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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 03/05/2003

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: KINGMAN FELDSPAR MILL

ALTERNATE NAMES:
ARIZONA MINERALS
ARIZONA FELDSPAR
TAYLOR MILL

MOHAVE COUNTY MILS NUMBER: 587A

LOCATION: TOWNSHIP 21 N RANGE 16 W SECTION 18 QUARTER C
LATITUDE: N 35DEG 12MIN 08SEC LONGITUDE: W 114DEG 01MIN 19SEC
TOPO MAP NAME: KINGMAN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
MILL FELDSPAR
MILL SILICA
MILL TAILINGS

BIBLIOGRAPHY:
ADMMR KINGMAN FELDSPAR MILL FILE
BLACKMORE, T. "GEOL OF THE CHLORIDE QUAD"
P. 401; 1953 (ADMMR GEOLOGY FILE)
OLSON, J.C. "BERYL-BEARING PEGMATITES IN RUBY
MTNS & OTHER AREAS IN NV, NW AZ" USGS BULL
1082-D
"MINERAL & WATER RESOURCES OF AZ" AZBM BULL
180, P. 345, 415; 1969
TENNEY, J.B. "2ND RPT ON MIN. INDUST. OF AZ"
AZBM BULL 129, P. 94; 1930
MILL DISASSEMBLED IN LATE 1980'S

09/17/85

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: KINGMAN FELDSPAR MILL

ALTERNATE NAMES:
ARIZONA MINERALS
ARIZONA FELDSPAR
TAYLOR MILL

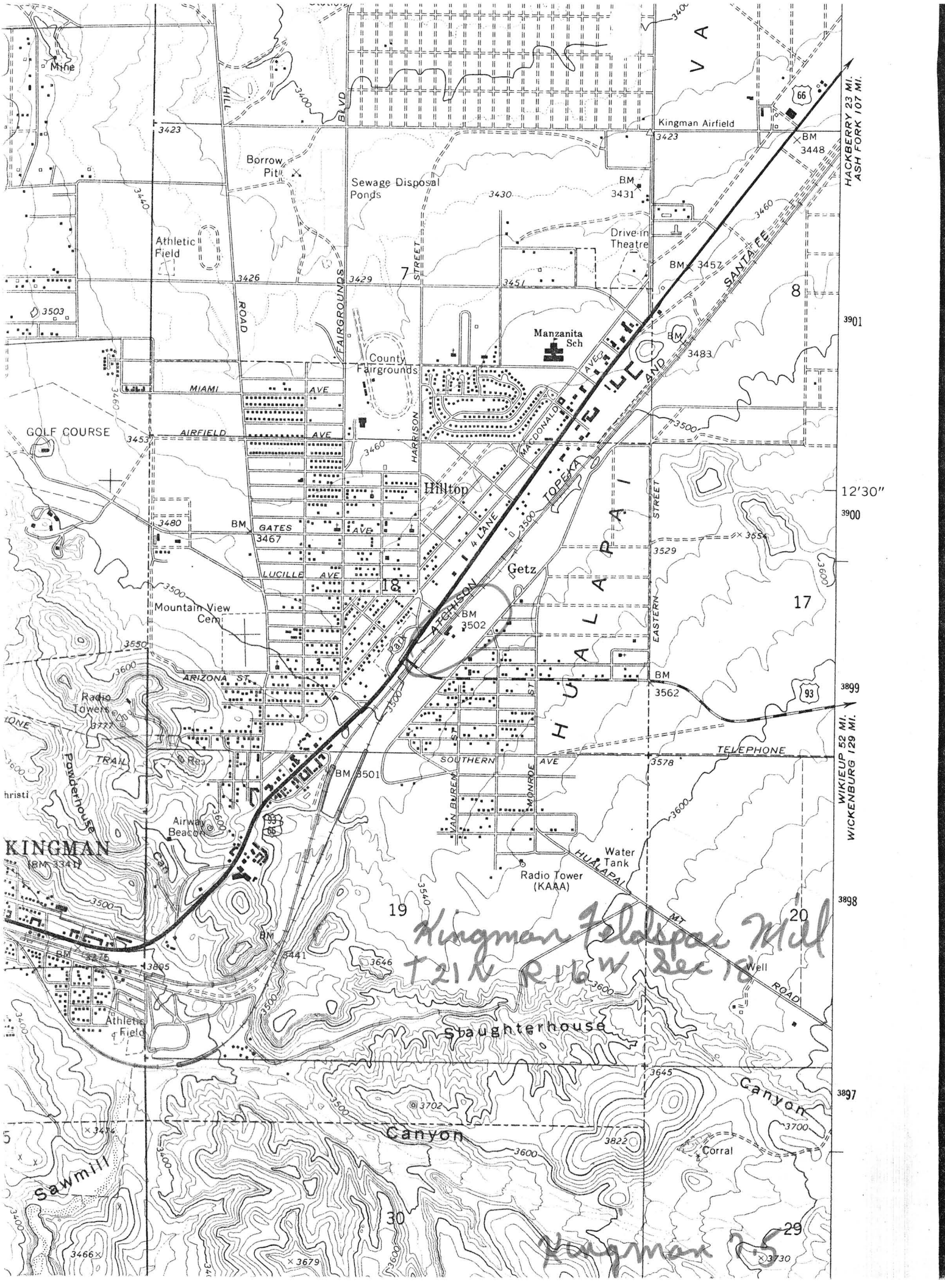
MOHAVE COUNTY MILS NUMBER: 587A

LOCATION: TOWNSHIP 21 N RANGE 16 W SECTION 18 QTR. C
LATITUDE:N 35DEG 11MIN 46SEC LONGITUDE:W 114DEG 04MIN 58SEC
TOPO MAP NAME: KINGMAN - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:
FELDSPAR-PRIMARY
SILICA-BYPRODUCT

BIBLIOGRAPHY:
MSHA YELLOW FORM 4000-6.5
ADMR KINGMAN FELDSPAR MILL FILE
GEO FILE, BLACKMORE, THOMAS, 'GEOLOGY OF THE CHLORIDE QUAD' 1953, P.401
USGS BULL. 1082-D
AZBM BULL 129, P. 94
AZBM BULL L80, P. 345, 415


Mine
Borrow Pit
Sewage Disposal Ponds
Athletic Field
Kingman Airfield
Drive-in Theatre
Manzanita Sch
County Fairgrounds
GOLF COURSE
Hilltop
Getz
Mountain View Cem
Radio Towers
Airway Beacon
KINGMAN
(BM 3441)
Water Tank
Radio Tower (KAAA)
Well
Slaughterhouse Canyon
Sawmill Canyon
Corral
HILL BLVD
FAIRGROUNDS ROAD
7TH STREET
HARRISON STREET
MACDONALD AVE
EASTERN ST
MIAMI AVE
AIRFIELD AVE
GATES AVE
LUCILLE AVE
ARIZONA ST
SOUTHERN AVE
TELEPHONE
POWERHOUSE TRAIL
HUALAPAI MT ROAD
ATCHISON TOPEKA AND SANTA FE
4 LANE
HUALAPAI
VAN BUREN ST
MONROE ST
HACKBERRY 23 MI.
ASH FORK 107 MI.
WIKIEUP 52 MI.
WICKENBURG 129 MI.
12'30"
Kingman Feldspar Mill
T21N R16W Sec 18
Kingman 25

DATE PRINTED: MAR 18, 1981

MINERALS AVAILABILITY SYSTEM
DEPOSIT LISTING

DEPOSIT NAME: ARIZONA MINERALS

SEQUENCE NUMBER: 0040150342

>>>> MILS - DATA SET <<<<
(MINERAL INDUSTRY LOCATION)

STATE: ARIZONA
COUNTY: MOHAVE
TYPE OF OPERATION: PROC PLANT
CURRENT STATUS: PRODUCER
LATITUDE: N 35DEG 13MIN 33SEC
LONGITUDE: W 114DEG 02MIN 45SEC
UTM - ZONE: 11
HEMISPHERE: NORTHERN
NORTHING: 3901875
EASTING: 768875
POINT OF REFERENCE: PLANT
PRECISION: 100 METERS
ELEVATION: 1055 METERS
PRECISION: 100 METERS

YEAR FIELD CHECKED:
QUADRANGLE: KINGMAN
RIVER BASIN NAME:
SACRAMENTO WASH
RIVER BASIN CODE: 59A
HYDROLOGIC UNIT CODE:
DATUM OF ELEVATION: SEA LEVEL
MAP NAME: KINGMAN
SCALE: 7.5 MIN
DOMAIN: PRIVATE
TYPE OF MINERAL HOLDINGS:

MINE MAP REPOSITORY:
TYPE OF EVALUATION: M
EVALUATOR:
YEAR OF INFORMATION ENTRY: 1979
MAINTAINING FIELD CENTER:
INTERMOUNTAIN
MINERAL PROPERTY FILE:
CORE LIBRARY:
MINES IDENTIFICATION:
GEOLOGICAL SURVEY CRIB:
LAST MILS MODIFICATION:
MAY 08, 1980
LAST DEPOSIT MODIFICATION:
MAY 08, 1980

--PUBLIC LAND SURVEY--

PRINCIPAL MERIDIAN:
GILA & SALT R
TOWNSHIP: 021 N
RANGE: 017 W
SECTION: 12
SECTION SUBDIVISION:
NE 1/4,
SURVEY STATUS: SURVEY

>>>> COMMODITY - DATA SET <<<<

RECORD NO.	COMMODITY	MODIFIER	MARKETABILITY	STANDARD INDUSTRIAL CODE	DATE OF LAST MODIFICATION
01	FELDSPAR		PRIMARY		MAY 08, 1980
02	~~SILICON~~ Silicon		PRIMARY		MAY 08, 1980

>>>> NAMES(ALTERNATE) - DATA SET <<<<

AZ.FELDSPAR

>>>> OWNERSHIP - DATA SET <<<<

RECORD NO.	NAME OF OWNER	STATUS	PERCENT OF OWNERSHIP	LOCATION OF HOME OFFICE	YEAR OF INFORM.	DATE OF LAST MODIFICATION
01	AZ MINERALS CORP	OWNER-OPERATOR	%	USA ARIZONA	1979	MAY 08, 1980

>>>> BIBLIOGRAPHY - DATA SET <<<<

	SET REFERENCE	LINE NO.		
		002	aOMMR - Kingman Feldspar Mill, file	
		003	~~ADMR AZ.FELDSPAR ACTIVE MINE FILE~~	???????
%			KEITH, S.B., AZ.B.M. BULL #180, P344	???????

M&Ra Yellow Form 4000-6.5

DEPOSIT NAME: TAYLOR MILL

SEQUENCE NUMBER: 0040150060

>>>> MILS - DATA SET <<<<
(MINERAL INDUSTRY LOCATION)

STATE: ARIZONA
COUNTY: MOHAVE
TYPE OF OPERATION: PROC PLANT
CURRENT STATUS: PRODUCER
LATITUDE: N 35DEG 11MIN 46SEC
LONGITUDE: W 114DEG 04MIN 58SEC
UTM - ZONE: 11
HEMISPHERE: NORTHERN
NORTHING: 3898492
EASTING: 765610
POINT OF REFERENCE: PLANT
PRECISION: 500 METERS
ELEVATION: 0991 METERS
PRECISION: 500 METERS

YEAR FIELD CHECKED: 1978
QUADRANGLE: KINGMAN
RIVER BASIN NAME:
BIG SANDY RIVER
RIVER BASIN CODE: 59C
HYDROLOGIC UNIT CODE:
DATUM OF ELEVATION:
MAP NAME: KINGMAN
SCALE: 7.5 MIN
DOMAIN: UNKNOWN
TYPE OF MINERAL HOLDINGS:

MINE MAP REPOSITORY:
TYPE OF EVALUATION: M
EVALUATOR: IFOC MILS
YEAR OF INFORMATION ENTRY:
MAINTAINING FIELD CENTER:
INTERMOUNTAIN
MINERAL PROPERTY FILE:
CORE LIBRARY:
MINES IDENTIFICATION: 0200969
GEOLOGICAL SURVEY CRIB:
LAST MILS MODIFICATION:
AUG 24, 1978
LAST DEPOSIT MODIFICATION:
JUN 19, 1980

--PUBLIC LAND SURVEY--

PRINCIPAL MERIDIAN:

TOWNSHIP: 021 N
RANGE: ~~017W~~ 16W
SECTION: ~~22~~ 18
SECTION SUBDIVISION:
C,
SURVEY STATUS:

>>>> COMMODITY - DATA SET <<<<

RECORD NO.	COMMODITY	MODIFIER	MARKETABILITY	STANDARD INDUSTRIAL CODE	DATE OF LAST MODIFICATION
01	FELDSPAR				AUG 24, 1978

SILICA

>>>> OWNERSHIP - DATA SET <<<<

RECORD NO.	NAME OF OWNER	STATUS	PERCENT OF OWNERSHIP	LOCATION OF HOME OFFICE	YEAR OF INFORM.	DATE OF LAST MODIFICATION
01	HEMPHILL BROTHERS INC 1978		%			JUN 19, 1980

%

REF

ADMR KINGMAN FELDSPAR MILL FILE

Date Printed: 06/09/95

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION SUMMARY

Information from: **Michael Boose**

Company:

Address: P.O. Box 495
City, State ZIP: Kingman, Arizona 86402
Phone:

MINE: **Kingman Feldspar Mill**

ADMMR Mine File: ADMMR KINGMAN FELDSPAR MILL FILE
County: **Mohave**
AzMILS Number: **587A**

SUMMARY

Michael Boose was in and reported he has control of the feldspar mill tailings at the site the dismantled Kingman Feldspar Mill. He explained that his contract is from Patti Lewis. He hopes to find a market for the tailings and would prefer not to invest any money in reprocessing the material. Uses of feldspar were explained and some of the history of the feldspar tailings was reviewed.

