MR-096-02

McKINLEY LAKE GOLD MINE LTD.

Cordova - Copper River District
Alaska

MR
96-2

Note:

In considering this report, it should be borne in mind that the values given in some instances are based on Gold at $20.67 per ounce, and in others they are based on Gold at $35.00 per ounce. Therefore, attention should be given to the date of the report and those prior to 1934 refer to the $20.67 price.

It should be noted that in some of the earlier reports reference is made to the two groups of claims as follows: 1. McKinley Lake Property, 2. Lucky Strike property. Subsequently, the group of claims originally referred to as the McKinley Lake Group was renamed and is now referred to as the "Pioneer" group of claims. The entire property now consisting of two groups, viz: Pioneer Group and Lucky Strike Group is referred to in its entirety as the "McKinley Lake Gold Mine Ltd."

Mr. L. D. Gassaway who made the 1935 report for Mr. L. V. Blankman is associated with the Yuba Consolidated Gold Mines at San Francisco, and is available for a personal discussion of his observations.

For further information, refer to

Mr. L. V. Blankman
Sir Francis Drake Hotel
San Francisco, California

Cordova, Alaska, Nov. 11, 1915

President and Directors,

Cordova Mining and Development Co.,

Gentlemen:

I submit herewith a brief report upon the "Lucky Strike and McKinley Lake groups of Mining Claims," located on the north and northeast slopes of McKinley Mountain, about 23 miles southeast of Cordova, Alaska.

At the time of my visit I was fortunate in having fine weather, which afforded me an opportunity to see the surface and to tracing out the veins of the district. The first group includes the "Lucky Strike Extension No. 2 N.E." "Lucky Strike Extension No. 1 N.E." "Lucky Strike", Lucky Strike Extension No. 1 S.W." and the "Big Four Fraction," with an area of over 120 acres. Map No. 1 shows the claims in their general relations to the surrounding claims, while Map No. 2 shows the claims as surveyed, according to tracing furnished I will call these claims the "Stringer Group" to designate them from the other claims in the district and also as the Company holds an option of purchase on the group.

ACCESSIBILITY.

This property is easily reached by the Copper River and Northwestern Railroad from Cordova to Alaganik Station which is about four miles from the property and from the Station by trail which is in fair condition. Again by water with small boats through Alaganik Slough to McKinley Lake which would not exceed 1½ miles from the property. From a point about five miles east of Alaganik on the Railroad a good wagon road could be cheaply constructed up Salmon River to the Property. From my observation, I think a couple of thousand dollars would construct a good road to the property, either from the Railroad or from McKinley Lake, by which supplies could be gotten at all seasons of the year.

TIMBER

McKinley Lake District is noted for its fine timber, both for mining and lumber, and it would not be a difficult matter to deliver same to Saw Mill.

WATER

There is plenty of water in Salmon River and Fall Creek if properly collected, to furnish power to run a large plant.

GEOLOGY

The geological conditions for several miles in extent is composed of graywacke and slates alternating with quartz diorite dikes at various intervals. The dikes so far as determined, as a rule, follow the foliation and are parallell to the stratified beds, but in some cases cut the beds. The dikes form the vein system or the mineralized zones of the district, which are likewise parallel and occur as contacts between the graywacke hanging walls, and some the reverse.

The general average strike is about N. 20° E. and dip from 40° to 80° N.W. About two miles to the west of the "Lucky Strike," group is a large body of granite and as you near this granite bed the slates have reversed their dip to about 80° to the southeast. There are frequent intrusions of porphyry through the ore and often several inches of salvage on the walls. The diorite has been brecciated and subsequently mineralized by numerous small veins and veinlets.

These dikes are very persistent and can be traced for a long distance. I followed the "Lucky Strike" and "Tip Top" veins for about 1½ miles across two high ridges, and they vary in width from 10 ft. to over 60 ft. between walls. There are three large known veins in this group and possibly more. Chrystals of pyrite and arsenopyrite can be seen throughout the vein matter.

DEVELOPMENT WORK

There are three large veins on the "Lucky Strike Group" the out-crops of which are partly protected by the locations and to which I will refer under the head of recommendations.

At the center end lines of the "Lucky Strike" and the "Lucky Strike Extension No. 1 N.E." is a large open cut about 20 feet long, 8 feet wide and 15 feet in height, which exposes the vein 12 feet in width. Below this cut about 75 feet distant and 50 feet lower in altitude, a tunnel was driven in the foot wall of the vein and at a distance of 110 feet the vein was cut on the foot wall, the drift extended 24 feet farther across the vein at which point the hanging wall was found showing the vein to be 24 feet in width.

Had the tunnel been started 100 feet farther to the west and run to the same point to which it is now, it would have been on the vein all the way. Map No. 3 shows the "Lucky Strike" upper tunnel in relation to the Finlander Tunnel. The Finlander Tunnel was also driven in the country foot wall parallel to the vein, which could have been run on the vein as easily as in the foot wall, but as it is, it would require a cross-cut to the west of about 60 feet to cut the vein. There are several open cuts below the Finlander Tunnel on the vein which out-crop and is from 8 to 20 feet between walls. The Stringer vein is to the west of the "Lucky Strike" vein near the west side line of the "Lucky Strike Extension No. 1 N.E." By referring to Map No. 4 you will see Stringer Incline Tunnel, which was run on the vein, but why on an incline is beyond my comprehension. The face of this tunnel is about 100 feet vertical from the surface. This vein has been opened by several open cuts below the Stringer Tunnel and the vein outcrops for 800 to 1000 feet below the tunnel until it is covered by slide and debris just above the timber line. The Tip Top vein is opened by a large open cut at the center ends of the

Morning Star and the Tip Top claims which shows the vein to be about 16 feet wide. This is all the work done on the Tip Top vein, while there has been several feet of tunnels and open cuts on the property, all of which show the continuation of the vein as well as the mineralization but is utterly useless as far as to blocking out the ore for mining. The work has been money thrown away.

FAULTY LOCATIONS

The original locator of this group of claims no doubt intended to cover the Apex of outcrop of the veins throughout the entire group, but for some cause failed to do so.

To illustrate my point, take the junction of the end lines of the "Lucky Strike" and the "Lucky Strike Extension No. 1 N.E." the discovery cut is supposed to be on both claims and the center of the claims. Taking the strike of the "Lucky Strike" vein from this point (the outcrop of which is very prominent) the vein would pass through the west side line of the "Lucky Strike" claim near the center side line, that is on the strike and dip of this vein. Then in the opposite direction, which would be the N.E., I am of the opinion that the vein would pass through the northeast side line not far from the southeast corner of the "Lucky Strike Extension No. 2 N.E." claim.

It would require a survey to determine the exact conditions as to the distance that the Apex is covered by these locations, and I would insist upon amended locations or probably better make other locations to the southwest to cover what is shown on Map No. 1 as the Flat Iron, Little Lake and the well known claims, which Mr. Sam Erickson informed me were open for location.

The present owners of the "Lucky Strike" group should make these locations and include them in the option which the Cordova Mining and Development Company now holds upon the property, in order to protect

the outcrops of the veins, which pass through the side lines of the claims. The Lucky Strike vein is the largest and most prominent vein on the "Lucky Strike" group, and one from which the largest tonnage could be extracted. From twenty-three samples taken from the open cuts and tunnels along the vein, the average value was $1.20 per ton. All these samples were from the surface, with the exception of samples No's. 10 to 15 inclusive, which were taken from the "Lucky Strike" upper tunnel where the tunnel cross-cut the vein 24 feet between walls, and at a depth of 50 feet from the surface, vertical, the average of the samples at this point were $1.66 per ton and values seem to be distributed very uniformly through the vein filling, but as the tunnel merely cross-cuts the vein, there is no tonnage in sight, therefore can not figure any value.

There is no doubt in my mind but this should be prospected, but there are other factors to be considered besides the $1.66 per ton. As has already been stated, the locations do not cover the Apex of the vein for more than 2000 feet, if that far, and the cost of opening up what is covered, is going to be the big item, as well as the price asked for the property, which will come up later.

The Stringer vein which has been developed by an incline tunnel 75 feet and open cuts for a distance of about 800 feet, the tunnel known and referred to as the Stringer Incline tunnel, which was run on the vein but on an incline of about 10 degrees, is the only work that has developed or opened up any ore that could be measured up, showing available ore in sight on this group. By referring to Map No. 4, you will see the conditions.

The mountain rises very abruptly from the approach of this tunnel and at a distance of 75 feet the face of the tunnel is 100 feet vertical from the surface, 75 x 100 x 4½ - 33,750 cubic feet, figuring

15 cubic feet in place to one ton of ore, we have the following: 33,750/15 = 2250 tons of ore in sight. The average value of 29 samples taken from this tunnel including two samples from the dump, $4.41 per ton, 2250 X $4.41 = $9,922.50 gross value in sight.

