



CONTACT INFORMATION

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Arizona Department of Mines and Mineral Resources Mining Collection

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: THUNDERBOLT

ALTERNATE NAMES:
SILVER ZONE

YAVAPAI COUNTY MILS NUMBER: 782C

LOCATION: TOWNSHIP 10 N RANGE 1 E SECTION 1 QUARTER S2
LATITUDE: N 34DEG 14MIN 06SEC LONGITUDE: W 112DEG 12MIN 31SEC
TOPO MAP NAME: BUMBLE BEE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
SILVER
LEAD
ZINC
COPPER
IRON HEMA-MAGNE

BIBLIOGRAPHY:
USGS BUMBLE BEE QUAD
HARRER, C.M. RECON OF IRON RES USBM IC 8236
1964 P 108
ADMMR ECLIPSE GROUP FILE
ADMMR THUNDERBOLT FILE
LINDGREN, W. ORE DEPTS OF JEROME & BRADSHAW
MTN QUADS USGS BULL 782 1926
ARIZONA MINING JOURNAL, SEP. 1917, P. 13
GUITERAS, J.R. GOLD MINING AND MILLING IN THE
BLACK CANYON AREA USBM IC 6905 1936 P 21
CIOCANELA, R., BLACK CANYON BIF HORIZON, GEO-
LOGY, SECTIONS, GEOCHEMISTRY, 1984 - GEOFILE
CIOCANELA, R., BLACK CANYON, BIF ADMMR GEOFILE

NAME OF MINE: THUNDERBOLT

COUNTY: YAVAPAI

DISTRICT:

METALS: ZN, AG

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

5/1/44

J. H. Christensen,
Cleator, Arizona

2/45

DATE:

5/1/44

Milling

5/31/44

"Dead" (BWB)

2/45

Developing

Mining Journal
6/30/42

May 27, 1957

THUNDERBOLT MINE
& MILL

Yavapai County

This property inactive.

MARK GEMMILL

See: U.S.G.S. Bulletin # 782 pp 158-59, 29,45

THUNDERBOLT

Pb, Ag

Yavapai

13 - 6

T 10 N, R 1 E

J. H. Christensen, Cleator

'43

Vic L. Smith

- 2 -

Mr. Christensen stated that on account of the value of the equipment on had his people would like to have him remain on the job in some working capacity so as to see that the equipment was properly cared for. This may or may not be in line with the wishes of a prospective purchaser.

I know that you are more oreless acquainted with this district and probably with this particular property. The owners of the property are the Black Canyon Mining Co. of Kansas City, Missouri. They do not wish to sell outright as they feel as though there is a large tonnage of prospective ore that may be developed on the property. The Black Canyon Mine Associates purchased their lease from Tom Priestly and Williams whom you may know. But after the purchase of same had a revised lease direct from the owning company.

I have known this property for a good many years and I believe it offers an excellent chance. My suggestion is that you visit the property on your next trip to Arizona and then see if you cannot locate a ready customer as this property will produce a substantial amount of lead and zinc. It should be entitled to full priority.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:BA

Thunderbolt

September 23, 1942

Mr. J. H. Christensen
Cleator, Arizona

Dear Mr. Christensen:

Mr. Harold E. Ketchum was in the office yesterday discussing some phases of your operation and some of its problems. Within an hour or so after he left I received a copy of Brent Rickard's letter to you in which he states it would not be possible for the smelting company to advance operating funds.

In the light of this letter I suggest that you make application through the R.F.C. for a general mining loan. The form on which to make application may be obtained by writing R.F.C. Mine Loan Division, 325 Heard Building, Phoenix. Fill in this form as completely and thoroughly as you possibly can. Forward it in original and duplicate to this office and we will have Mr. Broadgate file it in Washington and follow it through for you. We believe your problem will make an excellent test case and for that reason will receive more than usual attention in Washington.

We suggest that you do this without delay.

