

#### **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 Mining Collection

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PRINTED: 11-25-2011

#### ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: BLUE STAR MINE

**ALTERNATE NAMES: BLUE ROCK** 

PINAL COUNTY MILS NUMBER: 609

LOCATION: TOWNSHIP 8 S RANGE 12 E SECTION 32 QUARTER SE LATITUDE: N 32DEG 41MIN 29SEC LONGITUDE: W 111DEG 07MIN 09SEC

TOPO MAP NAME: TORTOLITA MTS - 15 MIN

**CURRENT STATUS: DEVEL DEPOSIT** 

COMMODITY:

COPPER SULFIDE COPPER OXIDE GEMSTONE SILICATES GOLD LODE SILVER LODE

**BIBLIOGRAPHY**:

BARTER, CHARLES F., GEOLOGY OF THE OWL HEAD MINING DISTRICT PINAL CO., AZ. MS UOFA, 1962 ADMMR BLUE STAR MINE FILE

#### ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

#### **VERBAL INFORMATION SUMMARY**

1. Information from: James A. Griffith Address: 3210 N. El Burrito, Tucson AZ 85705

2. Phone: (602) 293-6888

3. Mine: Blue Rock Mine

4. ADMMR Mine File: Blue Star Mine

5. County: Pinal

6. MILS Number: 609

7. District: (mining) Old Hat (or mineral)

8. Township: 8S Range: 12E Sec(s): 32

9. USGS Topographic Map: Chief Butte (7½ min) Tortolita Mtns (15 min)

10. Location (descriptive): Approx. 1½ miles SW of Highway 89
13½ miles NW of Oracle Junction

11. Number of Claims: Patented Unpatented 6

12. Owner(s): (if different from above)

13. Address:

14. Operating Company: Blue Rock Mining Co.

15. Pertinent People and/or Firm:

James A. Griffith - John Watson

16. Commodities: Silica Flux Cu Au Ag

17. Operational Status: Start up

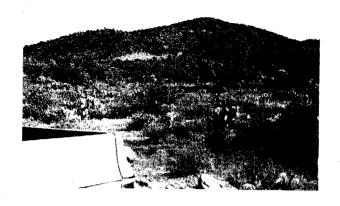
18. Summary of information received, comments, etc.:

Mr. Griffith reported that the 500 ton test lot will be mined and hauled to San Manuel by a contractor. If this test lot is acceptable Blue Rock Mining will acquire its own equipment and personnel to ship 50 TPD on a continuing basis.

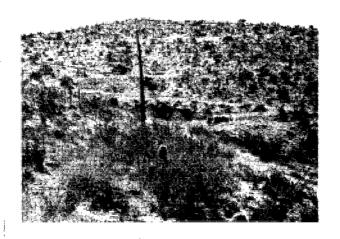
He provided a copy of his contract with Magma and start up sheet.

Date:	3/9/92	Richard R. Beard

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Looking South: Distant view of north end of Suizo Myns. Red line denotes mineralized fault zone. Black dot on zone is portal of tunnel developed on copper mineralization. Sear to left of red line is road out.



Looking South: Close-up showing workings on mineralized fault which constitutes the Blue Star mine at north end of Suize Mtns. Red line denotes the position of copper mineralization along quartz vein. Old equipment can be seen in foreground.





SREA MINE

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> TES , PIZE. Pinal County, ARIZona 050 chaims - Burkhardt; Bogkin,

The mine workings on the north side of the Suizo Mountains (R12E T8S Secs. 32-33) were examined. The shafts, tunnels and bulldozer cuts are developed along a prominant fault zone striking N10°E, dipping  $70^{\circ}$ W, which is mineralized with copper oxides and specularite. This mineralized fault projects beneath a gravel covered area to the north where Anamax is now conducting an I.P. survey on ground that they acquired from Banner. REL WR 8/21/73

BLUE STAR MINE PINAL COUNTY

Owned by Chas. Bearup - FTJ WR 4-18-69

Visited Chas. Bearup's Blue Star Mine. Equipment (drills, dozers, etc.), and trailer house parked but no one around. FTJ WR 7-25-69

Interviewed Chas. Bearup who is doing his assessment work on Blue Star Mine and other claims in Owl Head District. FTJ WR 4-18-49

En Star Man

# VIS18.21 ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

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11. Number of Claims: Patented

Unpatented 6

- 12. Owner(s): (if different from above)
- 13. Address:
- 14. Operating Company: Blue Rock Mining Co.
- 16. Commodities: Silica Flux Cu Au Ag
- 17. Operational Status: Start up
- 18. Summary of information received, comments, etc.:

Mr. Griffith reported that the 500 ton test lot will be mined and hauled to San Manuel by a contractor. If this test lot is acceptable Blue Rock Mining will acquire its own equipment and personnel to ship 50 TPD on a continuing basis.

