



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HOT BOY

ALTERNATE NAMES:

BLACK MOUNTAIN PROJECT
CRUZE PROPERTY

PINAL COUNTY MILS NUMBER: 583

LOCATION: TOWNSHIP 8 S RANGE 14 E SECTION 16 QUARTER NE
LATITUDE: N 32DEG 44MIN 31SEC LONGITUDE: W 110DEG 53MIN 49SEC
TOPO MAP NAME: ORACLE - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD
SILVER
COPPER OXIDE
COPPER SULFIDE

BIBLIOGRAPHY:

ADMMR HOT BOY MINE FILE

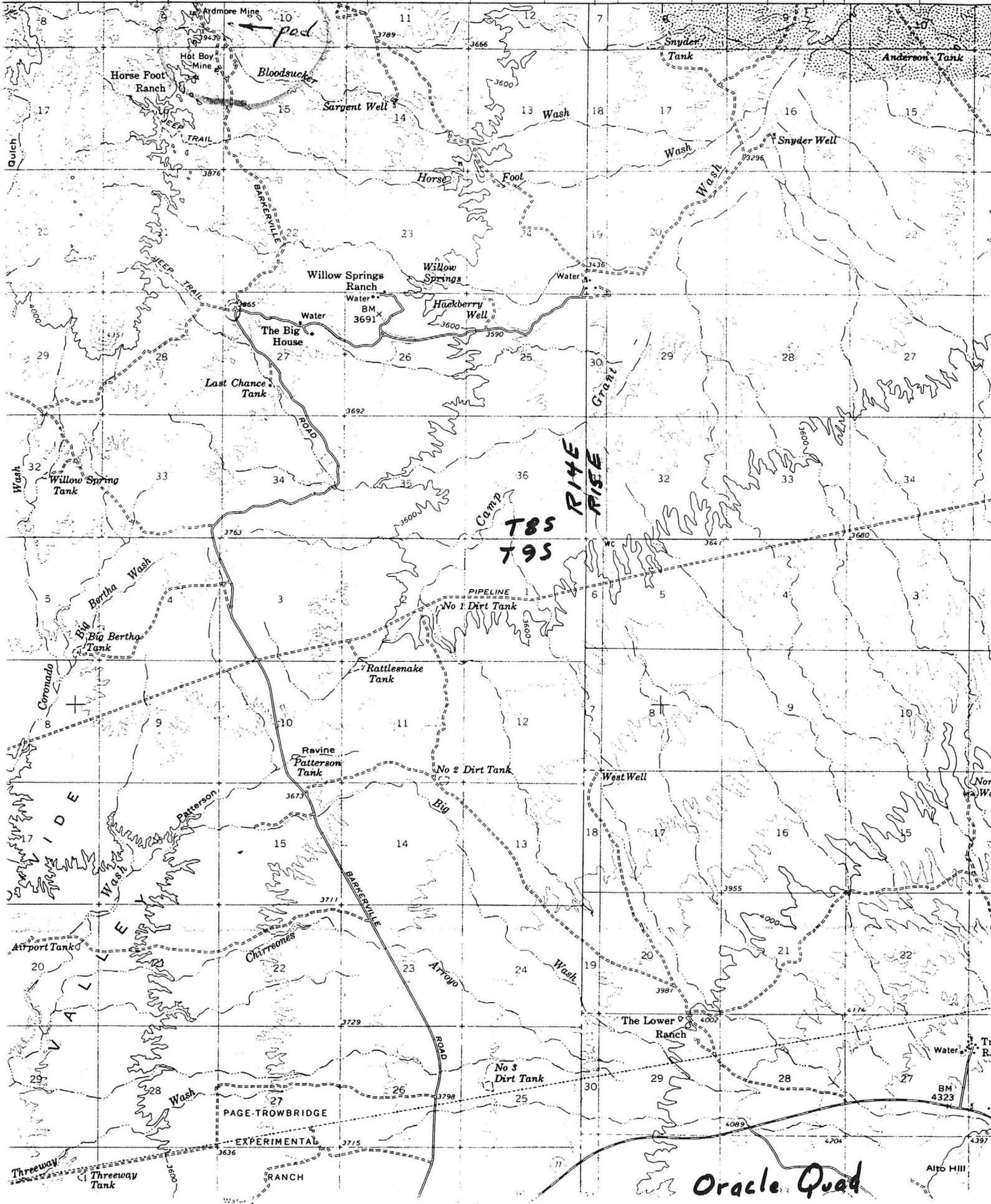
UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

