IR 195-37

TERRITORY OF ALASKA
Department of Mines

Preliminary Report of Investigations and Itinerary of J. C. Roehm in the Wrangell and Petersburg Precincts.
June 9 to 29 inclusive
1945

June 9 and 10. Juneau to Petersburg.

June 11. Petersburg to Woewodsky Island.

The following information was obtained from the U. S. Commissioner's office at Petersburg:

The Kuiu Zinc Mines, Inc. has filed intent to hold 32 claims on Kuiu Island. The recorded document is signed by Helen Z. Hawkes as secretary. There are several assignments on file, signed by associates of J. C. B. Hawkes, of claims to the Kuiu Zinc Mines, Inc., one of the assignors being J. P. Morgan of New York City.

J. H. McDaniel and Harvey C. McKowan have one claim on record called the Blondie Coble Lode Claim with the location date of May 3, 1943, the location is given as, "Beginning at Initial Post, one tin can on a hemlock tree on Kupreanof Island, . . .". This claim is described as covering a deposit of bentonite.

F. R. Porter, Fred McGill and H. D. Colp have one claim on record covering the Baird Prospect adjacent to Baird Glacier, and one claim called the "Cascade" at the south end of Thomas Bay.

Mary McKallick, Mike McKallik and G. W. Morgan have 36 claims in three groups of 12 each and one millsite. The groups are named the Sunlight groups and are on record with the description covering the location of the old Tower Copper Mine inland from Tower Bay at the head of Duncan Canal. The same locators have six claims designated the Ironton Nos. 1 to 6, inclusive, on record with the location given as the left hand side of Tower Bay. They also have a group of three claims named the Mica Nos 1 to 3, inclusive, on record with the location given as 5 miles inland from the head of Tower Bay. Two lode claims, B. Nos 1 and 2, are on record with the

location on Castle Island, locators being Mike McKallick and G. W. Morgan.

R. Porter is holding and working on a claim, the location of which is on the north side of Thomas Bay at a point 4 miles south of Baird Glacier. Mr. Porter and one associate are engaged in mining amethyst quartz under the direction and with the help of Carl Vevelstad of Petersburg.

The Alaska Juneau Gold Mining Company has filed intent to hold several claims at Red Bluff Bay on Baranof Island.

Earl Ohmer and associates have restaked the Hattie and the Maid of Mexico prospects on Woewodsky Island.

F. Wyant of Tebenkof Bay, Kuiu Island, claims the discovery of the clear quartz that is known to have come from Thomas Bay several years ago. According to Mr. Wyant, this vein was found at an elevation of about 2000 feet while hunting and is located inland 2 miles from the north side of Thomas Bay. This is very near the amethyst discovery by R. Porter. The vein was reported to be 8 feet in width and was exposed for 20 feet. At the time of discovery a few pieces of the quartz were obtained and brought to Petersburg. Mr. Wyant has not returned to the discovery since and it is very doubtful if anyone else has seen it. He has promised to revisit the vein and forward samples to this Department. He, in turn, was promised an examination providing the quartz proves of value.

June 12. Preliminary examination of Maid of Mexico Prospect.

The old workings of the Maid of Mexico gold prospect are located 1-3/4 miles inland at the end of a good trail beginning at the old mill of the Olympic Mining Company at the beach on the northwest end of Woewodsky Island. Very little information was obtained from the old surface and underground workings due to dense cover and caving at a point 25 feet inside the portal. A few hours work would open this adit. These underground workings were reported to consist of 80 feet of cross-cut to the vein, 100 feet of drift on the vein, two small stopes and raises 65 and 40 feet above and one raise to the surface. An incline shaft was sunk on the vein within the adit to a reported depth of 90 feet. Numerous open-cuts were observed along the vein. Three cuts northeast of the adit were found open for observation while most of the cuts to the southwest were in part filled. The strike of the vein changes from N. 70° E. to N. 50° E. northeast of the adit portal. This northeast section of the vein is in altered greenstone while to the southwest the vein appears to be on the contact of altered greenstone schist and limy shales. The vein consists mainly of a white milky quartz, maintains a width from 4 to 6 feet, and contains small lenses of a grayish blue quartz

in which are sulphides and free gold. These small high-grade lenses are distributed along the vein and on both walls, and appear to be confined to the section of the vein where it cuts from the greenstone onto the contact with the lime shales and in the same section the vein is intersected by a north and south fault on the hanging wall or north side. The largest of these high-grade lenses was reported to have been 18 inches in width and a few feet in length at the surface but decreased both in width and length in depth and decreased in gold content. There is also a very noticeable change in the dip of the vein from about 60° on the southwest to nearly vertical in the last cuts to the northeast.