He provided a copy of his contract with Magma and start up sheet.

Date:	3/9/92	Richard R. Beard
Date.	3/3/34	Kicharu K. bearu

AMC# , 6595 + 3/6596

BLUE ROCK MINE

316581

START UP COST SHEET AND MINING PLAN

The Blue Rock Mine is entering into a contract with Magma Copper Corp, (Contract enclosed), to furnish material to the Magma Copper Smelter in San Manuel Arizona. Assay reports done by Jacobs Assay office and testing of material by Magma indicate the ore is of a quallity needed by Magma and should be a long term profitable operation for the Blue Rock Mine. An initial five hundred ton test run is required by both parties to determine the overall Flux properties for Magma and the profitabillity for the Blue Rock Mine. The above assays and testing indicate a price of approx. \$69.70 per short ton. Magma has indicated a need for fifty tons per day on a continuing basis with an increase in tons per day with the abillity of Blue Rock Mine's production.

The initial cost cost of aquiring equipment and getting an overall operation into production is considerably more than the continuing cost of production. This must be taken into account when determining the overall profits of the operation. The proceeds from the initial five hundred tons purchased from Blue Rock by Magma will not cover the cost of putting this mine into operation, but will aid in the cost of the future operation.

The Blue Rock Mine will begin the mining operation at the juncture of the #1 and #2 claims, (see map), disturbing approx. 2.7 acres of surface. The area is typical desert with no known endagered species of flora or fauna. There is one saguaro cactus on this area and it will be transplanted in a safe place in the area. There are numerous old mine diggings from the past 50 years in the area and the overburden of approx. six to eight feet being removed from the current mining will be used to reclaim these areas.

The machinery to be used in the area will be a large earth moving dozer, front end loader, truck, compressor, drills and necessarry blasting agents.

The BLUE ROCK MINING CO. will strive to maintain an environmentally safe operation in compliance with E.P.A. and M.S.H.A. regulations. The area will be open to inspection by all Govt. and State agency representitives when requested.

#### BLUE ROCK MINE

Proposed starting date: March 15, 1992

#### COST FIGURES

<ol> <li>Lease 1450 dozer for one week for removal of overburden. Transport and permits for dozer</li> </ol>	\$2500.00 \$ 500.00
2. Purchase Pay-Loader Add cage and service	\$2500.00 950.00
<ol> <li>Compresser for drilling operation Service and repair</li> </ol>	\$1200.00 600.00
4. Track Loader, (optional) good for future. Renovate and repair track loader	\$4000.00 \$7000.00
5. Generater for electricity	\$1250.00
6. 10 ton dump truck Tires and service	\$2500.00 \$2800.00
7. Blasting agents include powder, primer and caps	\$ 875.00
8. Hauling by contract, first 500 tons	\$2140.00
9. 3 months labor costs for 2 laborers	\$7500.00
10.Labor costs for John Watson (3months)	\$9000.00
11. Labor costs for J. Griffith ( 3months)	\$9000.00
12. Labor costs for Job site runner and rep.	\$1200.00
13. Fuel and job site service of equip.	\$3200.00
14. Misc. tools, lumber etc.	\$ 750.00
15. Office trailer, tool shed etc.	\$1400.00
Approximate start up cost	\$60865.00

Continued operating cost per ton approx, based on 30 day operating costs and productions of 50 tons per day, \$25.00 per ton with sales of an average of \$65.00 per ton, with ANCL a gross profit of approx. \$40.00 per ton of ore delivered.

FOR OFFICE USE ONLY
START-UP NUMBER
STATE NUMBER
MSHA NUMBER

## NOTICE TO ARIZONA STATE MINE INSPECTOR

State Mine Inspector of our intent	to start <u>X</u> stop <u> </u>	(please check one)	a mining operation.
If this is a move, please show lest l If you have not operated a mine pr Training Division to assist with yo Cyanide for leaching, please check	reviously in Arizona, please our mine safety training, ple	check here: 1	f you want the Education & If this operation will use
COMPANY NAME:	BLUE ROCK MINING	CO.	
DIVISION:	BLUE ROCK MINE	ARIZONA	
MINE OR PLANT NAME:	BLUE ROCK	TELEPHONE: _	602-293-6888
CHIEF OFFICER:	ames A. Griffith		
COMPANY ADDRESS:3	210 N. El Burrito		
CITY:	STATE: _ARI	ZONA ZIP CO	DE: _85705
MINE OR PLANT LOCATIO locating property by vehicle	N: (Include county and	nearest town, as well mile North of	well as directions for highway
marker #104 on High	way 89 approx. 14	miles North of	f Oracle
This is a small tes			
TYPE OF OPERATION:OF	nen Pit PI	RINCIPAL PRODUC	T: Flux/copper
STARTING DATE: 04/01/9	2_ CLOSING DATE: .	Open DURA	TION: Test Run
PERSON COMPLETING NOT	TICE: J. A. Griff	ith TITLE:	Project Mngr.
DATE NOTICE MAILED TO	STATE MINE INSPEC	TOR: <u>0</u> 1/10/92	
FORM 101-106 REV. 10/85			