Very truly yours,

Earl F. Hastings, Assistant Director
and Projects Engineer

EFH:LP

Handwritten:

September 17, 1942

Mr. J. H. Christensen
Cleator, Arizona

Dear Mr. Christensen:

Please let us know as soon as you have received a reply from the smelting companies relative to the loan that you discussed when last in this office.

In the event that you are unable to obtain a loan through the channels of which we talked, we would like you to make application for a general mining loan and to file it through this office. We will send it directly to our Washington representative who will in turn contact the head of the Legal Department of the R.F.C. and attempt to put this through in record time.

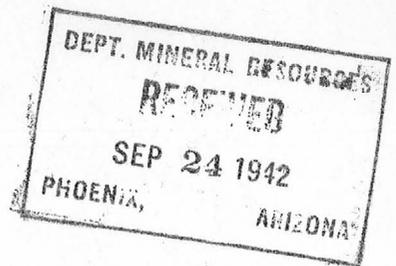
Borrowing from the smelting company would still be the quickest way to obtain the money, but if that is impossible we will try this other method.

Very truly yours,

Earl F. Hastings, Assistant Director
and Projects Engineer

EFH:LP

September 23, 1942



Mr. J. H. Christensen, Manager
Thunderbolt Mine
Black Canyon Mining Association
Cleator, Arizona

THUNDERBOLT MINE
BLACK CANYON MINING COMPANY
YAVAPAI COUNTY, ARIZONA
CLEATOR

Dear Sir:

You note from Mr. B. N. Rickard's letter of the 21st that he has referred your property to this department for consideration.

We are familiar with the Thunderbolt Mine. It was examined by our engineers in 1922, at which time considerable development work had been done.

We regret to advise that our company would not be interested in undertaking its further development.

We wish, however, to thank you for your consideration in bringing it to our attention.

Yours very truly,

Original Signed By
F. M. Stephens
F. M. STEPHENS

FMS/ap

cc: Mr. Earl F. Hastings
Dept. of Mineral Resources
413 Home Builders Bldg. - Phoenix

AMERICAN SMELTING AND REFINING COMPANY

SOUTHWESTERN ORE PURCHASING DEPARTMENT

810 VALLEY BANK BUILDING

P. O. BOX 2229

TUCSON, ARIZONA

BRENT N. RICKARD
MANAGER

September 21, 1942

Mr. J. H. Christensen, Manager
Black Canyon Mining Association
Cleator, Arizona

THUNDERBOLT MINE, BLACK CANYON DISTRICT
YAVAPAI COUNTY, ARIZONA

Dear Sir:

Mr. Earl F. Hastings, of Arizona Department of Mineral Resources, has written to me regarding your operation, stating that you need for financing up to \$15,000 to be secured by mortgage on your equipment.

I am sorry to say that the Smelting Company cannot make loans of this nature. However, I am referring to our field engineer Mr. F. M. Stephens the report of May 29, 1942, by Mr. A. C. Nebeker, which accompanied Mr. Hastings' letter. Mr. Stephens will be glad to call on you the next time he is in the vicinity, and I shall appreciate it if you will let him look over your operation. Perhaps he may be able to make some helpful suggestions.

Yours very truly,

BRENT N. RICKARD

cc:Mr. Earl F. Hastings
Department of Mineral Resources
413 Home Builders Bldg., Phoenix

September 15, 1942

Mr. Brent Rickard
P. O. Box 2229
Tucson, Arizona

Thunderbolt

Dear Mr. Rickard:

Mr. J. H. Christensen of the Black Canyon Mining Association, Cleator, Arizona, visited this office yesterday and outlined some of the problems which are facing him at the present time.

He is operating his 50-ton flotation mill on old stope fillings in the mine which are low grade and do not return sufficient profit that he can commence breaking ore to raise his mill heads. He also has a problem brought about by a high ratio of concentration which causes a considerable investment in concentrates if he holds them for sufficient time to accumulate a carload.