There is nothing in sight on the "Tip Top" and "Morning Star Claims", the discovery cut is the only work on these two claims. The purchase price of property is $80,000.00, offset by $9,922.50, leaves a prospective value of about $70,000.00, which is seven times greater than the actual value, which is beyond all reason. To the purchase price would have to be added the development, which would be governed entirely by the extent of development. On a big low grade property like the one under consideration, it would require from $150,000.00 and up to equip and put the property in shape to produce say 200 tons per day, for any length of time, and you would want at least two years for development, before installing a milling plant. I would not recommend paying anything on purchase price until the expiration of two years, if a sum equal to $100,000.00 or more, was to be expended in equipment and prospecting. Further, I would not recommend going into the proposition with a few thousand dollars, for your money and time would be wasted.

I submit as a part of this report, a list of samples, from where taken, and values, also tracings of the property as far as obtainable. As soon as the samples are ready on the McKinley group, I will present same with remarks on the property, which will also comprise a part of this report, as I was instructed to look up this group, while in the district.

CONCLUSION

In conclusion, I will say, while the property possesses considerable merit as a prospect, the development work is not sufficiently extensive to warrant a definite opinion as to its ultimate future.

I am of the opinion, however, from the facts given herein, that extensive explorations would develop large bodies of low grade ore, and place the property among the producers.

Yours truly,

(Signed) Jas. H. Henley

LIST OF SAMPLES FROM THE LUCKY STRIKE PROPERTY

No. 1 East side above upper tunnel, 12 feet across vein near bottom of cut- - - - - - - - - - - - - - - - -	$ 2.80
No. 2 East side of open cut above tunnel, 12 feet across vein near top of cut- - - - - - - - - - - - - - - -	2.40
No. 3 West side of open cut above tunnel, bottom of cut 12 feet across vein - - - - - - - - - - - - - - - -	1.60
No. 4 West side of open cut above upper tunnel, near top of cut, 10 feet across vein - - - - - - - - - - - -	1.60
No. 5 above upper cut 6 inches of white quartz, on foot wall -	12.40
No. 6 Diorite west of upper tunnel about 40 feet, foot-wall	1.20
No. 7 Surface west of upper tunnel, foot wall of vein 16 feet of quartz and diorite - - - - - - - - - - - -	0.80
No. 8 Surface west of upper tunnel, center of vein 10 feet	1.60
No. 9 Surface west of No. 8 on hanging-wall, 2 feet- - - -	0.40
No. 10 Lucky Strike upper tunnel, west side across vein, 24 feet quartz-diorite ore - - - - - - - - - - - -	1.60
No. 11 Lucky Strike upper tunnel, east side across vein, 24 feet quartz-diorite - - - - - - - - - - - - - -	2.40
No. 12 Sample from top of tunnel between No's, 10 and 11, 24 feet quartz-diorite - - - - - - - - - - - - - -	1.60
No. 13 Sample taken from both sides of Lucky Strike upper tunnel, 5 feet from foot-wall - - - - - - - - - -	Blank
No. 14 Sample across tunnel 10 feet from foot-wall, quartz-diorite - - - - - - - - - - - - - - - - - -	2.00
No. 15 Across tunnel 20 feet from foot-wall, quartz-diorite	2.40
No. 16 Stringer vein 40 feet west Stringer Incline tunnel, surface this streak seems to be an overflow in the bedding of the slates - - - - - - - - - - - -	3.20
No. 17 Stringer Incline tunnel, at entrance east side (Blacksmith shop) 5 feet quartz-diorite - - - - -	3.40
No. 18 Stringer Incline tunnel, opposite side from No. 17, 5 feet quartz-diorite - - - - - - - - - - - - - - -	Blank
No. 19 Stringer Incline tunnel west side 4½ feet- - - - - -	2.80
No. 20 Stringer Incline tunnel west side 10 feet in 4½ feet	2.80
No. 21 Stringer Incline tunnel, west side 15 feet in 4½ feet	2.80

No. 22 Stringer Incline tunnel, west side 20 feet in 4½ feet	3.60
No. 23 Stringer Incline tunnel, west side 25 feet in 4½ feet	8.40
No. 24 Stringer Incline tunnel, west side 30 feet in 5 feet	14.00
No. 25 Stringer Incline tunnel, west side 35 feet in 5 feet	3.40
No. 26 Stringer Incline tunnel, west side 40 feet in 4½ feet	36.80
No. 27 Stringer Incline tunnel, west side 45 feet in 4½ feet	2.40
No. 28 Stringer Incline tunnel, west side 50 feet in 5 feet	10.00
No. 29 Stringer Incline tunnel, west side 55 feet in 5 feet	3.60
No. 30 Stringer Incline tunnel, west side 60 feet in 5 feet	2.80
No. 31 Stringer Incline tunnel, west side 65 feet in 5 feet	2.80
No. 32 Stringer Incline tunnel, west side 70 feet in 3 feet point at which ore pitches under level - - - - -	1.20
No. 33 Stringer Incline tunnel, face of drift 4½ feet- - -	4.40
No. 34 Stringer Incline tunnel, east side 65 feet in foot-wall - no value so claimed by owners - - - - - -	0.40
No. 35 Stringer Incline tunnel, across top and east side	4.00
No. 36 Stringer Incline tunnel, 40 feet in top and east side	3.40
No. 37 Stringer Incline tunnel, foot-wall 5 feet quartz-diorite -	2.40
No. 38 Stringer Incline tunnel, grab sample from dump - - -	14.00
No. 39 Stringer tunnel, grab sample from dump - - - - - - -	10.80
No. 40 Open cut above Stringer tunnel, 6 inches white quartz, near hanging-wall (special sample) - - - - - - -	174.80
No. 41 Stringer vein open cut near foot of bluff, grab from dump - - - - - - - - - - - - - - - - - - -	3.20
No. 42 Stringer vein open cut surface 12 feet across ledge	2.00
No. 43 Stringer vein 2 feet of shales on hanging-wall, no values - - - - - - - - - - - - - - - - - - -	Trace
No. 44 Stringer vein in gulch hanging-wall 4 feet - - - - -	3.60
No. 45 Stringer vein in gulch foot-wall 4 feet - - - - - -	8.80
No. 46 Silver Pick discovery cut Lucky Strike vein 10 feet, foot-wall streak quartz-diorite - - - - - - - - -	2.00
No. 47 Silver Pick tunnel entrance foot-wall of vein 6 feet	1.60
No. 48 Silver Pick tunnel 10 feet from entrance - - - - - -	Trace

No. 49	Silver Pick tunnel, diorite, no value so claimed - -	Blank
No. 50	Lucky Strike vein, open cut above Silver Pick tunnel, 7 feet quartz-diorite - - - - - - - - - - - - - - -	0.40
No. 51	Lucky Strike vein, surface croppings, west Finlander tunnel, slates 5 feet - - - - - - - - - - - - - - -	1.20
No. 52	Lucky Strike vein, surface of Finlander tunnel, hanging wall, 6 feet quartz-diorite - - - - - - - -	Blank
No. 53	Entrance Finlander tunnel across top 6 feet - - - -	0.40
No. 54	Gouge tunnel or tunnel where Erickson did his assessment work for this year, slates and talc on foot-wall -	Blank
No. 55	Tip Top discovery, open cut, surface, foot-wall, 16 feet -	0.80
No. 56	Tip Top discovery, hanging-wall - - - - - - - - - -	5.60
No. 57	Tip Top discovery, hanging-wall 7 feet - - - - - - -	0.80

REMARKS ON THE McKINLEY GROUP WITH LIST OF ASSAYS

The McKinley Group of mining claims are in the same district as the Lucky Strike and the two properties join at their southern extremities. The main workings of the McKinley upon which the tunnels have been driven are about 1500 feet from the head of the Lake with a good pack trail, which would be made into a good wagon road with little expense and with an easy grade. The geological conditions and the vein formation apply to the McKinley Group as to the Lucky Strike. The property is easier of access and the surface showing of the veins are larger than the Lucky Strike.

DEVELOPMENT

There has been several thousand dollars of development work on this property but failed to develop as it should, for the reason that it was not properly applied. The manner in which the work has been prosecuted is a detriment instead of a benefit.

The lower or long tunnel has been driven about 550 feet with a cross-cut near the face 100 feet. The tunnel was not started on the vein and it is a question whether it is parallel to the strike of the vein. It is my impression that the face of the tunnel has cut the vein, though it may require a survey to prove this, anyway the face of the tunnel is in ore.

The upper tunnel is about 500 feet further up the gulch from the long tunnel and in elevation 250 feet higher. This tunnel was started in the slates on the hanging-wall of the vein and continued 125 feet, and run diagonally toward the vein and at 75 feet from portal cut the vein on the hanging-wall side. The conditions at this tunnel are less excusable than at the lower tunnel, for the vein shows on the surface within 25 feet of the portal and was opened on the surface by open cuts and the

vein can be traced for about 800 feet in width from 40 to 70 feet.

After cutting the vein in the tunnel, instead of following the strike of the vein, the tunnel was continued back into the hanging-wall.