#### MAGMA METALS COMPANY

A Subsidiary of Magma Copper Company

Marketing & Sales

PURCHASE CC

FR SELP MADE S

Par Jen Fries

February 24, 1992

offices at 3210

MAGMA META

morphisms did not the USA, a Delaware Corporation, with its principal offices at 7400 N. Oracle Road, Suite 200, Tucson, AZ, USA 85704, ("Buyer") agrees to purchase that material as specified below, on the terms and conditions set forth below:

1. MATERIAL:

Silica ore which shall typically be of the following quality and specifications, (the "Material"):

SiO <sub>2</sub>	90%
Ag	0.175 oz/st
Au	0.019 oz/st
Cu	4.2%

Buyer reserves the right to reject any Material with a silica content of less than eighty (80) percent. Buyer further reserves the right to reject any Material which does not conform to the above analysis and specifications or contains deleterious elements or compounds which are unsuitable for smelting, provided that Buyer and Seller shall use good faith efforts to mitigate the effect of any rejection.

2. **QUANTITY**:

Approximately five hundred (500) short tons to be delivered commencing mid-February, 1992, through and inclusive of April, 1992.

3. <u>DELIVERY</u>:

F.O.B. end-dump truck at San Manuel, Arizona Smelter (the "Smelter"). Seller shall stockpile Material at the Smelter until the total contractual quantity of Material is delivered at which point title to the Material shall pass to Buyer.

4. <u>PRICE</u>:

Subject to the deductions and refining charges hereinafter described, Buyer shall pay for metals as follows:

(A) Copper - Buyer shall deduct twenty-five hundredths (.25) percent from the actual copper assay and pay Seller for eighty-five (85) percent of the balance ("Payable Copper") at the COMEX first position settlement price for copper, as quoted in Metals Week, averaged for the Quotational Period, less a refining charge of six (6) U.S. cents per pound of Payable Copper.

- (B) Silver Buyer shall deduct two tenths (.20) troy ounce per dry short ton of Material from the actual silver assay and pay Seller for seventy-six and one-half (76.5) percent of the balance ("Payable Silver") at the London Spot U.S. Equivalent settlement price for silver, as quoted in <u>Metals Week</u>, averaged for the Quotational Period, less a refining charge of forty (40) U.S. cents per troy ounce of Payable Silver.
- (C) Gold Buyer shall deduct one hundredths (.01) troy ounce per dry short ton of Material from the actual gold assay and pay Seller for seventy-six and one-half (76.5) percent of the balance ("Payable Gold") at the London Final settlement price for gold, as quoted in <u>Metals Week</u>, averaged for the Quotational Period, less a refining charge of six (6) U.S. dollars per troy ounce of Payable Gold.
- (D) Penalties If the silica content in any sample lot of Material is less than eighty-five (85) percent, Buyer shall deduct ten (10) percent from the total payment due Seller. No other payment shall be made for the silica content.
- (E) No accounting will be made for any metal or silica content except as specified above in this Paragraph 4.

#### 5. **QUOTATIONAL PERIOD**:

The "Quotational Period" for all accountable metals shall be the calendar month of arrival and acceptance of the total contractual quantity of Material at the Smelter.

#### 6. SUSPENSION OR CESSATION OF QUOTATIONS:

If one or more suspensions of quotations occur for any cause resulting in the absence of quotations for all accountable metals for more than three (3) days during the Quotational Period, then the beginning of said period (or the balance thereof if suspension begins during the period) shall be deferred a number of quotational days equal to the number of quotational days occurring during the entire time of suspension. When the normal number of quotations for the period specified in this Agreement has been thus obtained, such quotations shall be averaged for pricing. One or more suspensions of quotations aggregating three (3) days or less during a Quotational Period shall be disregarded and the remaining quotations shall be averaged for pricing.

If at any time either party deems any of the quotations of Paragraph 4, "Price", unrepresentative, it shall make evidence available to the other party that these prices are no longer reflective of the price at which principal North American and South American producers are delivering their principal production to major consumers.

In that event, Material delivered hereunder in accordance with Paragraph 4, "Price" shall be mutually agreed upon between Buyer and Seller, on the premise that material deliverable under this Agreement shall not be canceled as a result of any price dispute. If the parties fail to agree on the applicable price, then the issue shall be submitted to arbitration in accordance with Paragraph 12, "Arbitration", and arbitrators shall determine the price representative of market conditions as specified below to be applied to Material delivered hereunder.

