

SUMMARY REPORT OF MINING INVESTIGATIONS
IN THE HYDER PRECINCT, ALASKA
September 17-24, 1941.

RECEIVED
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September 17. Arrived Hyder aboard motorship Chacon.

September 18. Investigation of Riverside mine.

The Riverside mine has been under development by the J. H. Scott Company since July, 1940 and the mill has been operating intermittently since June 1, 1941. Mill tests were made during the spring of 1940, but an actual mill flow was not developed until this year. Very little underground development has been done other than actual stoping of pillars and one intermediate sub-drift and raise.

Ten patented claims were reported purchased by Scott and Company at a reported price of \$50,000. The first report was that the mill and other machinery were purchased for junk. However, commercial amounts of scheelite were discovered in the ore and a favorable report on the mine was made by a geologist named Hall. The property was purchased by option and Mr. S. C. Putnam was placed in charge of development. Apparently, a contract was made with the Atolia Mining Company (P. Bradley interests) to deliver the tungsten concentrate to the General Electric Company, Cleveland, Ohio via Premier dock, Canadian National Railway, from Prince Rupert.

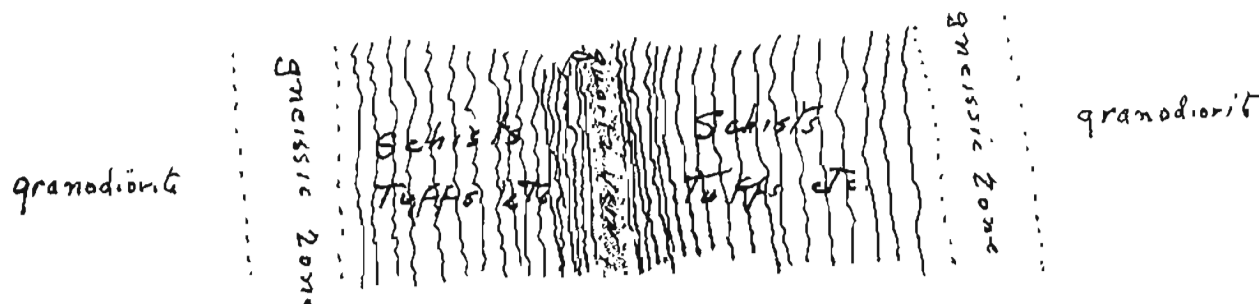
The mine was visited by the writer accompanied by Mr. Putnam, and only those portions of the mine were visited where scheelite was known to occur. A Mineralight was used to determine the scheelite in the ore.

The most important tungsten-bearing vein is the Lindeberg or main vein. This occurs in a 50-foot band of green to gray schist inclosed in granodiorite. The vein occurs near the center of the band of schist along a highly developed shear zone. The general strike of the vein and schist band is N. 60° to 70° W. and the dip varies between 70° to 80° northeast. In places along the drift the vein slightly cuts the schistosity, but in general conforms to the schistosity in both strike and dip. The original rocks, which make up these schists, have not been definitely determined. Hall, geologist, for Scott and Company, classified these schist bands as sediments and occurring as roof pendants in the granodiorite. Other interpretations of these schist bands are to the effect that they consist of the original green tuffs, lavas and sediments found overlying the granodiorite and were caught between recessive sills during the intrusion of the Texas Creek Batholith.

KX-118-41

Bradley's Claim 118

A cross-section of the band which incloses the Lindeborg vein is as follows:



The more intense shearing is situated in the center of the schist band and along both walls of the vein. Lenses of quartz occur on the vein, some of which carry the mineral scheelite, in addition to various sulphides of other metals.

In the underground development on the upper level the Lindeborg vein has been developed by tunnel for several hundred feet. Near the southeast portion of the tunnel a quartz lens 200 feet in length and with widths up to 6 feet is exposed. This quartz lens shows scheelite under the lamp for its entire length. The WO_3 content has been estimated by Mr. Putnam at one-half per cent. This lens contains low values in gold, but was not economical to mine during the earlier operations.

Most of the earlier gold mining was confined to several small lenses with a high percentage of sulphides on the intermediate level 100 feet below. These contain a WO_3 content averaging from 1.5 to 2 per cent. The present mining is confined to the various remaining pillars and some newly found lenses on the Lindeborg vein. These lenses vary from a few feet to 75 feet in length and up to 3 feet in width. The ore is mined and lowered through a raise to the mill level from which it is trammed by hand to the mill.

