State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

(Koehler Mine)

GRAY EAGLE MINE (antimony) VIRTUE DISTRICT
BAKER COUNTY

FLF 8-20

Owner: Pat O'Brien and associates, Baker, Oregon.

Location: Five miles east of Baker on the west slope of the range of hills lying south of the Flagstaff Mine.

Area: Two unpatented claims, located by Pat O'Brien and associates in 1940.

History: Pat O'Brien has had three men working at the mine for several months, reopening the old workings and searching for ore. One car of ore was shipped to the smelter in March 1941.

According to Gilluly, Reed and Park, USGS bulletin 846A: "The Koehler mine is on the west slope of the range of hills lying south of the Flagstaff mine. The workings were inaccessible at the time of this survey. According to Parks and Swartley, the mine yielded antimony and gold, beginning late in 1915. The vein is reported to be well defined, with a maximum width of about 10 feet. Stibnite is distributed through the whole width of the vein, but massive stibnite occurred near the hanging wall in lenses that were 2 feet thick. Some of these lenses yielded ore that was shipped direct; other ore was brought up to grade by sorting. Several carloads carrying over 50 per cent of antimony were shipped, and the receipts from these sales are reported to have been about $15,000."

Equipment: Hand steel, blacksmith forge, shovels and picks.

Geology and development: The country rock is an altered or meta-gabbro. No definite vein could be seen, but lenses or pockets of quartz containing stibnite were observed in a fault zone which strikes N 10°E. The present work is being done in this zone through a 25 foot winze.

There is one old adit which runs N80°E for 600 feet and does not show any signs of mineralization whatsoever. An 80 foot, 55 degree incline shaft which runs S85°E taps old workings that are partialy caved. No mineralization was observed.

April 17, 1941
May 5, 1941
Hugh K. Lancaster
Field Engineer

Hugh K Lancaster

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon
Jan. 26, 1942

GRAY EAGLE MINE (Antimony) Virtue Area
(Kohler Mine)

Baker County.

Owner: Pat O'Brien and associates all of Baker, Oregon.

Location: The mine is located 5 miles east of Baker on the west slope of the range of hills lying south of the Flagstaff Mine in sec. 8, T. 9 S., R. 41 E., W. M. It lies 2 miles by dirt road from the Baker-Richland highway. This road is good in dry weather.

Area: 2 unpatented claims.

History: The Gray Eagle Mine, formerly known as the Koehler Mine, owned by Dr. A. Koehler, was located by Pat O'Brien of Baker, Oregon, in 1940. O'Brien and three associates have been working intermittently during the last year and have shipped 3 small cars of ore from which smelter returns totaled $460. Most of the ore shipped came from the dump and an old stope. It is estimated that only 10 tons represented sorted mine ore. At present an attempt is being made to ship a car of high grade ore.

According to data furnished by Ed Hendryx smelter returns from the Koehler Mine are as follows: On October 15, 1915, 18.208 dry tons of ore was shipped by A. Koehler and Carter to the Chapman Smelting Co., San Francisco, Calif., which netted $1178.04 after smelter deductions. The ore was valued at $75 per ton and had a gross value of $1365.64. Charges were: sampling $18.39 and freight $187.60.

On January 11, 1916 Dr. A. Koehler shipped 49.8665 dry tons of ore to the Chapman Smelting Co., San Francisco, which returned $6372.94 after smelter deductions. The gross value was $7449.83, and freight $620.88. The ore assayed 60% antimony and 0.04% arsenic. The value per ton was $127.80.

In April 1916 Dr. A. Koehler shipped two lots of ore. Lot 1 assayed 42.8% antimony and had a value of $115.99 per ton. Smelter returns were $2450.00 and freight was $335.60. Lot 2 assayed 28.5% antimony and had a value of $51.59 per ton. Smelter returns were $1094.64. Freight was $369.00. Shipments were made to the International Lead Refining Company, East Chicago, Indiana.

On June 24, 1916 Dr. A. Koehler shipped three lots to the International Smelting Company, East Chicago, Indiana. The data on these lots are:

Tonnages	Percent Antimony	Value
23.044	31.3%	$ 540.96
29.684	57.7%	1918.48
8.225	33.6%	207.28

According to Gilluly, Reed and Park, U.S.G.S. Bulletin 846A: "The Koehler Mine is on the west slope of the range of hills lying south of the Flagstaff Mine. The workings were inaccessible at the time of this survey. According to Parks and Swartley, the mine yielded antimony and gold, beginning in 1915. The vein is reported to be well defined, with a maximum width of about 10 feet. Stibnite is distributed through the whole width of the vein, but massive stibnite occurred near the hanging wall in lenses that were two feet thick. Some of these lenses yielded ore that was shipped direct; other ore was brought up to grade by sorting. Several carloads carrying over 50 percent antimony were shipped, and the receipts from these sales are reported to have been about $15,000."

Development: Development work consists almost entirely of work done by Dr. Koehler in 1915 to 1917. A 500-foot adit which follows the strike of the vein, generally north and south, has been reopened. Another old adit runs N.80° E. for 600 feet but shows no mineralization. An 80-foot 55-degree inclined shaft, which strikes S. 85° W. taps old workings that are partially caved and practically inaccessible.

Geology: The country rock appears to be a gabbro. In the vicinity of the vein the country rock is altered. The only mineralization occurs along a shear zone which strikes N. 10° W. The width of vein between the hanging and footwall varies from 3 to 8 feet and is filled with a moderately soft gouge-like material which lies on either side of a quartz vein. The vein dips 30 to 55 degrees W. Massive stibnite occurs in the quartz vein, which varies from 3 to 10 inches in width and lies in the center of the shear zone. The stibnite lenses vary in width from 3 to 8 inches and appear to be 2 to 10 feet long. These lenses are not continuous along the 500 feet of vein exposed. It is estimated that half a car of 50 percent plus stibnite is in sight and could be obtained by careful sorting.

Much of the gouge-like material contains valentinite and kermesite - the oxide and oxysulfide of antimony. Some of the oxide specimens run as high as 50% antimony, but these would have to be carefully studied before sorting could be done. It is difficult to distinguish the low grade from the high grade.

Equipment: Hand steel, blacksmith forge, shovels, and picks, one one-ton mine car, 100 feet of 8-pound rail and a 10 ft. by 10 ft. shed.

General: The mine is located at an elevation of 4000 feet on the gentle rolling sagebrush covered hills of the Virtue area. Rain and snowfall are the same as at Baker or about 12 inches precipitation per year. Snowfall will vary from 8 to 20 inches in depth. There is no water or timber on the claims so that both must be hauled to the mine. However, timber may be purchased from the sawmills in Baker 5 miles away.

Hugh K. Lancaster
Field Engineer
January 26, 1942

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Gray Eagle Mine (antimony) Virtue Area Baker, County

The Gray Eagle Mine, formerly known as the Kpehler Mine, is located five miles east of Baker on the west slope of hills lying south of the Flagstaff Mine. The mine was active in 1915 and 1916 and produced about $1500 in antimony. It has been inactive from that time until 1940 when it was located by Pat O'Brien and his associates, all of Baker, Oregon. The mine has excellent possibilities of producing a car or two of 50% to 60% antimony ore, if it were not for the fact that the mine title is not clear.

Owner: Pat O'Brien and associates all of Baker, Oregon

Location: The mine is located five miles east of Baker on the west slope of the range of hills lying south of the Flagstaff Mine in section 8, T.9S., R.41 E., W.M. It lies two miles by dirt road from the Baker-Richland highway. This road is good in dry weather.

Area: Two unpatented claims, located by Pat O'Brien and associates in 1940.

History: The Gray Eagle Mine, formerly known as the Koehler Mine and owned by Dr. A. Koehler, was located by Pat O'Brien of Baker, Oregon in 1940 after Dr. A. Koehler failed to do his assessment work. O'Brien and three associates have been working intermittently during the last year and have shipped three cars of ore on which smelter returns totaled $460. None of these cars were 50 ton cars and most of the ore shipped came from the dump and an old stope. It is estimated that only 10 tons represented sorted mine ore. At present an attempt is being made to ship a car of high grade ore.

