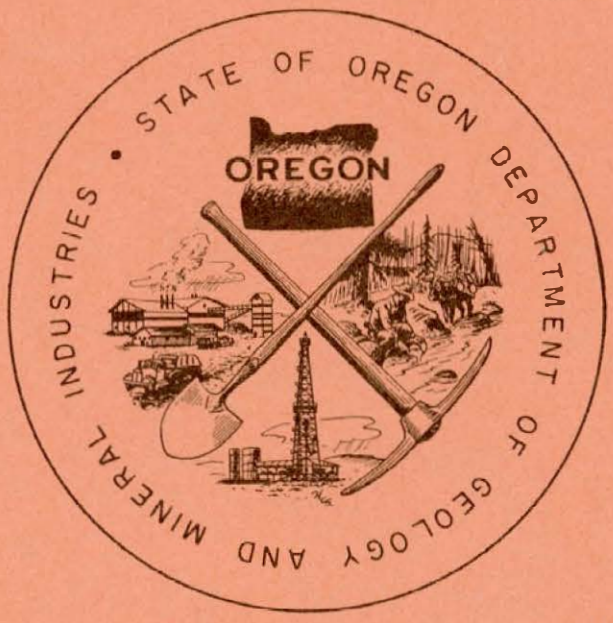
THE OREGON KING MINE JEFFERSON COUNTY, OREGON



by

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and

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STATE OF OREGON

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES 1962

Foreword

In the past, Oregon has had many more productive metal mines than exist now. Today most of them are closed down, but interest still remains in these former "producers." Unpublished records of many old properties in the form of mine maps, geological reports, and smelter returns are available to the public in the offices of the Department of Geology and Mineral Industries. When possible, the Department publishes this material for general distribution.

This report on the Oregon King mine has been compiled partly from material made available to the authors by the Trust Department of The First National Bank of Oregon and partly from Department records and field work. Additional information was secured from sources as noted in the text. A problem that always exists in research on the operations of old mines is that, along with the usual partial or total inaccessibility of underground workings, gaps are left in the record because of the death of the early-day owners or operators, and because of the lack of maps and reports which, if found, are often in conflict. This is further complicated by lack of accurate dating (or no dating) on maps and reports, and to the vagaries of memory of those who were once familiar with the property. Therefore, a publication such as this is important as it assembles and organizes much pertinent material, establishing an authentic record for future reference.

The Oregon King mine is receiving attention at the present time because its ores contained sizable amounts of silver, and silver has recently undergone a price rise. The mine is of interest also because its mineralization took place during Tertiary times. With the exception of the Oregon King and some ore bodies in the Western Cascades, Tertiary mineralization in Oregon is limited to quicksilver. Probably this property comes as close to resembling the "bonanza" type deposits of Nevada as any known ore body in this state.

The Department is fortunate to have the careful work of the two authors. The senior author, Fay W. Libbey, is a former Director of this Department, a graduate of Massachusetts Institute of Technology in mining engineering, and a registered professional engineer with many years of experience. The junior author, Raymond E. Corcoran, Department geologist with a wide experience in Oregon geology, is a graduate in geology of the University of California at Los Angeles with a master's degree from the University of Oregon. These authors have collaborated in other Department reports.

Hollis M. Dole
Director

May, 1962

STATE OF OREGON

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

1069 STATE OFFICE BUILDING
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Introduction

The great majority of metallic ore deposits in Oregon are found in the northeastern and southwestern parts of the state, where they occur in pre-Tertiary rocks and associated granitic intrusives or as placers in adjacent stream valleys. An important exception is the silver-gold lode in central Oregon known as the Oregon King mine (see Figure 1). There the oldest rocks are early Tertiary volcanics locally intruded by rhyolitic to andesitic masses. The geology and mineralogy of this mine have some similarities to the silver deposits of the Tonopah, Nevada, district, which has produced more than 150 million dollars in silver and gold since 1900. It is not intended to draw an analogy between the Oregon King and the Tonopah mines at this stage of its development, but merely to point to a similarity in its geological setting to that of these Nevada mines and other precious metal deposits of the epithermal or bonanza type as exemplified in some of the boom camps of Nevada.

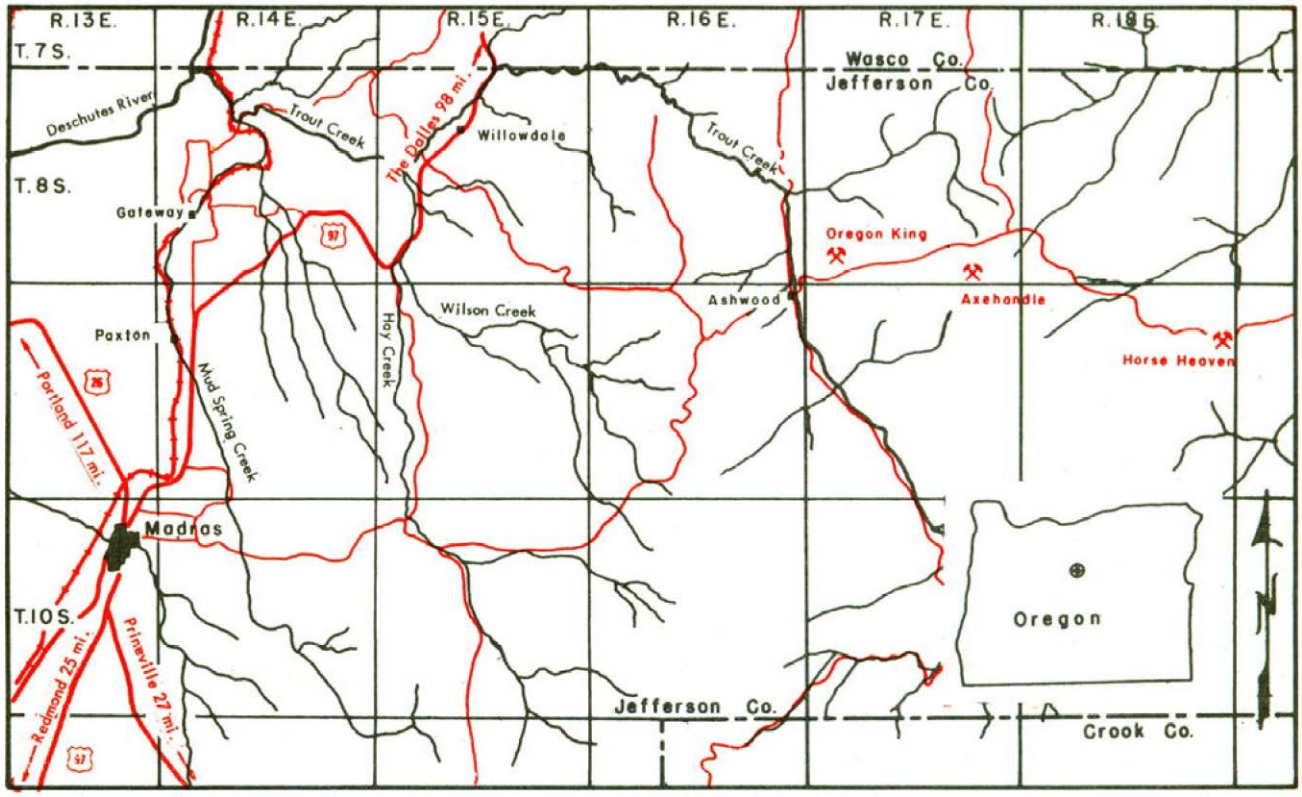

Figure 1. Map of Ashwood area, Jefferson County, Oregon, showing location of the Oregon King mine.

Until mining was halted by a shaft fire in 1950, records of the U. S. Bureau of Mines show that, during the period from 1935 to and including 1950, the Oregon King hod a total production of 232,402 ounces of silver, 2,419 ounces of gold, 59,076 pounds of copper, and 110,071 pounds of lead, with 37,351 pounds of zinc reported but not recovered. In addition there was a small production from smelter shipments from 1899 through 1904 (tabulated later in this report).

The mine is now flooded up to the second or adit level, which is about 150 feet vertically and 173 feet on the incline below the collar of the shaft. Levels below the adit therefore cannot now be examined. Old assay reports of samples taken when the exploration work was done in the 1899-1904 period indicate the presence of ore of good quality at these lower depths. However, some conflicts and omissions in the available records are evident and, until these are clarified, definite statements regarding assay values in the early records are open to question; but because of the history of operations, especially the smelter shipments, a geologic and economic study of the property both on the surface and underground seems warranted.

Judging from reports ovoiloble, probably oll known ore has been stoped above the odit level. Whether there is still minable ore exposed between the second and third levels is not known but it appears doubtful. Below the third level, however, it is reported that only a minor amount of stoping has been done.

Smelter returns provide the only authentic evidence of the grade of ore that may be available, but most of this information is on ore above the third level. Ore shipped from the dump presumably was vein material from shaft and drifts at all levels when the mine was originally developed by W. S. Thomas, mining engineer for J. G. Edwards (see History). The smelter figures, together with ossoy reports of samples token when the shaft was sunk from the surface to the sixth level, indicate an average grade that could be economic if the quantity available is proved sufficient, and if operations ore conducted by experienced mining people.

The Alaska Juneau Mining Co. did extensive sampling of the mine in 1934-1935, and, although a satisfactory comparison is difficult to make, its assay results do not check very well with those from the earlier exploration work under the supervision of W. S. Thomas. Records of assays made in the early work under Thomas seem to have been kept carefully, but there are large gaps in the records and descriptions of samples are often lacking in sample widths and in distances from a fixed point in the lateral work. There is no record available of shaft sampling by Alaska Juneau. An effort is made later in this report to superimpose assay results of the Thomas period on Alaska Juneau assay mops to show seeming divergencies.

The Orie and Roy claims in the so-called Roy group which borders the Oregon King group on the south (see Figure 2) appear to have mineralization similar to the Oregon King vein, and investigation might show that these claims would be a desirable addition to the Oregon King ore supply.

The Oregon King deposit has generated some interest ot this time because of the world silver market situation. For the past few years the demand has substantially exceeded supply, and the United States' stock of "free" silver, that is, the domestic stock not ear-marked for currency backing and available for purchase and commercial uses, has been largely depleted. The market price for silver has risen from $0.905 to about $1.00 an ounce (March 1962). This has caused any new potential source to assume more importance. Hence attention has been directed to the Oregon King as a possibility. Reports of world shortage of silver and the probability of o soaring price should, however, be viewed with caution. Nobody knows how much silver in the form of coins has been hoarded or how much could be thrown on the market, especially by Asian countries, if the price rises high enough. Asia, where people always hove trusted silver as money for above local currencies, has been o "sink" for silver for generations,

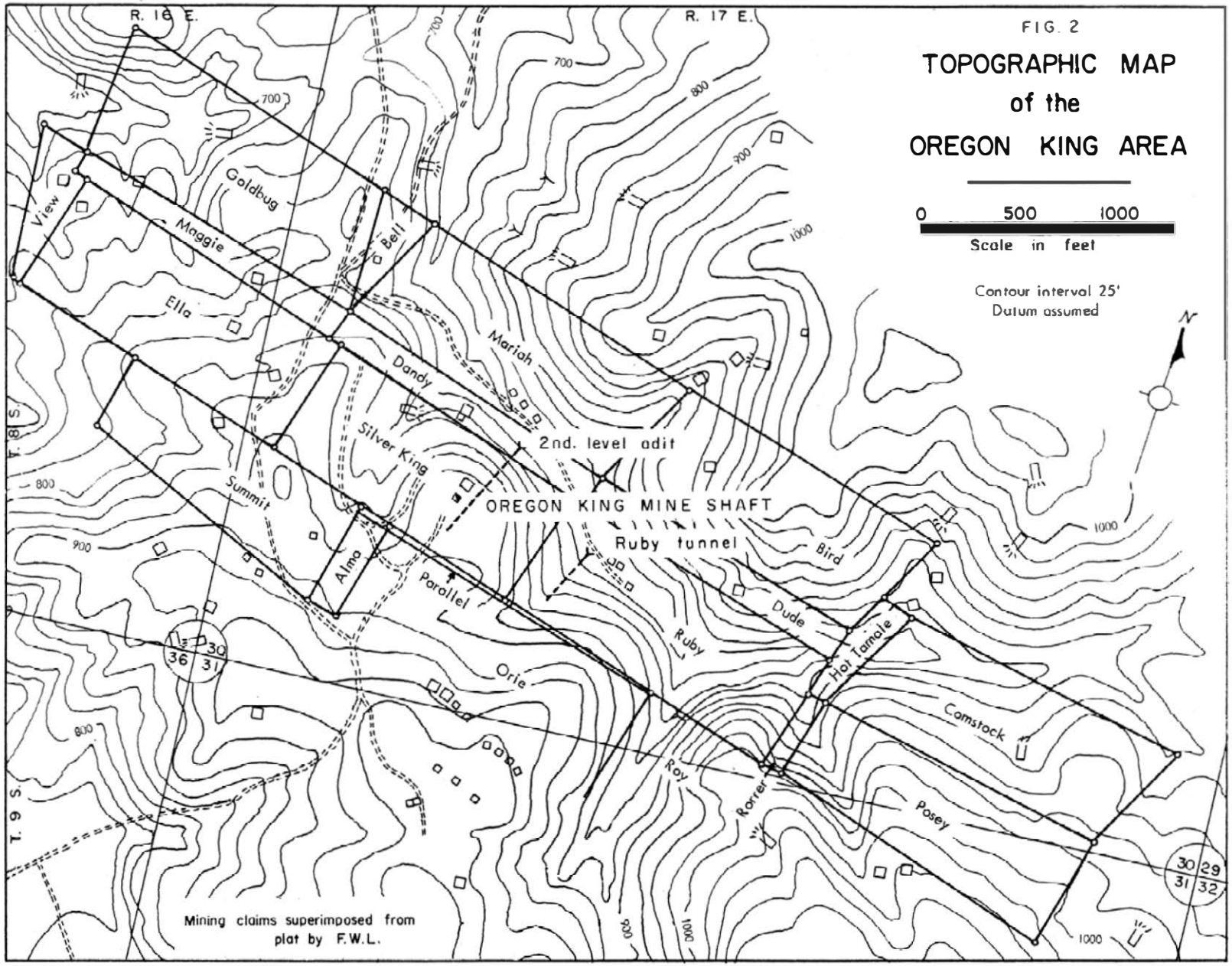

FIG. 2

TOPOGRAPHIC MAP of the OREGON KING AREA

0 500 1000

Scale in feet

Contour interval 25'
Datum assumed

N

and could undoubtedly be a source of supply of millions of ounces if a seeming shortage forced abnormally high prices.

Geography

Location and ownership

The Oregon King mining property is in sec. 25, T. 9 S., R. 16 E., and secs. 30 and 31, T. 9 S., R. 17 E.W.M., Jefferson County, Oregon, approximately 3 miles by graveled and dirt roads northeast of Ashwood, which is 28 miles east of Madras, the county seat. The mine is 26 miles by road from Gateway on the Oregon Trunk Railroad.

The mining property, as shown in Figure 2, comprises 18 patented mining claims including 11 fractions. Title is held by The First National Bank of Oregon as Trustee of the J. G. Edwards estate. Total area is 293 acres, more or less, as evidenced by patent surveys made over the period 1906-1918.

Topography

The area is hilly with V-shaped canyons. Relief in the mine area is about 300 feet. Elevation of the shaft collar is reported to be 3,000 feet 1/. Aneroid reading (July 1957) was 2,940; at Ashwood it was 2,580. Contours on Figure 2 are of sketch map quality only. Drainage is westerly into Trout Creek and the Deschutes River.

Climate and vegetation

Central Oregon is semi-arid with extremes of temperature during the year, hot in summer and cold, often with subzero temperatures, in winter. Precipitation is small and snowfall light, but heavy precipitation for short periods is not uncommon. The rolling hills have grassy patches and sparse junipers. Grazing and wheat raising are the principal industries of the immediate area.

Geology

General description

The Ashwood area is underlain by a complex assemblage of Tertiary volcanics and subordinate sedimentary rocks in the western part of the Blue Mountains of central Oregon. Most of the rock in the general vicinity of the Oregon King mine ranges in age from Eocene (?) to Miocene (?), and comprises at least two formations: Clarno and John Day (see map, Figure 3). The Eocene-Oligocene Clarno Formation, in which the mine is situated, is composed of lava flows and coarse volcanic breccias of porphyritic pyroxene andesite with less abundant tuff and mudstone. The John Day Formation of Oligocene to Miocene (?) age, characterized by tuff,

1/ Alaska Juneau records (may be arbitrary).