A lens of quartz 30 feet in length on the Ickis vein of the mill level was found to carry a small percentage of scheelite. The lens contains an ore of different type and texture than the Lindeborg vein. The scheelite occurs in larger crystals and is associated with less sulphides of other metals. This makes for better milling ore. The Ickis vein is in the granodiorite and further development might reveal larger tungsten-bearing lenses.

The cross-vein, which is located between the Ickis and Lindeborg veins, and follows a north and south strike, is also contained in the granodiorite. This vein contains a large amount of sulphides and economical gold values. The presence of scheelite was not detected.

Extensive developments were formerly carried out on the Lindeberg vein on the lower or mill level. A few small quartz lenses were encountered, but these show only minor amounts of scheelite.

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Carroll
The mill has been operated intermittently since June 1, 1941 with a daily capacity ranging from 30 to 35 tons. Some of this tonnage is being sorted from the waste dump of the tunnel with the aid of a Mineralight. The ore from the mine is dumped into a small bin with a 1-inch grizzly with the oversize passing under a water spray, thence some waste is sorted and the remainder passes through a Traylor No. 8 gyratory into the lower ore bin. The ore is fed to a 5x4' ball mill which makes a primary grind and the flow passes over concentrating tables and is elevated to No. 2 5x4' ball mill which regrinds under closed circuit through a Dorr classifier. A Pan-American jig and tables take out additional scheelite concentrate. Thence the flow with material between 35 and 60 mesh is fed to four newly installed Kraut cells. These cells float the scheelite and sink the sulphides. Thence the flow is taken into the older type cells from which a concentrate of some scheelite, lead, and sulphides are taken out with a portion of each remaining in the flow. These tailings are ponded. One of the final products is a concentrate of nearly pure scheelite from the tables and front cells. This is sacked in 150-pound sacks and will be shipped to the General Electric Company at Cleveland, Ohio. The other concentrate of scheelite, lead and sulphides will be shipped to a smelter for returns in gold and other metals.

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Carroll
A new change room with running hot and cold water has recently been constructed between the mill and power house buildings. In the power house two Fairbanks Morse semi-diesel engines--one of 150 H. P., operates a 175 KVA 220-volt Westinghouse generator; and the other, a 75 H. P., operates a smaller Westinghouse, 220-volt generator. Power is transmitted to the mill to a 150 H. P. motor which operates a line shaft off which most of the mill machinery is operated. Another 75 H. P. Fairbanks Morse semi-diesel runs a horizontal and vertical 14x8-3/4x10" Sullivan compressor, which furnishes air for the mine.

Most of the machinery in the power house is protected with rail guards and heavy screens. No immediate necessity for further safety devices was noted. The buildings are being kept clean and conditions in general are fair. The one outstanding danger with respect to both mill and mine is fire. The mill building, a wooden structure covered with sheet iron, is situated less than 50 feet from the portal of the lower tunnel. The fumes from a mill fire would draw into the lower tunnel and through the mine workings. One light wooden door, located a few feet in from the portal, is not sufficient protection. This door was apparently installed to control the draft through the underground workings during the winter season. A steel door with fire proof casing instead of this wooden structure for fire protection is required. As a fire preventative the company has installed several bomb-type tetrachloride fire extinguishers in the mill and other camp buildings.

These offer protection only during small fires. Other methods of combating fire are lacking. Water for mill use is pumped from Salmon River across the road into a small wooden tank in the mill. This tank has only a small capacity, and there are no provisions for using this water in case of fire.

Conditions within the mine are not dangerous. The drifts and stopes are in good ground and very little timber is required. However, the present operator is taking advantage of this fact and he is not using sufficient timber for safe mining. Ladders are in many places broken and ropes are used in the stopes to replace ladders and a means for hoisting machines and supplies into the stopes. From one to one and a half tons of powder is used per month, and is delivered from Hyder by truck in small amounts. No storage facilities are maintained at the mine.

A total of 27 men were employed at the mine, several of which were reported to be Canadians. A request for the names and nationality of the workmen was made to Mr. Putnam. This was not granted, however, Mr. Dale, customs collector and acting immigration agent, reported that he had a record of each and was allowing this due to a shortage of mine labor in Hyder.

September 19-21. Visited on foot several old properties on the Fish Creek drainage.

