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PRINTED: 08/16/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SILVER CORD

ALTERNATE NAMES:
MCCUTCHEON SHAFT
INFANT TUNNELL
BROOKS CLAIMS
AMERICAN FLAGG

YAVAPAI COUNTY MILS NUMBER: 1204B

LOCATION: TOWNSHIP 11 N RANGE 1 E SECTION 36 QUARTER NE
LATITUDE: N 34DEG 15MIN 20SEC LONGITUDE: W 112DEG 12MIN 19SEC
TOPO MAP NAME: CLEATOR - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
SILVER
LEAD
GOLD
COPPER
ZINC

BIBLIOGRAPHY:
ANDERSON, C.A. PRECAMBRIAN ROCKS IN CORDES AREA USGS BULL 1345 1972 P 34-35
ADMMR SILVER CORD FILE
GUITERAS, J.R. GOL MINING AND MILLING IN THE BLACK CANYON AREA USBM IC 6905 1936 P 29-31
LINDGREN, W. ORE DPSTS JEROME & BRADSHAW MTN QUADS USGS BULL 782 1926 P 158
LUNDIN, R.J. ET AL, (ADMMR GEOLOGY FILE)

SILVER CORD MINE YAVAPAI COUNTY

ABM Bull. 137 p. 53
ABM Bull. 140 p. 102 (Old Brooks)

USGS Bull. 782 p. 158

DeSoto Mine (file)

USBM List Nov. 1966

SEE: IC 6905 p. 29

USGS Bulletin # 1345 P. 34

* GENERAL REFERENCES

REFERENCE 1 F1 < ABGMT - USBM F DATA >

REFERENCE 2 F2 < AZ. DEPT OF MINERAL RESOURCES FILE DATA >

REFERENCE 3 F3 < USBM I.C 6905, p. 29-31 >

REFERENCE 4 F4 < U.S. GEOL. SURVEY BULL 782, p. 158 >

A83 < OF INFANT CLAIM AND ACROSS TURKEY CREEK. CUTTER IS REFERRED TO AS SEPARATE MINE >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < >

*RECORD TYPE B20 < X, 1, M >

DEPOSIT NUMBER B40 < >

REPORT DATE G1 < 8, 1, ✗, 0, 9 > (YR. MO.)

*INFORMATION SOURCE B30 < 1, 2 >

*FILE LINK IDENT. B50 < USBM - 004 - 025 - 1756

REPORTER(SUPERVISOR) G2 < DEWITT, ED, H > (last, first, middle initial) ( ) (last, first, middle initial)

REPORTER AFFILIATION G5 < ABGMT >

*SITE NAME A10 < SILVER CORD MINE >

SYNONYMS A11 < SILVER CORD, GOLD CROWN, INFANT >

LOCATION

MINING DISTRICT/AREA A30 < BLACK CANYON DISTRICT >

COUNTY A60 < YAVAPAI >

*STATE A50 < A, Z >

*COUNTRY A40 < U, S >

PHYSIOGRAPHIC PROV A63 < 1, 2, ✗ >

DRAINAGE AREA A62 < 1, 5, 0, 7, 0, 1, 0, 2, ✗ >

*LAND STATUS A64 < 0, 0, ✗, ✗, ( ) >

QUADRANGLE NAME A90 < CLEATOR (1, 9, 7, 4) >

*QUADRANGLE SCALE A100 < 2, 4, 0, 0, 0 >

SECOND QUAD NAME A92 < ( ) >

SECOND QUAD SCALE A91 < >

ELEVATION A107 < 3, 2, 2, 0, ✗, F, T >

UTM

NORTHING A120 < 3, 7, 9, 0, 8, 5, 0 >

EASTING A130 < 3, 8, 9, 0, 2, 5 >

ZONE NUMBER A110 < +, 1, 2 >

*ACCURACY

ACCURATE ACC (circle)

ESTIMATED EST < >

GEODETIC

*LATITUDE A70 < 3, 4, -, 1, 5, -, 1, 7, N >

*LONGITUDE A80 < 1, 1, 2, -, 1, 2, -, 1, 9, W >

CADASTRAL

TOWNSHIP(S) A77 < 0, 1, 0, N : ✗ : ✗ : ✗ >

*RANGE(S) A78 < 0, 0, 1, E : ✗ : ✗ : ✗ >

SECTION(S) A79 < 12 : ✗ : ✗ : ✗ >

SECTION FRACTION(S) A76 < SW OF SE >

MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 2.75 MILES SOUTHEAST OF CLEATOR, ARIZONA >

