

CONTACT INFORMATION

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

01/10

PRIMARY NAME: BLACK DIAMOND LODE CLAIMS

ALTERNATE NAMES:

SILVER KING EXTENSION BRECCIA

PINAL COUNTY MILS NUMBER: 743

LOCATION: TOWNSHIP 1 S RANGE 12 E SECTION 24 QUARTER S2 LATITUDE: N 33DEG 19MIN 31SEC LONGITUDE: W 111DEG 05MIN 04SEC TOPO MAP NAME: SUPERIOR - 7.5 MIN

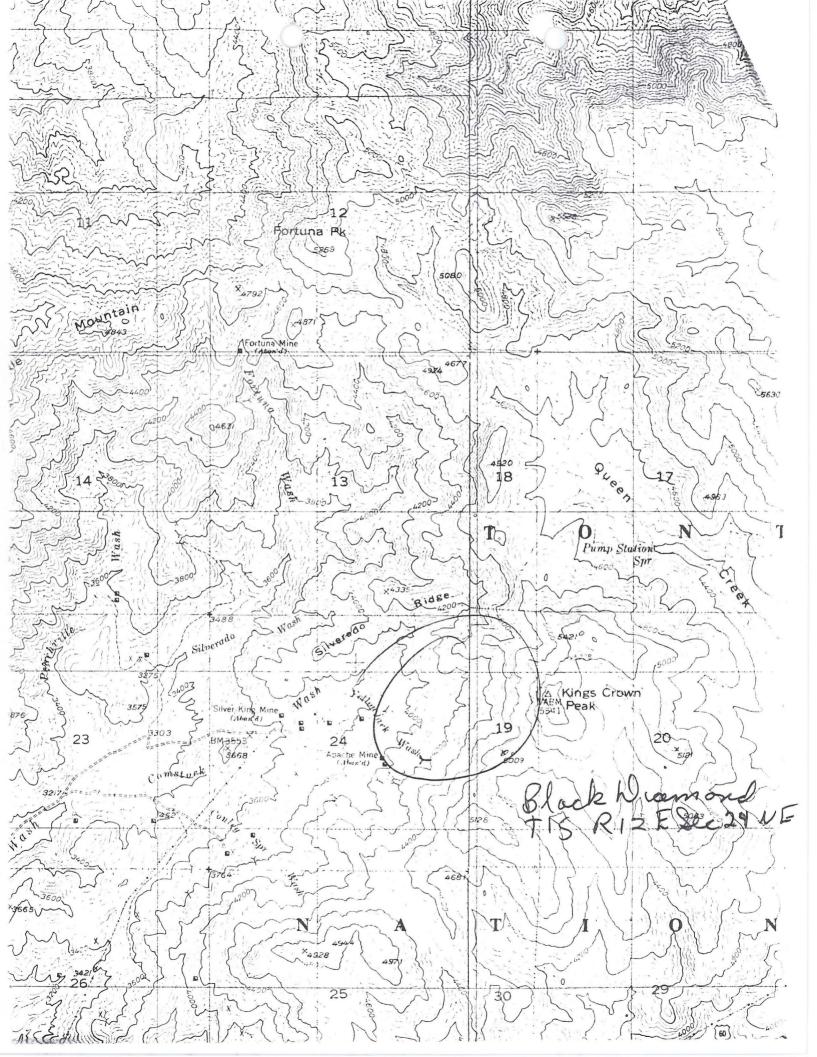
CURRENT STATUS: EXP PROSPECT

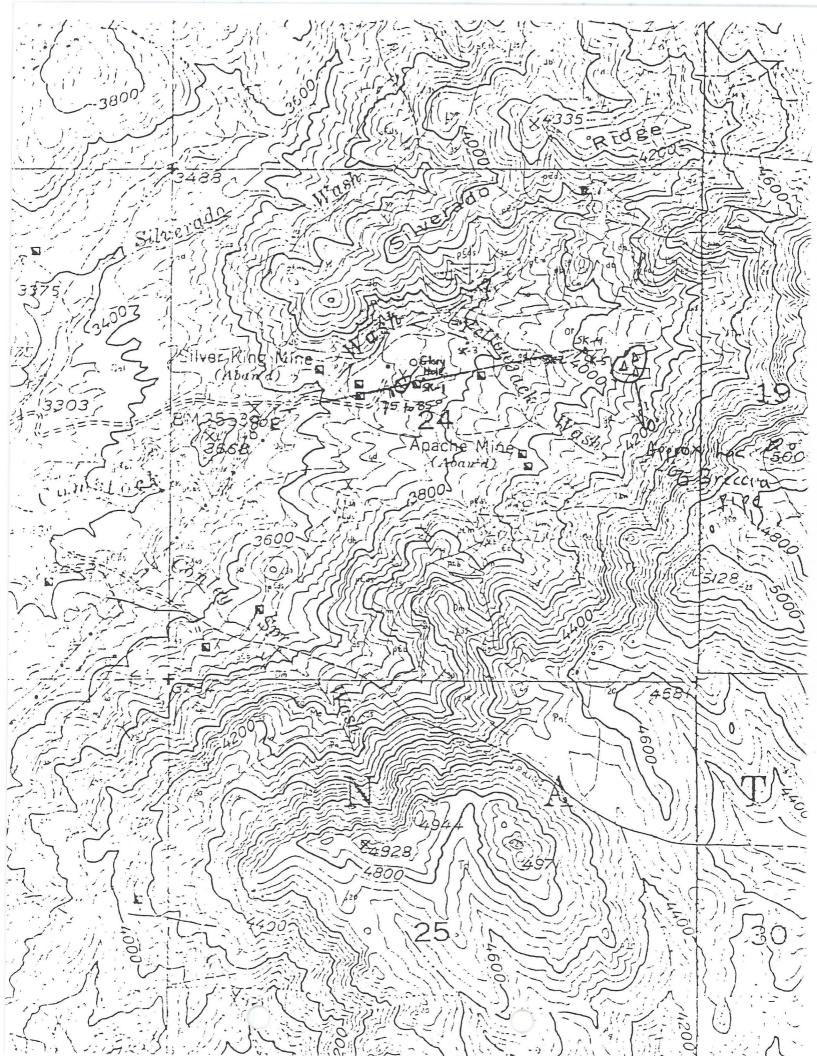
COMMODITY:

GOLD LODE SILVER

BIBLIOGRAPHY:

ADMMR BLACK DIAMOND LODE CLAIMS SHORT, MN "GEO & ORE DPSTS OF SUPERIOR MNG AREA, AZ" AZBM BULL 151, PLATE I USGS MAP MF-253; 1962





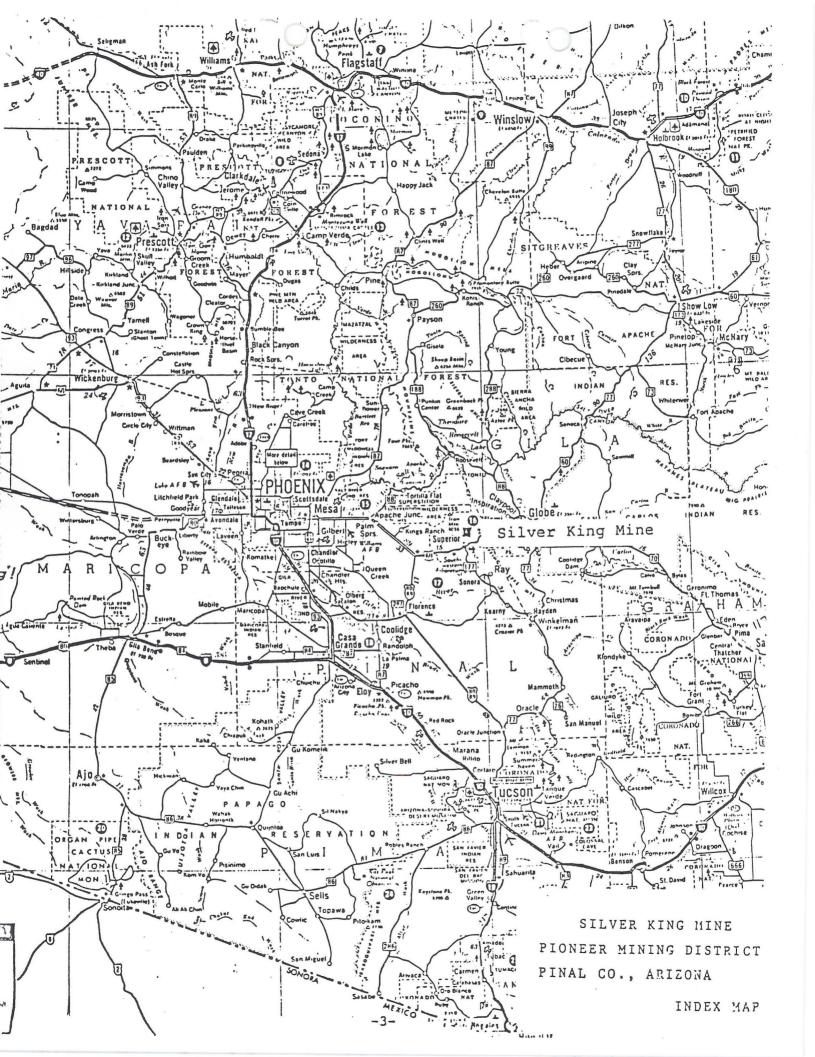
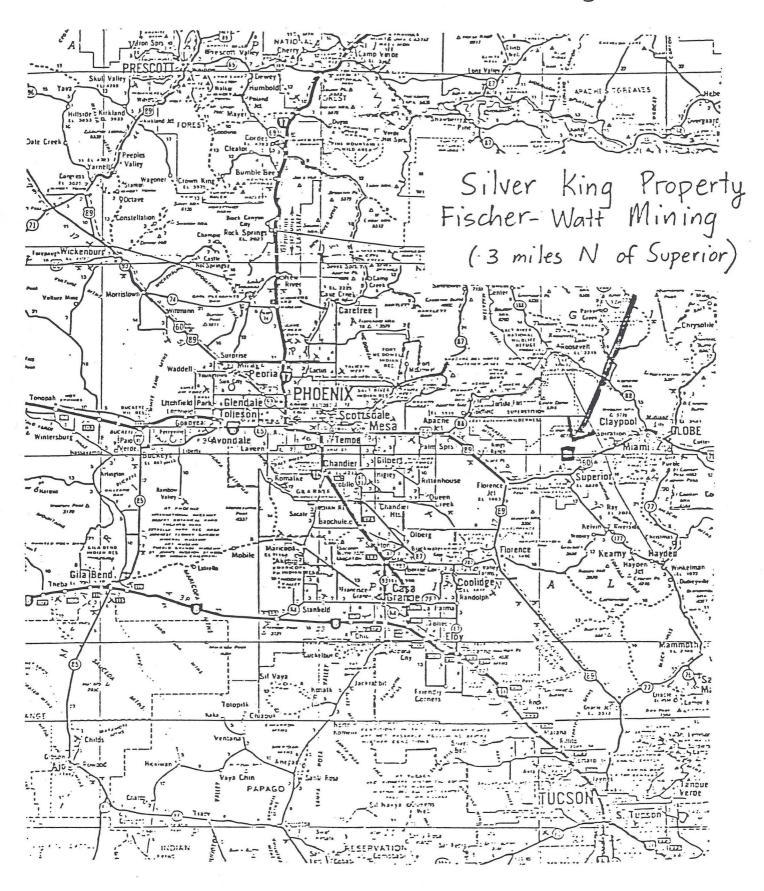
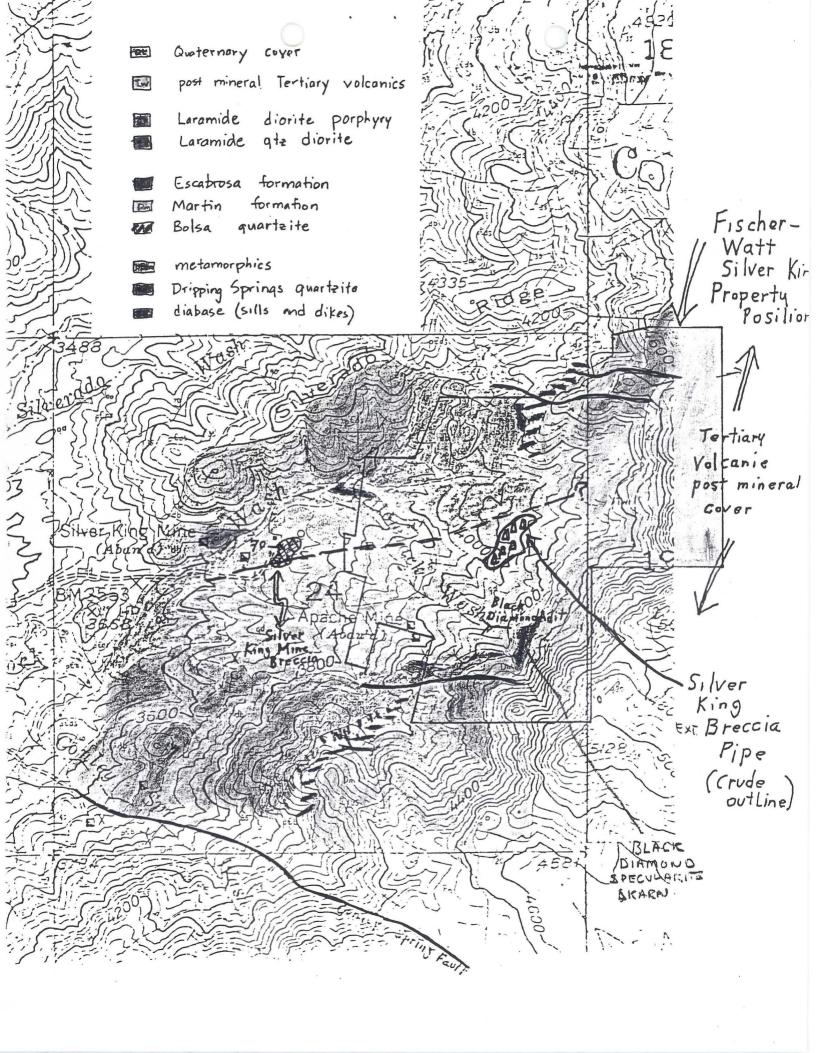
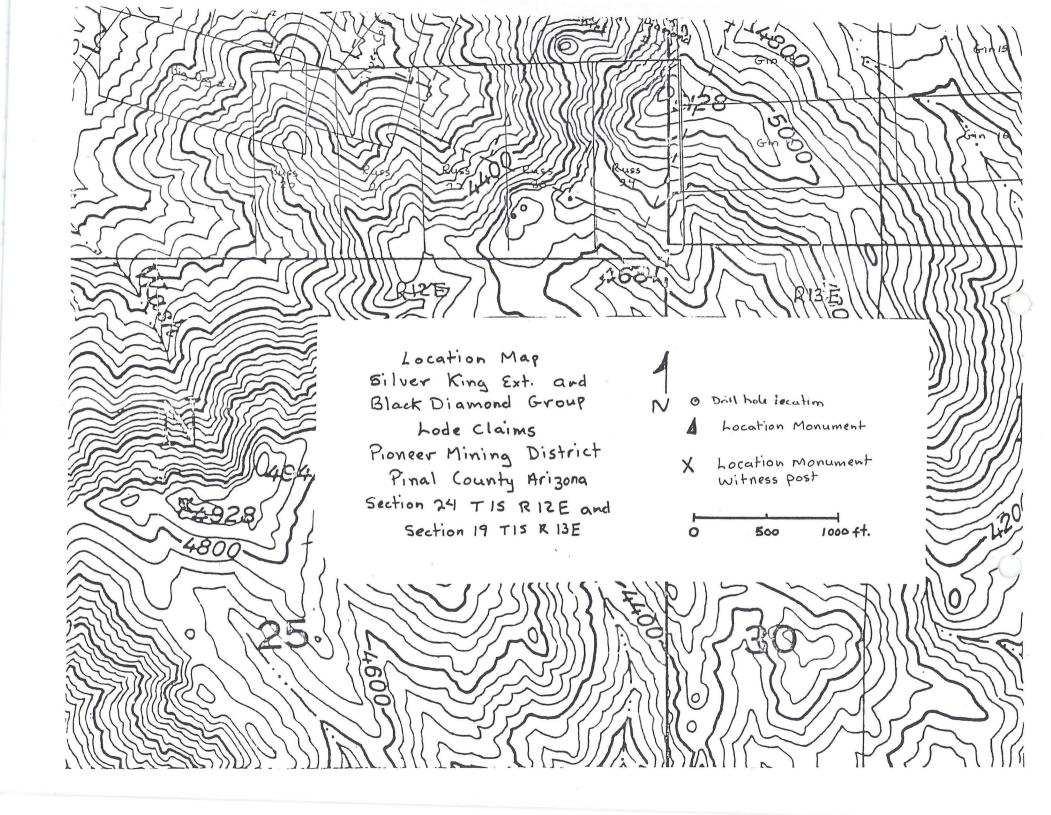