The Liberty-Last Chance group of claims is located along Skookum Creek, a tributary of Fish Creek, 4 miles NE. via trail from Mile 4½ on the Salmon Creek road. This group contains eight unpatented claims; namely, Last Chance, Last Chance Nos. 1 & 2, Liberty, Liberty Nos. 1, 2, 3 and 4. The owners are B. B. Smith, Sidney Anderson, John Ronan and Florence Anderson of Hyder. The claims contain many of the old workings described in U. S. G. S. bulletin No. 807.*

The writer examined the tunnel workings on Last Chance claim No. 1, located on the west side of Skookum Creek. Here a quartz vein was traced 600 feet on the surface, and it is developed by two tunnels and a connecting raise. The vein is in granodiorite and strikes N. 66° W. with a dip of 65° NE.

The lower tunnel, elevation 2980 feet, has a length of 300 feet and is driven in a northwestern direction. This follows the vein for a distance of 125 feet at the end of which a raise up 50 feet connects with the upper tunnel. The vein in this tunnel shows a very strong fissure which contains quartz ranging from 10 inches to 3 feet in width. A 40-foot section of this vein was reported to react for tungsten. This was sampled by Arthur Moa and results of one-half per cent tungsten oxide was obtained besides variable values in gold, silver, lead and copper.

*Buddington, A. F., "Geology of Hyder and Vicinity, Southeastern Alaska."

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The upper tunnel is located northwest of the lower tunnel and on the opposite side of the ridge at an elevation of 3030 feet. This connects near its southeastern end with the raise from the lower level. This tunnel follows the vein for 125 feet. In this tunnel the vein has a greater width, ranging from 3 to 6 feet. A winze was sunk to a reported depth of 40 feet on a small quartz lens and some stoping was done. A total of 22 tons of ore was shipped from this tunnel by the above owners in 1935. This ore averaged \$50 per ton in gold, silver and copper. No tungsten minerals were noted in the vein in this tunnel or in the surface cuts.

The metallic minerals noted in the ore consisted of galena, chalcopyrite, pyrite, bornite, tetrahedrite and arsenopyrite. The gangue minerals were calcite, quartz, chlorite, a little scheelite in lower tunnel, and various altered granodiorite minerals.

The following channel samples were taken in the above tunnels, last Chance No. 1 claim:

Sample No.	Location	Description	Width	OzS. per ton				Percentage		
				Au.	Ag.	Pb.	Cu.	WO ₃		
850	Upper tunnel, east face. (Moa sample No. 12) 10' east of banded quartz raise.	Highly mineralized section of vein,	3'							
851	Upper tunnel, 35' from east face. (Moa sample No. 10)	"	3'2"							
852	Upper tunnel, 55' from east face. (Moa sample No. 9)	"	3'5"							
853	Upper tunnel, west face. (Moa sample No. 7)	Banded quartz less mineralized than above.	5'3"							
856	Lower tunnel, 30' west of connecting raise. (Moa sample No. 4)	Banded quartz, abundant metallics.	3'							
857	Lower tunnel, 10' west of connecting raise. (Moa sample No. 5)	"	3'							
858	Lower tunnel, west face. (Moa sample No. 6)	"	3'							

On the Liberty No. 2 claim, located on the east side of Skookum Creek at an elevation of 3220 feet a mineralized zone in greenstone tuffs was examined. This zone occupied the top of a small anticlinal fold which has a northwest strike and dips of northeast and southwest. The tuffs are interbedded with sediments and both occur as roof pendants in granodiorite. Shearing has been parallel with the folding and mineralization has occurred within the zone of the fold. The metallic minerals were mostly pyrrhotite with some pyrite. Minor segregations of a bluish quartz are contained in the zone and a small amount of scheelite was noted associated with the metallic minerals. A 10-foot shaft was sunk in the center of the showing which apparently bottomed the zone of mineralization. a

Sample 859 was taken from pieces off the mineralized zone on the southeast side of the shaft. These consisted mainly of pyrrhotite. This sample gave the following results: oz. of Au.; oz. of Ag.;
and % WO₃.

There exists a number of pyrrhotite showings at the head of Skookum Creek, all more or less small in surface outcrops. Very little work has been done on these showings, and their structure and occurrence have not been worked out geologically. The important feature noted in these is the occurrence of small amounts of scattered scheelite. The occurrence of an association of pyrrhotite and scheelite in mineralized sulphide zones is rather unusual. Further investigation into these various occurrences is warranted. This type of mineralization presents much less of a metallurgical problem than does the Riverside ore which contains an abundance of lead with iron sulphides.

