is found necessary to do so in order that the deal can be swung without a hitch.

I am sending a few rough sketches showing the workings, and the formation around the main tunnel.

Address - Box 355, Bisbee

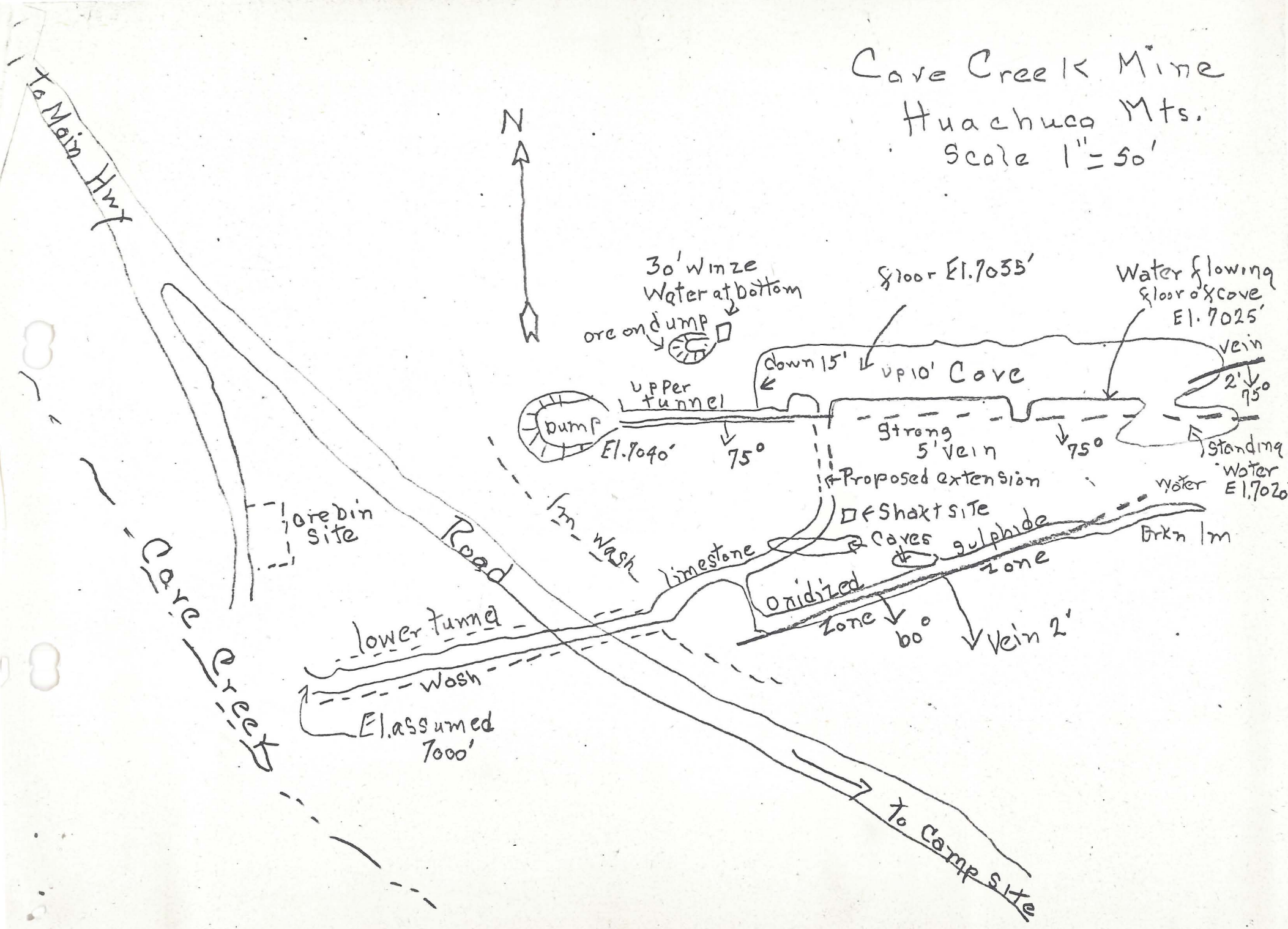
Signed

J. P. Brunel

Cave Creek Mine

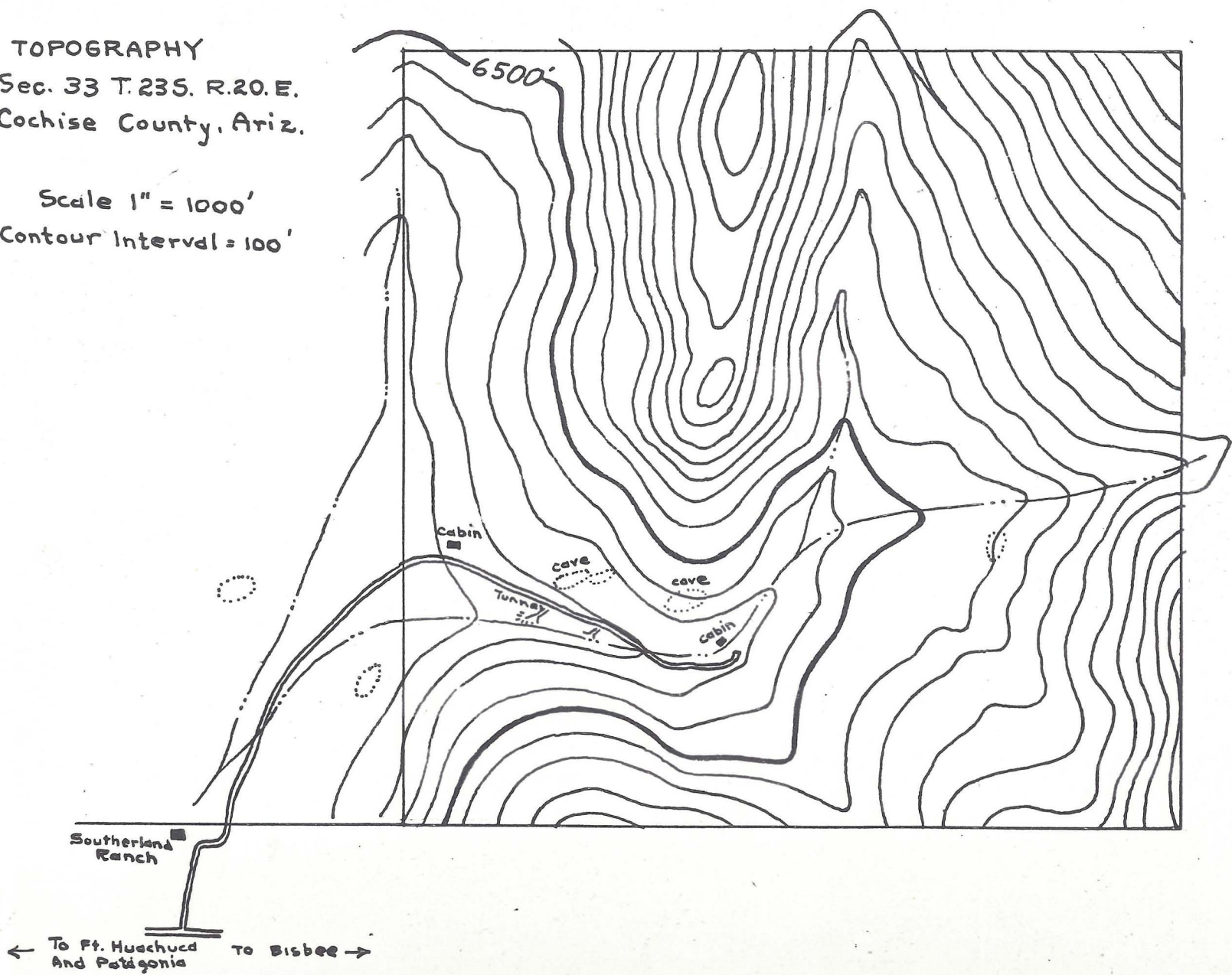
Huachuca Mts.

Scale 1" = 50'

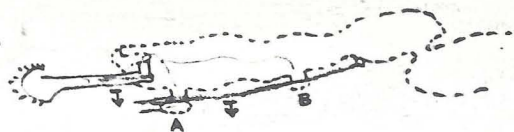


TOPOGRAPHY
Sec. 33 T.23S. R.20.E.
Cochise County, Ariz.