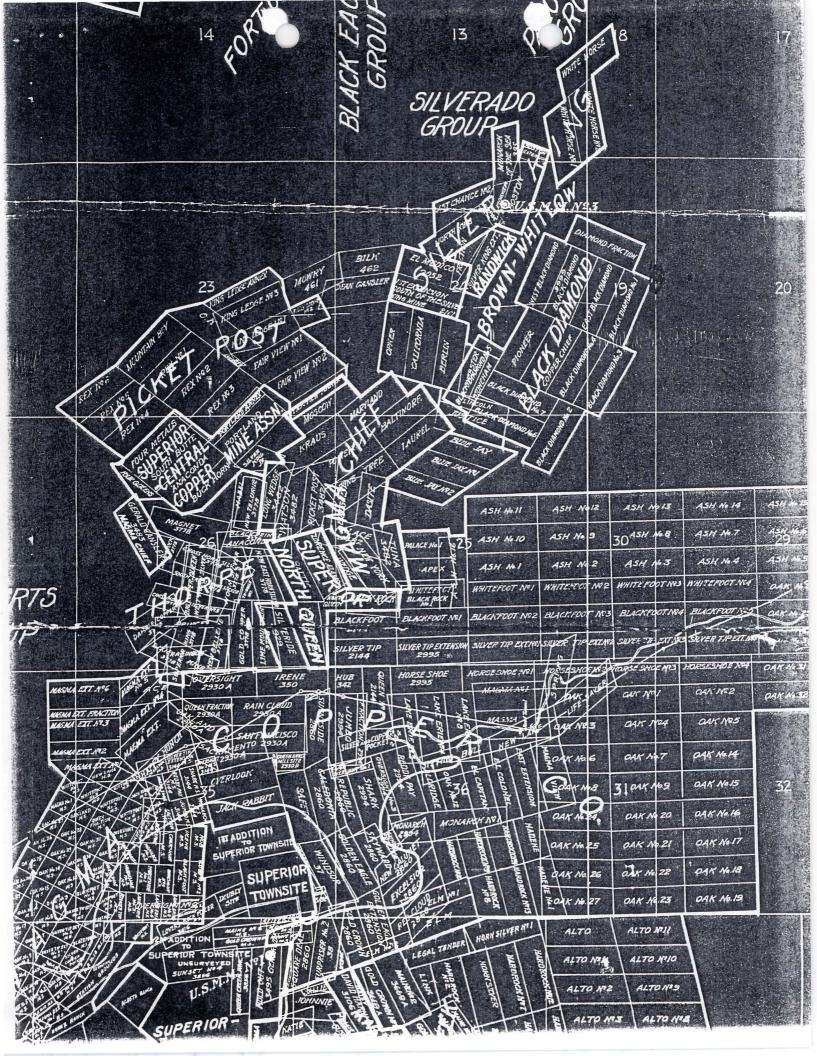
Figure 1.











Fischer-Watt Mining Co. Inc.

ADMINISTRATIVE OFFICE: 114 TUCKER, SUITE 2 KINGMAN, ARIZONA 86401 PHONE: (602) 753-1622

THE SILVER KING EXTENSION PROSPECT

Pinal County, Arizona

March 15, 1982

Fischer-Watt Mining Co. Inc.



ADMINISTRATIVE OFFICE: 114 TUCKER. SUITE 2 KINGMAN. ARIZONA 86401 PHONE: (602) 753-1622

THE SILVER KING EXTENSION PROSPECT

INTRODUCTION

Fischer-Watt Mining's holdings within the Silver King District consist of ± 280 acres within Section 24, TIS, R12E and Section 19 TIS, R13E, about 2½ miles NNE of Superior, Pinal County, Arizona (Figure 1). The property consists of 1 patented and 8 unpatented lode claims leased from Bill Kirtland (specific lease terms are discussed in a later section) and 14 fractional unpatented claims staked by FWM. A complete claim map is attached. The property is located immediately adjacent to the Silver King Mine (which produced $6x10^6$ oz. of Ag from a circular pipe shaped body between 1875 and 1889) and just 1½ miles NNE from Magma Copper's vein and replacement deposit north of Superior.

To date, Fischer-Watt Mining's activities on the property has consisted of field mapping, geochem sampling and fluid inclusion studies. Although such efforts have not been thorough enough to develop concise targets, the property is favorably located with respect to three distinct target types: vein and limestone replacement ores similar to those at the Magma Mine, a possible buried Cu-Mo porphyry system, and enriched silver ore hosted by Silver Kingtype quartz breccia plugs.

GEOLOGY

The principal geologic feature of the property is a Laramide intrusive complex consisting of a small diorite porphyry stock (within which the Silver King Mine is located) and a larger quartz diorite body. East dipping Precambrian diabase sills and sediments and Lower Paleozoic strata flank the intrusives on the north and south. Included in this sequence is the Devonian Martin limestone, host to large replacement ores one mile south in the Magma area and to surface specularite skarns at the Black Diamond claim of this property. The entire pre-Teritary geology is then covered by a thick pile of post-mineral volcanics to the east. A generalized geologic map, (Figure 2) largely based upon the USGS geologic map of the Superior quadrangle, depicts FWM's claim position in relation to these features. Although Fischer-Watt's land position is a relatively small one, it is strategically located with respect to possible Magmatype replacement bodies in the Devonian Martin formation, a possible mineralized Cu-Mo porphyry system related to Laramide intrusive activity, and possible Silver King-type mineralized pipe features.

REPLACEMENT ORES

The Black Diamond skarn (see Figure 2) is located within a NNE trending 25° east dipping wedge of Devonian Martin limestone approximately 50' thick which is in direct contact with Laramide quartz monzonite to the west and is covered by tuffaceous Tertiary volcanics to the east. Massive bladed specularite associated with other calc-silicates and locally coated by minor encrustations of copper carbonate mineralization crops out for approximately 300' before being covered by volcanics to the northwest. A major EW structure with approximately 300' of right lateral movement offsets the Martin just south of the skarn body but the time relationship website between faulting and mineralization is not clear.

A long flooded adit, portaled in the quartz diorite apparently succeeded in reaching the skarn. Although the portal was pumped out in an effort to enable sampling of the workings, the adit apparently was driven beneath the mineralized Martin and unfortunately ore shoots and passages up into the stoped (?) zones are caved and inaccessible.

The general structural setting and mineralogy observed in the limited exposure of lower Martin formation at the Black Diamond is quite similar to that described to be associated with replacement ores at Magma. Above the 3000' level hematite is the predominant gangue at Magma and "appears to be most common near the margins of the replacement deposit." (Hammer and Peterson 1967). The large specularite skarn at Black Diamond has not been tested downdip to determine if it represents the marginal effects to an economic sulfide replacement deposit. Furthermore, the strong, although not completely understood relationship of ore to E-W striking veins, (Sell, 1961; Hammer and Peterson, 1967) also lends credence to the ore potential of the Black Diamond prospect for a major E-W fault truncates the Martin immediately south of the skarn outcrop. If solutions passing up the EW structure did migrate northward from this vein into the Martin and proceed updip to the surface (a scenario proposed by Hammer and Peterson for Macma) then the downdip extension of the Black Diamond skarn (for which FWM controls the apex) north of this fault would be an attractive exploration target.