We believe that this association would be eligible for a general mining loan, however, as you know, these loans require several months for consumation and his problem is immediate. We have suggested to him that he write to you relative to the possibilities of the smelter advancing funds for the purpose of opening up his mine, giving as security a mortgage on his entire equipment which, we understand, is valued at something in the neighborhood of \$15,000 and is free of any encumbrance at this time.

We are enclosing herewith field engineer's report which if, of course, of a cursory nature and we have asked our engineer to re-visit the property to appraise the possibilities. We understand that the operators have all the equipment needed for mining and that they require only operating finances for payrolls, and so forth, for a sufficient period of time to accumulate carload lots of ore.

While we, of course, do not know your policy as regards loans to operators, we did feel that you might consider this particular case and we could think of no other way for an immediate solution of the problem which has prohibited this property from its full productive capacity.

Very truly yours,

Earl F. Hastings, Assistant Director
and Projects Engineer

EFH:LP
Enc.

September 15, 1942

MEMORANDUM

TO: A. C. Nebeker

FROM: Earl F. Hastings

Mr. J. H. Christensen of the Black Canyon Mining Association (Thunderbolt Mine), Cleator, Arizona, was in the office yesterday and presented some of his problems, principally that of obtaining finances to break ore in the mine. He is now milling rejects which was used as stope filling and is naturally lower grade than the broken ore would be. The general mining loan would take so much time that it would not solve his problem.

Since his property is free and clear of any encumbrance, he could no doubt obtain some financing through the smelter to which he ships, however, that would no doubt warrant authenticated information prior to considering such a loan.

Inasmuch as this property falls into Type 1 of our current Army Navy Munitions Survey, I thought it might be possible for you to visit it at an early date and give us your opinion of his prospects and possibilities. Such a visit would serve two purposes - both for the information for the survey and as a concrete and immediate assistance to Mr. Christensen.

JAS

October 8, 1942.

Mr. Vic L. Smith
Hotel Mayfair
Los Angeles, California

Dear Vic:

I believe the property mentioned in the other letter owned by Mrs. Miller is the property you should deal on with the party you mentioned the other evening. In addition there is another property which has been called to my attention and on which you may be able to make a deal with other people.

I believe you are well acquainted with the Thunderbolt located about four miles from Cleator, Arizona. The property is fully equipped with a 40 ton Hardings mill, flotation equipment, 100 H.P. diesel Cummings engine, 50 H.P. - I.R. Diesel compressor, of small tools and equipment and buildings practically new and ready to run on a half-hours notice. They claim about 10,000 tons of ore in sight. Practically blocked out which will run 15 to 20 ounces in silver, 3 to 4% in lead and 3 to 4% in zinc.

The owners of the property are the Black Canyon Mining Associates, J. H. Christensen, Cleator, Arizona. They have a 20 year lease with privilege to renew on a straight 10% royalty net returns from the smelter or sale of ore. The Black Canyon Mining Associates paid \$5,000 cash for the lease and fully equipped the property with all equipment and are in from \$25,000 to \$30,000. The deal they wish to make is \$5,000 cash and the balance of \$30,000 purchase price for their lease and equipment. The balance after the \$5,000 cash payment to be met out of a 10% net royalty. That means that until the \$25,000 is paid there would be a 20% royalty. This is a rather stiff royalty to stand but if you consider a complete plant, modern in every respect and ready to start operations on a moments notice, it is not a bad deal.

It would probably take about \$10,000 to swing the deal out of which \$5,000 would go for the lease and the balance for working capital to mine and mill such ore for the first working shipment of concentrates it might be necessary to put in a small set of flotation cells to separate the zinc from the lead and thus avoid any penalties on the sale of concentrates.

United States
Department of
Agriculture

Forest
Service

Bradshaw
Ranger District

2230 East Highway 69
Prescott, AZ 86301

THUNDERBOLT (E) JANUARY 27 1995
A HMC

file
↓
K

Reply To: 2810

Date: January 27, 1995

Dear Prescott National Forest User:

The Bradshaw Ranger District has received a Plan of Operation for a gold exploration project to be conducted South and West of Cleator, Az. near the Thunderbolt Mine. The project area is shown on the attached map.