The following samples were taken which represent the concentrate pile below the mill and the three open-cuts northeast of the adit portal:

Sample 1106 was a four-ppund sample taken as representative of two or three tons of sulphide concentrates - Results: Au. 1.62; Ag. 4.40 - total value $59.78.

Sample 1107 was taken across 5 feet and consisted of greenstone schist and quartz in the No. 1 cut northeast of the adit portal on the bank of the creek. This cut is located 200 feet northeast of the portal. - Results: Au. 0.63; Ag. 1.80 - total value $23.31.

Sample 1108 was taken across 4 inches of a high-grade lens on the hanging wall of the vein in Cut No. 2 or 15 feet northeast of Cut No. 1 - Results: Au. 0.98; Ag. 0.7. total value $34.79. *

Sample 1109 was taken across 6 feet of white quartz and a few inches of mineralized schist in Cut No. 3 located 350 feet northeast of the adit portal - Results: Au. nil; Ag. nil.

Following is an abstract from a letter dated 10/20/1923, addressed to Mr. Harvey, operator of the former Olympic Mining Co., at that date owner of the Maid of Mexico Prospect. This letter was found among correspondence in the old mine building of the Olympic Mining Co. The letter is signed by J. L. McPherson, Civil and Mining Engineer of Seattle, Washington, and gives assays of samples apparently taken within the adit:

"The assays of the 'Maid of Mexico' samples were as follows

#1 Mineralized portion face of drift N. E. end of tunnel - Gold $1.20; Sil. $0.39; Total $1.59

#2 Mineralized portion face of drift S. W. end of tunnel - G. $5.60; S. $0.89; T $6.49

#3 Same locality quartz and vein filling G. 0.20; S. 0.16 T $0.36

*Not received at date of writing.

#4 S. W. end of raise - 4 inches mineralized quartz on footwall: G. $22.80; S. 0.65 T $23.45

#5 Same locality, quartz and vein filling: G. 0.20; S. 0.11 T $ 0.31

#6 N. E. outcrop about 1500 ft. from tunnel: G. $ 2.00

#7 Outcrop about 300 ft. N. of tunnel G. $ 0.20

These results would tend to confirm the opinion that the values in this vein are in the mineralized stringers or 'pay streak', as the samples of the quartz, apparently barren of mineral showed little if any values. The probability of the widening of the mineralized portionor of larger or richer pay shoots can only be determined with development."

The following information was obtained as to the history of development:

The Maid of Mexico vein and another parallel vein, the Maid of Texas, were discovered by Charles Smith about the year 1908 during development by the Olympic Mining Co. on the Helen S and Hattie Prospects. Mr. E. E. Harvey financed the early development and purchased the property for a few thousand dollars for the Olympic Mining Co. Mr. Harvey had some surface work done and later became owner through court judgment against the Olympic Mining Co. During the year 1926, Mr. Harvey leased the property to Leo Haider who started the cross-cut adit, and later formed a partnership with Tony Steele and Earl Ohmer. A revolving type Straub stamp mill, a compressor, concentrating table, and other equipment were placed near the adit portal on the small creek and put into operation. Formerly Haider had built an arrastre. The remains of the mill and machinery are still on the site, but in a state beyond repair. A few shipments of amalgam were reported to have been made to the smelter at Tacoma with the highest returns amounting to $600.00 for individual shipments. Harry Townsend is reported to have examined the property in 1933. M. J. Jasper, who was reported representing the Consolidated Mining & Smelting Company of Canada, Ltd., examined and did some surface trenching on the property during the year 1936. The property has since been idle and is now held by E. Ohmer and associates of Petersburg.