Scale 1" = 1000'
Contour Interval = 100'



① Entrance to cave:
see mineralization
at A & B.



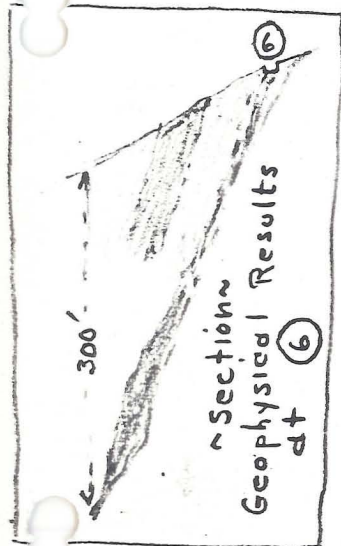
② shaft: someone on dump.

③ shaft on cropping of mineralization of cave

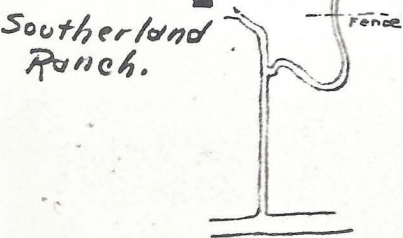
④ two cuts showing alteration near contact.

⑤ shaft: 14oz. silver sample taken from dump.

⑥ Two cuts and croppings (Lead & Zinc shown to you
on our trip to Ruby taken from here.)



Southerland
Ranch.