The project will involve testing of gravels in a 30 foot by 500 foot area next to Turkey Creek. A backhoe and small Bobcat-type loader will excavate and move materials to a trommel and sluice for processing. Water discharged from the operation will flow into a settling pond. Approximately 30 test holes will be sampled within the project area. One road of approximately 100 feet will be created into the processing area. No vegetation over 3" at the base will be removed within the project area.

Access to the project site is by way of Forest Road 259 to Cleator. From Cleator, Forest Road 101 provides access directly to the project site. A reclamation bond sufficient to rehabilitate the area and mitigate resource disturbances will be posted by the proponent. All reclamation will be done to Forest Service standards.

Arizona Department of Environmental Quality specialists, along with Forest Service biological, hydrological, and archeological specialists, reviewed the project and the project site. Minimizing impacts on air and water quality, vegetation, and wildlife were identified as environmental concerns. A Heritage Survey of cultural resources was completed for the project. A biological evaluation is being completed at this time.

If you have any additional concerns or comments, please provide them to me by February 17, 1995. A copy of the proposal is available for review at this office. If you have questions, feel free to contact Doug Vandergon at (602) 445-7253.

Sincerely,

John W. Holt
JOHN W. HOLT
District Ranger

Laura Carter
Steve Clinc
Cervo Cuddy
Phoenix,

Enclosure

Caring for the Land and Serving People

Bank on side of creek.

RIE

REDBIRD #11
EXPLORATION
PROJECT

map drafted by: D. Vandergon
1/25/95

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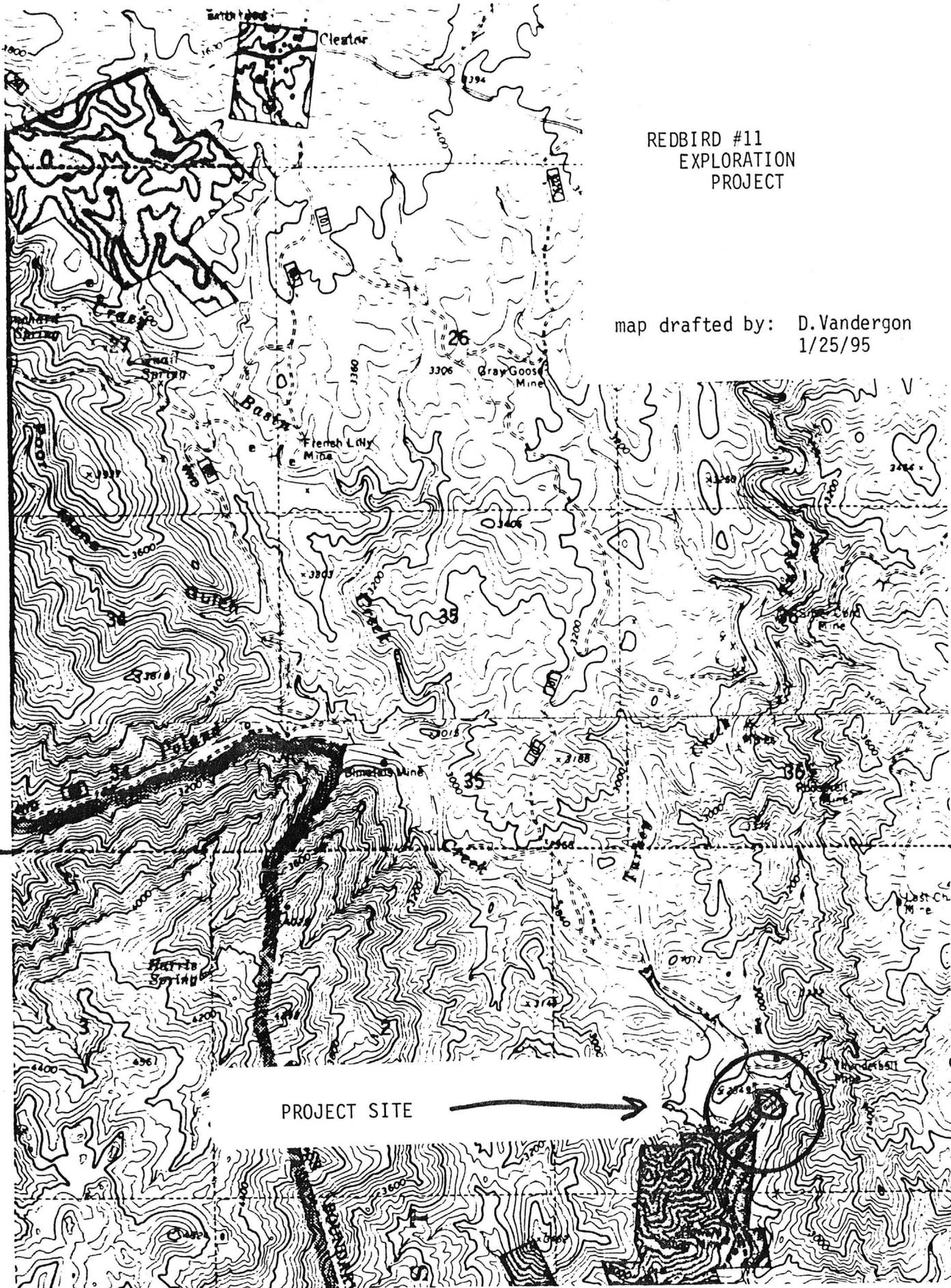
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PROJECT SITE



