

INVESTIGATIONS MC CARTHY, NIZINA RIVER, BREMNER
And CHISANA MINING DISTRICTS

SUMMARY REPORT

And

Itinerary of J.C. Roehm, Associate Engineer to Commissioner of Mines, Territorial Department of Mines, Juneau, Alaska, Aug. 4 to Sept. 1, 1936

Aug. 4-6 En route Juneau, Alaska to Cordova.

Aug. 8. En route from Cordova to Kennecott Mine. Went through the concentrating mill of the Kennecott Copper Corporation. This mill has been in operation since June 1935 with one 8 hour shift and since June 1st of this year a 9 hour shift. Safety measures are maintained in good order, and since repairs and oiling of moving parts are made on a night shift when the mill is not in operation, makes a very safe operation.

A total of 188 men are employed, 64 of which are employed at the lower camp. Of these 27 men are employed on the staff, 12 men in the mess, 10 men on the tramway and the remaining in the mill and floatation plant.

Mr. W.A. Richelson is at present in charge of operations. Since the strike on the Copper River and Northwestern Railway, the high grade shipping ore is not being mined. Efforts are directed to mining and milling the low grade and the concentrates are being stored in the bins. The mine have sufficient supplies to carry on operation for some time and do not intend to be closing down or cutting operations.

Aug. 9. En route over the aerial tramway to Bonanza Mine. This tramway appeared to be kept in good repair, however it shows numerous signs of wear. All men working in the three mines are housed at the Bonanza Bunk House. A total of 25 men are employed in the Bonanza mine, and they are all working on day shift. They are engaged in mining pillars and in scaling down the old stopes. No development work is being done, and most of the activity is in the large stope between 990 and 1090 levels. Here large pillars above and below the drifts are being mined. A whole pillar is drilled and then blasted at one time and the muck falls to the bottom of the stope. At the bottom of the stope a drag scraper is installed, that drags the ore from the stope into a pocket and thence loaded into cars and trammed out. Above level 1090 in this stope, a large block of wall rock bulges out on the side nearly in the

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center of the east wall. This block is nearly eighty feet high and forty feet in width and several feet thick. On the bottom a gouge of ore cuts it off with a flat dip towards the stope. This was the only dangerous condition seen in any of the stopes in the three mines. This block has been in this position for several years, however there is a chance of it falling during heavy blasting. The muck pile is up to the bottom of it and only the scraper is engaged there. Only the hoistman and the trammers are on that level and they are in a drift at the end of the stope. The men were working on the levels above. This block is being carefully watched. No attempt is to be made to mine the ore beneath it.

From the Bonanza Mine, I entered the Mother Lode Mine. Here 20 men are employed on day shift mining and mucking, and five men are employed on night shift, hoisting and tramming. Again here no development work is being carried on and most of the men are engaged in mining pillars. These pillars are high grade ore which from 10 to 20 feet in thickness above and below the drifts. The top is drilled and blasted in sections and followed by sections on the bottom. In the large 1252 stope, six men are mining benches on the sides and ore around a large bulkhead at the bottom. These men are exposed to falling rocks from above. Three of these miners, I knew well, and they stated that very rarely a rock fell and they were usually small pieces. It was reported that in two small stopes there was some sluffing, but they were not allowed in them.

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Aug. 10

In the Jumbo Mine, 29 men were employed on day shift only. Below the large flat fault a small bunch of high grade carbonate ore was found. It appears to be an offshoot from the large stope and it is a rare occurrence of ore due to the fact that all of the ore has been above this fault. Mining here again consists of taking out pillars between the 200 and 600 levels. These stopes appeared to be fairly safe. In the 200 level hoist room, there are several open contacts and switches on a control board that does not have a screen or guard rail in front. These switches and contacts carry a 440 voltage and are located on the righthand entrance to the room. They are in such a position that anyone entering the room passes between the board and the hoist with a clearance of four or five feet. The danger consists in someone carrying a piece of steel or wrench might possibly contact these switches. Further the floor was wet a few feet from the entrance and partly in front of the board and without a screen a careless person might easily touch one of these contacts or a switch.

