

SUMMARY REPORT OF MINING INVESTIGATIONS IN THE
KETCHIKAN DISTRICT TO B. D. STEWART, COMMISSIONER OF MINES, AND ITINERARY OF J. C. ROEMM, ASSOCIATE ENGINEER, TERRITORIAL DEPARTMENT OF MINES
May 7 to June 2, 1939.

Interest by the general public in mining was found to be greater in the Ketchikan district than in the two former seasons of 1936 and 1938 when visits were made to this district. The writer bases this statement on the larger number of interviews and the numerous inquiries concerning both active and inactive prospects. This past year has shown more actual development on properties with more favorable results than heretofore. The greater part of the interest is in the Helm Bay area, where the development of the Blue Jay mine has proven a low grade orebody and created considerable of the interest. This, followed by resumed underground development of the Alaska Gold Mountain Mines, Ltd., and proposed development of other prospects, has awakened renewed interest in this section. General interest is also being shown in the Karta Bay-Hollis area in the activities of the Flagstaff and Harris Creek properties. At Harris Creek, property of the Kasaan Gold Company, under lease to Wendell Dawson, development work has progressed according to instructions given last season and has proven a total of 5,000 tons of ore reported to run \$30 per ton. The Flagstaff Mining Company has been handicapped by transportation and other factors to the extent that only a small amount of ore was milled and development work has not been extensive. Mining operations ceased in April on the Thorne Arm properties and the latter were not visited. The writer visited a total of 15 mines and prospects and obtained a total of 50 samples. Following is a summary statement according to itinerary:

May 7-9. En route to Ketchikan from Juneau and one day in the first city.

May 10. Upon reports that the Valparaiso Gold property at Dolomi had been recently leased to C. H. Dunton and W. H. Roessel of Ketchikan, the writer proceeded to Dolomi upon a trip to the east coast of Prince of Wales Island.

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The above lessees have apparently obtained a lease from only the major interest holders of this property. Mr. Dunton was mill man for the original company that mined the high grade ore shoot in the vicinity of the Valparaiso shaft. Later he obtained a lease and mined a pillar of this ore and obtained good results. His intentions this year are to reopen some old surface cuts near the supposed intersection of the Valparaiso and Jessie veins. He claims that during the early exploratory work high values were obtained in some of these cuts. He expects to mine from these surface cuts and will not attempt to work in the old

workings. Two men have been employed trenching and have encountered several quartz float that contain good gold values, 300 feet west of the Jessie shaft. Mr. Dunton states that he is decidedly limited as to financial means for operation and expects to build up an operation from the remaining machinery and minable high grade which he alone appears to know about.

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Apparently the last operator, Col. Ryan, operating under Alaska British Columbia Mines, Ltd., spent a reported total of \$152,000, and never arrived to the point of any underground development. A tram from the beach to Pauls Lake, 2600 feet elevation, was constructed at a reported total cost of \$27,000. This is a 36-inch gauge of 24-lb. rails and in good condition. A gasoline locomotive was used on this tram, from which the motor was reported to have been stolen. At the mine camp, north shore of Pauls Lake, a new compressor house, power house, bunk and cook house, and blacksmith shop were constructed and are in good repair. The flume and pipe line were repaired. A 74-inch Pelton was placed in the power house and drives a 400 KW. General Electric generator via V-belt drive. This is in place, however, the power house has been stripped of transformers, switches, tools and other electric equipment. This totals the machinery on the property except the old mill machinery and compressor, the latter obsolete. The mill machinery, which consists of a 5-stamp battery, Lane mill and tables, was torn from the building and has to be replaced. New concrete forms were poured for the new mill machinery, which was held up under litigation, and most of which has since been sold, and never arrived on the property. Considerable machinery was reported being held by Heckman & Company of Ketchikan for debts. Over and above pending debts, and with only a lease from part of the owners, Messrs. Dunton and Roessel expect to re-install the stamp mill, build an amalgamation arrastre to run behind the stamps with table concentrator, and operate. They intend to operate the hydro-electric plant for power. Due to the workings being filled with water, only an occasional cut and dump were investigated.