RIE



Date Printed: 07/14/93

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

Information from: John Frazzini

Company:

Address: 9219 N. 13th Place
City, State ZIP: Phoenix, Arizona 85020
Phone:

MINE: Thunderbolt

ADMMR Mine File: Thunderbolt Mine; Also Eclipse Mine
County: Yavapai
AzMILS Number: 782C

SUMMARY

John Frazzini, 9219 N. 13th Place, Phoenix, AZ 85020 called and talked to Leroy Kissinger about his mining claims. Mr. Kissinger explained that since he had less than ten claims he could get a small miners exemption and do his assessment work as usual and file and record his affidavit. However, the small miner exemption had to be certified by August 31, 1993.

I sent Mr. Frazzini a copy of the BLM application for small miner exemption with the hope that he would read and understand it so that he does not loose his mining claims.

He later called and said he received my letter and the copy of the BLM form. He has submitted a plan of operations to the Prescott National Forest for underground development work he wants to do. His claims cover the Thunderbolt Mine in Yavapai County. He explained that he was told that approval will only take two weeks. He has five claims and cannot afford the \$1,000 for rentals and still have funds for his one man development effort. He believes he can drill, shoot, and tram vein material to the portal and crush and pan free gold from the ore profitably.

Ken A. Phillips, Chief Engineer Date: July 14, 1993

THUNDERBOLT

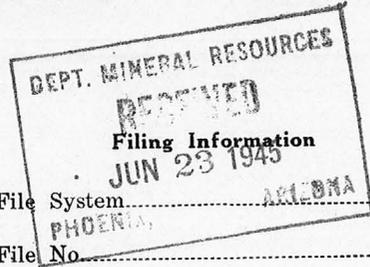
YAVAPAI COUNTY

Mrs. Reasoner at Cleator said Don Faubert of the Cadillac agency at Phoenix was about to start work at the Thunderbolt mine (four miles south of Cleator) a silver property.