McKINLEY GROUP -- 2

There are three very large veins on this group. The one for which the tunnels were driven, I will designate as the "McKINLEY" vein, which can be traced about 800 feet on the surface, beyond which point I never tried to follow it. This vein, as already stated, is from 40 to 70 feet between walls and the assays show it is uniform in values.

The second vein is about 300 feet to the east of the McKinley, for convenience I will call it the "CENTER" vein, which runs about parallel to the McKinley, and from the work done thereon is about 10 feet wide.

The third or "JUMBO" is some 300 feet east of the Center vein and from an open cut shows to be over 50 feet wide on the surface. A short tunnel has been run on this vein below the open cut about 15 feet and is in ore. I never traced out the Jumbo or Center veins, only so far as work had been done on them.

Several tons of ore have been mined from the upper tunnel and the open cuts along the McKinley vein and treated in a little mill erected on the property, but as to the values and savings, I could not learn, but Mr. Erickson claims the raw ore was about $10.00.

The Assays have been completed on the McKinley group and I am more than surprised at the values. The average of thirty-one samples from this group was $5.06, which I consider very good for a large low grade property.

RECOMMENDATIONS

According to the assay returns from this group, I would recommend that the Cordova Mining and Development Company begin negotiations for terms and conditions on this property if it could be had on reasonable time and payments. I would not make any payments until after the expiration of two years from the date of option, but in lieu thereof, agree to perform a certain number of feet of development each year, and to equip it with the necessary machinery for such work.

McKINLEY GROUP -- 3

This being a low grade proposition, it will require a large sum to develop it into a large producer and at least two years time before a large plant should be put thereon. If the Company can raise the money to develop this property I would suggest that it be tied up by some form of option and that a survey be made and further examination and some sampling done to demonstrate the character of work and amount of money necessary to develop enough ore in sight to justify a large milling plant, for it will have to be worked on a large scale to make money, on a large scale. Should the Company desire to make further investigations and wish any suggestions from me, I will be too glad to render any assistance possible. Trusting that the above will enable you to form some conclusions, I am

Yours very truly,

(Signed) Jas. H. Henley

LIST OF SAMPLES TAKEN FROM THE McKINLEY LAKE PROPERTY

No. 58	McKinley group, open cut above upper tunnel hanging-wall - - - - - - - - - - - - - - - - - -	$ 4.80
No. 59	McKinley group, open cut above upper tunnel, 10 feet from hanging wall - - - - - - - - - - -	4.00
No. 60.	McKinley group, open cut above upper tunnel, 15 feet from hanging wall - - - - - - - - - - -	4.00
No. 61	McKinley group, open cut above upper tunnel, 20 feet from hanging wall, diorite-quartz - - -	3.20
No. 62	McKinley group, open cut above upper tunnel, 25 feet from hanging wall, diorite-quartz - - -	3.20
No. 63	McKinley group, open cut above upper tunnel, 30 feet from hanging wall, diorite-quartz - - -	2.40
No. 64	McKinley group, open cut above upper tunnel, 35 feet from hanging wall, diorite-quartz - - -	3.20
No. 65	McKinley group, open cut above upper tunnel, 40 feet from hanging wall, diorite-quartz - - -	4.40
No. 66	McKinley group, open cut above upper tunnel, 45 feet from hanging wall, diorite-quartz - - -	3.20
No. 67	McKinley group, open cut above upper tunnel, grab sample from dump - - - - - - - - - - - - -	20.80
No. 68	McKinley group, open cut above upper tunnel, grab sample from dump - - - - - - - - - - - - -	6.40
No. 69	McKinley group, open cut point of ridge, 7 feet diorite-porphyry - - - - - - - - - - - - -	2.40
No. 70	McKinley group, open cut point of ridge, 12 feet diorite-porphyry - - - - - - - - - - - -	2.40
No. 71	McKinley group, point of ridge open cut, 15 feet diorite-porphyry - - - - - - - - - - - -	2.40
No. 72	McKinley group, open cut just above upper tunnel where ore had been mined for mill 8 feet - - - -	5.60
No. 73	McKinley group, open cut just above upper tunnel where ore had been mined for mill 9 feet - - - -	6.40
No. 74	McKinley group, open cut just above upper tunnel, grab sample from dump where ore had been mined for mill -	4.80
No. 75	McKinley group, open cut just above upper tunnel where ore had been mined for mill - - - - - - - -	3.60

No. 76	McKinley group, upper tunnel at intersections of drifts average 10 feet across diorite-quartz - - -	20.40
No. 77	McKinley group, upper tunnel first left across cut 18 feet diorite-quartz - - - - - - - - - - - -	2.80
No. 78	McKinley group, upper tunnel east cross-cut, 10 feet across tunnel, diorite-quartz - - - - - -	2.40
No. 79	McKinley group, upper tunnel north drift, diorite-quartz - - - - - - - - - - - - - - - - - -	5.80
No. 80	McKinley group, upper tunnel, grab from dump - - -	2.80
No. 81	McKinley group, upper tunnel, grab from dump - - -	14.40
No. 82	McKinley group, face of long tunnel, grab from pile - - - - - - - - - - - - - - - - - - -	2.00
No. 83	McKinley group, long tunnel cross-cut west, graywacke - - - - - - - - - - - - - - - - - - -	Trace
No. 84	McKinley group, long tunnel grab from dump - - -	2.00
No. 85	McKinley group, long tunnel grab from dump - - -	2.00
No. 86	McKinley group, long tunnel grab from dump - - -	2.00
No. 87	Mckinley group, Center vein south-east of McKinley vein about 300 feet, grab sample from dump, vein 10 feet wide - - - - - - - - - - - - - - - - - -	4.80
No. 88	McKinley group, face of Jumbo tunnel 4 feet, this vein is over 40 feet wide on surface - - - - - -	2.40

Copy communication - By L.D. Gassaway- V.P. Yuba Gold Fields Consolidated
to Mr. L.V. Blankman - Kodiak, Alaska, May 23rd, 1935

Dear Mr. Blankman:

As per your telegraphic request early in May Mr. Whiting and I stopped over at Cordova to look at the McKinley Lake mining prospect. Due to the time of year and lack of transportation it was necessary to charter a plane for the trip. One day was spent on the properties and no sampling was attempted. I have therefore placed my deductions in the form of a letter to you.

Available Data

1. A large number of samples have been taken by several engineers, and some of these engineers have also taken check samples on the others.

2. Considerable development work has been done at various times on the properties in the form of tunnels, cuts, shafts, trails and buildings, - most of which was ill advised and poorly done.

3. The claims numbering about 20 are contiguous and cover the mineralized territory more or less completely, although some of them should be amended to conform to the strike of the veins.

4. The formations are thin-bedded slates and graywackes uplifted and contorted by mountain building and the intrusion of large masses of granitic magma nearby. The slates stand at high angles of dip - the general strike being about east and west, the dip 35 to 70 degrees northerly. Quartz, glassy and sugary, has more or less thoroughly penetrated the laminae of the slates and graywackes in stringers, lenses and veins with the same strike and dip as the slates. At places such as within the claims there are large zones of weakness where considerable movement and crushing has taken place prior to mineralization, and a subsequent infiltration of quartz and such other minerals as iron pyrite, arsenopyrite, gold and silver have found easy access to the slates and contacts. The nature of the quartz, sulphides diorite dikes and adjacent granitic mass seem to indicate a sequence of mammatic segregation from the latter and the ores should attain considerable depth.

5. The samples while scattered in bunches over the claims indicate good values ranging from $2.00 to $70.00 per ton - perhaps an average of $4.00 or $5.00 per ton. Gold figured at $20.67 per ounce. The width samples vary from 3 to 4 feet in tunnels - to 140 feet in cuts, seemingly indicating wide zones of low grade materials. These zones, mineralized and sampled, are more or less parallel and frequently close enough together so that underground development may be carried on from one or two main gangways for the most part.

6. A large amount of fine timber is available on the claims and sufficient water power may be developed from Bear and Salmon Creeks nearby.

7. The properties are at Lake McKinley and about three miles from Alaganik Station of the Copper River R.R. The elevation varies from 200 to 900 feet above sea level, and the topography lends itself to cheap road building. Airplanes can land easily at the lake. Cordova, nearest seaport, is 22 miles northwest and serves for import and export of supplies the year around.

8. The properties are incorporated under the Laws of Washington as "The McKinley Lake Gold Mines Ltd, Inc." There are 4,000,000 shares of 5 cents value each. The stock is all common and of equal voting value. There are at present 2,600,000 shares in the Treasury. Dr. W.H. Chase and Charles Goodall, of Cordova, control the company and own 1,000,000 shares in escrow in the Bank of Cordova. Dr. Chase is prepared to make reasonable terms with reliable people. The titles are said to be clear, and all assessment work to date. Three mining engineers - James Henly, W.G. Smith, and Hancock - have examined and reported favorably on the properties but are not known by the writer. The Trail Smelter people of British Columbia have made an offer based on the reports of the above engineers but the terms are not satisfactory to Chase and Goodall.