On the 700 level the only prospecting work is being carried out. It consists of a long drift towards the Erie

Mine. This drift is to be directly below some surface outcroppings of ore and through an unexplored area, and it is to be used as a tramway from the Erie; where it was reported considerable low grade ore was left in the stopes. However at the present time no men are employed at the Erie. An electric cable is to be installed from the Motherlode to the Erie.

A few men are employed doing assessment work on the surface on some unpatented claims between the Mother Lode and the Erie.

Generally, it may be stated, that while the mining is described as a somewhat dangerous operation, the conditions that were evident are fairly safe for the following reasons;

1. The coolness of the mine prevents sluffing. This is evident from the stopes themselves that have stood open without timber for several years.
2. The methods of mining are carefully planned, and the men and conditions are carefully watched by the management.
3. The miners are mostly old men, whom have worked there formerly. Nearly half of the miners, I knew. And in talking with them, had they been working in dangerous positions, I would have known about them.
4. An occasional pillar of ore is left.
5. Very few open fractures were seen and the dolomite formation is in itself rather tough.
6. No recent movement was noted on the faults.
7. No recent reported injuries have been reported from falling rocks.
8. Ventilation is good throughout the mines, and blasting is done only at the ends of shifts.
9. Mr. Sullivan, Superintendent of mine and bosses are all former employees, and know conditions well.

Generally the dangerous conditions may be considered reasonably safe. However there still remains a danger of mountain sliding due to the abruptness of the mountain tops, the faulted condition, and the general weak condition from mining.

Aug. 71

At the J.E. Andrus property on Rex and Chitchu Creeks, 16 men are employed. This property is still under the management of Chas. Cramer. Three giants were in operation on Rex Creek, 2000 feet from the mouth, where it empties into Chitchu Creek. A bank on the right limit, nearly 100 feet high is being cut down, and this averages nearly 4 cubic yards to the square foot of bedrock. A 3000 foot pipe line leads the water to the pit, in which there is 440 feet of flume boxes and seven boxes of tight riffles. Operations after clean-up sometime in September will consist of moving the dam several hundred feet up creek. Two 10 hour shifts are worked and common wages are \$5.00 with a 50 cents bonus per day for the season.

In 1935, 17 men were employed and 1692½ ounces of gold was reported taken out. It was further reported that this gold ran \$31 an ounce.

One small clean-up has been made this year, but the gold had not been cleaned.

Mr. Cramer reports, that including the bench claims that the company has, and with the present rate of operation, they have enough ground to last for fifty years. And further expects to make a good profit this year.

Above on the old Brooks property, which was reported sold to J.B. O'Neill and associates, 3 men are employed. They are hydraulicking with two giants on an old channel on the left limit and a few feet above present creek level. The bank is 25 to 50 feet in height and it was reported to run between \$1 and \$1.25 per square foot of bedrock. At the time of visit they were not down to bedrock.

This company is known as Edison Association Placer Mine.

Wm. Howell is working alone, drifting under an old channel, on the left limit of Rex creek, ¾ miles from the mouth. This group of four claims is owned by Mrs. Bertha Jones of Anchorage, and Mr. Howell has a lease that terminates this season. His cross-cut tunnel is 120 feet in length, and 200 feet in length along the old channel. The bottom of this channel is frozen and has to be drilled and blasted, and is from 20 to 25 feet in width. To date this year 30 ounces of gold has been taken out. Last year the total of 48 ounces were taken out.

On the Rex Minas property, located $5\frac{1}{2}$ miles above the mouth of Rex creek, and nearly at the head, Jim Davis is shoveling in from an old channel a few feet from the creek. This operation had just started and only 10 penny-weights had been taken out. This property consists of two claims owned by J.S. Taylor, who is at present doing work on the Taylor Lode Prospect. K77-72

Aug. 12.

This prospect is a group of 16 claims owned by J.S. Taylor and a small interest held by Mr. Murie of Mc Carthy. It is located at the head of Rex Creek, 6 miles from the mouth on the left limit and the northwest slope of Taylor Peak. The camp at the creek is at an elevation of 3800 feet and the showings are 5600 feet.