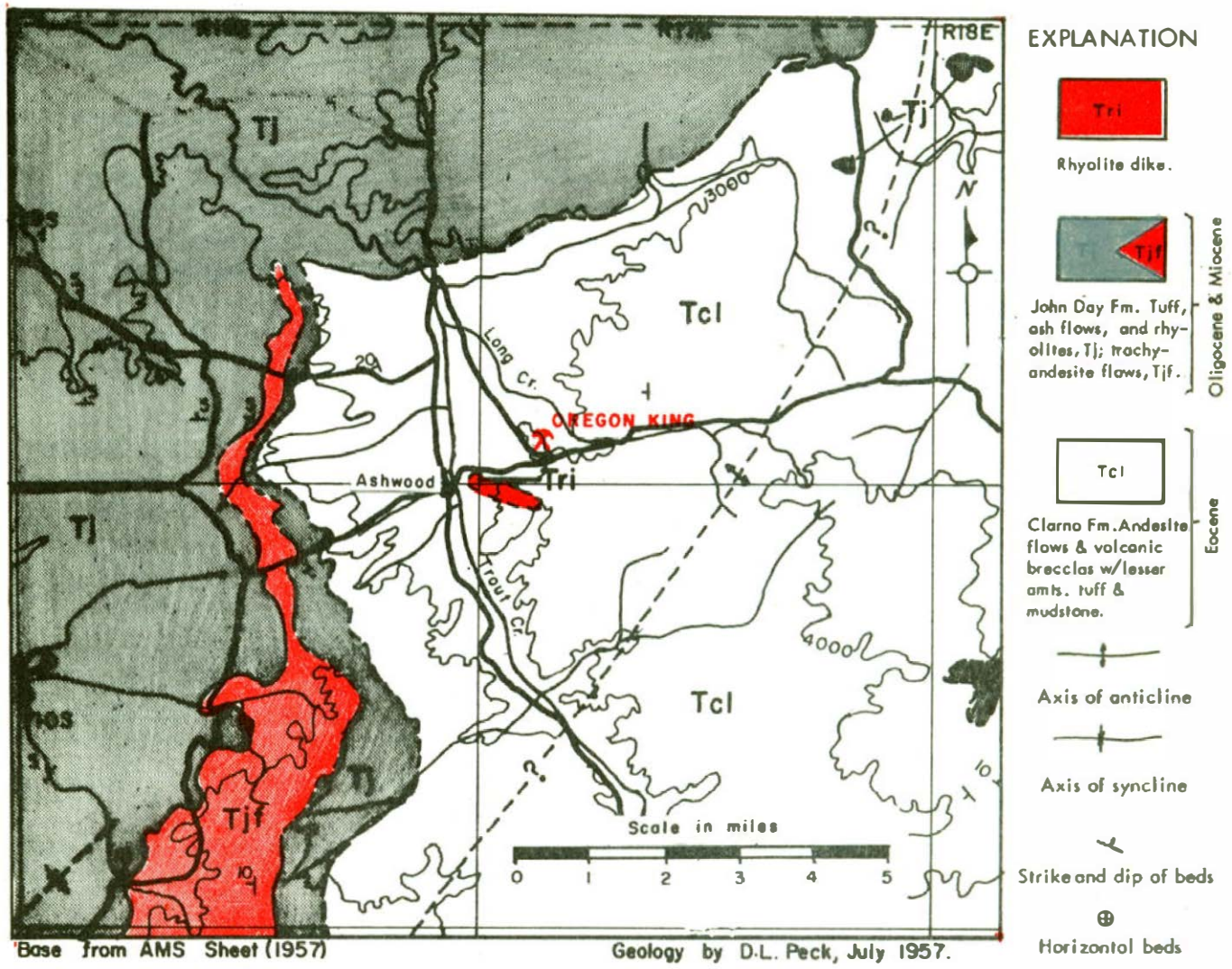

Figure 3. Reconnaissance geologic map of the Ashwaod area, Jefferson County, Oregon.

lapilli tuff, strongly to weakly welded ash flows, and subordinate flows of trachyandesite and rhyolite, is exposed a short distance north and west of Ashwood (D.L. Peck, written communication, 1962). Rhyolitic and andesitic domes or plugs which intrude the Clarno volcanics near the mine on the Bird claim and possibly the Ella, are thought to be possible correlatives of rocks of similar composition which occur in the John Day Formation.

Erosion of this region has produced a rugged topography in which the volcanic intrusive rocks stand out boldly above the softer tuffs and sediments that surround them. Soil cover and slide material obscure the bedrock in most places so that good exposures are usually limited to stream gullies and road cuts.

Ore zone

The ore zone at the Oregon King mine is associated with a fault trending N. 75° W. The dip on the fault averages about 75° S. W., but it is steeper in the lower levels of the mine, according to mapping by the Alaska Juneau Co. The andesitic rocks along the fault have been brecciated, silicified, and impregnated with quartz and pyrite, together with smaller amounts

of chalcopyrite, galena, and sphalerite. Cerargyrite, silver chloride, and native silver have been reported in upper levels. Bunches of massive sulphides, largely pyrite, are occasionally found.

Reportedly, the ore occurs in lenticular pipelike masses of variable size ranging in width from a few feet to as much as 20 feet. Generally, walls of the shoots must be determined by assay. It is said that some of the shipping grade ore was difficult to distinguish visually from low grade.

Values are mainly in silver with a smaller amount of gold. Copper, lead, and zinc sulphides ore found in relatively minor amounts except locally. A very little arsenic was reported in the concentrates, and stibnite was reported among the sulphides.

Other mineral deposits

Although mercury has not been found in the Oregon King mine, cinnabar mineralization, apparently associated with volcanic plugs in the Clarno Formation, occurs sporadically throughout this region. The most important of these deposits, the Horse Heaven mine, which, between 1934 and 1958, produced slightly more than 17,000 flasks of quicksilver, lies about 12 miles east of the Oregon King (Figure 1). The ore body in the Horse Heaven mine occurs in autobrecciated portions of a rhyolite plug and its subsidiary protrusions, and in adjacent breccia zones formed as a result of the rhyolite having been intruded in a highly viscous state (Waters and others, 1951) 2/. The Axe Handle mine (sec. 35, T. 9 S., R. 17 E.) is in altered rocks at the margin of a plug of augite andesite, and is reported to have produced about 150 flasks of quicksilver over a period of several years. Mercury mining in the state has now almost ceased because of the present low price of the metal.

History

Edwards-Thomas period (1898-1933) 3/

Development to adit level: It is reported that the outcrop of the Oregon King vein had long been known to herdsmen and range workers but its value was not recognized until 1898, when sheepherders dug into the outcrop and found some rich silver ore. A shaft was sunk 60 feet on the outcrop in 1899 when J. G. Edwards 3/, then half owner of the Hay Creek Ranch, bought the property. He, together with J. B. Cartwright of Portland, Oregon, and P. J. Quealy of Wyoming, former business associates, organized the Oregon King Mining Co. under the laws of Wyoming, and prepared to develop the property. They hired W. S. Thomas 4/ as superintendent, and shaft sinking was continued. Somewhat later both Cartwright and Quealy

2/ Waters, A. C., Brown, R.E., Compton, R.R., Staples, L.W., Walker, G.W., and Williams, Howel, 1951, Quicksilver deposits of the Horse Heaven mining district, Oregon: U. S. Geol. Survey Bull. 969-E.

3/ Biography of J. G. Edwards in Appendix at end of paper.

4/ W. S. Thomas was a mining engineer who had attended the Missouri School of Mines. He wrote a mine report for Edwards dated October 11, 1933, and much of the mine history related herein was obtained from a copy of this report.

died and in the settlement of their estates Edwards became the sole owner.

The shaft followed the vein with an initial dip of about 60° S.W. and a strike of about N. 75° W. Thomas described the vein as composed of crushed quartz and highly altered vein matter. In the upper part of the vein, silver chloride (cerargyrite) was found, as well as small amounts of native silver and a little metallic gold; both silver and gold were sometimes deposited on sulphides. At the 100-foot level values dropped abruptly and the vein was apparently barren for 23 feet, according to Thomas. At this point (123 feet) sulphides appeared and water came into the shaft in "bailable amounts." The sulphides increased in width and filled the whole shaft. The water forced suspension of shaft work until a pump could be purchased and installed.

A shipment of 14.5 tons of ore from shaft development work down to the 100-foot level was made to the Tacoma smelter in October 1899 (see Table 1). This lot gave net smelter returns of $1,764.00, or approximately $122 a ton. Thomas reports that ore below $100 a ton was placed on the dump.

At this stage of operations, an adit crosscut tunnel some 470 feet long was driven westerly from the Long Creek side of the hill to intersect the vein at 173 feet, and was designed as an aid to ventilation and the pumping load. In a report dated "Summer of 1921" by "Richards and Party" it is stated that this tunnel "cuts through several small fissures but none of commercial importance." It also states that "where first encountered in the crosscut the Oregon King vein is 17 feet wide, plus. That is, the farther wall could not be seen and at no other point was the full width of the vein disclosed. Samples were taken every 15 feet along the 173-foot level and averaged 0.138 ounce gold and 5.73 ounces silver per ton or an average value of $8.50 per ton with silver at $1.00 per ounce." Of course gold was $20 per ounce in 1921. The authors have no further information concerning Richards and Party or the purpose of their report.

Third and fourth levels

In 1901 the shaft was continued below the second level to the third level, which Thomas places at 273 feet. Between the second and third levels the vein had steepened to a dip of 78 degrees. East and west drifts were driven at the third level. According to Thomas, the vein flattened near the fourth level and the shaft intersected a smooth wall which, when broken, showed "... a lens of solid sulphide of shipping ore grade and carries silver, gold, and some copper. Its greatest thickness at any point observed is two feet. It is more than 200 feet long on the dip and has a width of more than 50 feet where stoped on between the fourth and fifth levels."

Thomas states that in May 1901 a shipment of 45 tons of ore was sent to the Tacoma smelter, net returns of which were $2,325.39 ($51.67 a ton) and in June 1901, 20.5 tons which returned $725.71 ($ 35.40 a ton). This ore came from shaft development at and above the third level. These shipments are included in Table 1.

In the Thomas report considerable emphasis is placed on the importance of a "slickenside" which appears to be on the hanging wall side of the vein on the second level and possibly on the foot wall side below the third level. He does not mention striations on the smooth wall of the vein but he does describe what appears to be a heavy clay gouge. Whether or not this means post-mineral movement cannot be determined from his report, although he mentions "drag" of crushed ore in the gouge which continues in the shaft below the fourth level. He mentions two periods designated as "primary" and "secondary" ore in "hanging wall and foot wall systems." Some of the samples in his tabulations of assays from lower levels are identified as coming from hanging wall and foot wall ore.

Fifth and sixth levels

From 1901 to 1903 the mine was shut down because of litigation in the Federal Courts over title to the mine property. Apparently the court decision was in Edwards' favor. Tabulations of sampling and assays 5/ appear to show that shaft sampling ceosed on or about June 13, 1901 with o sample from the hanging wall at 480 feet, and was resumed on or about October 17, 1903 at 484 feet. This is the lost recorded shaft sample. It hod o description of "Footwall side (2½ feet wide)," and the assay was 22.8 ounces silver and 0.15 ounces gold. As the fifth level was supposed to be at approximately 473 feet, these shaft samples of June 13, 1901 and October 17, 1903 were below the fifth level. According to the assay records, fifth-level samples were reported on June 14 and June 15, 1901; also beginning August 15, 1903 and continuing through March 16, 1904. All samples from the fifth level in 1904 were recorded as coming from stopes on both east and west sides of the shaft.

As indicated above, the shaft sinking was continued to the sixth level in 1903 and east and west drifts were run on both fifth and sixth levels in 1903 and 1904. Thomas reports that "the rich ore thins out as the sixth level is reached." He states that ore may be followed in the hanging wall side of the west drift on the sixth level to the face, a distance of 96 feet. In the face there is a "good showing" of ore. The east drift on this level shows no ore at its face although "some nodules of good ore were found scattered around in o soft white quartz near the shaft." His report continues "This ore body in the west drift on the sixth level has the greatest lateral extent of any yet found." Two samples taken later by Edwards and Thomas from the face of the west drift, March 10, 1930, os shown below are pertinent here.

Sample No.	Name	Gold oz.	Silver ozs.	Copper percent	Zinc percent	Lead
1	Special High grade Stringer	0.38	105.6	present	-	-
2	All of ore on hanging side of drift ("30 inches of this")	0.08	15.7	2.86	7.05	present

Ore shipments by Thomas: Shipments of ore from development work in the shaft between the fifth and sixth levels and from stopes "on the east and west side of the shaft between the fifth and fourth levels" were made in 1904. All the shipments mode during the Edwards-Thomas period of operation are tabulated in Table 1 as quoted from the Thomas report.

Mine closed 1904; reopened 1929: Thomas recorded "In September 1904 further litigation was threatened and the property was closed down and so remained."

In 1929 Edwards reopened the mine and made some additions to the surface plant, among which were a 125-hp diesel engine and an electric generator, together with some other electrical equipment. Shaft sinking below the sixth level was begun on April 9, 1930.

5/ See Synthetic Sample log record in Appendix.

Table 1. Ores Shipped from the Shaft, Levels, and Stopes of the Oregon King Mining Co.'s Silver King Claim from August, 1899, to October, 1904.

Date Month	Year	Car Designation	Weight (Dry Tons)	Net Returns (dollars)	Ore From
Oct.	1899	-	14.5	1,764.00	Shaft
May	1901	-	45.0	2,325.39	Shaft at and above third level.
June	1901	-	20.5	725.71	Same
Feb.	1904	#6096	16.0	741.23	Shaft and drifts below fourth level.
Aug. 27,	1904	#6434	52.00	3,976.83	Shaft and drifts below fifth level.
		(2 lots)	1.93	431.92	
-	1904	#84152	10.92	1,368.71	Mostly from stopes between 5th and 4th levels.
Oct.	1904	#6342	2.408	1,675.83	Same
		(2 lots)	15.196		
		Totals	178.454	13,009.62	

Shaft sunk to seventh level: Thomas reported as follows:

"The vein is strong at the sixth level and calcite now comes in mixed with quartz and as stringers interlaced with other vein filling. There is now a crushed seam that follows down in the west side of the shaft. This shows drags of good ore all the way down to the bottom. In the main portion of the shaft there are stringers of pyrite interlaced with vein filling. At times the shaft is all in the foot wall system and away from the slickenside which it followed so long and was itself included from the fourth level down as noted before.

"At the bottom a 20-inch vein of quartz had come in next to the slickenside. The vein is still strong and carries pyrite.

"A crosscut into the hanging wall here did not show any ore but it may not be far enough to be conclusive as can readily be shown by conditions as developed in the west drift on the sixth level. There the ore is no longer just behind the

slickenside but is well back from it and shows all of the characters as drags in the crushed zone, as inclusions in the space fillings and secondary deposits. The entire drift on the sixth level is on the hanging wall side and the slickenside is well back in what has become a foot wall side of the drift."

The above comments of Mr. Thomas appear to refer mainly to the bottom of the shaft at the seventh level horizon 6/, and furnish the only evidence available of conditions at the lowest point in the mine. There are no assay records from this horizon.

Mine closed 1930: At this stage of operations when the shaft had reached the seventh level, Thomas reports that "Engine trouble hod now come to be frequent and a source of annoyance, delay, and impossible expense." Operations ceased on June 20, 1930. He reports that the shaft was making 25 g.p.m. when the mine shut down.

Ruby Tunnel: The only development work of record during the Edwards-Thomas period, other than that described, was the Ruby Tunnel driven at irregular time intervals during the early part of operations. According to tabulations of assays supplied by the late Louis Enderud, who was Edwards' business manager at the Hoy Creek Ranch, the Ruby Tunnel work evidently was begun as assessment work in 1899 ond wos continued in 1900 and 1904. The tunnel is about 600 feet east of and approximately parallel to the Oregon King second level adit.

At about 160 feet from the portal, vein material consisting of broken quartz, gypsum seams, pyrite, and clay gouge with a well defined foot wall was intersected. Here a winze 18 feet deep was sunk. Assays of winze samples token in 1904 ore shown in Synthetic Sample Log Record in Appendix. The vein strikes N. 75° W. and dips obout 60° SW. The tunnel continues in barren rock from the winze to the face, a distance of about 120 feet.

Alaska Juneau period (1934-1935)

The mine lay idle from 1930 to 1934, when the Alaska Juneau Mining Co. took possession under an option to purchase. Underground work was resumed and continued until the end of 1935, when the company gave up its option. As shown by the mine maps, Alaska Juneau explored underground on the fourth, fifth, and sixth levels Smelter records show that during 1935 the company shipped six cars of ore containing 200 dry tons valued by the smelter at $15,374. The bulk of these shipments reportedly came from the small stapes above the fifth level.

Alaska Juneau also did considerable mine surveying and sampling. Some incomplete mine mapping was done prior to Alaska Juneau's work, but so far as is known to the authors none has been done since. Plan and assay maps prepared by Alaska Juneau are shown in Plates 1 through 8 in the Appendix. Assays of samples taken during development work in the Thomas period and recorded in the Synthetic Log are superimposed in red on the Alaska Juneau maps of the 400, 500, and 600 levels. Widths of samples and even approximate locations are missing in most sample descriptions of the early development work.

6/ Custer Young, written communicotion (1962), says that the shaft is 718 feet deep. Whether or not Alaska Juneau measured the shaft is not recorded. On that company's longitudinal cross section it scales in excess of 675 feet vertically.

Rohlfing-Anderegg period (1940-1950)

Rohlfing lease: After Alaska Juneau stopped work, the mine was idle until 1940 when Edwards leased the property to Ernest Rohlfing, a Portland wheat broker with whom Edwards had previously had business dealings. The lease, besides setting a royalty, said to have been 15 percent, called for a percentage of the receipts from ore shipments to be set aside for the purchase of o mill. Rohlfing had Custer Young of Ashwood and Fronk Dahlquist of Boise as partners.

Smelter shipments were started in October 1940, and the first shipments were 14 cars from the ore pile of the mine dump. Then, later, ore was shipped from the 25-foot, 50-foot, and 100-foot levels in addition to the dump ore. Total shipments in 1940 as reported by the U. S. Bureau of Mines amounted to 1,062 dry tons containing 329 ounces of gold, 20,313 ounces of silver, 6,169 pounds of copper, and 29,474 pounds of lead. Shipments in succeeding years are tabulated later in this report.

In May to July, 1941, metallurgical testing work was done on a sample of Oregon King ore (110 pounds) by the Denver Equipment Co. There is no record of source of the sample or how it was obtained. A report of the test results was submitted by Denver Equipment Co. under date of July 9, 1941, together with a recommended flow sheet. The test sample assayed 0.15 ounce gold, 9.45 ounces silver, trace lead, 0.88 percent copper, 0.40 percent zinc, 6.75 percent iron, 6.09 percent sulphur, no arsenic, and 0.20 percent antimony. Bulk flotation with one cleaning of concentrate by flotation was recommended, together with tabling of flotation tailings, and table concentrates added to flotation concentrates. As reported, selective flotation did not seem advisable because a pyritic tailing carried too much gold and silver to be discarded as waste.

The mill was purchased and installation finished in July 1942. Custer Young reported that the first car of concentrates was shipped July 28, and that the mill feed was obtained from both the mine dump and the 200 level. According to the U. S. Bureau of Mines' records of production, 2,354 dry tons of ore and 261 dry tons of concentrates were shipped in 1942.

Rohlfing took over full ownership of the lease from Young and Dahlquist in August 1942; then he subleased to George Fenton and Charles Silbaugh in October 1942. Fenton and Silbaugh shipped one car of ore from the mine dump and seven cars of concentrates. They gave up their sublease in March 1943.

Anderegg lease: Rohlfing operated intermittently until 1945 when he sold his lease to Henry Anderegg. Young returned as superintendent in 1945 and stayed about one year. Work was somewhat intermittent as shown by smelter shipments, although some improvement is evident in early 1947. In the last half of 1947, however, some cars of ore were shipped which were too low grade to pay expenses. No record of where these shipments were mined is available. There is no record of production or other activity for 1948 or 1949.