Conclusions

1. The present development of tunnels and cuts is of little value in that while indicative of good values it has developed little ore.

2. Assuming the assay values to be correct, they are indicative of values but do not indicate the continuity of ore. The samples are bunched and do not uncover connected areas or volumes of ore necessary in determining a large low grade property.

3. The geologic formations, more of mineralization, nature of the metals, and general economic aspects, are favorable for spending some money in proper sampling and a limited amount of underground development.

4. The physical contours of the properties will allow mining by gravity methods at a low cost. There will be no pumping or hoisting charges. There will be a minimum of timbering, but there is a large supply of good cheap timber available. Water power may be developed cheaply close to the properties.

5. Supplies will cost slightly more than in the States, but will be easy to obtain from Seattle or San Francisco. Freight rates are not prohibitive and winter conditions are quite favorable.

6. The metallurgy of the ores will be fairly simple. The flow sheet will probably indicate stamp milling, followed by amalgamation, concentration either by table or flotation, and cyanidation. It is not believed at this time that there is sufficient Arsenic in the ores to interfere with amalgamation or cyanidation, although careful inspection may show otherwise. A rough inspection of the exposed vein material seems to show 1% to 2% sulphides or a concentration ratio of 1 to 50. It may be less than this. 75% of the gold values should be recovered by amalgamation. Much of the values lie in the crushed slates outside

the quartz. The zone of oxidation or enrichment is practically absent due to glaciation and erosion, and the sulphides appear at the surface.

7. Proper sampling and some short well chosen tunnels should show up the value of the properties quickly and at a reasonable expense. It is believed by the writer that a maximum of $15,000 to $20,000 will definitely prove the value of this property if spent by a competent engineer. Also if advantage be taken of the present tunnels the same results may be accomplished for much less. However, to spend money simply to check the present assays will serve only to prove what we already assume and will not then determine the value of the property.

8. As only one day was (the rest of this is missing)

REPORT ON THE
LUCKY STRIKE & PIONEER GROUP
OF
MINING CLAIMS
McKINLEY LAKE MINING DISTRICT
CORDOVA, ALASKA
OWNED BY
McKINLEY LAKE GOLD MINES, LTD.
JUNE 19th, 1934

Property:

The Lucky Strike Group is comprised of twelve full sized claims, namely Lucky Strike one to twelve and the Big Four Fraction, all held by location.

The Pioneer Group consists of 16 mining claims, namely Pioneer, Pioneer number one to eight, Pioneer Extension Number one to four, and Uno number one to three, entire holdings comprise of about 640 acres.

The claims are well located with reference to mineral lodes as exposed on the surface.

Size of claims are approximately 1500 feet by 600 feet.

Location:

The above two groups of claims are situated in the McKinley Lake Mining division, twenty-two miles from the town of Cordova, Alaska, on the Copper River and Northwestern Railway, then by trail two and one half miles to the property. All year round transportation to the property, with a cost of F.O.B. mine, should not exceed thirty dollars per ton from Seattle to Property.

Timber:

Ample timber on the property for all requirements, and of sufficient size to be sawed into any size timbers which might be required, the timber is a valuable asset to the Company.

Power:

Some water power is available and could be harnessed. I recommend the installation of two portable compressors to do the first development.

Geology:

The formation is chiefly composed of slates and graywackes, other dikes and sills which I observed on both groups of claims, may be diorites. They were too highly altered for me to tell what they were. One and one half miles to the north lies a large granite stock, which may have something to do with this mineralized break.

Veins and Ore Deposits:

On the Lucky Strike group, three veins have been discovered, namely, Lucky Strike Vein, Stringer Vein and Tip Top. All are well defined and can be traced for considerable distances. Widths are from a few feet to twenty-five feet wide. I did not get in the Lucky Strike tunnels as the draws and portals were filled with snow. Sampling of Stringer tunnel showed ores of commercial value, as follows:

Sample #2 - Width 36" - Value $ 6.30
Sample #3 - Width 15" - Value 70.70
Sample #4 - Width 5" - Value 0.70 See Map #1.

A tunnel driven 1000 feet below this showing a distance of about five hundred feet, which was wrongly directed, and by swinging the tunnel in a more northerly direction, will beyond a doubt intersect the downward continuation of the Stringer vein. Then further cross-cutting to the north the Tip Top vein will be intersected, 1000 feet depth. This tunnel a distance of 400 feet from the portal, cut a nine foot vein which returned an assay of $0.70 Gold, and is worthy of further exploration. I recommend the driving of the cross-cut to the north and also drifting on South Vein, which will eventually intersect the downward continuation of the Lucky Strike vein, and large tonnages of ore can be developed. See Map #2.

On the Pioneer group a large shear zone on claim number eight, open cut, shows width of over one hundred feet. Several open cuts below show its continuity up to or near creek, where I believe an east and

west fault has displaced the downward continuation. In my opinion the displacement would not be of any great distance.

Samples taken in sections across a long open cut a distance of over 100 feet, as follows: Section A with a width of 43 feet returned an average of $5.93 per ton. Section B with a width of 32 feet returned an average of $5.23. Section C showing two open cuts ten and six feet long returned an average of $7.03. See Map #3.

By continuing the lower tunnel, 200 feet, which has been driven in six hundred feet, see Map #4, one could easily glory hole out this area. The tunnel would cut the showing at a depth of three hundred feet, thereby developing exceedingly large tonnages of ore, which should be mined at a cost of not more than 25 cents per ton, on a thousand ton per day basis. I took a sample of a tailing pile from ores milled from this section and got $10.50 per ton.

On the Pioneer claim upper tunnel a sample across five feet gave a return of 0.11 oz Gold, or $3.85 per ton. A tunnel was driven lower down and exposed 24 inches of quartz, which showed $0.70 per ton. More surface work should be done in this area as I fully believe there are possibilities of disclosing vein intersections from a high grade cross fissure which shows further down on this particular claim. The strike of this zone is north and south, strike of fissure east and west. Near the lower boundary of Pioneer and Pioneer Number one a fissure as above referred to striking east and west and dipping 50 degrees to north, see Map #5, shows a quartz vein average width 14 inches, for 180 feet, average value $78.98. One of these samples was taken down west end shaft 16 feet deep.

I took twenty-seven samples in order to check previous assay reports, and found them to check correspondingly well.

Conclusion:

I feel quite confident the properties, both Lucky Strike and Pioneer Group, under a proper plan of development, will respond in tonnage developed, and will both make a major operation to possibly one thousand tons per day of five dollar ore, with a cost not to exceed two dollars per ton.

Attached is an estimate of development costs. (not here)

Respectfully,

(Signed) W.G. Smith

"McKinley Lake Gold Mines Ltd., Inc."

Located about 22 miles from Cordova, Alaska. Reached by water, Rail, and Air.

Incorporated for 4,000,000 non-assessable shares - par value five cents. Original owners received stock for release and deeds to property.

Property includes 20 full claims 600 x 1500 feet each.

Good trail to R.R. 2½ miles. Fine timber on property. Water available for power...but, up to 200 H.P. Diesel most economical as oil reasonable locally.

Property can be worked year around--seldom down to zero this district.

A high-grade true fissure vein now being developed by incline shaft, all on ore. Last assay was $59.45. A true Ribbon Quartz--values in arsenopyrites. 20 samples gave average returns of $33.00. Vein stripped 150 feet--averages 2 feet in width. Ore being extracted and piled for mill. When 50 feet depth is reached it is intended to drive drift westerly whereby an overhead of 2000 feet may be obtained. A shaft at opposite end of stripped vein shows 21 inches of ore. Samples carry more than $25.00 per ton values.

There are 7 big low-grade veins on the property--at elevations of 400 to 1200 feet--ore from which can all be brought to one point by gravity. There is one 25-foot vein, one 12-foot vein, one 10-foot vein, one 5-foot vein and a zone containing three veins. Vein and country rock across 70 feet of which will assay more than $6.00, or the vein matter more than $10.00. This zone can be worked open by quarrying--gaining nearly foot for foot headway as the mountain is about 45% in steepness.

The country is made up of slates, graywackes and diorites. All the big veins are free milling, amalgamation and tables. The Fissure Vein shows little free gold, this best treated by flotation followed perhaps by cyanide. Should return practically full values.

Good building near present working on Fissure Vein. Have 2000 feet rails, 3 ore cars, hand tools, steel, etc.

Company desirous of raising ten thousand dollars from sale of non-assessable stock at five cents per share to install 20-25 ton capacity plant, Ball mill table and flotation (probably Denver Equipment), a compressor and a small cat tractor with drum and cable attached. With this capital the plant can be installed ready for operation within 60 days from day of shipment.

No further stock will be offered at anything like this price after equipment is installed, and not then without authority from the Board of Directors.

89 sample assays from the low-grade ledges gave an average return of $14.10 per ton in values.

The only U.S. Geological report on the District was Bulletin No. 542 issued in 1912. This only a few hours visit by Dr. Brooks to see the outcroppings of one of the large veins on the Lucky Strike groups that could be seen from the lake.

