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03/24/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: SWASTIKA

ALTERNATE NAMES:

PATENTED CLAIMS MS 2529
SILVER PRINCE GEN. NO. 86
CURTIN MS 653 PAT. CLAIM
BLACK WARRIOR MS 419, PAT.
KINGDON

YAVAPAI COUNTY MILS NUMBER: 1268A

LOCATION: TOWNSHIP 11 N RANGE 1 W SECTION 25 QTR. SW
LATITUDE: N 34DEG 15MIN 42SEC LONGITUDE: W 112DEG 18MIN 39SEC
TOPO MAP NAME: BATTLE FLAT - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER-PRIMARY
COPPER-COPRODUCT
LEAD-BYPRODUCT
GOLD-BYPRODUCT

BIBLIOGRAPHY:

USGS BATTLE FLAT QUAD
BLM MINING DISTRICT SHEET 217
YAVAPAI MAGAZINE JUNE 1918 P 4 SHARLOT HALL
MUSEUM PRESCOTT, AZ
ADMMR SWASTIKA MINE FILE
AZ MNG. JRNL. SEPT 1917 P 14, MAY 1919 P 27
RAND, L.H. ETAL. MINES HANDBOOK 1919 P 27

SWASTIKA MINE

YAVAPAI COUNTY

Mines Handbook 1931 p. 434

USGS Bull. 782 p. 162

ABM Bull. 140 p. 102

SEE: IC 6905 p. 32

See: Arizona Mining Journal
Sept 1917 p. 14 Jan 1918 p. 26
Feb 1920 p. 44 April 1920 p. 61-62;
July, 1918, p. 26; May, 1919, p. 27;

Stan West Corporation (file) Page 17

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Swastika - Silver, Copper

Date June 2, 1960

District Peck, Yavapai Co.

Engineer Travis P. Lane

Subject: Visit to mine May 18, 1960.

Status: Developing

Property: The property comprising 3 patented and several unpatented claims, is located in the Peck Mining District near Peck Siding on the Cleator-Crown King road.

Owner: Holmardix Mining Co., Richard Martin, Pres., Prescott, Arizona.

Operator: Swastika Silver Copper Mining Co., 7002 Tatum Blvd., Phoenix. The company is a partnership with Walter J. Lonergan as general partner.

Arthur P.O. Box 269, Phoenix (8-1960 TPL)

See file for previous reports and memos. At the time of this visit the crosscut described in my weekly report dated March 5, 1960, had advanced to a point 550' from the 300' level drift. The objective here is the "Copper" vein which parallels the Big and Little Silver Prince veins (at about 600' from the Big Prince vein). The Little vein was intersected at its projected position in the crosscut and it showed a 9' width of only low grade mineralization. The face of the crosscut is now some 25' beyond the plotted downward projection of the Copper vein. The work is being continued, however, on the chance that a flattening of dip, or faulting, may account for its not having been found in the crosscut. The Copper vein is big and strong on the surface where it is claimed to have a length of about 500' and an average width of 17' with commercial values in copper and gold-silver. Four men were working including Wm. White, Supt.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine KINGDON ARIZONA MINING & MILLING CORP.

Date July 1942

District PECK MINING DISTRICT

Engineer Fred H. Perkins

Subject: Brief Report on Kingdon Group of
Claims - formerly known as SWASTIKA

LOCATION:

The Kingdon Group is located on the wagon road between Cleator Post Office and Crown King and about 3 miles south of Cleator.

When the present wagon road was a railroad, Peck siding was the shipping point on the railroad. A fair wagon road connects these mines with the main Mayer-Crown King wagon road. At present, Mayer is the logical and nearest shipping point.

METALS:

Lead, silver, gold, silica and copper.

TOPOGRAPHY:

The area in which these holdings are located is a small mineralized area of a few square miles and at an altitude of about 6000 feet. The area consists of high rugged ridges and sharp canyons. Tunneling is the method used to extract ore from the mine, though there are three shafts and a one hundred foot winze on the group of claims.

WATER:

Plenty of water for camp and mill use in the lowest workings. This water is handled by an electric pump and piped throughout the camp and mill.

GEOLOGY:

The country rock is Yavapai Schist with intrusions of quartzite, diorite and quartz-porphry.

There are two parallel veins with a strike north and south and having a 60° dip to the west, which are about 300 feet apart, and an extraordinary concentration of lead and silver values down as far as the lowest workings have explored.

The best values are found in the fissure or sheared zone where an intrusion of quartzite, diorite or quartz porphyry has distributed the flow of ore making solutions.

The rich portions of the veins are generally from one foot to three feet thick and are continuous along the vein.

That area between the two parallel veins is of a more or less laminated structure with a stock work of ore bearing veinlets, which under favorable conditions one could reason would in places produce large lenses of ore. No drifts have been driven into this hanging wall country and prospecting of this class is highly desirable.

- 2 -

DEVELOPMENT WORK:

Three shafts and several thousand feet of drifting has been done on this property, but unfortunately the extraction of ore as fast as it was developed leaves little or no high grade ore reserves blocked out. Considerable ore of lower grade which can be shipped under present conditions and at a profit, still remains in this mine.

The presence of air and water lines and track, etc. throughout the mine will make for cheap mining.

In fact, the completeness of present equipment in place and ready to go lends itself to extra cheap mining costs in extracting present ore as well as of new areas that were neglected in former days.

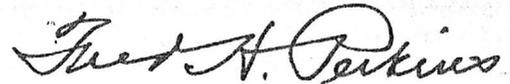
REMARKS:

This camp and mine are complete in every respect for a sufficient crew to go to work immediately.

Power lines to camp and mine are in good working order; no extensions or repairs; no transformers to replace. Compressors, saws, drill sharpener, pumps, etc. all in good working order. Underground drills, steel and hand tools and everything needed on hand.

Outside of explosives, groceries, gas and oil, no money need be spent on equipment. This set-up is unique and no borrowed money is required to get ready to develop this ground. The high silica contents of the veins make the mine run ore very desirable to the smelters. Thus a saving on milling can be taken advantage of. A complete mill is on the property and in perfect working order, should ore conditions make it advantageous to use the mill, it is ready to go.

The possibilities for quick production of lead, copper, silver and gold cannot be overstressed on this operation.



FRED H. PERKINS,
Field Engineer

SWASTIKA

YAVAPAI COUNTY

KAP WR 5/15/87: Dick Erlick, Consulting Geologist, 6077 Gilbert Lake Road, Birmingham, Michigan 48018, phone 313-556-3862, work 644-0878 called requesting information on the Summit Silver Mine, Yavapai County. The Summit Silver Mine is another name for the Swastika Mine (file) Yavapai County. The property has been submitted to his client as having 125,000 tons of silver ore in dumps and backfilling stopes. The "ore" is reported to run 14. tr. oz./ton in silver. If that much ore is available it would contain approximately 1,750,000 ounces of silver which is more than the entire past production of the Peck Mineral District (as per ABG&MT Bull 194). Copies of file data on the property were sent to Mr. Erlick as well as a list of those companies we know did exploration work on the property in the past. I encouraged him to consider the property regardless of any possible false or exaggerated claims by a promoter.

RRB WR 6/5/81: Frank Cerie, Stan West Mining Corp. reports that drilling on the Stan-McCabe group looks good. They've got assays of .25 to 1.00 oz. of gold over 5 ft. widths. They expect to make a decision in August as to what to do next but expect to pump it out and to' underground for extensive drilling. They have spent \$6 million so far. Another \$2.1 million has been raised for drilling on the Swastika property. He reports that they are making a new prospectus and that he will send us a copy when it is completed. He also reports that they are in the process of buying two more properties that he will tell us about when the deal is closed. Also they are interested in acquiring other promising properties if any are availab.e.

KAP WR 4/6/83: Mr. James McCarthy, Montezuma Lakes, Arizona brought in two grab samples and a tailing sample from the Swastika Mine. The two grab samples (one from an outcrop and one from a dump) were crushed. The results are contained on an Arizona Testing Laboratories Assay Certificate dated April 28, 1983 which is included in the file. Mr. McCarthy is going to try to promote the property for its owner Loft Hollaman. The property has apparently been dropped by Jerome Mining Company.

RRB WR 6/29/84: James McCarthy, Silver Hill Mining Cp., P O Box 385, Lake Montezuma, Arizona 85342 reports that he may soon start leaching the dumps at the Swastika Mine, Yavapai County. He brought in some buckets of sand and decomposed granite containing considerable magnetite from another property for Ken Phillips.

NJN WR 11/23/84: Allan St. James reports 8 or 9 drill holes totaling 13,000' were drilled by Stan West Corp (f) at the Swastika Mine (f) Yavapai Co. during 1982 when the property was leased from Loft Hollamon (c). The vein and/or mineralization narrowed at depth.

RRB WR 3/14/86: It was reported that Dave Hermiston working out of Grass Valley, Ca. has control of the Swastika, Pine Grove Dist., and is putting together a land position. He is reportedly a Canadian mine promoter who has had some success promoting U.S. properties.

NJN WR 3/28/86: Dave Hermiston (sp) 11550 Polaris Dr., Grass Valley, Ca. 95945 visited and reproted that he has purchased the Peck (f) and Swastika (f) mines, Yavapai Co. He is planning on leasing them to Rainex Resoruces Ltd., 1120, 625 Howe St., Vancouver, Canada, V6C 2T6.

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Mr. Solos and his two partners of Vancouver came in to discuss heap leaching of silver ores; they have the old Swastika mine leased.