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The Maid of Texas vein is a parellel vein to the Maid of Mexico and located about 100 yards to the southeast. A few partly filled cuts were noted with dumps containing similar white quartz. However, the vein in place was not observed, and no samples were taken.

June 12.

The Hattie Prospect located near the beach on the west side of Woewodsky Island was examined. Here, in similar type structure but different formation than the Maid of Mexico, are two parallel veins occupying brecciated shear zones. The distance between these shears is nearly 300 feet. The veins and shears strike N. 45° to N. 65° E. and the dip is variable to the southeast. The footwall vein, which is cut at the portal of the adit and which was apparently cut by the vertical shaft 65 feet in, is the Hattie vein referred to in U. S. G. S. Bulletin 347, page 183. The hanging wall, or south vein, at the end of the cross-cut adit, and along which a few hundred feet of drifting was done on this level, is a smaller vein but similar in appearance. Two levels, one at 63 feet and the other at 134 feet, were reported off the shaft. The country rock containing both shears is dioritic in appearance, and probably represents a transitional phase from quartz diorite to andesite, since the quartz diorite occurs along the beach on the southern end of the island and andesite on the northern end along the west shore; and there is no noticeable contact between them. The quartz in both shears appears to be rather barren of metallic content, however, the altered schist along the walls carried some pyrite. The walls on both sides of both veins show a high degree of alteration from massive crystalline rock down to a talcose schist. Also contained in the shears and quartz are both small and large pieces of partially altered country rock. Small ore shoots were reported to occur in these shears with a southwest plunge; however, none were observed in the adit workings, and the surface workings are overgrown with vegetation and more or less filled.

Small creeks follow inland upon the strike of these shears to the northeast. It was noted that these large quartz masses are localized along these shears at points where they are intersected by north and south striking faults. These quartz bodies appear to be lenses ranging from 300 to 400 feet in length and vary in width up to 20 feet. For the most part the quartz appears to be barren of sulphides, but the schists alongside carry small amounts of pyrite and ocassionally galena.

In order to arrive at the average gold content of this quartz, a 30-pound sample was taken from numerous places around the end of the dump which consisted mostly of quartz with some sulphide bearing schist.

Sample No. 1110. Results: Nil - both gold and silver.

Sample No. 1112, - taken across 4 feet of highly mineralized schist in the adit on the footwall of the southeast vein at a point 100 feet back from the face. Results: Nil - both gold and silver.

Sample No. 1113 was taken from a long open-cut a few feet above high tide level on the southeast vein across 8 feet of quartz containing scant sulphides and schist. Results: Au. 0.03; Ag. 0.20.

Sample No. 1111 was taken from the Hattie vein across 5 feet of quartz and schist carrying abundant sulphides and from an old cut located 2000 feet northeast from the adit. Results: Nil - both gold and silver.

No suitable places were found for taking samples on the Hattie vein in the vicinity of the adit near the beach. From all appearances the Hattie main vein quartz is nearly barren of metallic sulphides and the gold content extremely low,- whether or not enriched sections occur along it will have to be determined by further development.

The Hattie Prospect was held and developed by the Olympic Mining Company. Reports were to the effect that some ore was mined and transported to the mill on the Helen S claim. Further reports were that the mill results were low and the ore was not amenable to amalgamation.

During the year 1936 M. J. Jasper had an option on the property, and he did some trenching and considerable sampling for the Consolidated Mining and Smelting Company of Canada, Ltd.

June 13.

Another set of northeast striking shear zones are intersected by a north and south shear is represented on the Helen S and Harvey patented claims on the northwest end of the island. While this intersection zone is almost unobservable on the surface due to vegetation, a greater portion of the ore was reported to have been found on the north and south shear. This shear is in greenstone of andesitic type and shows pyritized schists with quartz veinlets across a width of 40 feet. The dip of the schists is from 65° to 70° east. Small quartz lenses with variable widths of schists carrying pyrite were observed distributed along the northeast striking shears. Some surface work was also done on these. An extensive dump is found behind the mill with the material having come from two shafts about 600 feet apart off from which considerable drifting was reported to have been done. The ore as milled was reported to have averaged $3.66 in gold per ton which was too low for profitable extraction.