55' BARKERVILLE 8.4 MI R. 14 E

(WINKELMAN)

50'

R. 15 E



Oracle Quad

Alto Hill

BM 4323

Water

Tri-Ran

North

Well

West Well

No 2 Dirt Tank

No 1 Dirt Tank

Rattlesnake Tank

Big Bertha Tank

Big Bertha Wash

Willow Spring Tank

Willow Springs

Hackberry Well

Water

HOT BOY MINE

aka Black Mountain Project
Cruze Property

PINAL COUNTY

T8S R14E Sec. 16
MILS Seq. # 0040210534

CHAMBER OUTLOOK

GREATER BISBEE CHAMBER of COMMERCE

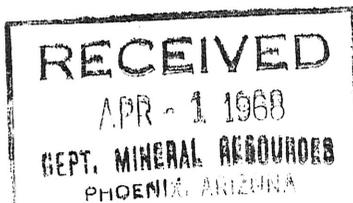
Bisbee, Arizona

3-29-68

Art Barber says that Inspiration calls this the Black ~~Mountain~~ Mountain Project.

COCHISE COLLEGE

BUSINESS MANAGER



COCHISE COLLEGE
DOUGLAS, ARIZONA 85607

IN ACCOUNT WITH

BULK RATE
U. S. Postage
PAID
Permit No. 22
Bisbee, Arizona

DOUGLAS, ARIZONA

196

HOT BOY

PINAL COUNTY

MG WR 11/85: Visited the Hot Boy mine (Pinal County). The headframe of the inclined shaft (approx. 45° East) is in fair to good condition. Water stands in the shaft about 20 feet below the collar. A portion of the mine dump was placed on a cyanide leach pad east of the shaft; leaching was attempted in late 1983 on a lift of material about five feet deep. The operator, Mr. George McJunkin, reports the program was unsuccessful because of the presence of abundant sulfides. The pad is located east of the wash in the NW $\frac{1}{4}$ of Sec 15, T8S R14E. The dump material averaged 0.04 to 0.05 oz gold/ton; reportedly there is a pocket of unmined ore near the surface and north of the shaft that assays 0.3 oz gold/ton. McJunkin reports that he invested about \$20,000 in the property; the leach operation produced about \$500 in bullion.

HOT BOY MINE

PINAL COUNTY

Hot Boy mine is under option to the Salome Mining Co. who are supposed to be waiting for a State Lease to be granted before continuing with exploration. Salome has the same officers as Frost Enterprises, Safford. GWI QR 2-27-70

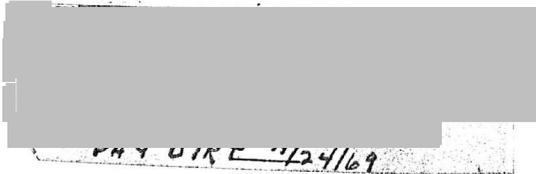
Frost Enterprises of Safford thru a subsidiary company have an option on the Hot Boy, Ardmore mine from V. L. Cruce. GWI QR 4-1-70

Mine Visit - Hot Boy and Ardmore mines - no sign of change since last visit. GWI WR 5-2-70

No new activity. GWI QR 6-30-70

No activity at the Hot Boy and Ardmore mines on Bloodsucker gulch sub-district. GWI QR 10-1-70

Mr. Cruce has terminated the Salome Mining Co. of Safford option on the Ardmore and Hot Boy mines and environs. GWI QR 12-31-70



MG WR 8/7/80: A realtor called for information on the Hot Boy Claims in T8S, R14E, Pinal County. Mrs. Leta S. Cruz, owner, has moved to California and wants to sell her property.