GW WR 1/24/77

KAP WR 8-24-77 - Red Johnson, reportedly a realtor and an extractive metallurgical chemist is trying to sell the Swastika Mine for owner Loft Hollaman. bh 8-31-77

KAP WR 9-9-77 - Cyanide leaching of the Swastika Mine, Yavapai County tailings was discussed with Al Guthier of B.A.R.R. 4 Mica Company. Guthier reported he has leased the tailings from Loft Hallaman of Camp Verde. His plans are to treat 225,000 tons of tailings, dumps and ore which he claims have high silver and gold values. Past recent attempts to leach such material at the Swastika have met with repeated failure. Contained and recoverable values seem to be much less than given in reports, operations have been initiated without comprehensive metallurgical and pilot plant studies, and efforts have lacked technically qualified supervision. Copies of sections on gold-silver cyanidation from Denver Flowsheets was supplied along with the caution to proceed carefully. Guthier also expressed interest in mining 600' level of the mine which he claimed contains 631 oz./ton silver and 18 oz./ton gold.

Red Johnson, reportedly a realtor and metallurgist reported that he had visited Al Guthier's B.A.R.R. 4 Mica Mine and he will be helping B.A.R.R. 4 solve their problems (?).

Red Johnson reported he has a contract to sell the Swastika Mine. Further bits of information from Johnson are that Fred Ellison is trying to operate a gold placer near Rich Hill and Norman Harrison is trying to operate a mica mine near Black Canyon City.

KAP WR 6/27/80: Daryl Hand is reported to supposedly have his Swastika Mine, Yavapai County, for sale. The report is only a rumor.

AWB WR 9/3/80: Brian Faulkner said the Swastika Mine was going to be opened.

KAP WR 9/12/80: Daryl Hand, Keller Realty, P.O. Box 1807, Camp Verde, Arizona 86332, phone 567-3530, reported he was the owner (or agent) of the Swastika Mine, Peck District, Yavapai County, which he hopes he has sold. That is, he reports, it is in escrow.

Road work to the Swastika property had ceased without completing the road.
FTJ WR 5-21-65

Met John P. Hagerty, Bumble Bee, and his partner Ken Sherwood, Box 246, Black Canyon, coming from the Swastika. They were removing some of the buildings from the Swastika and will place them at the Pelican when road conditions permit. FTJ WR 3-18-66

Mr. A. L. Hollamon of Camp Verde has the Swastika property. He also has the Home Artic mine. FTJ WR 9-23-66

Loft Hollamon, Box 23, Camp Verde, Arizona, (567-3538) was in office 4-27-71. LP

Mr. Steve Sersli and Mr. Larry Socovuff (not sure of spelling) were in the office. They informed me that they had a leaching operation underway at the Swastika Mine on the Crown King Road. They said that by Saturday the 24th, should be "taking silver off the plates." They are electrowinning silver. Steve Sersli, president, 3550 North Central Avenue, Suite 120, Phoenix, 971-7918. GAM WR 4/22/76

Accompanied Ken Phillips to the Swastika Mine. There we met Mr. George Sipos of the New Denver Explorations, LTD (NPL) (726-470 Granville Street, Vancouver, British Columbia, or Swastika Mine, Crown King Rt., Mayer, Arizona, 86333). Mr. Sipos is listed as Director of the New Denver Explorations, LTD (NPL). Currently Mr. Steve Sersli (listed as president of New Denver Inc.) and George Sipos are attempting to reclaim silver by leaching the old dumps. When Ken and I were there they had two men working and they indicated that one person was not there. (Total of three employees plus George Sipos). For report of equipment, methodology and recovery see mine report by Ken Phillips. GAM WR 4/26/76

Mr. Murry (New Denver Exploration Ltd. (NPL) and Mr. Harvey (Index Mines Ltd., Calgary) (Administration office, 326 One Palliser Square, 125-9 Avenue SE, Calgary, Alberta T2G0P6) were sent to us by George Sipos. They wanted to discuss the leaching operation they are undertaking at the Swastika mine. They told me they were still having trouble recovering silver. Also they informed me that Steve Sersli was no longer working for them. They were unhappy about the way things were progressing at the mine site. Mr. Murry told me that they were not sure how much silver they are recovering. Ken and I told them what we thought some of their problems might be and also how they might solve part of their problems. I also told them to contact Dave Rabb at the Arizona Bureau of Mines. GAM WR 5/19/76

Arthur J. Lonergan, 7002 N. Tatum Blvd., Phoenix, and George Lauer of Oakland, California, visited the office requesting information re the Swastika mine and vicinity. Lonergan is a general partner and takes the lead in Swastika Silver Copper Mining Co. and Lauer is a limited partner. They reported the current status of development of the property as follows: crosscutting is in progress on the 300' level of the Curtin shaft, driving toward the "copper vein". The crosscut starts from a point in the drift level about 100' north of the shaft station and has advanced about 275' (of 450' estimated distance to the copper vein). It is expected to cut the smaller "Prince" vein any day now (Mar. 2, 1960). Bill White is the supt. and from 5-7 men are employed steadily. TPL WR 3-5-60

✓ Visited Dick Martin, realtor, in Prescott. He is the principal in Holmardix Mining Co. which has leased the Swastika mine to Swastika Silver-Copper Mining Co. He reported that work has been suspended at the Swastika following disappointing results from development. He also told me he owns a substantial interest in the old Waters Gold Mine (2 claims and a mill site all patented) in the Santa Maria District. The property has recently been leased to J. L. McPherson and C. J. Berry of Wickenburg who plan to work the mill tailings. TPL WR 7-2-60

The Swastika Silver Copper Mining Co., near Cleator, Arizona, is crosscutting on the 300' level of its Curtin shaft. The crosscut starts from a point in the drift level about 100 feet north of the shaft station and has been advanced about 275 feet. Bill White is superintendent. Mining World July 1960

Interviewed Dick Martin, ✓ realtor and attorney in Prescott. He said the Swastika operators (he is part owner of the claims) have suspended but not abandoned the project. TPL WR 9-23-60

Interviewed Dick Martin, realtor, Prescott, who advised that the Swastika exploration project is to be resumed with drilling of the gossan area of the upper part of the property and lateral diamond drilling on the lowest level (450') of the Curran shaft. William Hayes continues as the principal in the venture. Bill White also will continue to superintend the operation. TPL Memo 10-6-60

Interviewed Dick Martin who advised that he and associates had entered into an agreement with Verne Allen of San Francisco, who plans to drill the Swastika property. Mr. Allen is a principal in the Interstate Oil & Uranium Co. which for a time operated the Anderson uranium mine. Also in Prescott, visited McMican's office. TPL WR 12-29-61

E. L.

Mr./Brown visited re Swastika mine. Mr. Brown is with Banner Construction Co. who have explored this property and built roads to the area. LP 5-8-64

E. L. Brown and E. L. Juarez were in the office May 8. Mr. Brown said he fixed the road and hauled some equipment up to the mine and then found out the property had been misrepresented to them so they moved out without doing any work in the mine. Nothing has been done by anyone else. EGW Note 7-16-64

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This property inactive.

Mark Gemmill
5-27-57

W. A. Hayes of Oakland, California has taken over the Swastika silver-copper mine in Yavapai County, Arizona and preparations are being made for its re-opening. A 300-ft. crosscut will be driven to the copper vein exposed west of the silver vein. When completed this will give four levels from the main workings. The 400-ft. shaft located on the Prince silver vein will be dewatered and deepened to the 500 level in order to explore that area. Operations are under the supervision of Bill White of Congress Junction, Arizona. Mining World Feb. 1959

It is reported that the Swastika mine will be re-opened and that improvement of the short road connecting with the Crown King road is to be undertaken immediately. No interested parties were available. I plan to visit this property as well as the Springfield property on my next visit in the region. TPL WR 5-30-59

Visited Dick W. Martin, attorney, in Prescott, to inquire re the Swastika Mine. Mr. Martin is president of the Holmardix Mining Co. which took over the Swastika property from Kingdon just before the latter's death some 9 or 10 years ago. The company operated for a time and then suspended. Recently (Sept. 1958) the property was optioned to W.A. Hayes, 1900 Leimert Bldg., Oakland, California. William White, supt., is directing work employing several men constructing a camp at Peck Siding about a mile down a canyon from the mine workings. Mr. Hayes plans to extend an existing tunnel to intersect the projection of the "copper vein" below the old Middle ton shaft workings. He plans, also to explore the main silver vein workings at a later date. TPL WR 8-1-59

Visited the Swastika Mine (mentioned in my weekly report dated July 31) Mr. William White is superintendent. The main or Curtin shaft was being unwatered with several feet of water remaining on the 400' level. This level connects with the 400' level of the Black Prince shaft some 900 feet distant. The older Black Prince shaft and most of its workings are caved. Also, a gossan area in the vicinity of the shafts is being drilled. The two shafts are on the main silver vein and explore it and, in places, a closely parallel vein. A 92' crosscut was run from a working face to explore another parallel vein, the copper vein. The crosscut reached the mineralized fissure, but did not encounter ore. Mr. White plans to drive an adit on this same vein with the adit portal some 500-600 feet north from the point reached by the crosscut. 5 men are employed. TPL WR 10-3-59

The main or Curtin shaft at the Swastika mine near Cleator, Arizona, is being unwatered to the 400 ft. level, and a gossan area in the same vicinity is being drilled. This shaft and the caved Black Prince shaft are on the main silver vein of the property, but present plans call for exploration of a parallel copper vein about 600' to the north. The Swastika is controlled by W. A. Hayes of Oakland, Calif., and associates. William White is supt. at the mine. Mining World January 1960 p. 67

Location

The Swastika group is ten miles westerly from the junction of the Crown King road and State Highway 69. In general the road to the mine follows the old railroad grade. The mine is one mile up on the flank of the hills on the north side of a deep valley. Altitude is 5200 feet. Timber is scarce on these claims but is abundant higher up near Crown King. The mine makes enough water for domestic and mining purposes.