In addition, to the exposed skarn in the southern portion of the claim block, unaltered Devonian Martin crops out north of the quartz diorite and is cut by EW structures that could have served as conduits for mineralizing fluids under the volcanics to the east. Furthermore, the intermediate 2000' interval where the Devonian strata centrally located within the claim block, is completely covered by volcanics may also contain prospectable ground, especially where a major N75E structure projects through the buried Martin limestone (see Figure 1).

Cu-MO PORPHYRY POTENTIAL

Fairly widespread stockwork quartz-sulfide veining within portions of the quartz diorite and centrally located quartzsericite-pyrite altered intrusive breccia pipe (± 400 feet in diameter) indicate evidence of a moderate sized porphyry type hydrothermal system within the eastern half of Section 24, TIS, R12E. Widespread guartz + chlorite + k-spar ± chalcopyrite ± pyrite ± magnetite veins within the quartz diorite outline a propylitic to weak phyllic alteration envelope 2000 x 3000 feet. Later quartz + sericite + pyrite veins showing a strong phyllic alteration zone are spatially. restricted to the immediate vicinity of the breccia pipe and present a geologic setting similar to that observed within the mineralized diorite intrusive marginal to economic ore at the Sierrita porphyry copper deposit. Although surface sampling within the guartz diorite and the breccia pipe did not reveal economic grades of copper or molybdenum, they did reveal distinct Mo, Pb, and Zn anomalies spatially associated with the pipe. (Figures 3-5) Furthermore, weakly anomalous arsenic values appear to form a crude halo around the breccia pipe and the Pb, Zn, Mo anomalies (Figure 6).

Additional positive evidence for a high temperature hydrothermal event in the Silver King area was found from a fluid inclusion study within the pipe. Inclusions from both quartz "phenocrysts" and quartz-pyrite veinlets within the pipe revealed that hypersaline (>50 wt%) hot (350-450°C) fluids invaded the breccia pipe. Samples FI-2 and FI-3 (Figure 7) came from the breccia pipe.

However, perhaps of even greater interpretative significance than the high temperatures and total salinity is the composition of the inclusions. The presence of both halite and sylvite as daughter products within the inclusions allows for quanitative determination of Na/K ratios within the mineralizing fluids. In the Silver King breccia pipe determination of Na/K values by salt dissolution indicated the presence of two compositionally distinct hypersaline fluids (see Figure 8), suggesting the possibility that two separate high saline hydrothermal fluids bathed the pipe during its evolution. Of further significance is the extremely low Na/K ratio observed, well out of range of an equilibrium value expected for fluids in equilibrium with diorite and much more in equilibrium with more potassic rocks. The low Na/K fluid compositions provide permissive evidence of the presence of a felsic intrusive host at depth in the Silver King area.

BRECCIA HOSTED SILVER MINERALIZATION

The Silver King Mine, producer of 6 million ounces of silver from 1875 to 1889, is located approximately 1000' west of the FWM land position. High-grade supergene silver mineralization was exploited from a 130 feet diameter pipe-shaped 70° west dipping "plexus of veins and veinlets of guartz." (Ransome, 1974) The mineralized stockwork zone, consisting of sulfides of lead, zinc, and copper in a gangue of quartz and pyrite is contained completely within a plug of unfractured diorite porphyry, which intruded the larger quartz diorite stock which extends onto the FWM ground. Ransome describes the orebody as "formerly cropping out at the top of a little hill about 75 feet high, composed of much altered yellowish-brown porphyry, "a description not too unlike the surface expression for the breccia pipe described in the previous section. Unfortunately, the present Silver King area surface exposure is a caved pit about 150' in diameter from which practically no information can be gained.

-4-

Although the high saline fluids observed within the FWM pipe were not observed in the Silver King pipe (low to moderate temperature 180°-330°C) two phase inclusions were all that were observed, FI-1, FI-2) a few quartz veinlets containing galena, sphalerite and barite can be detected in the less altered fringes surrounding the breccia pipe. Unfortunately, the present logistical conditions around the Silver King Mine preclude definitive physical comparisons between the two quartz-rich breccia plugs. However, their proximity (2000' separate the two similar sized features) and their similar geologic setting within a Laramide intrusive complex represent positive comparisons suggesting that further exploration for enriched silver ore in the area of the pipe may be justified.

LAND STATUS

Fischer-Watt Mining presently controls 1 patented and 22 unpatented federal lode claims. Due to the complex claim situation in the area, most of the unpatented claims controlled by FWM are fractional claims (Figure 9). FWM controls about 280 acres at the present time and we have been in negoitiations with Guzeman Construction over the last 2 years regarding their large land package of unpatented lode claims to the north and west. However, no formal acreement has yet been reached.

We presently have underlease 1 patented and 8 unpatented lode claims under the following terms:

REFERENCES

Hammer, D.F. and Peterson, D.W., 1968, Geology of the Magma Mine Area, Arizona: Ore Deposits in the United States, editor, John D. Ridge, pp. 1282-1310.

Ransome, F.L., 1914, Copper Deposits near Superior, Arizona: U.S. Geol. Surv. Bull. 540-D, pp. 139-158.

Sell, J.D., 1961, Bedding Replacement Deposit of the Magma Mine, Superior, Arizona; Unpublished M.S. thesis, Univ. of Arizona.

Fischer-Watt Mining Co. Inc.

ADMINISTRATIVE OFFICE: 114 TUCKER, SUITE 2 KINGMAN, ARIZONA 86401 PHONE: (602) 753-1622

July 6, 1982

Bill Kirtland 832 Hondo Apache Junction, AZ. 85220

Dear Bill;

Enclosed please find copies of all the data which we have generated on the Silver King Extension Area to date. Of particular interest is the Fred Haynes 3/15/82 report which summarizes all the previous work. The other reports give the details for Fred's summary.

I appreciate your's and Jerry's call yesterday and I do hope we can get a few test holes on the property in the reasonably near future.

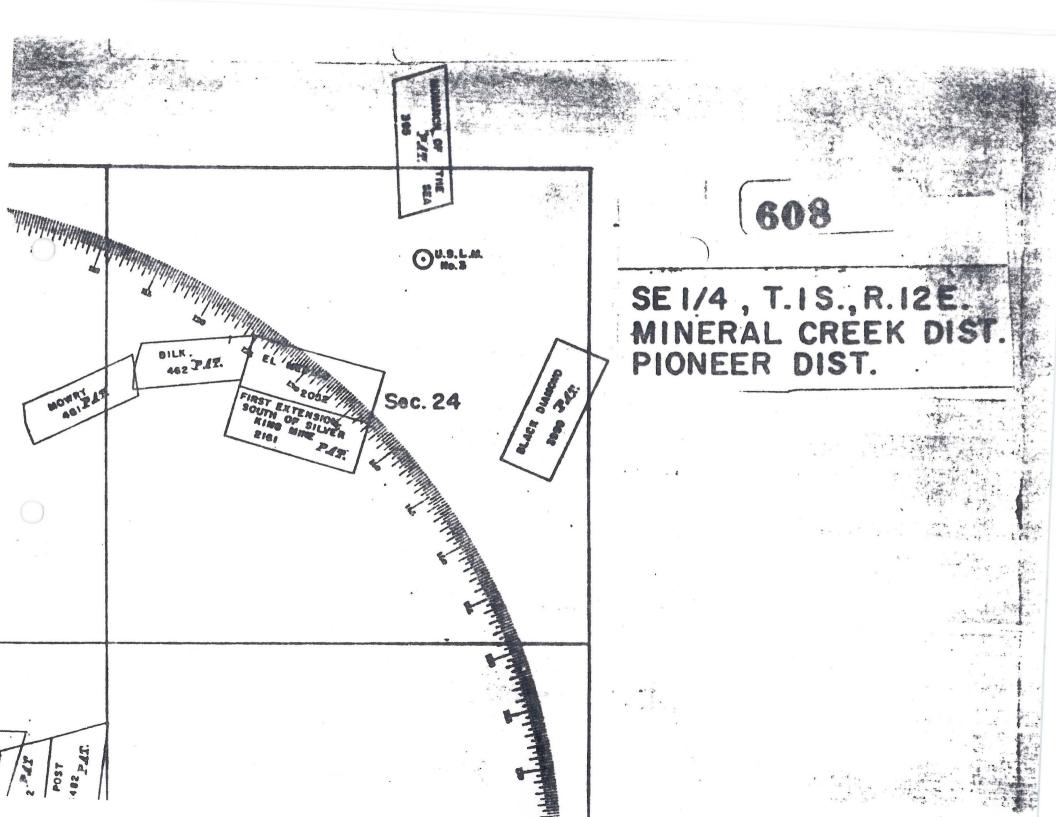
I am leaving for Billings Tuesday, 7/6/82 and hope we get the final details of our joint venture worked out.

Best Wishes,

W. P. S. / P.A.S.

Perry Durning

cc: Jerry Kirtland



TO: FEFTY DURNING, Fischer-Watt Mining Co. FROM: Fred Haynes, Jim Reynolds RE: Silver King Breccia Pipe Prospect DATE: March 16-19, 1980

CONCLUCIONS

(1) The structural environments responsible for localization of minoralization and alteration at the Silver King Mine and the Silver King breccia pipe contrast markedly. At the mine, brecciation and mineralization within the diorite porphyry appear to be controlled by a N80°E trending structure. The breccia pipe was not localized along any obvious planar structures, and apparently formed by a process unlike fault brecciation.

(2) The character of fracturing in and adjacent to the Silver King breccia pipe and the nature of the pipe itself are suggestive of a porphyry copper environment. Widespread quartz + chlorite + K-spar <u>+</u> chalcopyrite <u>+</u> pyrite <u>+</u> magnetite veins within the quartz diorite and later quartz + sericite + pyrite veins spatially restricted to the immediate vicinity of the breccia pipe present a geologic setting similar to that observed within the mineralized diorite intrusive at the Sierrita porphyry copper deposit.

RECOMMENDATIONS

(1) Detailed mapping of the eastern portion of section 24 at a scale of 1"=400' is recommended to evaluate the nature and extent of the porphyry system. Careful mapping of changing fracture density and vein mineralogy within the intrusives and adjacent Precambrian and Paleozoic rocks would be required.

(2) A cursory study of homogenization temperatures from fluid inclusions within quartz associated with silver mineralization at the Silver King Mine and within quartz from the Silver King breccia pipe is recommended. Such a study should provide quantitative data allowing a comparison of the two geologic environments.

SILVER KING MINE

The Silver King Mine is located approximately 21/2 miles NNE of the town of Superior, Arizona, and less than 2 miles north of the Magma vein. Mineralization at the mine occurs within a small dioribe porphyry stock which intrudes the southeastern end of a larger quartz diorite stock. Although earlier accounts of the district's geology (Galbraith, 1935; Ariz. Bull. 151&156) paid limited attention to structural controls for the 6 million ounces of silver that was recovered about a century ago, a major N80°E, 82°S structure parallels the mineralized zone and appears to be the primary control for circulation of fluids from which the silver ore was deposited. This fault vein zone can be traced over 1500' across the diorite porphyry from the large glory hole at the mine until it disappears into alluvium to the East (see map with topo base). It two localities (SK-1 & SK-2) the structure crops out as a 15-20' wide zone characterized by clay-altered and iron oxide-stained diorite porphyry containing abundant quartz stringers and veins carrying evidence of past sulfides. In both outcrops, bull quartz veins up to 6" in width are present. It appears likely that the tetrahedrite, sphalerite, and galena bearing quartz that

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carried high silver values occurs at dilatant zones along this structure, perhaps at intersections with other unknown structures.

BILVER KING BRECCIA

The bilver King breccia pipe is located approximately 1500' east of the large glory hole of the Silver King Mine. The 400' by 450' breccia body intrudes and brecciates an equigranular quartz diorite stock-like intrusive and two N50°W trending diorite porphyry dikes (see accompanying map). The entire body is pervasively altered to a quartz-sericite assemblage. Iron oxide staining and casts after sulfides suggest an original sulfide content in excess of 10% by weight. Abundant stringers, pockets, vugs, and voins of quartz crosscut the breccia and are often characterized by free-standing quartz crystals up to a cm in length. In most cases the breccia shows sharp contact relations with the quartz diorite and such contacts, particularly evident on the southwest side, suggest that the breccia body plunges about 45-50° NW.