According to data furnished by Ed Hendryx smelter returns from the Koehler Mine are as follows: On October 15, 1915, 18.208 dry tons of ore was shipped by A. Koehler and Carter to the Chapman Smelting Co., San Francisco, Calif,, which netted $1178.04 after smelter deductions. The ore was valued at $75 per ton and had a gross value of $1365.64. Charges were sampling $18.39 and freight $187.60.

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In April 1916 Dr. A. Koehler shipped two lots of ore. Tonnages are not available. Lot 1 assayed 42.8% antimony and had a value of $115.99 per ton. Smelter returns were $2450.00 and freight was $335.60 Lot 2 assayed 28.5% antimony and had a value of $51.59 per ton. Smelter returns were $1094.64. Freight was $369.00. Shipments were made to the International Lead Refining Co., East Chicago, Indiana.

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According to Gilluly, Read and Park, USGS bulletin 846A: "The Koehler Mine is on the west slope of the range of hills lying south of the Flagstaff mine. The workings were inacessible at the time of this survey. According to Parks and Swartley, the mine yielded antimony and gold, beginning in 1915. The vein is reported to be well defined, with a maximum width of about 10 feet. Stibnite is distributed through the whole width of the vein, but massive stibnite occurred near the hanging wall in lenses that were two feet thick. Some of these lenses yielded ore that was shipped direce; other ore was brought up to grade by sorting. Several carloads carrying over 50 percent of antimony were shipped, and the receipts from these sales are reported to have been about $15,000."

General Description: The mine is located at an elevation of 4000 feet on the gentle rolling sage brush covered hills of the Virtue Area. Rain and snowfall is the same as Baker or about 12 inches precipitation per year. Snow fall will vary from 8 to 20 inches in depth. There is no water or timber on the claims so that both must be hauled to the mine. However, timber may be purchased from the saw mills in Baker five miles away.

Equipment: Hand steel, blacksmith forge, shovels and picks, one one-ton mine car, 100 feet of 8 lb. rail and a 10 x 10 shed.

Development: Development work consists almost entirely of work done by Dr. Koehler in 1915 to 1917. A 500 foot adit which follows the strike of the vein, generally north and south has beenreopened. Another old adit runs N 80° E for 600 feet but shows no mineralization. An 80 foot 55 degree incline shaft, which strikes S85°E, taps old workings that are partically caved and practically inaccessible.

Geology: The country rock appears to be a gabbro. In the viinity of the vein the country rock is altered. The only mineralizarion occurs along a shear zone, which strikes N10°W toNN10°E. The width of vein between the hanging and footwall varies from 3 to 8 feet and is filled with a moderately soft gouge like material which lies on either side of a quartz vein. Massive stibnite occusrs in a quartz vein, which varies from 3 to 10 inches and lies in the center of the shear zone. The stibnite lenses vary in width from 3 to 8 inches and appear to be 2 to 10 long. These lenses are not continuous along the 500 feet of vein exposed. It is estimated that half a car of 50 per cent plus stibnite is in sight and could be obtained by careful sorting.

Much of the gouge like material contains valentinite and kermesite the oxide and oxysulfide of antimony. Some of the oxide specimens run as high as 50% antimony, but these would have to be carefully studied

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before sorting could be done. It is difficult to distinguish to low grade from the high grade.

Hugh K. Lancaster
Field Engineer
January 26, 1942

G.P. Lilley, Ben O'Frary and Jack Isgrig have taken a lease on the Gray Eagle (Koehler) Mine. They plan to mine selectively, sort, and ship high grade Antimony ore.

H.K.L. 2/20/42

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GRAY EAGLE MINE (Antimony) Virtue Area Baker County

Progress report to accompany report dated Jan. 26, 1942.

On March 30, 1942, Lilley and Isgrig shipped 40 tons of high grade antimony ore to the Texas Mining and Smelting Co., Laredo, Texas. No further work was done, as it appeared that further development work was not justified, so the lease was relinquished. The property then reverted to the owners, Pat O'Brien and associates, who are now working the property.

One shipment of 39.023 tons was made by the owners to the United States Smelting Co., Salt Lake, and netted $191.19. This shipment was made from ore that was cobbed from the high grade shipment made by Isgrig and Lilley. The analysis of this shipment is as follows:

Gold	0.22 oz/ton
Silver	0.1 "
Insoluble	51.6%
Iron	4.5%
Sulfur	0.8%
Lime	4.3%
Antimony	18.3%

At present Pat O'Brien is working on an open cut 200 feet south of the shaft. A six inch iron stained quartz vein striking N 40°E and dipping 80 southeast is exposed. This vein assays $10.50.

The accompanying sketch shows workings that are accessible. No ore is blocked out.

Hugh K. Lancaster,
Field Engineer
April 16, 1942.

MAP IN FILES

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Prepared for Roseburg
May 1943 (W.D.L.)

Baker County, Oregon

GRAY EAGLE MINE (Virtue district)
(Also known as Koehler Mine)

Owner: ? Dr. Koehler, Baker, Oregon. Note: Lancaster in his report lists Pat O'Brien and associates of Baker, Oregon, as the owners and operators, and smelter returns indicate O'Brien is one of owners.

Location: NW¼ sec. 7(?), T. 9 S., R. 41 E., on the west slope of the hills lying south of the Flagstaff mine (sec. 5, T. 9 S., R. 41 E.) and 5 miles east of Baker.

Area: Lancaster's report (3) indicates that it consists of 6 claims including the Dandy Jim group of 2 claims.

History: Parks and Swartley (6) reported that the mine produced antimony and gold beginning late in 1915 and several carloads containing over 50 percent antimony was shipped which were reported to have returned $50,000. Lancaster (3) reported May 5, 1941 that two unpatented claims were located in 1940 by Pat O'Brien and associates, Baker, Oregon. Three men worked the mine for several months, reopening the old workings and searching for ore. One car of ore was shipped to the smelter in March, 1941. Wagner (7) reported that, according to smelter returns, the 1915-17 operations yielded more than 153 tons of ore which contained 71.9 tons of antimony. Most of this ore was high-grade; lower grades of ore were not shipped. He states that recent shipments of ore (all but 25 tons unsorted) total 276 tons of run-of-the-mine vein matter. This contained a calculated 12.3 percent or 32.8 tons of antimony. Wagner states that smelter receipts show 455 tons of ore have been shipped which contained a calculated 118 tons of antimony, about 26 percent. A shipment early in 1943 of one car each of high grade and low grade ore has not been included but are estimated to bring the total of antimony produced up 20 tons to 138 tons.

Development: An old adit runs N. 80° E. for 600 feet. An 80-foot, 55° incline shaft which trends S. 85°E. connects with old workings that are partly caved. In 1941, work was being done in a fault zone striking N. 10° E.; a winze 25 feet deep had been sunk. More recent developments have not been mapped but Wagner (6) reports that the main shoot has been developed laterally 200 feet and to a depth of 80 feet on the incline.

Geology: Lancaster (3) classifies the country rock as an altered or metagabbro. The ore, up to 10 feet wide but usually much less, occurs in a well-defined shear zone. The vein is composed of stibnite, various secondary antimony oxides, quartz, gold, gouge, and other highly altered material. Though the stibnite is distributed throughout the width of the vein, the more massive stibnite occurred near the hanging wall in lenses that were in places 2 feet thick. Many of these were taken out in the 1915-17 operations. Most of the ore remaining, as judged from smelter analyses of 276 tons of ore recently shipped, is a mixture of secondary antimony oxides (valentinite, senarmonite, cervantite, kermesite) with some 20 percent stibnite. Wagner states that in places the ore widens out into massive lenses 1½-2 feet thick and in other places, the ore tapers off to a narrow vein or disperses into a patchwork of stringers between lenses.