#### 7. PAYMENT:

Seller shall issue a final invoice to Buyer for one hundred (100) percent of the value of the Material less the applicable deductions set forth in Paragraph 4, "Price", above and Buyer shall make payment on or before the fifteenth (15th) day of the calendar month following the calendar month of arrival and acceptance of the full contractual tonnage at the Smelter.

Said invoice shall be based on Buyer's weights as determined under Paragraph 8, "Weighing and Sampling", of this Agreement, on assays set forth in Paragraph 1, "Material", and on the prices for gold and silver as stated in Paragraph 4, "Price", less the applicable deductions and penalties set forth above in Paragraph 4, "Price".

All payments to Seller shall be made via check to Blue Rock Mining Company, 3210 North El Burrito, Tucson, Arizona 85705.

#### 8. WEIGHING AND SAMPLING:

(A) Weighing of Material shall be conducted by Buyer at the Smelter promptly upon delivery of the Material to the Smelter. Buyer shall sample Material after the lot is crushed and prepared for processing. This shall be done on a campaign basis once all Material is received. All weighing and sampling of Material shall be done in accordance with Buyer's standard weighing and sampling procedures. Seller, at its sole expense, shall have the right to be represented at weighing and sampling. Buyer's weighing and sampling shall be accepted by Seller as final.

Failure to be represented at such weighing and sampling shall be deemed to be a waiver of the right to object to such weighing and sampling. Seller shall provide in writing, prior to the arrival of Material at the Smelter, the identity of Seller's representative.

#### (1) Sample Lot Size

A sample lot shall be the entire quantity delivered under this Agreement. Each truck shall be weighed separately. A composite sample for the sample lot shall be prepared and a moisture content of three (3) percent shall be deducted.

#### 9. **ASSAYING**

Copper, silver, gold and silica assays of the sample lot of Material shall be made by Buyer from samples obtained pursuant to the provisions of Paragraph 8, "Weighing and Sampling," and shall be considered final.

#### 10.

FORCE MAJEURE: (A) In case either party shall be hindered or prevented from performing under this Agreement, or if such performance is rendered impossible, impracticable, or unlawful, by reason of any force majeure event such as fire, explosion, earthquake, storm, flood, drought, unavoidable accident, embargo, war or other hostilities, riot, insurrection, revolution, civil commotion, sabotage, Act of God or the enemies of the United States of America, strike, lockout or other labor disturbance (which a party is not required to settle if not in its best interest), shortage of or other interruption in transportation facilities, mechanical breakdown. (including shutdowns for maintenance inventorying), shortages or inability to obtain supplies, proper feed mix, fuel or power, governmental demand, action, regulation or requirement, or interference, prohibition or restriction by any competent government or any officer or agent thereof having jurisdiction in the premises, restraint by injunction or other legal process from which the party restrained cannot reasonably relieve itself by giving security or other procedures, any suspension or curtailment of activities to avoid an actual or alleged, present or prospective violation of federal, state or local statutes, rules, regulations or ordinances, or to achieve compliance with a requirement, statute, law, regulation, policy, instruction, request or order of Government, or the failure by the other party to perform any of its obligations under this Agreement, or any other cause whatsoever that is beyond a party's reasonable control, whether or not of the character hereinbefore specifically set forth. but expressly excluding financial or economic hardship, or the failure to pay money, then the party so hindered or prevented shall not be liable to the other for resulting failure to carry out its obligations hereunder. Any such obligation, so far as may be necessary, shall be suspended during the period of such hindrance or prevention and the affected quantities shall, at Buyer's option, be cancelled from this Agreement.

#### (B) Notice

In any event, as aforesaid, the party affected shall give to the others immediate notice (by telephone, telegram or facsimile confirmed by letter) of the cause of hindrance or prevention, the date of commencement thereof and its estimated duration and shall give a further notice in like manner after such cause shall cease to have effect.

#### (C) Mitigation

The party affected shall endeavor with due diligence to resume compliance with its said obligations at the earliest date and the parties will do all they reasonably can to overcome or mitigate the effects of any such event upon the regular operations of this Agreement. To the extent that Buyer declares force majeure hereunder, the quantities deliverable under this Agreement shall be ratably reduced. Notwithstanding any other provision herein or the declaration of force majeure, Buyer's obligation to purchase any quantities already priced and/or shipped shall remain absolute and shall survive a force majeure declaration by either party, and delivery of such affected quantities shall be deferred until notice has been given that the cause of force majeure has ceased to have effect and shall be delivered as soon as practical thereafter.

#### 11. NOTICES:

All notices required under this Agreement, if to Buyer, shall be addressed to:

Magma Metals Company 7400 North Oracle Road, Suite 200 Tucson, Arizona 85704 Facsimile No. (602) 575-5616

Attn: Controller, Marketing & Sales Division

And if to Seller, shall be addressed to:

Blue Rock Mining Company 3210 North El Burrito Tucson, Arizona 85705 Attn: Jim Griffith

Notices and communications shall be sent by facsimile, cable or telex and shall be acknowledged promptly by the Receiving party in the same manner and shall be effective at the time that this exchange is completed. Either party may change its address when necessary or convenient by notifying the other party of such change by facsimile, cable, telex or registered mail and such notice shall be acknowledged promptly in the same manner by the Receiving party. Receipt of such acknowledgment shall serve as an amendment to the respective aforementioned address in this clause.