Ken A. Phillips, Chief Engineer Date: June 8, 1995

VIS6.38

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: **Tim Whitney**

   Company: **Murco Wall Products**

   Address: **Buckeye, AZ 85326**

2. Phone:

3. Mine: **Kingman Feldspar Mill**

4. ADMMR Mine File: **Kingman Feldspar Mill file**

5. County: **Mohave** MILS Number: **587A**

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

Tim Whitney screened a sample of feldspar tailings from the Kingman Feldspar Mill. The dry screen analysis is:

Mesh	%
-110	10%
-10 +40	5%
-40 +200	20%
-200 +325	20%
-325	45%

When screened wet it is 82% -200 mesh.

The 10,000-20,000 tons of tailings remaining from years of operation, contain some trash and brush which could possibly be screened out and a sized filler produced from the tailings. Chemical analysis is in progress.

Date: **June 1992** Engineer: **Ken A. Phillips**

VIS6.40

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: Tim Whitney and Norvell Fuller

   Company: Murco Wall Products & Pfizer Minerals

   Address: Murco (228 Arizona Eastern,
   Buckeye, AZ 85236)

2. Phone: (602) 386-5781

3. Mine: Kingman Feldspar Mill

4. ADMMR Mine File: Kingman Feldspar Mill

5. County: Mohave MILS Number: 587A

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

A sample of tailings from the old feldspar mill was collected by myself on February 2, 1992. The sample was submitted to Tim Whitney at Murco Wall Products for possible use as a filler in joint cement. He had it analyzed by Pfizer. The chemical and mineralogical analysis is attached.

Date: 8/10/92 Engineer: Ken A. Phillips

PARTIAL PAGE

Premi-Primas Product for Joint Compound
(req#1826;ALAB#16532)

cc: P. K. Kern
G. P. Tomaino

Per technical service request #3515-92-11, we received a two pound sample of an unknown product from Premi-Primas for elemental analysis as requested by Murco Wall Products.

Our analyses show the material to be mostly quartz (α-SiO_2). The minor phases present are feldspars of the Microcline type (potassium aluminum silicate) and the Albite/Anorthite type (sodium aluminum silicate/calcium aluminum silicate).

Quantitative elemental analysis confirms the high level of silicon, aluminum, potassium, and sodium associated with these type minerals. A summary table containing the results of that analysis is attached.

If you have any questions regarding these data please call.

R. Michael Kroc

attachment
file ref:16532.doc

ELEMENTAL ANALYSIS DATA SUMMARY

Sample ID		3515-92-11
%MgO	(XRF)	<0.2
%Na2O	(XRF)	1.42
%SrO	(XRF)	<0.01
%ZrO2	(XRF)	<0.05
%Fe2O3	(XRF)	0.17
%WC**	(XRF)	<0.05
%Mn2O3	(XRF)	<0.05
%TiO2	(XRF)	<0.01
%Cr2O3	(XRF)	<0.2
%CaO	(XRF)	0.17
%SiO2	(XRF)	81.8
%K2O	(XRF)	6.66
%P2O5	(XRF)	<0.05
%Al2O3	(XRF)	9.53
%LOI	(muffle)	0.35

** = *Tungsten carbide content is most likely from contamination during the milling process*

A16437.RES,16437AL.RES,16518NA.RES,A16532.WQ!

XRD and TGA/DTA Summary

A16532

A sample from Murco Wall Products designated 3515-92-11 was submitted for phase identification and thermal analyses. The sample was stated to be an additive to a final joint compound product and if possible to determine its relative composition.

XRD-crystalline phase identification estimates

alpha-SiO2	major
a Microcline type type phase	minor/major
an Albite/Anorthite type phase(s)	minor

NOTE: the microcline is a KAlSilicate, the Albite a NaAlSilicate, an the Anorthite a CaAlSilicate phases

Thermally, the sample only yields a total LOI from RT-1000 C of 0.35% as anticipated by the XRD phase identifications.

Further verification of the phase estimates is via the actual elemental analyses.

If you have any questions, please call me.

Gary P. Tomaino

		N Spar	K Spar
1.	Chemical Properties		
	SiO_2	75-80%	67-72%
	Al_2O_3	13-14.5%	16.5-18%
	Fe_2O_3	0.40% max.	0.30% max.
	CaO	0-1.0%	1.0-2.5%
	MgO	0.20% max.	0.8% max.
	Na_2O	6.50-8.0%	3-5.0%
	K_2O	0-0.50%	5.0-7.0%
2.	LOI	0.70% max.	0.70% max.
3.	Particle Size Control	97% minus 200 mesh (wet)	
4.	PCE	Cone 7-8	
5.	Fusion Cone Control	0.03"+ compared to Master Standard Material	

At the time of shipment, samples of the material to be delivered to the customer are pulled and accompany the shipment.

Corporate Office: North 9516 Division Street #B Spokane, WA 99218 Tel. (509) 467-5700
Calspar Division: 12402 Los Nietos Road Santa Fe Springs, CA 90670 Tel. (213) 946-1711
Kingman Division: Kingman, Arizona

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

Field Visit

1. **Information from:** Field visit by Ken Phillips and Nyal Niemuth
2. **Address:**
3. **Phone:**
4. **Mine or property name:**
5. **ADMMR Mine File:** Kingman Feldspar Mill
6. **County:** Mohave
7. **MILS Number:** 587A
8. **Operational Status:** Dismantled
9. **Summary of information received, comments, etc.:**

   Mill has been completely dismantled. Some scrape metal remains. Feldspar tailings remains as does low grade quartz stockpile from Pacific Silica's operation.

Date: April 4, 1989

Ken D. Phillips

KINGMAN FELDSPAR MILL MOHAVE COUNTY

KAP WR 1/16/87: Dan B. Robertson of Stealhead Resources explianed that they were finally getting the mill (Kingman Feldspar Mill - file), Mohave County together and plan to start mining feldspar at the Picacho View Mine, Yavapai County.

KAP WR 5/15/87: Sharon Boling, Florida Tile (card) reported her firm found the clay they were looking for in California near Sacramento and they will likely build their tile plant in that area. She asked about sources of kyanite and feldspar. Arizona kyanite occurrences are not developed. It was suggested she contact Steelhead Resources about the availability of feldspar from the Kingman Feldspar Mill (file) Mohave County. Information on kyanite occurrences was sent.

KAP WR 8/21/87: A visit was made to the Kingman Feldspar Mill (file) Mohave County. Little work appears to taken place since previous visits. The four ball/tube mills are still in place, but the crushing circuit has been removed. Some of the electrical systems appear to have been scavenged. It is doubtful the plant has been operated since it was acquired by Stealhead Resources. No "ore" is stockpiled on the property. About 25 tons of ground feldspar in paper bags is stacked on pallets in the shipping warehouse. Although there is supposed to be a watchman nearby, no one showed up during the 45 minutes I was at the plant.

KINGMAN FELDSPAR MILL MOHAVE COUNTY

NJN WR 1/4/85: Collected a few hundred pounds of rose quartz and feldspar from the Kingman Feldspar Mill (f) yard, Mohave County for the Mineral Museum teacher's kits. The mill's office and other buildings were all locked up. About 10 skids with wire baskets of quartzite and flint grinding balls remain.

NJN WR 2/1/85: John Torok, president of Torok Exploration, Mining and Construction, Reno, Nevada reported that Nevcan Exploration (c) has been negotiating to buy the Kingman Feldspar MIll (f) Mohave Count during the last couple months.

KAP WR 4/5/85: While researching information on magnesite and brucite occurrences it was determined the kaolinite mentioned in the KAP WR 10/23/81 note in the Kingman Feldspar Mill (file) Mohave County may in actuality be brucite from the White House Group (file) Mohave County.

KAP WR 8/22/86: Daniel B. Robertson, Vice President, Stealhead Resources, Ltd. N. 9516 Division Street #B, Spokane, Washington 99218, phone (509) 467-5700 reported his firm purchased Cal-Spar and as a result acquired the Kingman Feldspar Mill (file), Mohave County. They plan to clean it up, make necessary repairs and start grinding. They have made a deal with Sunrise Feldspar deposit in the White Picacho District, Yavapai County, to mine and haul feldspar to the Kingman Plant for grinding. Mr. Robertson was provided a number of marketing suggestions. Through the acquisition of Cal-Spar, Stealhead also owns the Cal-Spar grinding plant in Sante Fe Springs, Calfiornia and a California feldspar deposit.

RRB WR 2/27/87: Wallace McGregor, N. 9516 Division St., Suite B, Spokane, WA 99218, Geologist Consultant is looking for limestone properties east of Kingman. He said that he is working for the new owners (Steelhead Res) of the Kingman Feldspar Mill (file). I referred him to Rovert E. McKee and Genstar and sent him "Pertinent Data".

KINGMAN FELDSPAR MILL MOHAVE COUNTY

NJN WR 4/8/83: The Kingman Feldspar Mill, Mohave County, has been ~~sold~~ leased to Calspar, a company that mines and processes feldspar and silica. Calspar's address is 12402 Los Nietos Rd., Suite 107, Santa Fe Springs, CA 90570, phone (213) 944-6108. Bill Bryant is the company's general manager.

NJN WR 4/15/83: A brief visit was made to the Kingman Feldspar Mill. The mill was grinding silica from the White Spar Mine, Mohave County. It was reported that they would like to be grinding feldspar (as demand for it is good), but currently have no local source of supply.

KAP WR 1/13/84: An advertisement appeared in the January 4, 1984 edition of the Mining Record trying to sell the Kingman Feldspar Mill. The phone number given is for Industrial Mineral Products in Washington (206) 432-1286. A call was made for an equipment list and pertinent information that might help us provide information to a prospective buyer. A Mr. A. B. Berg was going to return the call. Nyal Niemuth took the return call.

NJN WR 1/20/84: Ron Roman with Industrial Mineral Products (IMP) (c) called returning my inquiry about IMP's advertisemnet to sell the Kingman Feldspar Mill, Mohave County. Mr. Roman explained that for the last year IMP had been leasing the Mill to Calspar (c) of Calfiornia which is owned by Harty Schweigard (c) of Colorado. When Calspar quit making payments, IMP took the mill back. The mill was closed mid-December by IMP. As IMP is concentrating their efforts on the Pacific Northwest a decision was made to sell the mill. The mill sits on a railroad siding leased for about $500.00/ month from the Sante Fe Railroad. It is IMP's intention to sell the mill as an operating plant at its present site. If that does not work out IMP may just sell it for parts. Interested parties should contact Mr. Roman at IMP for all the details.

KAP WR 7/13/84: Although rumor had it that the Kingman Feldspar Mill (f) had been shut down by the State Mine Inspector's Office, Mr. Ed Martin of that office said the shut down was only temporary and short lived. He explained that a dust exhaust system was repaired and the plant was restarted.

KINGMAN FELDSPAR MILL

ARIZONA FELDSPAR CORP. MOHAVE COUNTY

It appears that the recent ownership of the property is as follows: Juntenen and Eaton purchased the mill in 1973 from International Minerals. It became Arizona Feldspar Company. Mr. Wylie Hemphill of Pacific Silica bought Arizona Feldspar mine and mill in January of 1978. Chet Cheatwood, Arizona Minerals bought Arizona Feldspar and shortly after lost it to Mr. Hemphill. In 1981 Industrial Mineral Products bought the mine and mill. 8/25/81 KAP

KAP WR 10/23/81: A visit was made to Industrial Mineral Products Inc. (IMP) grinding mill at Kingman. Industrial Mineral products has purchased the feldspar mill from Hemphill Brothers. IMP reports they are operating numerous nonmetallic mineral processing plants in the West and Pacific Northwest. They plan to operate the Kingman mill to grind various nonmetallic commodities: The first to be a koalinite clay from Union Pass. A stockpile of crude lump feldspar & kaolinized tuff is held at the mill. The main office for IMP is Industrial Mineral Products, P.O. Box 95, Ravensdale, Washington 98051.