The property has been owned until very recently by Richard Kingdon, who resides at the mine. The nearest postoffice is Cleator. Mail is delivered daily to the box on the Crown King Road.

Extent

There are four patented claims;

Curtin
 Nora B.
 Isis
 Silver Prince.

The nineteen unpatented claims are:

Left over Fraction.
 Left over.
 Peck Swastika Extension.
 Velvet.
 Hardscrabble.
 Midget.
 Peck Swastika Extension #10.
 Peck Swastika Extension #11
 Contact.
 Trinacria No. 1 to No. 10 Inclusive.

HISTORY

The earliest operations started in 1876 and continued until 1885 under F.W.Curtin. From then until 1910 the mine was inactive at which time it was reopened by F.W.Wood. Up to this time reported production was \$480,000 from the Silver Prince and \$385,000 from the Black Warrior which is the same vein on the Nora B claim. The latter production occurred about 1878 under Tom Eamon.

From 1910 until 1915 production is said to have been 600,000 ounces. From 1915 until May 1919, Frank Giroux operated the property and he reports that his operations paid out about \$142,000 in purchase price and royalties above operating costs. It is evident that all three of these operations were satisfactorily profitable.

Mr. Kingdon has been mining on a small scale for the past twenty years. During 1935 and 1936 Pope-Peterson obtained a lease, put up a mill, mined and shipped some ore developed by Mr. Kingdon, and milled dump ore and fills. I have been unable to get a satisfactory record of their operations. It appears that their work disclosed no new ore, but they did very little crosscutting.

Mr. Giroux, a reputable engineer and assayer of Mayer, estimates that the production from the property is about three million ounces of silver.

The Kingdon Arizona Mining & Milling Corporation have just acquired the property from Mr. Kingdon.

GEOLOGY

The mine workings are wholly in the PreCambrian Yavapai schists. This formation consists of typical chloritic fissile to dense schists, with some sericite, and with numerous large quartzite lenses. On the Curtin claim are at least three rhyolite dikes which strike nearly parallel to the schistosity. Two of the dikes appear in the crosscut tunnel #2, the easterly one is apparently the tail end of the 40 ft. dike which cuts across tunnel #1. This narrow end is more a decomposed andesite, and the same transitions from hard rhyolite to soft greenish weathered dike material was noted on surface, as a rather typical terminal phase. The westerly of the two dikes cut in tunnel #2 is forty feet wide and apparently correlates with the dike in the Prince 100 level crosscut to the Little Prince vein. A third heavy rhyolite dike appears in the north east corner of the Silver Prince claim. While these dikes have some genetic connection with the mineralization, the ore does not develop on contacts to the same extent as it does in vein fissures in the quartzite near the dikes. Some so called quartzites are apparently a highly silicified porphyry, resembling quartzite but exhibiting traces of the original phenocrysts.

The vein system consists of two principal fissures, the Prince and Little Prince, some 250 feet apart. Parallel fissures and branch fissures are common to both. There are a number of faults, none of very great displacement, striking in general N 70° W. These appear to have considerable bearing on ore deposition.

The veins have an average strike of N 25° E. and dip about 70° west. The vein matter ranges from a clean

quartzite to siderite with dolomite and various manganese minerals. The only important mineral is silver and it occurs as the chloride, bromide, native and tetrahedrite. Some chalcopyrite was noted and high-silver galena is not uncommon.

Oxidation is deep and the depth of oxidation irregular, as on the Prince claim, according to Mr. Giroux, sulfides were found above oxides and oxides below sulfides in places. The sulfide stopes on the 400 level of the Prince showed no appreciable decrease in value according to Giroux.

The Peck Mine, one mile west bottomed at shallow depth after having enjoyed a remarkable concentration of silver in the upper levels. The absence of ore on the 400 level of the Curtin claim may exemplify this, however this is not true of the Prince where high grade sulfides extend below the level floor.

The quartzite when intersected and fractured by the fissures seems to be receptive to deposition. It is probable that the absence of ore on the 400 level of the Curtin is due more to the fissure traversing schist, whereas on the level above good ore is associated with quartzite. The footwall quartzite showing in the shaft station on the 400 level of the Curtin is dense and tight, the vein fissure is in a soft complex of schist and siderite usually about 15 feet wide.

Development

The Silver Prince claim is developed by a four hundred foot shaft and three adit crosscut tunnels, all on the same elevation and only several hundred feet apart. From the most southerly of these a winze has been sunk 125 feet and it is from this that the Black Warrior production was taken. The

Prince shaft is equipped with a gas hoist and is in fair repair. Four levels have been opened at approximately 100 ft. intervals with an average length of 800 feet.

On the Curtin claim are three adit X-cut tunnels. No. 2 connects with the 100 level of the Prince, and No. 3 with the 200 level. At the end of tunnel #3 is a shaft 165 ft. deep. Sixty five feet below the collar is a level which connects with the 300 level of the Prince, and at the bottom 165 feet down is the level which connects with the Prince 400. The shaft is in perfect shape, and most of the mine openings on the Curtin, being of fairly recent date are in good repair.

Numerous crosscuts have been driven from the various levels, a better and clearer picture of which can be obtained by inspection of the mine map.

Most of the work on the Curtin claim, except for the adit crosscuts, are mapped by the writer from Brunton surveys and are accurate only to that degree.

The Little Prince vein has been developed to a limited extent by a tunnel and a shaft 135 ft. higher than camp, by No. 2 crosscut tunnel where it has been drifted on, and by the crosscut from the Prince 100 level. It is reported by Mr. Giroux that considerable production came from the latter work. The drifts are now largely backfilled or caved to the extent that stope areas cannot be ascertained.

Milling

It is apparent that unless excellent recovery were obtained, these high grade ores should be shipped, not milled. The presence of oxidized silver minerals precludes the opportunity of good recovery, and this was demonstrated by Pope-Peterson. Cyanide would probably give better results but this must be determined. The sulfide ores will float to better advantage, and if intermediate grade ores are developed there will be an opportunity to mill these ores. On the high grade ores, even the sulfides, the combined milling cost and tailing loss will probably exceed the shippings costs of crude ore.

The flotation mill on the property is an excellent one. The grinding section can be used to advantage should cyanide work satisfactorily. The cyanide process will call for two agitators and probably three counter current washing thickeners, using the present tailing thickener as a primary. A small precipitation plant would also be required.

ORE POSSIBILITIES

From old records of assays on the Silver Prince, it is evident that the ore was narrow and high grade, very often the width in inches times assay in ounces gave a product of about 1500 units or more. Under these conditions one cannot expect to find appreciable amounts of ore left. The twenty samples taken by the writer are chip samples taken more for indications of value. Samples 2, 9 and 10 indicate good ore above the 300 level, and #20 that good ore is being broken below the 365 level north of the Curtin shaft. These sample widths, assays and locations are given on the enclosed map.

It is probable that some ore suitable for leasing operation may be obtained from present openings, but if the mine is to become an active producer then a program of prospecting and development must first be accomplished.

This program may be divided into two classes, one of short distances and relatively low cost, a second of longer prospects which will cost more but which will have greater possibilities because they open new country. The 4th level of the Curtin has been so devoid of crosscuts that the hanging wall should be explored.

Under the first group I recommend the following work, subject to modification as new information is gained:

- | | |
|--|-------------|
| a- Crosscut into hanging wall 400 level 200 ft. S. of Curtin shaft. - - - - | 50' |
| b- Additional 50' into hanging wall 400 level 60' S. of shaft - - - - | 50 |
| c- Crosscut hanging wall 400 level 180 ft. north of shaft | 90 |
| d- Drift south on 365 level on the hanging wall vein from the point of connection to the Ciroux work. This to get under the ore showing on the 300 | 100 |
| e- Drive the south 400 level Curtin about 50 ft. southerly, connect with the old raise below 303 stope, rehabilitate this raise if necessary and sub level off for stoping. The old records show some exceptional ore below the level floor at 303 stope 60' | |
| f- Drive south on the 200 level of the Prince shaft to prospect the ground under 101 stope. | <u>150'</u> |

Total footage 500

The direct cost of this work should cost about \$3000 exclusive of the necessary repair work in the shaft and in the raise. With blacksmithing, hoisting supervision and taxes the total cost will be close to \$6,000.

Second group of Prospecting

These will be modified according to developments in the first group and further study.

a-	Crosscut about 260 feet from the 200 level Prince shaft to intersect the Little Prince vein.	260'
b-	Drifting on same north and south	200
c	Crosscut from this drift	80
d-	Drift north 300 feet from No. 2 tunnel on the Little Prince vein, and at least 60 feet south to observe the effects of the fault in the Prince vein east of here.	360
e-	If the work south on the Prince 200 level is encouraging drive south an additional	<u>600</u>
	Total	1500 Ft.

Probable cost both development programs \$20,000.

While diamond drilling is much cheaper, because of the open nature of the fissures and the presence of cross faults I do not recommend it. Drifting and crosscutting give more value in permitting a detailed study

The total cost of the program will be partially offset by royalties from leasers operating on ground already opened up. The results of the program, when complete, may be negative, but it is probable that sufficient ore will be discovered to pay the cost and return a profit. No large tonnage of ore is to be expected, but the important point is value in dollars.