Quartz-sericite veining extends into the unbrecciated quartz diorite, but the density of such fracturing drops off dramatically away from the breccia. The quartz diorite outside of the influence of the texturally destructive sericitic alteration is crosscut by a dense stockwork of quartz + sulfide veins in which chalcopyrite, pyrite, and/or magnetite are associated with K-feldspar and chlorite.

The orientation of structures observed in the vicinity of the breccia vary markedly from those near the mine. All major fault and vein features observed near the breccia trend NNE to NE with $120^{\circ}E$ to $130^{\circ}E$ structures predominating. Four such structures,

3

wide quartz veins (>4") associated with apparent fault gouge clays and iron oxides, are shown on the detailed map of the breccia pipe.

DISCUSSION

The differences in structural control and in alteration and mineralogy between the mine area and the breccia suggest that the breccia pipe is not a viable target for additional silver mineralization. Instead the breccia pipe and its surroundings show many similarities to a porphyry copper environment. Strong vein-veinlet controlled alteration in the form of quartz + sulfide + chlorite <u>+</u> magnetite <u>+</u> K-feldspar veins occurs over a considerable area in the quartz diorite. Paleozoic limestones adjacent to the intrusive have been extensively altered to skarn. Such fracturing and alteration does not appear to be related to major structural features such as the fault along which the Silver King Mine is located.

The presence of chalcopyrite in surface outcrop has to be regarded as a negative feature for it probably precludes the possibility of supergene ore. However, the anomalous Ho values within the breccia, and the nature of the host rocks (abundant diorites, Precambrian schists and diabase) are positive criteria for possible hypogene molybdenite ore. Detailed mapping is required to attempt to find signs of a possible buried cautative intrusive that might be capable of producing a hypogene porphyry copper system carrying enough molybdenite to be of economic interest.

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GEOCHEMISTRY

Detailed Geochemical sampling of the breccia pipe was inhibited by inclement weather during the final day of the project; however, 12 samples from the pipe and adjacent area were collected. In addition, 5 samples were collected from other structures, including the Silver King Mine fault vein structure. It is suggested that all be analyzed for Ag, Au, Cu, Pb, Zn, and Mo.

1. 30

REFERENCES

1. Galbraith, Frederic W., 1935, Geology of the Silver King Area, Superior, Arizona, University of Arizona Thesis, pp 118-129.

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- Peterson, Donald W., 1969, Geology of the Superior Quadrangle,
 Pinal County, Arizona; U.S.G.S. G Q -818 .
- 3. Ransome, F. L., 1914, "Copper Deposits Near Superior, Arizona"; Contributions to Economic Geology; U.S.G.S. Bull. 540 pp 156-158.

Fischer-Watt Mining Co. Inc.



ADMINISTRATIVE OFFICE: 114 TUCKER, SUITE 2 KINGMAN, ARIZONA 86401 PHONE: (602) 753-1622

27 October 1980

Mr. William Kirtland 982-313, 619 South Copper Lane Apache Junction, Arizona 85220

Silver

Dear Bill:

I have had an opportunity to talk with Carl Fischer and Fischer-Watt Mining would like to propose a lease option on your 14 patented and unpatented Black Diamond lode claims located 2 miles NNE of Superior, Pinal County, Arizona. As I mentioned Fischer-Watt Mining has done considerable work in the area and have already identified targets suitable to drilling.

We would propose to lease your claims under the following terms:

- 1) During the 1st 6 months 1,000 feet of drilling
- 2) During the 2nd 6 months 2,000 feet of drilling
- 3) At the end of the 1st year \$5,000. payment
- 4) At the end of the 2nd year \$10,000. payment
- 5) At the end of the 3rd year \$15,000. payment
- 6) From the 4th year on \$15,000./year until production
- royalties exceed pre-production royalty payments.

Should production be realized from your claim block we propose a production royalty along the following lines. The royalty payments would escalate as the net value per ton of ore mined increased according to the following chart.

Net value of the ore	
< \$50./ton	3% net smelter return
\$50 \$99./ton	4% net smelter return
\$100 \$149./ton	5% net smelter return
\$150 \$200./ton	6% net smelter return
> \$200./ton	7% net smelter return

*** GENERAL REFERENCES** AND ORE DEPOSITS OF AREA GEOLOGY SA, ERIOR MINING FI < SHORT, M.N., REFERENCE 1 ARIZONA, 1943, ABM BULLETIN ISI, PLATE I F2(USGS MINREM, INVESTIGATIONS FIELD STUDIES MAP MF-2,53, 1962 REFERENCE 2 BICA ABGMT-WORM FILE DATA REFERENCE 3 F4 < REFERENCE 4 -U.S. CRIB-SITE FORM **RECORD IDENTIFICATION** RECORD NUMBER 820 (X, 1, M) B10 4 RECORD TYPE DEPOSIT NUAABER 840 5 FILE LINK IDENT. BSO (USBM -004 021 GI (82, 50,3) INFORMATION SOURCE BS0 (1.2. REPORT DATE REPORTER(SUPERVISOR) G2 < ROTH, FRAM (last, first, middle initial) (GEST, DON (last, first, middle initial) FRANCES REPORTER AFFILIATION GS < ABGMT SITE NAMEA10 BLACK DIAMOND MINE SYNONYMS A11 < LOCATION AINING DISTRICT/AREA ASO PIONEER DISTRICT AGO PINAL COUNTY STATE ASO (A.Z.) COUNTRY A40 (U.S.) HYSIOGRAPHIC PROV A63 (1.2.1), A62 (1,5,0,5,0,1,0,0,) A64 (0,1. K. , K. (, 1.9,7,9,)) RAINAGE AREA AND STATUS ANO SUPERIOR (.1.9.9.9. UADRANGLE NAME QUADRANGLE SCALE A100 (2.4.0.00.) 1 ECOND QUAD NAME A92 (.)) SECOND QUAD SCALE API .) A107 (41,2,08,FT) LEVATION *ACCURACY JTM GEODETIC A120 < 3, 6, 8, 7, 4, 4, 0, VORTHING LATITUDE ATO N,> <___ ACCURATE ASTING A130 (4,9,2,6, 8,0) LONGITUDE ASO ,W,> ESTIMATED EST ZONE NUMBER AITO CADASTRAL OWNSHIP(S) ATT (0.0 .1 .5 .: . . *RANGE(S) A78 (0,1,2, E, :,) ECTION(S) A79 24 .:.... ۲. :. 1 SECTION FRACTION(S) AT6 COF E2 AERIDIAN(S) ABIK GILA AND SALT RIVER 20SITION FROM NEAREST PROMINENT LOCALITY AB2 ABOUT 0.5 MILES SOUTHWEST OF KINGS CROWN PEAK OCATION COMMENTS ASS (LOCATION MEASURED TO ADIT ON BLACK DIAMOND CLAIM IN VELLOW TACKET WASH ESSENTIAL INFORMATION

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GEN. ANALYTICAL DATA COM. INFO. COMMENTS		1
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POTENTIAL PRODUCTS	POTEN	
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	e) PRODUCTION SIZE MAD MED LGE (circle one)	PRODUCTION UND NO (circle one)
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	14	
*	STATUS AND ACTIVITY A20	STATUS AND ACTIVITY A20
[*] YEAR OF DISCOVERY	L10 () *NATURE OF DISCOVERY L30 (B) *YEAR C	DF FIRST PRODUCTION L40 $\langle 1927 \rangle^{+}$ Year of last production L45 $\langle 1990 \rangle^{-}$
PRESENT/LAST OWNER	A12	
PRESENT/LAST OPERATOR		
EXPL./DEV.COMMENTS	LITOK PREVIOUS OWNER / OPERATOR : BLACK	DIAMOND MINING CO. (1927)
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	DECONTRACTOR A	
	DESCRIPTION	OF DEPOSIT
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DEPOSIT FORM/SHAPE	M10< M20< *UNITS M21< >	MAXIMUM LENGTH M40
	M30 (> *UNITS M31 (>	MAXIMUM LENGTH M40 < UNITS M 41 < MAXIMUM WIDTH M50 < UNITS M 51 <
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DIRECTION OF PLUNGE	M100	> *PLUNGE M90<
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		> *PLUNGE M90<
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GENERAL COMMENTS GEN <_

TO: Perry Dui .ng, Fischer-Watt Mining _ ompany FROM: Frederick Haynes

REGARDING: Fluid Inclusion Study, Silver King Breccia Pipe and Line, Superior, Arizona

DATE: May 14, 1980

CONCLUSIONS

- 1. The thermal and compositional characteristics of fluids attending formation of the breccia pipe differ markedly from those at the Silver King Mine. Hypersaline (>50 wt%) hot (350-450°C) fluids invaded the breccia pipe; lower salinity (<2 wt%) cooler (180-300°C) solutions deposited quartz and presumably sulfides at the Mine.
- 2. At least two compositionally distinct hot hypersaline fluids bathed the breccia pipe during its evolution. Quartz-sericite-pyrite alteration may have occured after each with the second hypersaline fluid decrepitating inclusions from the earlier quartz-sericite-pyrite event.
- 3. The low Na/K ratios, and the high temperatures of fluids within the breccia pipe provides permissive evidence of the presence of a felsic intrusive host at depth.

RECOMMENDATIONS

- 1. No further fluid inclusion work is warranted at this time.
- 2. Integration of this work with detailed alteration and ⁰ mineralization mapping and with geochemical data should provide enough preliminary material to justify a submittal report for the property as a high-level porphyry target above an unexposed felsic intrusive.

INTRODUCTION

The structural and genetic relationships between the mineralized system at the Silver King Mine that hosted six million ounces of silver and that associated with a small (400'by 250') breccia pipe 1500' to the east are complex. Field evidence, both structural and textural, comparing and contrasting the two environments is inconvlusive. Some clear differences are immediately evident: the pervasive quartzsericite-pyrite alteration at the pipe is absent at the Mine, quartz is generally clearer at the pipe, a major structural feature transects the mine, none is apparent at the breccia. However, the pipe-like form documented for the orebody and apparent in the breccia precludes any hasty consignment of the two features as unrelated.

Semi-detailed evaluation of thermal and compositional variations within the systems from fluid inclusions yield quantitative data contrasting the two environments. In total, six samples were studied, four from the various features in and adjacent to the breccia pipe and two within the mineralized material from the Silver King Mine. The exact nature of each is listed below:

- 0
- FI-5 : Quartz associated with Kspar-chlorite-magnetitepyrite-chalcopyrite veins crosscutting the quartz diorite. (located about 200' East of the breccia)
- FI-2 : Quartz phenocrysts within the pervasively quartz-sericite-pyrite altered groundmass of the breccia pipe
- FI-3 : Quartz associated with pyrite and possibly sericite in veins and vugs within the open spaces of the breccia pipe.

- FI-4 : Quartz associated with barit and galena from voin near the breccia pipe
- FI-1 : Quartz, vuggy, associated with pyrite and galena from the Silver King Mine (U of A collection)
- FI-6 : Quartz from Silver King Mine, single large clear zoned crystal (2") associated ? with sulfides.

The first four samples from the breccia area are listed in presumed paragenetic sequence, earliest to latest.

SUMMARY OF RESULTS - As delineated in Figures 1 and 2.

- Fluids with temperatures in excess of 350°C and perhaps as high as 450°C bathed the breccia pipe.
- 2. The composition of hypersaline fluids within inclusions found in quartz phenocrysts from the breccia pipe reveal a bimodal distribution.
- 3. Inclusions in quartz-pyrite veins within the pipe homogenize over a wide temperature range (200-430°C); others would not homogenize and appear to have been decrepitated.
- 4. Homogenization temperatures of fluid inclusions within Kspar-chlorite-sulfide veins collected outside the breccia pipe but in the quartz diorite varied from 150-375°C.
 The 380-430°C temperature inclusions and the high salin-ities observed in the pipe were not evident in these veins.
- 5. Temperatures measured in two samples of quartz from the Silver King Mine were lower still, and both samples showed distinct peaks. A 290-310°C peak was recognized in a quartz-pyrite-galena sample, and a 180-230°C peak was delineated within a large (2") clear zoned quartz crystal associated with tetrahedrite? and sphalerite.
- 6. Salinities attending formation of quartz from the mine

samples was very low; freezing point temperatures of approximately -3° C indicate a 1-2 wt% NaCl equivalent solution.