Sample No. 1117 consists of pyritized schist taken from an old cut located 1000 feet from the beach and represents in part a portion of the shear zone. Results: Au. 0.06; Ag. 0.20, Total value $2.24.

Luderman Prospect.

Another prospect called the Luderman is located on the northwest end of Woewodsky Island. In contains a shear zone 40 feet in width and cuts across above high tide level. The strike is N. 70° E. and the dip is 65° S. The discovery was made by a man named Luderman while crab fishing in Duncan Canal. Gold colors can be panned from material taken from the top of the mineralized greenstone schists along the shear. The formation is clastic greenstone lava of andesitic type. A section 12 feet in width near the center of the shear contains the most pyrite with minor amounts of galena and sphalerite.

Sample No. 1118 represents a channel across this 12 feet width. Results: Nil - both gold and silver.

June 14 & 15.

Fred Magill reported that two bluffs located at tidewater at the head of Little Duncan Canal were barite similar to the Castle Island deposit. Investigation revealed that the bluffs were of limestone. These two bluffs are on opposite sides of a small bay and represent two outcrops of the same stratum nearly 100 yards apart. The stratum strikes N. 20° W. and dips 60° S.W. The footwall is a schisted black slate and the hangingwall is in the sea covered with loose material. Several dikes of a dioritic composition traverse the limestone at various angles and dips. The contact of the dike material with the limestone is void of metallic minerals. The colors of the limestone vary from grayish blue to light buff to white with spots stained brown to red by iron oxides. Small veinlets of quartz and secondary calcite are common in both bluffs. Due to the numerous quartz veinlets and the dikes themselves, this limestone is probably too impure in quality to be a source of commercial lime. Another factor that detracts from its value is that Little Duncan Bay goes dry for nearly two miles out at low tide. Each bluff is 200 feet in length, from 100 to 150 feet in width and 50 to 70 feet in height. Some of the pieces appeared to be heavy, indicating a slight barium content, but two samples, Nos. 1114 and 1115, gave nil results in barium sulphate.

June 19. Cascade Prospect.

The Cascade prospect, formerly known as the Colp Prospect, is located at tidewater in the southeast arm of Thomas Bay south of Spray Island. Beginning at tidewater a large banded and brecciated quartz lens is traceable for a distance of 300 feet. The width varies from 7 to 12 feet. The strike is also changeable, ranging from N. 70° W. to nearly east-west and the dip is variable towards the south. Slickensides are numerous along the walls and are contained in between the quartz bands which have the appearance of sheeting. A small quartz vein which strikes N. 50° W. joins the main vein at the cross-cut adit a few feet above the main adit. Minor S-type folding is much in evidence in the hangingwall of a

a mica garnet schist. This type of structure appears to be similar to the larger structures on which this large lens occurs. The lens cuts diagonally into hornblende schist to the west. The schists have various degrees of strike ranging from nearly east-west to north and south which indicates large folding.

At an elevation of 15 feet and situated 100 feet back from high tide level is an adit driven along the footwall section of the vein. The adit measures 73 feet, and 20 feet back from the face a short cross-cut cuts through to the hangingwall.

Sample No. 1120 was cut across 7 feet of the most favorable portion of the vein in this cross-cut. Results: Au. 0.02 ; Ag. 0.70 Total value $_____ *

Located above this adit a distance of 50 feet and about 15 feet in elevation is a cross-cut adit 20 feet in length cutting across the vein.

Sample No. 1119 was taken across 9 feet 6 inches, the entire width of the vein in this cross-cut. Results: Au._____; Ag._____ Total value $_____ *

The quartz in the lens is of a banded nature and contains small bands of nearly pure arsenopyrite and fewer and narrower bands of pyrite with smaller amounts of chalcopyrite and galena. The quartz is of the high temperature type and the greater portion of the sulphides are of lower temperature type. Thus the metallization appears to be of the supergene type of origin. This prospect is held by Fred Magill, Fred Porter and Harry Colp.

Baird Glacier Prospect.