In 1950 Frank A. McMenamin of Portland became associated with Anderegg in the management of the mine and there was a resumption of activity. In August 1950 a car of concentrates (39 tons) obtained from milling 200 tons of are was shipped to Tacoma. The return was 23 ounces of gold and 1,886 ounces of silver plus 700 pounds of copper. This was the last shipment.

At about this time a power transmission line was put into the property by the Wasco County P.U.D. and the Oregon King has a transformer on a pole structure near the shaft.

In September 1950 a night fire which, as reported at the time, apparently started on the second level, traveled up the shaft timbers, and burned the shaft house, containing hoist and compressor, and bunkers. Mr. McMenamin reported that "... the fire continued in the sulphide

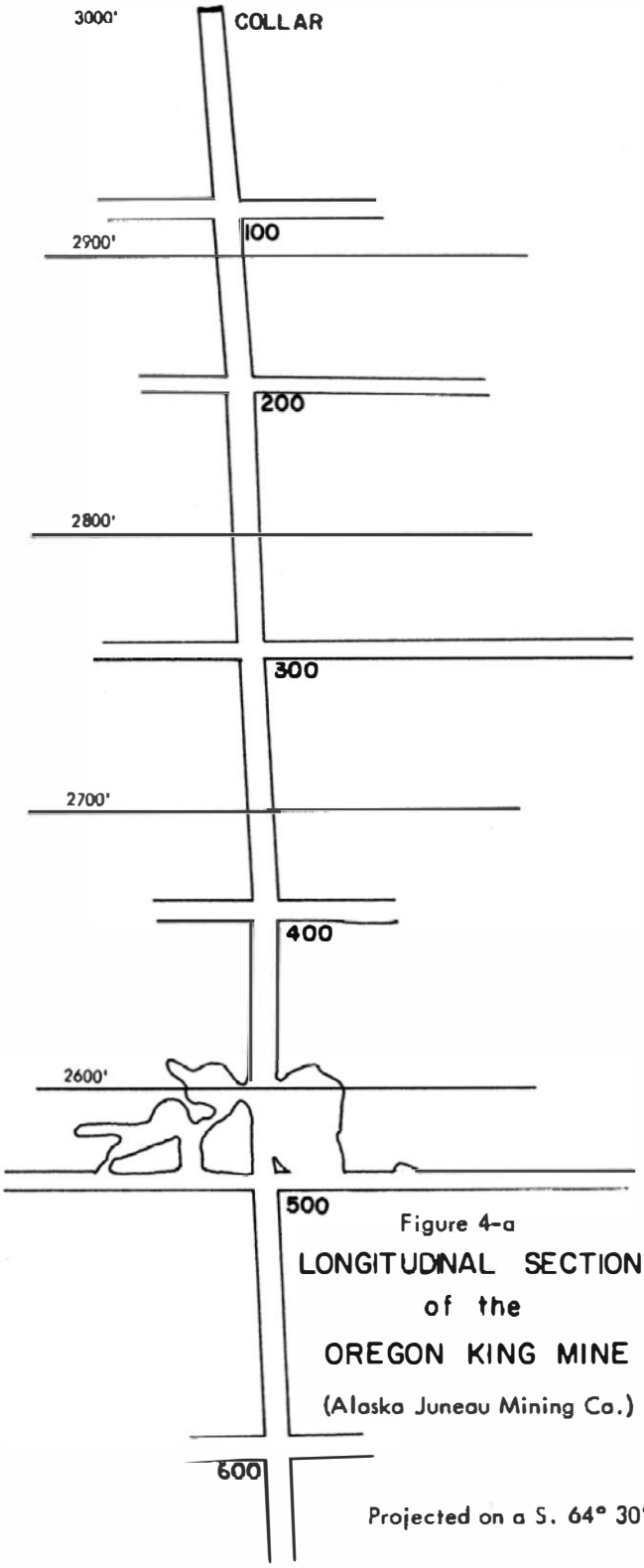

Figure 4-a

LONGITUDINAL SECTION
of the
OREGON KING MINE
(Alaska Juneau Mining Co.)

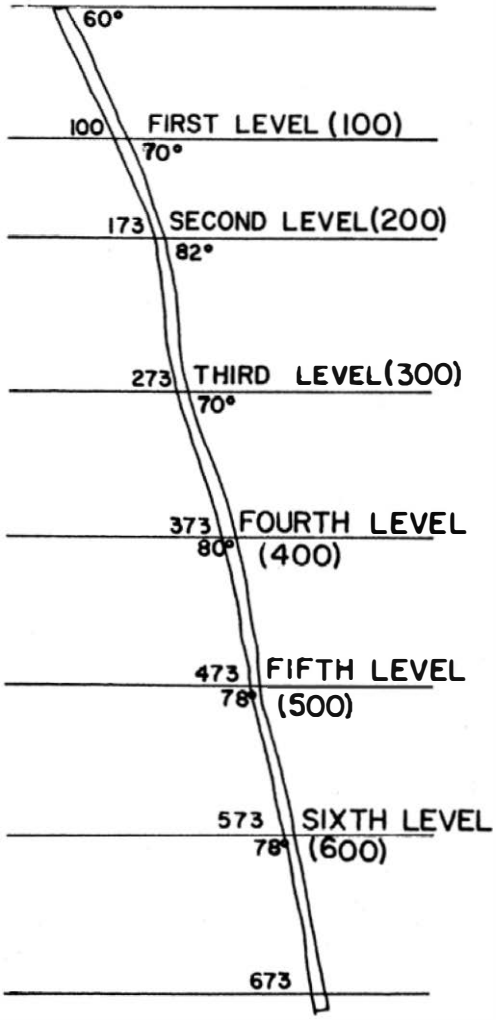

Figure 4-b

SECTION of SHAFT
LOOKING EAST

(F. W. Libbey)

Projected on a S. 64° 30' E. plane

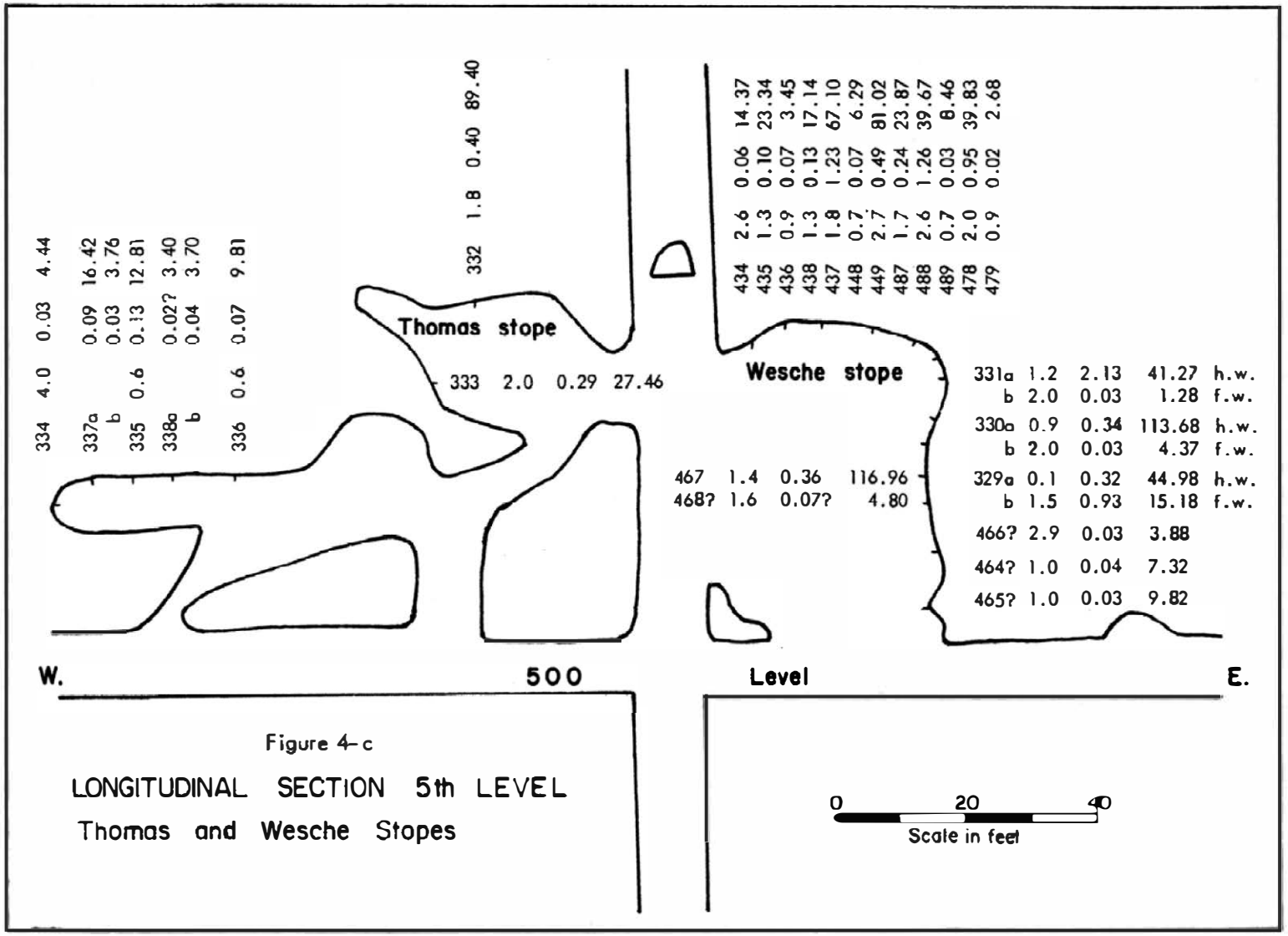

Figure 4-c

LONGITUDINAL SECTION 5th LEVEL

Thomas and Wesche Stopes

ore for some two weeks until we had to put in a large charge of dynamite and blast down below to shut off the air currents."

The fire caused a stoppage of all mining activity, and seemingly soon thereafter the lease was canceled. Nothing has been done at the mine since.

Mine Development

Thomas report maps

No adequote mine level maps or assay maps of the early development work hove been found. A blue print showing both a cross section of the shaft to the fifth level and a plan of the adit tunnel, together with drifts to the fifth level, accompanied the Thomas report. Who prepared this map is not recorded. Also there is a smaller print prepared by Victor J. Jory, United States Deputy Mineral Surveyor, showing contours of the surface near the shaft collar. Neither map is dated. At the time these maps were compiled, approximately 873 feet of lateral work had been done underground including the adit tunnel, which scales 468 feet. The shaft was about 485 feet deep.

Synthetic somple log record

From the records furnished by the late Louis Enderud, it appears that Alaska Juneau prepared a log of samples and assays obtained in development work under Thomas, utilizing daily report sheets which they found at the mine (see Appendix). However, many of these sheets were missing, leaving gaps in the log. In addition most of the descriptions that were found did not give sample widths and locations.

Alaska Juneau mine maps

Alaska Juneau prepared a longitudinal section (Figure 4-a) as well as plan and assay maps down to and including the sixth level. These indicate that they did several hundred feet of development work, the exact amount of which cannot be determined because of incomplete knowledge of the early work. A section on the shaft looking east (Figure 4-b) was constructed by the authors to show the variation in dip of the ore zone as it was followed downward during the initial development. Alaska Juneau's maps show a total lineal footage of about 3,500 feet in the mine, including about 700 feet of shaft, up to and including 1935. It is believed that only a relatively small amount of development work was done by the lessees in the 1940's, and that only on the second level. Comparing the present east drift on this level with the Alaska Juneau map, it is indicated that the lessees extended this drift about 200 feet. The only assay records of the leasing period, that is, 1940-1950, are the smelter reports.

Stoping report

Known ore is reportedly stoped out completely above the second level, and, to a large extent, above the third level. There is no evidence of stoping on the fourth level. The Alaska Juneau longitudinal section (Figure 4-a) shows small stopes above the fifth level (Figure 4-c). These stopes scale about 30 feet long and 40 feet high on the east side of the shaft and

irregularly 20 feet by 20 feet on the west side of the shaft. They probably represent in part the source of ore mined by Alaska Juneau for shipment in 1935. An Alaska Juneau assay record sheet found in Louis Enderud's files names the stope east of the shaft the "Wesche Stope" and the one west of the shaft "Thomas Stope." In both of these stopes some rather high gold values were recorded, and probably a higher than average gold-silver ratio. Average assays reported ore as follows:

Stope Name	Samples		Assays		
	Description	Location	Width (feet)	Gold (ozs.)	Silver (ozs.)
Wesche (east)	Back 25 feet long	Hanging wall	2.75	0.74	44.6
" "	" "	Foot wall	0.9	0.10	13.8
Thomas (west)	Back 20 feet long	Hanging wall	3.9	3.18	24.7
" "	" "	Foot wall	2.0	0.10	3.9

An average of 23 samples from the Wesche (east) Stope taken in the back and breast gives 0.38 ounce of gold and 29.8 ounces of silver. In the Thomas (west) Stope only two samples are recorded. They average 0.34 ounce of gold and 58.43 ounces of silver. In the short sub-level off the Thomas Stope an average of seven samples gives 0.06 ounce of gold and 7.5 ounces of silver.

Recent Sampling

An inspection of the mine area was made by the senior author in 1957. This included sampling as follows: Samples No. 1 and No. 2, as shown on Figure 5, were taken in the second level adit (173 feet below the surface) and consisted of chips along the southeast wall for a distance of 25 feet beginning at a pyrite seam 240 feet from the portal. The rock was somewhat bleached and contained sparse pyrite. It assayed trace of gold, 0.32 ounce of silver, and no copper. Sample No. 2 was taken in the same way along the succeeding 25 feet of the adit toward its junction with the main east drift of the level. It assayed a trace of gold, 0.24 ounce of silver, and no copper.

Sample No. 3 was chipped across 5 feet of the face of a small cut on west side of the gulch west of and below the mine dump and road, probably on the east end of the Ella claim. The material in the cut, which is in line with the strike of the Oregon King vein outcrop, is silicified, fissured, iron-stained rock with no visible sulphides. Sample No. 3 assayed a trace of gold and 1.28 ounces of silver.

Sample No. 4 was a grab of the mill tailings along a face, cut by Long Creek. As a large part of the tailings has been washed away, the sample may not be representative. It assayed a trace of gold and 1.64 ounces of silver.

Sample No. 5 was a grab from the "ore" pile on the dump of a prospect shaft at the top of the hill east of the portal of the adit tunnel. According to Custer Young, this shaft is on the Bird claim. Two shafts about a hundred feet apart at this place were sunk on the same vein, striking about S. 80° E. with a very steep dip. The vein is in a well-defined fissure in altered rhyolite. Some specks of galena were seen. Sample No. 5 assayed a trace of gold and 1.08 ounces of silver.

Table 2 - Oregon King Mine. Production 1935-1950*

Year	Dry Tons Shipped or Milled	Concentrates (Dry Tons)	Smelter	Gold (Ounces)	Silver (Ounces)	Copper (Pounds)	Lead (Pounds)
1935	200	0	Tacoma	315	7,471	4,026	5,794 1/
1936-39	No production	0					
1940	1,062	0	Tacoma	329	20,313	6,000	18,000 1/
1941	2,348	0	Tacoma	945	88,823	14,000	34,000 1/
1942	2,615 3/	261	Midvale, Tacoma	333	56,797	14,000	20,000 2/7/
1943	1,248 4/	178	Midvale, Tacoma	108	9,727	5,700	7,800 2/
1944	1,561 5/	90	Tacoma	150	16,754	6,000	8,000 1/
1945	120	0	Tacoma	38	8,443	350	677 1/
1946	24	0	Tacoma	6	954	300	600 1/
1947	988	0	Midvale, Tacoma	172	21,234	8,000	14,000 2/
1948-49	No production						
1950	200 6/	39	Tacoma	23	1,886	700	1,200 1/
Totals	10,366	568		2,419	232,402	59,076	110,071

*Adapted from U. S. Bureau of Mines records.

1/ No lead recovered at Tacoma smelter.

2/ Lead and copper, but not zinc, recovered and paid for at Midvale smelter.

3/ Includes 1,035 dry tons mine ore, and 400 tons dump ore from which was recovered 202 ounces of gold and 39,459 ounces of silver. Included also is total of 1,180 tons milled producing 261 tons of concentrates which returned 313 ounces of gold and 17,338 ounces of silver.

4/ Includes 98 tons of crude ore shipped from which was recovered 16 ounces of gold and 1,153 ounces of silver. Included also is a total of 1,150 tons milled which gave 178 tons of concentrates containing 92 ounces of gold and 8,574 of silver.

5/ Includes 661 tons of crude ore containing 114 ounces of gold and 12,305 ounces of silver. Included also is a total of 900 tons of ore milled producing 90 tons of concentrates containing 36 ounces of gold and 4,449 ounces of silver.

6/ 200 tons milled which gave 39 tons of concentrates containing 23 ounces of gold and 1,886 ounces of silver.

7/ Zinc in concentrates shipped to Midvale amounted to 18,103 pounds. Total zinc in crude ore shipped to smelters was 37,351 pounds.

Toble 3 – Total Values of Shipments from Oregon King Mine according to Smelter Sheets and Thomas Records
From 1899 to 1950 Inclusive

BULK ORE

Operating Periods Selected	Dry Weight Tons	Total Smelter Value (dollars)	Smelter Payments (dollars)	Av. per ton Smelter Value (dollars)	Av. per ton Smelter Payments (dollars)	Average Assays Au oz.	Average Assays Ag oz.	Remarks
Earliest records 1899-1901-1904	178.434	13,009.62 2/	13,009.62		72.90	2.55	118.9 1/	7 lots
Alaska Juneau 1935	200.267	15,374.39	13,100.60	75.70	70.40	1.71	37.7	3 lots
Rohlfing 1940-1945 incl. 6 years	5,874.447	174,357.25 1,585 3/	144,453.42 1,313 3/	29.70	24.60	0.30	33.1	110 cars
Rohlfing and Anderegg 1946-1950 incl.	979.172	22,543.05 1,127 3/	14,348.71 717 3/	23.00	14.70	0.20	20.0	20 cars
Totals and Averages	7,334.212	233,693.11	192,692.85	31.85	26.27			

1/ Assay values for 1899 and 1901 not available. Assay value for 8.892 tons shipped (7 lots) in 1904 (Enderud's records).