(See KAP WR 4/5/85 re kaolinite (brucite)

NJN WR 4/16/82: Glenda McLucas with Industrial Mineral Products of Washington called. IMP is the current owner of the feldspar mill in Kingman. (Arizona Feldspar Corporation, Mohave County). Ms. McLucas reported they want to produce some high quality silica and are looking for raw material.

In connection with this, she was interested in how to locate the owner of the C. F. Weeks quartz property (White Spar, Mohave County). They hope to get a lease or option on the property and produce some silica from it.

RRB WR 4/9/82: Glennda McLucas of Industrial Mineral Products, P.O. Box 95, Ravensdale, WA 98051, (206) 432-3910 called to find location of quartz mine near Wittman that had sold flux to a copper smelter in the past. Determined that she must be referring to the White Peak Silica Mine. She is looking for a pure quartz for their mill in Kingman as their current source is nearly exhausted. They will pay $15 to $20 per ton delivered in Kingman.

NJN WR 6/4/82: Visited Industrial Mineral Products Mill in Kingman, Mohave County. The mill has a local phone now. The number is 753-1725. The mill has been grinding some kaolinite and silica, but is currently doing maintenance work on the mill while a new lease is negotiated with the owner of the White Spar property, Mohave County.

KINGMAN FELDSPAR MILL

Stopped at the Arizona Feldspar Co., mill where Mr. Juntenen said the cross-cut had gone thru the quartz and is now in really hi-grade orthoclase (see the specimen). GW WR 5-1-74

Visited the Arizona Feldspar Co. mill where Stanley Juntenen said they continue to receive more orders for ground spar than they can fill due to slow underground mining. He said they had an order for 3 cars from a Phillipine concern and another from an emery wheel company in Niagra Falls, New York. GW WR 8/28/74

Stopped at the Arizona Feldspar Co. mill in Kingman where Stanley Juntunen says their business has picked up somewhat but that they still aren't at full capacity. GW WR 8/27/75

KAP WR 1/20/78: Wylie Hemphill has purchased the Arizona Feldspar mill and mine. They have shut down their quartz mine in Sec. 22, and are producing quartz from the feldspar mine in Sec. 26 both T22N R17W, Stockton Hill, 7½ minute USGS Quadrangle. Quartz is being hand sorted from years worth of feldspar mine dump material. The quartz from the Kingman area is a portion of 270,000 tons of silicon ore shipped ot the Columbia River area yearly by Hamphill Brothers.

KAP WR 7/18/80: John Fowler of Arizona Mica Co. reported that Arizona Minerals (The Feldspar mill at Kingman) which was operated by Chet Cheatwood has gone out of business.

CJH WR 7/18/80: Richard E. Mieritz, consultant will be evaluating the Arizona Mineral feldspar properties at Kingman and Yarnell for possible acquisition by Tanner Co.

CJH WR 8/14/81: Phone call: Ms. Glennda McLucas, Geologist, Industrial Mineral Products, P.O. Box 95, Ravensdale, Washington 98051. She reported that her company purchased the Taylor Quartz-Feldspar mine and mill at Kingman from Mr. Hemphill. They have run some quartz through the mill.

RRB WR 8/14/81: Glennda McLucas of Industrial Mineral Products, P.O. Box 95 Ravensdale, WA 98501 (206) 432-3910 called about the Taylor Mine (Arizona Fedspar Corp., International Minerals & Chemicals Corp.) They are considering the acquisition of this property. I sent her copies of pertinent reports in our files.

KINGMAN FELDSPAR MILL

INTERNATIONAL MINERAL AND CHEMICAL CORP. MOHAVE

Mr. Juntenen wasn't available at the feldspar plant of International Minerals & Chemical Company in Kingman. GW WR 2/7/73

Messrs. Juntenen and Eaton have purchased the feldspar mill at Kingman. Apparently International Minerals & Chemical Company are getting out of the feldspar grinding business as Eaton says they have also sold the mill at Custer, S. D., Perhaps they will continue as the sales agent; this wasn't made clear. GW WR 3/8/73

Visited with Stanley Juntenen at the feldspar mill where he said they were going ahead with the sinking of a 350 foot - 27° shaft which is estimated to intersect the feldspar deposit about 150 feet below the present pit bottom. When completed they intend to drive a long drift (1200-1400 feet) thru the deposit and put up a couple of raises to the surface. He said their business was flourshing and that Spruce Pine, Nprth Carolina had asked them to furnish some of their customers. They have a 50 ton shipment to get out for a Japanese firm and another for a Philadelphia company. GW WR 5-3-73

Visited with Messrs. Eaton and Junetnen at the Arizona Feldspar Corp. mill (was International Chemical & Minerals Co.) They have contracted the sinking of a -27° decline to Alanco, Tucson; they are now about 150 feet deep which is about half finished. They said they have more orders than they can fill and want to buy a used 2½ cu. yd. front-end loader. They would like to contract the mining after the decline is completed. GW WR 10/4/73

Stopped at the Arizona Feldspar Company mill and visited with Stan Juntunen who said they could sell twice as much -200 mesh spar as they were presently capable of producing. Their incline shaft is approximately half finished. Advance in it was stopped for about 10 days while installing track, skip and a hoist. Mr. Juntunen also said their supplies were increasing in price and were becoming more difficult to obtain. They pay $130/ton for quartzite blocks for mill linings shipped from Jasper, Minn. Their grinding media is 3" quartz pebbles imported from Belgium. An effort will be made to locate this type of material in Arizona that will be satisfactory for their use. GW WR 11/8/73

Visited the Arizona Feldspar plant where John Eaton said they were very busy and that the inclined shaft into their pegmatite had been stopped at 176 feet and a drift had advanced 45 feet into the deposit. GW WR 12/6/73

Mr. Anthony Lane of Knox Arizona called to find out how to contact the mine inspector. He said that they have acquired Arizona Feldspar near Kingman and are sinking a shaft and driving a drift. REL WR 1-24-74

Went to the Arizon a Feldspar Co. mill in Kingman where Stanley Juntennen said their cross-cut about 200 feet long was 30 feet into the pegmatite but that the material was quartz instead of feldspar as had been expected. They have Jerry Haynes mining on a small feldspar deposit north of the old pit which is supplying the bulk of the prod. GW WR 4-3-74

INTERNATIONAL MINERAL AND CHEMICAL CORP. MOHAVE COUNTY

KINGMAN FELDSPAR MILL

Mr. Juntunen was not available at I.M.C. feldspar plant in Kingman, but an inquiry as to the specs. for custom rock brought the reply from the analyst that Fe shouldn't exceed 0.09%, Al_2O_3 18%, SiO_2 65% and K_2O_3 12.5%. GW WR 12/1/71

The International Minerals and Chemical feldspar plant and quarry at Kingman maintained a steady production. However, since the decease of C. F. Weeks, they have discontinued grinding silica. GW QR 9/71

Saw Stan Junenen at International Minerals and Chemical Company feldspar plant. He says their orders are piling up. GW WR 2/3/72

The International Minerals and Chemical Company feldspar plant and quarry are operating at full capacity. GW QR 2/72

Mr. Juntenen at International Minerals and Chemicals Co. wasn't there. GW WR 4/5/72

Mr. Juntenen wasn't available at International Minerals and Chemical Company in Kingman, but the secretary said their business has increased. GW WR 5/3/72

Stopped at International Minerals and Chemical Company feldspar mill in Kingman where Mr. Juntunen said sales were just moderate now, about 50 T/day of 200 mesh. He made no changes in the active mine directory. GW WR 6/7/72

Also the International Minerals and Chemical Co. office was closed, however, the mill was in operation. GW WR 11/2/72

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* Actove Mine List - October 1972 Empl. 4

Mr. Juntenen of International Minerals and Chemical Company, Kingman, requested a search for deposits with a high potash feldspar content; that was the reason for this visit. After leaving the Gila Bend Mountains, the Buckeye Hills were visited to examine a number of quartz-feldspar pegmatites trending northeast through coarse grained granite. There are at least a dozen and perhaps more of these dikes several hundred feet in length but of varying widths up to about 20 feet. One, about 12 feet wide, was examined rather closely for K-spar content which was estimated at more than 60%. GW WR 1/18/73

INTERNATIONAL MINERAL AND CHEMICAL CORP.

KINGMAN FELDSPAR MILL

Active Mine List Oct. 1969 - John Eaton, Mgr. - 11 men

Visited IMC plant. Interviewed John Eaton who said operations will cease Dec. 15. He expects to be transferred to another plant in Ohio or Indiana. FTJ WR 11-7-69

International Minerals & Chemicals located several claims north of the Taylor feldspar mine. Stanley Juntunen, mgr., said they were cleaning up and did not know how long they would be operating. John Eaton transferred to IMC's Black Hills operation in South Dakota. FTJ WR 3-16-70

International Minerals and Chemical Corp. was milling stockpile material. FTJ QR 4-3-70

Interviewed Stanley Juntunen at IMC office - they were doing some exploration on claims adjoining Taylor mine. FTJ WR 5-8-70

Active Mine List May 1970 - 11 men - Stanley Juntunen, Mgr., Box 229, Kingman

Visited the IMC plant, manager on vacation, but left feldspar sample for evaluation. FTJ WR 7-11-70

International Minerals and Chemical Corp. continued to treat stockpile material and were exploring a pegmatite deposit north of the Taylor mine. FTJ QR 7-1-70

Visit at IMC plant - mine quartz near Prescott.

Active Mine List Oct. 1970 - 4 men - Stanley Juntunen, Mgr.

Visited International Minerals and Chemical plant. They are still milling stockpile material. FTJ WR 11-6-70

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* To International Minerals & Chemical plant. They are still operating on stockpile material and plant to mine quartz at their mine south of Prescott. FTJ WR 1-8-71

Visited International Minerals and Chemical Co. plant. They are mining feldspar but may have to go underground in the near future. FTJ WR 5-10-71

Stopped at International Minerals & Chemicals Co. feldspar plant in Kingman and met Mr. Juntunen, mgr. He was tied up with two U.S.B.M safety engineers. GW - WR 9/3/71

Dir. of Mining - August 1971 - 4 employees.

INTERNATIONAL MINERAL AND CHEMICAL CORP.

KINGMAN FELDSPAR MILL

Interview with John Eaton at International Minerals and Chemical Co. Plant. Rail siding to his plant for Prescott Quartz has not been completed thus holding up mining. FTJ WR 9-7-67

Interviewed John Eaton, International Minerals & Chemicals. The Santa Fe have not completed their spur to silica plant. FTJ WR 11-10-67

Interview with John Eaton at International Minerals and Chemical Co. Plant. Operations normal. FTJ WR 1-5-68

Visited the IMC plant. Eaton was away from office. FTJ WR 3-8-68

Active Mine List Nov. 1967 - 13 men
Active Mine List April 1968 - 13 men

Visit John Eaton at International Minerals and Chemicals Plant. Stockpiling quartz at their Prescott mine and are looking for a feldspar deposit. FTJ WR 5-10-68

Visited International Plant - Eaton was in Prescott where they are mining quartz. FTJ WR 7-12-68

Visit with John Eaton of IMC plant. They have shut down their Comet operation south of Prescott. Apparently grade of quartz not as expected. FTJ WR 9-6-68

Active Mine List Oct. 1968 - 13 men

To IMC plant, interview John Eaton. They are looking for feldspar and quartz property, as life of Taylor deposit may be less than 10 years. FTJ WR 11-8-68

Interview with John Eaton at International Minerals and Chemical Corp. office. Operations normal - may again try to mine quartz from the Comet Claim south of Prescott. FTJ WR 1-10-69

Visited with John Eaton at IMC plant. He said competition in quartz market is hurting. FTJ WR 3-7-69

Active Mine List April 1969 - 11 men - John Eaton, Mgr. P.O. Box 229, Kingman

Visited John Eaton at IMC plant. They have ceased mining operations and are milling their stockpile. He expected to close everything down in 6 months although not a certainty. He said higher freight rates and competitive operations caused loss in the operation. FTJ WR 7-11-69

Visited John Eaton at IMC plant. No shut down date as yet. FTJ WR 9-5-69

INTERNATIONAL MINERALS & CHEMICAL CORP.

KINGMAN FELDSPAR MILL

International Minerals & Chemcial Corp. are operating their mine and mill at their regular rate. Cy Weeks mines quartz for them at the quartz quarry. FTJ QR 7-8-66

Active Mine List Oct. 1966 - 15 men working

Visited IMC plant. Operations normal. FTJ WR 11-4-66

Visited International Minerals & Chemical Corp. plant. John Eaton, supt., said Cy Weeks has not been mining as roads to his quarry were impassable. A good stockpile at the plant will take care of requirements for 2 or 3 weeks. Jerry Haynes is mining feldspar. FTJ WR 1-7-67

International Minerals & Chemical Corp. operated at their regular rate. FTJ QR 4-5-67

Visited IMC plant. Interview with John Eaton. They are going to mine quartz from a deposit about 8 miles south of Prescott just off the old Senator Highway. Additions to the plant at Kingman are planned. FTJ WR 5-5-67

Interview with John Eaton at International Minerals & Chemical Plant. They are getting set up to mine quartz from Prescott (250 tpd) and ship to Kingman plant. They can mine and ship from there to Kingman cheaper than they buy from Cy Weeks. FTJ WR 7-7-67

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*

CONSOLIDATED FELDSPAR CO. *
KINGMAN FELDSPAR MILL

Visite to Mill and Quarry with "Red" Williams. *This is a division of International Mineral and Chemical Co.