- 7. A quartz-barite-galena vein collected near the breccia pipe showed similiar homogenization temperatures (160-300°C) to the mine samples, but lacked a distinct peak.
- 8. Napor-rich inclusions homogenizing at 360-440°C were observed in both the breccia and the Kspar-chlorite-sulfide veins.

INTERPRETATION

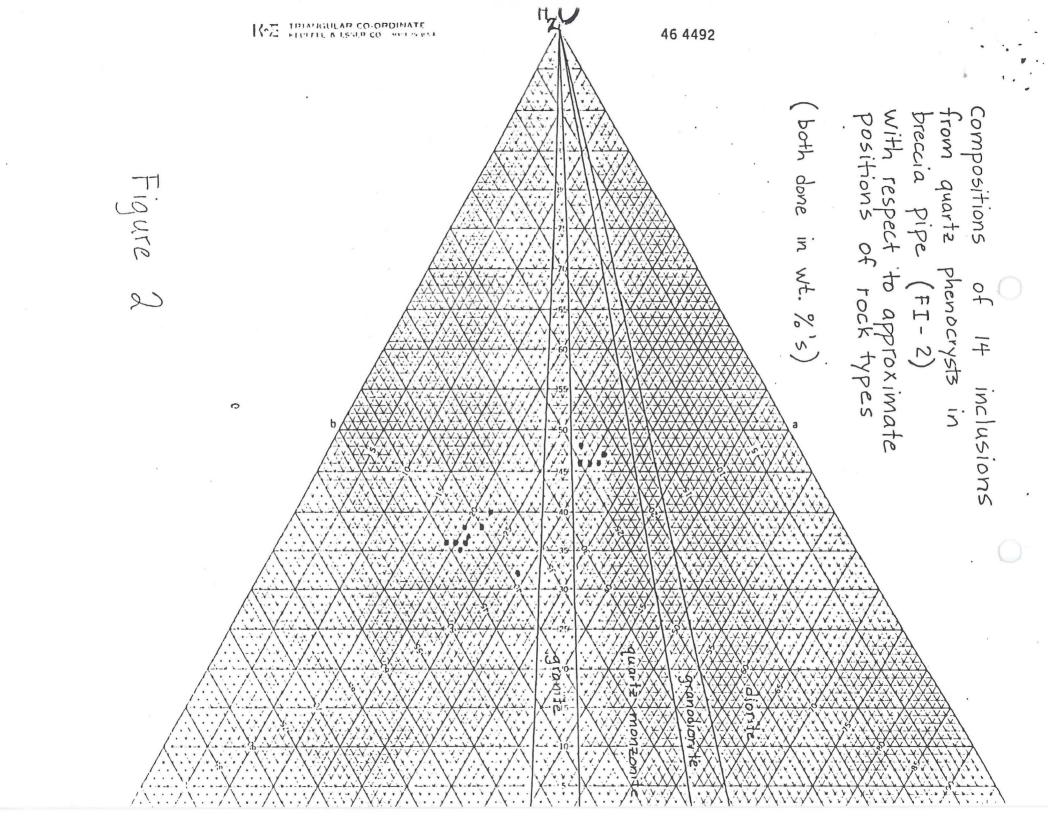
The highly variable nature of fluids associated with the breccia lend themselves to a host of interpretations. The following scenario is, however, consistent with the observed data.

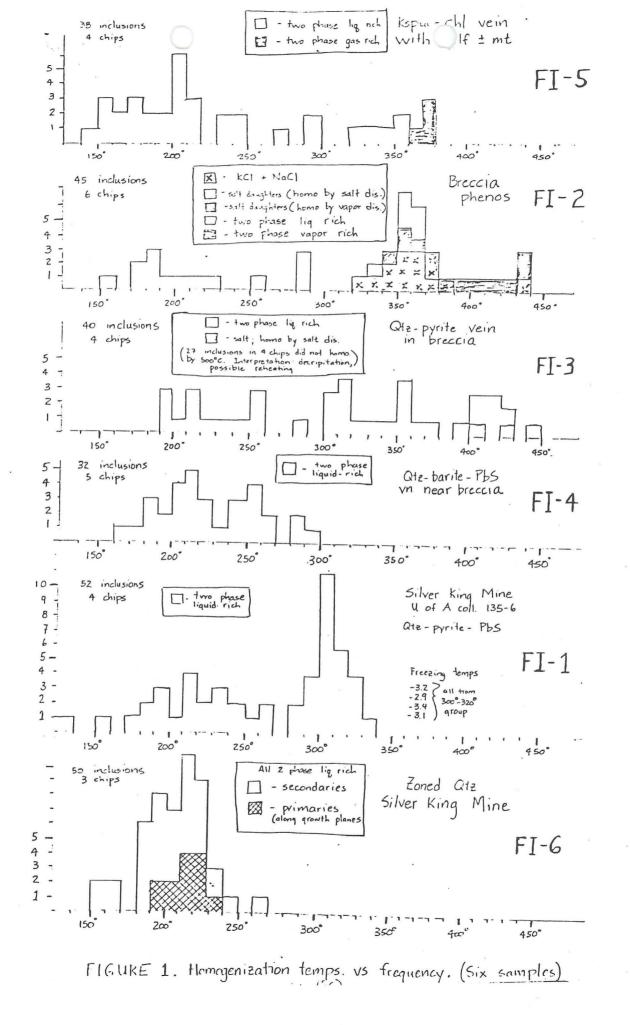
- A. Moderate salinity fluids circulating around or above a causative intrasive stock deposit Kspar-chlorite-sulfide veins in the overlying quartz diorite host at temperatures of 320-380°C.
- B. Water pressure build-up in a portion of this intrusive exceeds lithostatic load and is released along a zone of weakness in the form of a breccia pipe. Magmatic solutions dispersed through the pipe with this event are hot (350-420°C and carry a Na/K ratio of 1.6, a signature of the felsic intrusive from which they emanated.
- C. Permaability within the pipe created by the brecciation remains high after the magnatic fluids are flushed out, and cooler (300-350°C) solutions of primarily meteoric origin are convected through the permeable breccia pro-

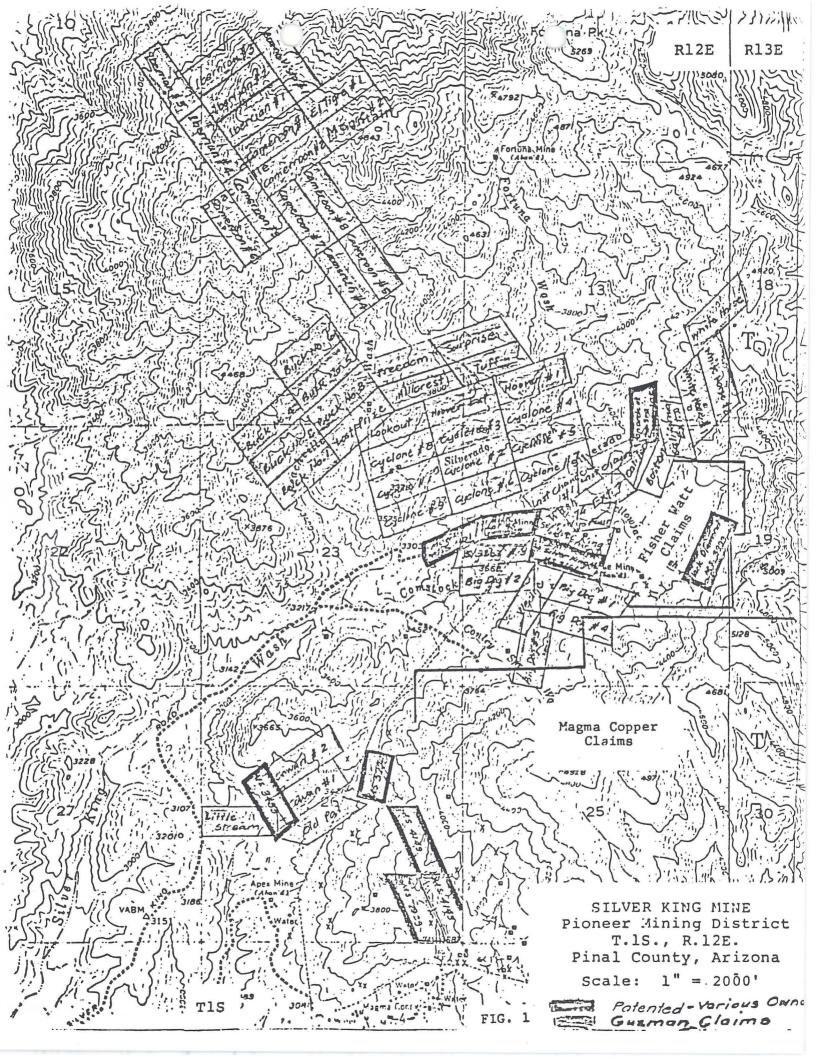
ducing pervasive quartz-sericite-pyrite alteration in the pipe.

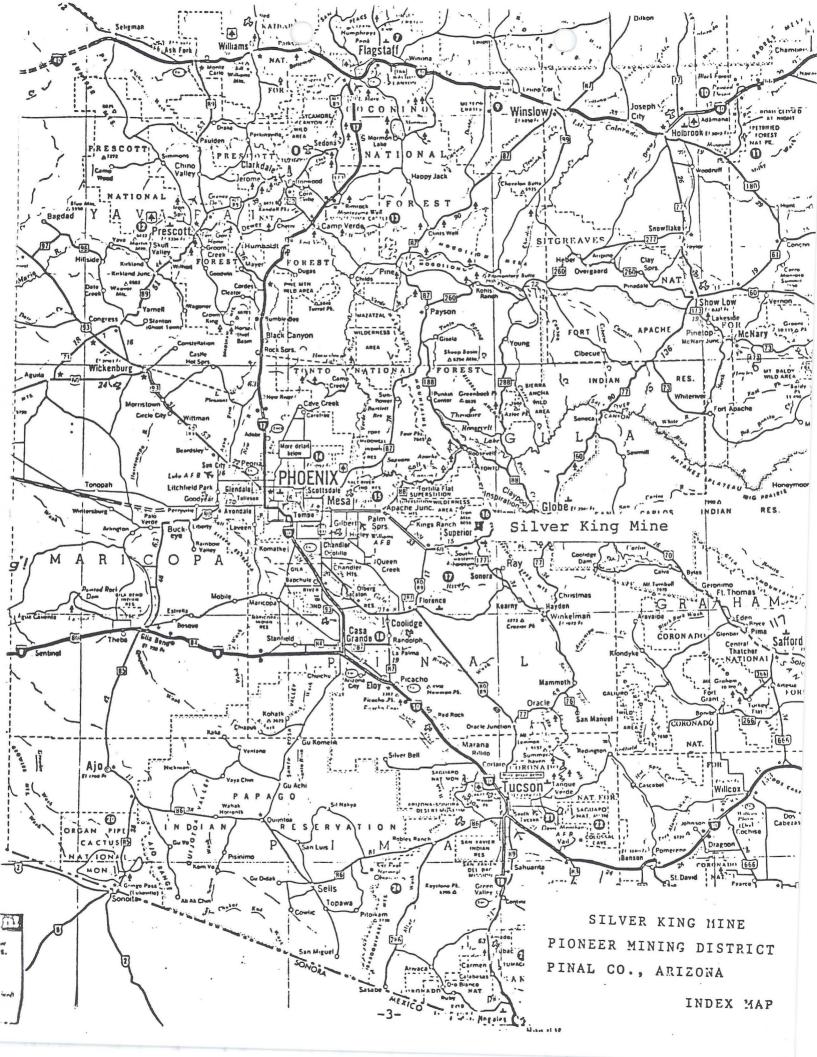
- D. A second surge of hot hypersaline magmatic waters invades the pipe. This fluid carries a lower Na/K ratio, for it is emanating from a much more differentiated source (the "last gasp" of magmatic activity). This fluid reheats earlier inclusions in the quartz-pyrite veins causing widescale decrepitation of inclusions associated with quartz-sericite alteration.
- E. A second stage of quartz-sericite-pyrite alteration commences with the end of the reheating event.
- F. Later base metal-bearing quartz-barite veins are deposited at cooler temperatures (200-300°C) and presumably lower salinities.
- G. Temperature and salinity data from both mine samples may have been suggest that it A at this time that the structure hosting the silver mineralization at the Silver King Mine was active.