The Monarch tunnel on the Monarch claim was visited. This tunnel lies at an elevation of 2620 feet and is located north of and next to the Last Chance No. 1 claim of the Last Chance-Liberty group. The tunnel has a length of 35 feet and extends in a southeasterly direction. It follows a shear zone in granodiorite, which strikes N. 66° W. and dips 63° NE. The shear zone is 6 feet in width. A 20-inch quartz lens contained in the zone is exposed the length of the tunnel. The quartz contains the following metallic minerals in sparse amounts: Sphalerite, pyrite and a little galena. Scheelite shows in the face and for 15 feet back. Several quartz stringers occur in the shear zone which parallels the main vein, however, no scheelite was detected in them. Sample JCR. No. 854 was taken across the vein, 20 inches, in the face of the tunnel and gave results of % WO₃. Sample JCR. No. 855 was taken 12 feet back from the face from 20 inches of quartz in the roof. It gave results of % WO₃. The Monarch claim is held by Arthur Moa of Hyder, Alaska. Further development in this tunnel is warranted to determine the horizontal extension of this lens and the amount of tungsten contained. KX 118-48

The dump and surface showings of the Titan group were examined. This group of 10 claims is located between the head of Fish Creek and the International Boundary. The tunnel, elevation 3400 feet, was not examined. It was reported to be 600 feet in length and to have encountered no veins in its course. The vein on the surface above the tunnel is exposed by several open cuts which expose a fissured zone containing quartz stringers or small lenses. Some of these lenses have widths over 12 inches. These are mineralized with sphalerite, galena and pyrite. Samples were collected from the cuts, however, no scheelite was noted in them. Later these samples were passed under a Mineralight and there was no reaction for tungsten.

The lower tunnel of the American Mining and Milling Company, located along Skookum Creek above the Mountain View group, was examined for tungsten minerals. Scheelite was not noticed in the underground exposures or the dump. Samples Nos. 860 and 861 were taken in the tunnel at points 80 and 100 feet in from the portal. These gave results of % and % WO_3 , respectively. This vein as exposed in the tunnel is a contact vein between green schists and granodiorite. It has a strike of N. 60° W. and dips 55° NE. At a point 150 feet in from the portal a fault was encountered which cut off the vein. This fault strikes N. 22° E. and has a dip of 80° N. Drifts both ways along the fault have failed to encounter the vein extension. The American Mining and Milling Company, Ltd. owns three patented claims, U. S. Survey No. 1064. This company was reported to be defunct, with the property being held by A. P. McMillan, Burke Bldg., Vancouver, B. C.

September 21. The lower showings on the Bishop claim were examined for scheelite. This claim is located along Lower Skookum Creek, and between the Mountain View and Riverside claims. A vein of quartz and barite shows in a short tunnel in from the creek bank of Skookum Creek. This is distributed along a shear in granodiorite. The vein is mainly frozen and is not mineralized. At a point 100 feet above the barite vein is a quartz vein, which strikes N. 40° W. and dips 55° NE. This vein has a width between 2 and 3 feet and contains heavy sulphides, mainly pyrite, with a little galena. The vein shows some alteration along the granodiorite walls. Low gold values were reported as having been obtained and small amounts of scheelite were noted distributed in the heavy sulphides. No scheelite was observed in the barite vein. Sample 862 was taken across 4 feet on the barite vein and an assay of % WO_3 was obtained. The Bishop claim is owned by Pete Lowe of Hyder, Alaska. The claim has been surveyed, but not patented.

September 22. The underground workings and the surface exposures of the Gray Copper vein on the property of the Mountain View Gold Mining Company were examined, accompanied by Arthur Moa. KY-12084
20-80

The property of the Mountain View Gold Mining Company consists of eight claims and one fraction, all of which are patented. This group is located at the junction of Fish and Skookum creeks one and a half miles east of the Hyder road at a point opposite mile 4½.

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The tunnel, or lower underground workings, is at an elevation of 750 feet. This is locally called the Skookum tunnel. On account of a report that scheelite occurs in the Gray Copper vein, attention was given to this vein only. In the Skookum tunnel this vein was encountered at the end of the north crosscut at a point 1760 feet from the portal. At this point the vein was followed by drift 120 feet northwesterly and 40 feet southeasterly. The vein averages over one foot in width over the exposed distance. With the aid of a Mineralight scheelite was noted over the entire distance of the exposed vein, but most abundant in the northwestern end. Sample 863 was taken across 23 inches in the northwest face. This gave results of $Ni\% WO_3$. The vein strikes N. 56° W. and has a dip of 53° NE.