The stibnite appears to occur chiefly in the thicker lenses or bunches of ore as a core in the antimony oxides. It is scarce in the thin veins and stringers. Though considerable stibnite has been encountered in the development drift (80-foot level) this does not necessarily indicate that the bottom of the oxidized zone has been reached. The apparent lack of sulfides in the upper levels is due mainly to the removal of the high-grade stibnite lenses.

The stibnite is thought to have been deposited from hydrothermal solutions. The entire Virtue district may have had many hot springs in recent geologic time. Several hot springs occur in that area and several wells have tapped warm water. The temperature of the water in the nearby Virtue mine was a serious obstacle to operation, and two other mines within a mile radius of the Gray Eagle are reported to have encountered hot water. Hydrothermal alteration is conspicuous throughout the district. Possibly part of the alteration of the stibnite to the antimony oxides is due to the action of hot waters. Antimony occurrences in this region indicate that the solutions responsible for the antimony mineralization appear to have affected much of the Virtue district and other adjoining sections as well. Impounded tailings from the Flagstaff mine assayed 1.4 percent antimony and smelter returns show its presence in mines of this and other nearby districts.

Wagner estimates that between 4000 and 6000 tons of ore similar to the 276 tons of ore (12.3 percent antimony) recently shipped is available. According to Mr. Dakin (of the Texas Smelting and Refining Company) this type of ore has been hand jigged in Mexico to give a 50 percent concentrate. The antimony on the 80-foot level appears to be similar in quality and quantity to that in the tunnel near the surface.

A new ore shoot south of the main workings has been encountered underground. It shows more than a foot of high-grade oxide. A possible shoot crops out several hundred feet north of the mine. It has not been opened up.

Antimony oxides have been found at three places on a well-defined vein similar to, and in the immediate vicinity of, the Gray Eagle vein. Its projection intersects the Gray Eagle vein north of the property line. This locality is adjacent to and east of the group of hills one mile south of the Flagstaff mine. These hills have a relief of 500 feet. Lindgren (4) states that many prospects occur in these hills and some contain stibnite.

References:

(1) Gilluly, James. Geology and Mineral Resources of the Baker Quad., Oregon, U. S. Geol. Survey Bull. 879, pp. 97-98, 1937.

(2) Gilluly, James; Reed, J. C.; and Park, C. F., Jr. Some Mining Districts of Eastern Oregon, U. S. Geol. Survey Bull. 846-A, p. 76, 1933.

(3) Lancaster, Hugh. Report on the Gray Eagle Mine, Virtue District, Baker County, Oregon. Oregon State DOGAMI, May 5, 1941.

(4) Lindgren, Waldemar. The Gold Belt of the Blue Mountains of Oregon. U. S. Geol. Survey, Annual Report, pt. 2, 1901.

(5) Oregon Metal Mines Handbook, Bull. No. 14 A, p. 107, Oregon State DOGAMI, 1939.

(6) Parks, H. M. and Swartley, A. M. The Mineral Resources of Oregon, Oregon Bureau of Mines and Geology Bull., vol. 2, no. 4, p. 137, 1916.

(7) Wagner, Norman S.

1. Summary of Data and Observations Accumulated on the Gray Eagle Mine, Virtue District, Baker County, Oregon, Oregon State DOGAMI, January 26, 1943.

2. Departmental Letter, March 8, 1943.

State Department of Geology and Mineral Industries

FWL

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Portland, Oregon

Examination by N. S. Wagner
Date: February 3, 1945

Virtue District - Baker Co.

GRAY EAGLE MINE (Antimony-Gold)

Foreward: The following report is entirely supplemental to the report on the Gray Eagle Mine as contained in GMI 13. It includes production statistics to January 18, 1945 and a discussion of some geologic conditions revealed by recent work.

Production: Total production of refined Sb to date from all known periods of operation as calculated from available smelter records is 299.89 tons. Of this current operation account for 227.99 tons. The balance 71.9 tons was produced during an earlier period of operation and it represents only a portion of the production known to have been made at that time.

Total tonnage of ore shipped as a result of current operations is 1,817.7 tons. Of this 139.3 tons represents sorted highgrade averaging 49.2% Sb, and 1,678.4 tons represents rejects or lowgrade averaging 9.48% Sb.

Average gold and silver content of 39 cars of lowgrade is 0.266 oz/ton Au and 0.09 oz/ton Ag.

The per cent of Sb which occurs as Stibnite as calculated from Sulphur content of 1,590.6 tons of lowgrade is 18. The per cent of Sb which occurs in some form other than Sb_2S_3 (obviously oxides in this case) is 82.

Development: To bring map in GMI 13 up to date the following development should be added.

1. Continue drift to the North on No. 3 level 125' on a N. 10 E. bearing. Then 78' to face on a N. 2 W. bearing.
2. In line with North drift in No. 3 level, extend one south 55' to face on a S. 8 E. bearing.
3. Enter a stope which begins with a raise situated 12' north of vertical shaft on No. 1 level and which extends to and joins with tunnel at a point midway between portal and first winze as shown in map.

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For the records it might well be noted that essentially all ground between No. 3 level and No. 2 level has been stoped out with exception of a few pillars.

Geology: Production statistics show the grade of the lowgrade ore shipped during current operation has decreased from an average of 11.2% Sb for the first 1072.8 tons shipped to 9.48% Sb for the grand total of all such tonnage shipped to date - namely 1678.4 tons to Jan. 13, 1945. Examination of shipment records shows this to be due to an unprecedented low grade for shipments which came primarily from the horizon between the 3rd and 2nd levels.

This might mean that the oxide zone bottoms at this horizon. Indeed, this supposition is supported by the fact that an overall increase in Sulphur content of recent shipments (39 to 56) is such as to bring the per cent of Sb which could occur as Sb_2S_3 up from 13.7% in 985 tons from higher workings to 18% in 1590 tons, the grand total of all shipments.

Examination of the mine however shows that within the horizon mentioned (between 3rd and 2nd levels north of shaft) the vein tends to assume greater widths than usual. The antimony oxides which account for the bulk of the antimony content of the rejects or lowgrade, occur in this as widely separated and divergent stringers, or in sparcely scattered disseminations. Thus, the decrease in grade for the shipments from this area may, in the last analysis, represent dilution from waste rather than actual decrease in antimony mineralization. The volume of ground moved here including waste, has been considerable.

The gold value of shipments from this horizon however is essentially the same as the average - or as the usual - for this type of ore. This might be construed as indicative that the oxide mineralization is actually decreasing especially so since lenses of highgrade were found in about the same abundance

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and amount as usual. The per cent Sb value of this highgrade is identical the average of previous shipments and is 49.2%.

As against the above considerations it must be noted that a rather large and persistent and very flat fault - locally mineralized - is exposed, in the 3rd level where it appears on the east or footwall side of the drift, and where it strikes about the same as the bearing of the drift and dips to the west. The relation of this fault to the vein isn't especially clear at the present stage of development - that is, whether it cuts through the vein or terminates against it. It did seem clear however, that the vein steepened in dip below this fault and it seemed apparent that the scattered stringers of oxide tend to come together there into a more compact, cleaner-cut vein than prevailed above.

As is governed by the mining policy in effect here, there is no ore blocked out other than that which remains in pillars - - perhaps a minimum car of 30-40 tons. However, there are two possibilities of developing more. One is with depth and the other is by continuing the 3rd level to the north.

The first instance has already been covered in the discussion of how the vein steepened and became more clean cut below the flat dipping strike fault. The second possibility can be summed up by saying that good ore was encountered in the tunnel and No. 1 level for a distance north beyond the extent of any of the lower levels. Thus said territory is in effect blocked out by workings on the top and one side.

Economics: A move is under consideration now to create a Metals Reserve Stockpile in Baker. Said stockpile, should it be approved, would permit shipments of a lower grade (estimated 35%) of highgrade than has been shipped heretofore. This would be a very considerable boon to the mine as the price allowed for Sb in the low-grade is now only 3¢ per lb.