Note - date out of sequence.

MG WR 8/17/79: Bob Coleman advised the owner of Hot Boy has passed away. His widow, Mrs. Leta Cruce (Cruse) is now taking care of the property. It has some copper and she would like a mining company to look at it.

RRB WR 5/13/83: Ed Spaulding of the State Land department called for information on the Hot Boy Mine in Pinal County. He reports that Grant Godfrey of Safford and Al Levine of Tucson have applied for a mineral lease on Section 16, T8S R14E. They claim reserves of 60,000 tons of .06 oz/ton gold ore. Mr. Spaulding took a grab sample of the vein which assayed 1.133 oz/ton Au and a composite grab sample of the dump that assayed .11 oz/ton Au.

HOT BOY MINE

PINAL COUNTY

At Inspiration Geology Office interviewed both Hugh Olmstead and Jack Eastlick - exploration and development continuing. Olmstead has been in Nevada and expects to return. They continue to study the Black Mountain area northwest of San Manuel.
FTJ WR 1-31-69

Mr. Cruce said that Inspiration had turned back the Hot Boy Mine but retained a number of claims they had located in the area surrounding the Cruce claims. FTJ WR 7-25-69

Salome Mining Co. of Safford had an option. Salome Mining Co. apparently is a partnership of Mr. Schunk, John and Lloyd Frost and a Mr. Ambrose. Mr. Cruce verified that Amax had taken state leases and located claims from Willow Springs ranch (near Cruce property) to Oracle road and distance of 10 or 11 miles. FTJ WR 7-25-69

The Hot Boy and Ardmore mines owned by V. L. Cruce have been optioned to the Frost Enterprises of Safford, Arizona. This was later signed over to the Salome Mining Co., which a different corporate entity with the same principals as Frost Enterprises. They have been doing percussion drilling and expect to start a diamond drilling program as soon as leases and prospecting permits have been granted by the State Land Department.
GWI QR 9-1969

Inspiration has done a lot of staking in the Bloodsucker district. After the name of the Wash north of the Willow Springs Ranch. (Oracle Quadrangle) Have no details on this.
GWI WR 2-9-68

They are rehabilitating a shaft on the Cruse Prospect near Willow Springs Ranch west of San Manuel. FTJ WR 3-29-68

The Inspiration Consolidated Copper Co. has acquired the Ardmore and Hot Boy mines in the Willow Springs ranch area. This is called the Black Mountain Project. The cleaning out of two shallow shafts and the drilling of one deep hole has been in progress.
GWI QR 4-1968

Active Mine List April 1968 - 4 men

Inspiration Copper Co. - Black Mountain Project. One drill operating. Mine visit to the Hot Boy mine - Inspiration has cleaned out shaft. GWI WR 6-30-68

Inspiration Consolidated Copper is still drilling at their Black Mountain Project. This includes the Hot Boy and Ardmore mines. GWI QR 6-1968

Inspiration Consolidated Copper Co. are exploring in the Black Hills, T8S, R14E, covering the Ardmore and Hot Boy Mines. I understand that they have given up their prospecting permits and leases, but might hold any claims that they staked. GWI 10-30-68

Active Mine List Oct. 1968 - 4 men

Inspiration Consolidated Copper Co. appear to have dropped their options on their Black Mountain Project 20 miles west of Mammoth. GWI QR 12-1968

At Inspiration Geology office - interviewed both Hugh Olmstead and Jack Eastlick - exploration and development continuing. Olmstead has been in Nevada and expects to return. They continue to study the Black Mountain area northwest of San Manuel.
FTJ WR 1-31-69

Mr. Cruce said that Inspiration had turned back the Hot Boy Mine but retained a number of claims they had located in the area surrounding the Cruce claims. FTJ WR 7-25-69

Salome Mining Co. of Safford had an option. Salome Mining Co. apparently is a partnership of Mr. Schunk, John and Lloyd Frost, and a Mr. Ambrose, Mr. Cruce verified that Amax had taken state leases and located claims from Willow Springs Ranch (near Cruce property) to Oracle road and distance of 10 or 11 miles. FTJ WR 7-25-69