LOCATION COMMENTS A83 < SILVER CORD CLAIM GROUP CONTAINS FOLLOWING CONTIGUOUS CLAIMS: SILVER CORD, INFANT, CUTTER. MAIN SILVER CORD WORKINGS ARE ON SILVER CORD AND INFANT CLAIMS. CUTTER CLAIM IS APPARENTLY SOUTHWEST >

ESSENTIAL INFORMATION

ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 <A.G. , A.U. , P.B. , C.U. , Z.N. , >
*ORE MINERALS C30 <PROUSITE, SILVER CHLORITE, ARGENTIFEROUS GALENA, SPHALERITE, PYRITE, GOLD>
COMMODITY SUBTYPES C41 <>
*GEN. ANALYTICAL DATA C43 <>
COM. INFO. COMMENTS C50 <>

* SIGNIFICANCE

PRODUCER		NON-PRODUCER	
MAJOR PRODUCTS MAJOR	<A.G. , A.U. , P.B. , >	MAIN COMMODITIES PRESENT C11	< >
MINOR PRODUCTS MINOR	<C.U. , Z.N. , >	MINOR COMMODITIES PRESENT C12	< >
POTENTIAL PRODUCTS POTEN	< >		
OCCURRENCES OCCUR	< >	OCCURRENCES OCCUR	< >

*PRODUCTION

PRODUCER	NON-PRODUCER
PRODUCTION (YES) (circle) PRODUCTION SIZE (SMAL) MED LGE (circle one)	PRODUCTION UND NO (circle one)

EXPLORATION OR DEVELOPMENT

*STATUS

PRODUCER	NON-PRODUCER
STATUS AND ACTIVITY A20 <4>	STATUS AND ACTIVITY A20 < >

*DISCOVERER L20 <>
YEAR OF DISCOVERY L10 <LATE 1870'S> *NATURE OF DISCOVERY L30 <B> *YEAR OF FIRST PRODUCTION L40 <1910> *YEAR OF LAST PRODUCTION L45 <1970>
PRESENT/LAST OWNER A12 <TOM CLEATOR, CLEATOR, ARIZONA — STAR ROUTE, BUMBLEBEE, ARIZONA>
*PRESENT/LAST OPERATOR A13 <TOM CLEATOR, SILVER CORD MINING>
EXPL./DEV.COMMENTS L110 <>

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEIN>
DEPOSIT FORM/SHAPE M10 <TABULAR>
*DEPTH TO TOP M20 <> *UNITS M21 <> *MAXIMUM LENGTH M40 <4500> *UNITS M41 <FT>
*DEPTH TO BOTTOM M30 <400> *UNITS M31 <FT> *MAXIMUM WIDTH M50 <400> *UNITS M51 <FT>
*DEPOSIT SIZE M15 (SMALL) M15 <MEDIUM> M15 <LARGE> (circle one) *MAXIMUM THICKNESS M60 <5> *UNITS M61 <FT>
*STRIKE M70 <N80E IN NORTH; N0E IN SOUTH> *DIP M80 <10 TO 15 SE; MAY BE FLAT>
*DIRECTION OF PLUNGE M100 <> *PLUNGE M90 <>
*DEP. DESC. COMMENTS M110 <VEIN IS QUITE FLAT. VEIN TRENDS E-W ON SILVER CORD CLAIM AND N-S ON INFANT CLAIM. VEIN IS MAXIMUM 5 FT THICK BUT AVERAGES 1 FT THICK>

DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND (M130) BOTH M140 (circle one) *OVERALL LENGTH M190 <1200> *UNITS M191 <FT>
*DEPTH BELOW SURFACE M160 <400> *UNITS M161 <FT> *OVERALL WIDTH M200 <5> *UNITS M201 <FT>
*LENGTH OF WORKINGS M170 <1200> *UNITS M171 <FT> *OVERALL AREA M210 <6000> *UNITS M211 <FT>
DESC. OF WORK. COM. M220 <UNPATENTED CLAIM GROUP CONTAINS THREE CLAIMS>