The block of ground on the Curtin 300 level just south of the property line is promising for immediate production, as is the sub-level work north of the Curtin shaft below the 365 level

The speed of development will probably be limited by compressor capacity but should be about 200 feet on a one shift basis up to 400 feet per month on double shift. Working as many headings as the air capacity will allow, but not to the point of overcrowding other facilities will result in the lowest unit cost of development.

EQUIPMENT

MILL

- 3- Steel water storage tanks 10' D x 22' high
- 1 Steel frame mill building.
- 1 Timber receiving bin about 14' square.
- 1- 20 ft. belt feeder bin to crusher.
- 1 8"x 24" Allis Chalmers roller bearing crusher with 25 H.P. motor. and A-C grizzly.
- 1e 13" belt feeder from crushed ore bin below crusher to ball mill.
- 1 4'x6' Allis Chalmers ball mill, in closed circuit with
- 1 36" Aikens spiral classifier.
- 1 60" Conditioner
- 1 3- disc reagent feeder.
- 6 18" Denver Sub-A cells.
- 1 6 ft. concentrate thickener with pump.
- 1 4 x 4 Drum filter.
- 1 20' Tailing thickener.

Individual motor drives with full magnetic protection on all mill units.

The mill is in excellent condition and is a nice bit of engineering.

MINE

- 1 Small compressor
- 1 Ingersoll single stage 50 H.P. compressor
- 4 Jackhammers
- 2 75 Leyner Drills.
- 2 Stopeys
- 1 #50 Ingersoll Drill sharpener
- Large quantity of drill steel.
- 1 10 H.P. Ingersoll motor pump on 400 level.
- 1 52 H.P. Pratt Gilbert geared electric mine hoist on 500 level Curtin.

Complete equipment of rails and pipe and mine cars.

BUILDINGS

The mine camp is in good shape and is an excellent one for a small mine.

Blacksmith shop	at	No 3	tunnel	Curtin.
Compressor house	"	"	"	"
Change House	"	"	"	"
Managers house				
Guest house				
Boarding house				
Cook's house				
Residence				
Engineer office.				
Assay office				
Bunk house				
Garage or barn.				

All buildings are of frame construction.

CONCLUSION

The property purchased by the Kingdon Arizona Mining and Milling Corporation from Richard Kingdon embraces an extensive area of well mineralized ground. Three claims of the group, the Nora B, the Silver Prince and the Curtin have had a considerable and profitable production of high grade silver ores.

But little ore is left in the mine for immediate mining purposes. Because the ore has occurred in rather small high grade lenses, not always on the same fissures, close prospecting is necessary. There are a number of areas close to present mine workings which should be investigated for new ore. In addition to these, the hanging wall country, especially in the zone of the Little Prince vein offers favorable opportunities over a considerable length of strike.

The property must be regarded only from the aspect of being favorable for a program of prospecting and development in ground which has yielded high grade silver ores and which may be made to yield more.

While there is a possibility that the ore does not persist with depth, this must not be accepted until proved beyond doubt. The area available at and above present depth is extensive enough that the problem of depth is of no immediate concern.

The price of silver will strongly affect the success of future operations.

The cost of the program outlined in this report is moderate, and I believe that the chances are excellent that sufficient ore will be found to return the cost, and favorable that a profit above this will be made.

The mine is well equipped with everything necessary for this program

A. F. Mills

North American Gold Mining Industry News 4/25/86

Page 162
U.S.G.S 782

May 10, 1944

Mr. Mark Wilmer
703 Heard Building
Phoenix, Arizona

Dear Mr. Wilmer:

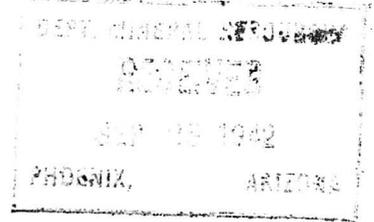
Many thanks for the Swastika inventory
and I am enclosing your notes and also an
additional copy of the inventory.

Yours very truly,

J. S. Coupal, Director

JSC:LP
Enc.

Washington, D.C.
Sept. 25, 1942

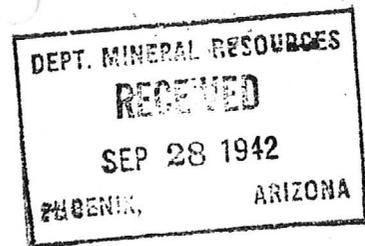


SUBJECT: Mine Loans, Class B
✓ Kingdon Mining and Milling Company

This property has been recommended for field examination.

Bill
Bill Broadgate

Edwards



Sept. 25, 1942

Mr. Morton Macartney,
Chief, Self Liquidating Division,
Reconstruction Finance Corporation,
Washington, D.C.

Hotel Harrington

Dear Mr. Macartney,

It was most kind of you to inform me that the Kingdon Mining and Milling Company application has not been rejected because the loan was requested for a silver property, but has now been recommended for a field examination.

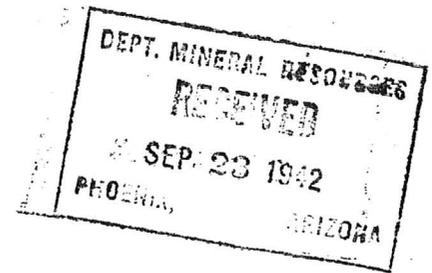
I have recent information to the effect that this ore is much desired by the Clarkdale smelter and I believe some such statement was attached to the application, consequently I feel that it is no mistake to order the examination, aside from silver considerations.

I can scarcely begin to tell you how much I personally appreciate the extreme courtesy I have been accorded by the RFC personnel from Senator Henderson down.

Very truly yours,

W. C. Broadgate
Asst. Director

Washington, D.C.
Sept. 21, 1942

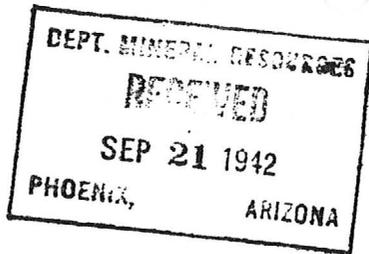


SUBJECT: Mine Loans
Class B
Kingdon Arizona M & M Co.

This application has not yet been acted on by the Board, consequently we may have been in time asking for reconsideration on the basis outlined in my letter to macartney. This would be much better than having an official turndown and having to ask for a review and reopening.

Bill

Bill Broadgate



Washington, D.C.
Sept. 19, 1942

SUBJECT: Mine Loans, Class B
Kingdon Arizona Mining & Milling Co.

I have the memo of Sept. 18.

I knew that the mine had been presented as valuable for fluxing ores.

I did not know, or if I did I had forgotten, that letters from the smelter were filed with the application.

You have evidently not had a notice of rejection as yet.

You have had subsequent correspondence from me showing additional action.

It may be that under the circumstances the Board will not reject, or the reviewing request may ~~come~~ have come quickly enough to forstall adverse action.

In case you do get a rejection, an application or request should be made to reopen the case for review, enclosing copies of the smelter letters, and, especially indicating that the smelters are willing to pay a bonus for the fluxing ore, or to lower the rates because of it. It would also be well to point out the new importance of silver for war industrial purposes.

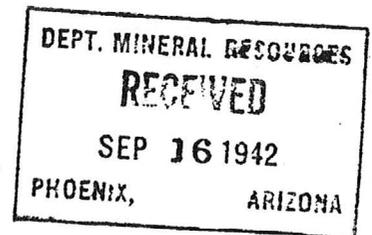
I believe this route would be better than trying to force the issue of trying to make the property look like a copper and lead mine, which I do not believe it is, even though those metals are present.

We probably can work this out.

Bill

Bill Broadgate

Washington, D.C.
Sept. 14, 1942



SUBJECT: Mine Loans
Class B
Kingdon Arizona M & M Co

I am speaking off the record on this matter, but I have not been able to get very far in influencing opinion favorably.

As you know, the word has gone forth to screw down on gold and silver mines, to save labor and materials for strategics.

The presentation of this application so definitely fixes it as a silver mine and for various reasons the records do not show very much lead, looking at the mine from the strictly lead-mine status.

Furthermore, although copper is short and the zinc situation alarming, lead is in an easy position and there is no pressure to open very marginal leads where the metal returns might not be commensurate with the expenditure of men and operating supplies.

I question very much whether a field examination will be recommended... I understand this application will go to the Board this week sometime.

Of course, we may be agreeably surprised, but I do not want to raise any false hopes.

In case the application is rejected, the only move would be to present new material, such as a report from Coupal, bolstered by sufficient evidence that the property will be valuable as a lead mine, entirely aside from the silver involved, and a letter recommending that a field examination would be warranted on this basis, from the Department.

I understand that an analysis of the data indicates lead to be incidental and that in the past no particular effort has been made to recover it.

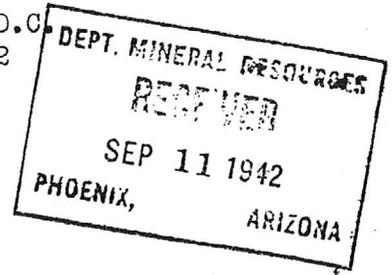
I certainly should like to do something for this case, but if it turns out to be a negative result, the above is the best I can recommend.

Bill Broadgate

As the set-up indicates shipments will be made to a copper smelter, this corroborates the lack of lead and that it will not be recovered. In case the application is turned down and the course I suggest is taken, the copper-fluxing angle is out; if that is the course to be pressed, perhaps letters from the copper smelters to the effect that they are in great need for this ore for flux might help. You will have to take one stand or the other, you can't take both. This memo will give you a chance to marshal your ideas, but don't go writing any letters until official action is taken, and don't refer to me.