- ⑦ shaft on top of Rhyolite contact.
- ⑧ cut showing some lead, zinc & copper mineralization.
- ⑨ Tunnel: inaccessible.
- ⑩ cuts & shafts showing alteration near contact.
- ⑪ Tunnel & cut showing some copper mineralization.
- ⑫ Tunnel: Some lead reported shipped from here in early days.
- ⑬ Geophysical indications. —

IN THE HEART OF



THE SUN COUNTRY

DOUGLAS CHAMBER OF COMMERCE

DOUGLAS, ARIZONA

October 27, 1949

Department of Mineral Resources
Fairgrounds
Phoenix, Arizona

Gentlemen:

Enclosed please find two letters that were sent to us and am wondering if you would care to answer same for us. Mr. Wentworth of the Small Mine Operators of our city, suggested that we send these letters to you.

If you would rather send us the information to us and let us answer the letters will be entirely up to you.

Very sincerely,

Glenn Pratt: General Mgr.

ew

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date: 7/11/45

Name of Mine: Cave Canyon

Owner or Operator: J.W. Turner

Address: Copper Queen, Bisbee

Mine Location: Cave Canyon, Huachuca Mts

Filing Information

File System:

File No.:

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

PRESENT OPERATIONS: (check X)

Production.....; Development; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

PRODUCTION: Past and Future. Tons

Approx. tons last 3 months:

Approx. present rate per 3 months:

Anticipated rate next 3 months:

If in distant future check (X) here:

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars
Light or Service Trucks
Ore Hauling Trucks	<u>Garb Demer</u>	<u>3 gal hr</u>	<u>1800 per mo</u>
Compressors
Other Mine or Mill Eqpt.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead, Zinc

REMARKS:

This is a new operation - leasing the
Stattuck Mc Cabe property in Cave Canyon
for use for testing purposes
still recommended

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By: Geo. J. Fallon

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date 5/1/45
Name of Mine Kane Creek
Owner or Operator E. C. Widby (operator)
Address Box 1375 Jerome
Mine Location West side Thachuce Mts

Filing Information
File System
File No.
This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)
Production; Development; Financing; Sale of mine;
Experimental (sampling); Owner's occasional trip;
Other (specify)

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

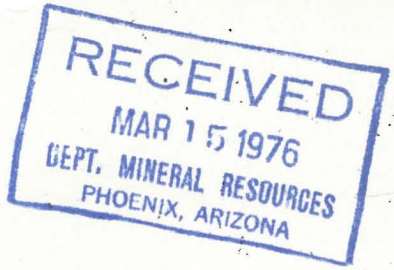
Table with 4 columns: Type, Quantity or Horse Power, Miles or Hours Per Month, Gallons Required Per Month. Includes entries for Personal Cars (4 Plymouth, 500 miles) and other equipment.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.
Lead

REMARKS: Mr. Widby is employed by Mr. James, lessee of this property. He will need this gasoline for preliminary work.

ARIZONA DEPARTMENT OF MINERAL RESOURCES
By: [Signature]

Date #25



SUMMARY REPORT OF MINERALS EXAMINATION

State Ariz County Cochise Mineral Products Zn, Pb, Cu + Ag

Name of property or deposit Cave mine

Date examined 3/11/76 Engineer V.B. Dale Date of this report 3/12/76

Reason for examination Owner's request

Engineer accompanied by Dave Rabb Address Az Bur. of Mines

Extent of property Four unpatented ~~mining~~ mining claims

Owner Mrs. Carol Cook Address Busbee, Az.

Leased or optioned to Marvin Combs Address 918 W. Santa Maria, Tucson Az.

Location of property (be specific) SW⁴ sec. 33, T. 23 S., R. 20 E., Hartford Mining District, Huachuca Mts., Cochise County

Type of deposit and mineralogy (brief description) Replacement in limestone intruded by andesite dikes along a fault striking as below.

Known dimensions of the deposit Length ± 500' Width 6' to 3' Depth 75'

Attitude of the deposit (strike, dip, etc.) N. 80° E., Dip variable

Possible extensions; correlation of known showings Mineralization also occurs alongside andesite dikes and in zones of structural weakness.

Mine workings (brief description or attach map or sketch) (indicate whether accessible) Mine adits totalling about 500 feet, ^{two} ~~is~~ stopes in to limestone caves.



Mining and milling equipment on property Trac drill 210 CFM
Compressor, Track, pipe, 2-room cabin, compressor
shed, miscellaneous ~~tools~~ tools.

Past production (if any) per ABRG bulletin 187: 565 ton ore
produced in 1946-47. Unknown production around 1960

Present rate of production (if any) None

Sampling (describe briefly, or attach sketch) None

Tentative Estimate of Reserves

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

Measurable None tons Grade

Indicated 2-300 tons Grade ±15% Pb, 10% Zn
1% Cu.

Inferred _____ tons Grade

Mining method (actual or suggested) _____

Milling or processing method (actual or suggested) open steps with
stalls & head boards.

Processing tests suggested None

Tentative conclusion and decision ~~Essential~~ Small production will
come from this mine until additional exploration
work is done.

~~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.~~