2/ Assumed smelter value and smelter payments were same becouse records for 1899 and 1901 ore incomplete.

3/ Average value per car.

4/ Average assays for copper 0.37, lead 1.22, zinc 1.28.

Table 4 - Values of Concentrate Shipments from Oregon King Mine

Date	Dry Wt. Tons	Total Smelter Value	Smelter Payments	Av.per ton Smelter Value	Av.per ton Smelter Payments	Average Assays (Arithmetical) Au oz.	Ag oz.	Cu %	Pb %	Zn %	Fe %	SiO_2 %
8/15/42	41.385	2,870.57	2,381.19	69.30	57.50	0.38	84.02	1.49	3.3	2.3	-	9.8
9/25/42	37.346	2,349.69	1,913.86	63.20	51.20	0.45	71.24	1.45	3.7	4.2	-	-
11/10/42	47.934	2,968.07	2,257.05	61.92	47.10	0.41	71.00	1.25	2.4	3.6	34.1	-
1/4/43	39.565	2,353.63	1, 906.63	59.60	48.70	0.78	51.02	1.24	3.2	3.8	-	-
1/15/43	45.281	2,015.94	1,547.54	44.40	34.10	0.36	48.40	1.33	2.4	3.3	-	-
1/25/43	47.083	2,492.90	1,947.92	51.70	41.50	0.50	53.71	1.55	2.1	2.5	-	-
8/9/44	47.207	2,309.03	1,788.90	48.00	37.90	0.53	46.56	1.45	3.6	3.4	34.2	9.0.
11/8/44	42.745	1,911.92	1,466.64	44.60	34.30	0.29	52.72	0.97	3.0	3.0	-	10.4
6/19/45	23.751	845.74	593.38	35.60	25.00	0.27	40.21	-	-	Tr	-	17.1
4/25/47	33.275	2,001.49	1,616.17	60.10	48.50	0.25	61.00	1.33	3.95	-	-	-
8/23/50	39.117	2,359.61	1,712.76	60.50	43.80	0.60	48.22	0.91	-	-	-	-
Totals	444.699	24,478.59	19,132.04	55.04	42.79	0.435	57.10	1.30	3.07	3.26	34.2	9.55

Note: In shipment dated 8/9/44, 0.31% arsenic was reported.

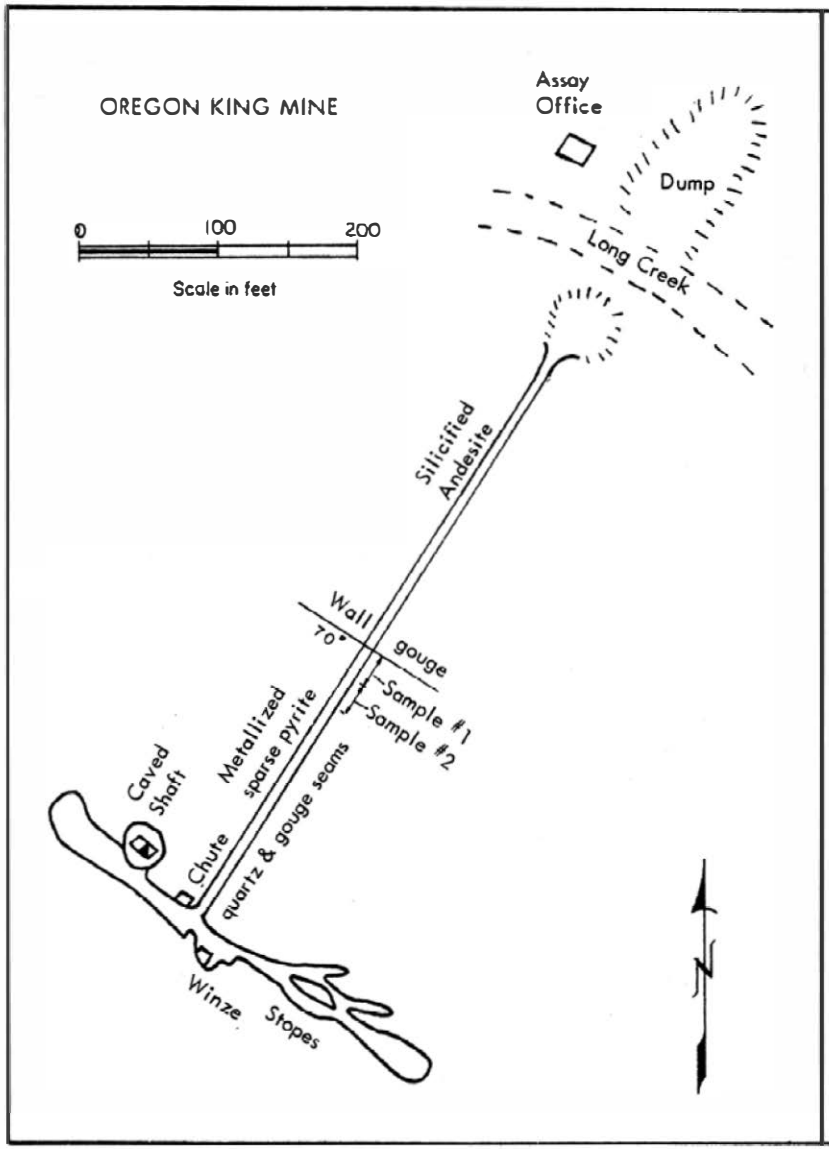

Figure 5 - Sketch of plan of second level adit.

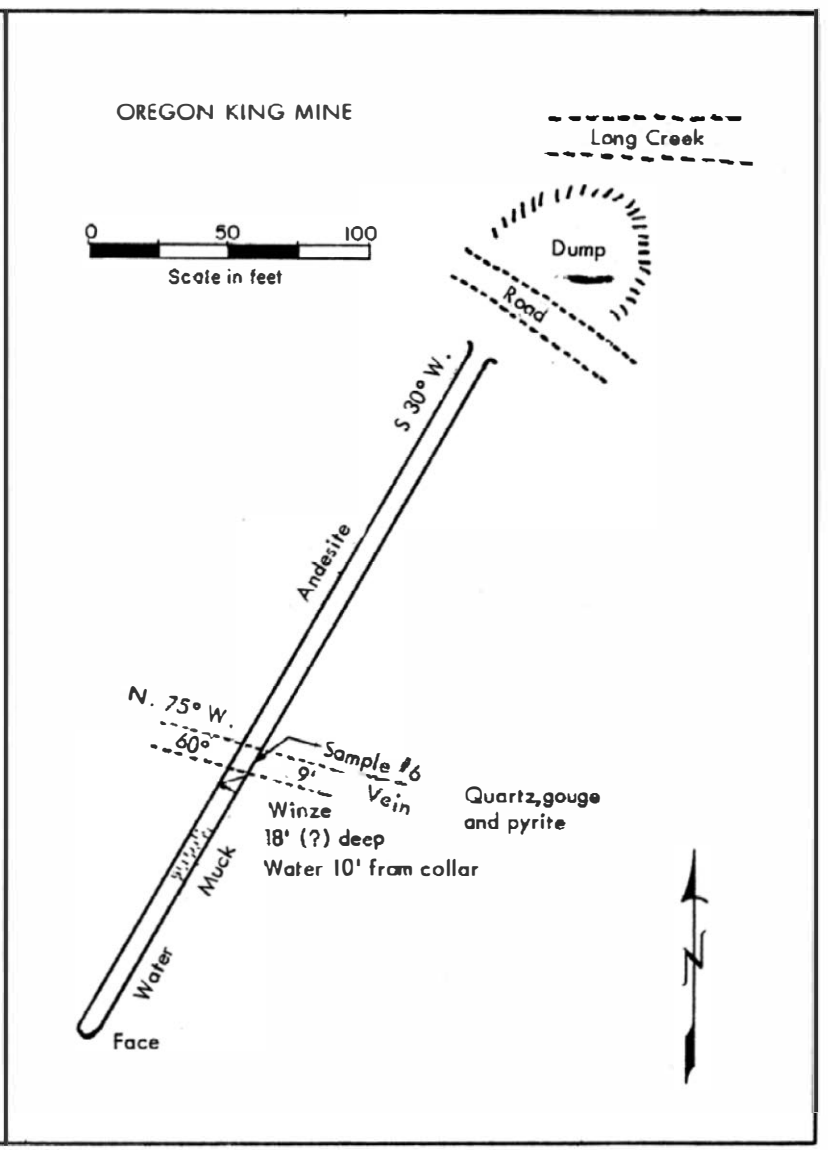

Figure 6 - Sketch of plan of Ruby Tunnel.

Sample No. 6 was a channel across 9 feet of vein material with a well-defined footwall at the top of the winze in the Ruby Tunnel (Figure 6).

All places sampled and inspected were tested with a scintillator. A variation in bockground count was recorded due to moss effect underground, but no significant radioactivity was noted anywhere.

Production

Table 2 gives production records of the Oregon King 1935-1950 adopted from statistics supplied by the U. S. Bureau of Mines.

A tabulation of smelter returns (Table 3) in the files of the Trustee was mode to compare with the Bureau's records. These records (Table 2) show a greater total tonnage than thesmelter sheets. Even with some of the smelter sheets missing, the tabulation represents a reliable overage unit value of mine production including grade of mill concentrates. Also the tabulation includes the small shipments of the earliest records not found in the Bureau report.

The apparent divergence in values between smelter assays of shipments and their settlement sheets is explained by the smelter discounts from government prices of both gold and silver. The smelter paid a little less than $32 an ounce for gold. The market price of silver varied in the 1940's from a low of 35 cents on ounce on two cars in 1940 to 90 cents beginning in 1947. Silver increased in price first in 1940 to 70-5/8 cents, then to 90 cents early in 1947. The smelter paid for 95 percent of the silver.

Iron and silica percentages for crude ore shipments are not given in Table 3, but it is estimated that the iron average was about 10 to 12 percent and the silica about 60 percent.

In the lotter port of 1947 some ore was shipped which was too low grade to pay its way. According to smelter settlement sheets, the lost cor of crude ore shipped (October 21, 1947) averaged $5.20 per ton and showed a debit of $284.75.

As shown by Tables 2 and 4, the concentrates produced by flootion indicate a low concentration ratio and are relatively low grade. It seems probable that the milling results could be improved by further testing. However, Denver Equipment Co. reported that its tests showed that on the sample submitted, selective flotation was only partially successful, because depressed pyrite carried too much gold and silver to be discorded; therefore a bulk concentrate was recommended.

Acknowledgments

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APPENDIX

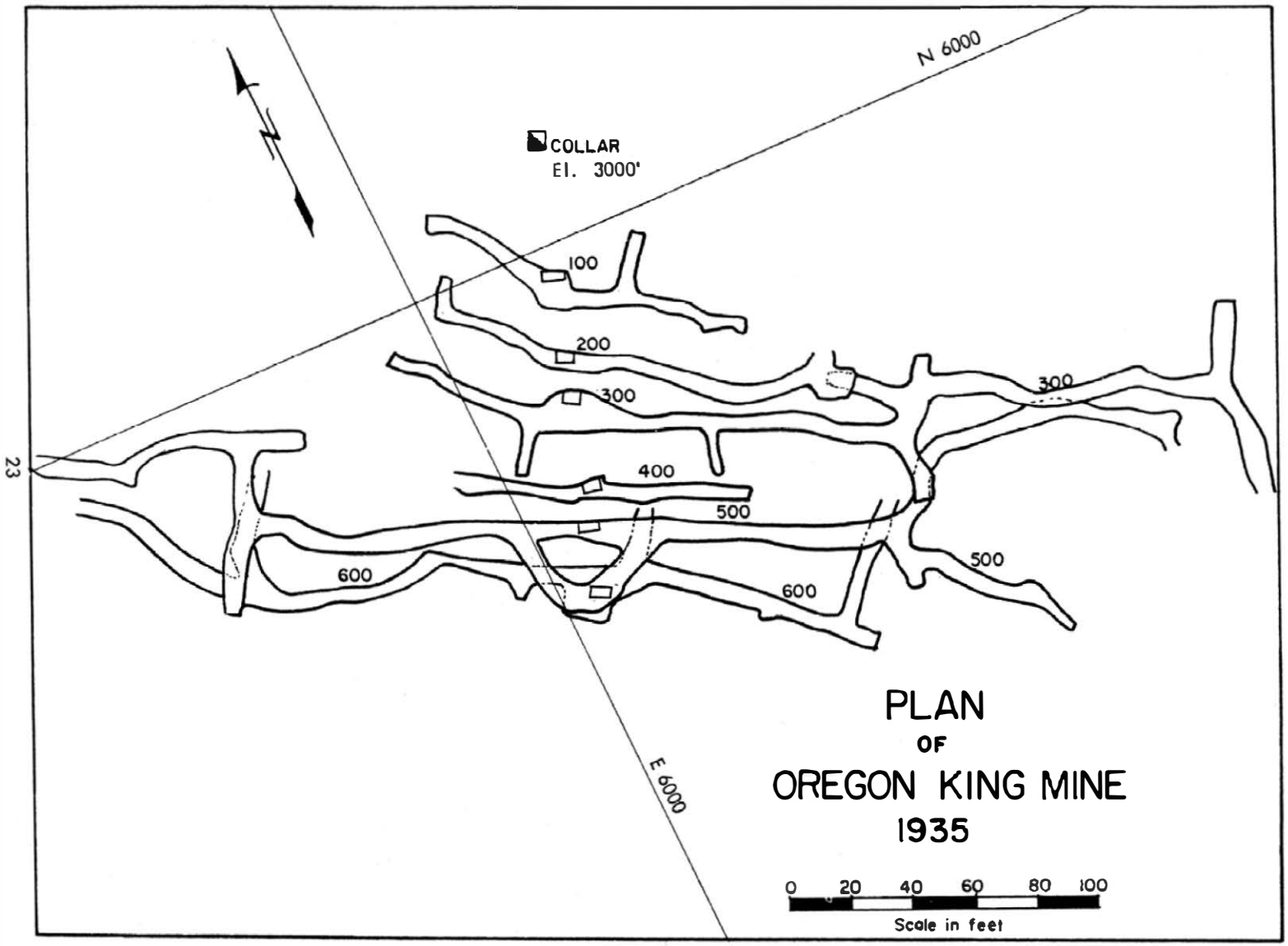

N 6000
COLLAR
El. 3000'
100
200
300
300
400
500
500
600
600
23
E 6000
PLAN
OF
OREGON KING MINE
1935
0 20 40 60 80 100
Scale in feet

Plate 1

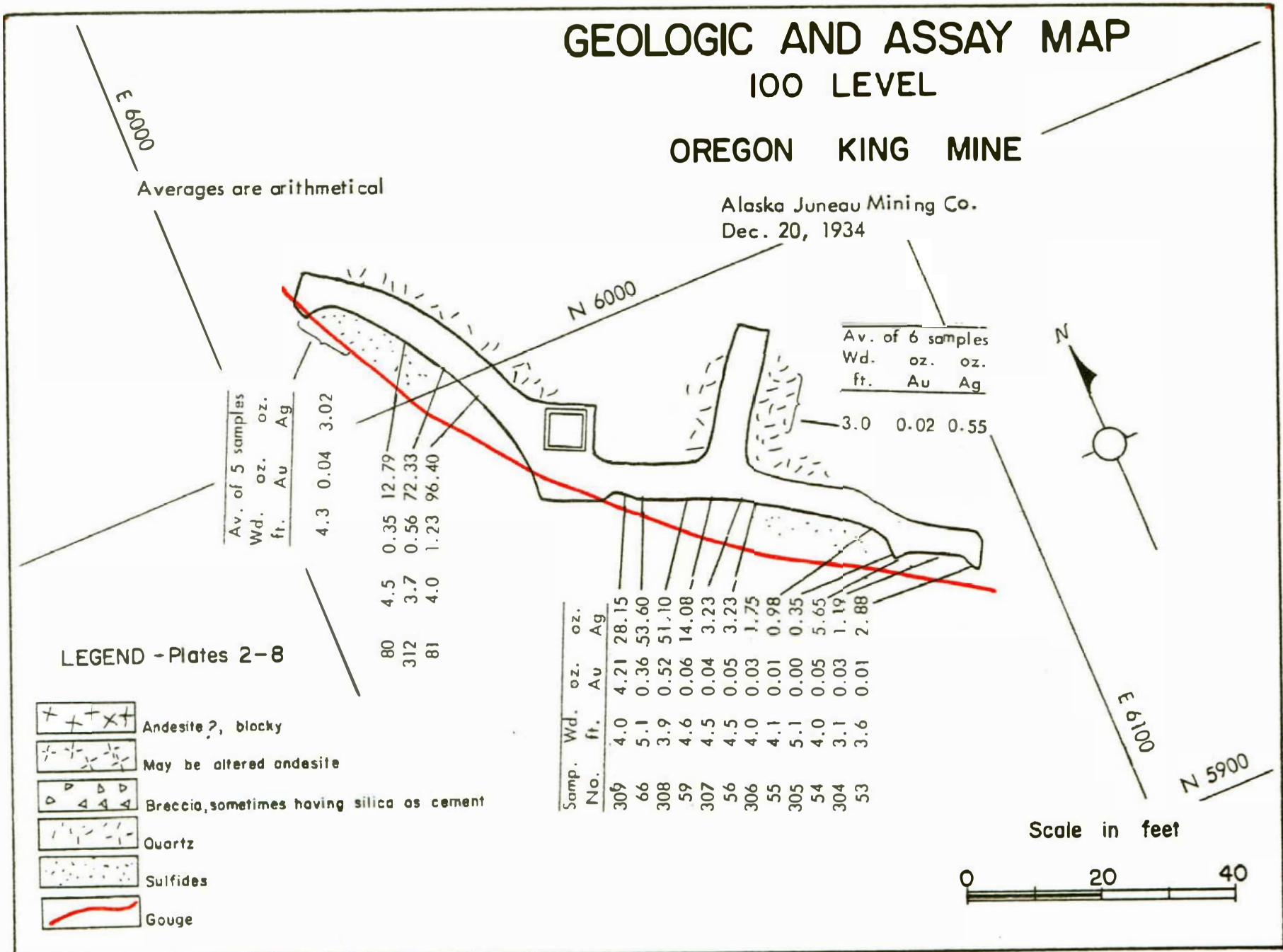
GEOLOGIC AND ASSAY MAP

100 LEVEL

OREGON KING MINE

Alaska Juneau Mining Co.
Dec. 20, 1934

Averages are arithmetical



Av. of 5 samples	Wd. ft.	oz. Au	oz. Ag
	4.3	0.04	3.02

Av. of 6 samples	Wd. ft.	oz. Au	oz. Ag
	3.0	0.02	0.55

Samp. No.	Wd. ft.	oz. Au	oz. Ag
309	4.0	4.21	28.15
66	5.1	0.36	53.60
308	3.9	0.52	51.10
59	4.6	0.06	14.08
307	4.5	0.04	3.23
56	4.5	0.05	3.23
306	4.0	0.03	1.75
55	4.1	0.01	0.98
305	5.1	0.00	0.35
54	4.0	0.05	5.65
304	3.1	0.03	1.19
53	3.6	0.01	2.88