(SEE CONFIDENTIAL FILE ALSO)

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Report by: N. S. Wagner
Date of Exam: December 3, 1946

PROGRESS REPORT NO. 2

GRAY EAGLE MINE (Sb--Au) — Virtue District, Baker County

FOREWARD: This report supplements GMI 13 and all subsequent progress reports, to wit:

Reports: "Gray Eagle Mine" by N. S. Wagner, February 3, 1946.

Shipment records: "Shipment Records and Calculations Therefrom". This accompanies the above mentioned progress report and brings shipment records up to date there with---shipments 1 to 56.

"Shipment Records & Calculations Therefrom". This includes records of shipments made subsequent to the above mentioned compilation---shipments 57 through 63.

"Summary of Production Statistics for Period of Operation between February 1941 and April 1945."

GENERAL: Mining operations were suspended in the Spring of 1945. This action was due partly to the cessation of ore buying by the Metals Reserve, partly to the uncertainty at the time regarding the status of the antimony market, and partly to Brandenthaler's interests and efforts in connection with the organizing and starting of the Burnt River Lumber Company.

Before closing down a small tonnage of low grade was milled by way of testing the feasibility of milling. This testing was carried out under Brandenthaler's direction on a small mill in Baker, and with reportedly

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satisfactory results.

Construction of a mill at the mine was commenced in late 1945 and this construction together with drilling for water for the mill was continued intermittenlly during 1946. Mining operations and milling were resumed in November 1946.

MILL: Mine rock is delivered to a 12 x 12 jaw crusher powered by an 8 h.p. Fairbanks gas engine. Rock is crushed to about $\frac{1}{2}$" and fed to a ball mill (5' x 3' inside). 4200 lbs. of 3-4-5" balls are carried in this mill and a speed of 28 r.p.m. is maintained with power from a 25 h.p. Fairbanks-Morse diesel. The ball mill discharge screen is 8 to 10 mesh. In practice the ground discharge averages 40 to 50 mesh. This ball mill discharge goes directly to a 12 x 12 Pan American pulsating jig for removal of the coarse free gold. The jig tails are put over a Wilfley table from which a generous concentrate is cut off and conveyed by way of a drier to storage bins.

This mill had been in operation about a 10 day period prior to this examination and while it could be seen that the jig was making a definite recovery of free gold, no assays were available regarding the gold and antimony tailings loss nor concentrate grade.

Mill operations were suspended a few days after this examination pending investigation of possible toxic qualities of the discharged mill water. Six or eight head of cattle had died and it was reported that the veterinarian's examination had demonstrated 'arsenic' to have been the

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cause of death. These cows supposedly acquired this arsenic poisoning from drinking water from the mill settling pond.

MINING: Mining during this period of recent operation included extending the No. 3 or bottom level to both the north and the south of the vertical shaft. To the south this level extends a distance of 100' and in this direction the vein progressively loses distinctiveness. To the north this level extends a distance of 250'. Good gold and antimony valves were encountered in this direction for the first 200'. During the last 50' several shears and splits in the vein occur with the result that the vein locally suffers loss of its usually clean cut and distinctive walls.

The rock milled consisted of the development rock from this drift plus a minor amount from stopes. With the suspension of milling operations a contract was let for sinking the vertical shaft 50 feet.

****

Included with this report is a map of the mine for the period August 1943----December 1946.

October 26, 1915.

Sent By Dr. Kohler & Carter. Baker, Oregon.

Shipped to the Chapman Smelting Company, San Francisco, Calif.

Shipment --------18.208 ~~lbs.~~ tons
Average value----------$75.00 per ton.
Sampling charge---------- 18.39
freight---------- 187.60

NET VALUE----------$1178.04

January 11, 1916.

Sent by Dr. Kohler.

Shipment---------49.866½ tons.

Stribnite-----60%

Total value ----------$127.80 per ton.
freight----------628.88

Total value----------$6,372.94

April 1916.

Sent by Dr. Kohler.

Shipment---2 cars-
No#1----------42.08%
No#2---------- 28.5%

No#1 value per ton----------$115.99
No#2 " " "---------- 51.59

Net value of No#1----------$2,450.50
Net " " "2----------$1,094.64

Freight ------no#1----------$335.60
Freight------- #2---------- 364.64

Sent to International Lead & Smelting Company.
Chicago, Indiana.

January 24, 1917.

Shipped by Dr. Kohler, Baker, Oregon.

Shipped to International Lead Company, Chicago, Indiana.

3 cars..

No#1	23.044	31.3%
No#2	29.684	57.7%
No#3	8.225½	33.6%

Net Value	$540.96
Net value--No#2	1,914.48
Net value No#3	207.28

January 24, 1917.

Shipped by Dr, Kohler, Baker, Oregon.

Internaational Lead Company, Chicago, Indiana----------

3 cars---

No#1	23.044	31.3%
No#2	29.684	57.7%
No#3	8.225½	33.6%

Net Value No#1	$540.96
Net Value No#2	1,914.48
Net Value No#3	207.28

COPY

UNION ASSAY OFFICE

Salt Lake City, Utah

Pat O'Brien — February 4, 1941

GOLD Oz per ton	SILVER Oz. per ton	ANTIMONY %
0.410	0.2	19.8

A. C. Selby (Signed)

No 1.

February 4, 1941

Sample from dump

See CAR #1

Gray Eagle Mine

UNITED STATES SMELTING AND REFINING ,MINING COMPANY

Salt Lake City, Utah

February 6, 1941

Mr. Pat O'Brien.
Medical Springs, Oregon.

Dear Mr. O'Brien:

We are enclosing the assay certificate showing the results on the sample you recently sent us.

As you will note, this particular smaple carries fair gold and antimony values and would be worth $16.47 per ton after treatment charges have been deducted. If you ship this ore from Baker Oregon, the freight rate is $3.25 per ton on a 50 ton car leaving you $13.22 per ton net.

If you have any of this ore to ship we would be glad to receive it from you and can get your money back in several days after receipt of the car.

We are enclosing a card giving shipping instructions and are asking you to please let us know whether or not you will have any of this ore to ship.

With kindest regards, I am,

Yours very truly,

BW:dce

(Signed) Blaine Watts.

No 2.

February 27, 1941

CAR #1

46½ tons.

From dump in 50 ton car.

UNITED STATES SMELTING& REFINING COMPANY.

SALT LAKE CITY, UTAH.

Feb.2 7, 1941.

PAY Pat O'BRIEN and PAT POWERS Box 144, 1941. Baker, Oregon.

ORE---Crude---Lot 1---

Sampled by---Midvale---Received 2-22-41---Sampled-2-25-41-Assayed-2-26-41.

Metal Quotation---Gold--34.9125---Antimony---40¢ unit---

GOLD Ozs. per ton	Silver Ozs. per ton	% Insoluble	% Iron	% Zinc	% Sulphur	% SB.
.18	.5	67.6	2.6	.3	3.6	11.2

CAR# UP 132018

GOLD 100%@31.8183	5.73
Antimony	4.48
Total Metal Value	10.21

Net Weight	104040	GROSS VALUE	10.21
Less 9.8%	10196	Less working charges00	5.00

DRY weight 93844 Payment for 46.922 tons @5.21 $2 44.46

Freight advanced-$3.25 per ton 169.97

Net payment $75.39

COPY

No 3.

April 4, 1941.

CAR #2 38 tons

½ from winze
½ from dump

UNITED STATES SMELTING and MINING COMPANY

Salt Lake, Utah-April 4, 1941.