GEOLOGY

*AGE OF HOST ROCK(S) K1 <P.R.O.T. , U/PB ZIRCON GREATER THAN 1740 MILLION YEARS>
*HOST ROCK TYPE(S) K1A <CHERT, METARHYOLITE, AMPHIBOLITE>
*AGE OF IGNEOUS ROCK(S) K2 <M.I.O. ,>
*IGNEOUS ROCK TYPE(S) K2A <ANDESITE>
*AGE OF MINERALIZATION K3 <M.I.O. ,>
*PERT. MINERALS (NOT ORE) K4 <QUARTZ, SIDERITE>
*ORE CONTROL/LOCUS K5 <FAULTING, SHEARING>
*MAJ. REG. TRENDS/STRUCT. N5 <FOLIATION IN PRECAMBRIAN ROCKS TRENDS N-S, DIPS VERTICALLY>
*TECTONIC SETTING N15 <>
*SIGNIFICANT LOCAL STRUCT. N70 <VEINS DO NOT PARALLEL FOLIATION>
SIGNIFICANT ALTERATION N75 <NONE>
*PROCESS OF CONC./ENRICH. N80 <OXIDATION AND ENRICHMENT OF ORE AT NEAR-SURFACE>
FORMATION AGE N30 <P.R.O.T. ,>
FORMATION NAME N30A <SPUD MOUNTAIN VOLCANICS AND UNNAMED PRECAMBRIAN UNITS>
SECOND FM AGE N35 <,>
SECOND FM NAME N35A <>
IGNEOUS UNIT AGE N50 <M.I.O. ,>
IGNEOUS UNIT NAME N50A <ANDESITE DIKES>
SECOND IG. UNIT AGE N55 <,>
SECOND IG. UNIT NAME N55A <>
GEOLOGY COMMENTS N85 <SILVER CORD IS VEIN DEPOSIT NOT SPECIFICALLY SPATIALLY RELATED TO MIOCENE DIKE, BUT BELIEVED TO BE SAME GENERAL AGE AS DIKES>

GENERAL COMMENTS

GENERAL COMMENTS GEN <>

SILVER CORD MINE YAVAPAI COUNTY

Learned that Tom Cleator and Lynn Montague have delivered a batch of ore from the Silver Cord mine to their mill on the Snaffle property. They are repairing a serious break-down at the mill. TPL WR 7-15-61

Active Oct. 1961

Visited Silver Cord mine - 3 men working on surface. EGW WR 1-25-63

In Cleator, Tom Cleator and 3 men were repairing the road to the Silver Cord mine where they expect to take out some ore to ship to the Waughtel Mill at the Ajax Mine. EGW WR 1-30-64

Interviewed Tom Cleator. He said the North Star Mining Co. is negotiating for his Silver Cord mine but as yet it is just in the talking stage. EGW WR 5-26-64

Visited the Silver Cord - no activity. EGW WR 7-28-64

Golden Belt Mill in process of rehabilitation by Dexter Broyles, L. E. Weisman, F. Collins and T. R. Cleator. The group are incorporating and intend to ship oxide ore from DeSoto mine to Hayden and mill (silver, lead & zinc) from the Silver Cord. FTJ WR 9-24-65

Active Mine List April 1966 - 10 men - Silver Cord
20 men - Golden Belt & DeSoto

To Golden Belt Mill - interview with Mrs. Jarvis - General Mining & Milling Co., headed by Mr. McIntosh in New York, has taken over the mill and were exploring Tom Cleator's Silver Cord mine. FTJ WR 9-19-69

KAP WR 2/15/85: Rich Lundin at Wallaby Enterprizes reported he has done a sampling project at the Silver Cord Mine (file) Yavapai County for a client. He reported his samples were taken over a minimum of 4 feet (more if the vein was wider) and average about 10 oz silver per ton, 0.05 oz gold per ton, 0.05% copper per ton with lead and zinc. Mr. Lundin was interested in the location of custom mills capable of treating the complex three-base metal ore. It was suggested he evaluate the possibility of treating the total ore in a cyanide mill with objective of recovering only the precious metals.

NAME OF MINE: SILVER CORD file
OWNER:

COUNTY: Yavapai
DISTRICT:
METALS: Pb,Au,Ag

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
7/46	R.M. McLeod, Cleator	7/46	Shipping
		10/46	Developing

NAME OF MINE: SILVER CORD file
OWNER:

COUNTY: Yavapai
DISTRICT: Turkey Creek
METALS: Ag, Pb, Au

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
1/45	R.P.McLeod, Cleator		Dev. & occ.shipments to Clarkdale
		5/45	Idle

SILVER CORD MINE

YAVAPAI COUNTY
BLACK CANYON DIST.

April 26, 1961 - Learned that the Snaffle-Silver Christmas-Silver Cord operation was suspended early in April but is expected to resume soon. The people are the Montague' Bros. and Potts'.

TRAVIS P. LANE - Weekly Report 4-29-61

May 23, 1961 - Visited the Silver Cord Mine owned by the Cleator' estate and leased to Potts and the Montague' brothers. The main adit is in the steep hillside slope above Turkey Creek. The adit is in 532' on the low dipping Silver Cord vein near the end of the adit. Lynn Montague' and Tom Cleator were stoping ore - 5 metals with silver predominately - and stockpiling same for milling later at their plant on the Snaffle property near Cleator. They also operate intermittently the Silver Christmas mine in the same neighborhood.