	Wd. ft.	oz. Au	oz. Ag
80	4.5	0.35	12.79
312	3.7	0.56	72.33
81	4.0	1.23	96.40

LEGEND - Plates 2-8

- Andesite?, blocky
- May be altered andesite
- Breccia, sometimes having silica as cement
- Quartz
- Sulfides
- Gouge

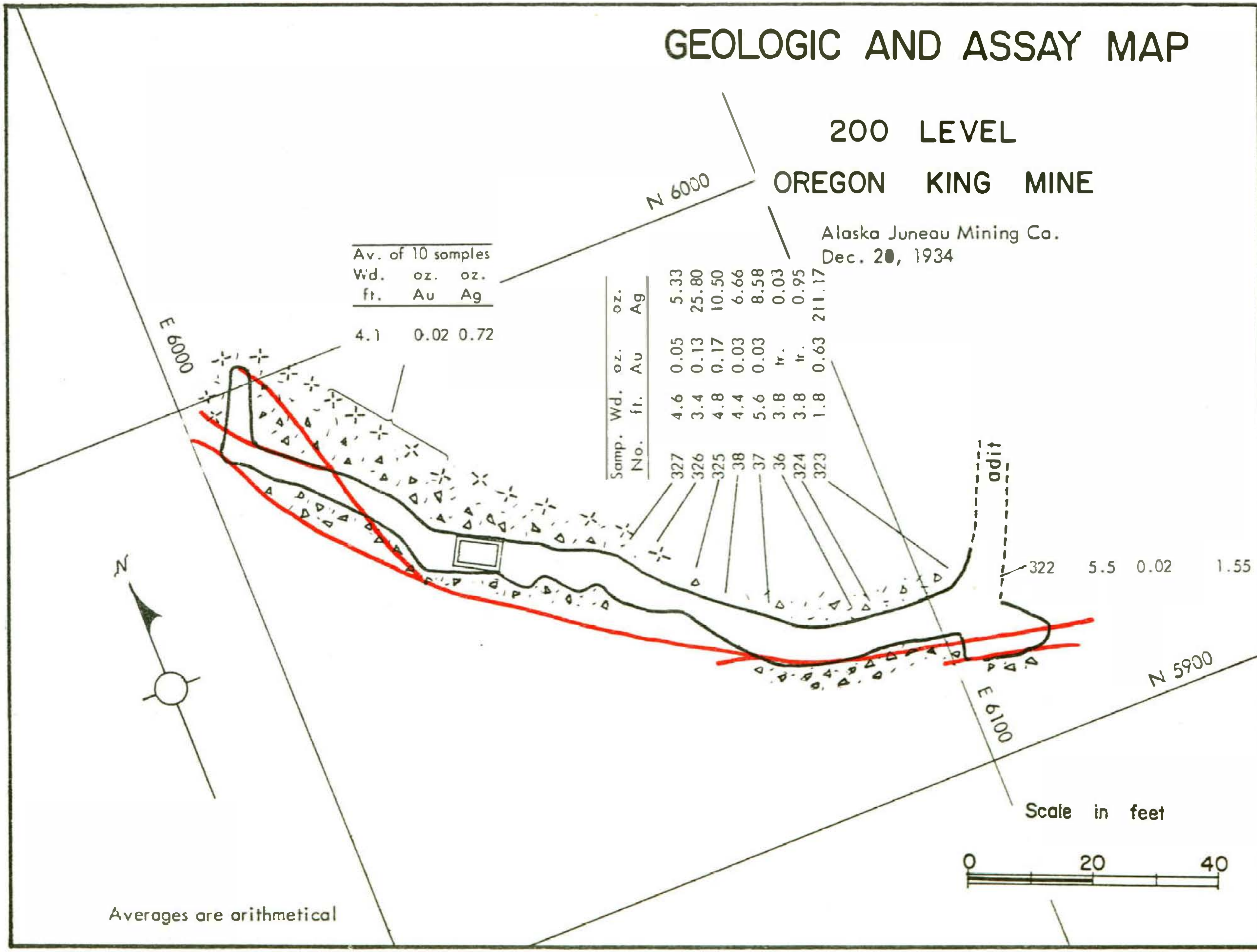
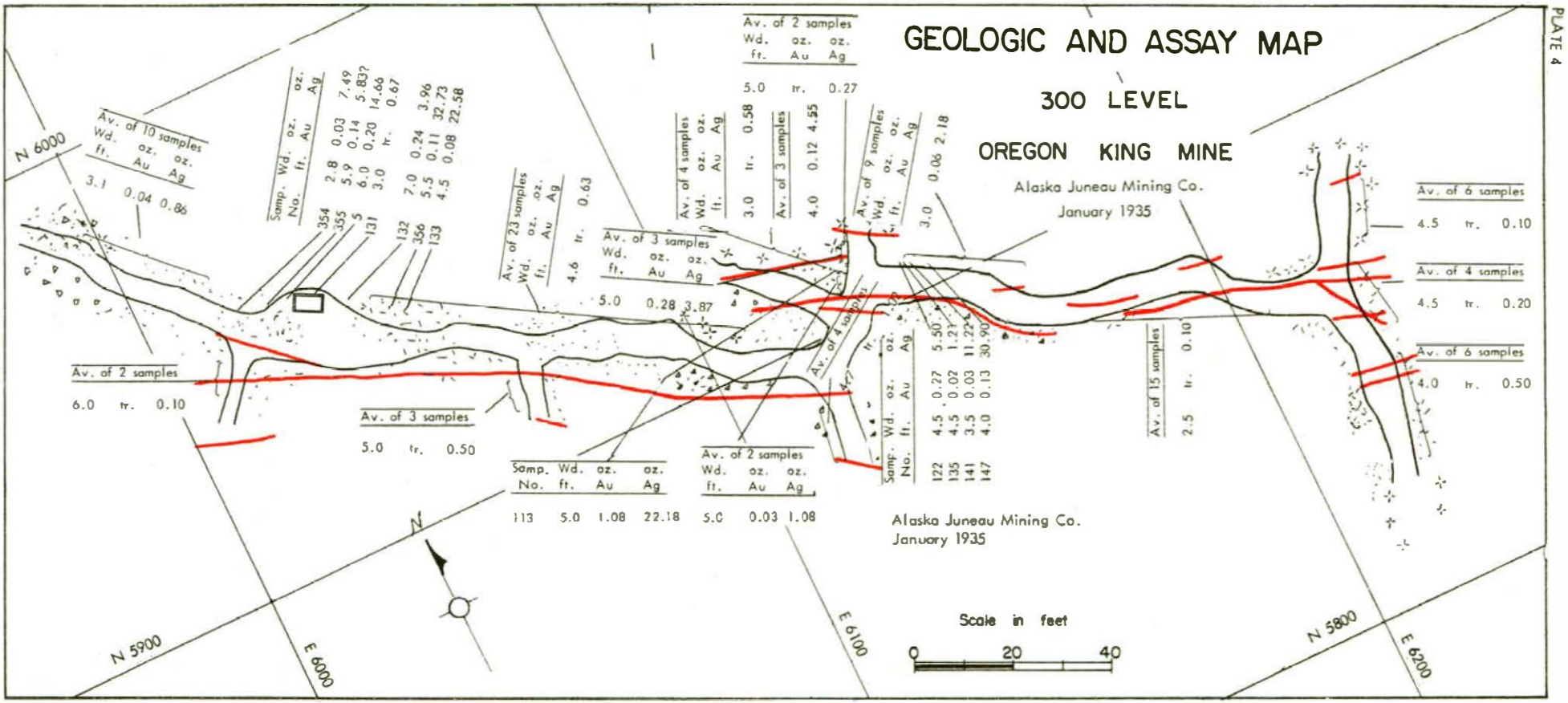
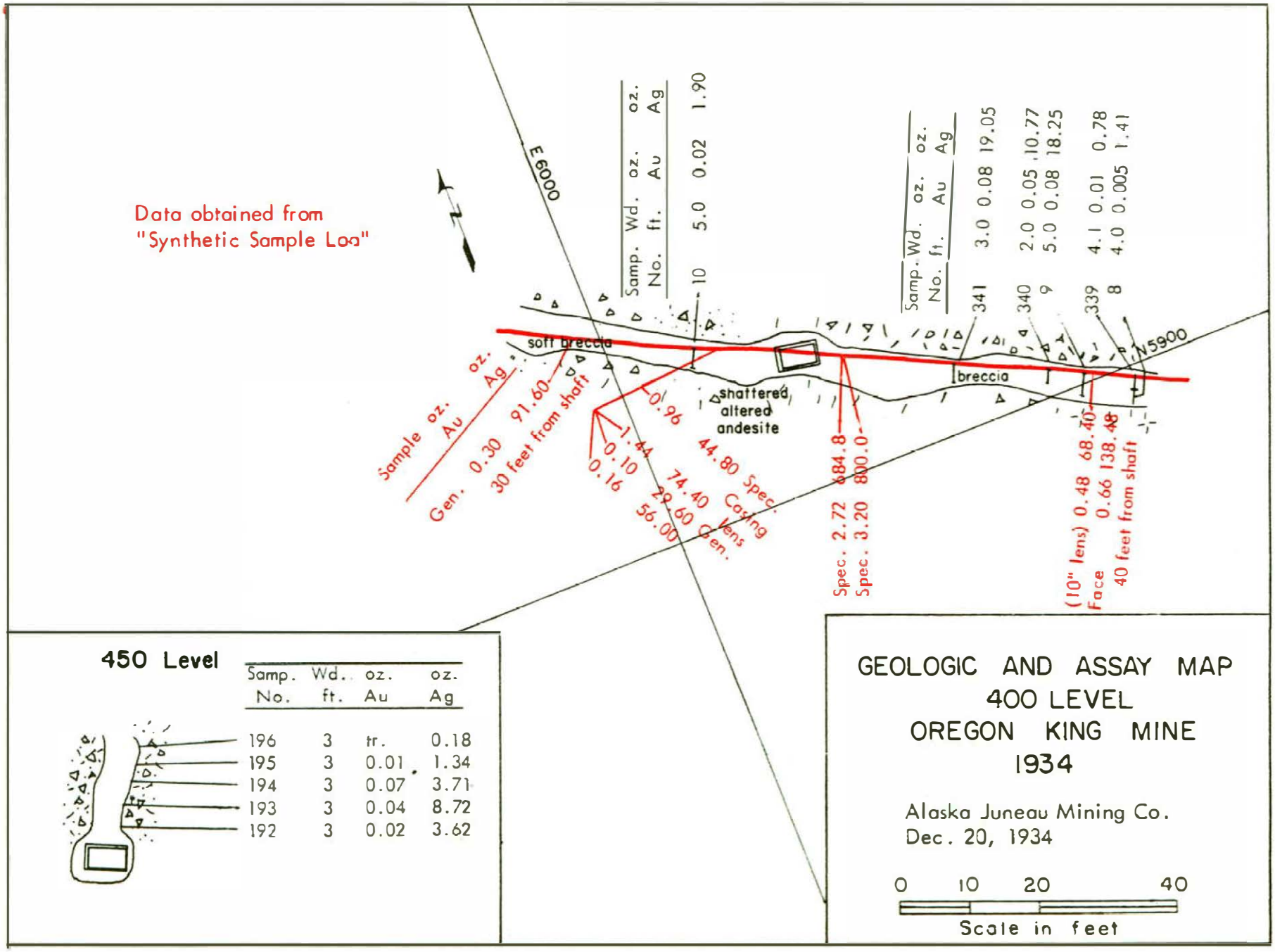

GEOLOGIC AND ASSAY MAP
200 LEVEL
OREGON KING MINE
Alaska Juneau Mining Co.
Dec. 20, 1934
Av. of 10 samples
Wd. ft. oz. Au oz. Ag
4.1 0.02 0.72
Samp. No. Wd. ft. oz. Au oz. Ag
327 4.6 0.05 5.33
326 3.4 0.13 25.80
325 4.8 0.17 10.50
38 4.4 0.03 6.66
37 5.6 0.03 8.58
36 3.8 tr. 0.03
324 3.8 tr. 0.95
323 1.8 0.63 211.17
322 5.5 0.02 1.55
adit
N 6000
N 5900
E 6000
E 6100
N
Scale in feet
0
20
40
Averages are arithmetical

Plate 3


GEOLOGIC AND ASSAY MAP
300 LEVEL
OREGON KING MINE
Alaska Juneau Mining Co.
January 1935
Av. of 10 samples
Wd. ft. oz. Au oz. Ag
3.1 0.04 0.86
Samp. No. Wd. ft. oz. Au oz. Ag
354 2.8 0.03 7.49
355 5.9 0.14 5.83?
5 6.0 0.20 14.66
131 3.0 tr. 0.67
132 7.0 0.24 3.96
356 5.5 0.11 32.73
133 4.5 0.08 22.58
Av. of 23 samples
Wd. ft. oz. Au oz. Ag
4.6 tr. 0.63
Av. of 3 samples
Wd. ft. oz. Au oz. Ag
5.0 0.28 3.87
Av. of 4 samples
Wd. ft. oz. Au oz. Ag
3.0 tr. 0.58
Av. of 3 samples
Wd. ft. oz. Au oz. Ag
4.0 0.12 4.55
Av. of 2 samples
Wd. ft. oz. Au oz. Ag
5.0 tr. 0.27
Av. of 9 samples
Wd. ft. oz. Au oz. Ag
3.0 0.06 2.18
Av. of 4 samples
Samp. No. Wd. ft. oz. Au oz. Ag
122 4.5 0.27 5.50
135 4.5 0.02 1.21
141 3.5 0.03 11.22
147 4.0 0.13 30.90
Av. of 15 samples
2.5 tr. 0.10
Av. of 6 samples
4.5 tr. 0.10
Av. of 4 samples
4.5 tr. 0.20
Av. of 6 samples
4.0 tr. 0.50
Av. of 2 samples
6.0 tr. 0.10
Av. of 3 samples
5.0 tr. 0.50
Samp. No. Wd. ft. oz. Au oz. Ag
113 5.0 1.08 22.18
Av. of 2 samples
Wd. ft. oz. Au oz. Ag
5.0 0.03 1.08
Alaska Juneau Mining Co.
January 1935
N
Scale in feet
0 20 40
N 6000
N 5900
E 6000
E 6100
N 5800
E 6200



450 Level

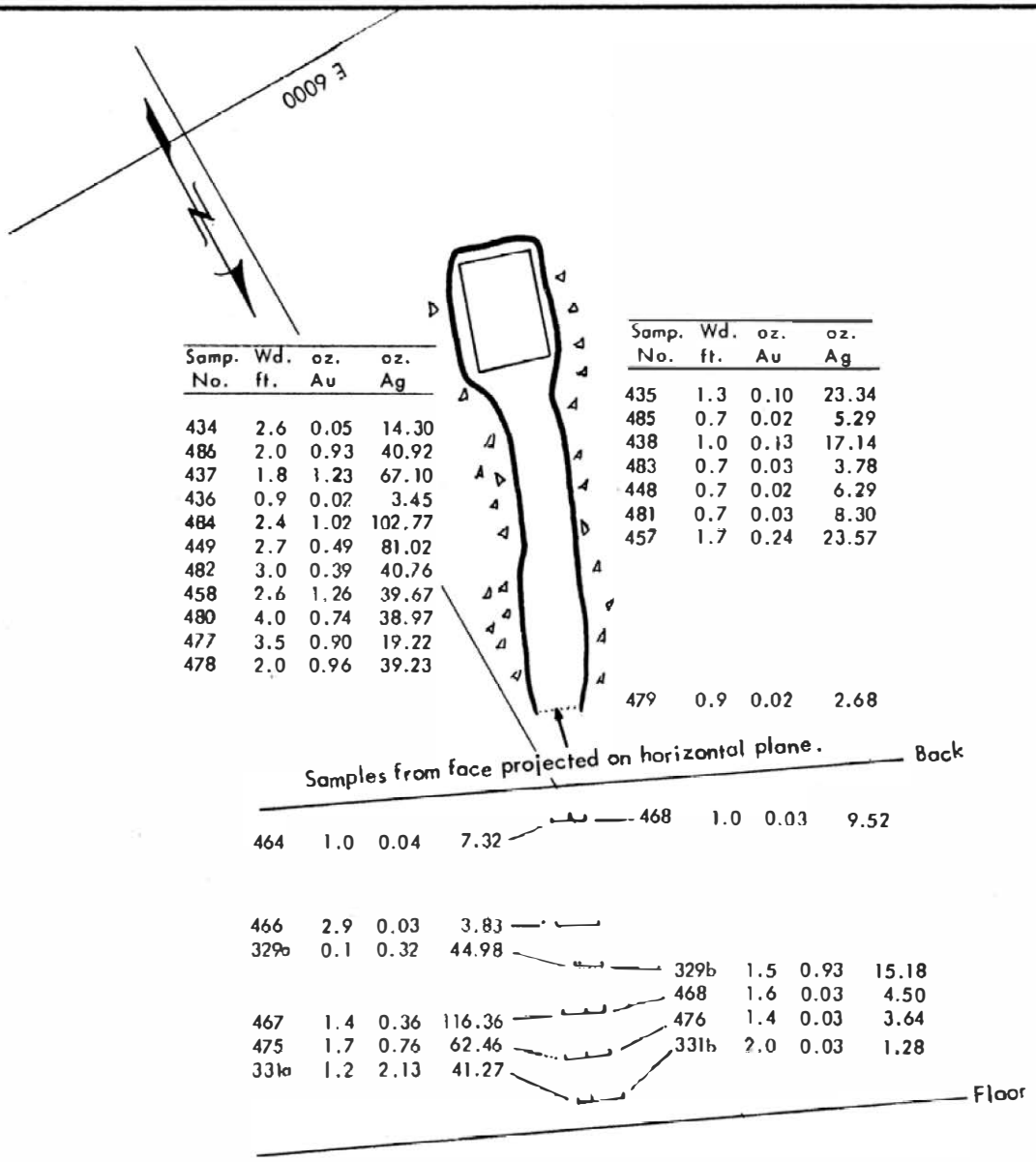
Samp. No.	Wd. ft.	oz. Au	oz. Ag
196	3	tr.	0.18
195	3	0.01	1.34
194	3	0.07	3.71
193	3	0.04	8.72
192	3	0.02	3.62