A flow of flat dipping amygdaloidal basalts are cut by several granitoid porphyry dikes and a small stock of hornblende granite. This flow of basalts is over 3000 feet in length and about 600 feet in width and lays conformable between beds of a limy shale on the footwall and argillites on hanging wall. Above was reported quartzites and limestone on the mountain top. Boulders of each were seen on the slides. These basalts are faulted by small displacement faults at right angles to their strike and are somewhat out of position. While these basalts are highly altered they still retain their amygdaloidal structure, however small pieces on the slides have a very characteristic ring of phonolite. All the formations in the vicinity including the granite is cut by a light yellow feldspar porphyry dike. This dike is from 20 to 25 feet in width and looks very much megascopically like a quartz monzonite. The sediments strike generally east and west with a very flat dip to the south. This dike strikes N. 28° West and dips 80 to 85° to the southwest. This dike can be traced for several thousand feet, and appears to cut across the valley onto Williams Peak, 3 miles to the north west. A similar dike with the same associated minerals and same strike and width occurs associated with the Gold King Prospect on Williams Peak. The two minerals that are definitely associated with this dike are stibnite and realgar.

The showings consist of highly mineralized areas in the basalts in the vicinity of the small granite stock. Several rock cuts in these areas show the primary ore. This ore is a gold bearing pyrite disseminated through the basalts and the highest gold values are associated with olivine and epidote within the amygdules. The oxidized produces on the surface pan gold. The work has been confined to two areas at an elevation of 5600 feet and about 2000 feet apart.

Under the direction of W.A. Pichelson of Kennecott, two men worked the seasons of 1934 and 35 putting in rock cuts. The largest is a trench 120 feet in length a few feet

in width and greatest depth of 12 feet. Several other smaller cuts were made and several assays taken from these cuts by Nicholson assayed between 0.04 to 0.68 ounces in gold and a small amount of silver.

Geological conditions are favorable for a higher grade ore in the vicinity of this later dike. And more extensive prospecting might be to advantage. However these mineralized areas in the basalts are of a rather low grade due to the position and in an area of high mining costs.

This property was examined 3 years ago by Mr. Hammond of the Hamond Yuba Consolidated. Also by Nicholson of Kennecott, who had considerable of the trenching done but the property was not under option.

A 12 inch quartz vein was reported by Mr. Holmes, on Seattle Gulch, on which an old tunnel 60 feet in length had at an early date been driven. This vein is located $\frac{1}{2}$ mile up Seattle Gulch from where it empties into the copper river. It was reported this vein assayed \$125 over 12 inches. Some work was done by Mr. Holmes, whom has it staked; but since a rock slide has covered the vein and caved the tunnel. The gold was reported free and in a decomposed quartz and associated with pyrite.

On the Copper river 3 men were reported hydraulic mining on the Nelson property. And John Lucky is shoveling-in on Rader Gulch.

Nine lode claims were located three years ago near the junction of Middle fork of the Copper river and Texas Creek. Here an undetermined dike, was reported, to cut several kinds of rock. Several quartz stringers in the dike were reported to assay \$1 (old price.) No work is being done this year.

Martin Radovan was reported doing assessment work on the Triassic Group of claims, located on the S. W. side of Glacier Creek. This is a copper prospect. It was further reported that he had taken out some gold from his placer claims on Dan Creek, above Dan Creek Mines.

C.A. Nelson was doing assessment work on his copper prospect on the south side of the valley of Chitistone River, a mile west of Glacier Creek.

Aug. 13. Partner's Corporation have been engaged in hydraulicking the Dan Creek Mine for the last three years. Two years have been spent in putting in dams and pipe lines. And in hydraulicking the banks down and prospecting. And this is the first year that any gold to any amount is expected to be taken out. This property is this year under the management of C.R. Herchman. KX-87-76

An average of 21 men have been employed and they are working two 10 hour shifts. wages paid are \$5.00 for labor and flume men, \$6.00 for pipe off men average, No.1. Piper, \$8.00, No.2 \$6.00 and tailing Piper \$5.50 and board. It was reported that board cost the company \$1.50 per man per day.