May 11. The Lucky Boy group of eight claims, located between Mineral and Dora lakes at the head of Dora Bay, Cholmondeley Sound, Prince of Wales Island, was visited. Three known veins containing values in gold, silver, zinc and lead; namely, Minnetonka, Lady of the Lake, and West Lake veins, were partly explored in earlier days by cuts and two adit tunnels. Practically no work has been done since and the total underground development measures 363 feet of drifts and crosscuts with two small stopes. The mill, which apparently ran only a few tons of ore, is now fallen down and the machinery is obsolete.

The lower West Lake vein strikes N. 100 W. and dips 45 to 50° E. and appears to contain the higher grade ore with considerable massive galena and sphalerite showing in the cuts on the surface. This vein ranges in width from 18 inches to 5 feet and averages 3 feet. It represents a fissure vein on which there has been some movement prior

to mineralization and the ore occurs very irregular and bunched. The formation in which the vein is enclosed is a schistose lava or tuffs which were formerly overlain by limestone, by an unconformity, and since worn away leaving inclusions, and filled limestone fractures which have more or less crystallized to calcite. Associated with the calcite in the vein is considerable quartz and various decomposed greenstone minerals. The formation strikes N. 20-25° W. and dips 70° SW. A considerable amount of iron oxides such as hematite, magnetite and limonite occur in the ore. Thus this vein is definitely of low temperature and of supergene origin. In the drift along the vein in the adit, the mineralization is less dense and more scattered and the values appear low. This vein is exposed on the surface by cuts for 300 feet and does contain a small volume of zinc-lead ore with low gold and silver values. Cadmium was found associated with the sphalerite in amounts less than 1 per cent.

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The Lady of the Lake vein is located 1200 feet north of the West Lake vein at an elevation of 220 feet. This showing consists of a large banded quartz and mineralized schist brecciated zone covering an area nearly 100 feet in length and 40 feet in width. Since the dip of the zone conforms nearly with the slope of the ground the width is only the extension of the zone on the dip. The exact width could not be determined, but was estimated between 12 to 15 feet. A crosscut adit below cuts this zone and exposes a definite vein 3 to 8 feet in width. This tunnel does not cut through the entire width of the brecciated zone. Sufficient work has not been done on this showing to determine the definite structure on which this ore occurs but from the surrounding rock outcrops, it appears to be in accordance with folding of the greenstone schists. The zone and vein strike N. 55° W. and dip 70° SW. This vein was reported as carrying higher gold values than the West Lake vein. The mineralization appears much the same, with more chalcopyrite and less sphalerite and galena, as the West Lake vein. Sample 605 was a channel sample across 43 inches in the adit tunnel, and sample 606 was a grab sample of 25 pounds from the large surface cut.

The Minnetonka vein is known as a cross vein, is large and very flat, and is located north and above the Lady of the Lake vein. This vein is much the same character and it is believed by the writer to be the upper portion and folded over section on a small anticlinal fold of the Lady of the Lake vein, the latter being the downward limb extension to the west. No samples were taken on this vein due to filled condition of the cuts.

Samples 602, 603, and 604 represent channel samples in the tunnel and surface of the West Lake vein.

While the showings appear to indicate a large volume of low grade gold-lead-zinc ore, were they further developed, they no doubt would be found to be rather limited. However, a small volume of ore could be mined and shipped to the smelter, were there one close at hand and shipping and other costs not too high. Further development, is, however, warranted.