The Baird Glacier Prospect is located in a steep walled draw south of Baird Glacier and north of Elephant Head in the north arm of Thomas Bay. A fracture zone striking parallel with the draw, N. 70° W., and over 100 feet in width, is intersected by another fracture zone of less intensity which strikes N. 80° E. Small finger sized and larger quartz veins containing pyrite, galena, arsenopyrite and free gold are contained in both sets of fractures. Some of the larger fractures contain broken pieces of the quartz diorite country rock, which show only slight alteration, and broken pieces of quartz. The largest single filled fractures ~~xxx~~ noticed measured 12 inches. The quartz diorite between the fractures is practically unaltered, and the distances between fractures and intersections is variable. In fact too much so to make for profitable extraction unless the fractures were extremely high grade, as the individual fractures are too small and short to be mined individually. The low angle of intersection of these two fracture zones makes a length for the deposit of over 400 feet. Other zones of similar description were reported some distance along the strike of the main northwest zone.

* Not received at date of writing.

Sample No. 1122 represents only pieces taken from several of the fracture fillings and does not represent any individual width. Results: Au. 0.02 ; Ag. 1.50 Total value $_____ *

June 20.

Robert Porter was reported to have located a small vein of amethyst quartz inland from a small bay opposite Scenery Cove in the North Arm of Thomas Bay. Mr. Porter was not in favor of showing his discovery on date of visit, since already some one had set off a blast ruining considerable of his gem material. He is now engaged in trenching the vein.

According to Mr. Porter the vein is located 1-3/4 miles from the beach on the side of a steep mountain. The vein varies in width from 1 to 5 inches and is enclosed in mica gneiss. Several small specimens were observed at his camp on the beach, all of which were highly fractured. No terminated quartz crystals were noted, but rather the quartz is compact, showing peculiar cleavage not common to quartz, and a tendency toward narrow banding. Included in the quartz are small bunches of biotite mixed with a white granular quartz. The color of the vein quartz is a light lavendar with thin fragments nearly colorless. Sizable carat pieces could have been cut from some of the less fractured pieces, however whether or not these pieces will part along the planes of banding during the cutting is mot known. Small shear planes are also noticeable in some of the pieces,(such as specimen on display in office) along which a light colored mica is distributed and which detracts from the beauty of the quartz as a whole.

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According to "Quartz Family Minerals" by Dake, Fleener and Wilson, page 87,

> "The amethyst, to be suitable for gem purposes, must be a deep, uniform color, otherwise the stone will appear colorless or gray when viewed by artificial light."

Among all the samples that were shown the writer, none possessed a deep or strong color. Further prospecting and development are in order, and may result in a better grade of material being found.

Noticeable in the mica schist and contained in with the mica bunches in the quartz are very glossy black metallic particles. These are extremely small and were not identified.

A trip was made inland on the north shore of Lindenberg Peninsula to examine a reported 6-foot vein of magnetite. Fred Porter claimed the discovery a few years ago while deer hunting in the vicinity. Mr. Porter and Fred Magill accompanied the writer. The location is about midway between Cape Straits and Portage Bay

* Not received at date of writing.

and inland one-half mile in the bed of a small creek. After hunting for half a day the deposit could not be found. Several hornblende dikes were noted cutting the slate and graywacke formation. Mr. Porter has promised to rediscover the vein and forward samples.

June 21 & 22.

At the request of Harry Colp and associates for an opinion on the old property of the Portage Bay Copper Company on Portage Mountain, a trip was made to the old workings inland from the head of Portage Bay. An old road right-of-way leads from East Bay at the head of Portage Bay south along the west and north slopes of Portage Mountain, a distance of 4 miles to an elevation of about 2000 feet. One adit with a length of 130 feet was located in a narrow draw at the bottom of a large alder slide on the northwest end of the mountain. This adit was driven on a fault zone along a contact of diorite and greenstone lava. The fault zone and contact strike northeast and dip 50° to 55° northwest. A slight indication of copper minerals was noted along the fault zone in the adit together with some altered shale filling. Located 500 feet above the adit in the draw and below a small waterfall, a north and south fault intersects this fault zone on the hangingwall. Here a zone of massive sulphides with both large and small blocks of limestone occupy the opening. Thin bands of pyrite and pyrrhotite with smaller amounts of chalcopyrite, bornite and a grayish mineral, probably tetrahedrite were noted. The draw above the waterfall was snow filled as were also the reported open-cuts above.