Cordova, Alaska
Nov. 8, 1938

(Signed) W. H. Chase
General Manager
"McKinley Lake Gold Mines Ltd., Inc."

MCKINLEY LAKE GOLD MINE LTD.

CORDOVA - COPPER RIVER DISTRICT

ALASKA

Note:

In considering this report, it should be borne in mind that the values given in some instances are based on Gold at $20.67 per ounce, and in others they are based on Gold at $35.00 per ounce. Therefore, attention should be given to the date of report and those prior to 1934 refer to the $20.67 price.

It should be noted that in some of the earlier reports reference is made to the two groups of claims as follows: 1. McKinley Lake Property, 2. Lucky Strike property. Subsequently, the group of claims originally referred to as the McKinley Lake Groupwas renamed, and is now referred to as the "Pioneer" group of claims. The entire property now consisting of two groups, viz: Pioneer Group and Lucky Strike Group is referred to in its entirety as the "McKinley Lake Gold Mine Ltd."

Mr. L. D. Gasaway who made the 1935 report for Mr. L. V. Blankman is associated with the Yuba Consolidated Gold Mines at San Francisco, and is available for a personal discussion of his observations.

For further information, refer to

Mr. L. V. Blankman
Sir Francis Drake Hotel
San Francisco, California

Copy to Howard Park
Jan. 22, 1962

Cordova, Alaska, Nov. 11, 1915

President and Directors,

Cordova Mining and Development Co.,

Gentlemen:

I submit herewith a brief report upon the "Lucky Strike and McKinley Lake groups of Mining Claims," located on the north and northeast slopes of McKinley Mountain, about 23 miles southeast of Cordova, Alaska.

At the time of my visit I was fortunate in having fine weather, which afforded me an opportunity to see the surface and to tracing out the veins of the district. The first group includes the "Lucky Strike Extension No. 2 N. E." "Lucky Strike Extension No. 1 N.E." "Lucky Strike", Lucky Strike Extension No. 1 S. W." and the "Big Four Fraction," with an area of over 120 acres. Map No. 1 shows the claims in their general relations to the surrounding claims, while Map No. 2 shows the claims as surveyed, according to tracing furnished I will call these claims the "Stringer Group" to designate them from the other claims in the district and also as the Company holds an option of purchase on the group.

A C C E S S I B I L I T Y.

This property is easily reached by the Copper River and Northwestern Railroad from Cordova to Alaganik Station which is about four miles from the property and from the Station by trail which is in fair condition. Again by water with small boats through Alaganik Slough to McKinldy Lake which would not exceed 1½ miles from the propertyl From a point about five miles east of Alaganik on the Railroad a good wagon road could be cheaply constructed up Salmon River to the property. From my observation, I think a couple of thousand dollars would construct a good road to the property, either from the Railroad or from McKinley Lake, by which supplies could be gotten at all seasons of the year.

T I M B E R.

McKinley Lake District is noted for its fine timber, both for mining and lumber, and it would not be a difficult matter to deliver same to Saw Mill.

W A T E R

There is plenty of water in Salmon River and Fall Creek if properly collected, to furnish power to run a large plant.

G E O L O G Y.

The geological conditions for several miles in extent is composed of graywacke and slates alternating with quartz dioryte dikes at various intervals. The dikes so far as determined, as a rule, follow the foliation and are parallell to the stratified beds, but in some cases cut the beds. The dikes form the vein system or the mineralized zones of the district, which are likewise parallel and occur as contacts between the graywacke hanging walls, and some the reverse.

The general average strike is about N. 20° E. and dip from 40° to 80° N. W. About two miles to the west of the "Lucky Strike", group is a large body of granite and as you near this granite bed the slates have reversed their dip to about 80° to the southeast. There are frequent intrusions of porphyry through the ore and often several inches of salvage on the walls. The dioryte has been brecciated and subsequently mineralized by numerous small veins and veinlets.

These dikes are very persistent and can be traced for a long distance. I followed the "Lucky Strike" and "Tip Top" veins for about 1½ miles across two high ridges, and they vary in width from 10 ft. to over 60 ft. between walls. There are three large known veins in this group and possibly more. Chrystals of pyrite and arsenopyrite can be seen throughout the vein matter.

D E V E L O P M E N T W O R K.

There are three large veins on the "Lucky Strike Group" the out-crops of which are partly protected by the locations and to which I will refer under head of recommendations.

At the center end lines of the "Lucky Strike" and the "Lucky Strike Extension No. 1 N. E." is a large open cut about 20 feet long, 8 feet wide and 15 feet in height, which exposes the vein 12 feet in width. Below this cut about 75 feet distant and 50 feet lower in altitude, a tunnel was driven in the foot wall of the vein and at a distance of 110 feet the vein was cut on the foot wall, the drift was extended 24 feet farther across the vein at which point the hanging wall was found showing the to be 24 feet in width.

Had the tunnel been started 100 feet farther to the west and run to the same point to which it is now, it would have been on the vein all the way. Map No. 3 shows the "Lucky Strike" upper tunnel in relation to the Finlander Tunnel. The Finlander Tunnel was also driven in the country foot wall parallel to the vein, which could have been run on the vein as easily as in the foot wall, but as it is, it would require a cross-cut to the west of about 60 feet to cut the vein. There are several open cuts below the Finlander Tunnel on the vein which out-crop and is from 8 to 20 feet between walls. The Stringer vein is to the west of the "Lucky Strike" vein near the west side line of the "Lucky Strike Extension No. 1 N. E." By referring to Map No. 4 you will see Stringer Incline Tunnel, which was run on the vein, but why on an incline is beyond my comprehension. The face of this tunnel is about 100 feet vertical from the surface. This vein has been opened by several open cuts below the Stringer Tunnel and the vein outcrops for 800 to 1000 feet below the tunnel until it is covered by slide and debris just above the timber line. The Tip Top vein is opened by a large open cut at the center ends of the Morning

Star and the Tip Top claims which shows the vein to be about 16 feet wide. This is all the work done on the Tip Top vein, while there has been several feet of tunnels and open cuts on the property, all of which show the continuation of the vein as well as the mineralization but is utterly useless as far as to blocking out the ore for mining. The work has been money thrown away.

F A U L T Y L O C A T I O N S.

The original locator of this group of claims no doubt intended to cover the Apex of outcrop of the veins throughout the entire group, but for some cause failed to do so.

To illustrate my point, take the junction of the end lines of the "Lucky Strike" and the "Lucky Strike Extension No. 1 N. E." the discovery cut is supposed to be on both claims and the center of the claims. Taking the strike of the "Lucky Strike" vein from this point (the outcrop of which is very prominent) the vein would pass through the west side line of the "Lucky Strike" claim near the center side line, that is on the strike and dip of this vein. Then in the opposite direction, which would be the N. E. I am of the opinion that the vein would pass through the northeast side line not far from the southeast corner of the "Lucky Strike Extension No. 2 N. E. claim."

It would require a survey to determine the exact conditions as to the distance that the Apex is covered by these locations, and I would insist upon amended locations or probably better make other locations to the southwest to cover what is shown on Map No. 1 as the Flat Iron, Little Lake and the well known claims, which Mr. Sam Erickson informed me were open for location.

The present owners of the "Lucky Strike" group should make these locations and include them in the option which the Cordova Mining and Development Company now holds upon the property, in order to protect the

outcrops of the veins, which pass through the side lines of the claims. The Lucky Strike vein is the largest and most prominent vein on the "Lucky Strike" group, and one from which the largest tonnage could be extracted. From twenty-three samples taken from the open cuts and tunnels along the vein, the average value was $1.20 per ton. All these samples were from the surface, with the exception of samples No's 10 to 15 inclusive, which were taken from the "Lucky Strike" upper tunnel where the tunnel cross-cut the vein 24 feet between walls, and at a depth of 50 feet from the surface, vertical, the average of the samples at this point were $1.66 per ton and values seem to be distributed very uniformly through the vein filling, but as the tunnel merely cross-cuts the vein, there is no tonnage in sight, therefore can not figure any value.

There is no doubt in my mind but this should be prospected, but there are other factors to be considered besides the $1.66 per ton. As has already been stated, the locations do not cover the Apex of the vein for more than 2000 feet, if that far, and the cost of opening up what is covered, is going to be the big item, as well as the price asked for the property, which will come up later.

The Stringer vein which has been developed by an incline tunnel 75 feet and open cuts for a distance of about 800 feet, the tunnel known and referred to as the Stringer Incline tunnel, which was run on the vein but on an incline of about 10 degrees, is the only work that has developed or opened up any ore that could be measured up, showing available ore in sight on this group. By referring to Map No. 4, you will see the conditions.

The mountain rises very abruptly from the approach of this tunnel and at a distance of 75 feet the face of the tunnel is 100 feet vertical from the surface, 75 x 100 x 4½ - 33,750 cubic feet, figuring

15 cubic feet in place to one ton of ore, we have the following: 33,750/15 = 2250 tons of ore in sight. The average value of 29 samples taken from this tunnel including two samples from the dump, $4.41 per ton, 2250 X $4.41 - $9,922.50 gross value in sight.