The quarry is being mined by Jerry Haynes, 225 Chestnut St., Kingman, under contract. Haynes has 14 men working at present. The main production is from the middle of three quarries. Here the pegmatite has two bands. The one on the west being quartz and the one on the east is feldspar. Considerable hand sorting of the feldspar is done to eliminate areas where biotite appears adequate for a long time. The pegmatite zone is over ½ mile long and the development work indicates that the pay material is continuous. The pegmatite crosses granitic rocks which are foliated somewhat. This is, to the west, and higher up the ridge, capped by basaltic to dacitic flows, which form bold cliffs. The feldspar sometimes contains small clusters or books of biotite which is deletereous. The biotite increases in amount near the contact with the granitic rock (possibly a diorite).

The feldspar and some silica are hauled by Consolidated Feldspar Co. to the mill (6 miles) by 20-ton truck. Here the silica and feldspar are crushed to 100-125 mesh by use of a crusher and pebble mills (pebbles from Germany). The ground material is bagged by automatic sackers and shipped to California (Purex Co.) for glass manufacture. The selection of ground material is done in 14 ft. classifier cones. The silica is ground to 200-235 mesh. The Consolidated Company's silica is supplemented with additional quartz by the Cy Weeks Quarry, situated 1½ miles northwest of the Consolidated Feldspar Quarry. According to Weeks he has a contract for 10,000 tons.
LAS Memo 9-1962

This property active Oct. 1962 - 10 men working

Visited quarry and mill of the International Mineral & Chemical Corp. - John Eaton, supt.
EGW WR 11-9-62

Interviewed J. W. Allen, International Minerals & Chemical Co. Mill. The company is no longer called Consolidated Feldspar. EGW WR 7-17-63

Active Mine List Oct. 1963

Visit International Minerals & Chemical Corp. Quarry - 10 men working. EGW WR 3-13-64

Visited International Minerals & Chemical Corp. Quarry and Plant. Learned from Jerry Haynes at Quarry that he still has 2 men drifting at the summit. Visited Cy Weeks plant - no activity at the plant because road work had the trucks stopped.
EGW WR 7-14-64

Visited International Minerals & Chemical Corp. Quarry - learned from Jerry Haynes he still has 2 men drifting the Summit Mine. EGW WR 9-15-64

Jerry Haynes contract mining for feldspar, using 6 men. Plant employs 13 men and 2 women. Mr. Eaton, mgr., said Japanese white wares were giving them competition. Cy Weeks supplies about 1500 tons of quartz per month, using 10 men. FTJ WR 9-10-65

Information for files:

November 20, 1987

From: John H. Jett

Received a telephone call from Wally McGregor, President of Steelhead Resources. They are giving up their feldspar property near Wickenburg and plans for a plant. They have purchased Tenneco's zeolite business and another property near San Bernardino which is closer to their plant in Santa Fe Springs. However, their ultimate goal is to eventually move their plant to the desert near Wickenburg in about 1½ years or so.

KINGMAN FELDSPAR MILL #1

saber
communications
international

business news

DECEMBER 17, 1986
FOR IMMEDIATE RELEASE

CONTACT: WALLACE MCGREGOR
(509) 467-5700

CLIENT: STEELHEAD RESOURCES, LTD.

BOB BATES
(714) 955-2552

STEELHEAD RESOURCES NAMES RUPERT SPIVEY, VICE PRESIDENT FOR MINING

SPOKANE-Rupert B. Spivey, veteran mining engineer, has been named vice president for mining, by Steelhead Resources, Ltd., Spokane, Washington, and Vancouver, B.C., Canada.

Spivey is a consultant to the mining industry, and was formerly general superintendent of Kennecott's Chino, New Mexico, mining operations, and manager of mining for Exxon Corporation. Wallace McGregor, president, Steelhead Resources announced the appointment today.

Spivey will be responsible primarily for all mining operations, and new plant design and construction, for Steelhead Resources. Steelhead Resources is in a major expansion phase of their feldspar mining operations in the Ord Mountains, near Barstow, California, and in the White Picacho District, near Wickenburg, Arizona.

Spivey graduated from the New Mexico School of Mines, in 1954, with a BS degree in mining engineering. He resides in Albuquerque, New Mexico.

(more)

2081 BUSINESS CENTER DR., SUITE 180 • IRVINE, CA 92715 (714) 955-2552

In conjunction with its California and Arizona mining activities, Steelhead Resources operates a feldspar processing plant at Santa Fe Springs, near Los Angeles, and plans to open a processing plant at Kingman, Arizona. The company produces potassium and sodium feldspars which are marketed to manufacturers of ceramic glazes, dishes, pottery, sanitary fixtures, and abrasives. Steelhead Resources, Ltd., is a Canadian publicly held company that is traded on the Vancouver Stock Exchange.

Steelhead Resources' U.S. executive office is located at N. 9516 Division Street, Suite B, Spokane, Washington 99218, telephone (509) 467-5700. Their Canadian office is located at 330-885 Dunsmuir Street, Vancouver, British Columbia, Canada V7C 1N5, telephone (604) 669-3404

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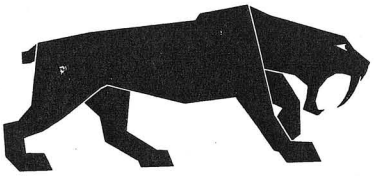


SABER COMMUNICATIONS INTERNATIONAL
2081 Business Center Dr., Suite 180, Irvine, CA 92715, U.S.A.
Worldwide Marketing/Sales Communications

Robert G. Bates, President
(714) 955-2552 Telex—277780-EXEC

MINE AND PROSPECT FIELD VISIT DATA SUMMARY

Sheet 1 of 2

COMMODITIES NA

MILS ID No. 587A Date 10-2-86

ENGINEER Nyal J. Niemuth

INFORMATION FROM: Daniel Rodriguez of Kingman

PROPERTY SUMMARY

I. MINE NAME Kingman Feldspar Mill (f) OTHER POSSIBLE NAMES INCLUDING ANY CLAIM NAMES NOTED

II. LOCATION: T 21N R 16W SEC(S) 18 C MINE DISTRICT

ELEV. COUNTY Mohave TOPO QUAD.

DIRECTIONS

MAP ATTACHED

III. OWNERSHIP: NAME Stealhead Resources Ltd. PHONE 509-467-5700

ADDRESS: 9516 N. Division St #B, Spokane, WA 99218

COMPANY NAME IF ANY:

PERTINENT PEOPLE Daniel Robertson - Vice President

IV. PROPERTY AND HOLDINGS:

V. PAST PRODUCTION - NOTED, KNOWN, PROBABLE, UNKNOWN, NONE Noted

IV. CURRENT STATUS: Stealhead is cleaning up yard and repairing roof of mill building. The

IIV. XXXXXXXXX electrical system will then be redone to satisfy safety requirements. Plans are to have this done by January 87. First material processed is to be trucked in from White Picacho Dist.

IIV. GEOLOGY AND MINERALOGY: DEPOSIT TYPE: NA

LENGTH: WIDTH: VEIN STRIKE

HOST ROCK:

ECONOMIC MINERALS:

COMMENTS:

IX. EQUIPMENT ON SIGHT: Industrial mineral grinding mill

CONSOLIDATED FELDSPAR COMPANY
a Department of
INTERNATIONAL MINERALS AND CHEMICAL CORP.

July 21, 1961 - Interviewed Jerry Haynes, Proprietor, Mohave Motors. He conducts a personal mining contracting business . He is contracting the mining and delivery of feldspar and quartz for International Minerals and Chemicals from their quarries to their Kingman Plant.

TRAVIS P. LANE - Weekly Report - 7-22-61

Active 10-1961

2-1962-V-card-TPL - Donald H. Freas, Geologist, Mining and Exploration Dept., Technical Division - International Minerals & Chemical Corp. Old Orchard Road, Skokie, Illinois.

Jan. 19, 1962 - Interviewed Jerry Haines at Kingman. He is contract mining feldspar for the Consolidated Feldspar plant at Kingman. He advised that Si Weeks will start soon supplying silica to this plant.

TRAVIS P. LANE - Weekly Report - 1-20-62

CONSOLIDATED FELDSPAR.

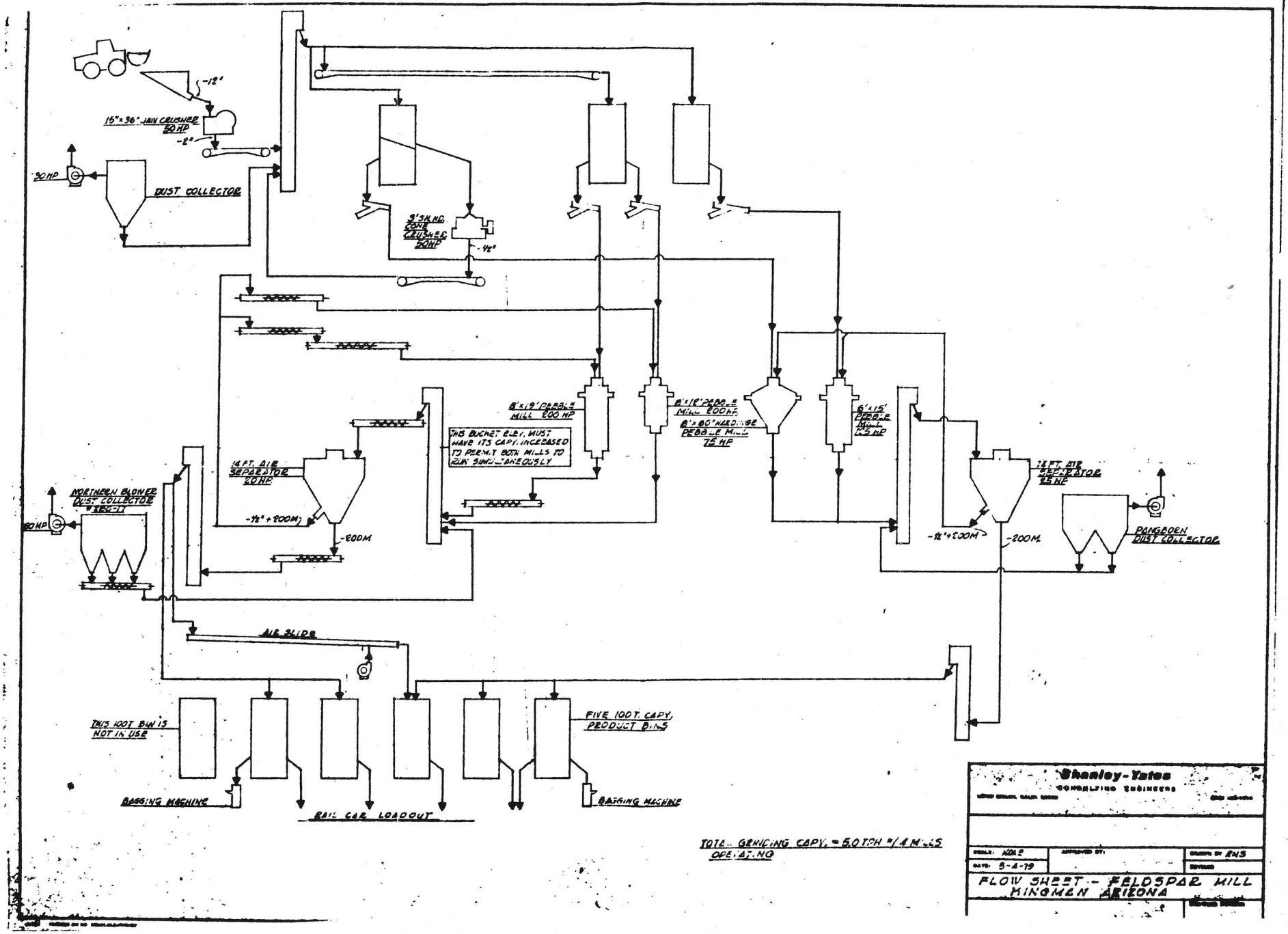
MINE **Claims: Grand Silica 1 & 2, Silica Extension are in secs. 25 and 26 T. 22N., R. 17 W.**

Mill: Approx Section 18, T. 21 N., R. 16 W.