Bill

Washington, D.C.
Sept. 8, 1942



SUBJECT: Mine Loans,
Class B
Kingdon Arizona M & M Co

I have managed to get this loan taken out of line (there are thirty days applications ahead of it) and to an examiner, who is now working on it.

You should either hear from it soon for additional information, or I will hear about the disposition, which I trust will be a recommendation for examination.

As you know, due to the fact that the Swastika has the reputation as a straight silver mine, I am a little uneasy about it.

Unfortunately, the examination did not fall to the man whom I particularly wanted to have it.

But here's hoping.

A handwritten signature in cursive script that reads "Bill".

Bill Broadgate

Washington, D.C.
Aug. 31, 1942



SUBJECT: Mine Loans
Class B
Kingdon Arizona M & M Co.

This application is now being worked on in the engineering section of the
RFC.

Bill Broadgate

BOARD OF GOVERNORS:
CHARLES F. WILLIS, PHOENIX
CHAIRMAN
DR. N. H. MORRISON, PHOENIX
VICE-CHAIRMAN
SHELTON G. DOWELL, DOUGLAS
L. V. ROOT, KINGMAN
LOYDE C. EDMONSON, GLOBE

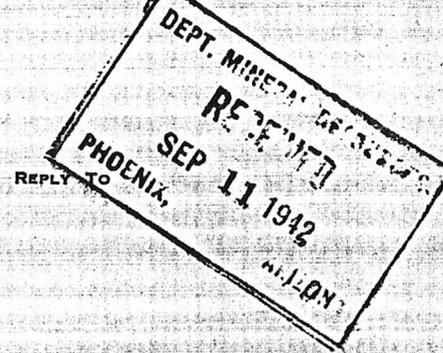
DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
518 TITLE AND TRUST BUILDING
PHOENIX, ARIZONA

J. S. COUPAL, PHOENIX
DIRECTOR
W. J. GRAHAM, PHOENIX
ASSISTANT TO THE DIRECTOR
AND SECRETARY TO THE
BOARD OF GOVERNORS

FIELD OFFICES AT
GLOBE - KINGMAN
PRESCOTT - TUCSON



Globe, Ariz.
July 23-42.



Mr. W. C. Broadgate,
11th & E. Sts., N. W.
Washington, D. C.
% Harrington Hotel

Dear Broadgate:-

At the request of Miss Montgomery I am sending you a Brief Report on the SWASTIKA GROUP of Claims as I see them.

You can not go wrong on giving this lay out a good strong boost.

Now and then word reaches me of the good work you are doing back there and I congratulate you on your activities and successes.

Yours truly,

FRED H. PERKINS.
GLOBE - ARIZONA
P. O. Box 229

* GENERAL REFERENCES

- REFERENCE 1 F1 < AZ DEPT OF MINERS RESOURCES FILE DATA
- REFERENCE 2 F2 < ABGMT- USGM FILE DATA
- REFERENCE 3 F3 < ABGMT CLIPPINGS FILE
- REFERENCE 4 F4 < U.S. GEO SURVEY BULL. 782, p. 162

M110 < SWASTIKA CONTAINS 4 PATENTED CLAIMS: CURTIN, MORA B, ISIS, SILVER PRINCE, AND 19 UNPATENTED CLAIMS >

F5 < DEWITT, ED. 1976 M.S. THESIS, UNIV. OF ARIZ. 150 PGS >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < _____ > RECORD TYPE B20 < X, I, M > DEPOSIT NUMBER B40 < _____ >
 REPORT DATE G1 < 8 1 8 0 9 > INFORMATION SOURCE B50 < 1 2 > FILE LINK IDENT. B50 < USGM 004 025 1828 >
YR MO
 REPORTER(SUPERVISOR) G2 < DEWITT, ED H. > (last, first, middle initial)
 REPORTER AFFILIATION G5 < ABGMT > SITE NAME A10 < SWASTIKA MINE >
 SYNONYMS A11 < SILVER PRINCE, BLACK WARRIOR, MORA B, KINGDON >

LOCATION

MINING DISTRICT/AREA A30 < PECK DISTRICT > STATE A80 < A.Z. > COUNTRY A40 < U.S. >
 COUNTY A60 < YAVAPAI >
 PHYSIOGRAPHIC PROV A63 < 1 2 W >
 DRAINAGE AREA A62 < 1 5 0 7 0 1 0 2 W > LAND STATUS A64 < 0 0 W 1 >
 QUADRANGLE NAME A90 < BATTLE FLAT (1974) > QUADRANGLE SCALE A100 < 24 000 >
 SECOND QUAD NAME A92 < _____ > SECOND QUAD SCALE A91 < _____ >
 ELEVATION A107 < 5190 FT >

UTM
 NORTHING A120 < 3791800 >
 EASTING A130 < 379300 >
 ZONE NUMBER A110 < 12 >

* ACCURACY
 ACCURATE ACC (circle)
 ESTIMATED EST < _____ >

GEODETIC
 LATITUDE A70 < _____ N >
 LONGITUDE A80 < _____ W >

CADASTRAL
 TOWNSHIP(S) A77 < 011 N 12 W > RANGE(S) A78 < 001 W 12 W >
 SECTION(S) A79 < 25 >
 SECTION FRACTION(S) A76 < SE OF SE >
 MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 4.0 MILES NORTH-NORTHWEST OF CROWN KING, ARIZONA >
 LOCATION COMMENTS A83 < SWASTIKA IS MINE NAME GROUP SILVER PRINCE AND MORA B ARE PATENTED CLAIMS IN THE SWASTIKA GROUP. BLACK WARRIOR IS ANOTHER NAME FOR MORA B >

* ESSENTIAL INFORMATION
 + ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Swastika Mine Date April 26 *Year? 1976?*
District Yavapai County Engineer Ken A. Phillips
Subject: Cyanide leach operation

Owner: Loft Hollamon, P.O. Box 23, Camp Verde, Arizona, 567-3538

Lessees and Operators: See previous report by Glenn A. Miller dated April 26, 1976 and April 22, 1976.

Operation: A cyanide leach, electrowinning operation is being attempted on the property. A leach pad has been prepared in a small ravine. A base of 24 inches of mill tailings was established, then covered by a 40 by 150 foot sheet of heavy gauge vinyl, and that by a 24 inch layer of tailings on top. Approximately 2000 tons of dump material reportedly averaging 8 oz. Ag/ton was piled on the prepared leach pad and a PVC sprinkler system has been installed on top of the dump rock. The cyanide plant consists of a 1400 gallon batch solution system. The cyanide solution contains a 55 gallon drum of sodium cyanide dissolved in 1400 gallons of water. The solution is sprinkled over the rock, percolates through the rock and is collected at the east (down slope) end of the pad where the solution flows through a 2" pipe to a large plastic swimming pool. The solution is pumped from the swimming pool to an eight foot square mixing tank. A portion of the solution is pumped from the mixing tank to the electrowinning cells and the remainder is recirculated through the sprinkler system. The electrowinning cell measures 10'X16" and is 18" deep. The cell contains 32 sets of plates, all stainless steel. The unit operates at 3.4 volts DC with a current flow of 140 amperes. Each plate measures 10"X14" giving a total cathode area of 4480 square inches and a current density of 0.0312 amperes/sq. inch. Overflow from the cell is returned to the mixing tank.

The electrowinning cells had been operating for about 72 hours when Mr. Sipos pulled a plate from the cell and scraped maybe a half an ounce of a black powder from the plate. The powder did not feel particularly heavy even though the designer and seller of the system and cell had told Sipos the black material would be silver. Sipos has not assayed the powder, nor has he made any tests as to the silver content of the pregnant solution. A Mr. Ken Thornstrom is reported to have invented the process and sold it to the present operators.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

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all levels of
Swastika checked

for radio activity

9-13-49.

Negative

b-1

Manning

KINGDOM ARIZONA MNG. & MILLING CORP.

Pb, Ag, Au, Cu

Yavapai

13-6

T 10 N, R 1 E

'42

ENCLOSURES

- 1- Plan and longitudinal section
 2- Claim map.