There is nothing in sight on the "Tip Top" and "Morning Star Claims", the discovery cut is the only work on these two claims. The purchase price of property is $80,000.00, offset by $9,922.50, leaves a prospective value of about $70,000.00, which is seven times greater than the actual value, which is beyond all reason. To the purchase price would have to be added the development, which would be governed entirely by the extent of development. On a big low grade property like the one under consideration, it would require from $150,000.00 and up to equip and put the property in shape to produce say 200 tons per day, for any length of time, and you would want at least two years for development, before installing a milling plant. I would not recommend paying anything on purchase price until the expiration of two years, if a sum equal to $100,000.00 or more, was to be expended in equipment and prospecting. Further, Iwould not recommend going into the proposition with a few thousand dollars, for your money and time would be wasted.

I submit as a part of this report, a list of samples,from where taken, and values, also tracings of the property as far as obtainable. As soon as the samples are ready on the McKinley group, I will present same with remerks on the property, which will also comprise a part of this report, as I was instructed to look up this group, while in the district.

C O N C L U S I O N

In conclusion, I will say, while the property possesses considerable merit as a prospect, the development work is not sufficiently extensive to warrant a definite opinion as to its ultimate future.

I am of the opinion, however, from the facts given herein, that extensive explorations would develop large bodies of low grade ore, and place the property among the producers.

Yours truly,

(Signed) Jas. H. Henley

LIST OF SAMPLES FROM THE LUCKY STRIKE PROPERTY

No. 1 East side above upper tunnel, 12 feet across vein near bottom of cut - - - - - - - - - - - - - - - - - - - $ 2.80

No. 2 East side of open cut above tunnel, 12 feet across vein near top of cut - - - - - - - - - - - - - - - - - - 2.40

No. 3 West side of open cut above tunnel, bottom of cut 12 feet across vein - - - - - - - - - - - - - - - - - - - 1.60

No. 4 West side of open cut above upper tunnel, near top of cut, 10 feet across vein - - - - - - - - - - - - - - - 1.60

No. 5 Above upper cut 6 inches of white quartz, on foot wall - 12.40

No. 6 Dioryte west of upper tunnel about 40 feet, foot-wall 1.20

No. 7 Surface west of upper tunnel, foot wall of vein 16 feet of quartz and dioryte - - - - - - - - - - - - - - 0.80

No. 8 Surface west of upper tunnel, center of vein 10 feet 1.60

No. 9 Surface west of No. 8 on hanging-wall, 2 feet - - - - - 0.40

No. 10 Lucky Strike upper tunnel, west side across vein, 24 feet quartz-dioryte ore - - - - - - - - - - - - - - 1.60

No. 11 Lucky Strike upper tunnel, east side across vein, 24 feet quartz-dioryte - - - - - - - - - - - - - - - - 2.40

No. 12 Sample from top of tunnel between No's 10 and 11, 24 feet quartz-dioryte - - - - - - - - - - - - - - - - 1.60

No. 13 Sample taken from both sides of Lucky Strike upper tunnel, 5 feet from foot-wall - - - - - - - - - - - - - Blank

No. 14 Sample across tunnel 10 feet from foot-wall, quartz-dioryte - 2.00

No. 15 Across tunnel 20 feet from foot-wall, quartz-dioryte- - 2.40

No. 16 Stringer vein 40 feet west Stringer incline tunnel, surface this streak seems to be an overflow on the

bedding of the slates - - - - - - - - - - - - - - - - - - 3.20

No. 17 Stringer incline tunnel, at entrance east side (black-smith shop) 5 feet quartz-dioryte - - - - - - - - - - 3.40

No. 18 stringer incline tunnel opposite side from No. 17, 5 feet quartz-dioryte - - - - - - - - - - - - - - - - - Blank

No. 19 Stringer incline tunnel west side 4½ feet - - - - - - - 2.80

No. 20 Stringer incline tunnel west side 10 feet in 4½ feet - - 2.80

No. 21 Stringer incline tunnel, west side 15 feet in 4½ feet - 2.80

No. 22 Stringer incline tunnel, west side 20 feet in 4½ feet - 3.60

No. 23 stringer incline tunnel, west side 25 feet in 4½ feet - 8.40

No. 24 stringer incline tunnel, west side 30 feet in 5 feet - 14.00

No. 25 Stringer incline tunnel, west side 35 feet in 5 feet - 3.40

No. 26 Stringer incline tunnel, west side 40 feet in 4½ feet - 36.80

No. 27 Stringer incline tunnel, west side 45 feet in 4½ feet - 2.40

No. 28 Stringer incline tunnel, west side 50 feet in 5 feet - 10.00

No. 29 Stringer incline tunnel, west side 55 feet in 5 feet - 3.60

No. 30 Stringer incline tunnel, west side 60 feet in 5 feet - 2.80

No. 31 Stringer incline tunnel, west side 65 feet in 5 feet - 2.80

No. 32 Stringer incline tunnel, west side 70 feet in 3 feet point at which ore pitches under level - - - - - - 1.20

No. 33 Stringer incline tunnel face of drift 4½ feet - - - - - 4.40

No. 34 Stringer incline tunnel, east side 65 feet in foot-wall no value so claimed by owners - - - - - - - - - - - - 0.40

No. 35 Stringer incline tunnel, across top and east side 4.00

No. 36 Stringer incline tunnel, 40 feet in top and east side - 3.40

No. 37 Stringer incline tunnel, foot-wall 5 feet quartz-dioryte 2.40

No. 38 Stringer incline tunnel grab sample from dump - - - - - 14.00

No. 39 Stringer tunnel, grab sample from dump - - - - - - - - 10.80

No. 40 Open cut above stringer tunnel, 6 inches white quartz, near hanging-wall (special sample) - - - - - - - - 174.80

No. 41 Stringer vein open cut near foot of bluff, grab from dump	3.20
No. 42 Stringer vein open cut surface 12 feet across ledge - - -	2.00
No. 43 Stringer vein 2 feet of shales on hanging-wall, no values	Trace
No. 44 Stringer vein in gulch hanging-wall 4 feet - - - - - - - -	3.60
No. 45 Stringer vein in gulch foot-wall 4 feet - - - - - - - - -	8.80
No. 46 Silver Pick discovery cut Lucky Strike vein 10 feet, foot-wall streak quartz-dioryte - - - - - - - - - - - - -	2.00
No. 47 Silver Pick tunnel entrance foot-wall of vein 6 feet - -	1.60
No. 48 Silver Pick tunnel 10 feet from entrance - - - - - - - -	Trace
No. 49 Silver Pick tunnel, dioryte, no value so claimed - - - -	Blank
No. 50 Lucky Strike vein, open cut above Silver Pick tunnel, 7 feet quartz-dioryte - - - - - - - - - - - - - - -	0.40
No. 51 Lucky Strike vein, surface croppings, west Finlander tunnel, slates 5 feet - - - - - - - - - - - - - - - -	1.20
No. 52 Lucky Strike vein, surface of Finlander tunnel, hanging wall, 6 feet quartz-dioryte - - - - - - - - - - - -	Blank
No. 53 Entrance Finlander tunnel across top 6 feet - - - - - - -	0.40
No. 54 Gouge tunnel or tunnel where Erickson did his assessment work for this year, slates and talc on foot-wall -	Blank
No. 55 Tip Top discovery, open cut, surface, foot-wall, 16 feet -	0.80
No. 56 Tip Top discovery, hanging-wall - - - - - - - - - - - -	5.60
No. 57 Tip Top discovery, hanging wall 7 feet - - - - - - - - -	0.80

REMARKS ON THE McKINLEY GROUP WITH LIST OF ASSAYS

The McKinley Group of mining claims are in the same district as the Lucky Strike and the two properties join at their southern extremities. The main workings of the McKinley upon which the tunnels have been driven are about 1500 feet from the head of the Lake with a good pack trail, which would be made into a good wagon road with little expense and with an easy grade. The geological conditions and the vein formation apply to the McKinley Group as to the Lucky Strike. The property is easier of access and the surface showing of the veins are larger than the Lucky Strike.

D E V E L O P M E N T

There has been several thousand dollars of development work on this property but failed to develop as it should, for the reason that it was not properly applied. The manner in which the work has been prosecuted is a detriment instead of a benefit.

The lower or long tunnel has been driven about 550 feet with a cross-cut near the face 100 feet. The tunnel was not started on the vein and it is a question whether it is parallel to the strike of the vein. It is my impression that the face of the tunnel has cut the vein, though it may require a survey to prove this, anyway the face of the tunnel is in ore.

The upper tunnel is about 500 feet further up the gulch from the long tunnel and in elevation 250 feet higher. This tunnel was started in the slates on the hanging-wall of the vein and continued 125 feet, and run diagonally toward the vein and at 75 feet from portal cut the vein on the hanging-wall side. The conditions at this tunnel are less excusable than at the lower tunnel, for the vein shows on the surface within 25 feet of the portal and was opened on

the surface by open cuts and the vein can be traced for about 800 feet in width from 40 to 70 feet.