TRAVIS P. LANE - Weekly Report 527-61

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Silver Cord - Ag,Au,Pb,Cu Date June 12, 1961

District Black Canyon, ~~Coconino-Co.~~- Yavapai County Engineer Travis P. Lane

Subject: Visit to property May 23, 1961

Property: The property, comprising 10 unpatented mining claims, is located on the east side of Turkey Creek about 1 mile due south of the Golden Turkey Mine and about 5 miles southwesterly by road from Cordes.

Owner: The property is owned by Tom Cleator of Star Route - Bumble Bee, Arizona, and is leased with option to purchase to A.R. Potts whose operating partners are the Montague Brothers. At the time of visit only Lynn Montague was still active in the group and he and Tom Cleator were working in the mine developing and stoping near the end of the main adit workings.

Description of Mine: The country rock is schist cut by numerous basic dikes. A particularly large black dike coursing in a north northwest direction is traceable on the surface to and beyond the St. John mine and, it is said, through the Iron King property. This dike and other smaller ones appear to be associated with the better ore in the mine. The vein strikes practically E-W and dips south about 20°. The vein is from an inch to 3 ft. wide and seldom more, and its persistent croppings are discernable for a length of several thousand feet. The mine was an early day producer of high grade silver-lead ore with some gold and copper content. No authentic record is available re either its production record nor its history. At one time a small mill operated on the property (circa 1920?), and was abandoned many years ago. Current ore production (which is sulphide ore) is stockpiled for milling at irregular intervals in a small mill on the nearby Snaffle property. The Snaffle and the Silver Xmas mines are controlled by the people who are working the Silver Cord. The Silver Cord had an RFC "gold-silver" loan in the 1930s.

The two principal developments are an old incline shaft and a long adit. The shaft was sunk on the vein many years ago to a depth of about 500'. Later an adit was driven* in the steep hillslope on the east bank of Turkey Creek. At its end the adit pentrates the large black dike. At a number of places the vein is stoped both above and below the floor of the adit. The projection on slope of the old incline shaft is some 400' east of the end of the adit and apparently somewhat higher than the adit level.

* (532' on the vein)

Intra-Company Correspondence

SHATTUCK DENN MINING CORPORATION
and
SUBSIDIARIES

Office: Humboldt, Arizona

Date: July 23, 1966

SUBJECT: Arizona-Yavapai Mining Co.
Lot 1

Silver ~~Belt~~ Gold Mine
Collins

TO: C. R. Sundeen
Humboldt

FROM:
H.E. Swanson

The Arizona-Yavapai ore Lot 1 can be settled on following schedule:

Gold - Pay for 50%	@	$32.00	per ounce
Silver - Pay for 85%	@	1.20	per ounce
Lead - Pay for 70%	@	1.50	per unit
Zinc - Pay for 50%	@	1.05	per unit
Copper - Pay for 40%	@	5.00	per unit

Less Mill Treatment Charge of $4.00 per dry ton.

Above metal pays are for current prices. Any future lots would be based on prices in effect at that time and metallurgical results.

Assay of Lot 1 is as follows:

Au.	Ag.	Pb.	Zn.	Cu.
.08	7.6	1.4	1.5	.05
Non-Sulphide		0.08	Nil	

Wet Tons	-	75.005
Per Cent Moisture	-	1.00
Dry Tons	-	74.255

Value of ore to shipper's as follows:

gold -	0.08	@	50%	@	$32.00	-	$1.28
Silver -	7.60	@	85%	@	1.20	-	7.75
Lead -	1.40	@	70%	@	1.50	-	1.47
Zinc -	1.50	@	50%	@	1.05	-	.79
Copper -	0.05	@	40%	@	5.00	-	.10
							11.39
Less Mill Treatment							4.00
Due Shipper							7.39

74.255 dry tons @ $7.39 - $ 548.74

HES/j
cc: W.Richardson

SHATTUCK DENN MINING CORPORATION
TEST S-29 - Arizona Yavapai

	Calc Head Assay	Ore Schedule Pay Per Dry Ton	Net Smelter Return Per Dry Ton
gold	.065	$ 1.04	$ 1.64
silver	7.01	7.15	7.72
lead	1.53	1.61	1.29
zinc	1.63	.86	.81
copper	.10	.20	.17
Total		10.86	11.63
Less Mill treatment charge		4.00	4.00
Due shipper		6.86	
Net Return			7.63
Profit			0.77

Pb Cts. -	.0617 x $163.89	-	10.12
Zn Cts. -	.0131 x 115.25	-	1.51
			$ 11.63

Prices - gold - $35.00; silver - $1.29; lead - ~~$15.04~~ 15.0¢;
zinc - ~~$14.54~~ 14.5¢