May 12¹² Visited the property of the Kasaan Gold Mining Company *KX-119-8*
under lease to Wendell Dawson. A total of four men have been employed
and the operation has been continuous during the year. During last
year a total of 400 tons was milled and the amount of \$6,000 was recovered.
This averages \$15 per ton recovery. On February 1 of this year the
mill was again operated and to date a total of 225 tons has been milled.
A new crosscut tunnel was driven into the vein 10 feet above the old
tunnel level and a drift of 100 feet on the vein to the west exposes a
width of ore ranging from 12 to 17 feet. This exposes the ore 40 feet
past the supposed end on the surface. An estimation of 5,000 tons of
ore was made in this block from the drift level to the surface. Assays
of this ore range from 20 to \$30 per ton in gold and silver. While this
block of ore is known to be definitely cut off on the bottom, the dip
of the flat fault to the west leaves a small block of ore under the drift.
The vein in the west end of the drift is widening and it appears that it
will change into a roll and turn into the original strike of the vein,
N. 10° W. The displacement of this block has been due to the monoclinial
folding of the slates and greenstone beds and the hinge rotational flat
faulting on the bottom. Due to the monoclinial folding of the beds, the
greenstone slate contact drops down the hill above the showings for a
distance of 300 feet off its normal strike. This folding has been the
major structural feature in the development of this orebody. The complex
situation was the later and recent rotational flat faulting from a
pivot on the west. The downward extension of this orebody which will
no doubt follow the plunge of the fold, should make a sizable orebody.
The presence of considerable manganese oxide with abundant iron oxides,
brings up the problem of values in depth. This cannot be determined
until the vein is encountered at a greater depth. Mr. Dawson wishes to
sell his lease on the property, since he does not have sufficient capital
to buy and operate a larger mill and the necessary mining equipment.
His present mill is of too small a capacity to make much profit on this
grade of ore.

May 13. The Hope Gold mine located 2 miles north of Hollis *KX-115-20*
is now being operated by Erickson and Locke. Last season this mine was
operated by Adams and Erickson and a total of \$1,800 in gold was pro-
duced. Small high grade pockets in the Hope vein accounted for most
of the gold. This season the operators have installed a 2-cylinder com-
pressor run by water power and are engaged in stoping the west end of the
old large stope above the upper long tunnel. They are raising the ore
to the surface with the aid of a hand windlass through the open stope.
It was estimated that 75 to 100 tons remain to be mined and this ore
averages better than \$50 per ton in gold and silver by assay. From the
surface the ore will be crushed and piped to the mill and milled. They
expect to sink on the high grade spots in the lower tunnel. No men are
hired and they are operating quite efficiently.

KX-119-30

May 14. J. J. Matuska staked the old Cascade property, 4 miles west of Hollis via trail and 2 miles southwest of the Hope mine, last year. This year he is engaged in packing in a small rocker type mill of his own design, a small crusher, small table and small 18-inch Pelton wheel with necessary tools and small equipment. The writer visited this prospect and due to the heavy snow, surface outcrops were not seen. This vein lies at an elevation between 1300 and 1500 feet and a short description is given in U. S. G. S. bulletin 347, "The Ketchikan and Wrangell Mining Districts" by Wright Bros., pp. 161-162. The vein is in an altered basic intrusive and elastic hard greenstone, and represents an old fissure filling averaging 2 feet in width and showing movement along the walls. The strike is N. 54° W. and the dip varies from 67 to 70° S. Only the upper tunnel, elevation 1400 feet, was accessible. This tunnel follows the vein over the former length of 175 feet. A small quartz lense extends back from the face for a distance of 36 feet and varies from 18 inches to 2 feet in width. The quartz is banded and mineralized. Samples Nos. 607, 608, and 609 were taken at 10-foot intervals across the lense. Beginning at the portal two parallel quartz veins 4 inches to 13 inches in width and 3 feet apart show good quartz mineralization with the hanging wall vein entering the hanging wall of the tunnel at a point 50 feet in from the portal. Sample 610 was taken across 4 inches of banded quartz on this vein 30 feet from the portal. Matuska reports 50 feet below the tunnel where the vein crosses the creek a lense of ore outcrops varying 8 to 10 inches in width and assays from \$63 to \$100 per ton in gold and silver. This lense he intends to mine and mill this season.

KX-119-3

May 15. The Flagstaff mine, located 2 miles south of Karta Lake and 4 miles southwest of Karta Bay, has been in continuous operation. The mill was put into operation last July and has run intermittently until April 7 of this year when both mining and milling operations were closed due to transportation conditions. The poor condition of the caterpillar road from Karta Lake to the mine, a distance of 2 miles, has been brought about by continued caterpillar use during spring thaw conditions and is cut up to such extent that it is impassable at the present time. Two shipments of concentrates were hauled out this winter and shipped.