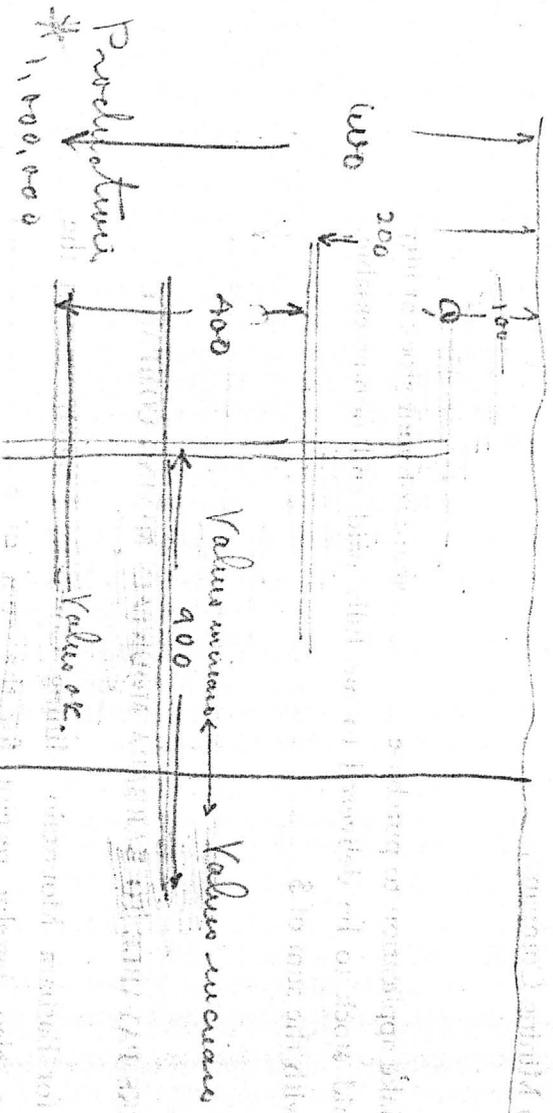
Chip samples taken

<u>No.</u>	<u>Wd.</u>	<u>Assay</u>		<u>Description</u>
		<u>Au.</u>	<u>Ag.</u>	
1	60"	Tr.	Tr.	300L. Footwall crosscut quartzite
2	28"	"	17.4	300L Curtin on Prince Claim.
3-	36"	"	0.6	400L. at connection to Prince.
4	36"	"	0.1	Tunnel #2 N. drift underhand
5	36"	.01	0.6	Nora B. S. of X-Cut.
6	18"	Tr	Tr	Little Prince 100 level X-cut.
7	8"	.01	15.2	" " between #1 and #2 tunnels.
8	27"	.02	6.8	" " Tunnel #2.
9	28"	.01	30.4	Upraise 500 level south.
10	30"	.01	17.4	" " " (N. of #9)
11	30"	Tr.	6.7	300 level south end of stope.
12	48"	--	43.4	S. end stope above 365 level.
13	30"	--	6.8	N. end sublevel below 365
14	36"	--	15.5	365 sublevel near winze.
15	36"	--	0.5	400 level 1st X-cut south
16	18"	--	1.3	Back of drift N. of 303 stope.
17	24"	--	1.4	20' N. of #16
18	20"	.01	1.7	F.W. X-cut 365 level- East fissure.
19	24"	.00	1.8	X-cut N. end 400, F.W. quartzite.
20	Grab	.01	25.6	Broken ore under 365 level North.

Note; All samples are more definitely located on plan map.

Sumatra

North Sumatra



Production \$1,000,000

Value increase 400

Value increase 400

Well 200

100

0

Surface

Base of Tertiary

Sumatra

North Sumatra

N

Russell's Letters

1/12/25

W.H.W. report on North Swastica adms
same as Bueling price 50,000

Swastica - price \$1,000,000
adymis Buelin on south

8-21-3

One further interesting feature is the existence of the
need never avoid it and similar general features which have
developed but which could be reached with moderate expense
from the present workings June 20th, 1939.

If your correspondent desires me to undertake the
Mr. M. R. Herzog, of whom I mentioned examination from
Cornelia Hotel, Ajo, Ariz. and would like to have the
Dear Mr. Herzog:

Following our visit to the Swastika Mine the
other day and confirming our verbal conversation regarding same
I will give you herewith an outline of my general impression.

As a conclusion I wish to state that the whole proposition
impressed me very favorably, and assuming that a reasonable deal
can be obtained, I feel that the property warrants a more
complete investigation or examination.

The underground workings in the mine are so extensive and
involved, and the records and maps so meagre and incomplete, that
considerable time would be required to formulate data for a definite
opinion or to answer the questions set forth by your correspondent.
I would say that a minimum of a week would be required and that
two weeks would be fully justified and time well spent. The cost
of such an examination would range from a minimum of about \$250. up
to possibly three times that amount if a new and complete map were
desired which could be compiled from various old maps but which
would also require some survey work to include workings not now shown
on any available map.

The Swastika Mine has a long record of intermittent production
and has no doubt produced over \$1,000,000 in silver ore. The ore
occurs in large lenses in the schistose margin caused by the
intrusion of the granitic Bradshaw Mountains into the older
sedimentary and volcanic beds. The history of the mine has been
that a large lense would be discovered and worked out and work
would cease and then a new ownership or management would continue
development and open up new lenses. When a lense is encountered
it is invariably a good one, opening up to wide width and heavy
tonnage with values of 200 to 700 ounces not unusual at the widest
spots.

Very little milling has been done in the history of the mine
and there is no doubt considerable mill ore still unstopped but
how much of this is still available or how much has been lost in
old caved workings is a question that it would take considerable
work and sampling and assaying to determine.

It is doubtful if there is any appreciable quantity of shipping
ore available at this time. There is no positive reason to justify
an assumption that any important lenses exist in the undeveloped
lateral territory. As you know the 400 level (bottom) was not
open for our examination the day we were there but Mr. Kingdon stated
that important lenses were cut with this level and were intact in the
bottom of same, and that he could have all of the water out of the level
on short notice.

Mr. M. R. Herzog #2.

One further interesting feature is the existence on the surface of two similar parallel veins that have never been developed but which could be reached with moderate crosscuts from the present workings

If your correspondent desires me to undertake the more thorough examination I would be glad to do so at any time, and would like to have an expression as to how thorough or detailed examination or report he would desire.

Thanking you for the pleasant trip Sunday and with best regards,

Yours Very Truly,

to state that the whole proposition impressed me very favorably and assuming that a reasonable price can be obtained for the property warrants more

STATEMENT SHOWING PRESENT VALUE OF EQUIPMENT-CAMP-ETC-SWASTIKA MINES-DECEMBER 31, 1944

	Initial Cost	Total Depr. Per year	Age of Plant	Total Depr.	Present value of Flotation plant & Equip.
65 Ton Floating plant complete 440- 60 Cy. A. C. Cost of installation	\$43,000.00	\$3,440.00*	10 Years	\$34,400.00	\$8,600.00
1. Knowles Com- pressor. 8x10 25 HP Motor	600.00	18.00	20 "	360.00	240.00
1. I-R Compressor 10x12 50 HP Motor	1,500.00	45.00	20 "	900.00	600.00
2. I-R Jackhammers	420.00	12.60	20 "	252.00	168.00
2. I-R 75 Leyners	500.00	15.00	20 "	300.00	200.00
2. I-R Stopers	325.00	10.75	20 "	215.00	110.00
Drill Steel	150.00	4.50	20 "	90.00	60.00
1. 10 HP I R Motor Pump	600.00	18.00	20 "	360.00	240.00
1. 52 HP Hoist	1,500.00	45.00	20 "	900.00	600.00
1. 15 HP Hoist	350.00	10.50	20 "	210.00	140.00
3. Gasoline Eng 12-8-6 HP	600.00	18.00	20 "	360.00	240.00
1. Elec. Pump 1½ HP	300.00	9.00	20 "	180.00	120.00
2. Air Receivers	350.00	10.50	20 "	210.00	140.00
6. Mine Cars 12-16 #3	300.00	9.00	20 "	180.00	120.00
	50,495.00	225.85		38,917.00	11,578.00

That certain 50 ton flotation mill, complete with the buildings, and all machinery, equipment, tools and supplies used in connection therewith, situate on the mining property known as the Swastika Mine in the Peck Mining District, Yavapai County, Arizona.

- 3 - 10' x 20' Vert. Riveted Steel Water Tanks - No Tops
 - 1 - Hoist (Sgl. Drum Hoist) with 10 HP Motor
 - 1 - A-C Crusher & Motor (Same as Golden Turkey)
 - 500 - Used and Washed Concentrate Sacks
 - 1 - 15 ft. x 14" Feed Conveyor & Hopper - 1½ HP wagger Motor Falk Reducer Drive
 - 1 - A-C Ball Mill #1M24410 - 4' x 6' V-belt connected to
 - 1 - A-C Induction Motor 1165 RPM Type ARY - 72 amps at 440 volts
 - 3 - Denver Wet Reagent Feeders with Gear Reducer & ¼ HP Motor
 - 1 - 5' x 5' Wood Tank Conditioner with 2 HP A-C Vert. Motor 1750 RPM
 - 1 - 6 cell Denver Sub. "A" #J 5865 Flotation Unit with 3 5 HP Vert. Motors
 - 1 - 4' x 4' Denver Drum Type Filter with 1½ HP Motor Reducer V-belt Drives
 - 1 - Small Gear Pump
 - 1 - I.R. Vee Type Vac. Pump - V-belt connected to 5 HP Motor
 - 1 - Denver Simplex Diaphragm Pump
 - 1 - 10' x 8' Denver Thickener & Mechanism & 1½ HP Motor
 - 1 - 20' x 10' Wooden Settling Tank
 - 1 - Order #120-10-39 Aikens Classifier with Gear Motor, V-belt Drive 36" x 20", Pipe - Valves - Fittings - Conduit & Wiring Complete Switches & c for Motors
 - 1 - Steel Frame - Cor. Galv. Bldg. approx. 30' x 100'
- Including miscellaneous tools, pipe, equipment and supplies.

That certain 50 ton flotation mill, complete with the buildings, and all machinery, equipment, tools and supplies used in connection therewith, situate on the mining property known as the Swastika Mine in the Peck Mining District, Yavapai County, Arizona.

- 3 - 10' x 20' Vert. Riveted Steel Water Tanks - No Tops
 - 1 - Hoist (Sgl. Drum Hoist) with 10 HP Motor
 - 1 - A-C Crusher & Motor (Same as Golden Turkey)
 - 500 - Used and Washed Concentrate Sacks
 - 1 - 15 ft. x 14" Feed Conveyor & Hopper - 1½ HP wagger Motor Falk Reducer Drive
 - 1 - A-C Ball Mill #1M24410 - 4' x 6' V-belt connected to
 - 1 - A-C Induction Motor 1165 RPM Type ARY - 72 amps at 440 volts
 - 3 - Denver Wet Reagent Feeders with Gear Reducer & ¼ HP Motor
 - 1 - 5' x 5' Wood Tank Conditioner with 2 HP A-C Vert. Motor 1750 RPM
 - 1 - 6 cell Denver Sub. "A" #J 5865 Flotation Unit with 3 5 HP Vert. Motors
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 - 1 - Steel Frame - Cor. Galv. Bldg. approx. 30' x 100'
- Including miscellaneous tools, pipe, equipment and supplies.