6-27-62

*

INDUSTRIAL MINERAL PRODUCTS, INC.
P.O. BOX 95, RAVENSDALE, WASHINGTON 98051
R. J. (RON) ROMAN
VICE PRESIDENT / PROJECT DEVELOPMENT
(206) 432-1286 - OFFICE
HOME - (206) 235-0158



10-10-84

INDUSTRIAL MINERAL PRODUCTS, INC.
LIST OF EQUIPMENT - BUILDINGS - PARTS
LOCATION - KINGMAN, ARIZONA

DESCRIPTION	S/N	COMMENTS
Universal Jaw Crusher, 15"x36", 50 HP, Cast Iron Frame		
Symons Short Head Cone Crusher, 3', 50 HP, New Body Liner	3236SH	Needs work
Kohler Pebble Mill, 8'x12', Spout Feed, 200 HP Slip Ring Motor, Complete Grid & Controls		
Kohler Pebble Mill, 8'x19', Spout Feed, 200 HP Spur, Gear Motor, Complete Grid & Controls		New motor and starter. Needs new bull gear.
Hardinge Pebble Mill, 8'x60", Spur Gear - 25% 75 HP Slip Ring Motor, Complete Grid & Controls, New Spur Gear & Pinion(not installed)		Motor replaced w/standard induction motor and low voltage starter
German Pebble Mill, Spout Feed, Riveted Shell 125 HP Slip Ring Motor, 6'x15'		
GAYCO Mechanical Separator #38		Needs vanes replaced.
GAYCO Mechanical Separator, Model #44HD, 10 HP Blower	1212	Needs vanes replaced.
Tyler Hummer Screen		Does not work.
Bucket Elevators 26"x60" - 60' (#4) 15 HP V-Belt 14"x42" - 46' (#2) 3 HP Gear Head 18"x38" - 52' (#5) 3 HP Gear Head 22"x48" - 52' (#3) 3 HP Gear Head 22"x48" - 52' (#6) 5 HP Gear Head 18"x46" - 55' (#1) 3 HP Gear Head		
Large Cyclone - 10' Dia x 18' Approx.		
Ingersoll-Rand Stationary Compressor, Type 40 w/75 HP TEFC Electric Motor		May not work.
Air Slide -120'; w/blower		Does not work.
(4) Syntron Vibrating Feeders #F-22, 10"x36" Pan		
Conveyors - Belt Type 24"x51' 18"x30' 24"x30' 18"x12' 18"x26' 12"x12' 10"x26'		
Conveyors - Screw Type 10" Dia. x 26' (2) 10" Dia. x 14' (2) 10" Dia. x 10' 8" Dia. x 8'		
Storage Tanks - Steel (4) 12' Dia. x 45' High (2) 12½' Dia. x 48' High 13'Dia. x 40' High		

10-10-84

INDUSTRIAL MINERAL PRODUCTS, INC.
LIST OF EQUIPMENT - BUILDINGS - PARTS
LOCATION - KINGMAN, ARIZONA

DESCRIPTION	S/N	COMMENTS
Dust Collectors		
Norblo 18'x9' - E936-26		
Pangborn Model E174, Bag #64CH3	CH3-8756	Need Bags.
Norblo, Size 120, w/30 HP Blower 7'6"		
Pangborn, Size C-L, 46 Bag EA12, 60 HP	940-3	
St. Regis Baggers - #440-1, 2 Spout w/15 HP		
St. Regis Bagger - #3960 - Type 101 FL		
Howe Truck Scale - 15 Ton		
Hyster Fork Lift, 5,000 lb., Model # YE40, 10' Mast, Pneumatic Tires		
BUILDINGS		
Shower House - 16'x16' - 256 Sq.Ft.		
*Rock Shed - 40'x60' - 2400 Sq.Ft.		
Mill - 42'x162' - 6804 Sq.Ft.		
Office - 36'x 24' - 864 Sq.Ft.		
Bag House - 20'x36' - 720 Sq.Ft.		
* Structure blew down.		
PARTS		
Misc. Spare Parts, Nuts, Bolts, Supplies, etc.		
Misc. Office Equipment, Including Desks, Office Machines, Filing Cabinets, etc.		
Loading Conveyor Inc Hopper, Conveyor Dust Spray & Motor		
31' Bowl Liner & Mantle Electric Motor - 100 HP, 870 RPM		May have been removed. Used on Hardinge mill.

KINGMAN FELDSPAR MILL

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA 85007
602/255-3791

FIELD ENGINEERS REPORT

Mill : ARIZONA MINERALS (formerly Arizona Feldspar Corp Date : December 4, 1979

District: Kingman Engineer: C. J. Hicks

Subject : Field Interview and Mill Tour

Visited Arizona Minerals Mill in Kingman and talked with Ike Faylor, Mill Superintendent. The plant has been shut down for about a month. It had been receiving feldspar from the Monte Cristo Mine near Yarnell and the Taylor Mine north of Kingman. Mr. Faylor said that he was waiting for Mr. Chet Cheatwood to start up again. Four men would be hired for the mill and six at the mine (Taylor).

The minus 200 mesh spar is sacked (100#) from two bulk tanks and sold to various ceramic manufacturers in California and one in Washington (Marysville) and Oklahoma City.

They obtain their jasper grinding pebbles from Minnesota.

CJH:mw

cc: DMR Tucson

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
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CJH:mw

cc: DMR Tucson

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Arizona Feldspar Corp.

Date January 16, 1976

District

Engineer John H. Jett, Director

Subject:

Mining is underground, two miners - hoist man, surface man and supervisor. Incline adit, minus 27°, 177 ft. incline distance. Material is trucked to mill in Kingman where it is ground to minus 200 mesh in pebble mill. Pebbles are imported from France. Mill lines are jasper flint. Cut in and shipped from Minnesota. End product used as tile. It will glaze at 2300° and is iron free. Ball consumption is approximately 3# per ton.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Feldspar Plant & Quarry — Date August 28, 1958

District Cerbat (Wallapai), Mohave Co. — Engineer Travis P. Lane

Subject: Visit

Owner & Operator Consolidated Feldspar Co., a Department of International Minerals and Chemical Corp.

Main Office: Old Orchard Road
Skokie, Ill. (14 miles N of Chicago)

Kingman Office: At Kingman Plant
Box 229, Kingman, Arizona

Mr. J.W. Allen is the resident manager of the Kingman operation. The plant, located at Getz Siding, 2 miles E of Kingman, makes 2 products -- ground feldspar and ground silica. At the present time the output is about 50% feldspar and 50% silica.

The feldspar product is a practically pure potash feldspar ground to 200 M. Its principal uses are for the manufacture of ceramics and sanitary ware. The silica product is 99% SiO_2 ground to 140 M for use in household cleaner-compounds, or to 99% minus 200 M for use as Potters Flint. A pure white silica is required for the former use, but some slight coloration is permissible for the latter. Because of the high purity specifications for both feldspar and silica plant feed there are no plant waste materials.

The plant is designed so that the crushing section (jaw and cone crushers) handles alternately feldspar or silica feed. The crushed silica goes to an 8' x 12' pebble mill in closed circuit with a 60 M vibrating screen. The crushed feldspar goes to a 6' x 15' pebble mill with air classification for size control. An 8' x 5' Hardinge mill is being installed to replace the tube mill which will be held for standby or, when necessary, to supplement the Hardinge capacity. All crushing and grinding is dry. A shed building is provided to shelter stockpiled mine run feldspar during wet periods. The crude silica material needs no such protection.

All of the feldspar plant feed is obtained from the company's deposit on the west flank of the Cerbat range near its southern end, about 6½ miles easterly from the plant. Three mining cuts in close proximity to each other have been opened here. Two have reached a depth where mining can no longer be continued without benching the steep enclosing walls. Mining is in progress in the most southerly cut. While the deposit is notable for its pure potash feldspar content, nevertheless it is necessary to mine selectively to avoid dilution with soda feldspar, quartz, or other undesirable materials, and some close hand sorting is practiced.

The company purchases about 80% of its crude silica plant feed and the balance is obtained during the course of mining feldspar in the cuts. The greater part of the silica rock is purchased from a large number of small independent operators in the immediate vicinity of the feldspar deposit although some is trucked in a distance of up to 50 miles. Si Weeks of Kingman is the largest current supplier, his material being mined from a deposit several miles north of Consolidated Feldspar's quarries.

Feldspar Plant & Quarry (cont.)

The plant output normally is around 1200 tons per month but at present because of the recent destruction by fire of the company's feldspar plant at Custer, Montana, the feldspar section of the plant is being pushed at a higher rate than normal, to fill the Custer plant's orders.

Ten persons are employed in the plant and office. Mining is done by Juan Sena on contract, employing 4 men.

*

Information from MINE INSPECTOR'S OFFICE - August 15, 1957

INTERNATIONAL MINERALS & CHEMICAL CORP. (Mine and Mill)
(Formerly Consolidated Feldspar Corp.)

Walapai Dist., Mohave County

Mgr. - Wes Allen, Box 229, Kingman, Ariz.
Supt.- John Stewart, Gen. Del., Kingman, Ariz.

1000 tons Feldspar - 8 men working.

L.A.S.

*

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine CONSOLIDATED FELDSPAR Date April 16, 1957

District Engineer MARK GEMMILL

Subject: Present Activity

This property is now under the ownership of Consolidated Feldspar Department of the International Minerals and Chemical Corporation. Mr. Wes Allen, Manager, lives in Kingman

Operation at this property has continued steadily for a number of years. At the present time about 400 tons per month of feldspar is being processed in the mill and in addition, 700 tons per month of silica is being ground and sold for cleaning compound. Silica rock is being purchased from different operators in the area.

*

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Consolidated Feldspar Corporation

Date June 8th, 1946

District Kingman

Engineer A. C. Nebeker

Subject:

The Manager of the Consolidated Feldspar Corp. is Mr L. D. Gregory
Assistant Mgr. G. F. H endricks, address Kingman.

The photos show the mill which has a capacity of 50 to 80 tons of Feldspar ground to 200 mesh. The price at R.R. Cars $22.00 per ton.
Product shipped mostly to Los Angeles Calif.

The mill is 1½ miles east of Kingman and on a siding of the Santa Fe Railroad
The mine is 8 miles out from Kingman and north of the mill by 7 miles.
Ore is mined by open pit methods and is loaded on trucks in the pit. The breaking loading and sorting out the white quartz rock is done under the contract method.
The photo shows one of the open pits where about 100 tons of ore can be seen broken in the bottom of the pit. The walls of Feldspar in the pit show white color and the Quartz vein show dark and is dipping about 45 degrees.

18 men are employed on the average and most of them live in Kingman. The men speak highly of the Company and are pleased with the treatment they receive.

Code

Mohave

Is this same as Kingman Feldspar?

* Is there more than one Feldspar operating within 10 mi of Kingman?

7-3-39

Margarum, H. P. - President
Kingman Feldspar Company
Kingman, Arizona.

See KINGMAN FEIDSPAR (Mohave Co.)-Re - Field Engineers Report

NAME OF MINE: ~~KINGMAN FELDSPAR~~ ✓CONSOLIDATED FELDSPAR CORP.

COUNTY: MOHAVE
DISTRICT: Wallapai
METALS: FEL.

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	✓Kingman Felds. Co. Box 229, Kingman H.W. McIntyre, Supt.	5/1/44	Milling
2/45	✓C.F. Hendrix, Kingman, Supt.		
7/46	✓L. D. Gregory, Mgr., Kingman		

*

CONSOLIDATED FELDSPAR CORP.
(KINGMAN FELDSPAR)

~~Fluorspar~~

Mohave 8 - 9 T 22 N, R 16 W

Kingman Feldspar Co., Kingman '39

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Kingman Feldspar.

Date 7/3/39

District Kingman.

Engineer Elgin B. Holt
P. O. Box 288,
Kingman, Arizona.

Subject: Feldspar.

Location: 10 miles N. E. of Kingman.

Operating Company: Kingman Feldspar Company.

Address: Kingman, Arizona.

President: H. P. Margarum.

Gen. Manager: R. W. Lawson.

Mine Supt: J. P. Hendrix.

Mill Supt: H. W. McIntyre.

REPORT ON OPERATIONS

Following data was given to our Engineer by H. W. McIntyre, Mill Superintendent: Company operating dry crushing and grinding plant & tube mill, lined with silica blocks, set in cement. Ground product passed thru Exolon magnetic separator to remove "tramp iron" from abrasion of grinding parts as well as any magnetic iron sands, or hematite, from surface dirt that occasionally gets mixed with feldspar mill heads.

Production rate: 500 tons of ground feldspar product per month. Electric power furnished by Citizen's Utilities Co., of Kingman. Property consists of 3 mining claims, covering massive deposits of feldspar material, with narrow bands of silica (99% SiO2). Of total material milled, 10% is silica and 90% Potash Feldspar; this latter material being nearly pure orthoclase (KAlSi3O8).

The ground feldspar product is shipped to ceramic plants in California; but Mr. McIntyre was not at liberty to quote market price. The company also produces ground silica which is also shipped to California to ceramic plants and is used also in that industry.