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On the surface, 300 feet vertically above, the gray copper vein has an exposed length of 475 feet. It starts along the edge of the granodiorite and strikes at a low angle into the green schists. (Note accompanying sketch). The vein in the surface cuts, the short shaft and short crosscut tunnel on these showings averages between 2 and 3 feet in width. Scheelite can be seen with the aid of the Mineralight over the entire exposed distance, both in cuts on the vein and on the dumps. The short crosscut tunnel which exposes the vein for 60 feet shows scheelite. One short tunnel was driven on the vein north of the crosscut tunnel a distance of 20 feet. Scheelite shows in the face and back. Sample 864 was taken across 18 inches of this vein, or the section showing scheelite. The following result of $Ni\% WO_3$ was received.

The Gray Copper vein is the only vein known to carry scheelite on the Mountain View property. No accurate estimate as to amount of tungsten oxide can be made due to insufficient sampling, however, estimates by use of the Mineralight shows sufficient amounts to warrant both surface and underground sampling.

The writer collected several samples of vein material from the various occurrences of scheelite in the Hyder district. Slides are to be made, from which the type and kind of deposits are to be determined.

The entire Hyder district warrants further and extensive investigation. A reexamination of all prospects for possible tungsten, tin and other metals of strategic importance, along with a geological study of types and kinds of deposits, may reveal quantities of commercial ore.

The development of tungsten deposits in Alaska should be encouraged. The present market price, together with increasing demands and the few occurrences, is favorable for a stable industry. Due to its relatively high price per pound, it is one of the few metals in Alaska that could absorb the high labor and transportation costs. The world tungsten situation is well summed up in the 1941 edition of "Encyclopædia Britannica" as follows:

He Feb. 120

"Tungsten. The world's tungsten producing industry centers mostly in southeastern Asia, whence came 65% of the 1939 total, estimated at 41,000 metric tons of concentrates (60% WO₃ basis), a 10% increase over 1938; 28% of this total came from China, 24% from Burma, 3% from Malaya and 8% from other adjacent territories, chiefly Chosen. Of production elsewhere, the United States supplies 10%, Bolivia 8%, Argentina 3% and Portugal 9%; other outputs are small and widely scattered.

"Due to the disturbances incident to the Japanese invasion of China, the Chinese exports for 1939 dropped 35% below those of 1937 and early reports for 1940 were at a still lower level, mostly through Indo-China. Exports from Burma during the first half of 1940 were somewhat below the 1939 average, but Argentina during the first ten months held to the 1939 level.

"The United States industry is very erratic, and in spite of exceptionally heavy tariff, production is more or less at the mercy of world prices. Production has been increasing, however, since the depression low in 1932, reaching 3,889 metric tons in 1939. In addition to the domestic output in 1939, the U. S. imported for consumption about 1,400 metric tons of concentrates (60% basis), 560 tons for smelting and export, and small amounts of metal, alloys, and compounds. In addition ore imported and stocked in bond amounted to 1,550 tons. Imports were radically increased in 1940, the 60% equivalent of the imports for consumption for the first ten months being 3,950 tons and imports for smelting and export, 1,280 tons.

"The British empire controlled 32% of the 1939 world output, in Burma, Malaya, Australia, southern Africa and Cornwall.

"Germany is the largest consumer of tungsten, with imports of 15,400 metric tons (60% basis) in 1938 and 6,200 tons in the half of 1939. War conditions may be expected to increase the demand for tungsten in appreciable amounts."

Blasher. Cont. 118

September 23. Tungsten in the form of scheelite was reported in surface showings on the Sunset claim of the Blasher group. This group is located at the end of the Texas Creek road on the north side of the west fork near its head. At the Sunset tunnel, elevation 2750 feet, on the Sunset claim, a quartz vein is exposed in granodiorite for a distance of 170 feet. (Note sketch). The vein is largest at the short

KX - 118-19

BLASHER GROUP

tunnel portal with a width of three feet and gradually becomes smaller down to 12 inches at the end of the long open-cut to the northwest. The average width is 2 feet. The vein strikes N. 40° W. and dips 55° NE. The vein splits and bulges and has a dark brownish fine-grained rock associated in the fissure to which a portion of the quartz is frozen.

Sections of the vein along the granodiorite are free. At the portal of the 15-foot tunnel on the hanging wall side, is a section of altered sedimentary rock and some pegmatites. The altered sediments contain considerable lime, now in the form of carbonates, distributed through the altered mass and associated with the pegmatization are scattered flakes of molybdenite. The alteration of the molybdenite, possibly to powellite, a mineral compound of calcium molybdate and calcium tungstate, Ca, (Mo,W)O_4 , is believed to have been the mineral which showed weak tungsten reaction, as no scheelite was found after careful examination with a hand lens. Sample 871 (note assay sheet) was taken across 3 feet for WO_2 determination.

