

CONTACT INFORMATION

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: VERMICULITE

ALTERNATE NAMES:

SOLOMON

MARICOPA COUNTY MILS NUMBER: 9

LOCATION: TOWNSHIP 1 N RANGE 3 W SECTION 4 QTR. NE

LATITUDE: N 33DEG 27MIN 51SEC LONGITUDE: W 112DEG 33MIN 25SEC

TOPO MAP NAME: VALENCIA - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

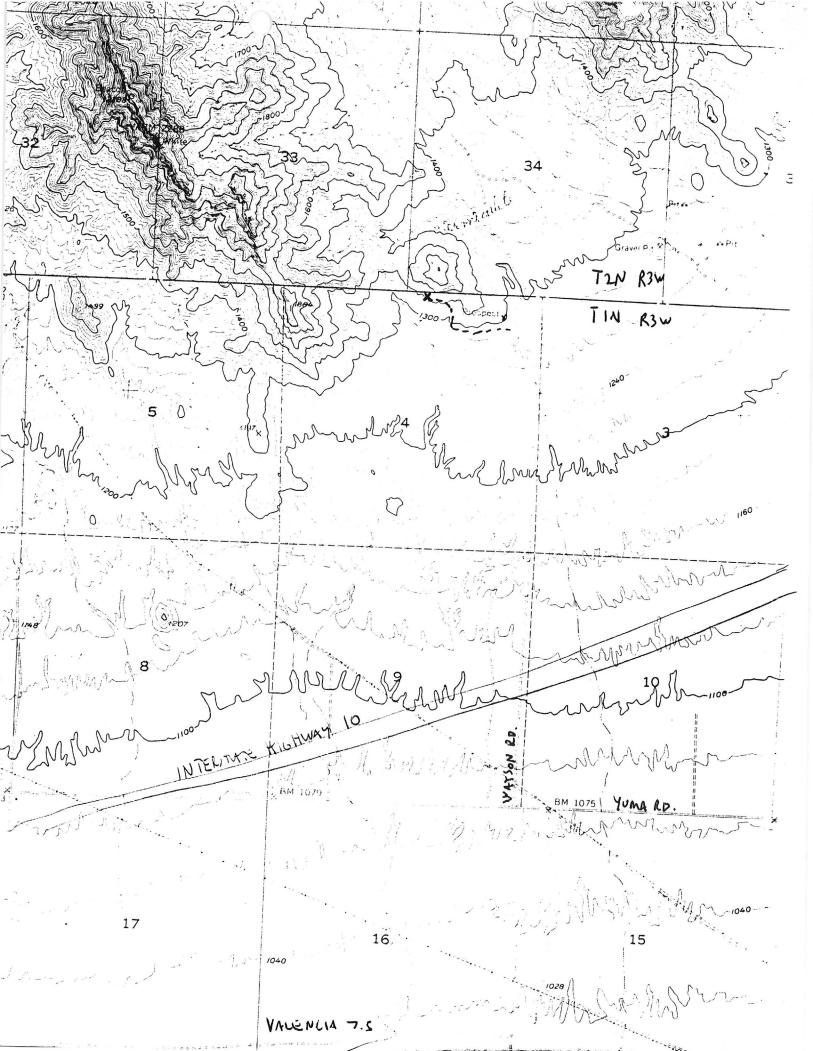
VERMICULITE - PRIMARY

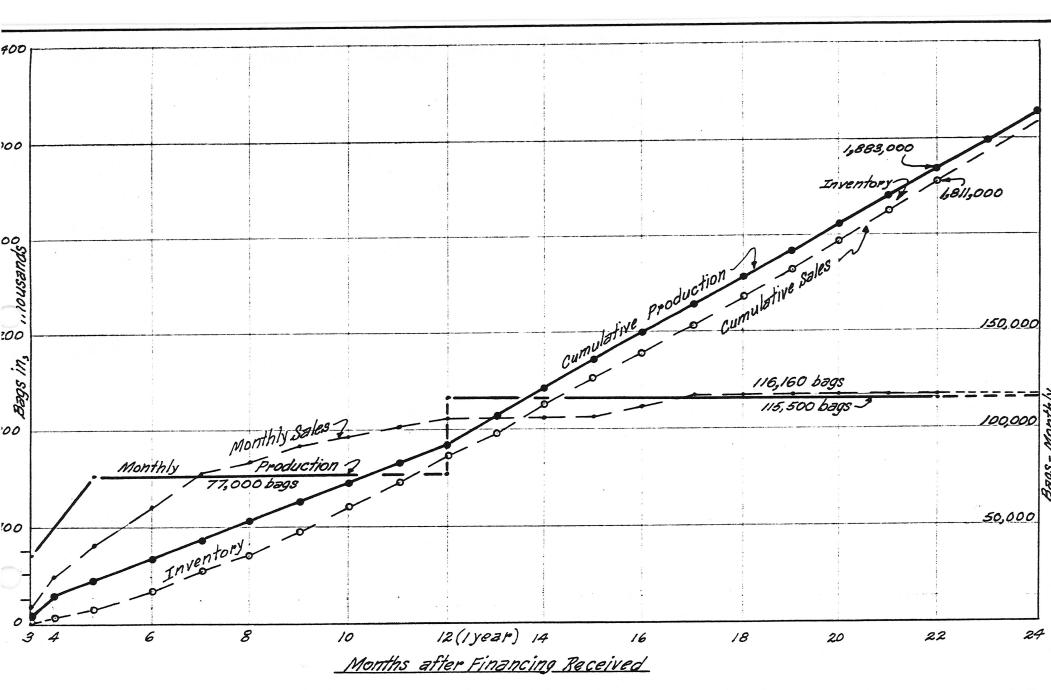
MICA - COPRODUCT

BIBLIOGRAPHY:

USGS VALENCIA QUAD

ADMMR VERMICULITE FILE





20 Month Cumulative-Monthly Production-Sales

After L. Frechette Dec., 1970 - R.E. Mieritz KAP WR 12/16/77: Discussed vermiculite with Bob Languth. He has some sort of an agreement with the owner of the Vermiculite Mine, Maricopa County (Harold Crevess?). He reported that some small samples have been expanded and the material tested Grade 2 and 3 and had an 8:1 expansion ratio. He further reported that United Nuclear had some interest in possible sources of vermiculite.

Mine Inspector's Office 6/2/78: Mr. Harold V. Cravasse, 5323 E. Mockingbird Lane, Paradise Valley, Az 85253, is the sole owner of the Triple Nickle Mining Company. Office is located near the Buckeye Mica Co. He mines and sells vermiculite to wholesalers. Mine is located 6 miles north of Buckeye at the edge of the White Tank Mtn. Address for Triple Nickel is P O Box 368, Buckeye, Az. 85326.

KAP WR 11/30/84: Traveled to a vermiculite occurrence at the southern end of the White Tanks Mountains in the NW_4^1 , NE_4^1 Sec 4, T1N R3W or possibly in the very southwest corner of Sec 34, T2N R3W. Samples were obtained for further identification and evaulation. A separate report has been prepared and a copy of a portion of the Valencia Arizona 7.5 topo map showing the location of the occurrence has been made for the Vermiculite Mine (f) Maricopa County. The occurrence is Maricopa MILS #9.