From an estimate based on the measurement of the stopes, if all was milled, a total of 1,000 tons has been stoped and milled. The lower tunnel drift has been advanced from 510 feet last year to a total length of 825 feet to date this year. The No. 3 stope represents the new ore shoot discovered last fall. This lense is over 100 feet in length and has been stoped up 35 feet and 70 feet along the drift. Good ore shown in the top of this stope ranges from $2\frac{1}{2}$ to $3\frac{1}{2}$ feet in width. No. 2 stope extends from 500 feet to 580 feet, measured from the portal. A partly timbered raise extends up 40 feet and the stope is up 80 feet. Forty-two inches of quartz is the vein width at the top of

the stope, but it is only slightly mineralized. Sample 611 was taken across the center of the stope back, 80 feet above drift across 42 inches. The orebodies appear to be small localized areas within the vein in which the major portion of the sulphides and gold and silver have concentrated. The limits of the profitable ore no doubt has to be determined by assay. No. 1 is a small stope up 30 feet and 25 feet in length, located 160 feet in from the portal. This stope is narrow, less than 2 feet, and only a slight mineralization shows in the quartz. The last 50 feet of the tunnel footage, 775 to 825 feet, shows a tight pinched vein down to 12 inches in width, mainly gouge, with 12 inches of banded quartz showing in the face with considerable iron oxides present. The appearance of the last 10 feet of drift shows the vein tending to widen and possibly another shoot will be developed with continued drifting.

The writer visited the mine during the absence of Mr. Wm. Goodwin. Two miners were the total crew at the mine camp. They were engaged in installing a furnace and steel sharpener at the blacksmith shop at the portal of the 1400-foot elevation tunnel. The company had been using detachable bits with poor results, and has now changed to solid steel bits and the installation of the Gardner-Denver sharpener and furnace. A snow slide in March came down the ravine which contains the vein over the portal of the tunnel and some damage was done which has resulted in considerable repair work to outside track and trestle work to the ore bin. After the necessary repair and installation, work is to be resumed in drifting in the tunnel. A 20-inch Buffalo centrifugal fan is installed at the portal, run by a one-cylinder gas engine, and ventilates the drift through a 6-inch pipe. The main crew is now engaged in building the 2-mile stretch of road from Karta Lake to the mine. A steam shovel has been rented for the job and the present road is to be widened, straightened and surfaced with gravel with the hope of transporting by truck. The sawmill has been moved from the mine to Karta Lake and bunk and cook houses have been built 300 feet south of the shore of the lake. There are good sized buildings capable of housing a crew of from 15 to 20 men. The road from Karta Lake to Karta Bay along the north shore of Karta River is at the present time in good condition and is being surfaced with gravel and crushed rock. Two float docks have just been completed at the road terminals on Karta Lake. A dock is lacking at the terminus on Karta Bay. A new 28-ton Denver Foundry make, ball mill, plunger type feeder, classifier and other small mill equipment has been ordered and is to be installed in the mill in addition to the present machinery. A diesel motor from one caterpillar tractor is to be installed in the mill for additional power. A small assay office building has been built during the past year and equipped with Simplex ore crusher, Braun pulverizer, furnace using Flamo, Ainsworth balance, and other equipment complete for gold-silver assaying.

The company does not expect to resume milling operations until the road is completed and the new additional milling machinery has been installed. In the present mill circuit an amalgamator followed by a 4x5-foot amalgam plate was placed below the ball mill on the flow to

the table. What success they have had with this is unknown. The flotation reagents are now added into the flow below the classifier overflow and direct to the cells, and are not carried through the entire circuit as originally planned. The concentrate ratio was reported as 25 to 1. Both a high and low value concentrate is obtained, a high concentrate from the table and a low concentrate from the cells.