Pay Pat O'Brien and Jim Woodell, Box 144, Baker, Oregon.

ore Crude-Grey Ea gle Mine----Lot 1-

Sampled by U.O.S.CO.---Received 4-1-41---Sampled 4-2-41-
Metal Quotations-Gold34.9125 ---Antimony 40¢ Unit

	Gold oz.ton	Silver oz.ton	% Insoluble	% Iron	% Sulphur	% Lime	% Sb.
Settlement Assay----	.43	.10	62.0	2.70	.40	2.9	16.60

UP 160446 x UP 63600--- Gold 100% @ 3 1. 8183-13 .68

Antimonyxxxxxxxx 6.64
Total 20.32

Net Weight 82480 Gross Value 20.32
Less Working charge 6.00

Dry Weight 76706 Payment for 38.353 tons @ 14.32 per ton- 549.2 1

Sampling charges-- 162.50
41.24 203.74

Surface cut NET PAYMENT---------- 345.47

ASSAY CERTIFICATE--SALT LAKE UTAH--UNION ASSAY OFFICE.

January 22, 1941.

Mine U.S. 580 Pat O'Brien, Baker, Oregon.

		Gold	SILVER	ANTIMONY	
#1	s haft----	0.230	0.3	28.82	Bottom level
#2	shaft	0.52 0	0.2	58.52	Surface cut under trace
#3	shaft	0.130	0.3	35. 86	" " " "

COPY

No. 5

CAR #4-----

December14, 1941

37tons from old stope.

Salt Lake City, Utah.

December 11, 1941.

Wm. Cozens.....510 South 13th Street, Boise, Idaho.

Gray Eagle Mine ore.....

Sampled by Midvale-------Received 12-3-41-----Sampled 12-7-41--Assayed 12-8-41.

GOLD--34.9125-----Antimony 2¢¢ per pound---

GOLD	SILVER	%Insoluble	% Iron	%Sulphur	% Lime	%ss.
.19	.05	73.60	3.7	.6	2.7	6.2

Gold 100% 31.8183---------6.05
Silver 100%@ ------------ 3.28

Total metal value----- 9.33

Net weight 79600
less h -0/ 4856

Dry Weight 74744 -----Payment for 37.372 tons @ 4-3482 per ton------$162.50
Freight advanced $3,25/ 50 ton minium----------$162.50

COPY

72.6

Car #6.....

25 tons-----50 ton car-----

From an underhand s tope on the tunnel level....

TEXAS MINING & SMELTING COMPANY

LAREDO, TEXAS.

April 2, 1942.

Shipper: -------Isrig and Lilley.
Baker, Oregon.

Lot #I&L #1---------

Date of arrival----March 22, 1942.

COPY

Wet weight- Pounds----	Moisture-----	Dry Weight Pounds-------	Assay %SB------	Contents Pounds
51,900	2.0%	50,862	52.1	20499

Price --52% pays, per short ton Unit SB----------$1, 5050
Plus Assay Adjustment; 0.1 of $0.005---------- . 0005

Liquidation Price per S.T.U.----------$1.5055

Value:-
26499 ---1324.95 short tons Units at $1.5055----------$1,994.71
20

Less Deductions:--Dead Weight freight---8,100 lbs; at $0.88 per hundred-----71.26

NET TO PAY.----------$1923.43

Texas Mining & Smelting Co:

No.7

April 2, 1942

Re: 25tons shipped to Laredo, Tex as.

39tons shipped 50 ton car..from the dump

of the 25 tons shipped to Texas.....

Salt Lake City Utah

April 2, 1942.

Pat O'Brien--2550 B. Street, Baker, Oregon

Ore Crude----------Received 3-25-42--Sampled 3-30-42- Assayed 3-31-42

Metal Quotations---GOLD 34.9125------Antimony 2¢ #

****

GOLD	SILVER	%Insoluble	%Iron	%Sulphur	%Lime	$SS.
.22	.10	51.6	4.5	.8	4.8	18.3

Gold 100% 31.8183 ----7.00
Antimony 100% @---------- 7.32

Total value---------- 11.32
Less working charge----- 5.00

Net weight 84740
Less 7.9 6694

Dry weight --78046--Payment 39.023 tons --------9.32---------$363.69
Freight $3.45 per ton 50 ton minimum---------- 172.50

**Net payment---$191.19

COPY

.. NO # 8...

Car of Antimony Gives $1,000..

Baker City, Oregon; April 18th....Ray Brothers have just received returns from their shipment of Antimony to the Oakland , California Smelter.....

They say that they have received a net profit of $1,000 from the carload of stibnite and oxide that it was at least $500 more than they expected, and that the smelter people informed them that their ore was more free from contaminating elements than that of other Antimony mines in the United States ,with the exception of one in Nevada. The ore was said to contain no arsenic, copper, or lead and to be easily milled.

On account of the high freight rates from the city of Oakland to Baker, the owners of this mine are preparing to install a smelter on the site of the mine which is about 4 miles east of this city. The ledge, which ranges in width from 12 to 20 inches, has been uncovered a distance of 50 feet, and shows signs of widening as it goes.

There are few Antimony mines in the country, the total output during the past year being 1750 short tons, valued at $346,980.

Above was credited to the Morning Democrat, Baker, Oregon. and was published in 1907..

COPY

	Insol	FeO	ZnO	Sulphur	Lime	%Sb	#Sb	Tons Sb	%Sb as Stibnite per ton	%Sb as Oxide per ton	%Stibnite in Antimony Minerals	%Oxides in Antimony Minerals
1.	Early shipments listed below.											
2.	46.9	67.6	2.6	0.3	3.6	11.2	10,505.6		9.30	1.90	83.0	17.0
3.	38.3	62.0	2.7		0.4	2.9	16.6	12,715.6		1.00	15.60	6.0	94.0
4.	38.2	63.0	5.7		0.6	2.1	15.9	11,157.6		1.53	14.37	9.6	90.4
5.	37.3	73.6	3.7		0.6	2.7	8.2	6,117.2		1.54	6.66	18.8	81.2
7*	39.0	51.6	4.5		0.8	4.3	18.3	14,274.0		2.06	16.24	11.2	88.8
9.	36.6	64.3	4.6		0.3	2.5	14.8	10,833.6		.77	14.03	5.2	94.8
AA	25.4						52.1	26,499.0					
A	23.0						31.3	14,398					
B	29.6						57.7	34,158					
C	8.0						33.6	5,376					
D	49.8						60.0	59,760					
F**	21.5						42.0	18,060					
F**	21.2						28.5	12,084					

* Rejects from sorted high-grade shipment No. AA

** Tonnages calculated from data available on net value and average value per ton, and in error to the extent that smelter and shipping charges are not known.

SUMMARY OF KNOWN PRODUCTION RECORDS AND PERTINENT CALCULATIONS.

Numerals --- recent shipments of unsorted ore.

Double Capitals ---- recent shipments of sorted high-grade.

Single Capitals ---- available records of early production.

Copy of Shipment returns from Gray Eagle Mine,
Baker, Oregon.
Copied January 19, 1943 by N.S. Wagner.

Car No.	Sampled by	Shipped by	Date of Settlement
2	Midvale	Pat O'Brien and Pat Powers	Feb. 27, 1941.
3	U. O. S. Co.	Pat O'Brien and Jim Woodell	April 4, 1941.
4	Midvale	Pat O'Brien	October 16, 1941.
5	Midvale	Wm. Cosens, Boise, Idaho	December 11, 1941
6	Texas M. & S.	Isgrig and Lilley	April 2, 1942
7	Midvale	Pat O'Brien	April 2, 1942
9	Midvale	Pat O'Brien, Reynolds, Dunn	September 30, 1942
10	Midvale	Pat O'Brien	

Car No.	Location	Tonnage
2	From old dump, and without sorting	46.9
3	One-half from surface cut and one-half from dump	38.3
4	One-half from tunnel slough and one-half from stope	38.2
5	From old stope	37.3
6	25 tons shipped in 50-ton car, taken from underhand stope on tunnel level.	
7	Taken from dump of above sorted ore	39.0
9		36.6
10	10 tons of dump and 30 tons of mine run, vein as is, unsorted	40.0

With the exception of car 6, these shipments represent vein matter of normal quartz and alteration material and associated antimony ores, mined without especial regard to antimony content. Whereas some high grade antimony lenses were included, the material is perhaps more representative of the bulk tonnage between high grade antimony lenses, than of an average mine yield. (Personal conclusion.)