HES/j
7-23-66

1M—11-15-54—PPCo.—4217

SHATTUCK DENN MINING CORPORATION

IRON KING BRANCH — HUMBOLDT, ARIZONA

METALLURGICAL REPORT

Date 7-23-66

Arizona Yavapai
Lot 1
Test No. S-29

PRODUCT	WEIGHT GRAMS	PER CENT	OZ. Au.	OZ. Ag.	% Cu.	% Pb.	% Zn.	% Fe.	% Insol.	
1. Pb. Cts.		6.17	.78	94.8	.90	22.1	8.8			
2. Pb. Cl Tails		2.03	.28	21.2	.22	3.5	4.25			
3. Zn cts.		1.31	.175	38.8	.64	4.4	55.0			
4. Zn Cl Tails		2.94	.009	1.92	.03	.2	2.7			
5. Tails		87.55	.01	.19	.04	.04	.22			
Calc. Head		100.00	.065	7.01	1.53	1.63	.10			
Assay Head			.08	7.6	1.4	1.5	.05			
Non-Sulfide					.08	Nil				

METAL CONTENT						PER CENT RECOVERY						
Au.	Ag.	Cu.	Pb.	Zn.	Fe.	Au.	Ag.	Cu.	Pb.	Zn.	Fe.	
1.						73.9	83.4	53.2	88.9	33.4		
2.						8.7	6.1	4.3	4.6	5.3		
3.						3.5	7.3	8.1	3.8	44.5		
4.						.4	.8	.9	.4	4.9		
5.						13.5	2.4	33.5	2.3	11.9		

PROCEDURE

Attached hereto are metallurgiaal test data and calculations for this lot of ore.

Henry E. Swanson

Henry E. Swanson

HES/mj
cc: W. W. Richardson

Copy of Sealed "1914" Brig

REPORT ON THE SILVER CORD GROUP OF CLAIMS
Yavapai County, Arizona.

------o------

LOCATION:--

The Silver Cord group is located in the Black Canon Mining District, Yavapai County, Arizona. It is three miles by trail and four miles by wagon road south from Turkey Creek Station on the Prescott and Crown King branch of the Atchison, Topeka & Santa Fe railroad. The nearest smelter is at Humboldt, Arizona, twenty miles distant on direct line of railroad, though most of the ores of this district have been shipped to El Paso, Texas, Needles, California, and some to San Francisco, for the reason that the Humboldt plant has not yet installed facilities for the treatment of lead bearing ores. The postoffice is at Turkey and the nearest telephone is at present three miles from the property, connecting with all principal points in Arizona and New Mexico. The line is at present, within a mile of the property and connection could be made at slight expense. There is a good wagon road from the railroad station to the property, running through it for a distance of about 700 feet from the initial monument from this point on to the edge of the claims, a distance of about 3750 feet, a trail has been built and used by pack animals for the past fifteen years. The wagon road and trail both follow the vein. The former could be extended for another thousand feet, and in opening up such a road the work would be most entirely on the vein, using the floor of the vein for the roadbed and at the same time both developing and extracting ore. Toward the end of the property a wagon road would be more difficult of construction and the trail must be used for the present.

ACREAGE AND TITLE:-

The main group consists of three claims, known as the "Silver Cord", the "Infant" and the "Cutter". These are full claims 600 feet by 1500 feet each, giving a total area of 60 acres. The claims have been taken up lengthwise within the ledge and join one another end to end, forming an unbroken group. They are held by location under U.S. mineral laws, although more than enough work has been done to warrant government patent on the entire group. The property has been on the hands of the present owners for more than twenty-five years and the titles are in good condition free of encumbrance.

The same geological and mineralogical conditions extend and apply to the two claims known as "The Brooks Claims", adjoining the Silver Cord group on the south. But as the Brooks claims are as yet but little developed and still in a prospect stage this report will be confined principally to the Silver Cord group of three claims.

HISTORY:-

The history of the property is brief. The Black Canon district was first organized about thirty years ago. In the early days of the district several prospect properties were packing high grade surface ores to Prescott. The free-milling ores were treated at custom plants and the smelting product sent to El Paso and San Francisco. The Silver Cord was one of the early locations. It has been operated most entirely under the leasing system and the records are available for only a small part of its production.

Throughout the district however, it is generally conceded that the property has been an extensive producer, has made substantial profits for leasers, paid its own way, kept free of debt and bears a good reputation.

WATER, WOOD AND FUEL:-

Water for milling operations would have to be developed along Turkey Creek, which flows through the property, and where a sufficient supply for all purposes could be procured by sinking a storage well close up to the creek, and during "flood season" pumping from the creek district.