Wages range from \$6 for miners and mill men down to \$5 per day with board for muckers and laborers. The company will be interested in obtaining a good mill man and two or three good miners according to Mr. L. Gore, who is interested in the company and is managing office affairs in Ketchikan.

Dr. ... The Nelson and Tift operation on McLean Arm was not visited. They have resumed mining and have made a 50-ton shipment thus far this year. Last season a total of 1076 tons were shipped with returns of \$34,000 in gold and silver. This season a milling plant consisting of a 3x4-foot Denver ball mill, crusher, classifier, amalgam plate and a No. 6 Wilfley table is to be installed. The mill is to be powered with an 80-H. P. Budda gas engine. The operators state they have a thousand tons of disseminated ore which runs \$15 in gold and silver. Since this ore does not pay to ship, they intend to mill and ship concentrates. They also have a few tons of loose quartz boulders above the glory hole which shows free gold and they intend to mill this. They further report bunches of massive sulphide ore in the bottom of the glory hole which they are mining at the present time. A crew of 8 to 10 men will be employed this summer. K. 11-53

The Vermont Marble Company has indefinitely closed operations at their marble quarry at Token. Considerable of the machinery has been sold and no further operations are in store until west coast building warrants. This company intends to hold its property, but no immediate operation is planned.

Mr. Wm. Sulzer visited the holdings of the Alaska Consolidated Mining and Smelting Company at Sulzer last season and posted some patent notices on a few claims.

May 16-17. Return to Ketchikan and flew to Klawock.

The Martin Saxe prospect on the north side of Klawock Lake is apparently not held at the present time. The showings of the prospect were found covered with snow. Mr. Arthur Thane definitely promised to examine and sample this prospect as soon as conditions permit. Some good grade zinc specimens were observed in Klawock, reported to have come from the beach on the northwest end of Baker Island. A 2-foot vein was reported found by Mr. Peratovich, store owner at Klawock. The latter intends to prospect further on this vein and in the vicinity this season.

May 18. Klawock to Nutkwa Bay.

The Nutkwa, or Jack Wilcox gold prospect, is located on the north shore of Nutkwa Lagoon 3 miles east of the head of Nutkwa Bay. Small craft can be taken into this lagoon on extreme high tides, but at other times a portage of 300 feet has to be made. The showings consist of a 340-foot tunnel with short crosscuts across a shear zone that varies from 3 to 12 feet in width. This zone cuts the schistosity of greenstone schist in both strike and dip, and can be easily traced from the lake shore to the top of the ridge, nearly 1,000 feet in elevation and 3,000 feet in length. The only development on the shear is the tunnel and a long rock cut above at an elevation of 100 feet and 600 feet inland from the shore of the lagoon. The tunnel follows the shear which strikes N. 20-30° E. and dips 80° W. ^{KX-119-26}

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The geology of the vicinity consists mainly of greenstone schists with narrow bands of slate and limestone. The general strike of these formations is N. 20 to 25° E. Basic dikes were noted parallel to the strike of the formation along the lagoon shore and these are apparently associated with the intrusive mass south of Nutkwa Bay. Remnants of limestone were noted from an unconformity between the greenstone schists and overlying limestones with the latter worn away. Two sets of shear or fault zones were noted. The northeast set, as per showing, strikes N. 20-30° W. These are intersected by more numerous and small fault shears that strike N. 80 to 80° W. The main low grade orebody in the tunnel is one of these intersections. This zone varies from 3 to 12 feet in width and carries a pyrite mineralization. Included in the shear is a band of black graphitic slate between 4 to 5 feet in width. It appears to strike with the shear, however, there has not been sufficient work to determine its relation to the schists. Zones in the shear are highly silicified and appear as a partial replacement of the schists. Small banded quartz lenses with variable lengths and small widths occur intermittently in the shear, some parallel with the shear and others striking obliquely across. These are of a later generation and contain the higher grade ore and the greater amount of mineralization. The metallic minerals noted consist of pyrite, arsenopyrite, galena, chalcopyrite and gold and silver. The quartz varies from milky white to dark gray. A ton of picked ore was shipped by the owner, Cyrus Perkins of Ketchikan, last year and a return of \$300 in gold and silver was reported. A sorted dump of approximately 50 tons of ore is located at the portal of the tunnel. Samples taken every 10 feet in the tunnel, numbers 613 to 634, inclusive, should give an average value of the low grade ore zone.