REPORT ON THE
PROPERTY OF THE
SWASTIKA SILVER & COPPER COMPANY

Pecks Siding, Yavapai County, Arizona

BY

F. W. GIROUX
Gleeson, Arizona.

ARIZONA MACHINERY COMPANY
281 N. CORTEZ STREET
PRESCOTT, ARIZONA

PROPERTY:

The group of mining claims belonging to Swastika Silver & Copper Company consists of eight claims, three of which are fractions. They extend in a line north-easterly and southwesterly 3,000 feet in length on the strike of the mineralization and consist of the following claims:

<u>NAME</u>	<u>TITLE</u>	<u>AREA</u>
✓ Nora B.	U. S. Patent	20
✓ Silver Prince	"	20
✓ Isis	"	20
✓ Hardscrabble	Location	10
✓ Midget	"	3
✓ Peck-Swastika Ext. No. 10	"	20
✓ " " " No. 11	"	20
✓ Contact	"	20

LOCATION:

The property is situated in the famous Peck Mining District, Yavapai County, Arizona, which has produced about \$10,000,000.00. Part of the group is located in the south-west and joins property of Gold Crown Silver Mining Company. The Nora B., Silver Prince, Isis, Hardscrabble and Midget claims are contiguous. The balance are attached claims. The property is situated three miles in a south-westerly direction from Middleton Station, on the Bradshaw Mountains Railroad, a branch line of the Santa Fe. From Middleton, the property is reached by a good truck road. Prescott, the county seat and largest town in northern Arizona, lies to the north a distance, by road, of about fifty miles.

ACCESSIBILITY:

The property is easily accessible over a fine county highway built to Federal specifications to Cordes. The roadway has a finished width of 20 feet and is a gravel surfaced road. To this point, the maximum grade is six per cent, which is reached only for short stretches. From Cordes the road to the foot of the Antelope Hill is narrow and of steeper grade, but good. From the foot of Antelope Hill to Middleton, a distance of seven miles, the road is narrow and full of steep grades. From Middleton to Peck Siding the road is excellent, following an old railroad grade. From Peck Siding to the portal of the Adit level, a distance of one mile, the road is narrow and crooked and has numerous heavy grades. However, any make of truck can negotiate the road with capacity loads. Train service from Prescott to Middleton is weekly.

TRANSPORTATION:

Prescott is served by the Santa Fe Prescott & Phoenix Branch of the Santa Fe system, which reaches all of the important points of the county; there being branch lines to smelters at Clarkdale, Clemenceau and Humboldt.

TELEGRAPH AND TELEPHONE:

There is an office of the Western Union Telegraph Company in Prescott with a sixteen hour service daily, with the usual messenger service. At Mayer a telegraph office is also maintained. The Hardscrabble and Nora B. claims are crossed by local and long distance lines of the Mountain States Telegraph and Telephone Company, with telephones at the property giving bell service at small cost at all times.

TOPOGRAPHY:

The claims line on the east slope of the Bradshaw Mountains at an elevation above sea level of from 4,300 feet to 5,500 feet, with the general drainage to the east. The terrain is very rough and precipitous. The vegetation is characteristic of the district, composed mostly of scrub oak and chaparral with a few dot-ten wood in the conyons.

WATER:

In sinking Swastika main shaft water was struck 100 feet below the level of the Adit tunnel. The flow increased as depth was attained and at the 400 foot level a flow of 10,000 to 20,000 gallons per 24 hours, (depending on wetness of seasons), has to be handled. By further sinking, enough water will be developed for a mill of large capacity.

CLIMATE:

Quite contrary to popular belief, this high plateau, although in the southern part of the United States, has a very equable climate. The average temperature for a period of ten years was 58 degrees Fah. with a maximum of 104 degrees Fah. and minimum of 20 degrees Fah. The average annual precipitation over the ten-year period was 15, 2 inches. The lowest temperature usually comes in January and the highest in the first party of July. January, February, July and August have the highest monthly precipitation; May, June and July the lowest. Although the summer temperature frequently goes to 100 degrees Fah. it is never unbearable owing to the very low relative humidity.

LABOR:

There is no difficulty in obtaining plenty of men at standard wages, i. e., \$5.50 to \$6.00 for machine men, \$6.00 for hoistmen, \$6.50 for timber men and \$4.00 for laborers on surface.

TIMBER:

Such as is needed in the mine is delivered on the ground for \$40.00 to \$60.00 per M.

POWER:

The Arizona Power Company's high tension line passes across the property. This power is furnished for about $2\frac{1}{2}\%$ per kilowatt hour, depending upon the amount of power used. This allows a considerable saving in power plant construction and the difficulty in handling fuel. A transformer house has been established on the Hardscrabble claim, from which point power is distributed over the property and to the plant of the Gold Crown Silver Mining Company.

GEOLOGY:

General: The important rocks of the northern and middle of the U. S. G. S., Bradshaw Mountain Quadrangle, (U.S.G.S. Folio 126), are schist, diorities, rhyolites and granites. The schist is found to be pre Cambrian in age and of probable sedimentary origin. On the property of the Swastika Silver & Copper Company the rocks are silicious schist of the Yavapai formation, cut by numerous dykes of rhyolite, some granite and quartz porphyry which appear to be off shoots from the main granite mass, both east and west. The schist trends north 26 degrees east

and the dykes cutting through and across the schists also have a general northerly course. The Swastika vein system is composed of immense quartzite ledges, running in places parallel to the schistosity, in other places diagonal to the schistosity. The broad schistose belt is cut by several prominent dykes of diorite, quartz porphyry and rhyolite and a softer, courser grained porphyry, of various width and similar strike and dip to the schists. Three prominent cross faults are noted. The conditions are good for mineral deposition.

Vein System: Five well defined veins cross the Nora B., Silver Prince, Hardscrabble and Isis claims, giving 3,000 feet of prospecting area along the strike of the veins, with 1,500 feet in cross section. The Main, or Big Prince vein on which are the principal workings of the Swastika, appears on the Nora B. and Silver Prince claims as a big jaspary quartzite ledge with high reef outcrops for many feet in places and at others covered with detritus, but maintaining where exposed a true course in conformity with the schistosity. It varies from ten to fifty feet wide along its strike and shows much oxidation; it lies on the foot wall side of a rhyolite dyke. Assays taken from the outcrop of this vein run from 4 to 150 ounces silver per ton. The Little Prince vein, some 300 feet to the west of the Big Prince vein, is not so bold or pronounced in its outcrop; it lies above the rhyolite dyke, making the dyke its foot wall and a band of schist for its hanging wall. Both of these veins, as they go toward the Curtin claim to the north, outcrop boldly as they enter the ground of the Gold Silver Mining Company. The copper condition is about 200 feet west of the

Little Prince vein. Several small pits and one shaft have been sunk along this condition. Copper ore occurs in this condition as lenticular replacements in the schist; samples taken have given from 1% to 30% copper, 2 to 20 ounces silver and \$2.00 to \$14.00 gold per ton; no ore concentration of commercial value in quantity has been encountered as yet. It is upon this continuation to the north that the large workings of the De Soto mine have been conducted and it promises great possibilities at depth in the Swastika ground. On the Hardscrabble claim the vein shows strong, following a rhyolite dyke as its foot wall with a band of schist for a hanging wall. About midway between the Hardscrabble vein and Big Prince vein is another vein un-named which shows on the surface. This vein was exposed by road grading. Samples taken at this point gave results of 15 ounces silver per ton. No development work has ever been done on this vein. The preponderance of ore in the silver veins will be of milling grade with bands or lenses of very high grade smelting products which will have to be carefully broken as some of it runs well into the thousands of ounces silver to the ton.

DEVELOPMENT:

The property has been developed to date by two adit tunnels, one on Silver Prince Claim and one on Nora B. claim; also by three shafts - one shaft on Nora B. 250 feet deep on Big Prince vein, a shaft on Silver Prince claim 225 feet deep and the main shaft 448 feet deep also on Silver Prince claim, this shaft being on the Big Prince

vein. Reference is made to the maps which accompany this report for details of development work. The greatest amount of development work was done in the Silver Prince and Nora B. claims with a less but important amount in the Little Prince vein. There was also a large amount of surface prospecting by means of shallow shafts, tunnels and open cuts on the numerous out-cropping veins of the property. The total amount of footage driven is as follows:

Shafts	923 feet
Drifts	} 6670 "
Crosscuts)	
Raises	900 "

EQUIPMENT:

The Swastika is equipped with a well filled compliment of hand tools for mining. There is no air compressor, all mining work having been done by hand. The camp is amply supplied with buildings, such as a boarding house, bunk houses, four dwelling houses, garage, assay office, all fairly well furnished to accommodate about thirty men with living quarters for the officers. The camp is lit throughout with electricity. Buildings for operating purposes consist of blacksmith shop, work shop and sample grinding house, ore bins, head frame and hoist house at main shaft. Mining machinery consists of one 12 H. P. Fairbanks Morse gasoline hoist; one 6 H. P. gasoline engine and cornish pump (these at main shaft), with one 9 H. P. gasoline engine, rock breaker and pulverizer at sampling department. There is also a five-ton Garford truck. The erection of a fifty-ton cyanide mill was started in 1919 - the concrete foundations were laid and some of

the machinery was brought to the site but was not erected. Now work was done on this building. All buildings and machinery have been well cared for and are in good condition. There is a little deterioration of some of the concrete piers due to weathering.