Frost Enterprises of Safford thru a subsidiary company have an option on the Hot Boy and Ardmore mines from V. L. Cruce. GWI QR 4-1-70

BLACK MOUNTAIN PROJECT

PINAL COUNTY

No activity at the Hot Boy and Ardmore mines on Bloodsucker gulch sub-district.
GWI QR 10-1-70

Mr. Cruce has terminated the Salome Mining Co. of Safford option on the Ardmore and Hot Boy mines and environs. GWI QR 12-31-70

Reference: Hot Boy (file)

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: George Mc Junkin
Address: 413 N. Jay, Chandler, Arizona 85224
2. Mine: Hot Boy Leaching Plant 3. No. of Claims - Patented _____
Unpatented _____
4. Location: 11 miles north of Arizona Hwy #77 on Willow Springs Road
5. Sec N $\frac{1}{2}$ of 10 Tp 8S Range 14E 6. Mining District Black Mountain
7. ~~Owner~~: Lessees, George McJunkin, Joe Hastings - Lessees of Hot Boy and Ardmore
8. Address: George McJunkin, Oracle Junction Trailer Park Space #9 Ph: 963-5810
9. Operating Co.: McJunkin Construction Company
10. Address: 413 N. Jay, Chandler, Arizona 85224
11. President: _____ 12. Gen. Mgr.: _____
13. Principal Metals: Gold, Silver 14. No. Employed: 3 (?)
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production Start up (e) Rate _____ tpd.
17. New Work Planned: Carbon stripping will be done at a plant near Wenden
(The old San Marcos - Hildbrand property? See CJH field visits 11/2/79)
18. Miscl. Notes: This is a cyanide leach-carbon absorbtion operation. The feed is from a dump at the Hot Boy (or Ardmore ?) mine. A 150' x 40' plastic membrane lined pad is loaded with a 5' lift of 1"-3" rock. 1 $\frac{1}{2}$ " PVC pipes with drill holes at intervals grid the top of the lift. Solutions drain into a 20' x 20' x 3' deep pregnant solution pond. It is then pumped to four 12" x 5' columns in series. The spent solution then goes to a holding pond (50' x 20' x 3'). The primary water source is a 90' well which is connected to a storage pond -- plastic lined -- 20' x 20' x 3'. Equipment in evidence: sheet iron cabin, Winnebago motor home, front end loader (LD8A Scoopmobile), truck mounted welder, trailer mounted generator.

The leach pad is $\frac{1}{4}$ mile east of the Willow Springs (Barkeville) Road. At $\frac{1}{8}$ mile west of the pad on the north side of the access road is a claim corner stake marked "NE corner, HB #113". Probably "Hot Boy". (continued)

Date: Oct. 13, 1983

Signed _____
(Signature)

Clifford J. Hicks

(Field Engineer)

10/13/83 Report
Hot Boy Leaching Plant
Clifford J. Hicks

-2-

Made first trip to the property with John Taylor, Deputy Mine Inspector. The only person on the property was a poorly informed watchman-handyman, Bernie Pitts. John Taylor made a second trip on November 2 and talked to McJunkin but failed to ask him who the current claimant is or how many claims he has leased.

CYANIDE CHECK SHEET

COMPANY NAME Mc Junkin Construction Co.

MINE NAME Hot Bay Leaching Plant MINE ID# _____

Person responsible for Cyanide Safety Joe Hastings

Deputy _____ Date _____

Cyanide chemicals being used Cyanobark Manufacturer Dod Chemical

Solution strengths: Makeup Tank 3 1/2 lbs Mining Solution 3 1/2 lbs

How often are the solution strengths tested? daily How? By litmus paper

What chemical is used to regulate the P_H of the solution? Caustic soda & lime

What P_H is maintained? Mixing Tank 10.5 Mining Solution 10.5

Are elevated temperatures used? _____ Yes No What temperature? Ambient

Are there any chemicals on the property that will lower the P_H of the solution?
 Yes _____ No What Kind? Chlorine