Three giants have been in operation since June 1st., on a bank, 170 feet high and 900 feet in length. Only 300 feet of this bank is pay and it has a width of 150 feet. The company expect to clean a total of 40,000 to 50,000 square feet of bedrock this year. 10,000 feet of pipe line has been laid this year, and an average of 3,000 miners inches has been maintained of this 1,500 is used as by wash. Numerous large boulders some 6 feet in diameter, were encountered in the old channel and considerable blasting has to be done. 22 lengths of 4'x 12' boxes are used and four contain Hungarian type riffles, spaced 4 inches apart and capped with $\frac{1}{2}$ inch angle irons leaving an $1\frac{1}{4}$ inch opening. The company expect to clean up about Aug. 15th. and expect to do well.

The William's Peak Prospect, known as Gold King and owned by J.E. Barret and Mat. Reeves, is located 2 miles south of Dan Creek and 4 miles via horse trail up the mountain from lower camp on the Dan Creek road at the 17 Mile post from Mc Carthy. This prospect found several years ago, was staked by Barret in 1930. This property consists of 27 claims. The lower camp is at an elevation 2200 feet and No.2 camp or upper camp is located on a small flat glacial moraine within a cirque at an elevation of 5240 feet. KX-87-23

Three tunnels have been driven on the vein with several rock cuts and trenches above nearly to the top of the mountain. No.1 tunnel at an elevation of 5880 feet has a length of 74 feet on the vein. No.2 tunnel (Known as Crumb tunnel) an old cross-cut tunnel is 40 feet in length. No. 3 tunnel a few feet above the No.2 at an elevation of 6220 was not accessible.

Mc Carthy

A quartz vein with interlocking crystals of stibnite and quartz with some pyrite varies from 4 to 8 inches in width. With mixture of gouge of country rock with a little quartz, lime carbonates and pyrite, it varies from 2 feet to 30 inches. This vein has a strike N. 28° W. and dips 76 to 78° S.W. It is a fissure vein in a fault zone with a little horizontal movement. It cuts through shales below, then Argillites and quartzites and numerous granitoid dikes when come in from the footwall from a small granite stock to the east. This vein runs parallel to a light yellow colored dike or a feldspar prophyry. This dike also cuts all of the formations including the other granitoid dikes, and is a similar dike to the one mentioned on the Taylor prospect. The sediments have nearly a east west strike and dip slightly to the south. The vein is 300 feet distant from the dike and on the south side. Two other smaller veins were seen closer to the dike and they carried the characteristic minerals associated with the dike, mainly stibnite and realgar.

A sketch was made of the No. 1 tunnel and five samples were taken from this tunnel and from the cuts above.

Fairly extensive notes were taken. It was reported that this vein was exposed across the cirque which would give it a length of 3 or four thousand feet, and also said to be exposed on the north side of the mountain which is too steep to be accessible.

This property is now under option to a Mr. Doyle, a Vancouver broker. He reported that it has been incorporated under Alaskan laws and is known as Gold King Alaska Incorp., with 10,000 shares of \$1 par value. All the stock is held by a British Columbia Company known as Alaska Gold King Mines Ltd., of two million shares of no par value. (Which makes it correctly just about none par value).

Aug 15 En route to Bremner Mine.

KY-87-71

The Bremner Mine is located 45 miles south of Mc Carthy, at the head of Colconda Creek, ten miles north of the north fork of the Bremner River. This company is operating a 50 ton ball mill which is operating two 8 hour shifts. A total of 24 men are employed with two 8 hour shifts in the mine.

The company owns 42 claims on which two parallel veins have been found. These veins are approximately 1500 feet apart and are known as the Lucky Girl and the Grand Prize. These are both fissure veins with an average strike of N 36° W. and a 79° dip to the N.E. The ore occurs in lenses along the fissure near the contacts of interbedded flat lying slates and graywackes of Mesozoic age. In the Grand Prize the ore is alongside a granitoid dike in the same formation.