KAP WR 12/14/84: Samples of vermiculite from the Vermiculite Mine (f) Maricopa Co. were tested at Therm-o-Rock Perlite Popping Plant (f) for expansion characteristics. The material easily expanded under heat from a torch. A larger sample will be obtained to make a screen analysis and pilot expansion test.

NJN WR 1/11/85: With field engineer Ken Phillips to collect bulk samples of vermiculite at the Vermiculite Mine (f) Maricopa County. About 3000 lbs. were collected from a north-south trench dug across the mines 2 bences. Additional time was spent crushing, sorting, and screening the samples at the department.

KAP WR 1/11/85: Cut three bulk samples across the benches at the Vermiculite Mine (file) Maricopa County. Approximately 50 linear feet of trench ± 4 " deep and 12" wide yilded about 3000 pounds of bulk samples. Details of samples and subsequent tests are the subject of separate reports and comments. The samples were crushed and screened at the Department office.

KAP WR 1/18/85: Discussed the prepared vermicultie samples with Ron Dobkin at Therm-O-Rock. With changes in their processing system they may be able to use material from the Vermiculite Mine (file) Maricopa County.

njn wr 2/1/85: With Ken Phillips, went to the Chandler Perlite Popping Plant (f) where we exfoliated approximately 50 lbs. of the vermiculite sample from the Arizona Vermiculite Mine (f) Maricopa County. The sample was analyzed for size fractions and specific density, and compared to Therm-O-Rocks regular product. A table with the results has been placed in the mine file.