* Mr. McIntyre stated there is no market at all for crude feldspar and that the market for ground feldspar product is already well supplied all over the United States. He further stated that the best course to pursue for anyone owning a feldspar prospect in Arizona would be to submit samples to some company already in the feldspar business; that such samples could be mailed to R. W. Lawson, General Manager, Kingman Feldspar Company, Kingman, Arizona; and that he would have tests made and write the one submitting samples advising as to quality, etc., of material submitted.

McIntyre further stated that feldspar product to be commercial must not contain in excess of 0.05% Fe_2O_3 and no phosphorus.

ANNUAL REPORT 1985

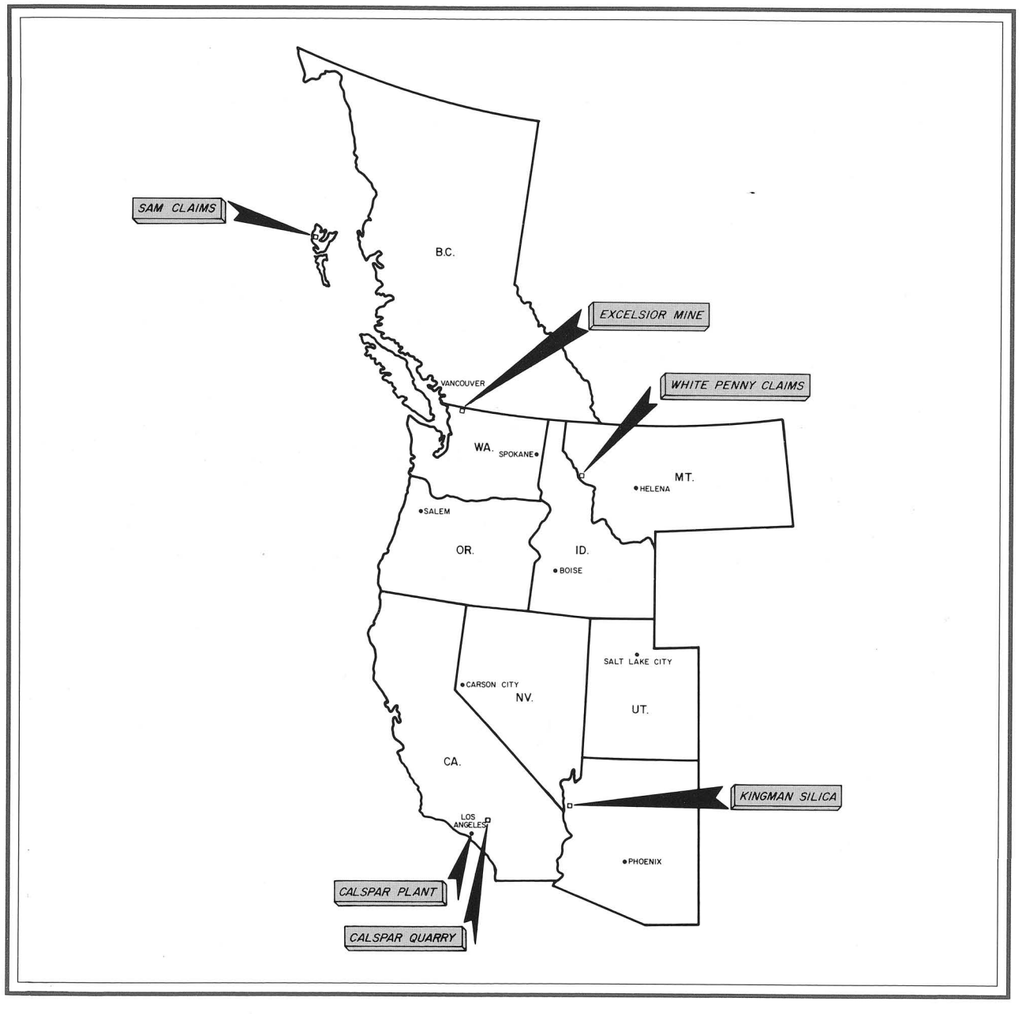
STEELHEAD RESOURCES, LTD.

1985 ANNUAL REPORT

Steelhead Resources, Ltd. is engaged in the exploration and development of gold and silver properties and the mining and marketing of industrial minerals.

TABLE OF CONTENTS

STEELHEAD PROPERTY LOCATIONS



PRESIDENT'S REPORT

1985 was a year of accelerated change for Steelhead Resources, Ltd. The change began in 1983 with the sale of the Company's petroleum assets and creation of the funds with which to acquire mineral assets. A major step to fulfill this objective was taken in 1985, with the acquisition by Steelhead of the total outstanding shares of Nooksack Mines, Inc., thereby gaining control of the Great Excelsior silver-gold deposit located in Whatcom County, Washington.

In October 1985, a management change took place with the election of Wallace McGregor as President and Daniel Robertson as Vice President. It is management's belief that the appraisal of opportunities in mining requires viewing such opportunities within the context of historic metal price cycles. If the present is not a propitious time for mine development, it is , nevertheless, an opportune time for the acquisition and development of advanced stage exploration prospects. At the same time, the present is viewed as extraordinarily opportune for industrial mineral developments.

In keeping with this view, steps were taken in late December 1985 to enter the California and west coast ceramics industry as a supplier of quality feldspar products. The Company purchased a unique and large-tonnage source of sodium feldspar and a milling plant with which to process the material for marketing. Renovation and repair of the plant was completed for single-product production in April and for two-product production in May 1986.

Funding of the feldspar project was accomplished through the private placement of 600,000 shares of common stock at a price of $.40 per share, with each share carrying a warrant to purchase an additional share at a price of $.45 for a period of one year.

Management has charted a new course for the Company, a course which has as its objective profitability for the Company in 1986 and long-term growth through mineral property acquisitions and development of precious metals and other mineral deposits as the opportunities arise.

On behalf of the Board,

Wallace McGregor
President

May 30, 1986

MINERAL PROPERTIES

Calspar Operations

In Dec. 1985 the Company acquired a feldspar quarry and processing plant that has been rehabilitated and is presently in production.

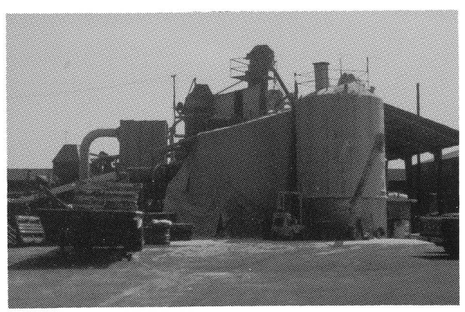
The Calspar assets include a lease covering the Calspar Quarry in San Bernardino County, California, and the processing plant in Los Angeles County, California. The quarry lies about 15 miles from Daggett, California, in the Ord Mountains, and contains very large reserves of high sodium feldspathic quartzite that is crushed and then trucked to our processing plant in Santa Fe Springs, Los Angeles County, California.

The Calspar processing plant consists of crushing, grinding, classifying and bagging equipment used to produce salable feldspar products. The plant processes the sodium-rich feldspar rock from the quarry to produce a product called N-spar, and also processes a high potassium byproduct from a large silica sand plant to produce a product called K-spar. Mobile equipment acquired with the plant includes pneumatic trailer, tractors, and loaders.

The capacity of the plant is about 1500 tons per month. After extensive plant rehabilitation, production of K-spar began in late March 1986, and shipments to buyers began in April 1986. Over a year's supply of N-spar has been mined at the quarry and production of N-spar began in May 1986.

The Calspar products are presently marketed in the Los Angeles area, mainly to producers of ceramic products. It is estimated that the three largest established purchasers will use at least 1,000 tons per month and that other miscellaneous users will purchase another 500 tons per month. Potential for expansion above 1,500 tons per month exists in west coast and sun-belt states. Calspar competes with eastern and midwest producers who have very high freight rates to the west coast.

Steelhead's economic analysis shows that the Calspar plant will break even at about 700 tons per month and that at a production rate of 1,050 tons per month, the operation will create an annual pretax cash flow on the order of $280,000. A positive cash flow is expected in June or July and the plant will have a payback by the end of 1986.



CALSPAR PLANT
SANTA FE SPRINGS, CALIFORNIA

FELDSPAR QUARRY
SAN BERNARDINO COUNTY, CALIFORNIA

Kingman Project

Steelhead Resources, Ltd. is in the process of acquiring a silica-feldspar processing plant at Kingman, Arizona, from Reserve Oil and Mining Company, as part of the Calspar purchase, for $58,000, to be paid in Steelhead stock.

The plant includes crushing, bagging and storage facilities on about five acres leased from the Southern Pacific Railroad. The capacity of the plant is about 3,000 to 4,000 tons per month. In addition to plant repair work, a long-term source of feldspar and silica is needed before the plant can be put into operation. A number of small existing quarries are available as raw material sources; however, Steelhead is planning an exploration program to develop its own raw material source.

Established markets from previous production of ground silica still exist, and the Company is researching new markets.

The Kingman plant has a cash flow potential similar to or greater than that of the Calspar plant.

KINGMAN PLANT
KINGMAN, ARIZONA

Sam Claims

Steelhead has four claims comprising about six square miles on Graham Island; Queen Charlotte Islands, British Columbia. The property lies a few miles northwest of the Cinola gold deposit. Geologic and geochemical reconnaissance is planned during 1986.

White Penny Property

Steelhead Resources holds a 75 percent joint venture interest in the White Penny claim group in Sanders County, Montana. The property has potential for Revett-type strata-bound copper-silver mineralization similar to ASARCO's Spar Lake deposit and ASARCO and U.S. Borax & Chemical Corporation's Cabinet Mountains prospects.

Excelsior Mine

Steelhead holds an option to purchase 54 lode mining claims located 49 miles easterly from Bellingham, Washington, near the town of Glacier. The claims are within the Baker National Forest in an area approximately one-half mile south of the Nooksack River. Access to the mine is via six miles of graded Forest Service road from Glacier. A gold-silver deposit known as the Great Excelsior, was discovered in 1900 and mine development and construction of a 20-stamp mill followed soon after. During the period from 1900 to 1916, the Great Excelsior mine produced approximately 50,000 tons of ore grading approximately 7 oz. silver and 0.1 oz. gold per ton.

Following the first world war, the mine remained dormant until resampled in 1930. For 40 years thereafter no significant exploration was carried out on the property until the 1970s, when ASARCO, Hanna Mining Company, and Quintana Exploration evaluated the property and carried out diamond drilling. In 1977 U.S. Borax & Chemical Corp. acquired the property and between 1977 and 1983 diamond-drilled 45 holes. The diamond drilling resulted in the discovery of high grade silver-gold mineralization adjacent to the original ore body and proved the existence of broadly distributed silver-gold mineralization. The full extent of the mineralization still remains undefined, both down the dip and along the strike of the mineralized zone.

The silver-gold mineralization is hosted by pyritic, felsic volcanic breccias, siltstones and tuffs of Middle Jurassic age. The mineralized zones are subparallel to stratigraphic units that have been folded and faulted. Mineralization is characterized by fine-grained pyrite with argentite, tetrahedrite and electrum, and a submarine volcanogenic origin is indicated by the geologic setting.

Exploration by U.S. Borax and other companies has delineated at least three ore zones. These zones are currently estimated to contain about 2.5 million tons. Based on existing drill hole intercepts, there are target areas of higher grade mineralization within the zones of mineralized rock that may average 12.5 oz. of silver per ton and 0.13 oz. of gold per ton. Table A shows some significant drill hole intercepts of greater than 10 feet which contain at least 5 oz. of silver per ton. Several holes show exceptionally high grade mineralization.

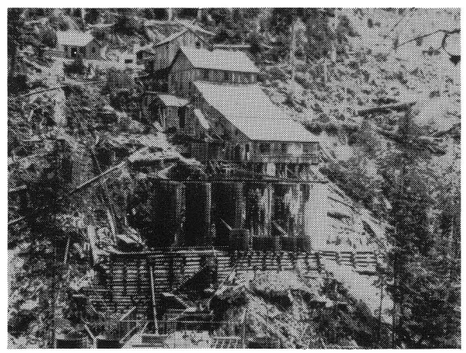
Steelhead's initial objective is to prove and develop reserves of at least 500,000 tons of higher grade material that could be mined by relatively low-cost underground methods. It is estimated that the higher grade cores of the mineralized zones could be profitably mined at a rate of 200-300 tons per day at the present low price for gold and silver. Larger tonnages of lower grade material could be mined with an increase in the price of gold and silver.

A program of reverse circulation rotary drilling is planned for the future. The purpose of this drilling is to further define the size and grade of the known blocks of high grade mineralization.

Underground drifting and underground drilling will be started after the evaluation of the reverse circulation drilling program has been completed. During 1986, base line environmental studies will be undertaken and metallurgical studies will be continued.