FPK WR June 4, 1969

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT



Date May 28 1945
 Name of Mine Thunderbolt
 Owner or Operator James H. Christensen
 Address Phoenix - Arizona
 Mine Location 3 mi S of Phoenix

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	_____	_____	_____
Compressors	_____	_____	_____
Other Mine or Mill Eqpt.	_____	_____	3450

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead - Silver

REMARKS:

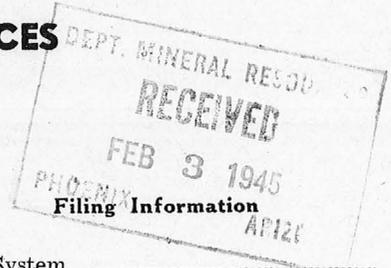
Both mining & milling for past 2 yrs
Approved

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By Ab. [Signature]

DEPARTMENT OF MINERAL RESOURCES

**REPORT TO OPA ON
ACTIVE MINING PROJECT**



Date Jan 31 1945
 Name of Mine Thunderbolt
 Owner or Operator James Christensen
 Address Cleator
 Mine Location 2 mi S Cleator

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
Compressors
Other Mine or Mill Eqpt.	<u>45</u>	<u>450</u>

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Pb - Ag - Zn

REMARKS:

This is an old operation
Application approved

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By W. Heber
 Field Engineer, D of M, R

THUNDERBOLT

Sept. 28th, 1948

BLACK CANYON

A. C. Nebeker

PRODUCTION POSSIBILITIES

This property is located 4 miles south of Cleator on the East side of Black Canyon.

At present 4 men are working, taking out the old fillings and milling the same. At the present size of grinding they are milling one ton per hour, and by making a small change in the flow sheet Mr. Christensen thinks the tonnage can be increased by 50%. (Correction on previous report, as to capacity of this mill as it is run today should be made, from 50 tons to 25 tons per day.)

Mr. Christensen would like to put on another shift and develop more new ore, and make a little change in the mill flow sheet, so he could save the zinc, but to do so he needs additional money. He don't know what kind of loan he can get, and has talked it over with the R. F. C. office and seemly did not get much encouragement. He claims to have ten years of ore insight for the present plant, with a large potential tonnage of new ore to be blocked out.

The present concentrate, he is shipping to El Paso is carrying 30% zinc, so he is not only losing the zinc but he is being penalized for the same, and that is what he wants to overcome.

The changes he figures necessary in the mill is to add a unit cell, a table and automatic reagent feeders.

Mr. Christensen claims he can double the production, if a loan can be arranged, which will allow him to go ahead and develop new ore, and mill while developing. The changes made in the mill they will pay for out of their own funds. He would like information just how such a loan can be worked out.

They have a 20 year lease on this property paying a 10% royalty, with a renewal clause.

They run the plant for 16 cents per hour. Have plenty of water for double production.

A. C. Nebeker

THUNDERBOLT

Sept. 28th, 1948

BLACK CANYON

A. C. Nebeker

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They have a 20 year lease on this property paying a 10% royalty, with a renewal clause.

They run the plant for 16 cents per hour. Have plenty of water for double production.

A. C. Nebeker

TEHRERDOLZ

Sept. 28th, 1942

BLACK CANYON

A. C. Hebecker

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They have a 30 year lease on this property paying a 10% royalty, with a renewal clause.

They run the plant for 16 cents per hour. Have plenty of water for double production.

A. C. Hebecker

THUNDERBOLT

Sept. 28th, 1942

BLACK CANYON

A. C. Nebeker

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A. C. Nebeker

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine THUNDERBOLT

Date SEPT. 28th, 1942.

District BLACK CANYON

Engineer A.C. NEBECKER

Subject: PRODUCTION POSSIBILITIES

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They run the plant for 16 cents per hour. Have plenty of water for double production.

Al Hecker

THUNDERBOLT

Sept. 26th, 1942

BLACK CANYON

A. C. Nebeker

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At present 4 men are working, taking out the old fillings and milling the same. At the present size of grinding they are milling one ton per hour, and by making a small change in the flow sheet Mr. Christensen thinks the tonnage can be increased by 50%. (Correction on previous report, as to capacity of this mill as it is run today should be made, from 50 tons to 25 tons per day.)

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The present concentrate, he is shipping to El Paso is carrying 30% zinc, so he is not only losing the mine but he is being penalized for the same, and that is what he wants to overcome.

The changes he figures necessary in the mill is to add a unit cell, a table and automatic reagent feeders.