Copy of Shipment returns from Gray Eagle Mine, Baker, Oregon.
Copied Jan. 19, 1943 by N. S. Wagner

Car	Sampled by	Dry Tons	Gold ozs/t	Silver ozs/t	Antimony %	Antimony value Unit	Antimony value $	Value per shipment $	Net Value $
2	Midvale	46.9	0.18	0.50	11.20	40¢U	4.48	244.46	75.39
3	Midvale	38.3	0.43	0.10	16.60	"	6.64	549.21	345.47
4	Midvale	38.2	0.19	----	15.90	"	6.36	283.28	120.78
5	Midvale	37.3	0.19	0.05	8.20	"	3.28	162.50	000.00
6	T.M.&S.*								
7	Midvale	39.0	0.22	0.10	18.30	"	7.32	363.69	191.19
9	Midvale	36.6	0.58	0.10	14.80	"	5.92	709.58	537.08
10	Midvale**	40.0***							

* High Grade, see below.
** Receipt lost. Reported as being approximately the same as #9
***Wet tons as reported by shipper. See **.

T.M.&S.	Wet Weight Pounds	Moisture	Dry Weight Pounds	Assay %Sb	Contents Pounds
	51,900	2.0%	50,862	52.1	26,499

Price: 52% Ore pays, per Short Ton Unit Sb. --------$ 1.5050
Plus Assay Adjustment, 0.1 of $ 0.005 ------ .0005
Liquidation Price Per S.T.U. -------- ----$ 1.5055

Value: $\frac{26499}{20}$ = 1324.95 Short Ton Units at $1.5055 --------$ 1994.71

LES DEDUCTIONS: Dead Freight -- 8,100 lbs. at $0.88 Per Hundred ------$ 71.28

NET TO PAY ----------$ 1923.43

TEXAS MINING AND SMELTING COMPANY
April 2nd, 1942.

Shipments of Ore from Gray Eagle (Kohler) Mine, Baker, Oregon.

Copies from information furnished by Mr. Calder, Jan. 22, 1943, by N. S. Wagner. (This information is itself a copy -- presumably much of it came from Ed Hendryx' files from the newspaper and records of the Baker Sampling Co.)

Shipped by Dr. Koehler --- Jan. 24, 1917. (Hugh has June 24, 1916)
To International Lead Smelting Company, Chicago, Indiana.

3 cars

#1	23.048 tons	31.3% Sb	$ 540.96 net value
2	29.684	57.5	1,914.48
3	8.225½	33.6	207.28

To the Chapman Smelting Co., San Francisco, Calif. Oct. 26, 1915.

18.208 1,178.04 net value $75/ton Av.

To International Lead & Smelting Co., Chicago, Indiana, Jan. 11, 1916.

49.886½ tons 60.0% Sb 6,372.94 net value

To International Lead & Smelting Co., Chicago, Indiana, April, 1916.

2 cars

#1	42.08 (% or tons)	2,450.50 net value	115.99/ton av.
2	28.5 "	1,094.64	51.59

(probably % Sb, as light % marks followed the figures, but it didn't specify Sb, and they looked as if they might have been erased -- The use as % Sb agrees with Hugh who got his figures directly from Hendryx.)

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Copied from information obtained from Mr. Calder, Jan. 22, 1943, by N. S. W.

Car of Antimony gives $1,000.00

****

Baker City, Oregon; April 18th, 1907 ---- Ray Brothers have just received returns from their shipment of Antimony to the Oakland, California Smelter ...

They say that they have received a net profit of $1,000 from the carload of stibnite and oxide that it was at least $500 more than they expected, and that the smelter people informed them that their ore was more free from contaminating elements than that of other Antimony Mines in the United Stated, with the exception of one in Nevada. The ore was said to contain no arsenic, copper, or lead and to be easily milled.

On account of the high freight rates from the city to Oakland to Baker, the owners of this mine are preparing to install a smelter on the site of the mine which is about 4 miles from Baker. The ledge, which ranges in width from 12 to 20 inches, has been uncovered a distance of 50 feet, and shows signs of widening as it goes.

There are few Antimony mines in the country, the total output during the past year being 1,750 tons, valued at $346,980.

****

Above was credited to the Morning Democrat, Baker, Oregon, and was published in 1907.

Analyses of Ore from the Gray Eagle Antimony Mine, Baker, Oregon.

Copied from record furnished by Fred H. Dakin; Courtesy of Texas Mining and Smelting Company. Copied Jn. 18, 1942, by N. S. Wagner.

	1	2	3	4
Antimony	40.3%	44.0%	58.5%	32.0%
Arsenic	0.002%	0.02%	0.07%	0.4%
Lead	0.005%	0.08%	0.03%	none
Copper	none	0.03%	none	trace
Zinc	none	0.04%	none	none
Selenium	-----	noue	none	none
Gold	0.096 ozs.	0.06 ozs.	0.12 ozs.	0.32 ozs.

1. Sample of Sulphide Ore taken in about 1940.

2. Sample of Sulphide Ore taken in 1942.

3. Sample of Oxide Ore taken in 1942.

4. Sample of straight unsorted mine ore containing quartz.*

* The arsenic content of this sample is apparently derived from the associated vein material --- from arsenopyrite?

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Gray Eagle Mine, Baker County, Oregon

SHIPMENT RECORDS AND CALCULATIONS THEREFROM

Including smelter return data covering shipments 57 through 63, supplementing like data previously reported for shipments 1 to 56.

Including production statistics calculated from all available production data through shipment 63, 1945

All production data copied directly from smelter receipts except when indicated to the contrary.

CONFIDENTIAL

M. S. Wagner

SHIPMENT RECORDS - GRAY EAGLE

BAKER COUNTY - OREGON

Copied from Smelter Receipts by N. S. Wagner

	Shipped by	Sampled by	Date of Settlement	Tonnage	Gold Oz/Ton	Silver Oz/Ton	Insol.	Iron	Sulphur	Lime	Antimony
57.	T. Brandenthaler	Midvale 27	1/30/45	56.3	0.27	0.10	72.3	3.7	0.8	2.1	6.8
58.	" "	Midvale 28	2/ 6/45	51.2	0.21	0.20	73.5	3.3	0.4	4.7	3.2
59.	" "	Midvale 29	2/13/45	48.7	0.34	0.10	69.3	5.3	0.7	2.4	5.0
60.	" "	Midvale 30	2/26/45	53.1	0.16	--	62.8	5.9	1.3	2.6	8.7
61.	" "	Midvale 31	3/ 1/45	51.3	0.14	0.10	79.0	3.9	0.4	1.5	3.4
62.	" "	Midvale 32	3/16/45	48.4	0.17	--	73.5	4.9	0.6	2.9	3.0
63.	" "	Midvale 33	3/28/45	53.0	0.29	--	73.7	5.0	0.4	1.4	3.4

SHIPMENTS TAKEN TO COMPUTE THE AVERAGE % VALUE
OR LOWGRADE

For shipment numbers refer to Shipment Records
Gray Eagle Mine, Baker County, Oregon

Shipments	Tonnage	% Sb	Lbs. Sb
57	56.3	6.8	6,305.60
58	51.2	3.2	3,276.80
59	48.7	5.0	4,872.00
60	53.1	8.7	9,239.40
61	51.3	3.4	3,488.40
62	48.4	3.0	2,904.00
63	53.0	3.4	3,604.00
	362.0		Total--33,690.20= 16.84 tons