The vein at the face of the tunnel, and on the surface for the remainder of its exposed length in the open-cut, consists of a coarse crystalline quartz with sericite, and altered granodiorite minerals such as chlorite, altered feldspar and ferro-magnesium minerals. The vein material is characterized by large crystals and masses of chalcopyrite. Pyrite, galena and sphalerite occur associated, but in much lesser amounts.

Frank Blasher, owner, stated that the vein was sampled at 5-foot intervals and an average of \$7 per ton in gold (old price) was received. Samples 865 to 871 were taken for assay, with positions shown on accompanying sketch and results and descriptions on accompanying assay sheet.

SAMPLES AND ASSAYS, BLASHER GROUP, HYDER DISTRICT,
September 23, 1941.

Sample No.	Location	Description	Width	Ozs. per ton		Percentage			
				Au.	Ag.	Cu.	Pb.	W03	
865	Open-cut, Sunset claim, NW. end (note sketch)	Foot-wall vein, mineralized quartz	12"	0.02	1.00	0.4	0.8		
866	Same, 35' SE. of 865	Highly mineralized quartz	12"	0.02	1.90	2.3	1.1		
867	Same, 20' SE. of 866	"	14"	Nil	1.40	1.08	0.6		
868	Same, 50' above tunnel	"	20"	Nil	1.80	4.32	2.4		
869	Same, 10' above tunnel	"	30"	0.02	2.60	2.74	1.6		
870	Face of tunnel	Banded quartz	30"	Nil	2.50	0.88	Nil		Nil
871	Portal of tunnel	Carbonate minerals	3'						

BLASHER
GROUP -
(Cont.)

On the strength of the showings on this outcrop, the property was optioned to Kennecott Corporation through Mr. Richelsen. Three groups, consisting of the Blasher group of four claims, Blasher Extension, four claims, and the Snowshoe group of seven claims, were optioned at a price of \$10,000 per claim. A payment of \$1,000 per claim at the end of the first year is to be made. No cash down and 250 feet of tunnel the first year, with option period of five years, are other terms of the agreement, according to Blasher. The tunnel work was to start this fall, however, on the date of the writer's visit, the closing of the road was expected shortly, and work will apparently not start until next June.

The high silica content of the ore, together with the gold, silver, copper and lead values, makes a suitable fluxing ore for smelter use. It was with this in mind that the option was taken by Mr. Richelsen.

On the return trip from Texas Creek, the writer stopped and examined small-scale placer workings on the left limit of Salmon River opposite the old Daily Alaska lode workings. Here Sidney Anderson and associates were sluicing a gravel bank, four feet high, and next to the channel of Salmon River. This location is a few yards below the steep canyon of Salmon River, one mile above the Texas Creek bridge. Loosely packed stream gravels were noted in the cut, with noticeable amounts of iron oxides. A few yards of gravel had been sluiced into narrow boxes, set along the river's edge. A small amount of fine flat gold was recovered. No bedrock was reached and the gold was distributed through the gravel. A few pans were taken and fine flat colors of gold ranging from 10 to 30 in each pan were counted. These colors were very small and light. These surface gravels are not to be considered as containing economic values, however, the amount of gold contained and the condition of the gravels below the present creek level at this locality is not known. Gravel deposits are abundantly distributed from the canyon at the Daily Alaska Mining Company camp to the mouth of Salmon River. Also, above the canyon, the Cantu flats were reported as very extensive.

The gravels as they show in the banks and present river bed are classified as medium to fine. They are well worn and no large boulders are visible. Small strata of sand and clay are visible in the cut banks and generally, the gravels are loose and poorly sorted. With regard to the potential possibilities of this river valley in relation to economic placer deposits, very little concrete information is available. Both the large Canadian mines, the Big Missouri and Silbak-Premier, contributed gold from their surface ore bodies to this Salmon River drainage. It is to be remembered that the entire Salmon River drainage has been subject to extensive alpine glaciation.

Anderson and associates have ten 20-acre placer claims staked, extending from the Alaska Daily to the International Boundary line. (Note accompanying sketch). The property is called the Hyder Placers. Following is a copy of a brief report by Mr. Anderson, owner of this property.

The writer was unable to investigate further these placer claims due to high water and unfavorable weather conditions.