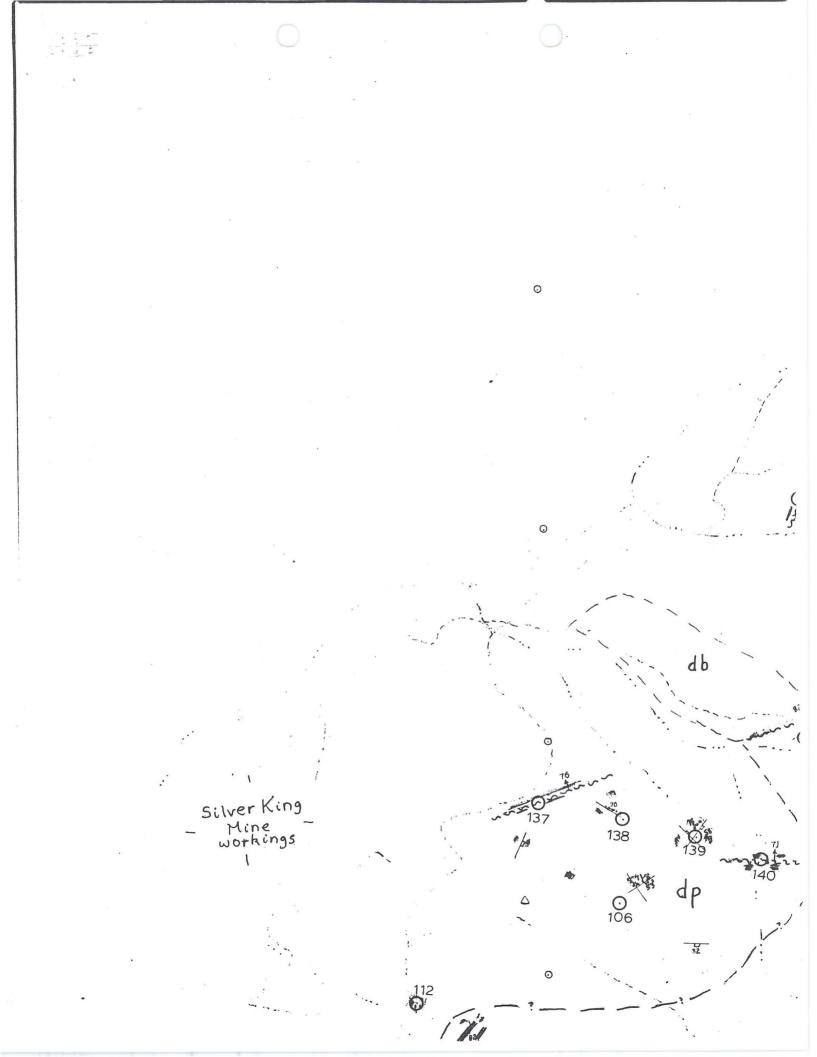
The existance of vapor-rich inclusions which homogenize at 360-440°C in FI-2 and FI-5 allow limits of 200-350 bars to be placed on the pressure attending formation of the breccia pipe, assuming moderate salinities in the vapor-rich inclusions.



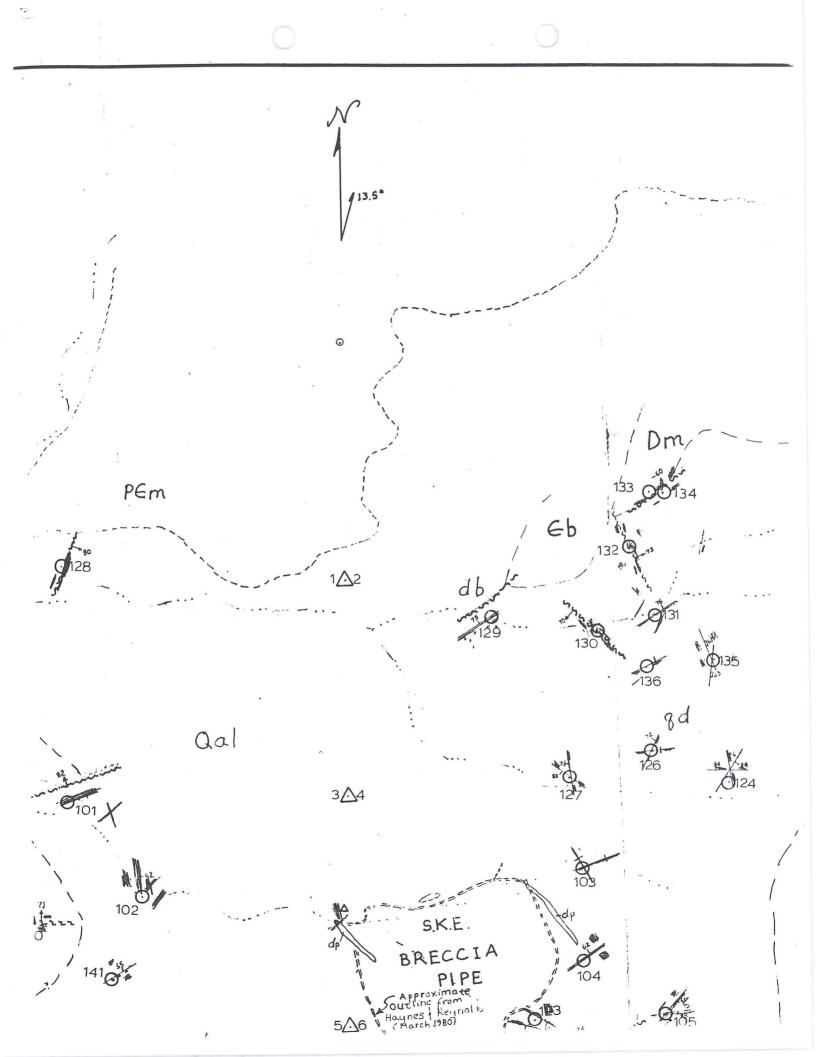


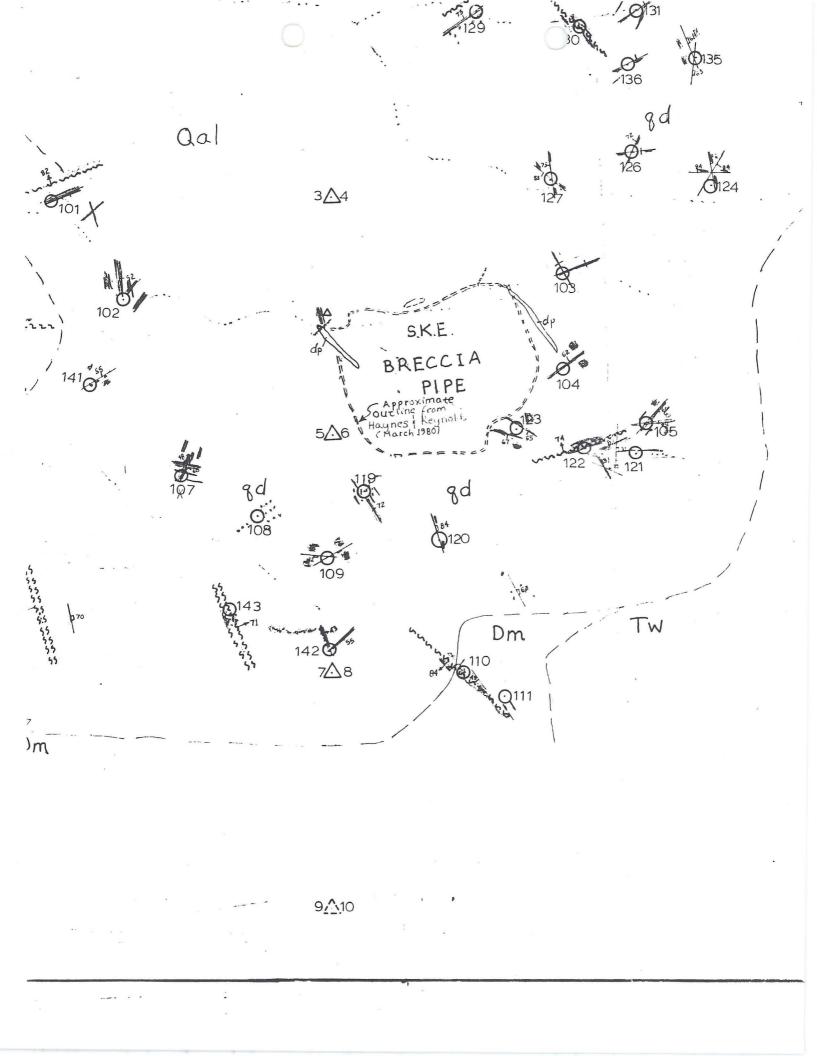


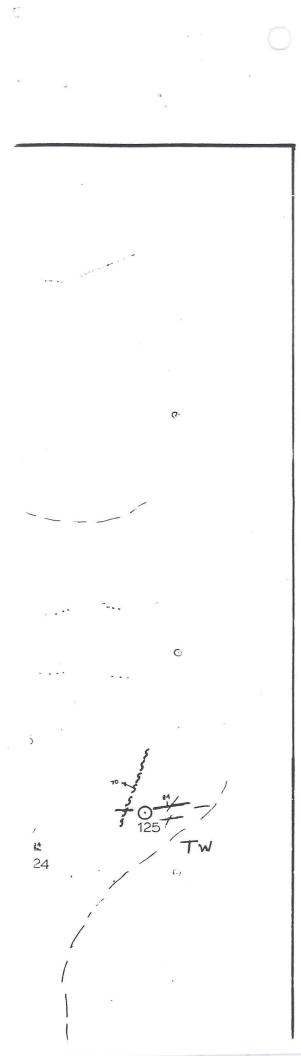






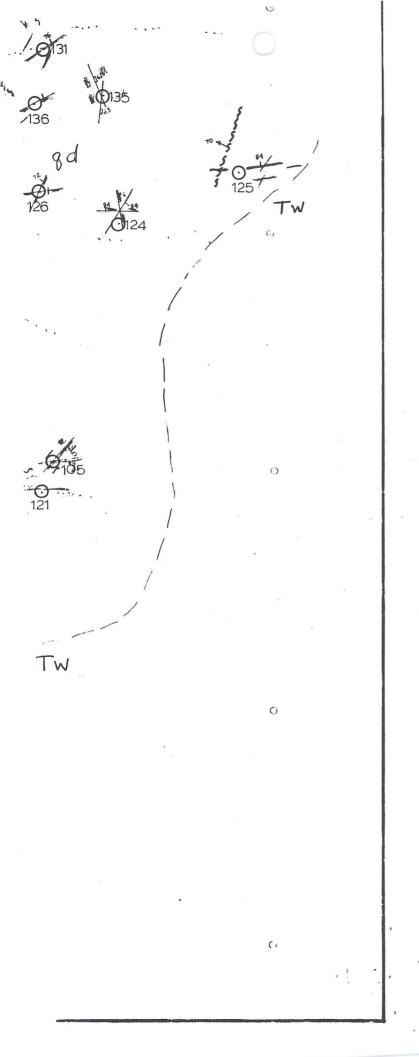






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Dm - Martin Limestone



shear zone other si O Sample locations i A SKE Discovery Moni Qal - alluvium Tw - Whitezail Congli dp - diorize porphyry gd - guartz diorize Dm - Martin Limestone Eb'- Cambrian rocks db - diabase Alteration and Mine EXT Scale : 1" = ~ 200' ± (1:5 (Note: Map not corrected for ph

<u>Reference</u>: Geologic base map from D "Preliminary Geologic Map of the I Superior Quadrangle, Pinal Cour U.S.G.S. Mineral Investigation Map_MF-25

Explanation sericize (perv.) 1+) - - with : py(+jar)tmagtcpy vns. + attitude lim) ± mag vns. jillic (clay tepid tch | t mafix -> FeOx) py (→jar) perv.)x) vnlt. ... rn joints si/ attitude of bedding

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Monuments

o Estimated position of claim corners (not investigated)

Conglomeraze yry -See Peterson (1962) for τe full strat. column cone 5 - Symbols represent only rocks in immediate periphery to SKE Bx pipe; rest of section

e 10 arrived of sil attitude of joints bedding ther symbols as per convention tions (SK-100's series) :ry Monuments o Estimated position of claim corners (not investigated) 1 Conglomeraze shyry rite -See Peterson (1962) for 2 STONE full strat. column ks - Symbols represent only rocks in immediate periphery to SKE Bx pipe, rest of section is undivided not shown. 400 d Mineralization Map for the Silver King Extension Claim Group, Pinal County, AZ. (1:2400)May 7-12, 1980 d for photo distortion) - by from D.W. Pezerson, 1962, SYVER, W. MORE Ethe Western Part of the 1 County, Arizona ", Syver W. More May 21, 1980 jations Field Studies

F-253

Fischer-Watt Mining Co. Inc.