There is no timber in the locality except such as could be used for domestic purposes. All lumber and saw timbers are shipped in from Prescott and Phoenix.

The fuel for power in the district has generally been distillate, which costs about 18cents per gallon in 110 gallon drums delivered on the ground. Steam coal from Gallup, N.M., costs about $8.00 per ton at the property.

SURFACE IMPROVEMENTS AND EQUIPMENT:-

These consist of one combination boarding and bunk house, blacksmith shop and stable on the Silver Cord claim. Close to the Infant claim, but not on it, is a boarding and bunk-house belonging to the property, and on the Infant claim a small improvised black smith shop. The two main working tunnels, one on the Silver Cord claim and one on the Infant claim, are supplied with track, mine cars and hand tools.

FORMATIONS AND ORE EXPOSURES:-

The locality is distinctively eruptive. The general topography is rough and the country considerably broken up. The average altitude at the property is about 3000 feet above sea level.

The Silver Cord vein is encased within walls of porphyritic schist. The hanging wall is most always a mixture of the two materials with the schist predominating, while the foot wall is in most places a clean porphyry, but now and then appears as a broken porphyry and schist.

Onthe Silver Cord claim the general strike of the ledge is east and west. From about the point where the Infant claim joins the Silver Cord, and out through the entire length of the Infant and Cutter claims, the strike is almost due north and south. The pitch is slightly to the north and west through the Infant and Cutter claims, but in a considerable portion of the Silver Cord claim is so flat as to have practically no pitch at all.

This vein can be clearly traced on the surface through the full length of the three claims and for more than 3000 feet beyond, including the entire length of the two Brooks claims. It is all the way from six inches to four feet wide, with an average width of twelve inches.

Dykes of quartz, or quartz-diorite, out crop on the property. Insertive reefs of diabase are encountered in the underground workings, and in these reefs are found the better grade ores which have made it possible to ship to smelters as far away as El Paso, Needles and San Francisco.

This ore bearing vein possesses some interesting features. It is a blanket almost horizontal and the mining is done practically on a flat floor. The ore rises and falls with the surface contour of the mountain or over-burden immediately upon it. That is, if there is a hill over the vein the ore rises with it. If a gulch, or depression, the ore falls with it. The vein fracture instead of being up and down into the mountain is a bedded plain from under and out of the mountain, and it is along this plain that the ore shoot occures. The vein does not run with the formation, or grain of the rock, but lies across the formation. The mountain however, rises faster than the vein and will give several hundred feet in depth on the vein as it is followed in under the mountain. It is probable that the ore will carry still higher values the deeper the mountain is penetrated. This prediction is based

upon the showing in the main tunnel on the Infant claim, which appears to justify it.

The mineralized zone occures in three different strata, one directly upon another, but still separate and well defined as to character and values.

First, there is a stratum of altered porphyry, schist and lime rock carrying gold and silver values of a low grade. This material has a width of from six inches to fourfeet.

Second comes a stratum of hard "quartzy" material varying in width from six inches to two feet carrying lead with gold and silver values considerably higher than the mixed stratum over it.

Third, is a stratum of quartz- diorite which is sometimes found under and sometimes found over the two strara above mentioned, as shown in Plat "B". This is a very hard, solid material, varying in width from two to eighteen inches, and isa very good grade streak, the values running from $25.00 to several hundred dollars per ton in gold, silver and lead, with a safe average of $35.00 per ton gross.

Where the third, or high grade stratum , appears above the low and medium grades these two strata are in a more mixed or conglomerate form, with the medium grade showing next to the high grade. Farther on the three strata will again appear as having assumed their former positions with respect to one another in the order mentioned above. But while the third or high grade stratum, sometimes cuts through the low and medium grades, it is never cut into by them.

This entire property has been quite extensively developed and considerable exploration work done in the way of tunnels, open cuts, trenches, etc., in every instance exposing ore of shipping and milling grade. While the the vein has been proven to exist under all of these claims by out crop and underground work, the greater part of the development has been on the east end of the Silver Cord claim, where the vein has been followed into the mountain by tunnel for a distance of 250feet. Atthe end of this work the high grade streak appears to be increasing in width. Diabase begins to show here and with it more lead, better values in gold and silver and a little zinc. There is also some arsenic in the form of arsenical-iron-sulphide, but apparently a very small percentage.

The Infant claim joins the Silver Cord claim on the south and west and is an extension of the same vein? Near the west end of the Silver Cord, but on the Infant claim, a tunnel has been run in on the vein for 150 feet. In this tunnel at 100 feet a winze has been sunk to a depth of 40 feet on the incline, following the dip of the vein.