May 20. Arrived back at Ketchikan.

May 21. Accompanied by Dr. Peterson, and at his request, the writer visited the old Gold Stream property across from Ketchikan on Gravina Island. The old shaft workings are water filled and the opencut work is mostly filled. Samples 635 to 641, inclusive, were taken, mainly grab samples of both quartz and mineralized greenstone schists. The last two were samples of two piles of concentrates found at the old mill location. The values were found rather low and confined mainly to the mineralized schists. Dr. Peterson was interested to the extent of wishing to know whether the showings contained sufficient values to warrant further work providing he could get reasonable terms on the property. The mineralized schist bands are apparently wide and in order to arrive at any definite conclusions as to accurate values, I advised that he obtain a working option for sufficient time to reopen the cuts and have the zones accurately channel sampled. KX-126-42

May 23. The writer visited the Mol group of four claims located on the south shore of Behr Canal one-half mile west of Roe Point at an old cannery location. The group is held by M. L. and Andrew Langloe of Ketchikan. Here along the bed of a small stream 400 feet from the beach on a contact of gneissic hornblende granite and a narrow band of magnesium limestone, highly altered, a quartz vein is exposed by cuts and a 12-foot tunnel for 200 feet. The vein is traceable for a thousand feet along the west bank of the stream, striking N. and S. and dipping 17° W. It is wholly within the hornblende granite with soft gouge walls and pegmatitic in texture. Disseminated through the vein and more concentrated on a 6-inch band on the footwall occurs the mineral, molybdenite, associated with pyrite, feldspar, mica and contact lime minerals. Assays of samples from the 6-inch footwall band were reported ranging from 3 to 6 per cent molybdenum. The main vein probably runs less than one per cent molybdenum. Considerable of the pyrite has leached out and left large vugs. These contain an abundance of molybdenite. Low gold values were reported associated. The vein appears to be narrowing rapidly on the dip away from the contact and the mineralization appears less. Four cuts, the 12-foot tunnel, and some stripping includes the total development work.

In the limestone along the contact, which was followed upstream for 2,000 feet, minor amounts of magnesite, barite, witherite and thin bands of green mica, the latter either a chromium or nickeliferous composition, ^{were found.} The amounts were small and deserve mention only.

May 24. Ketchikan to Helm Bay.

At the request of Mr. A. Brooks of Ketchikan in regard to development work on the Beat Lode, held by the Sleeping Beauty Mining Company, the property was revisited this season. Mr. Brooks and associates have acquired control of this company by the purchase of the treasury stock and some of the vendor stock which leaves none for sale to the public. Since last season a 12x15-foot cabin has been built on the millsite at the beach and two additional trenches have been dug on the showings. A second-hand Gordon single 8x10-inch compressor, run by an 80-H. P. Hudson motor, and a double drum hoist operated by a 15-H. P. KX-119-162

Fairbanks Morse diesel, are the new acquisitions of the company. This season the company intends to build a 3,000-foot aerial tram using a 3/8-inch cable with 3/8-inch carrier cable for hauling supplies to the showings from the beach. They intend to do tunnel work. The writer advised them to continue on the shear to the north in the old tunnel in the hope of finding ore. The surface to the north from their showings is deeply covered with overburden and trenching is impractical. This is purely a prospecting venture.

May 25. The Portland group, located on the west shore of Helm Bay between the Beat lode and Free Gold groups, and owned by Bert Libe, has been incorporated as the Blue Jay mine. Development has been continuous on this property since last year and has consisted of 13 feet of crosscutting and 103 feet of drifting. The last 8 feet of crosscut represents the footwall of the 30-foot shear zone and contains a 5 to 6 foot width of ore. This orebody has been followed the entire length of the drift and shows in both end faces. The orebody is a stringer lode consisting of quartz stringers, and masses included in mineralized greenstone schist. Between the drift level and the surface, calculated on the dip of the ore (60°) a back of 175 feet exists. How far the ore extends above the drift level is not known. According to channel sampling at 5-foot intervals by Mr. Libe along the drift, the ore averaged for the width of the drift from \$7 to \$8 per ton in gold and silver.