ADMINISTRATIVE OFFICE: 114 TUCKER, SUITE 2 KINGMAN, ARIZONA 86401 PHONE: (602) 753-1622

TO: Perry Durning, Carl Fischer, Tim Watt FROM: Fred Haynes SUBJECT: Silver King Assessment DATE: October 7, 1981

I. CONCLUSIONS

A. The quartz-sericite-pyrite breccia pipe appears to represent the locus for metal-bearing fluid circulation as a distinct Pb, Zn, Mo anomaly is clearly spatially associated with the pipe. A peripheral As-rich halo is also suggested by the limited data.

B. Although the anomalies are small, generally only one order of magnitude above background values in the diorite, I believe they are significant for they indicate that the source intrusive for the fluids producing the intense brecciation did carry metal values greater than those associated with the exposed diorite.

C. The base metal anomalies and the breccia pipe fluid salinities derived from fluid inclusion work last year point to the existance of a petrologically distinct buried intrusive somewhere beneath the Silver King area, and the anomalous metals present provide positive evidence that the buried intrusive may be mineralized.

II. RECOMMENDATIONS

A. It is recommended that 50 to 75 additional samples be collected within the diorite adjacent to the pipe to further substantiate and better define the anomaly. Analysis should be done for Cu, Pb, Zn, Mo, and As.

B. After compilation of such data, FWM should have adequate data on hand to justify preparation of a report which can be submitted to the major Cu-Mo exploration companies in an effort to joint venture the property.

III. INTRODUCTION

As a portion of the assessment work on the Silver King claim group north of Superior, AZ., a trace element study was conducted within the quartz diorite intrusive hosting the Silver King breccia pipe. Excepting a few samples from limestones associated with the Black Diamond skarn, the area of the study was restricted to a small window of diorite cropping out west of the Silver King Mine. PreCambrian intrusives and steeply dipping lower Paleozoic sediments truncate the diorite to the north and south, while steep cliffs of post mineral Tertiary rhyolitic tuffs and flows cover the diorite to the west.

In this initial study, a crude grid system with samples every 300' to 500' was used. Talis and landslide cover in portions of the valley precluded the utilization of a precise sampling pattern.

Ten to fifteen pound rock chip samples of the freshest least weathered rock possible were collected, although differential surface weathering across the area undoubtably has had some unknown effect on the samples.

IV. RESULTS

The results of a 50 sample trace element rock chip geochem survey, as delineated on the accompanying assay sheets and contoured on the accompanying maps, reveal a distinct Mo, Pb, Zn anomaly associated with the quartz-sericite-pyrite Silver King breccia pipe. Five of the six samples registering 10 or more ppm Mo, and 6 of 10 registering greater than 100 ppm Zn are found clustered in and immediately adjacent to the pipe. Lead values follow a similar pattern with anomalous values occurring along a NE trend, which encompasses the breccia body.

Copper values were far less diagnostic, a weak and diffuse anomaly, 20-50 ppm, appears to exist within the diorite intrusive hosting the breccia, however, the center of the anomaly is located 1000' to 1500' west of the pipe.

Arsenic values were only weakly anomalous precluding any definitive interpretations, however, those samples that carried in excess of 3 ppm form a crude halo around the breccia pipe and the Pb, Zn, Mo anomalies.

No gold, silver, uranium or flourine anomalies were observed.

COPPER STATE ANALYTICAL LAB., INC.

T.

DNYANENDRA A. SHAH ARIZONA REG. NO. 8888 REGISTERED ASSAYERS P. O. BOX 7517 TUCSON, ARIZONA 85725 710 E. EVANS BLVD. PHONE 602-884-5811 884-5812

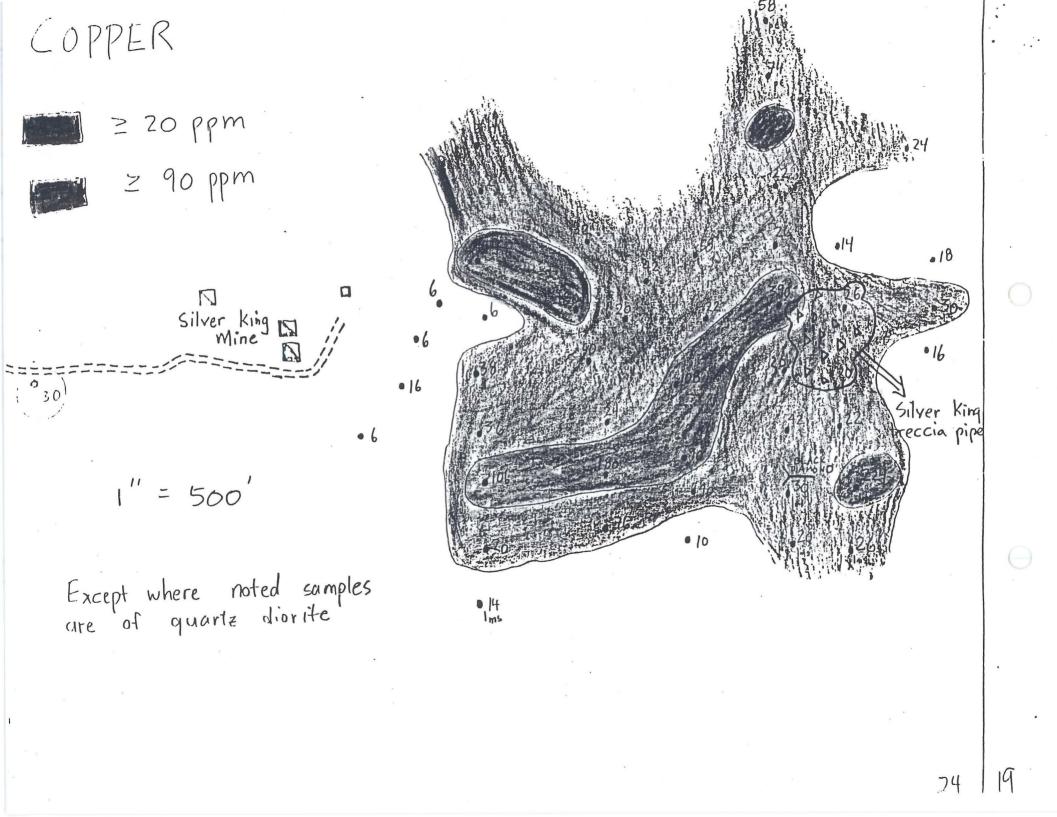
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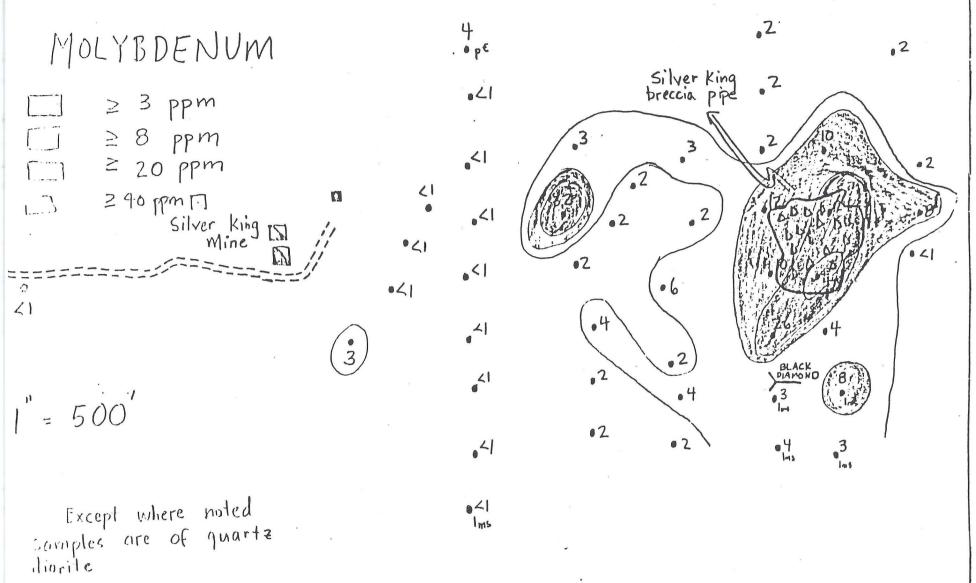
> Fischer-Watt Mining Co., Inc. 114 Tucker, Suite 17 Kingman, Arizona 86401

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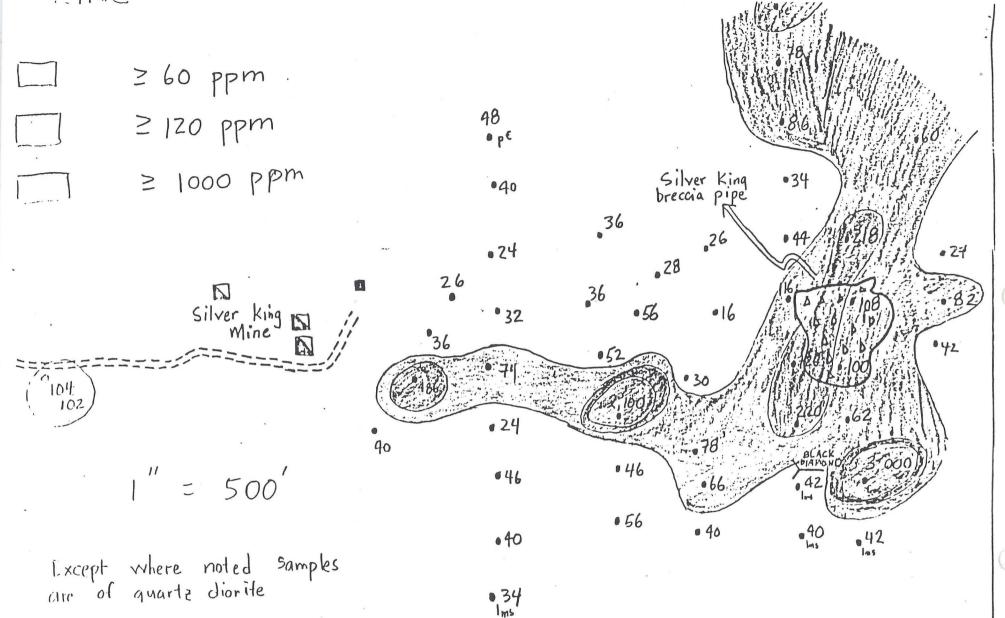
SAMPLE NUMBER	Au ppm	Ag ppm	Pb ppm	Cu ppm	Zn ppm	Mo ppm	As ppm
King Al	<0.01	6	12 ·	- 26	42.	3	3
· A2	0.10 '	3	582	224	.30%	8	95
A3	<0.01	< 1	10	22	62	ц	< 1
A4	<0.01	< 1	26	20	100	44	< 1
A5	<0.01	l	46	26	108	24	< 1
A6	<0.01	< 1	30	14	218	10	1
King B2	<0.01	< 1	20	20	40	4	l
B3	<0.01	< 1	12	30	42	3	3
B4	<0.01	< 1	86	42	220	26	l
B5	<0.01	< 1	36	20	126	10	3
B6	<0.01	8	224	390	116	12	< 1
B7	<0.01	< 1	14	26	цц	2	< 1
B8 .	<0.01	< 1	18	22	34	2	3
B9	<0.01	< 1	10	100	86	2	< 1
BlO	<0.01	< 1	12	74	78	2	4
Bll	<0.01	l	12	58	152	2	2
King Cl	<0.01	< 1	ų	.10	40	2	l
C2	<0.01	< 1	4	40	66	4	< 1
C3	<0.01	< 1	62	90	78	2	1
C4	<0.01	< 1	4	10,8	30	6	< 1
C5	<0.01	< 1	4	22	16	2	< 1
C6	<0.01	< 1	2	42	28	2	< 1
C7	<0.01	< 1	12	58	26	З.	2
King Dl	<0.01	< 1	16	76	56	2	< 1
D2	<0.01	< 1	6	180	46	2	< 1
King D3	<0.01	2	546	24	.21%	ц	3
D4	<0.01	< 1	10	50	52	2	4
D5	<0.01	< 1	8	20	56	2	< 1
D6	<0.01	< 1	12	180	36	32	7
דם	<0.01	< 1	4	32	36	3	< 1