After cutting the vein in the tunnel, instead of following the strike of the vein, the tunnel was continued back into the hanging-wall.

McKINLEY GROUP -- 2

There are three very large veins on this group. The one for which the tunnels were driven, I will designate as the "McKINLEY" vein, which can be traced about 800 feet on the surface, beyond which point I never tried to follow it. This vein as already stated is from 40 to 70 feet between walls and the assays show it is uniform in values.

The second vein is about 300 feet to the east of the McKinley; for convenience I will call it the "CENTER"vein, which runs about parallel to the McKinley, and from the work done thereon is about 10 feet wide.

The third or "JUMBO" is some 300 feet east of the Center vein and from an open cut shows to be over 50 feet wide on the surface. A short tunnel has been run on this vein below the open cut about 15 feet and is in ore. I never traced out the Jumbo or Center veins, only so far as work had been done on them.

several tons of ore have been mined fromthe upper tunnel and the open cuts along the McKinley vein and treated in a little mill erected on the property, but as to the values and savings, I could not learn, but Mr. Erickson claims the raw ore was about $10.00.

The assays have been completed on the McKinley group and I am more than surprised at the values. The average of thirty-one samples from this group was $5.06, which I consider very good for a large low grade property.

R E C O M M E N D A T I O N S

According to the assay returns from this group, I would recommend that the Cordova Mining and Development Company begin negotiations for terms and conditions on this property if it could be had on reasonable time and payments. I would not make any payments until after the expiration of two years from the date of option, but in lieu thereof, agree to perform a certain number of feet of development each year, and to equip it with the necessary machinery for such work.

McKINLEY GROUP -- 3

This being a low grade proposition, it will require a large sum to develop it into a large producer and at least two years time before a large plant should be put thereon. If the Company can raise the money to develop this property I would suggest that it be tied up by some form of option and that a survey be made and further examination and some sampling done to demonstrate the character of work and amount of money necessary to develop enough ore in sight to justify a large milling plant, for it will have to be worked on a large scale to make money, on a large scale. Should the Company desire to make further investigations and wish any suggestions from me, I will be too glad to render any assistance possible. Trusting that the above will enable you to form some conclusions, I am

Yours very truly,

(Signed) Jas. H. Henley.

LIST OF SAMPLES TAKEN FROM THE McKINLEY LAKE PROPERTY.

No. 58. McKinley group, open cut above upper tunnel hanging-wall - $ 4.80

No. 59 McKinley group, open cut above upper tunnel, 10 feet from hanging wall - - - - - - - - - - - - - - - - - - - 4.00

No. 60 McKinley group, open cut above upper tunnel 15 feet from hanging wall - 4.00

No. 61 McKinley group, open cut above upper tunnel 20 feet from hanging wall, dioryte-quartz - - - - - - - - - - - - 3.20

No. 62 McKinley group, open cut above upper tunnel 25 feet from hanging wall, dioryte-quartz - - - - - - - - - - - 3.20

No. 63 McKinley group, open cut above upper tunnel 30 feet from hanging-wall, dioryte-quartz - - - - - - - - - - - 2.40

No. 64 McKinley group, open cut above upper tunnel 35 feet from hanging-wall, dioryte-quartz - - - - - - - - - - - 3.20

No. 65 McKinley group, open cut above upper tunnel 40 feet from hanging-wall, dioryte-quartz - - - - - - - - - - - - 4.40

No. 66 McKinley group, open cut above upper tunnel 45 feet from hanging-wall, dioryte-quartz - - - - - - - - - - - 3.20

No. 67 McKinley group, open cut above upper tunnel grab sample from dump - - - - - - - - - - - - - - - - - - 20.80

No. 68 McKinley group, open cut above upper tunnel grab sample from dump - - - - - - - - - - - - - - - - - - 6.40

No. 69 McKinley group, open cut point of ridge, 7 feet dioryte-porphyry - 2.40

No. 70 McKinley group, open cut point of ridge, 12 feet dioryte-porphryr - 2.40

No. 71 McKinley group, point of ridge open cut, 15 feet dioryte-porphyry - 2.40

No. 72 McKinley group, open cut just above upper tunnel where ore had been mined for mill 8 feet - - - - - - - - - - 5.60

No. 73 McKinley group, open cut just above upper tunnel where ore had been mined for mill 9 feet - - - - - - - - - - 6.40

No. 74 McKinley group, open cut just above upper tunnel, grab sample from dump where ore had been mined for mill - - - 4.80

No. 75 McKinley group, open cut just above upper tunnel where ore had been mined for mill - - - - - - - - - - - - - - 3.60

No. 76 McKinley group, upper tunnel at intersections of drifts average 10 feet across dioryte-quartz - - - - - - - - - 20.40

No. 77 McKinley group, upper tunnel first left across-cut 18 feet dioryte-quartz - 2.80

No. 78 McKinley group, upper tunnel east cross-cut, 10 feet across tunnel, dioryte-quartz - - - - - - - - - 2.40

No. 79 McKinley group, upper tunnel north drift, dioryte-quartz - 5.80

No. 80 McKinley group, upper tunnel, grab from dump - - - - - - 2.80

No. 81 McKinley Group, upper tunnel, grab from dump - - - - - - 14.40

No. 82 McKinley group, face of long tunnel, grab from pile - - 2.00

No. 83 McKinley group, long tunnel cross-cut west, graywake - - Trace

No. 84 McKinley group, long tunnel grab from dump - - - - - - - 2.00

No. 85 McKinley group, long tunnel grab from dump - - - - - - - 2.00

No. 86 McKinley group, long tunnel grab from dump - - - - - - - 2.00

No. 87 McKinley group, Center vein south-east of McKinley vein about 300 feet, grab sample from dump, vein 10 feet wide - 4.80

No. 88 McKinley group, face of Jumbo tunnel 4 feet, this vein is over 40 feet wide on surface - - - - - - - - - - 2.40

MR Cordova 96

-Copy communicati - By L.D.Gassawy- V.P. Yul Gold Fields Consolidated-
To Mr. L. V. Blankman-Kodiak-Alaska-May 23rd-1935.

Dear Mr. Blankman:

As per your telegraphic request early in May Mr. Whiting and I stopped over at Cordova to look at the McKinley Lake mining prospect. Due to the time of year and lack of transportation it was necessary to charter a plane for the trip. One day was spent on the properties and no sampling was attempted. I have therefore placed my deductions in the form of a letter to you.

-Available Data-

1-
A large number of samples have been taken by several engineers, and some of these engineers have also taken check samples on the others.

2-
Considerable development work has been done at various times on the properties in the form of tunnels, cuts, shafts, trails and buildings,- most of which was ill advised and poorly done.

3-
The claims numbering about 20 are conteguous and cover the mineralized territory more or less completely, although some of them should be amended to conform to the strike of the veins.

4-
The formations are thin-bedded slates and greywacks uplifted and contorted by mountain building and the intrusion of large masses of granitic magma nearby. The slates stand at high angles of dri-the general strike being about east and west, the dip 35 to 70 degrees northerly. Quartz, glassy and sugar, has more or less thoroughly penetrated the laminae of the slates and greywacks in stringers, lenses and veins with the same strike and dip as the slates. At places such as within the claims there are large zones of weakness where considerable movement and crushing has taken place prior to mineralization, and a subsequent infiltration of quartz and such other minerals as iron pyrite, arsenopyrtie, gold and silver have found easy access to the slates and contacts. The nature of the quartz, sulphides diorite dikes and adjacent granitic mass seem to indicate a sequence of mammatic segregation from the latter and the ores should attain considerable depth.

5-
The samples while scattered in bunches over the claims indicate good values ranging from $2.00 to $70.00- per ton ton perhaps an average of $4.00 or $5.00-per ton- Gold figured at $20.67 per ounce. The width samples vary from 3 to 4 feet intunnels- to 140 feet in cuts-semmingly indicating wide zones of low grade materials. These zones, mineralized and sampled, are more or less parallel and frequently close enough together so that underground development may be carried on from one or two main gangways for the most part.

6-
A large amount of fine timber is available on the claims and sufficient water power may be developed from Bear and Salmon creeks nearby.

7-
The properties are at Lake McKinley and about three miles from Allganik station of the Copper River R.R. The elevation varies from 200 to 900 feet above sea level, and the topography lends itself to cheap road building. Airplanes can land easily at the lake. Cordova, nearest sea port, is 22 miles northwest and serves for import and export of supplies the year around.