### 12. ARBITRATION: (A) Disputes

Any alleged default, controversy, claim, counterclaim, defense, dispute, difference or misunderstanding arising out of or relating to the Agreement (a "Dispute") shall be settled by arbitration before a panel of three (3) arbitrators. The Participant seeking arbitration shall give the other Participant thirty (30) days' notice describing the Dispute(s) and the parties shall proceed to arbitrate the Dispute(s) as set forth below in this Section.

## (B) Selection

The party initiating arbitration on one hand, and the other party on the other hand, shall each select one arbitrator. If either the party initiating arbitration or the other party fails to select an arbitrator within thirty (30) days after receipt of notice from the other of its election to submit a matter to arbitration and naming its arbitrator, the party giving such notice shall have the right to appoint an arbitrator for the party in default. The two (2) arbitrators thus chosen shall, within thirty (30) days of selection of the latter of them, then select the third arbitrator.

#### (C) Qualification

All Arbitrators shall be knowledgeable in the field of commercial mineral transactions involving concentrates and other copper-bearing material, and otherwise qualified by training and experience to decide the issues presented to them. No person shall

be eligible for appointment as the third arbitrator who is not neutral and impartial as to the parties, meaning that the person shall not be a present or former director, officer, employee, shareholder or otherwise interested in either of the parties or in the matter or matters to be arbitrated. All arbitration hearings shall be held in Tucson, Arizona.

#### (D) Procedure

Except as otherwise provided herein, such proceedings will be governed by the then in effect rules of the American Arbitration Association (the "AAA"). A stenographic record of the hearing will be taken and the arbitrators shall base their decision upon the terms of the Agreement, applicable law and the testimony and briefs of the parties. The complaining party's brief setting forth its proposed findings of fact and conclusions shall be filed with the arbitrators within twenty (20) days after receipt of the stenographic record, and the other party's brief setting forth its proposed findings of fact and conclusions shall be so filed within fifteen (15) days after receipt by it of the complaining party's brief. In no event shall the arbitrators select a position not advanced by one of the parties, modify any term of this Agreement, or require a party to take an action not required under this Agreement. Judgment upon any award rendered by the arbitrators shall be final and binding subject to those grounds for appeal specified in the Arizona statutes relating to arbitration, and may be entered in any court having jurisdiction thereof.

#### (E) Cost

Each party shall pay for the services and expenses of the arbitrator appointed by it. All other costs incurred in connection with arbitration shall be paid in equal parts by the parties, unless the award shall specify a different division of the costs.

#### 13. <u>TAXES</u>:

All sales, use, privilege, transaction, excise or similar taxes, imposts, levies, charges and/or duties imposed and/or levied by or payable to a federal, state or local government, or any subdivision thereof pursuant to this Agreement or upon the material or products covered hereby or upon the purchase price payable thereunder shall be for the account of, and are assumed by and shall be paid by Seller.

#### 14. GOVERNING LAW:

The laws of the State of Arizona, without regard to conflicts of laws principles, and the Uniform Commercial Code shall apply to the interpretation of, validity, and enforcement of this Agreement. Subject to the provision on arbitration in Paragraph 12, "Arbitration" herein, any dispute concerning this Agreement shall be adjudicated in either the State courts or the United States District Court, in and for the State of Arizona.

#### 15. LIMITATION OF LIABILITY:

Buyer shall not be liable to Seller for any incidental, nominal, consequential, special, or indirect damages which Seller may sustain in any way related to or arising out of this Agreement.

#### 16. <u>SUCCESSION</u>:

Buyer shall have the right to assign this Agreement, in whole or in part, to any of its affiliates. Otherwise, this Agreement shall not be assignable by either party hereto without the written consent of the other, which consent shall not be unreasonably withheld. Subject to the foregoing, this Agreement shall bind and inure to the benefit of and be enforceable by the parties hereto, their legal representatives, successors and assigns, whether by merger, consolidation, sale of assets or otherwise.

#### 17. SEVERABILITY:

Should any clause or provision or any part thereof be found or adjudged to be invalid or unenforceable, such finding or adjudication shall have no effect upon the remaining clauses and provisions herein, which shall continue in full force and effect.

#### 18. ENTIRE AGREEMENT; WAIVER:

This Agreement constitutes the entire agreement between the parties as to the subject matter hereof and may not be changed except in writing by the parties hereto. No other or different terms and conditions, whether appearing on Buyer's purchase order forms or otherwise shall be applicable to any sale hereunder.