What protective equipment is used? Gloves Goggles Long Sleeves

Caustic Proof Apron Respirator Face Shield Other _____

How are Dry Spills handled? Washed with chlorine

How are Wet Spills handled? _____

Is there any Alkaline Hypochlorite available? _____ Yes No How much? _____

Does the responsible person know how to use it? _____ Yes _____ No

Is there a cyanide first aid kit available? _____ Yes No Where? _____

Has the entire crew been trained in its use? _____ Yes No

Are there people ever working alone? _____ Yes No

Is there a fresh water shower available? Yes _____ No

Is there outside Communication? _____ Yes No Type? _____

Have provisions for Emergency Rescue been made? _____ Yes No Source? _____

Have signs been posted to warn of Cyanide Hazards? Yes _____ No

Have Cyanide Ponds been fenced? Yes _____ No

Have provisions been made to contain spills caused by breached dams or ruptured tanks? _____ Yes No What? _____

Do the operators of this operation appear to be aware of the hazards associated with the use of Cyanide Chemicals? Yes _____ No

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Personal visit
Address: _____
2. Mine: Hot Boy- Ardmore 3. No. of Claims - Patented _____
Unpatented _____
4. Location: Bloodsucker Gulch -- Near Willow Springs Ranch
5. Sec 9-16 Tp 8S Range 14E 6. Mining District Black Mt.
7. Owner: V. L. Cruze
8. Address: P. O. Box 471 Tucson 85702
9. Operating Co.: Salome Mining Co.
10. Address: 101 East 2nd Safford
11. President: Lloyd Frost 12. Gen. Mgr.: Same
13. Principal Metals: ? 14. No. Employed: 0
15. Mill, Type & Capacity: none
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production (e) Rate _____ tpd.
17. New Work Planned: _____

18. Misc. Notes: No sign of activity. Some drilling equipment still on property.
Previously Mr. Cruze stated that they were waiting for State leases & P.P.
Before going ahead.

Date: 4-30-70 _____
(Signature)  (Field Engineer)

ARIZO DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: V. L. Cruce & visit
Address: P.O. Box 471 Tucson 85702
2. Mine: Hotbay ~~of Arizona~~ 3. No. of Claims - Patented _____
Unpatented 84
4. Location: Bloodsucker Wash
5. Sec. 16 Tp. 8 S Range 14 E 6. Mining District Black Mt or Bloodsucker
7. Owner: V. L. CRUCE
8. Address: P.O. Box 471 Tucson 85702
9. Operating Co.: Frost Enterprises -
10. Address: Safford Ariz
11. President: Lloyd Frost 12. Gen. Mgr.: John Frost
13. Principal Metals: _____ 14. No. Employed: ?
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production (e) Rate _____ tpd.
17. New Work Planned: _____
18. Misc. Notes: Have drilled & sampled 150 holes max depth 108'
D.D drilling program to wait until state leases are
confirmed.
Salome Mining Co (Same officers approx as Frost Enterprises) has
assigned their option to Frost Enterprises.

Date: 10-30-69

Gene Dine
(Signature)

(Field Engineer)

RIZOI DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

V. L. Cruce

& visit

1. Information from: _____
Address: _____
P. O. Box 471 Tucson 85702
2. Mine: Hotboy-Ardmore 3. No. of Claims - Patented none
Unpatented several
~~Black Mt. or Bloodsucker~~ also state leases.
4. Location: Bloodsucker wash near Willow Springs ranch.
5. Sec _____ Tp 8S Range 18E 6. Mining District Black Mt. or Bloodsucker.
7. Owner: V. L. Cruce
8. Address: as above
9. Operating Co.: not operating.
10. Address: _____
11. President: _____ 12. Gen. Mgr.: _____
13. Principal Metals: _____ 14. No. Employed: _____
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production (e) Rate _____ tpd.
17. New Work Planned: _____

18. Misc. Notes: _____
Two ASARCO scouts were with Mr. Cruce. The Occidental geologist
were looking over the north end of the property.