KAP WR 3/8/85: Started to test bulk density and screen size on a vermiculite bulk sample from the Vermiculite Mine (file) Maricopa County. The sample was split from a 1,000 lb test run through Therm-O-Rock's expanding facility. Evaluation of the sample was not completed because the expanded material appeared to have been processed at too high a temperature thus creating excessive fines. It is hoped a second 1,000 lb sample will be run by Therm-O-Rock.

KAP WR 3/21/86: Jim Kahil reported that Mr. John Hankins, 6261 E. Gelding, Scottsdale, Arizona 85260, phone 860-2029 took him to the Vermiculite Mine (file), Maricopa County in the south end of the White Tank Mountains. He felt the deposit contained an average of 35% vermiculite but was too small for his company's current interest. He did feel a small local operator "might" be able to produce for local needs. He reported that Hankins claims to have a lease from the owners of the claims.

Louis Frechette of Frechette Industries, Inc., 1625 W. Osborn Rd., Phoenix, have taken bond & lease on Solomon Vermiculite mine. Mrs. Dwight Solomon is to receive \$100/week and 10 cents per bag. They are building a plant at 59th, and Van Buren. Richard Mieritz is consulting engineer. According to Mr. Frechette, they have a good market and expect it to expand.

9-14-70 - FTJ - Weekly Report

Floyd Everett, USBM laison officer called to ask about a Mr. Frechette, who had phoned him and said he was producing $160\,\mathrm{t/day}$ of vermiculite from the Solomon property north of Buckeye. In processing the vermiculite he said about 20% was rejected. In the reject he had recently discovered Pt. Dick Mieritz who is retained by Frechette Industries as consultant, said that no mining or exploration of the deposit was presently being pursued and that Frechette was trying to raise capital for an operation. GW WR 12/19/70

Went to Solomon's vermiculite deposit about 5 miles north of Buckeye in Section 3, T1N R3W. Here a 30 ft. long side hill cut in soft black biotite shist reveals a small content of yellow mica which without a heat test would normally be identified as phlogopite. Perhaps a $\frac{1}{6}$ mile to the northwest of the cut is the former crushing and screening plant of Mr. Solomon, it has burned down to a pile of rubble. GW WR 11/21/72

Discussed vermiculite with Bob Languth. He has some sort of an agreement with the owner of the Vermiculite Mine, Maricopa County. (Harold Crevess?). He reported that some small samples have been expanded and the material tested Grade 2 and 3 and had an 8:1 expansion ratio. He further reported that United Nuclear had some interst in possible sources of vermiculite. WR/KP 12/16/77, 2/2/78 a.p.

Frand Cartwright, Phoenix, came in to inquire about vermiculite and perlite deposits. He particularly wanted to see the Solomon vermiculite deposit which I had visited several months ago. He was shown the material which had been taken from there which we tried to exfoliate with a match but it wouldn't. He was directed to Mr. Smith of the Buckeye Mica plant where an experimental furnace has been erected to treat the material from the Solomon deposit. Frank Cartwright called to say he had talked to Mr. Smith manager of Buckeye Mica Company, regarding the Solomon vermiculite deposit and exfoliating furnace and was not imprressed. GW WR 8/6/73



STATE OF ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

Mineral Building, Fairgrounds, Phoenix, Arizona 85007 • (602) 255-3791

MINE: Vermiculite Mine (file) DATE: 2/12/85

COUNTY: Maricopa

ENGINEER: Nyal J. Niemuth

SUBJECT: Land/Mineral Status

LOCATIO	•	MINERALS	SURFACE
T1N, R3W Sec. 04 T1N, R3W Sec. 04 T2N, R3W Sec. 34 T2N, R3W Sec. 34	$\frac{1}{2}$ $NW_{4}^{\frac{1}{4}}$ $W_{4}^{\frac{1}{4}}$ $SW_{4}^{\frac{1}{4}}$	Federal Federal Federal State	State State Federal State