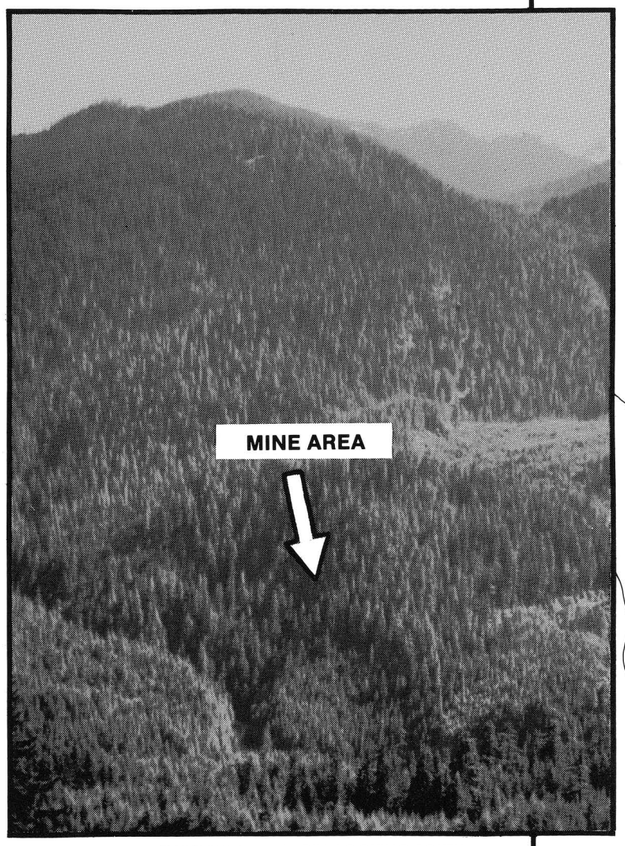
In December 1985, preliminary flotation and cyanide testing was started by N.A. Degerstrom Company, Spokane, Washington, using drillhole rejects from the U.S. Borax drilling program. Although the test work is still in progress, the preliminary results indicate that the Excelsior ores are amenable to both flotation and cyanide methods and that very good recoveries can be expected.

The exploration to date has tested only a small part of the altered rock units that host the mineralization and the potential for developing new ore bodies within the property is considered excellent.

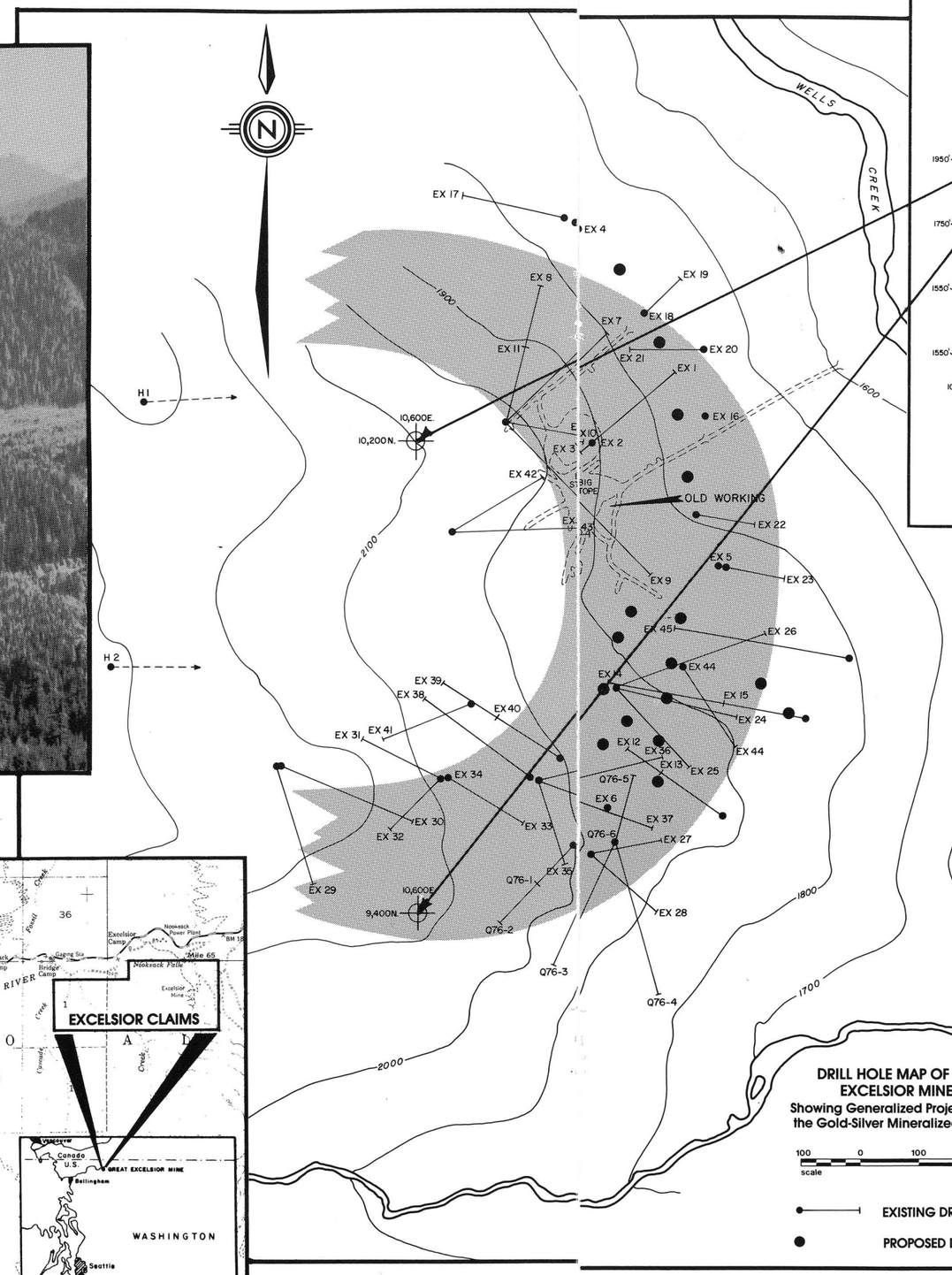


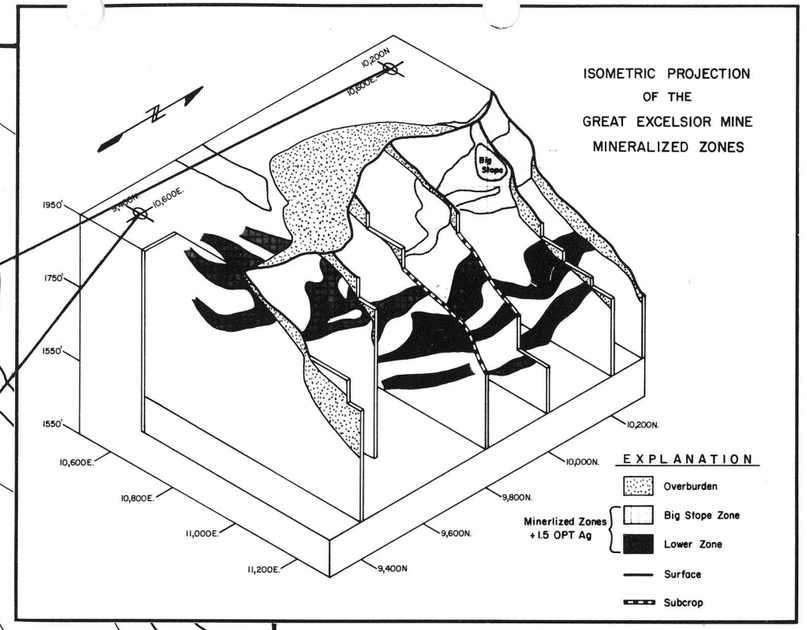
HISTORIC PHOTOGRAPH

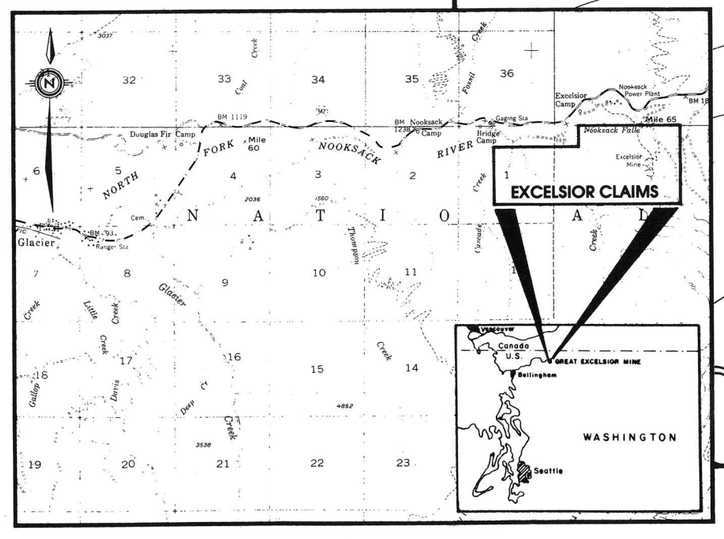
GREAT EXCELSIOR MINE
WHATCOM COUNTY, WASHINGTON



EXCELSIOR MINE AREA LOOKING SOUTH







INDEX MAP OF THE
EXCELSIOR MINE AREA

DRILL HOLE MAP OF THE
EXCELSIOR MINE
Showing Generalized Projection of
the Gold-Silver Mineralized Zones

100 0 100 200
scale feet

EXISTING DRILL HOLES

PROPOSED DRILL HOLES

TABLE A

SOME SIGNIFICANT DRILL HOLE INTERCEPTS FROM HIGHER GRADE ZONES

Drill Hole No.	Bearing & Inclination	Total Depth	Intercept Thickness	Intervals	Silver (oz/ton)	Gold (oz/ton)
EX-1	N50°E, -61°	380 ft	10 ft	280-290	9.53	0.110
EX-1	N50°E, -61°	380 ft	50 ft	295-345	4.64	0.125
EX-10	580°E, -75°	507 ft	20 ft	290-310	11.42	0.134
EX-14	N80°W, -45°	484 ft	100 ft	185-285	14.13	0.104
EX-24	S78°E, -60°	425 ft	160 ft	200-360	16.72	0.200
EX-27	N80°E, -65°	260 ft	10 ft	50-60	8.22	0.080
EX-27	N80°E, -65°	260 ft	15 ft	100-115	10.49	0.023

Consolidated Balance Sheets
As of December 31, 1985 and 1984

ASSETS

	1985	1984
Current Assets:		
Cash and cash equivalents	$ 156,601	$ 307,440
Accounts receivable	906	3,131
Prepaid expenses	3,934	—
Total current assets	$ 161,441	$ 310,571
Mineral Properties (Note 2)	459,064	—
Investment in Mining Venture (Note 3)	218,037	181,462
Equipment (Note 4)	234,851	—
	$1,073,393	$ 492,033

LIABILITIES AND SHAREHOLDERS' EQUITY

	1985	1984
Current Liabilities:		
Accounts payable	$ 13,398	$ 2,696
Income taxes payable	—	15,319
Note payable, current portion (Note 6)	78,611	—
Total current liabilities	$ 92,009	$ 18,015
Loans from Shareholders (Note 5)	40,194	—
Note Payable (Note 6)	198,088	—
Deferred Income Taxes	37,523	35,535
Commitment (Note 11)		
Contingency (Note 12)		
Shareholders' Equity	705,579	438,483
	$1,073,393	$ 492,033

The accompanying notes are an integral part of these consolidated balance sheets.

STEELHEAD RESOURCES, LTD.

Consolidated Statements of Operations
For the Years Ended December 31, 1985 and 1984

	1985	1984
Revenues:		
Oil and gas sales	$ —	$ 48,946
Interest income	21,527	24,064
	$ 21,527	$ 73,010
Operating Expenses:		
Depletion, depreciation and amortization	$ —	11,101
Production	—	6,849
General and administrative	74,287	64,338
	$ 74,287	$ 82,288
Income (loss) from operations	$ (52,760)	$ (9,278)
Equity share of losses in mining venture (Note 3)	—	(4,412)
Income (loss) before extraordinary item	$ (52,760)	$ (13,690)
Extraordinary Item:		
Gain on sale of oil and gas properties, net of taxes of $36,094 (Note 13)	—	17,725
Net income (loss)	$ (52,760)	$ 4,035
Net Income (Loss) Per Share (Note 10)	$ (0.03)	$ —

The accompanying notes are an integral part of these consolidated statements.

Consolidated Statements of Shareholders' Equity
For the Years Ended December 31, 1985 and 1984

	Common Shares			Cumulative Foreign	
	Issued and Outstanding	Amount	Retained Earnings	Currency Adjustment	Total
Balance, December 31, 1983	1,800,001	$ 334,949	$ 66,972	$ 4,025	$ 405,946
Net income	—	—	4,035	—	4,035
Foreign currency translation adjustment	—	—	—	28,502	28,502
Balance, December 31, 1984	1,800,001	$ 334,949	$ 71,007	$ 32,527	$ 438,483
Shares issued for purchase of subsidiary (Note 7)	600,000	300,000	—	—	300,000
Net income (loss)	—	—	(52,760)	—	(52,760)
Foreign currency translation adjustment	—	—	—	19,856	19,856
Balance, December 31, 1985	2,400,001	$ 634,949	$ 18,247	$ 52,383	$ 705,579

Authorized share capital consists of 10,000,000 no par value common shares.