These sediments are cut with several dikes much of the same character with one system striking north west and the other north-east. They are somewhat metamorphosed and mineralized.

In the Grand Prize tunnel a small quartz vein from 6 inches to 2 feet is exposed over two hundred feet. This tunnel is at 6000 foot elevation and 500 tons of ore has been stoped from the back of the tunnel. This ore has been trammed over an aerial tramway 3900 feet in length to the mill at the Lucky Girl. At present no men are employed here.

McCarthy
Mining is confined to three tunnel levels of the Lucky Girl and consists of stoping ore from the upper tunnel. This ore is trammed to the adit and put through a 6 inch pipe down to top of raise and down to main level from where it is trammed to the mill. They are raising and stoping in the next level below and the ore is passed down a raise to main level. A hundred and five feet below the main level and mill, another tunnel is in 60 feet which is to tap the largest orebody below the main level. The ore in the back of the main tunnel has been cut off with a nearly horizontal fault, and appears to be displaced two or three hundred feet. However development work has not been extended far enough to pick up this ore, which would be encountered by drifting straight ahead on the fissure. Advised them thus as the management had attempted cross-cutting and not finding the ore, had given up the attempt. The ore on this level is from 18 inches to nearly six feet in width.

The milling ore was reported to average from \$10 to 12 a ton. This mill can only be operated about five months a year due to the fact that the water supply is dependent upon that that comes from the melting snow and rain from the mountain side. And this is a very small amount. Also the small electric power plant $\frac{1}{2}$ mile south also is dependent upon the same conditions.

The stopes are timbered with stulls and the raises have square sets. Over 1200 feet of drifts have been driven; 400 feet of raises, and 50 feet of cross-cutting. 300 feet of tunnel in the Grand Prize.

First aid supplies are kept at the camp, about 2000 feet from the mine. A fire door of poor construction is erected at the adit on the main level. There are no ventilation pipes, however raises connect the main level with the one above. The men are very much in need of first aid training, as this camp is almost inaccessible in the summer time, with the exception of aeroplane. And it is sixty miles over the winter trail from Mc Carthy and again few men are employed in the winter. It was the desire of the management to have first aid training, but this season is too near close, however

next season, it would be advisable to arrange.

There are two landing fields, one 200 yards from the camp which is not usable in wet weather due to the fact that it does not drain, and the other is two miles south in the same valley. Both fields are short and attempts should not be made to land except with large balloon tires, as the fields are rough and contain many boulders.

Aug. 16

Located one mile south-east of the Bremner Mine at an elevation of 6000 feet, and reached by a trail four miles in length up a glacier cirque valley, S.A. Nelson found five quartz stringers varying in width from 6 inches to one foot. These veins are distributed over a width of 200 feet. They are in a schisted graywacke formation which is cut with several granitoid dikes. These veins extend only a few hundred feet and strike N. 25°E. They are nearly all parallel and lead into a light colored dike of 50 feet in width and end. These veins appear nearly barren of mineralization except for occasional bunches of heavy mineralization of pyrite which has associated gold values. These pockets are oxidized on the surface and leave large vugs and holes and contain nodules of quartz and partly oxidized sulphides and these show considerable free gold. Also very heavy pannings are obtained from the rust on the bottom of these holes. Mr. Nelson panned nearly three ounces of gold from a few of these holes.

Apparently considerable gold is distributed on the tops and sides of these mountains as several small stringers, gash veins and bunches of quartz contain visible gold. Usually these stringers are near dikes and associated with them and the dikes themselves in places contain gold values.