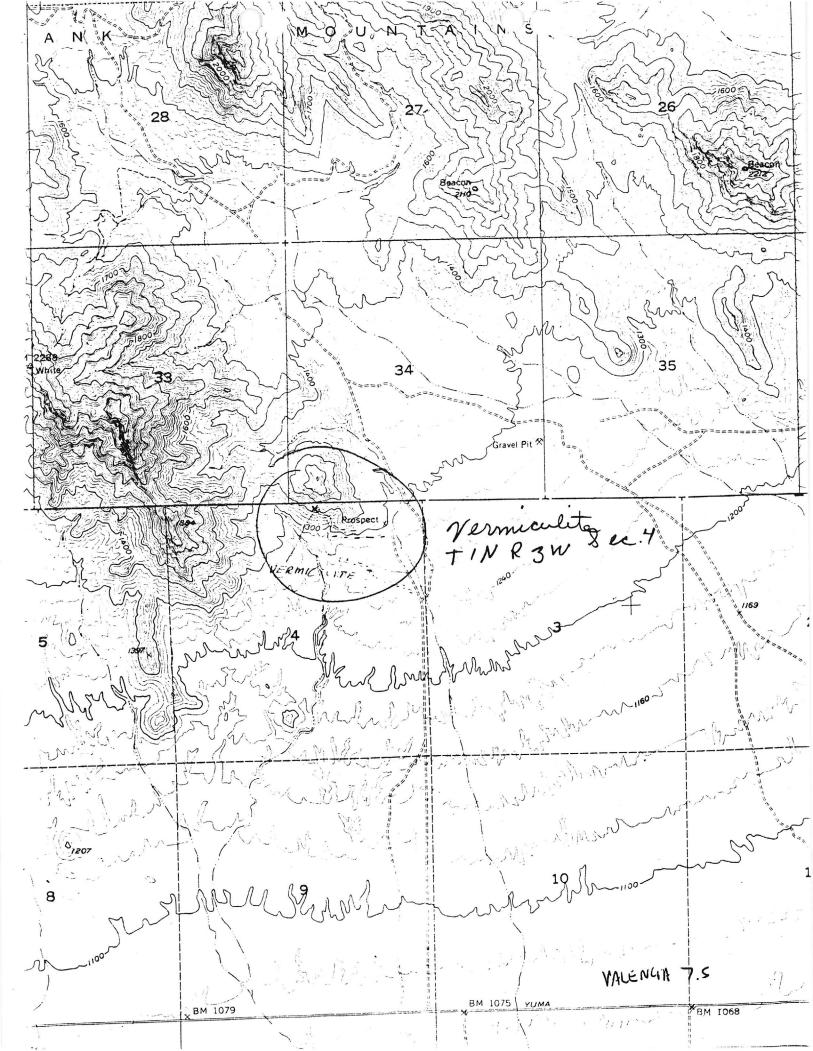
As shown on the attached map, David Youngblood, Rt. 2 Box 76 A5, Ashdown, AR 71822 owns 6 claims located in 1961 which cover the area of the vermiculite mine. Mr. Youngblood has filed his affidavit of labor for the 83-84 assessment for these claims which are as follows:

CLAIM NAME	AMC NUMBER
WW North	60459
Ocotillo	60458
Swag	60457
Taps	60456
V. #5	60455
#344	60454

	MINE OSPECT FIELD VI	ISIT DATA SU R
	Sheet 1 of 2	
	COMMODITIES Vermiculite	
	MILS ID No. Maricopa #9	
	ENGINEER Ken A. Phillips	
	INFORMATION FROM: Field Notes	
	PROPERTY SU	
•	. MINE NAME <u>Vermiculite</u> OTHER INCLUE	POSSIBLE NAMES <u>Solomon Triple Nickel</u> DING ANY CLAIM N AMES NOTED
	. LOCATION: T IN R 3W SEC(S) NW, I	NE Sec 4 MINE DISTRICT
	ELEV. 1400' COUNTY	TOPO QUAD. Valencia 7.5"
	DIRECTIONS From intersection of Yuma Road :	and Watson Road-north on Watson Road
	(continue under I-10) total of 1.7 miles, the	
	of hill.	MAP ATTACHED yes
	OWNERSHIP: NAME	PHONE
	ADDRESS:	
	COMPANY NAME IF ANY:	
	PERTINENT PEOPLE	
	PROPERTY AND HOLDINGS: PAST PRODUCTION - NOTED, KNOWN, PROBABLE, UNK	
•	. CURRENT STATUS: No activity	
•	. WORKINGS: <u>Open cut on hillside - 2 trenches</u>	10' high, 20 feet wide
	GEOLOGY AND MINERALOGY: DFPOSIT TYPE: Lent	icular pod
	LENGTH: 100 feet WIDTH: 50 feet	
	HOST ROCK: Precambrian gneiss	
	ECONOMIC MINERALS: Altered (weathered?)	
	lense which appears to have characteristics of	of vermiculite
	COMMENTS:	