The accompanying notes are an integral part of these consolidated statements.

STEELHEAD RESOURCES, LTD.

Consolidated Statements of Changes in Financial Position
For the Years Ended December 31, 1985 and 1984

	1985	1984
Cash From (To) Operating Activities:		
Net income (loss) before extraordinary item	$ (52,760)	$ (13,690)
Add items not affecting cash —		
Depreciation, depletion and amortization	—	12,087
Equity share of losses in mining venture	—	4,412
	$ (52,760)	$ 2,809
Source (use) of cash from changes in —		
Accounts receivable	2,225	27,135
Prepaids	(3,934)	—
Accounts payable	10,702	(41,258)
Income taxes payable	(15,319)	16,430
Deferred taxes payable	1,988	22,410
Translation adjustment —		
Cash	8,297	8.094
Non-cash assets and liabilities	11,559	20,408
Cash from operations	$ (37,242)	$ 56,028
Cash From (To) Financing Activities:		
Loan from shareholders	$ 40,194	$ —
Share capital	300,000	—
Notes payable	276,699	—
	$ 616,893	$ —
Cash From (To) Investing Activities:		
Investment in mining venture	$ (36,575)	$ (36,594)
Purchase of mineral claims	(459,064)	—
Proceeds from sale of oil and gas properties, net of taxes (Note 13)	—	135,293
Purchase of equipment	(234,851)	—
	$ (730,490)	$ 98,699
Increase (decrease) in cash	$ (150,839)	$ 154,727
Cash Balance, beginning of year	307,440	152,713
Cash Balance, end of year	$ 156,601	$ 307,440

The accompanying notes are an integral part of these consolidated statements.

Notes to Consolidated Financial Statements
December 31, 1985 and 1984

1 SIGNIFICANT ACCOUNTING POLICIES

a. **Consolidation and Foreign Currency Translation**

The consolidated financial statements include the accounts of the Company, as well as its two wholly-owned United States subsidiaries, Steelhead Petroleum, Inc. and Nooksack Mines, Inc. All intercompany accounts and transactions have been eliminated.

The operations of Steelhead Petroleum, Inc. (Petroleum) are in the United States and its accounting records are maintained in United States dollars. As Petroleum is a self-sustaining subsidiary, with its own financing, its accounts have been translated into Canadian dollars using the year end rate for the balance sheets and an average annual rate for the statements of operations. The translation effects of transactions between the Company and Petroleum and the changes in the exchange rate result in changes to the cumulative foreign currency translation account.

Nooksack Mines, Inc. (Nooksack) also operates in the United States and its records are maintained in United States dollars. However, as Nooksack relies on the Company for its financing, it is treated as an integrated subsidiary and its monetary assets and liabilities are translated at the year end exchange rate and its non-monetary assets and liabilities are translated at the exchange rate prevailing at the date they arose. Revenue and expense transactions are translated at the date they occur during the year with any foreign exchange gain or loss reflected in the statement of operations.

The translation effects of any significant transactions between Steelhead Resources, Ltd. and unrelated entities in the United States are translated at the exchange rate prevailing at the transaction date. Any foreign exchange gains or losses are reflected in the statement of operations.

b. **Mining Properties**

The Company defers acquisition, exploration and development costs until such time that the property is abandoned or placed into production. Costs of non-productive properties are charged to operations during the period abandoned. Costs of producing properties will be amortized to operations using the unit-of-production method.

c. **Equipment**

Equipment is depreciated on the straight line basis over its estimated useful life. As these assets were purchased on December 30, 1985, their useful lives have not yet been determined and no depreciation has been recorded.

d. **Income Taxes**

The Canadian parent company is subject to Canadian taxes, while Steelhead Petroleum, Inc. and Nooksack Mines, Inc. are subject to United States taxes. These determinations of income tax liability are made independent of one another. The deferred tax balance relates to exploration costs on a mining property deducted for tax purposes but capitalized for accounting purposes.

Steelhead Resources, Ltd. has net operating loss carry-forwards of approximately $79,000 which expire from 1987 to 1992. Nooksack Mines, Inc. has net operating loss carry-forwards of approximately $89,000 (U.S. $54,000) which will expire in 2000.

2 MINERAL PROPERTIES

The Company and its subsidiaries have the following interests in mineral properties:

SAM Claims — Queen Charlotte Islands, B.C.
Calspar Claims and Leases — Los Angeles County, California, U.S.A. (Note 6)
Nooksack Claims Option — Whatcom County, Washington, U.S.A. (Note 11)

The geological and drilling work performed to date on the mineral properties is inconclusive as to establishing the existence of commercial mineralization on the properties. The ultimate recovery of the investment the Company has made in these claims and any related equipment (Note 4) is dependent upon meeting all obligations relating to these mineral claims, discovering precious metal reserves which can be profitably mined and processed, and, if such reserves are discovered, upon obtaining additional financing for development.

3 INVESTMENT IN MINING VENTURE

In August, 1982, Steelhead Petroleum, Inc., a wholly owned subsidiary, entered into the White Penny Partnership with Mines Management, Inc. a former related company, for the purpose of exploration and development of certain mining claims. The agreement requires Steelhead Petroleum, Inc. to contribute $390,000 (U.S. $280,000) over a maximum of five years, and to pay 75% of all subsequent costs of the venture to earn a 75% working interest. Upon certain conditions, Steelhead Petroleum, Inc. can reduce its investment to a 25% net profits interest. As of December 31, 1985, Steelhead Petroleum, Inc. had contributed $245,000 (U.S. $176,000) to the partnership. Mines Management, Inc. provides supervision of the exploration activities and is paid a fee of 15% of qualified expenditures. Nevex Gold Company, Inc., an affiliate of a related company, provided certain accounting and financial services to the partnership, for which it was reimbursed.

The geological and drilling work performed to date on the property is inconclusive as to establishing the existence of commercial mineralization on the property. The ultimate recovery of the investment is dependent upon discovering ore reserves which can be profitably mined and processed and, if such reserves are discovered, upon obtaining additional financing for development.

The Company has not performed significant additional

Notes to Consolidated Financial Statements (continued)

work on its White Penny Project. Management has decided to use available cash resources primarily in searching for, acquiring and developing other properties. Further operations on the White Penny claim will not commence until additional financing for development has been obtained and the silver and copper markets improve.

4 EQUIPMENT

Office equipment	$ 1,674
Mine equipment	36,965
Transportation equipment	79,933
Mill plant equipment	116,279
	$ 234,851
Less — Accumulated depreciation	—
	$ 234,851

5 LOANS FROM SHAREHOLDERS

During the year the Company's subsidiary, Nooksack Mines, Inc., received loans from two shareholders. These loans are secured by promissory notes which charge interest at a rate of 9% and are due on January 31, 1987.

6 NOTE PAYABLE

On December 30, 1985 the Company's subsidiary, Steelhead Petroleum, Inc., purchased a processing plant and quarry in California for $283,673 (U.S. $203,364). The terms of this agreement required a $6,975 (U.S. $5,000) down payment with a further $20,925 (U.S. $15,000) due on January 31, 1986 and the remaining balance of $255,775 (U.S. $183,364) payable in monthly installments of $7,400 (U.S. $5,300), covering principal and interest, commencing March 1, 1986. Interest on the balance outstanding will be charged at a rate of 10% until August 1, 1987 when it will be adjusted to the greater of 10% or the then prime rate of the Security Pacific National Bank.

This loan will be repaid as follows:

	Cdn. $	U.S. $
1986	$ 78,611	$ 56,355
1987	79,902	52,265
1988	80,193	57,490
1989	44,992	32,254

7 ACQUISITION OF NOOKSACK MINES, INC.

The Company acquired all of the issued common stock of Nooksack Mines, Inc. (Nooksack) on July 23, 1985 for consideration of 600,000 common shares of the Company, having a deemed value of $.50 per share.

The purchase price as of the date of acquisition has been allocated as follows:

Cash	$ 6,890
Accounts receivable	542
Option on mining claim	370,120
Organization costs	485
Accounts payable	(20,271)
Due to shareholders	(57,766)
	$ 300,000

8 RELATED PARTY TRANSACTIONS

a. Nevex Gold Company, Inc., an affiliate of a related company, provided accounting, administrative and management services to the Company for eight months. The charge for these services was $5,384 in 1985 and $35,176 in 1984.

b. Directors and officers were authorized to receive annual remuneration commencing November 1, 1985 for services provided in the amount of $86,484 (U.S. $62,000).

9 STOCK OPTIONS

During 1985 the Company granted stock options, which expire October 23, 1990, to certain directors and employees at a price of 40¢ per share, as follows:

	Number of Shares
Directors	120,000
Employees	120,000
	240,000

These options have been approved by the Vancouver Stock Exchange.

10 NET INCOME (LOSS) PER SHARE

Net income (loss) per share is based upon the weighted average number of shares outstanding during 1985 and 1984 of 2,046,658 and 1,800,001 respectively.

11 COMMITMENT

In order for the Company's subsidiary, Nooksack Mines, Inc., to retain its option to purchase certain mineral claims in Whatcom County, Washington, the claims must be kept in good standing by performing the necessary assessment work, posting all bonds and making all filings required, carrying general liability insurance and paying all property taxes. In addition, the following annual U.S. dollar payments are required under the terms of the agreements to retain these options:

	Cdn. $	U.S. $
June, 1986	$ 83,700	$ 60,000
June, 1987	153,400	110,000
June, 1988	69,700	50,000
June, 1989 to June, 1996	139,500	100,000

Notes to Consolidated Financial Statements (continued)

Commitment (cont.)

If the Company makes all these payments it will retain its option to purchase the mineral claims by June, 1997 for $2,393,600 (U.S. $1,716,000).

12 CONTINGENCY

An application for approval of the purchase of the processing plant and quarry in California on December 30, 1985 has been made to the Vancouver Stock Exchange and the Company is awaiting reply. Such approval is required for the Company to maintain its listing on the exchange. The Company does not anticipate any problems in receiving this approval.

13 EXTRAORDINARY ITEM

On May 1, 1984 the Company's wholly owned subsidiary, Steelhead Petroleum, Inc. sold its interest in its oil and gas properties to the operator of the properties. An extraordinary gain of $17,725 was recorded on this sale, net of income taxes of $36,094.

14 SEGMENTED INFORMATION

As the Company and its subsidiaries have no signficant sales or expenses, segmented information has not been presented for them. The Company and its subsidiaries assets can be geographically segmented as follows:

Canada	$ 40,015
United States	1,033,378
	$1,073,393

AUDITOR'S REPORT

ARTHUR ANDERSEN & CO.
CHARTERED ACCOUNTANTS

2300 GUINNESS TOWER
1055 WEST HASTINGS STREET
VANCOUVER, CANADA
V6E 2J2

To the Shareholders,

Steelhead Resources, Ltd.:

We have examined the consolidated balance sheets of STEELHEAD RESOURCES, LTD. (a British Columbia company) and its subsidiaries as at December 31, 1985 and 1984, and the related consolidated statements of operations, shareholders' equity and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at December 31, 1985 and 1984, and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

Arthur Andersen & Co.

March 14, 1986.

STEELHEAD RESOURCES, LTD.

CORPORATE DATA

Board of Directors
Wallace McGregor
Spokane, Washington

Sam Parks
Bellevue, Washington

Nin Quan
Vancouver, British Columbia

Kenneth G. Sanders
Vancouver, British Columbia

Dick Dere
Vancouver, British Columbia

Officers
Wallace McGregor
President

Daniel B. Robertson
Vice President

Nin Quan
Secretary-Treasurer

Head Office
N. 9516 Division Street #B
Spokane, Washington 99218

Registered Office
330-885 Dunsmuir Street
Vancouver, British Columbia
Canada V7C 1N5

Subsidiaries
Nooksack Mines, Inc.

Steelhead Petroleum, Inc.*

*name changed to
Steelhead Resources, Inc.
February 1986

Auditors
Arthur Andersen & Co.
1055 W. Hastings Street
Vancouver, British Columbia
Canada V6E 2G2

Registrar & Transfer Agent
Guaranty Trust Company of Canada
800 W. Pender Street
Vancouver, British Columbia
Canada V6C 2T5

Solicitors
DuMoulin Black
1004-595 Howe Street
Vancouver, British Columbia
Canada V6C 2Y5

Shares Listed
Vancouver Stock Exchange
Symbol — SHZ

Capitalization
Authorized: 10,000,000 shares
no par value

Issued: 2,400,001
at December 31, 1985