Mr. Christensen claims he can double the production, if a loan can be arranged, which will allow him to go ahead and develop new ore, and mill while developing. The changes made in the mill they will pay for out of their own funds. He would like information just how such a loan can be worked out.

They have a 20 year lease on this property paying a 10% royalty, with a renewal clause.

They run the plant for 16 cents per hour. Have plenty of water for double production.

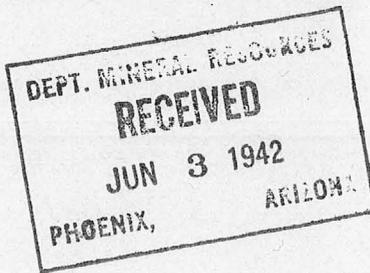
A. C. Nebeker

SURVEY OF OPERATING MINES

MAY 29th, 1942

By A. C. Nebeker

Ketchum



THUNDERBOLT MINE

Black Canyon Mining Association
 Mr Harold Kitchum Pres. & Mgr.
 2222 E. 2nd, St
 Long Beach, Calif.

Thunderbolt Mine,

Located 4 miles south of Cleator in the Black Canyon District. Yavapai Co. Ariz.
 The property consists of 15 unpatented claims and a mill site.
 The property has been a shipper in past years of high grade lead-silver ores and the low grade ores were allowed to be used as mine filling. It is reported that one car ore went \$5000 for the 50 ton shipment. While highgrading the mine there were many thousand tons of mill ore left behind.
 The vein that is now developed for mining is from 18" to 8 ft thick and has been opened on its length for 600 feet and 32 5 feet high. Approximately 10,000 tons blocked
 The vein is soft, mineralization between schist walls
 The metals mined are lead and silver and the concentrates being made now from the ores run from \$300 to \$600 per ton, ratio of concentration is 40 to 1.

The ores pass from the mine to the mill by gravity and goes through the mill by gravity. The mill is a 50 ton standard Denver Equipment Flotation Mill. The ore passing over a grizzly all inch stuff passes thru the over size is crushed in Jaw crusher thence to ~~Ball~~ Hardinge Ball mill thence thru a dorr rack classifier in closed circuit with Ball Mill and then to cells, where one cell is used for cleaner and five cells for roughers. Ores are crushed to 50 mesh
 Reagent used is Z3 Potassium Xanthate.

Power for mill units is electricity made at the property, by a 100 H. P. Cummings Diesel Engine connected to a 35 K.W. Westinghouse Generator. This plant uses 2 1/2 gals fuel oil per hour, cost of oil 7 cents per gal.

The ore being soft there has been no use for a compressor, but plans are to double production by adding another shift and then a compressor will be added to the mine equipment.

Concentrates are sacked and will be shipped by Alabam to El Paso Smelter. The mill has just started and results are satisfactory to the Superintendent, so at present they feel like their problems are solved.

6 men employed

Mr J. H. Christensen Mgr of operations.

A. C. Nebeker

9/14/42
 Note: Has compressor & mill now.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine THUNDERBOLT

Date Sept. 28th, 1942

District BLACK CANYON

Engineer A. C. Nebeker

Subject: PRODUCTION POSSIBILITIES

This property is located 4 miles south of Cleator on the East side of Black Canyon.

At present 4 men are working, taking out the old fillings and milling the same. At the present size of grinding they are milling one ton per hour, and by making a small change in the flow sheet Mr. Christensen thinks the tonnage can be increased by 50%. (Correction on previous report, as to capacity of this mill as it is run today should be made, from 50 tons to 25 tons per day.)

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Mr J. H. Chris tensen Mgr of operations.

A. C. Nebeker

DEPARTMENT OF MINERAL RESOURCES

Service Report

Date 9-14-42

Nature of Call _____

Place _____

Name J. H. Christenson

Address Cleator, Arizona.

Black Canyon Mining Assoc.

(Thunderbolt).

Subject Finances to

start mining. Is

now milling 50 tons

broken ore in stoves

Needs payroll.

Action _____

Refer to Notebook as

Type I

Signed _____

Use other side if necessary