Aug. 17-19

Located on the west slope of Trail Creek, 8 miles N.E. of the Bremner Mine and 4 miles from the mouth of the creek at an elevation of 4700 feet, a new gold discovery was made this summer by Steve Pytel and Mack Sanford. This is a fissure vein in flat lying graywacke and slate of Mesozoic age. These sediments are somewhat metamorphosed and cut by numerous granitoid dikes of light color. This vein strikes N. 45° West and dips 65° S. It is parallel to a granite porphyry dike of 25 feet in width and located 200 feet north of this vein. This dike has the same strike as the vein but dips 68° to N.E. The vein is made of a fine crystalline quartz, called sugar quartz and numerous wall rock fragments. It varies in width from a few inches to 3½ feet and is exposed over 250 feet. It outcrops in a small steep ravine between elevation of 4500 and 4700 feet. Its greatest width is at the contact of the slates and graywacke which appear

to be somewhat interbedded and contain numerous gash veins. This vein is altered and leached slightly on the surface and very little work has been done. Two samples from pieces taken from two different places on this vein by the owners were assayed at the Bremner Mine and ran \$11.90 and \$20 in gold per ton. Four samples were taken and a sketch made, samples Nos. 53-56 inclusive. Considerable sluffing of the slates into the vein, may possibly show a greater width and length, if it was opened up by surface work.

Directly across Trail Creek valley a distance of $\frac{1}{2}$ mile, a small glacial stream has 4 to 5 hundred foot fall. And another larger stream with less fall was reported 3 miles further up the creek near the head.

Aug. 20.

McCarthy
The Yellow Bank group of claims is located $3\frac{1}{2}$ miles south of the Bremner Mine on the east side of the valley of Solconda Creek. This group consists of seven claims staked by John Letander, J. Malloid and Carl Killion. It is now under option to A.C. Baldwin, who has two men employed tunneling to cross-cut a light colored feldspar-propylite dike. This tunnel is in 35 feet. This dike was reported to assay \$20 on the surface and to be 7 feet in width. Numerous dikes cut the graywacke and slates and a zone over 1000 feet in width is mineralized. These dikes strike a little west of north and dip nearly vertical. The lower tunnel at an elevation of 4700 feet was seen. This tunnel is 138 feet in length and along side a small dike with a strike N. 28° west and a dip of 85° south. It is a whitish gray dike of quartz and feldspar. Along side this dike on the hanging wall a small quartz vein 8 to 24 inches in width is exposed nearly a hundred feet in length. Both dike and vein are mineralized with pyrite. They were reported to carry good gold values. Sample No. 58 was taken across this vein at its widest portion. Due to the arrival of the plane this property was not seen further.

C.W. Vickery is prospecting for placer near the mouth of Solconda Creek. Fred Struckman is also prospecting, 10 miles north of the Bremner on Monohan River. Further than above mentioned, there has been no activity in this district.

Aug. 20-22. En route to Chisana.

Aug. 23. En route to Big Eldorado Creek.

Nobesna 78
Located on Big Eldorado Creek on No. 1 Placer claim below discovery and $1\frac{1}{2}$ miles up the creek from the mouth on the north-east slope of Gold Hill, a 6 foot body of nearly massive sulphides was uncovered, while sluicing on the present creek bottom. This is now staked as the Monto Carlo Lode claim and owned by P.D. and U.F. Peterson of Chisana. Ten lode claims were staked on the left limit

of the creek, and since only a few feet along the strike of the orebody was on the staked ground, I advised them to stake on the right limit. This deposit is only uncovered over an area of a few feet in the bottom of the creek, the extent could not be determined. The formation is dioritic and the contact of diorite and sediments that cuts Gold Hill is not far distant to the east but is deeply covered with gravel and slide rock. This showing is within a fault zone, caused by a later intrusion of dioritic porphyry which evidently came in as a sill in the diorite and terminated on the south bank or left limit of the creek within a few feet of the orebody. This fault zone has a strike N. 50° east and has a dip 65° NW. Another series of faults confined to a narrow zone with a strike N 9° West and a dip 65° west intersect at this point where the orebody occurs.

The sulphides are nearly massive and are 6 feet in width with small bands of white talc between. They are mainly marcasite, pyrite, possibly arsenopyrite, and a little chalcopyrite. T

The walls are altered for 3 or 4 feet on each side the ore with considerable white talc next to the ore.

Four samples were taken Nos. 59 to 62 inclusive.

Recommended a small winze be sunk on this deposit in order to determine any change in mineralization and to obtain better samples, as due to the position of the ore directly under the gold placer gravels, any samples taken are likely to be salted from the placer gold.