(Copy of Anderson Report)

HYDER PLACERS

Property consists of 10 twenty-acre placer claims.

Length - from old Daily Alaska camp to the International Boundary line. A length of eight claims or 10,560'.

The Cantu Flats at widest portion shows double section of claims No. 1 and 4 above, 5 above and No. 2 above.

Prospecting map inclosed.

Metcalf map showing Salmon River inclosed.

Buddington "Bulletin No. 807" gives the formation of the Cantu Texas Creek granite-diorite and cut by dikes of malchite also greenstone page "91" the Cantu join the Hyder Placers on four claims on the west. Page "90" Buddington re ^{intersects with} Gold Cliff states bed rock consists of quartzite, tuffs, and ~~intercalated~~ slate with a few dikes of the older porphyry. These claims join the Hyder Placers on the lower "Southerly half" on the east and west. See geology of Big Missouri pamphlet attached formation given as "Ore body is an extensive replacement deposit in volcanic tuffs, and gold occurs native in part."

Frank Reickenbach local assayer, places the value of gold at \$29.00.

A recent sample of the gold sent to a dredging company for examination reported O. K. as to dimension and state that the fine gold can be saved by a dredge as easily as is the coarser.

We are using a 1/8 in. mesh screen in prospecting and of the aggregate "gross" would estimate that about 50% goes thru screen,

Water is the handicap in prospecting and this was true also in January and February.

We have one face of gravel 20 feet, shown on map, samples 4, 5 and 6 water level was reached. Directly back of this cut about fifty feet is an old shaft "timbered" and was extended to a distance of 30 feet and at that depth water prevented further extension, this shaft was made in 1915, and no bed rock was encountered.

We encountered bed rock rim "sample No. 7" this was about ninety feet from river bank and at an elevation of approximately 30 feet, bed rock not rough, six in. of clay on bedrock, but not uniform.

8
hand. No large boulders encountered so far, all could be handled by hand. Estimates of yardage by local placer men placed at 25,000,000 cu. yds.

Distance to Daily Alaska from Hyder 11 miles, on main highway. Distance up Texas Creek main highway 10 miles and two additional miles of tractor path to Cantu flats proper.

Depth of snow on Cantu flats "Hyder Placers" last winter approximately six feet.

Remains of old boxes and flumes appear on Discovery and No. 1 below, and from reliable information \$1.50 per man day was earned at \$20.00 gold.

See page 33, 1939 Mining in Alaska, Bull. No. 926-A.

Sample

- No. 1, 2 & 3. On No. 1 Above Discovery 3 yards from two cuts, one cut on east bank and one cut on west bank. Total value for the three yards 90 cents, average 30 cents per yd. Values recovered in one cleanup from plates with amalgam. The cut on the west bank cannot be sampled at this time on account of high water. This sample was taken in January.
- No. 4. On No. 1 below Discovery on Bench on west bank 1 cu. yd. with amalgam and riffles 8 to 12 feet from the surface 61 cents.
- No. 5. Same cut as No. 4 at about 16 feet from surface 1 cu. yd. 30 cents.

- No. 6. Same cut as Nos. 4 & 5 at about twenty feet from the surface, 1 cu. yd. 32 cents. Nos. 4, 5 and 6 from same cut and at 20 feet water level encountered. Directly back of this cut is an old shaft which was extended to a depth of thirty feet and no bed rock was encountered, this shaft is timbered, this information was secured by a party who worked in the shaft in 1913.
- No. 7. 4 cubic feet panned, values figured per cu. yd. at \$2.04. Bedrock encountered, this sample is approximately 90 feet from river bank, and approximately 30 feet elevation. No. 7 sample taken on Discovery claim.
- No. 8. New cut on No. 1 below Discovery 4 cu. ft. panned, values figured per cu. yd. at 56 cents. Gold recovered 7-2/5 cents.
- No. 9. New cut on No. 1 Below Discovery 6 cu. ft. thru riffles 2 cu. ft. allowed for boulders, 4 cu. ft. net figures per cu. yd. \$1.44. Gold recovered 32 cents.
- Local assayer figures this gold as 18 K. Value \$29.00 per oz.
- July 3. Pannings here indicate approximately same values as samples 8 and 9. Bank about 10 feet at this point from surface to river level. No. 1 Below Discovery.
- July 4. John Murphy, M. E. and assistants spanned cuts where 8 and 9 show on the map. No. 1 Below Discovery.
- July 6. Pannings here on bank four to five feet from surface to river level indicate fair values. Distance from this point to samples 1, 2 & 3, 7500 feet. No. 4 Below Discovery.
- No. 10, July 12-13. Cut on No. 1 Below 5 cu. yd. gross put thru boxes. Gold recovered \$1.58 average per yard, 31-3/5 cents. All boulders measured and figured in the gross. Gold figured at \$29.00 per ounce.
- No. 11, Aug. 15. South end of No. 4 Below Discovery, 5 cu. yd. put thru boxes. 4 feet from water level to surface. Gold recovered 40 cents. Average 8 cents per cu. yd. Gold at \$29.00 per ounce.