ACCEPTED.

Waiver by either party of any term, provision or condition of this Agreement shall not be construed to be a waiver of any other term, provision or condition, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, provision or condition.

ACCEPTED.	
BLUE ROCK MINING COMPANY	MAGMA METALS COMPANY
BY:	BY: Muhal Cary Michael G. Carpenter
	Controller, Marketing and Sales
DATE:	DATE: 2/24/92

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REFERENCE 3	FO ( AGENT - US AM F	ILE DATA			
EFERENCE 4	F4 <		VILVEN		
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				MIDA	TO CA
					301
RECORD NUMBER REPORT DATE	R 810 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	RECORD	IB-SITE FORM IDENTIFICATION	DEPOSIT NUMBER B40 < *FILE LINK IDENT, B50 < USAM-の	
REPORTER(SUPER	(last, first, middle initial)		( (last, first, mid	dle initial)	)
	ATION GS < ABOMT  ATT < HONEY POT		>"SITE NAME A 10 < BLU	LE STAR MINE	
SMYMONYA	All \ HINE!		OCA TION		
MINING DISTRICT	IVAREA ASO DURHAM - SUI		OCATION		
COUNTY	A60 PINAL PROV A63 (1.2.1)		> '	STATE <b>A50</b> <	COUNTRY A40 (U, S)
DRAINAGE AREA	A62<1.5.0.5.0.1.0.0	, b, Lower COLORADO	(.1.9.5.Q.)>	LAND STATUS A64 < 4.9. b	\(\.\.\.\.\\\\\\\\\\\\\\\\\\\\\\\\\
QUADRANGLE NO SECOND QUAD N	JAME A92		(,,,,)>	SECOND QUAD SCALE A91	· · · · · · · · · · · · · · · · · · ·
ELEVATION	A107 (			• OFONETIC	
NORTHING	A120(3, 6, 1, 6, 8, 9, 0,)	*ACCURACY  ACCURATE (ACC) (circle)		GEODETIC  LATITUDE A70 <	N
EASTING	A130 < 4, 8, 8, 8, 3, 0, > A110 < +, 1, 2>	ESTIMATED EST		*LONGITUDE A80 <	W
		·		/ I	
CADASTRAL *TOWNSHIP(S)		, i   M , , , , i   M , , , ,		.78< <u>.0.1 2 E. ; b. , </u>	, , , , , , , , , , , , , , , , , , ,
*SECTION(S) *SECTION FRACTI	A79 < 32 ION(S) A76 < NE OF SE	; ; , <del>V</del> ,	i:   M	17 (#)	
MERIDIAN(S)	ABI CILA AND SALT	RIVER		>	
*POSITION FROM	NEAREST PROMINENT LOCALITY A82	I TILL NAM OF EL	3259 MOUNTAIN, SU	LNIATHPOR OSI	
LOCATION COM	MENTS A83 ( N END SUIZ	SUINTHUOM O			
ESSENTIAL INF	FORMATION				

<sup>\*</sup> ESSENTIAL INFORMATION + ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