HISTORY OF THE PROPERTY:

The Peck Mining District, Yavapai County, Arizona, was discovered by T. M. Alexander, Wm. Cole, E. G. Peck and Hon. C. C. Bean June 18, 1874. Early in 1875 the Silver Prince location was made by Andy Curtin. On the same day Tom Eamon located the Black Warrior claim which joins the Silver Prince on the south and is now known as the Nora B. Both of these claims were reported separately by the above locators and they became rich from the proceeds of the mines. After exhausting the high grade ores, (which went down 150 feet from the surface on the Silver Prince and to 250 feet on the Nora B.), these men lost interest and disposed of their holdings, principally due to the fact that silver had dropped from \$1.29 per ounce to \$0.70 per ounce. Work ceased on these properties about 1884. In 1887 Steve Mott, an old miner, took a lease on the Silver Prince claim and sunk the Little Prince shaft and struck an ore body which netted \$80,000.00. There work ceased again except that which was done by various small lessees. In 1900 the property was acquired by F. W. Wood and associates who organized the Swastika Development Company to operate the Silver Prince and Black Warrior (Nora B.). Very little work was done on the Nora B. claim, however, all work being confined to the Silver Prince. At the time that the Swastika Development Company went to work, no shaft had been sunk on the Big Prince vein. This company put a raise through from the adit level to the surface. Under this raise a shaft was started

and sunk 100 feet; thence drifting was done to the north on the vein. After driving some 200 feet, a high grade body of ore was encountered, the first carload of which netted \$11,000.00. The shaft was continued to the four hundred level-- this point being 448 feet from the surface--and drifts run out from the three- and four-hundred foot levels. Ore was encountered on all levels, one shoot of which came to within a few feet of the old adit level which has been run by Curtin. Thirty-six carloads of ore were shipped by Swastika Development Company with a net return of \$185,000.00 from 1911 to 1915. In March 1915 the property was leased. The lessee operated until May 9, 1919 and shipped thirty-three carloads of high grade ore with one hundred carloads of low grade ore, which netted approximately \$150,000.00. All these values came from the Silver Prince claim and from four ore shoots. On May 19, 1919 the Swastika Silver & Copper company was organized and took over the holdings of the Swastika Development Company. A campaign of development work, which included a milling plant, was started and some sixty thousand dollars worth of ore shipped. Owing to differences in organization, work was stopped in 1923, the mill not completed and the property remaining idle to this day.

ORE IN SIGHT:

There remains on dumps and in fills and stopes 125,000 tons of ore which assays 14 ounces silver per ton. The bottom of the 400 foot level has exposed three short shoots of high grade ore and a raise close to the north end line of the Silver Prince claim on this level is in high grade ore, running from 100 to 125 ounces silver per ton.

SUMMARY AND RECOMMENDATION:

Summarizing the different advantages in favor of Swastika Mine, attention is drawn to:

(1) The mineral belt on which it is located and its close proximity to other noted mines with the same geological characteristics:

(2) The high grade of the different ores from several workings.

(3) The adaptability of the ores to direct smelting and milling. A forty-ton lot of low grade ore was taken from dumps and fills from Swastika and shipped to the Dorr Company, Denver, Colorado, which tested the ore at the Golden Cycle Mill, Colorado Springs, Colorado, worked out a flow sheet showing that this low grade could be treated at a profit by the cyanide method.

(4) The fact that the formation is favorable for economical mining.

(5) The nearness to railroad and smelter.

(6) The further important fact that water is abundant for milling purposes.

(7) That it has been proven that ore bodies without diminishing of values go to five hundred feet in two neighboring mines and 448 feet on Swastika and that the values have not bottomed at that point.

(8) Consideration of all these favorable conditions warrants the recommendation of the Swastika Silver & Copper Company's property as being an excellent basis for profitable mining operations, where ore deposition on an extensive scale is foretold by characteristics which, from long experience in the majority of instances shows, are the guide to mines.

The writer's long and successful association with some of the profitable mines of this district is the basis for recommending the following development:

Swastika main shaft should be dewatered and repaired in its entirety, sinking it five hundred feet deeper should be the plan followed. Drifting should be done south on the 400 foot level as far as the south end line of the Nora B. claim, thus cutting the ore bodies which were worked to the 250 foot level, by shaft on that claim. This would also prospect the southern portion of the claim where considerable surface ore was found, mined and shipped. A cross-cut should be driven from the 400 foot level to the Little Prince vein to cut the downward projection of the ore shoot mined by Steve Mott above that point. Several cross-cuts should be run into the foot wall of the 400 foot level with the view of cutting the vein which shows between the Hardscrabble vein and the Big Prince vein and also to cut the Hardscrabble vein and prospecting the same. After reaching the Little Prince vein, it should be drifted upon both north and south and at a point approximately 500 feet south of the Little Prince shaft. Cross-cuts should be run into the hanging wall and the foot wall to thoroughly prospect the massive quartzite at this point and one of the cross-cuts should be continued to the west, or hanging wall side, until it shall have cut the Isis vein. The Isis vein is worth of prospecting due to the fact that in the territory indicated, a very fine body of ore was taken out in the early days of the Peck Mining District. At the present time, remnants of the rich ore taken out can still be found in the old shaft. History will repeat itself here as it did in the

Silver Prince claim. I wish to emphasize the fact that I am thoroughly convinced, from the experience that I have had in this district, that deep mining will be amply repaid.

It is the opinion of the writer that a very profitable mine will be developed on the property of Swastika Silver & Copper Company if the plan of development outlined in this report is carried out.

Respectfully submitted,

(SIGNED) F. W. GIROUX.

Gleeson, Ariz.

November 23, 1928.

SHEET No. 2

	Initial Cost	Total Depr. Per year	Age of Plant	Total Depr.	Present Value
F'PWD.	\$50,495.00	225.00		\$38,917.00	\$11,578.00
1000' 3" Pipe					
@ 0.70 Pr. Ft.	700.00	21.00	20 years	420.00	280.00
300' 2 1/2" Pipe					
@ 0.58 Pr. Ft.	174.00	5.22	20 years	104.00	70.00
500' 2" Pipe					
@ 0.37 Pr. Ft.	185.00	5.55	20 years	111.00	74.00
4000' 1 1/2" Pipe					
@ 0.27 Pr. Ft.	1,080.00	32.40	20 years	648.00	432.00
3000' 3/4" Pipe					
@ 0.11 1/2 Pr. Ft.	345.00	10.35	20 years	207.00	138.00
10 Tons Mine Rails					
@ \$45.00	450.00	13.50	20 years	270.00	180.00
8 Steel Tanks @ \$40.	320.00	9.60	20 years	192.00	128.00
2 Circ. Saws @ \$75	150.00	4.50	20 years	90.00	60.00
Misc. Tools	700.00	21.00	20 years	420.00	280.00
1 Steel sharpener	800.00	24.00	20 years	480.00	320.00
1 Punch machine	200.00	6.00	20 years	120.00	80.00
1 Boarding house					
equipped	1,200.00	36.00	25 years	900.00	300.00
1 Frame Bldg. 16x24	600.00	18.00	25 years	450.00	150.00
1 Frame Bldg. 12x12	500.00	15.00	25 years	375.00	125.00
1 Office 10'x14'	450.00	13.50	25 years	337.00	113.00
1 Guest House 16x30	2,000.00	60.00	25 years	1,500.00	500.00
1 Residence 14x24	550.00	16.50	25 years	412.00	138.00
1 Hoist House 14x24	400.00	12.00	25 years	300.00	100.00
1 Assay office 12x24	1,500.00	45.00	25 years	1,125.00	375.00
1 Garage 20x40	300.00	9.00	25 years	225.00	75.00
1 Compressor house					
12x30	500.00	15.00	25 years	375.00	125.00
1 Blacksmith shop					
10x15	150.00	4.50	25 years	112.00	38.00
1 Pump house 5x8	25.00	.75	25 years	18.00	7.00
1 Bunk house 12x60	1,100.00	33.00	10 years	330.00	770.00
1 Bunk house 12x50	800.00	24.00	10 years	240.00	560.00
TOTAL	65,674.00	680.37		48,678.00	16,996.00

(* Indicates 8% depreciation per year. All other depreciation 3% per year.)

A. Sweeney C.M.

Cleator, August 20th, 1946.

Mr, J. Walters, Jr,
Chesterfield Apt's,
Prescott, Arizona.

Sw

Dear Mr. Walters:

I thank you for letter and, also the offer of a job. The present situation at the mine is rather somewhat of a discouragement. "Dicks" tergiversation is not improving as time goes on.

During the past days I have been checking the mine maps, and I belive we are reasonable assured of ores in dumps, tailings and old stope-fills as follows:

4000 tons in Dumps-	10 oz. silver @	\$8.50-	\$ 34000.00
2000 "	Mill tailings 10oz. "	" 8.50-	" 17000.00
14000 "	Stope Fills 10-14 " "	" 10.20-	" 142800.00
4000 "	300 and 400 Levels 25 oz. "	21.25 "	85000.00
<u>24000 Tons- Gross Value-----</u>			<u>\$244800.00</u>

Price of silver at \$0.90.5 per oz. Less 5% deduction using \$0.85 per oz. in the above estimate. In addition to the preciding there are ores of unknown tonnages exposed in some of the old stope-faces.

I am enclosing for your information a valuation of machinery, buildings etc. The 1945 taxes were based on this estimate.

For some time past I have been in hopes of making a trip to Prescott, but so far circumstances have prevented me from making the grade.

Respectfully yours,

A. Syverson

A. Syverson.