Sheet 2 of 2

Χ.	SAMPLING: NOTE TYPE IF ANY, DRILLING? 2 samples taken. #1 soft loose black	
	(dark golden brown) vermiculite. #2, harder black biotite ? gneiss with some tiny	
	quartz and calcite stringers. Both to be evaluated as potential for vermiculite.	
Ι.	REFERENCES AND REMARKS ADMMR Vermiculite Mine file. Triple Nickel Mining Co. file	
	to be combined into the former	



Al. ONA DEPARTMENT OF MINERA RESOURCES Mineral Building, Fairgrounds Phoenix, Arizona

	Information from: Devight Solomon
1.	Information from: Alvight dolorson
	Address: 1338 W. Thomas Road, Phoenix
2.	Mine: Vermiculite 3. No. of Claims - Patented
	Unpatented
	Location: White Lank Mtb. N. of Buckeye
	Sec. # Tp / N Range 3 W 6. Mining District
7.	Owner: Dwight h. Solomon et al
8.	Address: above
9.	Operating Co.:
10.	Address:
11.	President:12. Gen. Mgr.:
13.	Principal Metals: Yermiculik 14. No. Employed: /
15.	Mill, Type & Capacity:
16.	Present Operations: (a) Down (b) Assessment work (c) Exploration (d) Production (e) Ratetpd.
17.	New Work Planned:
18.	Miscl. Notes: Yermiculite constitutes about 20 per cent of a highly
	altered rock. The broken rock is Leated to about 1450 - 1500 degrees Fah -
	runheit and the vermiculite fortion expands up to 30 times. The
	material is then fed to a 1/8 inch screen and the undersize has marly
	all of the remindate plus some granular fine. This undersize is tagged
	for use on oily flows in garages, etc. The porous vermiculite absorbs oil
	and the granular fines prevent one from slipping. Is far, 137 customer
	use up to 15000 the ker week and only 5 have not yet repeated.
	The remiculity can be cleaned by an separation, but there is very
	little local market for clean material.
р.	: 5/2/67 Zuns ASmit
Date	(Signature) (Field Engineer)

TRIPLE NICKEL MINING COMPANY

Owner: Harold V. Cravasse

5323 East Mockingbird Lane (home)

Paradise Valley, AZ 85253

P. O. Box 368

(business)

Buckeye, AZ 85326

- (a) sole ownership
- (b) sells to wholesalers
- (c) mines vermiculite
- (d) located near the Buckeye Mica Company
- (e) he says he has a plant but doesn't specify where

5/26/78 sef

- (a) mine is located six miles north of Buckeye; at the edge of the White Tanks Mountain
- (b) A mine inspector went in that area but couldn't locate the mine.
- (c) The inspector also went to the Buckeye Mica mill and found some sacks with "Triple Nickel" on them. He said the mill was not operating and didn't look like it had been for while; nobody was around.
- (d) Ann at the mine inspector's office said that Mr. Cravasse had told her that they were going to begin mining but hadn't started yet. She requested they send in notification papers as soon as they started.

 6/2/78 sef



STATE OF ARIZONA

DEPARTMENT OF MINES AND MINERAL RESOURCES

Mineral Building, Fairgrounds, Phoenix, Arizona 85007 • (602) 255-3791

MINE: Vermiculite

DATE: January 1985

COUNTY: Maricopa

ENGINEERS: Ken A. Phillips

Nyal J. Niemuth

ADMMR MINE FILE: Vermiculite Mine

SUBJECT: Vermiculite bulk samples from Vermiculite Mine, Maricopa Co.

Sample #1: Best sample, all material passed 1/2" screen with virtually no quartz or calcite contamination.

Sample #1 Trench: 16' x 1' x 4" - Represents a 25' x 75' area on the lower bench of pure vermiculite.