	COM	MMODITY INFORMATION
	C10 ( C,U, , )	أن ان ان الا الا الا الا
FORE MINERALS	COO CHRY SO COLLA MRITE MA	ALACHITE
COMMODITY SUBTYPES		
GEN. ANALYTICAL DATA	CSO COPPER COATED QUARTZ CRYSTA	
	CON CONTROL CARTE	ALS SOLD AS GEMSTONES
* SIGNIFICANCE	PRODUCER	I NOV PROPILEM
MAJOR PRODUCTS	MAJOR (C,U, b) , b) ,	NON -PRODUCER
MINOR PRODUCTS	MINOR ( , , , , , , , , , , , , , , , , , ,	MAIN COMMODITIES PRESENT C11
POTENTIAL PRODUCTS	POTEN	MINOR COMMODITES PRESENTE 12
OCCURRENCES	OCCUR	OCCURRENCES OCCUR
	PRODUCER	*PRODUCTION
PRODUCTION (YES) (circ		NON-PRODUCER
PRODUCTION VEST (CITE	PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION UND NO (circle one)
	<b>2</b> 12. 22	
*STATUS	EXPLOR/	RATION OR DEVELOPMENT
	PRODUCER	NON-PRODUCER
	STATUS AND ACTIVITY A20(4)	STATUS AND ACTIVITY A20 ()
		STATUS AND ACTIVITY AZO
DISCOVERER	L20 <	
YEAR OF DISCOVERY PRESENT/LAST OWNER	L10 \ NATURE OF DISCOVERY L30 \	
	A12	
EXPL./DEV.COMMENTS	1110 IP SHRYEY BY ANAMAY IN 11	1973. TWO CLAIMS IN AREA ARE HONEYPOT 1+2
		100 CLAINS IN AREA ARE HONEYPOT 1+2
	DESC	CRIPTION OF DEPOSIT
*		CRIPTION OF DEPOSIT
DEPOSIT TYPE(S) DEPOSIT FORM/SHAPE	C40< VEIN /SHEAR ZONE	
DEPTH TO TOP	/	MAXIMI IM LENGTH MAD
DEPTH TO BOTTOM	M30 > TINITS M31 <	UNITSM41
DEPOSIT SIZE	M15 SMALL M15 MEDIUM M15 LARGE (circle one	ne) MAXIMUM WIDTH M50 UNITS M61 (
TRIKE	M70 N 15 W	DIP M80 ( 7.0 W )
RECTION OF PLUNGE EP. DESC. COMMENTS	MINO VEIN FILLING IS DASK PIKE A	PLUNGE M90 (
T. DESC. CONTROL 13	WINCE THE TOTAL PIECE P	PHO RUARIZ
<b>`</b>	•	
		!
	DESCI	CRIPTION OF WORKINGS
AL LE CONTRACTO	M120 UNDERGROUND M130 BOTH M149 (circle one)	*OVERALL LENGTH M190< > *UNITS M191<
DEPTH BELOW SURFACE	M160 \ \ "Units M161 \	OVERALL WIDTH M200 (
LENGTH OF WORKINGS	M170 \ > *UNITS M171 \	OVERALL AREA M210 \ TUNITS M211 \
	M220 ( 25 FT SHAFT , 2 100 FT TH	unhels, PIB And Trenches of
VARIOUS SIZ		
	2.3	
	2.3.	
	2.3.	GEOLOGY .
		GEOLOGY .
*AGE OF HOST ROCK(S)	K1<(P.R.E.C., , , , , , , , , , , , , , , , , , ,	GEOLOGY
*HOST ROCK TYPE(S)	KIK PREW SCHUT	GEOLOGY
	KIK PREW SCHUT	GEOLOGY
*HOST ROCK TYPE(S) *AGE OF IGNEOUS ROCK(	KIK P.R.E.C	GEOLOGY
*HOST ROCK TYPE(S)  * AGE OF IGNEOUS ROCK(  *IGNEOUS ROCK TYPE(S)	KI<\(\frac{P.R.E.C.}{P.R.E.C.}\)  KIA<\(\frac{GNE(SS)}{SCHUT}\)  S)  K2A<\(\frac{K2A}{N}\)  K3<\(\frac{N}{N}\)  K2E\(\frac{N}{N}\)  K4<\(\frac{QUARTZ}{N}\)	GEOLOGY
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( *IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OF *ORE CONTROL/LOCUS	K1<\P.R.E.C.,	GEOLOGY
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( *IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OF *ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU	K1<\P,R.E.C	GEOLOGY
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( *IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION *PERT, MINERALS (NOT ON *ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING	KIKIPREC,  KIAK GNEISS, SCHIST  S) K2K  K2AK  K3K  K3K  K4K QUARTZ  K5K FAMLT ZONE N IS W, 70 W/  CT. N5K  N15K	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( *IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OF *ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU	KIKIPREC.  KIAK GNEISS, SCHIST  S) K2K  K2AK  K3K  K3K  K4K QUARTZ  K6K FAMLT ZONE M IS W, 70 W/  CT. NSK  N15K  N15K  DCT.N70K ZONE INTERLOED BY SKSIL DIKE	
*HOST ROCK TYPE(S) *AGE OF IGNEOUS ROCK( *IGNEOUS ROCK TYPE(S) *AGE OF MINERALIZATION *PERT. MINERALS (NOT ON *ORE CONTROL/LOCUS *MAJ. REG. TRENDS/STRU *TECTONIC SETTING *SIGNIFICANT LOCAL STR	KICPREC.  KIAC GNEISS, SCHUT  S) K2C.  K2AC.  K3C.  K3C.  K4C.  K5C.  K4C.  K5C.  K5	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OF * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE	K1 ( P.R.E. C. , , , , , , , , , , , , , , , , , ,	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OF * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION NAME	KIK PREC.  KIAK GNEISS, SCHUT  S) K2K  K2AK  K3K  K3K  K3K  K3K  K5K  K5K  K5K  K	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT ON * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION NAME SECOND FM AGE	KIK P.R.E.C.  KIAK GNEISS, SCHUT  S) K2A  K2A  K3A  K3A  K3A  K5 FALLT ZANE H IS W, ZOW/  CT. NSC  NISC  NISC  NISC  NISC  OT.N70  ZONE INTRUDED BY BASIC DIKE  CH.N80  N30A  N30A  N30A  N35	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT ON * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION NAME SECOND FM AGE SECOND FM NAME	KIK PREC.  KIAK GNEISS, SCHUT  S) K2K  K2AK  K3K  K3K  K3K  K3K  K5K  K5K  K5K  K	
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT ON * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION NAME SECOND FM AGE	KIK PREC.  KIAK GNEISS, SCHUT  S) K2  K2A  K3  K3  K3  K3  K5  FAULT ZONE M IS W, 70 W/  CT. NS  N15  ICT.N70  ZONE INTRUDED BY GASIC DIKE  CH.N80  CH.N80  N30  N30A  N356  N356  N356	: : : : : : : : : : : : : : : : : : :
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT ON * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC/ENR * FORMATION AGE * FORMATION NAME SECOND FM AGE SECOND FM NAME * IGNEOUS UNIT AGE	K1 ( P.R.E. C	: PRITIZED
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT NAME * SECOND IG. UNIT NAME * SECOND IG. UNIT NAME	K1 ( P.R.E. C. , , , , , , , , , , , , , , , , , ,	: : : : : : : : : : : : : : : : : : :
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION NAME * SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT AGE * IGNEOUS UNIT AGE * IGNEOUS UNIT AGE	KI ( P.R.E. C	: : : : : : : : : : : : : : : : : : :
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT NAME * SECOND IG. UNIT NAME * SECOND IG. UNIT NAME	K1 ( P.R.E. C. , , , , , , , , , , , , , , , , , ,	: : : : : : : : : : : : : : : : : : :
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT NAME * SECOND IG. UNIT NAME * SECOND IG. UNIT NAME	K1 ( P.R.E. C. )  K1A GNEISS SCHUT  S) K2A	S. S. L. L. Z. E. D
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME * SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT AGE * SECOND IG. UNIT NAME * GEOLOGY COMMENTS	KI ( P.R.E. C	: : : : : : : : : : : : : : : : : : :
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT NAME * SECOND IG. UNIT NAME * SECOND IG. UNIT NAME	KI ( P.R.E. C	S. S. L. L. Z. E. D
*HOST ROCK TYPE(S) * AGE OF IGNEOUS ROCK( * IGNEOUS ROCK TYPE(S) * AGE OF MINERALIZATION * PERT. MINERALS (NOT OO * ORE CONTROL/LOCUS * MAJ. REG. TRENDS/STRU * TECTONIC SETTING * SIGNIFICANT LOCAL STRI * SIGNIFICANT ALTERATION * PROCESS OF CONC./ENR * FORMATION AGE * FORMATION AME * SECOND FM NAME * IGNEOUS UNIT AGE * IGNEOUS UNIT AGE * SECOND IG. UNIT NAME * GEOLOGY COMMENTS	KI ( P.R.E. C	S. S. L. L. Z. E. D