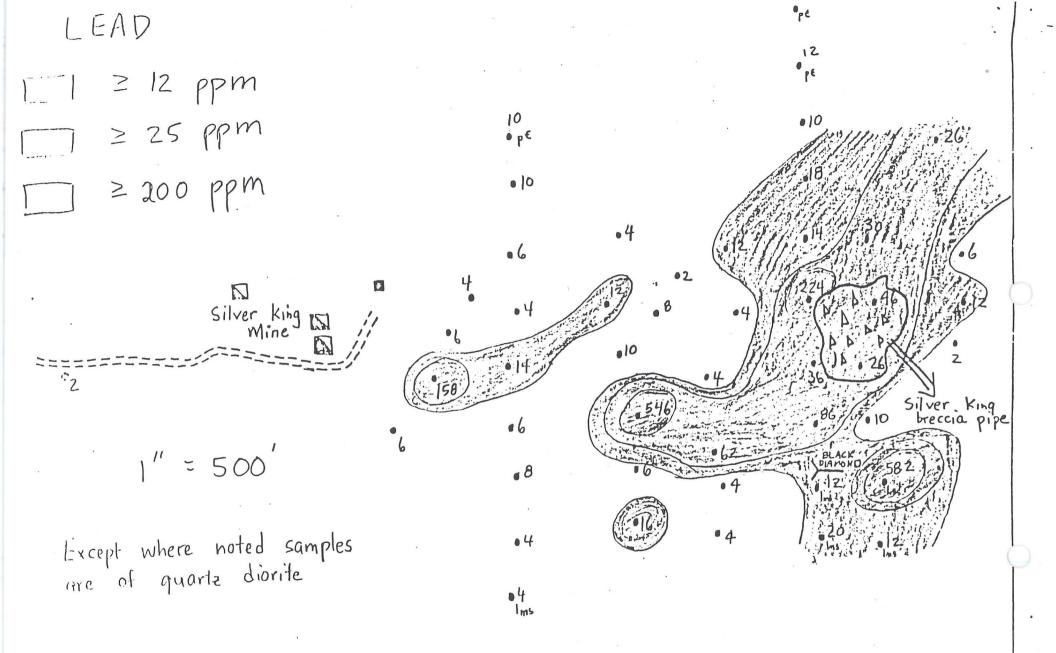
1 ppm = 0.000150 1 tray or rison = 34 286 ppm 1 ppm = 0.0292 tray or. (ton * Gold and 5 liver record in tray or. per 2,000 lib. ton.



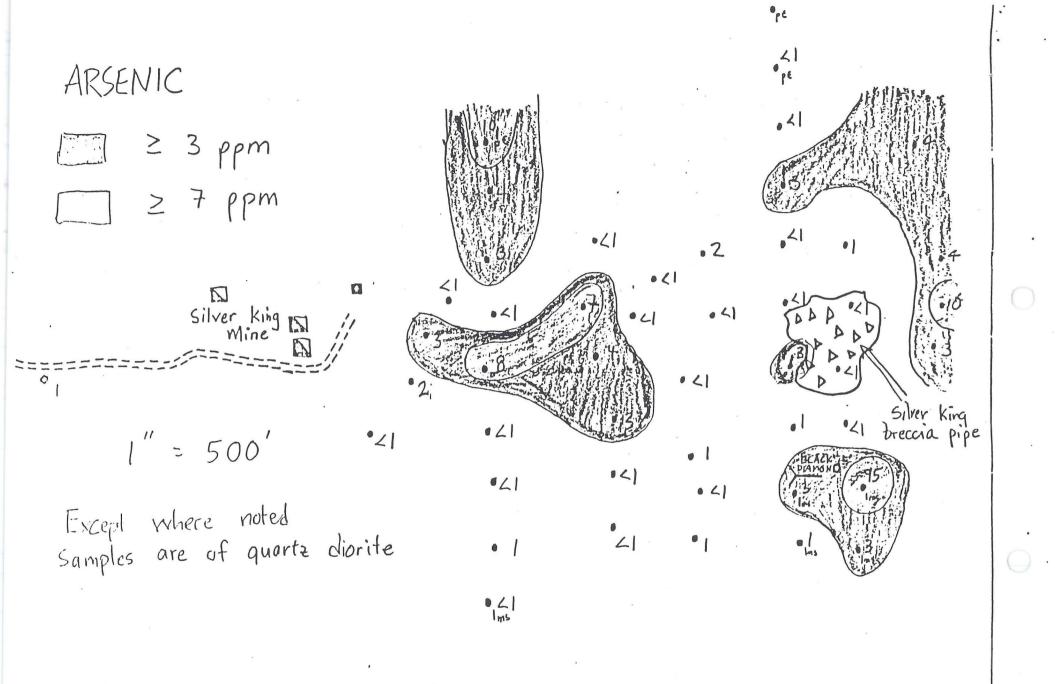


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United States Department of Agriculture

Forest Service

Globe Ranger District Rt. 1, Box 33 Globe, AZ 85501

Reply to 2810 Mining Claims Silver King Extension Date: June 22, 1982

Fisher-Watt Mining Company, Inc. ATTN: Mr. Pete Drobeck 114 Tucker, Suite 7 Kingman, Arizona 86401

Dear Mr. Drobeck:

We have completed an analysis of your proposed drill road construction across Forest Service lands. We approved the plans you proposed, subject to the receipt of a reclamation performance bond. This bond should be in the amount of \$1,000, either in cash to be held by the USDA, Forest Service, or through a bonding agent made collectable by the USDA, Forest Service.

The following stipulations are required as part of the reclamation requirements:

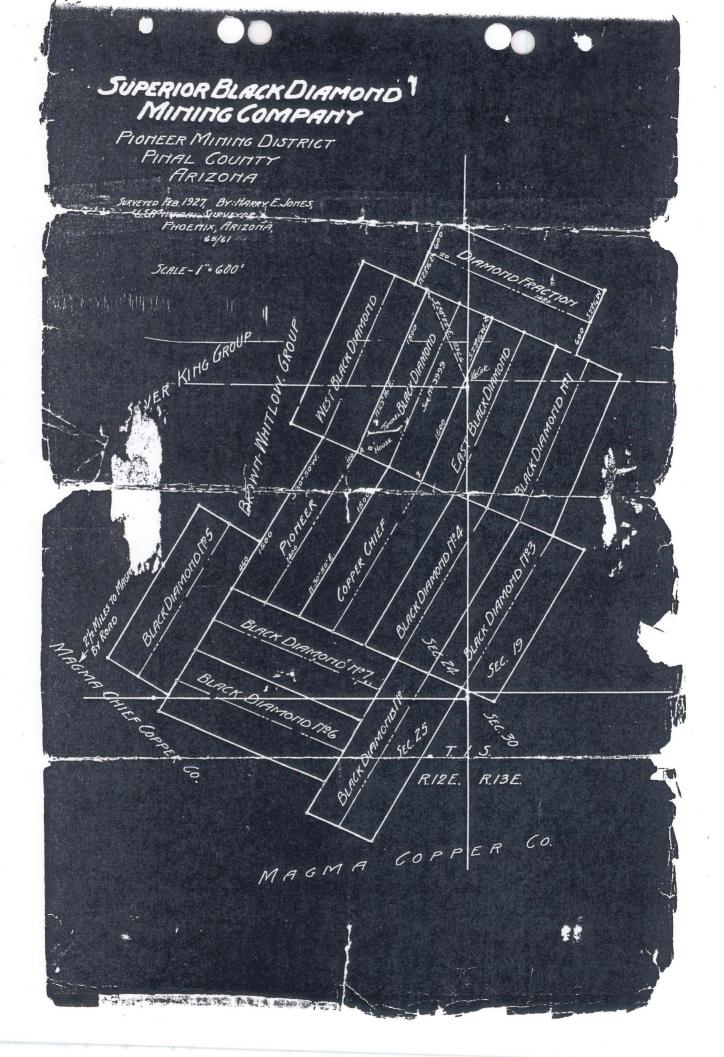
- Roads will be outsloped with grade dips in appropriate locations during construction.
- 2. After core drilling is completed, the berm will be pulled in, and the road water barred.
- 3. All disturbed areas will be seeded with 4 lbs/acre of Lehman's lovegrass immediately after tractor work is completed.

Upon our receipt of the performance bond, your road construction may proceed.

Sincerely, Larry Widner

LARRY P. WIDNER District Ranger

Enclosure



STATE OF ARIZONA I hereby certify that the within COUNTY OF PINAL instrument was filed for record Pinal County, State of Arizona. 1977.0.9.1.5. fitness my hand and official seal. Indexe Docket and Page ... INDEXED WILLIAM S. TRUMAN Pinal County Recorder Request of 20 Very Deputy Avilliam Kertland NY 879 PAGE 998 OFFICIAL SEAL PINAL COUNTY RECORDER AND WHEN RECORDED MAIL TO FLORENCE ARIZONA NAME William Hirthurd ADDRESS 6 Hondo, St. STATE Apacke Janc tion aligned STATE Apacke Jone Tion aligned MAIL TAX STATEMENTS TO SPACE ABOVE THIS LINE FOR RECORDER'S USE . NAME buildiam Kirtland Documentary transfer tax \$..... Computed on full value of property conveyed, or Computed on full value less licns & encumbrances 6 Honds St ADDRESS remaining thereon at time of sale. Cycache, Junetion aryoner 85220 Signature of declarant or agent determining tax - firm name Unincorporated area City of..... Quitclaim Deed L-11-A FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Kate S. Ridgeway (Mrs. Zeryl A) Dorothy Ridgeway Gramling . hereby remise, release and forever quitclaim to do William Kirtland and Jack R. Kirtland the following described real property in the county of Pinal state of Editoria: Arizona Elack Diamond Mining Lode, a patented mining, claim located in the County of Pinal, State of Arizona in rule Pioneer District in Section Twenty Four (24) Township Cne South (T.I,S.) Range Twelve East (R.12,E) containing Twenty (20) acres more or less. The survey calls for 20.661 acres. Dated Ang 23 1977 Kate & Ridgerbay STATE OF CALIFORNIA COUNTY OF San SS quit 23,1977 _before me, the under signed, a Notary Public in and for said County and State, personally appeared Dirathe -77 dgewal FOR NOTARY SEAL OR STAMP known to me to be the person _____ whose name Sau subscribed to the within instrument and acknowledged that They executed the same. OFFICIAL STAL BETTY KENNEDY OF PUBLIC CALIFORNIA ignatu PERITIPAL OFFICE IN SAN DIEGO COUNTY My Commission Expires April 25, 1979 ----Title Order No. Escrow No ... MAIL TAX STATEMENTS AS DIRECTED ABOVE 11 4 10 0 110