On this same location on the creek bed and along the banks 42 ounces of gold has been taken out this year by the two brothers and one man.

On the Jack Carrol property, located near the mouth of Gold Run Creek, a mile east of Big Eldorado, two men were employed in building a dam. It was reported 25 ounces of gold had been taken out this year. Last year 100 ounces was taken out.

Frank Maess and Harry Sutherland worked two months on Discovery Pup at the head of Gold Run and took out 20 ounces.

A.T. Wright is shoveling-in at the head of Gold Run, and has thus this year taken out 54 ounces. Last year 84 ounces.

Aug. 24. B.J. Davis has been mining on Little Eldorado and Skookum creeks on the old Whitam property. He has an open ditch 3100 feet in length, cut through glacial silt from the head of Caribou Pass. This silt is frozen and in places the ditch is 15 to 20 feet in depth. He has a flume 700 feet in length, and has had two men employed besides himself. He has sluiced 12,000 feet of bedrock and taken out 56 ounces of gold. Last year he took out \$1900.

On Bonanza creek claims Nos. 11 and 12 above discovery, A Mc Gilligan is shoveling in from the creek bed with one man and has taken out 19½ ounces in ten days.

On No. 9 claim Bonanza below Johnston has taken out a few ounces of gold and is at present engaged in drifting on a bench on the left limit, where he reported to have hit pay.

Aug. 25. On No. 6 claim above Discovery on Bonanza the N.P. Nelson Mining Co. are hydraulicking a bench on the left limit. This is on ground leased from W.E. James. This claim is located 1300 feet below the junction of Little Eldorado. One giant has been engaged in cutting down bank and thus far 9,000 feet of bedrock has been cleaned. It was reported to date \$24,000 in gold had been cleaned. Four men and a cook are employed and one mile of flume was constructed prior to this year.

On Claim No. 4 above Discovery Bonanza, Don Greene has two men employed hydraulicking with a two inch nozzle connected to a 6 inch pipe 700 feet in length and a 70 foot head. He has cleaned 2,000 of bedrock on a bench on the left limit, and has taken out 100 ounces.

On No. 2 Claim above Discovery Bonanza, Earl Hirst has two men employed and he has in operation one giant on an old channel about 300 feet in width and with banks 50 to 100 in height. He expects to clean 3,000 feet of bedrock, and he reports it to average \$3.00 a square foot.

William James is sluicing on Discovery Claim at the mouth of Bonanza creek and he has two men employed. He expects to clean about 12,000 feet of bedrock which he reports to average about 60 cents a square foot. The depth of gravel is from 12 to 15 feet in depth.

Aug. 27. Located on the right limit of Johnston Creek and one mile west of the mouth of Bonanza Creek, and on Cold Hill between elevations of 4700 and 5600 feet, are two groups of claims. KX-78-19 The Tyre group of 16 claims is owned by S. Gamblin, Earl Hirst and Bob Reeves. Adjoining on the east is a group of four claims called the Aviator Group owned by Louis Mc. KX-78-19 Cullen. Across these groups of claims are several mineralized fault fissures which are oxidized over widths from 2 to 15 feet and confined to seven parallel zones. They strike a little north of east, and a nearly vertical dip to the north. These zones are intersected with another fault system with a strike N. 20 east and a dip of 56° to the west. The formation is andesite and andesite porphyry which is intruded by a highly mineralized dike of a light bluish color and 30 to 40 feet in width. This dike has the appearance of a rhyolite and is located on the south portion of the claim group, it strikes N. 45° west and nearly vertical in dip. It was reported this dike cut through the mountain for a couple of miles. It is cut by these mineralized faults and in the vicinity these faults contain small quartz veins and small stringers of nearly massive galena from one to four inches in width. The walls of these faults are altered, mineralized and notably oxidized. At higher elevations and further distant from this dike, these veins contain small stringers of nearly massive hematite and limonite and also quartz. It was reported these stringers contain high gold values.

Some samples were taken, and four sketch maps were made.

Aug. 28 Enroute Chisana to Chistochina.

Aug. 29. Enroute Chistochina to Valdez.

Nabesna 78