On the strength of the ore showing a complete milling unit has been purchased consisting of a 14x18-inch jaw crusher, plunger feeder, 3x4-foot 25-ton Morse Bros. ball mill, 54x96-inch amalgam plate, Akins rake type classifier and No. 6 Wilfley table. In addition a second-hand Rex, 210 cu. ft. compressor, and a single drum hoist run by a Dodge motor has been purchased. The mill machinery and compressor are to be installed in the mill building below the tunnel, and powered by an 85-H. P. Cummins diesel engine.

Additional building since last year has been a pile-driven dock float, two cottages and store house on the beach, a 1500-foot tramway, 36-inch gauge with 20-pound rails, to the mill from the beach, a cook house, 18x32-feet, bunk house, 26x36 feet, and a combined office and assay office. The mill building is under construction, and the mill is expected to be in operation in July. A crew of seven men will be the entire operating crew.

Martin Bugge is doing assessment work on the Free Gold group north of the Gold Standard. He has one man employed and has started drifting on the ore zone in the long Freeburn crosscut. The stringer lode ore is showing up and appears to be on a similar structure as the Blue Jay mine.

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Ashley Egtvet and Olav Olson have staked the old Annie claim. They are engaged in trail building and expect to take in a Model A Ford engine with a combination head making a compressor of two cylinders. They intend to open up the old Annie shaft and develop the property. One man in addition to themselves will be engaged.

E. Steers is doing assessment with two men on the Rainey Day and the Lone Jack claims.

John Folwarzny and two associates are mining and milling in the Gold Standard glory hole. The concentrating table is out of order and only a portion of the concentrates are caught. Last season some ore was mined and milled from the upper faulted block of the Gold Standard vein. Recovery was poor in the mill due to low percentage of free gold. Since the ore was apparently better looking than the glory hole ore, and expecting it to run two to three hundred dollars per ton, they shipped a few tons direct to the smelter. Since the ore was shown by assay to range from \$20 to \$30 per ton, the results of the shipment were naturally within these figures and due to shipping and smelter costs no profit was made. Gradually the ore became of low value to the north on the block and it was abandoned. KX-120-44-85

W. C. Arnold has three men doing assessment work on the old Meadows prospect held by R. Knuckolls, located south of the Rainey Day prospect.

Craig 119
May 26-27. Visited the property of the Alaska Gold Mountain Mines, Ltd.

The Alaska Gold Mountain Mines, Ltd. resumed operations on March 27 of this year. This company is under the management of Homer Bradford, engineer from Colorado, and under the direction of Geo. Crerar and Mr. Rogers, with the aid of Los Angeles capital.

Since the above date the old machinery, a single compressor and semi-diesel engine, were dug out from a mud and rock slide, put in operation and 60 feet of crosscutting has been done. A combination bunk and cook house for 20 men, blacksmith shop, compressor house and cabin have been constructed. Considerable surface stripping has been done. The present crosscutting is an effort to pick up the continuation of the ore zone as plotted between two occurrences of ore in the lower long tunnel. The first orebody is located from 400 to 500 feet from the portal. At the intersection 430 feet from the portal 20 feet of ore, mainly mineralized greenstone schist, ran 0.10 gold. Other assays reported over the exposed length of 120 feet vary from 0.04 to 0.70 ounces of gold per ton. The other ore occurrence is at the end of the north crosscut 1500 feet from the portal and 4 feet ran 0.19 ounces of gold per ton. The upper tunnels contain ore of low tenor. Bradford hopes to connect the ore in the lower tunnel by means of raising with the ore in the upper tunnels. The total workings on this group consist of seven tunnels, two on the west vein workings and five on the east vein,

with considerable stripping and some pits. The officials of the company notified Bradford that they are sending a small mill and mill man for him to erect and operate to help with development expenses. At the present time there is not sufficient ore blocked to warrant a mill. A mill test of the greenstone schist ore has been made and 60 per cent of the gold was found free.