Date: 1-30-69


(Signature)

(Field Engineer)

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Burgrounds
Phoenix, Arizona

1. Information from: V. L. CRUCE
Address: _____
2. Mine: HOTBOY AND ARDMORE 3. No. of Claims - Patented _____
Unpatented _____
4. Location: Black Mountain District- Bloodsucker wash Pinal County.
9,10,11,12,13,14,15
5. Sec _____ Tp 8S Range 14E 6. Mining District Black Mt.
7. Owner: Mr. Cruze has made a deal with Inspiration ~~Con. Copper Co.~~ Con. Copper Co.
8. Address: Inspiration Arizona
9. Operating Co.: Same
10. Address: Same
11. President: _____ 12. Gen. Mgr.: _____
13. Principal Metals: _____ 14. No. Employed: 4 under sub-contractor
15. Mill, Type & Capacity: _____ none
16. Present Operations: (a) Down (b) Assessment work (c) Exploration
(d) Production (e) Rate _____ tpd.
17. New Work Planned: _____

18. Misl. Notes: Have drilled a 1000' drill hole near the HotBoy mine. Are
Cleaning out the Hot Boy shaft 190' deep on incline. (Old Spanish Workings)
Also another shaft just south, about 60' deep using a clam. The Hot Boy and the
Ardmore were gold silver and copper mines. The 60' shaft has been known as the
Pfiester shaft.

Date: 3-28-68

[Signature]
(Signature)

(Field Engineer)

10
GEOLOGIC REPORT ON
E½ SECTION 16
T8S, R14E, C&SRB&M
PIMA COUNTY, ARIZONA

*Hatboy +
Armore*

*Pinal County
Report received
from Mr. George
McTurkin -*

INTRODUCTION

The northern most 240 acres of the E $\frac{1}{2}$ of Section 16, T8S, R14E is held under prospecting permits in the name of Mr. V. L. Cruce. The property has been optioned by Mr. Cruce to Frost Enterprises, Inc., who are presently conducting an exploration program in this area. Some 12 holes have been drilled with a pneumatic type drill ranging in depth from 55' to 108'. These were drilled to check the possibilities of a near surface ore deposit. At the time of this writing the assay results were not available, but will be appended later. Also considerable benching has been done to expose some of the more geologically favorable areas. These will be sampled for additional information.

An inclined shaft has been sunk on this property (S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$) to a depth of 165'. This shaft was reportedly started by the Spaniards who were looking for gold. Later it was reworked by Mr. Cruce and sunk to its present depth. Several shipments were made by Mr. Cruce before abandoning the operation.

Inspiration Copper Co. also did some work on this property. Several shallow holes were drilled near the south boundary of the permits and one hole about 300' south of the inclined shaft was cored to 1000'. These logs were studied and all show significant alteration and mineralization.

GEOLOGY

The principal rock-type exposed in this vicinity is a coarse-grained quartz monzonite which is very probably part of the Precambrian Oracle granite batholith. This unit has been intruded by a series of diabase dikes that strike generally N20°W and dip almost vertically. Also a series of aplite dikes is exposed that have the same general trend as the basic dikes. It is not clear at this time whether these fine grained dikes have intruded the quartz monzonite or are a facies in the host rock. The contact are more or less gradational thus lending more substance to the latter postulation. Some feldspar-muscovite pegmatites are also present in isolated areas.

Overlying the older quartz monzonites are a series of tertiary volcanics composed mostly of andesites and andesite porphyry. These are exposed along the eastern edge of the permits. The contact between these volcanics and the intrusive is very irregular indicating the flow rock was laid down on an old erosional surface.

Exposed in several cuts and in the shaft is a highly altered intrusive that is not recognizable megascopically. This unit appears to have intruded the volcanics and occurs in the shaft and in several cuts nearby as sills interfingering with the andesites. This rock is probably Laramide in age and should thus correlate with the quartz monzonite intrusives in the San Manuel area. Towards the bottom of the shaft the interfingering is not so pronounced and the intrusive takes on more of a stock-type occurrence. However, several irregular masses of volcanics were noted that could be large inclusions in the invading intrusive. Since the area is also badly faulted these irregular bodies may be the result of breaking during the movement along this fault zone. A more detailed study of this area is needed to definitely determine what has actually occurred here.