## DEPARTMENT OF MINERAL RESOURCES STATE OF ARIZONA

PIELD ENGINEERS REPORT

Mine

BLUE STAR

Date

NOVEMBER 20, 1973

District

Owl Head - Pinal County

Engineer

R.E.LEHNER - Tucson office

Subject:

Mine Visit

Location: Secs. 32, 33, T8S R12E, 39 mi. north of Tucson; 16 mi. east of S.P. railroad. 2 miles of good dirt road west off of paved US Hwy 89.

Minerals: Copper - chrysocolla, some azurite and malachite

Ore blocked out: None

Probable Ore:

None

Type of Surrounding Terrain: The northern end of the Suizo Mtns. have a fairly steep relief of a little over 300 ft above the surrounding flat, but slightly dissected, desert alluvium (pediment?).

Geology and Mineralization: The northern end of the Suizo Mtns. consists of Precambrian schist and some gneiss which are cut by a fault striking  $N.15\,^{O}W$ ., dipping  $70^{O}$  W. fault zone is 1-1/2 to 2 ft. wide and has been intruded by a basic dike and quartz vein which carries copper mineralization. The Blue Star mine occurs on this structure and the workings consist of a 25' + shallow shaft (not accessible); 2-100' + tunnels. Portal is open on upper tunnel and probably accessible back to area of shaft. Also, pits and trenches of various sizes - surface exploration of veins (assessment work?). Workings all aligned along a mineralized structure N 15°W.

The copper mineralization consists of chrysocolla, azurite and some malachite which is usually confined to the fracture surfaces of the quartz vein. Specular hematite is There has apparently been very little, if any, shipments associated with the copper. of copper. It is reported (Thesis: C.F.Barter, 1962, Univ. Arizona), that most of the mining activity was for copper-coated quartz crystals that were sold as gemstones.

On August 21, 1973 Anamax was contracting Zong to survey the area north of the mine The I.P. lines were 1000' dipoles running E-W. and was survey of the Banner The southern property line is along the E-W section line property acquired by Anamax. 1/2 mile north of the mine. The geophysicist (Zong) told me in the field that the subsurface rocks beneath the gravel cover is complex with low resistivities and shows some response to the N.E. of the mine.

U of A Thesis: C. F. Barter, 1962 References:

C. D. Iles, 1967.

See following page for photographs.