Sample #2: Good sample, all material in barrel passed 1/8" screen. Rejects included about 10% quartz and calcite.

Sample #2 Trench: 15' x 1' x 4" - Cut on slope between upper & lower benches, the trench cut mostly vermiculite plus 3 dikes of granite and calcite.

Sample #3: Two barrels, one contains only material which passed 1/8" screen. Other contains crushed material (crusher set at 1/4") which did not pass 1/8" screen.

Sample #3 Trench: 18' x 1' x 3" - Cut accross upper bench
representing about 50' of length (poor exposures make width
estimate difficult). The cut includes 1 large granite
dike and some surface caliche seams contaminating the
vermiculite.

SAMPLE #3 1 SAMPLE #2 1 SAMPLE #1

CROSS SECTION IN PLANE OF TRENCHES, VIEW EAST

ANALYSIS OF EXPANDED VERMICULITE SAMPLES

DATE: 1/29/85

BY: Nyal J. Niemuth & Ken A. Phillips

SAMPLES:

TVV = Thermorock's Virginia Vermiculite

AZV = Arizona Vermiculite

BULK DENSITY (1b/ft3) OF 6 LITER SAMPLES .

TVV

8.6

AZV

30.6

SIZE ANALYSIS (% VOLUME)

	Minus 1/4" Thru Plus 1/8"	Minus 1/8" Thru 20 Mesh	Minus 20 Mesh
TVV	10%	78%	12%
AZV	8%	58%	33%

BULK DENSITY (1b/ft3) BY SIZE

	Minus 1/4" Thru Plus 1/8"	Minus 1/8" Thru 20 Mesh	Minus 20 Mesh
TVV	7.4	7.4	8.9
AZV	24.7	26.6	32.8

ANALYSIS OF CLEANED AZV

A sample of AZV minus 1/8" thru plus 20 mesh was cleaned to remove unexpanded vermiculite and rock. Expanded vermiculite was 84% of this sample by volume and 31% by weight. The expanded and cleaned vermiculite's bulk density was 7.5 lb/ft³.

Footnote:

 $^{^{\}mathrm{I}}\mathrm{Bulk}$ density not determined according to ASTM standard method.



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8.6

AZV

30.6

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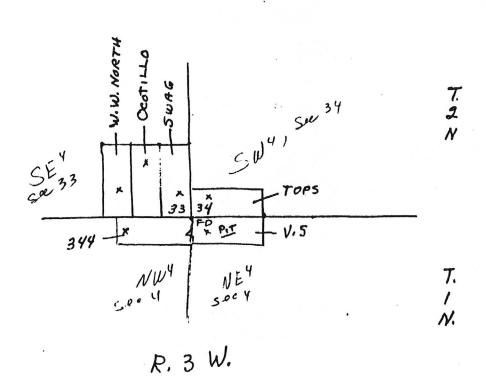
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Footnote:

 $^{^{\}mathrm{1}}\mathrm{Bulk}$ density not determined according to ASTM standard method.



AUG 1 5 1979 -11 00

STATE OF ARLEDNA)

I floreby sertify that the in instrument was filed and corded at request of

Hareld V. Crevasse

in Docket 13833 - 363 364 SCALE 1"= 2000'
MARICOPA CO. ARIZ.