Sample No. 1138 was taken from the main sulphide showing at the waterfall and represents 2 to 3 feet. Results: Au. 0.02; Ag. 0.80; Cu. Tr; Ni._____. *

June 24.

An antimony prospect was examined on December Point in Wrangell Narrows at a point 2-3/5 miles north from Point Alexander and 1-1/5 miles due north of Midway Rock. The workings consist of an old cut located a few feet up from high tide level. This cut is 25 feet long and from 4 to 5 feet deep. The formation in which this prospect is contained is a reddish colored granite showing a fractured intersection. One set strikes north and south with nearly vertical dip and the other set strikes N. 55° E. and has a 60° dip to the southeast. The fractures appear as dark streaks and are exposed from tidewater to cover on the beach. The widths of the fracture zones and the length and width of the zone of intersection could not be determined. Contained in the fractures and slightly penetrating into the granite are needle-like drystals of stibnite with pyrite and their altered products. A sample from this prospect was sent to this office last year for assay. Results show 13.9 percent antimony with traces of gold and silver (BDS 779).

Sample No. 1123 represents pieces frm several of these fractures and not any width. Results: Au._____; Ag. _____; Result of test for WO _____. *

* Not received at date of writing

June 24.

A stop was made on the north side of Woronkofski Island KX-117 en route to Point Nesbitt on Zarembo Island.

Two old gold workings are reported on this island with two adits. Only one adit was found and this is described in U.S.G.S. Bulletin 347, page 185. This gold prospect is located along the beach at a point half a mile west of the Elephant Nose on the north side of the island. The showing consists of a large quartz lens paralleling the beach for 300 feet and a few feet back. This lens is cut by several old rock cuts and a cross-cut adit 45 feet in length. The lens strikes north and south with a 30° dip to the west. The vein and lens are contained in a coarse crystalline syenite. To the north where the vein hits the beach, it splits into three smaller veins of different strike. The adit cross-cut is located on the west end of the exposed lens, and the vein in this section varies from 6 to 8 feet in width. The main width of the lens is white quartz containing altered pieces of syenite and phyllite schist. Both walls ~~is~~ of the lens consist of altered syenite which shows widths of alteration varying from 6 inches to 2 feet. Sulphides are unevenly distributed throughout the quartz and the schisted walls, with the greater amount on the hangingwall side. These sulphides consist mostly of a pale colored pyrite with small amounts of galena and sphalerite.

Sample No. 1124 represents a channel sample across 5 feet of the better looking portion of the vein at a point 36 feet inside the adit. Results: Au. N.T.; Ag. 2.80. Total value $____ *

Located along the beach a few hundred feet west of the Elephar Nose several milky white quartz veins were observed outcropped on the beach. These veins contain a small amount of pyrite and locally bunches of long needle-like metallic crystals up to 3 inches in length. These crystals were found to be rutile.

Sample No. 1125 is a sample of the quartz containing the greatest amount of pyrite. Results: Au. N.T.; Ag. Tr. Total value $_____ *

June 25. KX-99

Fluorite was reported by Harry Colp to have been found at Point Nesbitt, the southermost tip of Zarembo Island. The point was examined and found to consist entirely of greenstone lava. The beach for a distance of a mile in each direction from Point Nesbitt was examined carefully with no indications of any fluorite.

Harry Colp made a discovery of a few small veins and bunches of fluorite at a point 3 miles north of Pt. Macnamara on the beach. The formations in this vicinity consist of greenstone lava, lava breccia, lava dikes, agglomerates and lenticular masses of rhyolite. Cutting these formations diagonally is a set of north and south striking fractures with steep dips to the east. A few of these

* Not received at date of writing.

fractures show slight movement and have developed into small veins containing short lenses, vuggy pockets and seams filled with green, purple and colorless fluorite with associated quartz and pyrite. The small fracture veins can be traced from low tide to under cover at the beach, distances of 400 to 500 feet. These quartz-fluorite lenses are very irregularly spaced along the veins with the longest less than 100 feet and greatest widths from 4 to 6 inches. Also the distances between the parallel fractures is irregular - in many cases several feet. Neither are the fractures close enough together, nor is the fluorite sufficiently distributed in the veins to consider mining and concentration with present prices.