MINERALIZATION

The minerals known to occur here are copper, gold, silver and molybdenum. Others may be present but have not as yet been identified.

Copper is found in both secondary and primary form with secondary malachite the most common and occurring mainly as fracture coatings and small veinlets both in the volcanics and the quartz monzonite. In the monzonite it is closely associated with the areas that have been quartz enriched. Chrysocolla is also present but in minor amounts.

Chalocite was also noted in several areas usually along fractures, but in one instance as a halo surrounding a chalcopryite center.

Both pyrite and chalcopryite are disseminated throughout the highly altered intrusive through which the shaft was sunk, with pyrite the most abundant. Chalcopryite was also found in several of the quartz veinlets in the quartz monzonite. As stated above it is usually surrounded by a chalocite halo. Bornite is also recognized, but only in one or two specimens.

The gold and silver minerals could not be recognized with a hand lens but assay reports and smelter returns on shipments made by Mr. Cruce show these are present in significant quantities.

Trace analyses have indicated that molybdenum also occurs but whether this will prove to be of economic importance is yet to be determined. *is good right now*

ALTERATION

That the rock in this area has been hydrothermally altered is very evident. However, this alteration and its genetic relationship to the mineralization must be studied carefully before any definite conclusions can be drawn.

20° SW	- 480'	- Hole S2	From NE Cor N $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{4}$	- 108'
50° SW	- 360'	- Hole S1	" " " "	- 85'
S45° E	- 495'	- Hole S2A	" " " Hit Water	- 55'
S70° W	- 90'	- Hole S6	From NE Cor N $\frac{1}{2}$ SW $\frac{1}{2}$ NE $\frac{1}{4}$	- 108'
N20° W	- 200'	- Hole S3	" " " "	- 108'
S5° E	- 220'	- Hole S5	" " " "	- 102'
S75° W	- 85'	- Hole S7	From NE Cor S $\frac{1}{2}$ SW $\frac{1}{2}$ NE $\frac{1}{4}$	- 96'
N74° W	- 675'	- Hole S8	From E $\frac{1}{2}$ Cor Sec 16	- 108'
		(Near old angle Hole)		
S60° W	- 450'	Hole S12	From SE Cor N $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$	- 72'
N60° W	- 150'	Hole S10	From SE Cor N $\frac{1}{2}$ NW $\frac{1}{2}$ SE $\frac{1}{4}$	- 48'
S70° W	- 130'	Hole S11	" " " "	- 60'
N55° E	- 350'	Hole S9	" " " "	- 55'

Inspiration Holes No 17-300'
 " " No 18-300' on top of hill

The minerals usually associated with this type of alteration are found throughout the subject area. Chlorite, sericite, kaolin, epidote, muscovite and secondary quartz are all present. There are probably zones where the K-feldspars occur but these were not found during this examination. Limonite is abundant but its significance can only be assessed after a more complete study. Boxwork structures are prevalent with much staining and fracture coating. No doubt some of the limonite is after pyrite and chalcopyrite but much is probably the result of the biotite and possibly hornblende being altered.

CONCLUSIONS

The possibility of an ore body of economic importance existing on this property is in the opinion of this writer, very real. The mineralization that is usually found associated with the porphyry type copper deposits is present as well as the necessary hydrothermal type alteration. Lowell, in his report on the Kalamzoo deposit, near San Manuel described conditions that are very similar to those existing here. He also states, "Ore mineralization is about equally distributed between coarse-grained Precambrian quartz monzonite and Laramide monzonite porphyry host rocks", thus substantiating the promise that if the older quartz monzonite has been intruded by younger monzonites then the older rocks can and do become mineralized to the extent that they are ore.

Since the Precambrian Oracle granitic type rocks show evidence of favorable alteration in the permit area, and the fact that a younger altered and mineralized intrusive in the shaft areas is present it must be assumed that conditions favorable to a porphyry-type copper deposit do exist. It is also very possible that a near surface deposit carrying gold values in commercial quantities is present. This however, must be determined by a more extensive drill program.



Sherman D. Gardner
Consulting Geologist