GEOLOGIC AND ASSAY MAP
400 LEVEL
OREGON KING MINE
1934

Alaska Juneau Mining Co.
Dec. 20, 1934

0 10 20 40
Scale in feet

Plate 6



Samp. No.	Wd. ft.	oz. Au	oz. Ag
434	2.6	0.05	14.30
486	2.0	0.93	40.92
437	1.8	1.23	67.10
436	0.9	0.02	3.45
484	2.4	1.02	102.77
449	2.7	0.49	81.02
482	3.0	0.39	40.76
458	2.6	1.26	39.67
480	4.0	0.74	38.97
477	3.5	0.90	19.22
478	2.0	0.96	39.23

Samp. No.	Wd. ft.	oz. Au	oz. Ag
435	1.3	0.10	23.34
485	0.7	0.02	5.29
438	1.0	0.13	17.14
483	0.7	0.03	3.78
448	0.7	0.02	6.29
481	0.7	0.03	8.30
457	1.7	0.24	23.57
479	0.9	0.02	2.68

464	1.0	0.04	7.32
468	1.0	0.03	9.52
466	2.9	0.03	3.83
329a	0.1	0.32	44.98
329b	1.5	0.93	15.18
468	1.6	0.03	4.50
467	1.4	0.36	116.36
476	1.4	0.03	3.64
475	1.7	0.76	62.46
331b	2.0	0.03	1.28
331a	1.2	2.13	41.27

GEOLOGIC AND ASSAY MAP

500 EAST STOPE

(Wesche stope)

OREGON KING MINE

Alaska Juneau Mining Co.
Jan. 19, 1935

Scale in feet

0 10 20

PLATE 7

GEOLOGIC AND ASSAY MAP
500 LEVEL

OREGON KING MINE

Alaska Juneau Mining Co.
January 1935

N 6000

N 5900

N 5800

E 5900

E 6000

E 6100

Av. of 16 samples
Wd. oz. oz.
ft. Au Ag
3.0 tr. 0.19

Av. of 11 samples
1.0 tr. 0.15

Av. of 6 samples
1.5 tr. 0.21

Av. of 4 samples
Wd. oz. oz.
ft. Au Ag
5.0 tr. 0.30

Av. of 4 samples
5.0 tr. tr.

Av. of 8 samples
5.0 tr. 0.44

Samp. No.	Wd. ft.	oz. Au	oz. Ag
47	4.6	0.04	10.54
45	4.6	0.02	4.71
44	7.4	0.03	4.92

Av. of 3 samples
6.00 tr. 1.55

253	2.8	0.02	2.30
252	2.2	0.04	9.26
238	3.0	0.05	10.01
292	1.1	0.06	31.99

Au 0.32 oz.; Ag 34.4 oz
arith. av. W. drift, 1901-04

West stope
Broken
Au 1.15 oz.; Ag
1904

Stope

291	2.2	0.04	6.27
290	2.0	0.02	3.14
289	2.3	0.13	26.37
11	4.9	0.03	4.29

Au 0.64 oz.; Ag 32.8 oz
arith. av. E. drift, 1901-04

East stope
Broken
Au 0.33 oz.; Ag 52.0 oz
1904

Stope

Av. of 7 samples
4.0 tr. 0.47

52	5.0	0.01	3.92
57	5.5	0.02	10.61

Av. of 3 samples
5.0 tr. 0.26

Av. of 5 samples
5.2 tr. 0.22

224	2.5	0.65	3.00
210	2.5	0.77	3.74

Av. of 6 samples
7.5 0.06 3.35

Samp. No.	Wd. ft.	oz. Au	oz. Ag
263	1.1	0.37	10.08
262	0.4	2.40	10.03

Av. of 12 samples
1.0 tr. 0.49

Av. of 6 samples
1.5 0.02 0.72

416	1.2	0.07	1.76
416	2.5	0.03	4.56
426	1.6	0.07	3.67

Av. of 3 samples
Wd. oz. oz.
ft. Au Ag
4.0 tr. 0.55

Av. of 3 samples
5.0 tr. 0.71

Samp. No.	Wd. ft.	oz. Au	oz. Ag
296	0.3	tr.	0.21
295	0.5	0.01	6.28
294	0.8	0.02	3.34
293	0.3	0.01	0.35
2	0.6	0.02	4.21

Samp. No.	Wd. ft.	oz. Au	oz. Ag
143	2.5	0.04	6.37
152	3.5	0.01	5.01
164	1.0	0.03	6.54
176	0.5	0.17	76.35
174	1.1	0.05	16.60
175	1.6	0.01	2.36
199	0.03?	.02	7.42

Av. of 7 samples
1.0 tr. 0.97

Data obtained from
"Synthetic Sample Log"

Averages are arithmetical

Scale in feet
0 20 40

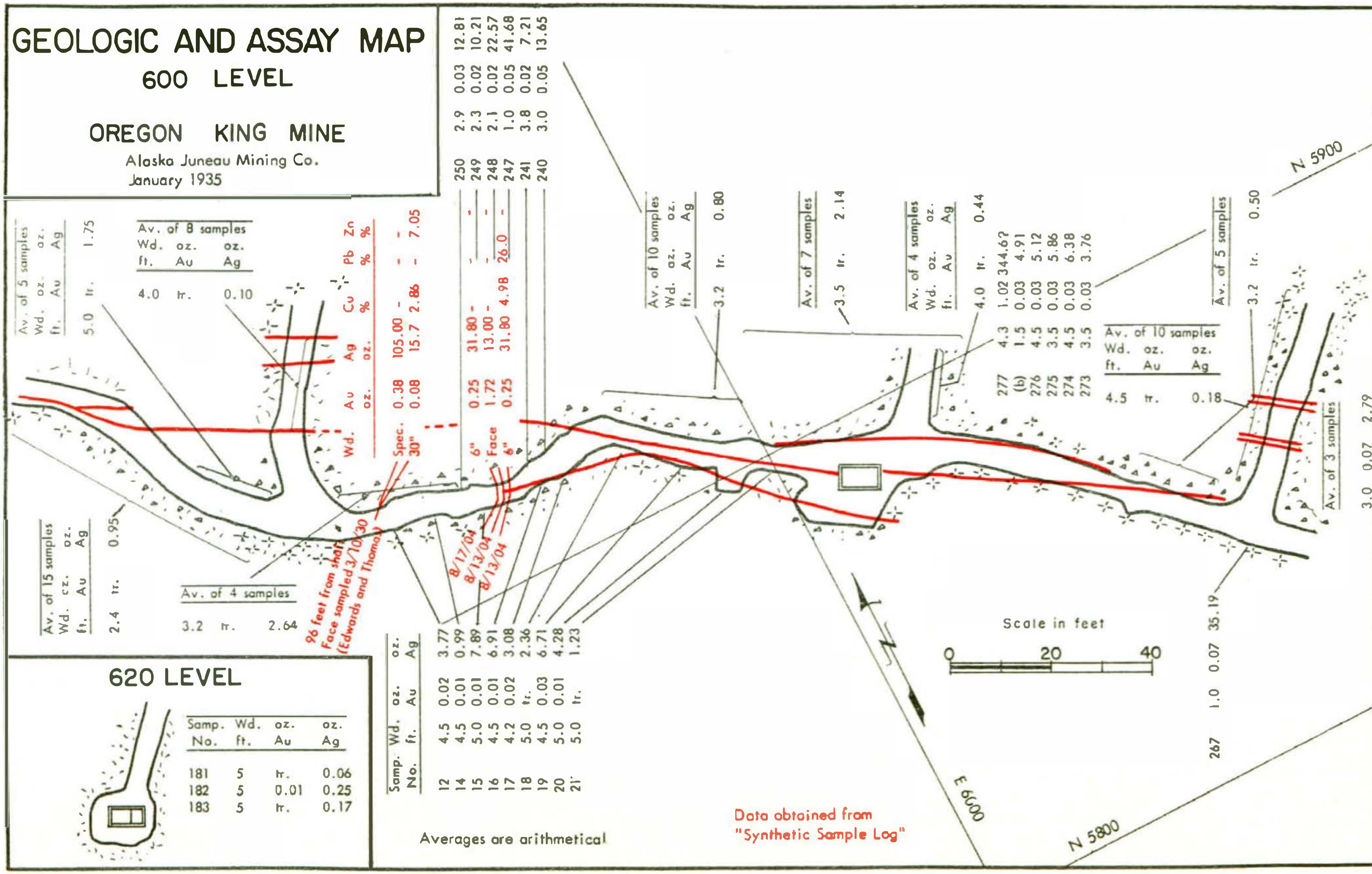

GEOLOGIC AND ASSAY MAP
600 LEVEL
OREGON KING MINE
Alaska Juneau Mining Co.
January 1935
Av. of 5 samples
Wd. oz. oz.
ft. Au Ag
5.0 tr. 1.75
Av. of 8 samples
Wd. oz. oz.
ft. Au Ag
4.0 tr. 0.10
Av. of 15 samples
Wd. oz. oz.
ft. Au Ag
2.4 tr. 0.95
Av. of 4 samples
3.2 tr. 2.64
96 feet from shaft
Face sampled 3/10/30
(Edwards and Thomas)
Wd. Au Ag Cu Pb Zn
oz. oz. % % %
Spec. 0.38 105.00 - - -
30" 0.08 15.7 2.86 - 7.05
6" 0.25 31.80 - - -
Face 1.72 13.00 - - -
6" 0.25 31.80 4.98 26.0 -
8/17/04
8/13/04
8/13/04
250 2.9 0.03 12.81
249 2.3 0.02 10.21
248 2.1 0.02 22.57
247 1.0 0.05 41.68
241 3.8 0.02 7.21
240 3.0 0.05 13.65
Samp. Wd. oz. oz.
No. ft. Au Ag
12 4.5 0.02 3.77
14 4.5 0.01 0.99
15 5.0 0.01 7.89
16 4.5 0.01 6.91
17 4.2 0.02 3.08
18 5.0 tr. 2.36
19 4.5 0.03 6.71
20 5.0 0.01 4.28
21 5.0 tr. 1.23
Averages are arithmetical
Av. of 10 samples
Wd. oz. oz.
ft. Au Ag
3.2 tr. 0.80
Av. of 7 samples
3.5 tr. 2.14
Av. of 4 samples
Wd. oz. oz.
ft. Au Ag
4.0 tr. 0.44
277 4.3 1.02 344.6?
(b) 1.5 0.03 4.91
276 4.5 0.03 5.12
275 3.5 0.03 5.86
274 4.5 0.03 6.38
273 3.5 0.03 3.76
Av. of 10 samples
Wd. oz. oz.
ft. Au Ag
4.5 tr. 0.18
Av. of 5 samples
3.2 tr. 0.50
Av. of 3 samples
3.0 0.07 2.79
267 1.0 0.07 35.19
N 5900
N 5800
E 6600
N
Scale in feet
0 20 40
Data obtained from
"Synthetic Sample Log"
620 LEVEL
Samp. Wd. oz. oz.
No. ft. Au Ag
181 5 tr. 0.06
182 5 0.01 0.25
183 5 tr. 0.17

PLATE 8

SYNTHETIC SAMPLE LOG RECORDS

Shaft data or log to 100 feet depth
Oregon King Mining Co. took charge when shaft was 60 feet deep.

Feet	Date 1899	Remarks	Ozs Silver		Ozs Gold		%		%	
1		No data except as showing in								
2		Smelter Returns of ore taken out and								
3		shipped. This notation applies to all								
4		blank spaces in this log. The								
5	(Jan. 19 1900)	original log book is mislaid or	160	.00		.81		Gen Samp Shaft		
6		lost and this log is compiled								
7		from Daily Report Sheets many of which								
8		are lost and only one depth point								
9		can be given in this hundred foot log								
10	(Jan. 11 Hoop) Aug. 10	section. No data on distance at	80 24	.92 .30		.40 .40				
11	" 11	which these samples were taken.	13	.37		.65				
12	" 12		25	.23		.60				
13		No Data of Assay. No distance shown.								
14	" 14		60	.76		1.20				
15	(Jan. 19, 1900)	Gen. Sump Shaft	80	.92		.40				
16										
17										
18										
19										
20	(Feb. 19, 1900)		46	52		.24				
21		Out of Crucibles No assays. No depth data.								
22										
23										
24										
25	(Feb. 19, 1900)		7	.93		.12				
26										
27										
28										
29										
30										
31										
32										
33										
34										
35	(Jan 11 1900)	Gen Samp. Hanging Sides	110	.68		.92				
36										
37										
38										
39										
40	(Jan 19 1900)	Gen. Samp. Sides of Shaft	119	.60		.80				
41										
42										
43										

45	(Drilling)	Cen. Samp. Sides of Shaft	40	56	1.20
51	Shaft		29	.17	.75
52	" 2		31	.60	.25
53	" 3		26	.74	.15
54	" 4		21	.87	.75
55	" 5		20	.67	.45
56	" 6		30	.00	1.00
57	" 7		32	.03	1.25
58	" 8		29	.17	1.50
59	" 9		18	.23	.90
60	" 10				
	" 11	No assay No Depth Data			
85	" 12		18	.23	.26
86	" 13		12	.16	.35
87	"				

92	" 14		17	.01	Not Determined					No Distilled		
93			10	.94	"	"				" Water		
94	" 15											
95	" 18		26	.74		.25						
96	" 19		13	.57	1	.00						
97	" 20		24	.52	1	.00						
98	" 23		14	.58		.75						
99		Average Assay Top to Bottom -	48	.70		.37						
100												

Shaft from 100 foot level to 200 foot level.

Depth	Date 1892		ozs Silver		ozs Gold		% Copper		% Lead	
101										
102										
103										
104										
105		No data { Nov. 20 Day, shaft	2	.00		tr.				
106		on distance { " 21 Spec. " samp.	1	.00		tr.				
107		" " Gen. Samp. Day & Night	2	.20						
108										
109										
110										
111										
112										
113										
114	Nov. 22	Night Gen. Samp. Shaft.	6	.00		tr.				
115		Day " " "	1	.00						
116										
117	" 23	Day " " "	2	.40		tr.				
		Night " " "	1	.50		tr.				
118	" 24	Day " " "	1	.72		tr.				
		Night " " "	1	.00		tr.				
119	" 25	Sulphides from Shaft	9	.60		tr.	2	.52		
120	" "	Night Gen Samp "	3	.60		tr.				
		Day " " "	3	.00						
121	" 26	Night " " "	1	.60		tr.				
122	" "	Day " " "	1	.28		tr.				
123	" 27	Day " " "	4	.04		.15				
124	" "	Night " " "	2	.80						
125	" 28	" "	3	.60						
126	" "	Day "	3	.60						
127	" 29	Day "	6	.40						
		Night "	2	.40						
128	" 30	Day "	8	.00						
		Night "	4	.00						
129	Dec. 1	Day " "	6	.00		.10				
		Night " "	7	.80		.11				
130	" 2	Day " "	7	.00		.11				
		Night " "	6	.00		.06				
131	" 4	Spec. Sulphides	20	.40		.06	3	.20		
132	" "	Day Gen. Samp.	14	.00		.16				
133	" 8	Spec. of S.W. corner of shaft	1635	.00	10	.20	6	.00		
134										
135		Dec. 20 Night Gen. Samp	6	.80		.30	3	.57		
136		No Dist. { " " Day " "	10	.40		.30	10	.80		
137										

Spec. Sulphides 128 ft.			
	Gold	Silver	Copper
Day	0.15	19.40	5.98
Day	0.15	12.00	5.00
Night	0.15	17.20	5.98
		12.40	

138	" 20	Sulphides Night	18	.00			.30	7	.84	
139	" 21	" "	20	00			tr	4	.93	
140	" "	Gen. Samp. Day	8	.80				3	.49	
141	" "	" " Night	9	.20				3	40	
142	" 22	Sulphides	12	.48				9	.94	
143	" "	Gen. Samp.	4	.80			tr.	2	.70	
144	" "	" "	12	.80			.40	4	.50	
145	" 23	" "	1 6	.80 .48			tr .12	3 2	.00 .70	
146	" 24	Sulphides	123 14	.00 .52		18 1	.60 .20	15 9	.68 .58	
147	" 26	Gen. Samp. night	13	00			.17		.87	
148	" 27	" " Day Night	8 44	00 .80			.10 .72	1 1	30 .74	
149	" 28	" " Day	10 12	.32 .78		1	tn .30	not	.43 run	
150										
151	" 29	" " Day	2	.80			tr		.45	
152										
153	" 30	" "	2	.00			tr.		tr.	
154	1900 Feb. 9	" "	6	.12			.40			
155		Spl. "	50	.40			.40	2	.50	
156										
157	" 12	" "	10	.92			tr.			
158	" 15	" Sulphides	25	.80			tr.			
159	" 14	Gen. Samp.	4	56			tr.			
160	" 15	Special Sulphides	189	.60			.78			
161	" "	" " Hanging Walls	183	.00			.72			
162										
163	" 18	Gen. Samp	2	.00			tr		tr	
164	" 19	Sulphides	405 10	.00 .02		1	.54 tr.	2	tr .00	
165										
166										
167										
168	" 23	Sulphides	21	.60			.10	1	.74	
169	" "	"	108 117	.00 .60			.36 .36	3 5	.48 .23	
170	" "	"					.72 .40	2	tr. .64	
171										
172		" East Side of Shaft	396	.00			1.20			
173		" " " " "	304 12	.20 .00			1.80			
174										
175		" " " " " " East " " "	8 33	.80 .60			tr. .20	1	.50	
176										
177										
178										
179										
180	Mar. 7	Spec. East Side 180.3 ft	16	.80			.52		tr.	
181	" 5	Gen. Samp. of Shaft	4	.80			tr.		tr.	
182	" 7		3	.60			tr.			
183	" 8		11	.60			.10			
184	" 9	No Assays on record								
185										

186	Jul 25	Gen. sump of Shaft. aprox 186 ft	4	80		tr.				
187										
188	" 27	About 1 ft of Ore Stringer in S.W. cor. of Shaft	50	40		.32				
189	" "	Gen Sump		tr.		tr.				
190										
191	" 29	No Assay								
192										
193										
194	" 30	Specie of Vein in Shaft		tr.		tr.				
195										
196										
197										
198	Aug. 1									
199										
200	" 2	Shaft Vein	16	.00		.10				
	" "	S.W. Corner Shaft 200ft	1457	.20	15	.60				

Shaft from 200 feet to 300 feet.