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The fluorite appears to have originated from hot solutions probably contained in the lavas themselves and during the process of cooling. These lavas are shown on Plate No. 1, U.S.G.S.Bulletin 800, to be of Tertiary period. These lavas were apparently fractured following closely after their extrusion and before they were entirely cooled. These north and south & fractures are common in this entire section of southeastern Alaska. They were found to be older than the northeast fracturing which also was generally found in this region. A large portion of the known prospects in the area appear to be associated with these fracture zones, located primarily at intersections. These fluorite veins in the north and south fractures indicate the age for this system of fracturing as late Eocene and the Northeast system sometime later. The remaining Tertiary Epochs, the Oligocene, Miocene and Pliocene are not represented in southeastern Alaska and must have represented periods of degradation during which innumerable minor concentrations of metallic minerals in the zones of fracturing were formed.

A trip was made south along the beach from Pt. Macnamara for a distance of 4 miles. No further fluorite was picked up until opposite Bushy Island where another similar occurrance is known and is described on page 14 of "Summary Report of Mining Investigations in the Ketchikan, Wrangell, Petersburg Precincts", May 24 to June 27, 1942, By J. C. Roehm.

June 26.

A search was made along the west shore of Duncan Canal for barite that was reported to be contained in the limestone bluffs. Along both the west and east shores of Tower Bay there are numerous bluffs of a bluish gray to light gray limestone. Some bluffs are in part crystallized, while others appear non-crystalline.

Sample No. 1135 is a representative sample of a large bluff of limestone on the east side of Tower Bay near the mouth. Result: Calcium carbonate content _____% . *

Sample No. 1136 is a sample of heavy limestone from the west side of Tower Bay near the mouth. Result: Barium sulphate content _____% *

* Not received at date of writing.

June 27.

A low grade zinc-lead prospect was examined on Taylor Creek, 1½ miles from tidewater on West Bay in Duncan Canal. A short description of this prospect is given in U.S.G.S. Bulletin 347, page 142. The showings are distributed along both banks of Taylor Creek and confined to a buff colored limestone, a central portion of limestone strata 50 to 75 feet in thickness and interbedded in greenstone schists. The ore body occupies the crest and limbs of a synclinal fold which plunges at a low angle to the northeast, conforming to the variable dip and strike of the folded strata and schists. The ore is exposed for a distance of 400 feet, going under cover on the north side of the creek to the north and cut off by a fault to the southeast. The width of the ore body ranges from 6 to 12 feet, narrowing on the limb of the fold to the north. The ore lies at the base of the buff colored limestone which is 20 to 30 feet in thickness. Underlying the ore is a grayish-blue mottled limestone which in turn is underlain by green schists. Overlying the buff lime is another layer of green schists. Exposed across a width of 50 feet on the southwest side of the creek is a mass of aplite. Its relation and structure could not be determined. This series of limestones and schists were followed upstream to a point 500 feet from the orebody. Here folding was found in reverse, showing a structural anticline plunging at a low angle to the northeast. The buff limestone bed was found to be away from the creek bed under cover to the east. The footwall green schist, while highly schistose directly under the limestone and near the folding, takes on a more massive and crystalline texture away from the contact. Cutting across the formations and the synclinal fold and paralleling the direction of plunge several diabase dikes were observed, ranging in width from 6 inches to 3 feet. A lime-filled fault zone strikes N. 75° W., and follows the course of the creek, cutting across the fold and displacing the normal sequence of the beds.

The ore is made up of abundant pyrite together with lesser amounts of fine galena and sphalerite disseminated throughout the basal portion of 12 feet of the buff limestone.

Sample No. 1139 represents a portion of the 12 feet that contains the greatest amount of sulphides and is not an average for the entire width. Results: Au. 0.03; Ag. 0.30; Zn. 3.9; Pb. 4.55. *

Note

Since assay returns have not been received at the date of writing much with regard to future recommendations depends upon gold and silver values.

Several pieces of this ore are on exhibit in the Juneau office.

* Note received at date of writing.

C O N T E N T S