On the surface and about 200 feet, possibly more, tothe southof the vein a large quartz dyke appears running northerly and southerly, and the two main tunnels---the one on the Silver Cord and the other on the Infant--- point toward this dyke. The indications are that the ore will continue downward and through the dyke. From the fact that the ore in the breastand incline winze is about 300 feet below the surface, on the dip of the vein, and continuing this work through the intersection of the dyke would undoubtedly be profitable mining, working in milling and shipping ore from the start. From this tunnel the vein has been followed back and upward to its out crop, providing an opening to the surface and a good air shaft.

The Cutter is a continuation of the vein and surface conditions on the Silver Cord and Infant claims. A number of open cuts expose the ore and several short tunnels penetrate the vein. Toward the southwest end of this claim, about 30 feet above and 60 feet away from the flow of Turkey Creek, a 65foot tunnel exposes a heavy lead ore carryiny gold and silver and a small quantity of zinc. This ore shoot is from six inches to two feet in width, carryiny average values of about $30.00 per ton, principally silver and lead. The farther under the over-burden this shoot is followed the better the ore appears in character and value.

While gold is always in these ores, the silver and lead values predominate. In this district the precious metals are

most invariably associated with the lead and iron. At the surface, and within 100 feet or so, the ores are well oxidized. The lead is a carbonate and galena, the iron an oxide, and the silver a chloride and black sulphurette with occasionally some native silver. Here and there small bunches of zinc appear as decomposed sulphide. Within the oxidized zone the ore is more or less brittle and broken down. As depth is gained it becomes harder and more quartzy.

This vein has been well prospected on all three of these claims and the ore body absolutely proven to exist in extensive tonnage and profitable quality clear from one end of the property to the other. Plat marked will show the manner in which the work on the three Silver Cord claims has been done. The workon the two Brooks claims consists of shallow tunnels and drifts on the vein.

SAMPLING & ORE VALUES:--

An examination of smelter certificates for shipments made by leasors at various times between 1900 and 1912 shows that there were shipped from the property 279.59 tons of ore which averaged 0.538 ounces gold;39.65 ounces of silver, and 8.3 per cent lead. The average gross value of these shipments was $34.36 per ton. After deducting railroad freights, treatment and all smelter charges and deductions the shipments yielded an average net smelter return of $12.47 per ton.

Two hundred different samples were taken from the various workings from the property from one end to the other, and these 200 samples were reduced to twelve separate composite samples. The twelve composite samples were then assayed separately and gave an average value per ton $26.06 gross.

The values were given by the custom assayer at Prescott, Arizona with gold at $20.67 per ounce; silver at the days quotationof 60 cents per ounce, and lead at 50 cents per unit.

No "speciman" samples were taken , and such samples as were taken came only from points where the ore can be had in tonnage. They were taken from the vein matter between the two walls but without any sorting from the gangue in the vein.The smelting ore shipped was "bulk stuff" and shipped without "close sorting"; that is without "hammering off" the gangue from the vein.

PLAN OF DEVELOPMENT:--

It would be difficult to estimate accurately the extent of this underlying blanketof ore. That it covers many acres is evidenced by several thousand feet of the exposed vein and underground workings, which show the vein to be persistent and unvarying and the pay ore continuous and constantly in sight. The three claims give a lineal length on the vein of 4500 feet and development on the properties adjoining show that it is not confined to the Silver Cord group, but extends uniformly throughout the two Brooks claims as well.

Reference to Platt, will show that the vein on the Silver Cord Group has been developed by eleven different tunnels varying in length from 10 to250 feet, ~~and drifts run in each direction as shown on other Plat; to extend~~ ********** There is no break in the ore in any one of these tunnels from portal to breast. In addition to this the ore body has been prospected on the surface between the different tunnels from one end of the property to the other.

The main tunnel on the Silver Cord has been driven in on the vein for a lengthof 250 feet and drifts runin each direction as shown on other Plat. To extend the remaining ten tunnels to the same length--250feet-- would require an additional development of 1939 feet of work, all of which would be on the vein, in shipping and milling ore, and would give to the entire eleven tunnels a length of 250 feet each, and by stripping

the vein on the surface would open up on three sides an ore reserve measuring 4500 feet in length by 250 feet in depth, with an average thickness of one foot, or, 1,125,000 cubic feet. It takes 22 cubic feet of this ore, broken, to make a ton, which would give an ore reserve divided into blocks developed on three sides, of 51,136 tons. The total expense of mining, milling (with plant on the ground) taxes, insurance, exploration work, and all other items of cost, should not exceed 50 per cent of the gross value of the ore. It would be safer to place the net value at $10.00 per ton, and this would give a net reserve in excess of $500,000.