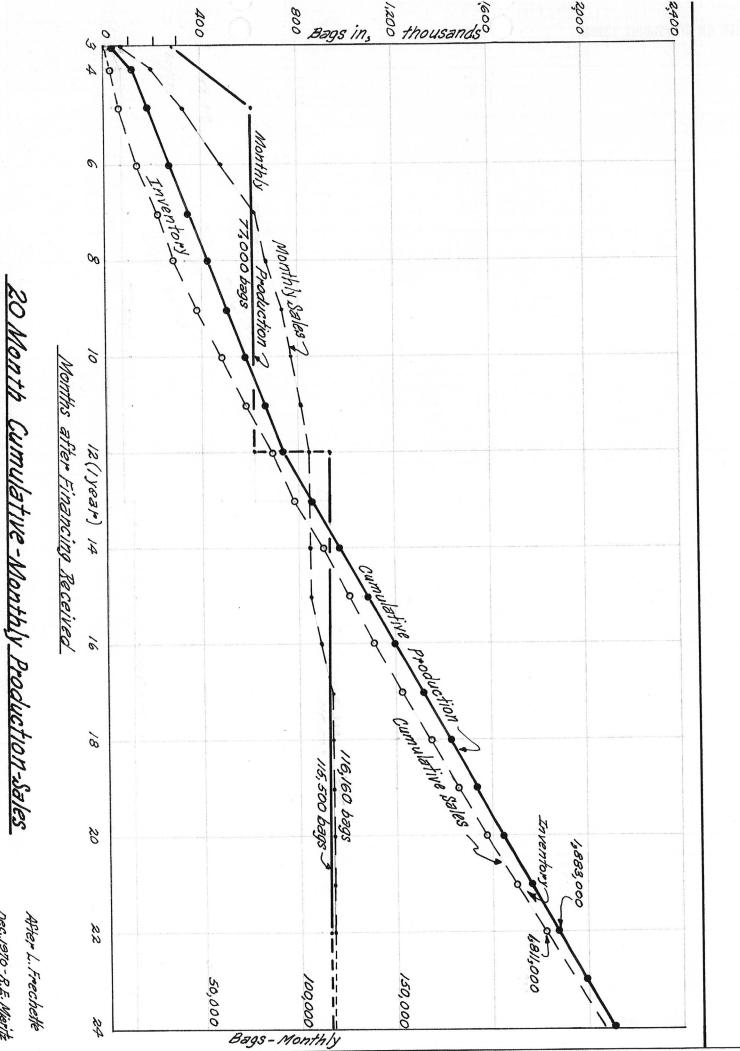
Sy County Recorder

Deputy Recorder

300

AUG 1 5 1979 -11 00

ICE 73



Dec. 1970 - R.E. Mieritz

SCHEDULE "A" - TIME AND EXPENDITURE TABLE - FRECHETTE INDUSTRIES INC., MINE DEVELOPMENT TO INITIAL PRODUCTION STAGE.

	FIRST		SEC	OND	THI	ZD	FOUR	TH H	FIFTH				
MONTH		2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th. 1	Oth.	Totals	Superris	Totals
TWO WEEK PERIODS	1st.)Fu.	- Turis	1								
(A) - Access Drill Road Const.	\$ 1.350		-)* \$ 1,350	+ \$ 510	= \$ 1,00
		7 2000	A 5 200	# 2 EEO	-) \$ 17,250	+ \$ 3,060	+ \$ 20,31
(B) - Core Drilling (Contr.)	\$ 3,300	\$ 5,200	\$ 5,200	\$ 3,550	-								A 1: 04
		-		\$ 2.960	\$ 1.344						\$ 4,304	+ \$ 510	= \$ 4,0
(C) - Mine Road Const. (Pre-Mine)				- 2.,,00	-						1 11 2 2 2		- + 46 9
(= 1, = 2)					\$ 7,350	\$ 8,700					\$ 16,050	+ \$ 765	= \$ 10,0
(D) - Mine 5000 Tens (Con't Haul)			1		-	-					4 44 700	. 4 4 205	- \$ 12 B
(-)	-			\$ 5,840	\$ 2,680		\$ 1,500	\$ 1,500			¥ 11,520.=	+ \$ 1,295	- 4 12,0
(E) - Plant Site Preparation				-			-	- '			A . 7 900	+ \$ 1,040	= \$ 8.8
(Pre-equipment)					-	\$ 3,000	\$ 3,000	\$ 1,800			\$ 7,000	+ 4 1,000.	- + 0,0
(F) - Equipment Installation and						-			200		\$117.896		= \$117.8
Erection (C)						\$ 32,000	\$ 32,000	\$ 16,056	\$ 37,840		\$117,070°-		- 422, 40
(G) - Equipment Purchase.				-				4 0 0 50	4 4 105		\$ 4.275.	+ \$ 1,000	= \$ 5.2
(H) - Plant Operation Trial								\$ 2,850	\$ 1.425		# 75-170-	2,0000	
Period											(Included	in Marketin	g Report)
(I) - Plant Full Production					-			 					
Period						-	2 400	\$ 3,600	\$ 3,600 \$	3,600	\$ 14,400	+ \$ 910	= \$ 15.3
(J) - Mine (stock pile 25,000+						-	\$ 3,000	\$ 5,000	7,000 4	-			
tons raw material)			<u> </u>	1	1 000	e 4 020	\$ 990	\$ 990	\$ 990		\$ 9,090		
(K) - Consulting Supervision &	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,940	9 770	7,70	-				
Expenses.	<u> </u>		-	-	1	A 1-1- 500	A 44 000	e 26 706	¢ 43 855 \$	3,600	\$203,935,-	\$ 9,090,-	\$203,9
Totals	\$ 5,670	\$ 6,220	\$ 6,220	\$ 13,370	\$ 12,394	\$ 44,720	\$ 41,090	\$ 20,750	\$ 43.855 \$,,,,,,	42-247330		
		1											
				1			1	1	1 1	1			
LABOR FORCE - Mining				• •	1 4	5	5	i	-				
Plant Construction	• • • •		• • • • •	4	4	,		4	5	** (Include	d in Market:	ing Report)	
Plant Operation (Tr	del)			- 4		6	6	1 6	6	1			
Totals				4)	1			1				