Calculations -

1678.4 Tons, Shipment 1 to 57
362.0 " " 57 to 64
2040.4 Total Tons Shipped in Shipments 1 to 64

159.37 Tons, Sb content in shipments 1 to 57
16.84 " " " " " 57 to 64
176.21 Total Tons, Sb content in Shipments 1 to 64

$\frac{176.21}{2040.4} \times 100 = 8.13\ \%$ = Average Sb content for 2040.4 tons of lowgrade shipped between 2/27/41 through 3/28/45. (Shipments 1 to 64)

SHIPMENT TAKEN TO COMPUTE AVERAGE GOLD AND SILVER CONTENT OF LOWGRADE

For Shipment data refer to Shipment Records
Gray Eagle Mine, Baker County, Oregon

	Shipment	Au	Ag
	57	0.27	0.1
	58	0.21	0.2
	59	0.34	0.1
	60	0.16	---
	61	0.14	0.1
	62	0.17	---
	63	0.29	---
Carry-over from calculations of shipments 1 to 57	7	1.58	0.5
	39	10.38	3.8
Total #Shipments	46	11.96	4.3

$\frac{11.96}{46}$ = 0.26 Oz Au/ton for 46 shipments

$\frac{4.3}{46}$ = almost 0.09 OzAg/ton for 46 shipments

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Gray Eagle Mine, Baker County, Oregon

SUMMARY OF PRODUCTION STATISTICS FOR PERIOD OF OPERATION

BETWEEN FEBRUARY 1941 AND APRIL 1945

CONFIDENTIAL

Total tons of sorted highgrade shipped------139.3

Average Sb content of highgrade shipped-----49.2%

Total tons of lowgrade shipped----------2040.4

Average Sb content of lowgrade shipped----------8.13%

Average Au content of lowgrade (in terms of the number of shipments)----------0.26 oz./ton

N. S. Wagner

SHIPMENT RECORDS - GRAY EAGLE MINE, BAKER COUNTY, OREGON

Copied from Smelter Receipts by N. S. Wagner

	Shipped By	Sampled by	Date of Settlement	Tonnage	Gold oz/ton	Silver oz/ton	Insol.	Iron	Sulphur	Lime	Antimony
1.	Pat O'Brien and Pat Powers	Midvale	2/27/41	46.9	0.18	0.50	67.6	2.6	3.6	---	11.2
2.	Pat O'Brein and Jim Woodall	U.So.Co.	4/4/41	38.3	0.43	0.10	62.0	2.7	0.4	2.9	16.6
3.	Pat O'Brien	Midvale	10/16/41	38.2	0.19	----	63.0	5.7	0.6	2.1	15.9
4.	Wm. Cozens	Midvale	12/11/41	37.3	0.19	0.05	73.6	3.7	0.6	2.7	8.2
5.	Isgreg & Lilley	Texas M&S	4/2/42	25.431							52.1
6.	Pat O'Brien	Midvale	4/2/42	39.0	0.22	0.10	51.6	4.5	0.8	4.3	18.3
7.	Pat O'Brien, Reynolds & Dunn	Midvale	9/30/42	36.6	0.58	0.10	64.3	4.6	0.3	2.5	14.8
8.	Pat O'Brien & Dunn	Midvale	12/9/42	39.6	0.37	0.10	71.4	4.2	0.1	2.0	8.8
9.	A. H. Smith and F. L. Hubbard	Midvale	2/8/43	31.9	0.21	0.10	66.0	5.0	0.8	2.5	12.0
10.	" "	Midvale	3/12/43	38.1	0.91	0.15	62.5	2.4	0.6	2.2	17.0
11.	" "	Midvale	3/20/43	40.9	0.33	0.10	65.8	6.0	---	2.0	12.6
12.	A. H. Smith	Texas M&S	4/2/43	22.368							43.8
13.	A. H. Smith	Midvale	4/9/43	32.6	0.22	0.10	77.2	5.5	0.5	1.3	5.4
14.	A. H. Smith	Midvale	4/28/43	27.5	0.25	----	70.8	4.7	1.0	2.6	7.2
15.	Wilks Larsen C. C. Estes	Midvale	8/12/43	31.6	0.22	0.10	70.8	4.5	0.3	3.8	7.5
16.	T. Brandenthaler	Midvale	9/30/43	39.6	0.325	0.10	63.9	5.0	0.3	2.4	12.2
17.	" "	S-79 Metals Res.	10/12/43	5.254							53.45
18.	" "	Midvale 2	10/21/43	42.4	0.16	0.20	60.4	7.2	0.3	2.7	11.70
19.	" "	S-83 Metals Res.	10/25/43	6.6							51.89
20.	" "	Midvale 3	10/30/43	39.9	0.14	0.10	60.6	7.9	0.2	2.9	12.45
21.	" "	Midvale 4	11/11/43	43.9	0.22	0.10	63.2	6.2	1.0	2.5	10.0
		S-87									

21.	"	"	Midvale 4	11/11/43	43.9	0.22	0.10	63.2	6.2	1.0	2.5	10.0
22.	"	"	S-87 Metals Res.	11/29/43	4.6							45.21
23.	"	"	S-88 Metals Res.	12/9/43	5.2							51.79
24.	"	"	Midvale 5	12/24/43	45.9	0.13	0.10	60.1	---	.6	2.5	10.5
25.	"	"	Midvale 6	1/6/44	37.1	0.155	0.10	62.3	4.1	.8	2.4	11.0
26.	"	"	S-89-Sb Metals Res.	1/14/44	6.4							53.19
27.	"	"	Midvale 7	1/20/44	43.5	0.12	0.10	62.7	4.0	1.0	2.3	11.9
28.	"	"	Midvale 8	2/10/44	43.5	0.10	0.10	62.5	4.4	1.2	2.3	12.3
29.	"	"	S-90-Sb Metals Res.	2/9/44	9.4							53.34
30.	"	"	Midvale 9	3/4/44	41.0	0.18	0.20	63.7	5.5	0.10	4.0	10.30
31.	"	"	Midvale 10	3/27/44	42.5	0.16		63.5	6.8	0.3	2.1	7.5
32.	"	"	S-91-Sb Metals Res.	4/6/44	5.2							40.36
33.	"	"	S-92-Sb Metals Res.	4/6/44	5.6							28 00 ~~44.44~~
34.	"	"	Midvale 11	4/17/44	41.6	0.16	---	60.8	5.6	0.5	2.9	10.45
35.	"	"	Midvale 12	4/27/44	41.9	0.22	0.10	64.8	3.4	0.6	2.8	10.10
36.	"	"	Midvale 13	5/29/44	47.5	0.32	0.10	70.9	4.1	0.5	2.0	7.45
37.	"	"	S-93-Sb Metals Res.	6/10/44	10.5							50.5
38.	"	"	Midvale 14	6/23/44	44.0	0.68	---	64.4	5.2	0.8	1.1	9.3
39.	"	"	Midvale 15	7/26/44	51.1	0.39	Tr.	70.9	4.8	0.5	2.2	5.6
40.	"	"	101 Metals Res.	July	9.9							49.7
41.	"	"	Midvale 16	8/10/44	51.1	0.27	0.3	79.0	4.0	0.6	2.0	2.2
42.	"	"	Midvale 17	8/17/44	50.0	0.24	---	75.9	3.7	0.9	2.1	4.2
43.	"	"	Midvale 18	8/24/44	56.5	0.17	---	69.6	4.0	0.7	3.2	4.6
44.	"	"	Midvale 19	8/31/44	53.1	0.17	---	70.2	4.6	2.2	2.8	4.2
45.	"	"	102 Metals Res.	August	5.3							52.0