Working two drilling shifts per day of eight hours each with air drills would give seven feet per shift in this material, or 14 feet per day for two shifts, and leave eight hours for the muckers to remove the waste. So that to accomplish this amount of development would require 138 days after installation of compressor and one machine drill, or, allowing for possible unforseen delays, say 160 days. Putting the second drill into service at the end of 30 days would double the work performed, and shorten the time by half.

Within six months time another compressor could be installed and put into service connecting these tunnels at the back. The two machines working toward each other would make 28 feet per day with two shifts for each machine and connect up all the tunnels within a period of 160 or 190 days.

When thus opened up on four sides the selling price of the property would be the net value of the ore measurable on four sides, less the cost of installation of plant for treatment of the ore on the ground and interest on purchase price. This should bring the selling price of the property somewhere between $300,000 and $400,000.

There would still be left as the "speculative margin" to the credit of the purchaser 3,000 feet of undeveloped but partially explored territory on the two Brooks claims, with a possible 30,000 to 40,0000 tons additional to be opened up within this area.

The dottedlines on plat will show the manner of prosecuting the development on the three claims, while the plan of development on the two Brooks claims would be practically the same.

During the process of this work the property would produce for market from 60 to 200 tons of shipping ore per month, according to the number of drills employed.

ORE TREATMENT:--

The Silver Cord ore is essentially a concentrating proposition, and this statement is borne out by laboratory experiments as well as by a small mill run made on about six tons of the material. But as these tests were made on a small scale the results must be regarded as indicative rather than conclusive. The proper course to pursue is to send an average carload shipment to some well equipped experimental plant and have an exhaustive test made and the plan adopted which will give the best net results.

MINING COSTS:--

The items of expense given below are based upon the use of machine drills altogether, except for the work of stripping the vein on the surface. The cost of hauling with teams in this locality, due tothe limited facilities for such service and the high cost of feed, and would amount to not less than $3.00 per ton between the mine and the railroad. Through the use of an auto truck, or traction engine, this item could be reduced to less than 50 cents per ton, and the hauling cost is based upon this method. The estimate is also based upon two drilling shifts per day, as the unit with which the work would begin. Increasing the number of drills would increase

the cost proportionately and likewise the revenue.

In daily practice some of the items mentioned may run a little higher and some a little lower, but in the aggregate the total will not exceed the figures given, and there is sufficient margin in the estimate to take care of the incidentals. The work of stripping the surface of the three claims could be done by two men within sixty days and this item of expense eliminated at the end of that time.

Two machine drill-men at $4.00 per day----------	$8.00
Two muckers and trackmen at $3.00 per day each------	6.00
Two strippers for surface at $3.00 per day each-----	6.00
Two engine men at $4.00 per day each----------	8.00
Sharpening tools, blacksmith coal----------	.50
3 candles to each underground man equals 12 candles at 5¢------	.60
5lbs. powder per drillman equals 10 lbs. per day at 18¢ per lb.	1.80
12 feet fuse per miner equals 24 feet per day at 1¢ per foot---	.24
4 caps per miner equals 8 caps per day at 1¢ each---	.08
30 gals. of distillate for compressor engine at 18¢ per gal.	5.40
Assaying, chemical work, oils and lubricants--------	.50
Hauling----------	1.50
Total expense per day----------	$38.62

Local conditions render the cost of mining at this property less than at most mining camps in Arizona, as the mining will all be open-cut and tunnel work, doing away with the expense of handling water and hoisting. No timbers have ever been required and a good portionof the waste taken out in mining would be employed for pillars and supports.

INITIAL CAPITAL REQUIRED:--

With $6,000n for beginning of operations this property can be put upon a substantial development basis and return a revenue during the work of developing. This amount to be disbursed in the following manner:

Two Waugh Drill Machines at $135.00 each--------	$ 370.00
One 14-8/8 [illegible] Pi, 14 I.P. 8-[illegible] Air Compressor----------	450.00
35 H. P. Distillate Engine----------	745.00
Air Receiver----------	110.00
Piping, Tools and sundries----------	100.00
	$1775.00
Less 20% discount per El Paso selling house-	355.00
	$1420.00

90 days operating expense at $38.62 per day----	$3,475.80
Freight and construction----------	500.00
Incidental expenses for ninety days----------	604.20
	$4,580.00
Bro't forward----	1,420.00
Total----------	$6,000.00

With the above amount of capital at hand to, begin with this property will under proper management take care of its future development without any further cash demands except such as will be forthcoming from the property itself,

Respectfully submitted,

(signed) George F.Goener.,M.E.

Prescott, Arizona,
January 3rd., 1914.