Bridges Case 118

Excerpt from Summary Report of Mining Investigations in the Hyder Precinct - Sept. 17 - 24, 1941, by J. C. Koehn, Associate Engineer, Territorial Dept. of Mines.

Tungsten in the form of scheelite was reported in surface showings on the Sunset claim of the Blasher group. This group is located at the end of the Texas Creek road on the north side of the west fork near its head. At the Sunset tunnel, elevation 2750 feet, on the Sunset claim, a quartz vein is exposed in granodiorite for a distance of 170 feet. (Note sketch). The vein is largest at the short tunnel portal with a width of three feet and gradually becomes smaller down to 12 inches at the end of the long open-cut to the northwest. The average width is 2 feet. The vein strikes N. 40° W. and dips 55° NE. The vein splits and bulges and has a dark brownish fine-grained rock associated in the fissure to which a portion of the quartz is frozen. Sections of the vein along the granodiorite are free. At the portal of the 15-foot tunnel on the hanging wall side, is a section of altered sedimentary rock and some pegmatites. The altered sediments contain considerable lime, now in the form of carbonates, distributed through the altered mass and associated with the pegmatization are scattered flakes of molybdenite. The alteration of the molybdenite, possibly to powellite, a mineral compound of calcium molybdate and calcium tungstate, $\text{Ca}(\text{Mo,W})\text{O}_4$, is believed to have been the mineral which showed weak tungsten reaction, as no scheelite was found after careful examination with a hand lens. Sample 871 (note assay sheet) was taken across 3 feet for WO_3 determination.

The vein at the face of the tunnel, and on the surface for the remainder of its exposed length in the open-cut, consists of a coarse crystalline quartz with sericite, and altered granodiorite minerals such as chlorite, altered feldspar and ferro-magnesium minerals. The vein material is characterized by large crystals and masses of chalcopyrite. Pyrite, galena and sphalerite occur associated, but in much lesser amounts.

Frank Blasher, owner, stated that the vein was sampled at 5-foot intervals and an average of \$7 per ton in gold (old price) was received. Samples 865 to 871 were taken for assay, with positions shown on accompanying sketch and results and descriptions on accompanying assay sheet.

SAMPLES AND ASSAYS, BLASHER GROUP, HYDER DISTRICT,
September 23, 1941

Sample No.	Location	Description	Width	Ozs. per ton		Percentage		
				Au.	Ag.	Cu.	Pb.	BiOg
865	Open-cut, Sunset claim, NW. end (note sketch)	Foot-wall vein, mineralized quartz	12"	0.02	1.00	0.4	0.8	
866	Same, 35' SE. of 865	Highly mineralized quartz	12"	0.02	1.90	2.3	1.1	
867	Same, 20' SE. of 866	"	14"	Nil	1.40	1.08	0.6	
868	Same, 50' above tunnel	"	20"	Nil	1.80	4.32	2.4	
869	Same, 10' above tunnel	"	30"	0.02	2.60	2.24	1.6	
870	Face of tunnel	Banded quartz	30"	Nil	2.50	0.88	Nil	
871	Portal of tunnel	Carbonate minerals	3'	-	-	-	-	Nil

On the strength of the showings on this outcrop, the property was optioned to Kennecott Corporation through Mr. Richelsen. Three groups, consisting of the Blasher group of four claims, Blasher Extension, four claims, and the Snowshoe group of seven claims, were optioned at a price of \$10,000 per claim. A payment of \$1,000 per claim at the end of the first year is to be made. No cash down and 250 feet of tunnel the first year, with option period of five years, are other terms of the agreement, according to Blasher. The tunnel work was to start this fall, however, on the date of the writer's visit, the closing of the road was expected shortly, and work will apparently not start until next June.

The high silica content of the ore, together with the gold, silver, copper and lead values, makes a suitable fluxing ore for smelter use. It was with this in mind that the option was taken by Mr. Richelsen.