^{*} These two increments are considered as one phase, total expenditure being \$22,170.-.

Prepared by: Richard E. Misrits Mining Consultant Phoenix, Arisona

· URN No. 0183-Allidavil of Labor Performed and Improvements Made-Bower Stat. & Ott. Equip. Co., Phoenix, Arizona RT, 2 BOX 76A- B AS HOOWN AR, 718

FEE #15.00 PGS

M., Docket.

71822

Blotted

Photostat

1

SCHEDULE "A" - TIME AND EXPENDITURE TABLE - FRECHETTE INDUSTRIES INC., MINE DEVELOPMENT TO INITIAL PRODUCTION STAGE.

MONTH	FIR	ST	SEC	OND	THIRD		FOUR	H	FIFT	H	
TWO WEEK PERIODS	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	Totals Supervis Totals
(A) - Access Drill Road Const.	\$ 1,350										N*\$ 1,350+\$ 510=\$ 1.86
(B) - Core Drilling (Contr.)	\$ 3,300	\$ 5,200	\$ 5,200	\$ 3,550)*\$ 1,350 + \$ 510 = \$ 1,86) \$ 17,250 + \$ 3,060 + \$ 20,31
(C) - Mine Road Const. (Pre-Mine)				\$ 2,960	\$ 1.344						\$ 4,304+ \$ 510= \$ 4,81
(D) - Mine 5000 Tons (Con't Haul)					\$ 7,350	\$ 8,700					\$ 16,050 + \$ 765 = \$ 16,81
(E) - Plant Site Preparation (Pre-equipment)				\$ 5,840	\$ 2,680		\$ 1,500	\$ 1,500			\$ 11,520 + \$ 1,295 = \$ 12,81
(F) - Equipment Installation and Exection						\$ 3,000	\$ 3,000	\$ 1,800			\$ 7,800 + \$ 1,040 = \$ 8,84
(G) - Equipment Purchase.						\$ 32,000	\$ 32,000	\$ 16,056	\$ 37,840		\$117,896 = \$117,89
(H) - Plant Operation Trial Period					a 1			\$ 2,850	\$ 1,425		\$ 4,275 + \$ 1,000 = \$ 5,27
(I) - Plant Full Production Period									-	-	(Included in Marketing Report)
(J) - Mine (stock pile 25,000+ tons raw material)							\$ 3,600 -	\$ 3,600	\$ 3,600	\$ 3,600	\$ 14,400 + \$ 910 = \$ 15.35
	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,020	\$ 1,920	\$ 990	\$ 990	\$ 990 -		\$ 9,090
Totals	\$ 5,670	\$ 6,220	\$ 6,220	\$ 13,370	\$ 12,394	\$ 44,720	\$ 41,090	\$ 26,796	\$ 43,855	\$ 3,600	\$203,935 \$ 9,090 \$203,93
LABOR FORCE - Mining				4	1 4	1 5	1 5	1 1 4	1 5	1 **(Ir	ncluded in Marketing Report)
Totals	, ,			4	5	7	7	7	2	4	

^{*} These two increments are considered as one phase, total expenditure being \$22,170.-.

Prepared by: Richard E. Mierits Mining Consultant Phoenix, Arisona

URNTO; DAVID YOUNG BLOOD

RT. 2 BOX 76A-5 ASHDOWN AR, 71822

2