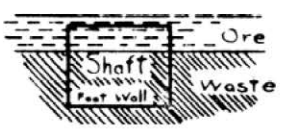
Depth Feet	Date 1900		ozs Silver	ozs Gold	% Copper	% Lead
201	Aug 3	Sump across Vein on sides of Shaft	12 .00	.10		
202	" 2	" " " " " "	16 .00	.10		
203						
204	" 4	" " " " " " "	23 .30	.10		
205						
206	" 6					
207						
208						
209	" 7	" " " " " " "	8 .00	tr.		
210						
211	" 8	" " " " " " "	17 .00	.56		
212	" 9					
213						
214	" 10					
215						
216	" 11	" " " " " " "	8 .40	.24		
217	" "	" " " " " " " concts from	24 .00	.60		
218	" 12	" " " " " " "	24 .40	.32		
219	" "	" " " " " " "	68 .00	.56		
220	" "	Spec. Sugar Crystal Pyrite Hanging Wall	39 .00	30 .80		
221	" 13		8 .00	1 .80	tr.	
222						
223	" 14		58 .80	.40	tr.	
224						
225	" 15		20 .00	.32	tr	
226						
227	" 16		8 .00	.40	tr.	
228						
229						

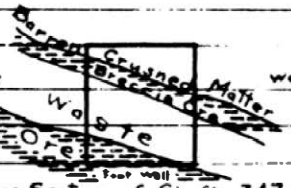
230	" 18		27	.70		.80		tr.		
231	" 19									
232										
233	" 20									
234										
235	" 21	Gen. Samp. from Shaft	9	.20		.36				
236										
237	" 22	Samp Across Vein in Shaft	33	.20		.40				
238	" 23									
239		Vein F wall Shaft								
240										
241	" 24									
242										
243										
244										
245										
246										
247										
248	" 28	" " " " "	16	.00		.20				
249										
250	" 29	" " " " "	20	.00		30				
251										
252	" 30									
253	" 31	Shaft passed into Low grade Foot Wall								
254		to 273 + foot depth								
255										
256										
257										
258										
259										
260										
261										
262										
263										
264										
265										
266	Sept 9									
267										
268										
269	" 10									
270	" 11									
271										
272										
273	" 13	See Drifts 3rd Level								
274		Special Samp. of Pyrite carrying								
275	" 14	red substance from shaft 175 ft.	30	.00		tr.				
276	" 15									
277										

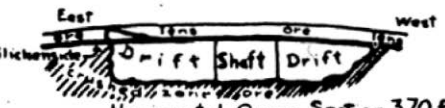
278	" 17									
279										
280	" 18									
281										
282	" 19									
283	" 20									
284										
285										
286										
287										
288										
289										
290										
291										
292										
293										
294										
295										
296	Nov. 7	Gen. Samp of Shaft	20	.40			tr.	2	.00	
297										
298										
299	" 9	Samp Sulphide Ore	48	.00		1	.40			
300										

Shaft section from 300 feet to 400 feet.

Depth feet	Date 1900		ozs Silver		ozs Gold	% Copper		% Lead
300								
301	Nov. 11							
302	" 12							
303								
304								
305								
306	" 14							
307	" 15							
308	" 16							
309	" 17							
310	" 19	Special Samps from Shaft	136 56	.00 .00	.80 .08	4 3	.50 .60	4 .50
311								
312	" 22							
313	" 23							
314	" 24	Random samp of ore in Shaft	112	.00	.76	2	.00	
315	" 25	" " " " " "	80	.00	.35	2	.50	
316	" 26							
317								
318								
319								



320							
321	" 29						
322	" 30						
323							
324	Dec. 1	Random samp of Vein	16	.00	.08		
325		Spec of zinc silver ore	44	.00	.80		
326	" 3	{Matte from ore (not roasted)	104	.00	.80	5	.50
327		{Ave of ore from which above formed	84	.00	.58	3	.80
328							
329	" 5						
330							
331							
332							
333							
334							
335							
336	" 10						
337							
338							
339	" 12						
340	" 13						
341	" 14						
342							
343	" 15						
344	" 17						
345		Spec. samp of ore	36	.00	.16	4	.70
346	" 18						
347		Gen. Samp. of ore in foot of wall " " " Crushed matter 2 ft wide Hang wall	12 13	.00 .20	.04 .08		tr.
348	" 19						
349							
350	" 20						
351							
352	Dec. 21						
353		Cross Section of Shaft 347 ft Lev.					
354							
355		Gen. Samp.	17	.60	tr.		
356	" 23						
357	" 27	" "	10	.40	tr.		
358	" 28						
359	" 29	" "	2	.00	tr.		
360							
361							
362	1901 Jan. 2						
363		" "	2	.00	tr.		
364	" 3						
365		" "	9	.20	tr.		

366		" "	5	60		Tr.				
367	" 5									
368	" 6									
369		" "	16	.00		.51				
370	" 7	" "	4	.40		.10				
371										
372	" 8		5	.20		.10		Gen. Samp.		
373										
374	" 9									
375			4	.80		.10		"	"	
376	"10									
377										
378	" 11									
379	" 14									
380	" 15	Spec. Samp. 50 Sacks sulphides rich lens 380'	72	.00	4	.00				
381										
382	" 16	Special Pyrite massive	693	.60	2	.40				
383		" " fine grain	85	.20	4	.80				
384		" " Sugar crystal 383'10"	20	.80		.96				
385		" " W. Side " " " " "	16	.00		.30				
386	Feb. 6	Gen. Samp of ore lens Hang wall side	40	.80	9	.60				
387	" 8	" " " " " " " "	61	.28	5	.92				
388	" 11	" " " " " " " " "	32	.80		.64				
389		" " " 27 in toward foot wall on East side of shaft	9	.60		tr.				
390	"	" " " ore lens	38	.60	6	.40				
391										
392	" 13									
393										
394		Spec. from foot wall side of shaft	29	.00		.10				
395		Random Samp. foot wall shaft	4	.80		tr				
396										
397										
398	" 19	" " Ore lens	24	.00		.15				
399										
400	" 20	Gen. Samp. slickenside to foot wall	24	.00		.10				
		No dist. data Gen. Samp. Shaft Feb. 25.	16	.32		.16				

Shoft section 400 feet to 500 feet.

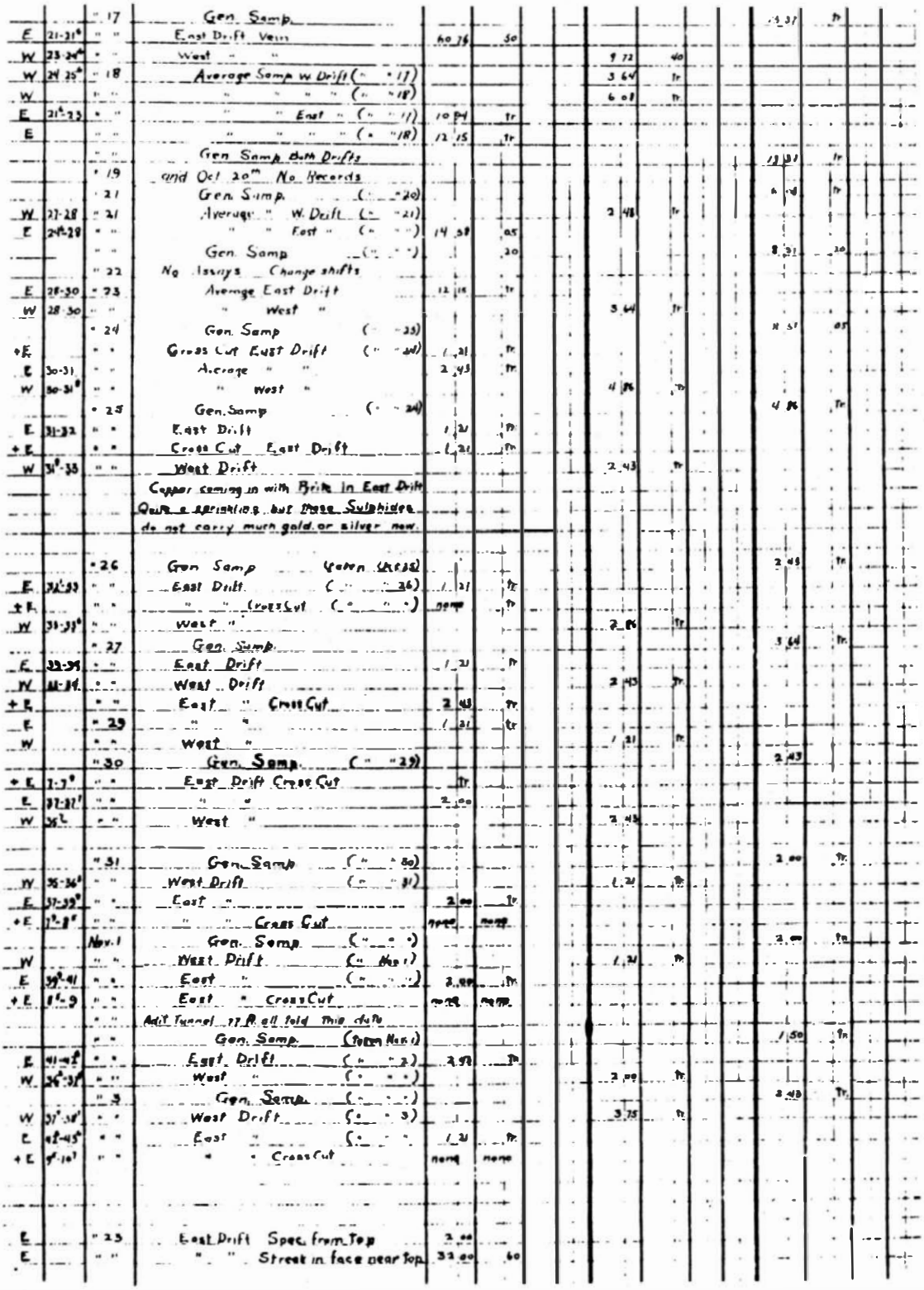
Depth Feet	Date 1901		ozs Silver	ozs Gold	% Copper	% Lead
401						
402	Feb. 26	Random Samp of East side and foot wall	10 .40	.64		
403	" "	" " " ore lens	18 .96	.32		
404						
405	" 27					
406						
407	" 28	Gen. Samp of shaft	24 .80	1 .92		

408		Random [illegible] foot wall	16	.00		.10		
409	Mar 1	Ore lens in shaft West side	26	.00	28	.49		
		" " " East "	48	.16		.67		
410		Spec. font wall	15	.60		.32		
411								
412								
413	" 3	Gen. both sides of shaft	23	.20	9	.60	1	.28
414	" 4	Random of ore lens " " East side	39	.92	36	.08	1	.60
		" " " " West "	26	.88	2	.72	2	.25
415		Special of copper ore	62	.56	3	.84	13	.16
416								
417		Random of foot wall	17	.08	3	.20		.70
		Gen. both sides of shaft	23	.46		.64		
418	" 6	West side ore lens (not large)	29	.60	12	.00		
		East " " " (2 ft of this)	76	.80	3	.20		
419	" 8	Spec. of west side	18	.20		.20		
420	" 25	Sump cut spec. samps	3	.20		tr.		
		" " "	1	.04		tr.		
421	Apr 4	" " Gen "	256	.00	1	.60		
			8	.40		.05		
422		" " Spec "	9	.60		.10		
423								
424								
425								
426								
427								
428	" 10	Ore lens bottom of shaft	27	.00		tr.		
429		East side ore lens	30	.10		.10		
430		West " " "	52	.80	24	.00		
431	" 16	Special from hanging wall	1046	.08	2	.72		
432		" Banded lead	48	.00		.10		5 .00
433	" 17	Ore lens East side of Shaft	81	.80		.64		
		" " West " " "	30	.40	6	.40		
435								
435	" 18							
436	" 19	Gen. Samp. ore lens	36	.80		.20		
437								
438								
439								
440								
441								
442								
443	" 25							
444	" 26							
445								
446	" 29							
447		Gen. Samp. of Shaft	24	.00		.20		
448		Foot wall ores shaft	10	.40		.10		
449	May 1	West side ore lens 16 in. wide	78	.40	1	.60		
		East " " " 8 " "	174	.40		.80		
450								
451	May 2	Gen. Samp. ore lens both sides of Shaft	127	.20	2	.08		
452		" " " " East side	207	.20	1	.40		
		" " " " West "	84	.80		.80		
453	" 6	Spec. " of Gold Ore	120	.80	21	.60		
		Mud " from slickenside	13	.60		.32		

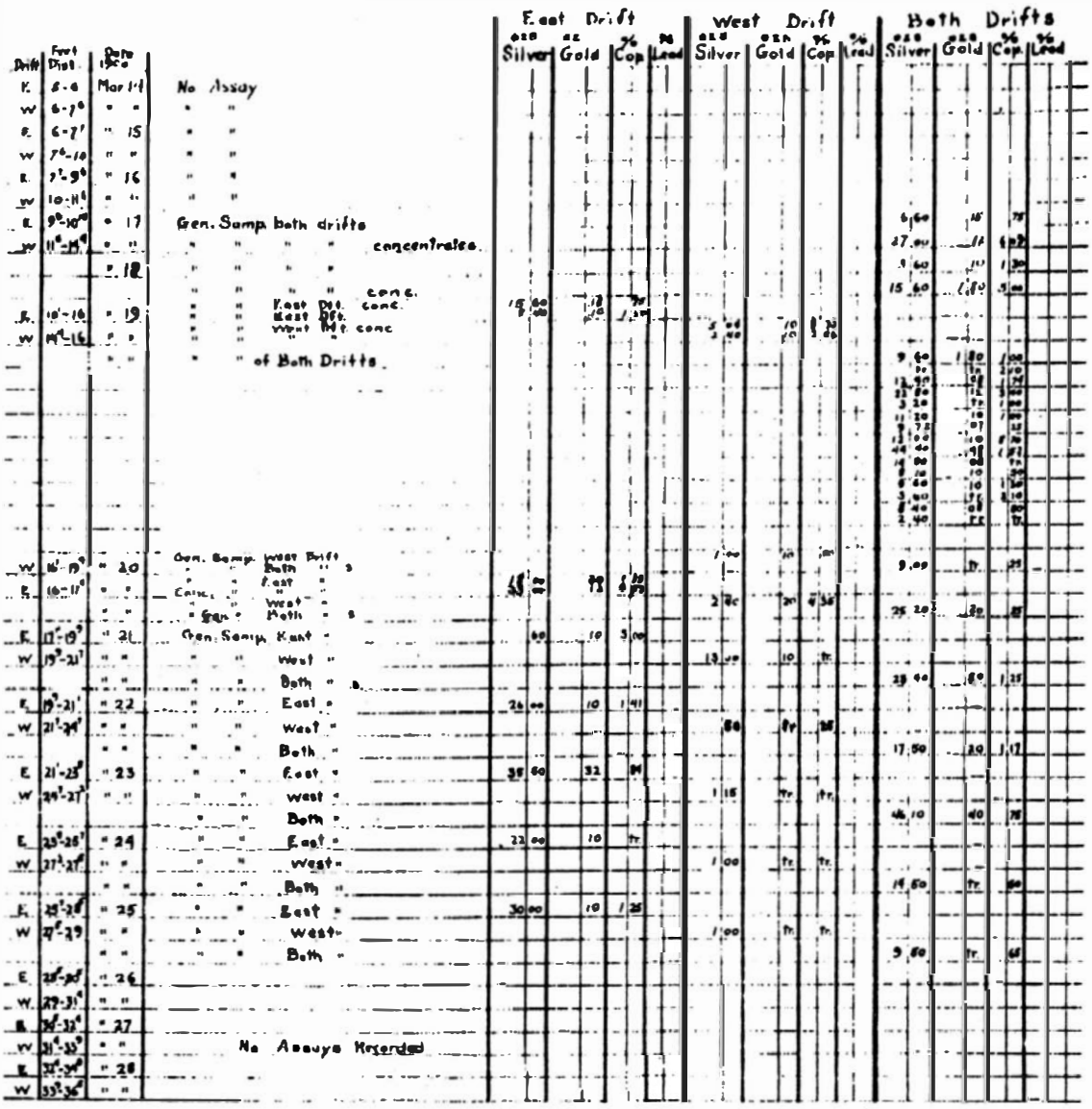
454	" 7	Gen " " shaft			22	.40		.32			
		" " " of ore lens			108	.00		.48			
455	" 6	" " " " East side			62	.40		.40			
		" " " " West "			128	.80		.80			
456											
457											
458											
459	" 15										
460											
461	" 17	Gen. Samp. East side of shaft			33	.60		.32			
		" " West " " "			38	.40		.10			
462	" 18	" " East " " and bottom			33	.20		.32			
		East wall ores			17	.60		.48			
463											
464	" 21	Spec. from Hanging wall			102	.80		.48			
		" " Foot wall			103	.20		.48			
465	" 22										
466	" 23	Gen. Samp. both sides of shaft			40	.00		.32		.50	
		" Hanging wall ore lens.			58	.40		.32		.60	
467											
468											
469	" 25	East side Gen. Samp			70	.40		Fr		Fr	
		West " "			10	.80		Fr		Fr	
470											
471	" 26										
472											
473			Foot wall winze		7	.20		Tr.			
474			West " ore lens		16	.80		.16			
475	June 7	No depth data	East " "		68	.00		.32			
476			Foot wall ores		28	.00		.08			
477			West side shaft.		16	.00		.64			
478											
479											
480	" 13	Spec. samp. from hanging wall			16	.80		.32			
481											
482											
483											
484	1903 Oct. 17	Foot wall side (2½ ft. wide)			22	.80		.15			
485											
486											
487											
488											
489											
490											
491											
492											
493		Records for shaft except as given are									
494		mislaid or lost. The Log Book covering all									
495		data during time operated, assays and									
496		measurements of Shaft, Drifts, tunnel, Cross									
497		cuts, winzes, and Discovery and									
498		Assessment work is mislaid or lost.									
499		There is no shaft data between 500 ft									
500		and 600 ft. See drifts of the									
		6th Level									

East and West Drifts, 100 foot level along the vein.