The key to the ore in these workings hinges, as it does on the Helm Bay side, to the downward limbs and the plunge of the monoclinial folding of the greenstone schists. The plunge appears to be in an opposite direction and at a steeper angle than the Helm Bay structures. The structural features were pointed out to Mr. Bradford, who has had considerable structural geology. It is the writer's belief that if he is given time and sufficient money, he will actually prove a worthwhile ore structure.

A total of 12 men are to be maintained and development is to be continuous. A sketch of the entire underground workings with numerous assays, was compiled from Mr. Bradford's notes and Brunton surveys.

May 30. Upon a request by Val Klemm for a map of the workings on the antimony claim, known as the Hot Air group, the writer made a trip accompanied by L. S. Ferris and Nils Johansson and mapped the outs, shaft and surface exposures. The shaft was bailed out and three channel samples were taken, Nos. 648, 649 and 650, from the two shafts. Only further trenching and stripping has been done on this prospect which has not revealed any further ore.

In the Hyder district very little activity was reported. Larry Thornton drove 139 feet of drift on the vein of the Solo Mining Company last winter. Low values were encountered with an occasional high grade spot encountered. This tunnel face is nearly under the high grade on the surface beneath the ice. His next development will be a raise of 60 to 70 feet on the vein to this spot.

Al Phillips, Goldberg and Fisher were reported working on the Engineer property. On the Fish Creek property a lense of solid pyrite was discovered that was reported to contain gold values.

H. King of the Canadian Consolidated examined the Green Point group of claims owned by San Swenning last season and a re-examination is expected this season.

The Nyconda Mining Company closed milling operations in November last year. 700 tons of ore was reported milled in the Peerless mill last season and an average of \$3.50 per ton was reported recovered. Most of this ore was mined from beneath the glory hole on the Goo Goo Extension claim.

Craig 119

Klemm 120

KK-120-16

KK-118-23

KK-118-61

KK-120-57

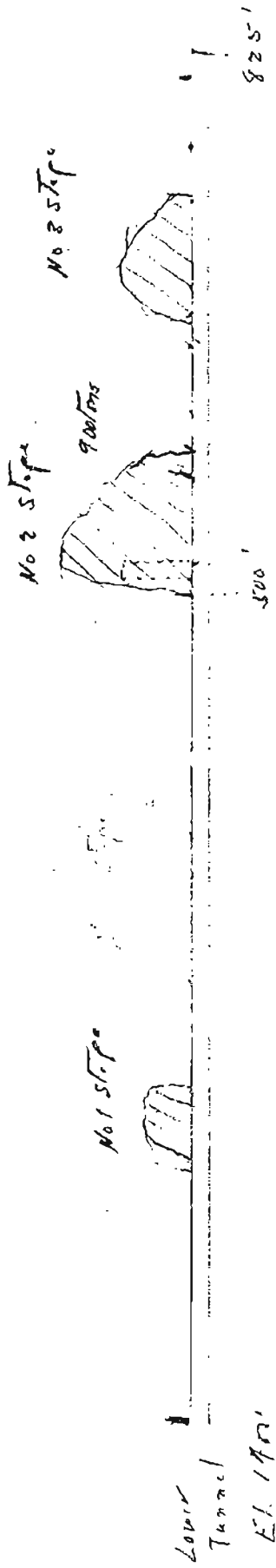
This year operations were limited to pumping out the Sea Level workings. All the ore was reported stoped from the surface to the lower level, 120 feet below the surface. The bottom of the drift of the lower level was sampled with reported poor results. The company suspended operations in April and dropped all holdings except the Goo Goo, Goo Goo Extension and the Sea Level claims. At the present time a watchman is maintained on the property.

June 2. Returned to Juneau.

Fliegstaff Mine

May 15 - 1959

Scale 1" = 100'



Estimated Slip-d Tracing 1200' TMS