42.	"	"	Midvale 17	8/17/44	50.0	0.24	---	75.9	3.7	0.9	2.1	4.2
43.	"	"	Midvale 18	8/24/44	56.5	0.17	---	69.6	4.0	0.7	3.2	4.6
44.	"	"	Midvale 19	8/31/44	53.1	0.17	---	70.2	4.6	2.2	2.8	4.2
45.	"	"	102 Metals Res.	August	5.3							52.0
46.	"	"	Midvale 20	9/ 9/44	49.0	0.22	---	73.0	4.6	0.4	2.7	4.0
47.	"	"	Midvale 21	9/20/44	45.5	0.29	0.2	68.4	4.0	1.2	2.7	8.0
48.	"	"	S-103-Sb Metals Res.	10/23/44	4.5							47.94
49.	"	"	Midvale 22	10/28/44	54.5	0.14	0.20	69.9	5.7	0.6	1.5	7.3
50.	"	"	Midvale 23	11/2/44	48.6	0.13	0.10	67.5	5.3	0.5	1.7	7.0
51.	"	"	S-105-Sb Metals Res.	11/21/44	4.8							50.87
52.	"	"	Midvale 24	12/19/44	49.2	0.23	Tr.	63.2	6.6	0.6	2.1	8.6
53.	"	"	S-107-Sb Metals Res.	12/20/44	4.3							49.21
54.	"	"	S-108-Sb Metals Res.	1/2/45	4.1							46.03
55.	"	"	Midvale 25	1/3/45	43.0	0.32	0.20	62.0	6.1	0.6	1.6	9.8
56.	"	"	Midvale 26	From telegram dated 1/18/45	54.	0.45						12.0
57.	"	"	Midvale 27	1/30/45	56.3	0.27	0.10	72.3	3.7	0.8	2.1	6.8
58.	"	"	Midvale 28	2/6/45	51.2	0.21	0.20	73.5	3.3	0.4	4.7	3.2
59.	"	"	Midvale 29	2/13/45	48.7	0.34	0.10	69.3	5.3	0.7	2.4	5.0
60.	"	"	Midvale 30	2/26/45	53.1	0.16	--	62.8	5.9	1.3	2.6	8.7
61.	"	"	Midvale 31	3/1/45	51.3	0.14	0.10	79.0	3.9	0.4	1.5	3.4
62.	"	"	Midvale 32	3/16/45	48.4	0.17	--	73.5	4.9	0.6	2.9	3.0
63.	"	"	Midvale 33	3/28/45	53.0	0.29	--	73.7	5.0	0.4	1.4	3.4

DESCRIPTION OF SHIPMENTS FROM FOREGOING RECORDS

OF THE GRAY EAGLE MINE, BAKER COUNTY, OREGON

A to F	From early workings which include stopes on the tunnel level and on the northern part of the 1st underground (Koehler) drift.
1	From old dump and without sorting
2	Half from surface cut and half from dump
3	Half from tunnel slough and half from tunnel stope
4	From old stope on tunnel level
5	From underhand stope on tunnel level
6	From dump and rejects material from #3 and 4 and 5
7	No information
8	10 tons from dump and 30 tons of mine run ore, unsorted, from stope on foot wall cross cut between vertical shaft and incline shaft
9	Development rock from number 1 sublevel
10 - 11	From stope on foot wall extension of the main Koehler drift situated just opposite cross cut and behind incline shaft
12	Highgrade sorted from shipment 9-10-11
13 - 14	Development rock from number 2 sublevel; first 60' of northern part
15	Probably same as above
16 - 37 inc.	From horizon between second sublevel and main drift
38	From stope on main drift between vertical and inclined shaft. Stope running to surface cut
39	From horizon between 3rd and 2nd levels north of shaft
40	Highgrade sorted from shipments 39 and 39
41 to 51 inc.	Principally from horizon between 3rd and 2nd levels, but including some tonnage from immediately above 2nd level.
52	From horizon between 2nd level and 1st level
53 - 54	High grade sorted mostly from between 3rd and 2nd levels, but including some from shipment 52
55 - 56	From stope beginning just north of shaft on 1st level and extending to tunnel level at a point between portal and winze shown on map.

Gray Eagle Mine	Koehler	Antimony - Gold	
NAME	OLD NAMES	PRINCIPAL ORE	MINOR MINERALS

9 S	41 E	7
T	R	S

...Baker..... COUNTY

...Virtue..... AREA

..... ELEVATION

..... ROAD OR HIGHWAY

...5 miles to Baker..... DISTANCE TO SHIPPING POINT

PUBLISHED REFERENCES

Gilluly, Reed & Parks 33:76
Gilluly 37:97
Dogami Bull 14 A
Dogami GMI 13

MISCELLANEOUS RECORDS

PRESENT LEGAL OWNER (S) .Anthony Brandenthaler.....

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.....

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Address ...Baker, Oregon.....

.....

.....

.....

OPERATOR ..Anthony Brandenthaler.....

.....

Name of claims	Area	Pat.	Unpat.

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY

DEPARTMENTAL RECORDS on file in		P'land	G.P.	Baker
REPORTS				
Gray Eagle Mine	H.K.L. 4/17& 5/5/41	x		x
" " "	H.K.L. 1/26/42	x		x
" " " progress Report to accompany above	" 4/16/42	x		x
" " " " " " " "	H.K.L.7/6/42	x		x
" " "	W.D.L. May 43	x		x
Gray Eagle Mine (supplement No 1 to GMI 13)	N.S.W. 2/3/45	x		x
" " " (progress Report #2)	N.S.W. 12/3/46	x	x	x
" " " pink paper Report to accompany above	N.S.W. 2/2/47	x	x	x
SHIPMENT AND ASSAY RECORDS				
Complete record of shpments referred to in GMI 13 and in the first supplemental report to GMI 13.	N.S.W.	x		x
2nd Supplemental record of shpments including shipments 57 to 63		x	x	x
Summary of production record including tabulation of all previous data.		x		x
MAPS				
Underground by H.K.L.	1942			x
" "	N.S.W. 1943	x		x
" "	N.S.W. 1944 (used in GMI 13)	x	x	x
" "	N.S/W. Revised to Dec 46 (Included with progress report 2	x	x	x

6/46

Kohler Mine — see Gray Eagle — Quinary-gold

NAME — OLD NAMES — PRINCIPAL ORE — MINOR MINERALS

9S	41E	7
T	R	S

PUBLISHED REFERENCES

Baker ..... COUNTY

Burton ..... AREA

..... ELEVATION

..... ROAD OR HIGHWAY

..... DISTANCE TO SHIPPING POINT

MISCELLANEOUS RECORDS

PRESENT LEGAL OWNER (S) Tony Brandenthaler ..... Address Baker, Oreg .....

.....

.....

.....

OPERATOR .....

Name of claims	Area	Pat.	Unpat.

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY

MI-21

KOEHLER MINE

VIRTUE DISTRICT:

is 6-1/2 miles from shipping point, Baker, Oregon, on the Union Pacific and Old Oregon Trail. Located in 1913 and consists of 4 unpatented lode claims, recorded in Baker county. Located in a hilly area; the country rock is gramite, slate footwalls; vein strata bearing northeast and southwest; width 3 feet, length 3000 feet. Mineral is gold and antimony, assays at $40. Water is scarce; power can be purchased from Eastern Oregon Light & Power Company nearby; no timber. Mine is now idle, but was equipped with gas engine, power cars, track and tools, which were mostly stolen. Owner is Dr. A. Koehler, Baker, Oregon.

(Prescott---6/1/37).

DANDY JIM EXTENSION.

VIRTUE DISTRICT:

is 6-1/4 miles from shipping point, Baker, Oregon, on the old Oregon Trail and Union Pacific. It was located in 1913 and consists of 2 unpatented lode claims, recorded in Baker county. The mine is located in a hilly area and the country rock is granite, with hanging walls of granite and footwalls of slate; vein strata bearing northeast and southwest; width 9 feet, length 6000 feet. Mineral is antimony, assays at $46. Water is scarce; power can be purchased from Eastern Oregon Light and Power Company nearby. Mine is now idle, but 300 tons of antimony were mined and shipped during the World War. It is developed with 2600 feet of tunnels and a shaft 150 feet deep. Owner is Dr. A. Koehler, Baker, Oregon.

(Prescott---6/1/37)