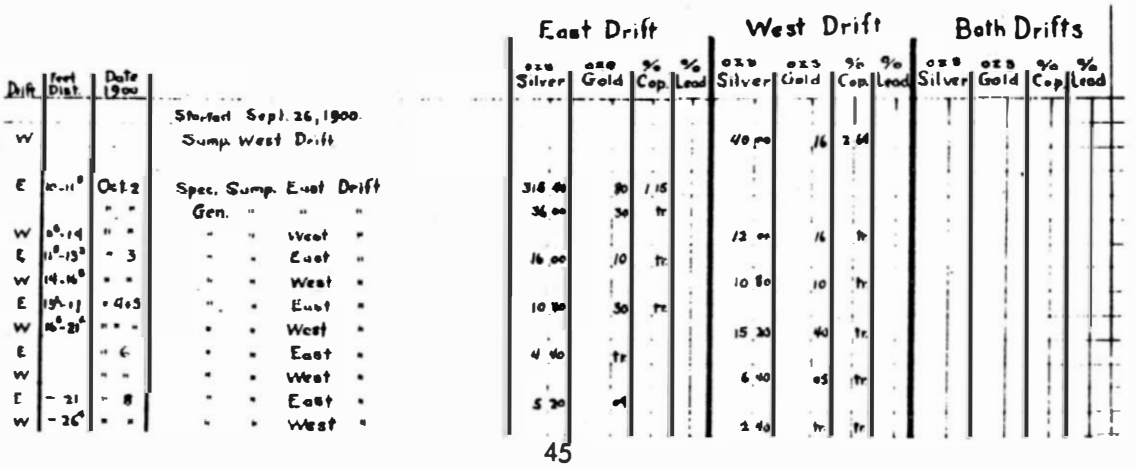
Drift	Ft from Shaft	Date 1899		East Drift oz. Silver	East Drift oz. Gold	East Drift % Cop	East Drift % Lead	West Drift oz. Silver	West Drift oz. Gold	West Drift % Cop	West Drift % Lead	Both Drifts oz. Silver	Both Drifts oz. Gold	Both Drifts % Cop	Both Drifts % Lead
W	6-7	Sept 28	Foot wall Vein slow Pinched Brown Quartz					3 65 / 19 44	tr / 30						
E	1	"	" " " "	23 09	2 91										
E	1-2½	" 30	Foot wall side / Hang wall " " "	51 60	50			13 37 / 19 99	tr / 30						
W	7-8	" "	Gen Samp Both Drifts									12 00	3 69		
			" " " " Sept 28									27 83 / 26 79	50 / 50		
W	8-9	Oct 1	Foot wall matter						tr						
E	2-4	" 1	Spec. selected ore No 1 / No 2	20 00 / 25 09	1 21 / 50										
E	"	" "	Gen samp of the Face	25 02	50										
E	4-5	" 2	Special picked samp No 2 / Gen samp of the Face	19 50 / 11 00	75 / 1 25										
E	"	" "	Spec Samp of Galena / Gen samp of Face of drift	40 38 / 20 00	1 00 / 3 00										
W	9-10	" "	" "					22 12	50						
W	10-11	" 3	Spec samp of Galena Lead not determined / Gen Samp of Both Drifts (taken Oct 2)					96 01	50			23 20	1 00		
W	"	" "	Average samp (" " ")					111 80	1 20						
E	"	" "	" " (" Oct 3)	19 44	50										
E	"	" 4	Spec samp to classify (" ") / Average samp	50 66	50										
W	11-12	" "	Gen " of the drift					34 64 / 121 69	1 50 / 1 00						
E	7-8	" "	Spec Samp E drift Foot plate / Gen Samp	818 96 / 41 83	8 21 / 40										
E	"	" "	Foot wall matter	6 08	tr										
E	8-10	" 5	Gen Samp Both Drifts (" Oct 4)									35 45	1 21		
E	"	" "	" " East "	93 00	25										
W	12-13½	" "	" " West "					29 11	25						
			Spec of Galena from one of Drifts									51 04	00		55 00
		" 6	Gen samp Both Drifts (taken Oct 6)									52 00	25		
W	13½-14	" "	Average samp					30 38	50						
E	10-11	" "	" "	64 63	1 00										
		" 7	Gen Samp Both Drifts (" " 6)									00 76	10		
E	11-12½	" "	Wells Both sides / Sump of the Vein	3 43 / 64 63	tr / 1 00										
W	14-16	" "	" " "					24 00	40						
		" 8	No work Sunday Off												
W	16-17	" 9	Gen Samp					24 00	50						
E	12-14½	" "	Wells Foot and Hanging	2 43	tr										
E	"	" "	Vein Samp	99 65	1 00										
E	14-15½	" 10	East Drift Vein	89 00	1 00										
E	"	" "	" " Walls	2 43	tr										
W	17-19	" "	Gen Samp West Drift					24 50	50						
		" 11	No assay												
		" 12	Gen samp (" Oct 9)									60 16	40		
E		" "	Ore pile from East Drift	802 95	1 21		1 00								
E	17-19		Gen samp East Drift (" " 10)	109 16	1 30										
E		" "	" " " " (" " 11)	76 56	1 00										
W	19-20	" "	" " West " (" " 10)					36 46	50						
W		" "	" " " " (" " 11)					14 68	75						
		" "	" " Both " (" " 10)									25 52	50		
		" 13	" " " " (" " 11)									19 44	50		
E	18-19½	" "	Walls of East Drift	tr	tr										
E		" "	Vein " " "	60 76	3 00										
W	20-21	" "	" " West "					9 72	50						
W		" "	Average samp W Drift					13 37	tr						
		" "	Gen Samp Both Drifts (" " 12)									19 44	75		
E		" 14	Vein East Drift	46 18	1 21										
		"	Gen Samp Both Drifts (" " 13)									14 57	25		
E	18½-20	" "	East Drift left Wall	9 72	tr										
		" "	" Vein	58 89	75										
W	21-23	" "	West Drift Vein					7 29	tr						
		" "	Gen Samp.									14 58	10		
		" 15	No day shift												
		" 16	Gen Samp (Taken Oct 16)									13 52	tr		
E	20-21	" "	East Drift Vein	48 16	50										
W	23-23½	" "	West " "					9 72	40						

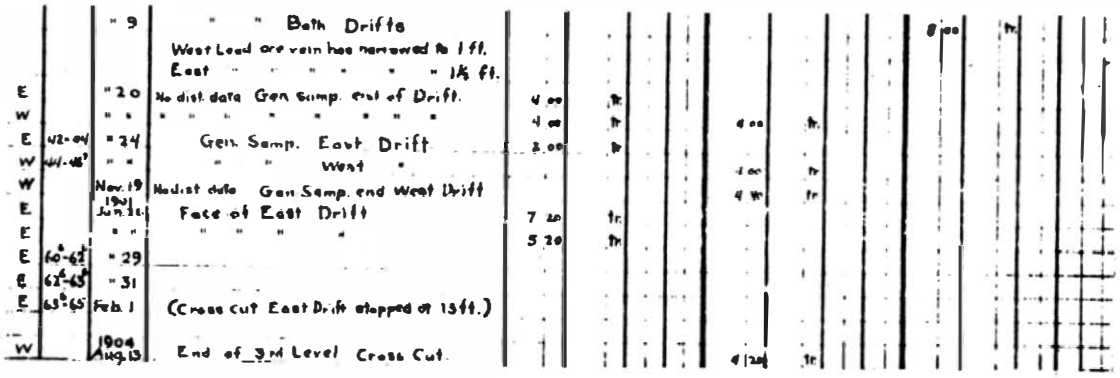

Gen. Samp.
East Drift Veins
West " "
Average Samp w Drift
" " " "
" " East "
" " " "
Gen Samp both Drifts
and Oct 20th No Records
Gen. Samp.
Average " W. Drift
" " East "
Gen. Samp
No Assays Change shifts
Average East Drift
" West "
Gen. Samp
Cross Cut East Drift
Average " "
" West "
Gen. Samp
East Drift
Cross Cut East Drift
West Drift
Copper coming in with Brite in East Drift
Quite a sprinkling but these Sulphides
do not carry much gold or silver now.
Gen Samp
East Drift
" " Cross Cut
West "
Gen. Samp.
East Drift
West Drift
East " Cross Cut
" "
West "
Gen. Samp.
East Drift Cross Cut
" "
West "
Gen. Samp.
West Drift
East "
" " Cross Cut
Gen. Samp.
West Drift
East "
" " Cross Cut
Adit Tunnel 77 ft all told this date
Gen. Samp.
East Drift
West "
Gen. Samp.
West Drift
East "
" " Cross Cut
East Drift Spec from Top
" " Street in face near top

East and West Drifts - 2nd level - 172 feet.

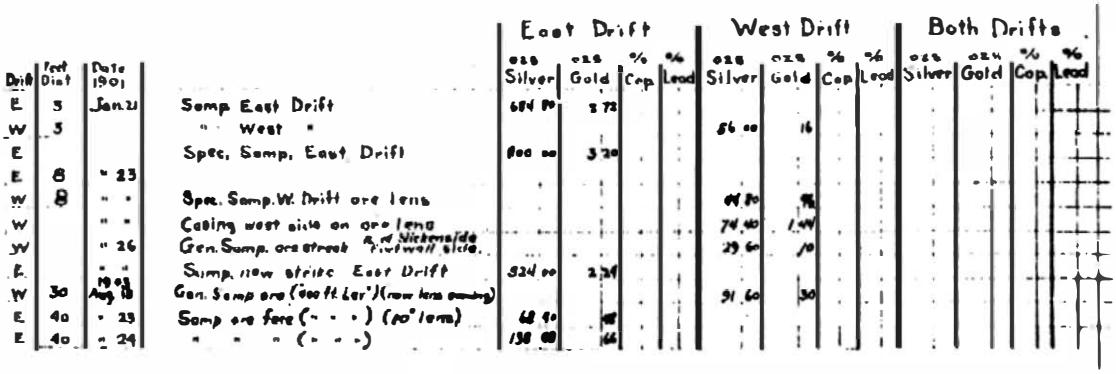


East and West Drifts - 3rd level - 272 feet.





East and West Drifts - 4th level - 370 feet.



East and West Drifts - 5th level.

W		Feb. 6	Samp 2nd Class of stope Gen Samp.					30 84	48						
W		" "	" Ore west end of stope					98 40	60						
W		" "	" " Center " "					146 40	1 96						
W		" "	" " East " " "					229 20	2 72						
W		" "	" 2nd Class sorted from stope					37 80	60						
E		Mch 8	Samp 12 sacks from East stope (east side of shaft on level up)	46 00	30										
W		" "	" 22 " " west stope					103	2 10						
E		" 16	" 45 " East stope (east of shaft)	57 00	36										
W		" "	" High grade ore center of stope west side					98 76	66						
W		" "	" Low " " " " " " "					26 16	24						

East and West Drifts - 6th level.

Drift	Ft from Shaft	Date 1904		East Drift ozs Silver	East Drift ozs Gold	East Drift % Cop	East Drift % Lead	West Drift ozs Silver	West Drift ozs Gold	West Drift % Cop	West Drift % Lead	Both Drifts ozs Silver	Both Drifts ozs Gold	Both Drifts % Cop	Both Drifts % Lead
W		Jan 13	Spec. of new strike west side					617 00	1 20						
			Gen Samp " " " "					27 60	24						
			(Copper is present in above samples but not over 3%)												
W		Feb 13	New strike west					19 56	48						
E		" "	Samp from drill cuttings East	38 80	36										
W		July 13	Gen Samp ore face of Drift (4 ft of Ore)					10 40	14						
W		" 29	" " " " " " " (2 " " ")					29 70	20	3 22	22 00				
W		" "	Samp small streak ¾ in. wide on hang. wall					169 56	72						
W	71 ft	Aug 11	Ore streak (6 in wide)					31 80	25						
W	73	" "	Gen Samp. Face of West Drift					13 00	1 72						
E		" 13	" " Qtz on Hanger (4 to 6 in wide)	72 00	20										
+E		" "	Samp new strike on Cross Cut	395 40	84										
W	72	" 17	Samp ore streak 6 in. wide					31 80	25	4 98	26 00				

Ruby Tunnel and Winze.

		Date 1899		ozs Silver	ozs Gold	% Cop.	% Lead
		Dec. 6	Ruby assessment	24 00	tr.		
		" "	" " No. 2	30 80	tr.		
		" "	" " Gen Samp.	10 [illegible]	tr		
		1900					
		Apr 28	Tunnel Samp.	8 00	tr		
		May 10	Outer Casing Ruby strike	5 60	tr		
		" "	" " " "	3 48	tr		
			Vein at this date was 20 in. wide but no distance or depth data is given.				
		" 26	Hand samp. of latest strike	4 00	tr.		
		June 6	Samp. from tunnel	7 10	.18		
		" 16	Ruby Winze 4 ft.	5 80	.16		
		" "	" " 5 ft.	4 10	.12		
		July 4	" " 12 ft deep	8 20	.18		
		" 13	" "	7 84	.12		
		" 29	" " 17-18 ft.	8 10	.12		
			(Ore only one to two ft. oxide mixed with Qtz. but mostly iron pyrite.)				

Biography of John G. Edwards

John Griffith Edwards typified the self-reliant pioneer of the old West. His adventures in Wyoming during the 1880's are reminiscent of episodes in Owen Wister's "The Virginian." His was the life of the rugged, free-enterprise stockman who had to protect himself at all times in a lawless region, sometimes against long odds, as he built up one of the greatest stock-raising domains in the country.

Jack Edwards, as he was commonly known, was born in Wales on July 13, 1855. He emigrated to this country while still in his teens and journeyed to Wyoming in 1871. He worked as a store clerk and then operated a coal agency in Salt Lake City. After o visit to Wales he returned to the United States and in 1879 went into the cattle business near Rawlins, Wyoming. A severe winter, combined with a Ute Indian rebellion that converted the cattle ranges of Wyoming and Colorado into a battleground, ruined his business. A major campaign by the U. S. Army ensued and Edwards volunteered as an Army Scout. Because of his experience and knowledge of the country, he was instrumental in the location of strategic military posts and Indian reservations in Colorado and Utah. The Army finally brought the Indians under control and peace returned to the range country.

Edwards went back to cattle ranching but, always aroused by a challenge, he became greatly interested in the burgeoning demand for wool and the opportunity of ranging great herds of sheep over the rolling Wyoming hills. Thus he entered on his sheep-raising venture with the utmost enthusiasm. This aroused the enmity of cattlemen who at that period wanted to run all sheep and sheepmen out of the country. Sometimes there was violence but Edwards did not budge from his determination to graze sheep on the public domain which he believed, as a citizen, he had as much right to use as did the cattlemen. His reputation and courage were so well known that he was able to maintain his position against the opposition until eventually the combatants realized that the disagreements were suicidal, and the serious frictions gradually disappeared from the ranges. Edwards became the largest operator and probably the best known sheep mon in the country. But at this period increasing immigration of settlers and the consequent decrease in available range land in Wyoming caused him to look over the distant horizon for land better suited to his plans. The great expanses of central and eastern Oregon beckoned.

In 1898 Edwards bought a half interest in the Hay Creek Ranch in central Oregon owned by the Baldwin Sheep and Land Co., which had pioneered in raising alfalfa for sheep feed. He, with C. M. Cartwright and J. P. Van Houten as partners, set about improving his herds. He made long trips to buy breeding stock and made importations of selected Merino and Rambouillet sheep from Spain and France. His fame as a breeder become world wide and his Hoy Creek Ranch, with its herds of 60,000 to 70,000 sheep, was called the greatest Merino breeding station in the world. Also in 1898, he bought the Oregon King mine, which had been recently discovered only a few miles east of his ranch area. The mine was always one of his chief interests.

In 1903 Edwards was married to Elizabeth J. B. Smith in Yorkshire, England. In 1905 he became the full owner of the Hay Creek Ranch comprising some 70,000 acres, and at this time, Louis Enderud was brought in as business manager, becoming one of Edwards' closest business associates. In 1910 he sold the ranch to Henry C. Pittock and L. B. Menefee of Portland. Because of increasing government restrictions on the amount of grazing land available, Edwards had to reduce his herds until he believed it uneconomic for him to graze his herds on government

range. Therefore, he decided to quit the business and move to Portland.

Early in World War I he went to France as a captain in the Red Cross and was stationed at Dijon, where he organized and maintained a large supply depot.

After he retired from the sheep business, he was offered the post of head of the Russian bureau of animal industry by the Czar of Russia. He was preparing to leave for St. Petersburg when the revolution broke out and forced him to change his plans.

In 1923 he built a fine home in Portland where he assembled many art objects. He loved to paint pictures and showed much talent in his painting.

Edwards died in Portland on October 27, 1945, ending a full and eventful life. His estate, disclosed by The First National Bank as Trustee, showed a trust valued at approximately $700,000 set aside as a perpetual fund for charity. It was said to be one of the largest community trusts ever established in Portland. After stipulating that the public benefits were not to become effective during the lifetime of Mrs. Elizabeth Edwards, the widow, the trust selected no beneficiary, but directed the Trustee to use its discretion in distributions for such charitable purposes as it deems proper. Mrs. Edwards died November 3, 1959.

Jack Edwards was one of the last of his breed - pioneer westerner, cattleman, Army Scout, Indian fighter, sheepman, breeder of fine stock, and one-time owner of the 70,000-acre Hay Creek Ranch. He was a strong and purposeful man whose philanthropy will be of perpetual benefit to the people of Oregon.