8-

The properties are incorporated under the Laws of Washington as "The McKinley Lake Gold Mines Ltd-Inc."- There are 4,000,000 shares of 5 cents value each. The stock is all common and of equal voting value. There are at present 2,600,00 shares in the Treasury. Dr. W. H. Chase and Charles Goodall, of Cordova control the company and own 1,000,000-shares in escrow in the Bank of Cordova. Dr.Chase is prepared to make reasonable terms with reliable people. The titles are said to be clear, and all assessment work to date. Three mining engineers-James Henly-W.G.Smith and Hancock have examined and reported favorably on the properties but are not known by the writer. The Trail Smelter people of British Columbia have made an offer based on the reports of the above engineers but the terms are not satisfactory to Chase and Goodall.

- Conclusions -

1-

The present development of tunnels and cuts is of little value in that while indicative of good values it has developed little ore.

2-

Assuming the assay values to be correct they are indicative of values but do not indicate the continuity of ore. The samples are bunched and do not uncover connected areas or volumes ore necessary in determining a large low grade property.

3-

The geologic formations, more of mineralization, nature of the metals, and general economic aspects are favorable for spending some money in proper sampling and a limited amount of underground development.

4-

The physical contours of the properties will allow mining by gravity methods at a low cost. There will be no pumping or hoisting charges. There will be a minimum of timbering, but there is a large supply of good cheap timber available. Water power may be developed cheaply close to the properties.

5-

Supplies will cost slightly more than in the states, but will be easy to obtain from Seattle or San Francisco. Freight rates are not prohibitive and winter conditions are quiet favorable.

6-

The metallurgy of the ores will be fairly simple. The flow sheet will probably indicate stamp milling, followed by amalgamation, concentration either by table or flotation, and cyanidation. It is not believed at this time that there is sufficient Arsenic in the ores to interfer with amalgamation or cyanidation, although careful inspection may show otherwise. A rough inspection of the exposed vein material seems to show 1% to 2% sulphides or a concentration ratio of 1 to 50. It may be less than this. 75% of the gold Values should be recovered by amalgamation. Much of the values lie in the crushed slates outside the quartz. The zone of oxidation or inrichment is practically absent due to glaciation and erosion, and the sulphides arrear at the surface.

7-

Proper sampling and some short well chosen tunnels should show up the value of the properties quickly and at a reasonable expense. It is believed by the writer that a maximum of $15,000 to $20,000 will definately prove the value of this property if spent by a competent engineer. Also if advantage be taken of the present tunnels the same results may be accomplished for much less. However to spend money simply to check the present assays will serve only to prove what we already assume and will not then determine the value of the property.

8-

As only one day was spent (the rest of this is not shown)

Report on The

Lucky Strike & Pioneer Group

of

Mining Claims

McKinley Lake Mining District

Cordova, Alaska

Owned By.

McKinley Lake Gold Mines, Ltd.

June 19th, 1934.

Property:

The Lucky Strike Group is comprised of twelve full sized Claims, namely Lucky Strike one to twelve and the Big Four Friction, all held by location.

The Pioneer Group consists of 16 mining claims, namely Pioneer, Pioneer number one to eight, Pioneer Extension Number one to four, and Uno number one to three, entire holdings comprise of about 640 acres.

The claims are well located with reference to mineral lodes as exposed on the surface.

Size of claims are approximately 1500 feet by 600 feet.

Location:

The above two groups of claims are situated in the McKinley Lake Mining division, twenty-two miles from the town of Cordova Alaska, on the Copper River and Northwestern Railway, then by trail two and one half miles to the property, all year round transportation to the property, with a cost of F.O.B. mine should not exceed thirty dollars per ton from Seattle to Property.

Timber:

Ample timber on the property for all requirements, and of

Timber: (cont'd.)

sufficient size to be sawed into any size timbers which might be required, the timber is a valuable asset to the Company.

Power:

Some water power is available and could be harnessed, I recommend the installation of two portable compressors, to do the first development.

Geology:

The formation is chiefly composed of slates and graywacks, other dykes and sills which I observed on both groups of claims, maybe diorytes, they were too highly altered for me to tell what they were. One and one half miles to the north lies a large Granite stock, which may have something to do with this mineralized break.

Veins and Ore Deposits:

On the Lucky Strike group, three veins have been discovered, namely, Lucky Strike Vein, Stringer Vein and Tip Top. All are well defined and can be traced for considerable distances. Widths are from a few feet to twenty-five feet wide. I did not get in the Lucky Strike tunnels as the draws and portals were filled with snow. Sampling of Stringer tunnel showed ores of commercial value, as follows-

Sample #2	- Width 36"	- Value	$ 6.30	
Sample #3	- " 15"	- "	70.70	
Sample #4	- " 5"	- "	0.70	See map #1.

A tunnel driven 1000 feet below this showing a distance of about five hundred feet, which was wrongly directed, and by swinging the tunnel in a more northerly direction, will beyond a doubt, intersect the downward continuation of the Stringer Vein. Then further xoutting to the north the Tip Top vein will be intersected, 1000 feet depth. This tunnel a distance of 400 feet from the portal, cut a nine

foot vein which returned as assay of $0.70 Gold, and is worthy of further exploration. I recommend the driving of the xout to the north and also drifting on South Vein, which will eventually intersect the downward continuation of the Lucky Strike vein, and large tonnages of ore can be developed. See Map #2.

On the Pioneer group a large shear zone on claim number eight, open cut, shows width of over one hundred feet. Several open cuts below show its continuity up to or near creek, where I believe an east and west fault has displaced the downward continuation. In my opinion the displacement would not be of any great distance.

Samples taken in sections across a long open cut a distance of over 100 feet, as follows, Section A with a width of 43 feet returned an average of $5.93 per ton, Section B with a width of 32 feet returned an average of $5.23. Section C showing two open cuts ten and six feet long returned an average of $7.03. See Map #3.

By continuing the lower tunnel, 200 feet, which has been driven in six hundred feet, see Map #4, one could easily glory hole out this area. The tunnel would cut the showing at a depth of three hundred feet, thereby developing exceedingly large tonages of ore, which should be mined at a cost of not more than 25 cents per ton, on a thousand ton per day basis. I took a sample of a tailing pile from ores milled from this section and got $10.50 per ton.

On the Pioneer claim upper tunnel a sample across five feet gave a return of 0. II oz Gold, or $3.85 per ton, a tunnel was driven lower down and exposed 24 inches of quartz, which showed $0.70 per ton, more surface work should be done in this area as I fully

full believe there are possibilities of disclosing vein intersections froma high grade cross fissure which shows further down on this particular claim. The strike of this zone is north and south, strike of fissure, east and west. Near the lower boundry of Pioneer and Pioneer number one, a fissure as above referred to striking east and west and dipping 50 degrees to north, see Map #5, shows a quartz vein average width 14 inches, for 180 feet, average value $78.98. One of these samples was taken down west end shaft 16 feet deep.

I took twenty-seven samples in order to check previous assay reports, and found them to check correspondingly well.

Conclusion:

I feel quite confident the properties, both Lucky Strike and Pioneer Group, under a proper plan of development, will respond in tonnage developed, and will both make a major operation, to possibly one thousand tons per day of five dollar ore, with a cost not to exceed two dollars per ton.

Attached is an estimate of development costs.

Respectfully,

(signed) W. G. Smith

"7 McKinley Lake Gold Mines td-Inc-"

Located about 22 miles from Cordova-Alaska-Reached by water-Rail and Air-

Incorporated for 4,000,000Non-assessable shares-par value Five Cents-
Original owners received stock for release and deeds to property-

Property includes 20-full claims 600 x 1500 feet each-

Good trail to T.H. 2½ miles - Fine timber on property-water available for power- But, upp-to 200-H.P. Diesel most economical as oil reasonable locally.

Property can be worked year around-seldom down to zero this district-

A high-grade True Fissure vein now being developed-by Incline shaft-all on ore- Last assay was $59.45- A true Ribbon Quartz- Values in Arsenopyrites- 20 samples gave average returns of $33.00- Vein stripped 150 feet- Averages 2 feet in width- Ore being extracted and piled for mill- When 50 feet depth is reached- It is intended to drive drift westerly whereby an overhead of 2000-feet may be obtained. A shaft at opposite end of stripped vein shows 21 inches of ore samples carry more than $25.00 per ton values.

There are 7 big low-grade veins on the property-at elevations of 400 to 1200 feet-ore from which can all be brought to ore point by gravity- There is one 25 ft-vein- One 12 ft-vein- one 10 ft-vein - One 5 ft-vein and a zone containing three veins-Vein and country rock across 70 feet of which will assay more than $6.00- Or the vein matter more than $10.00- This zone can be worked open by quaring-gaining nearly foot for foot headway as the mountain is about 45% in steapness--

The Country is made-up of Slates-Graywacks et Diorites- All the big veins are free milling-amalgamation et tables- The Fissure Vein shows little Free Gold- This best treated by Flotation- followed perhaps by Cyanide- should return practically full values-

Good building near present workings on Fissure Vein - Have 2000-feet rails- 3 Ore cars- Hand tools-steel etc;

Company desirous of raising Ten Thousand Dollars from sale of Non-assessable stock-at Five Cents per share-to install 20-25 ton capacity Plant - Ball Mill-table et floatation-(probably(Denver Equipment) - A Compressor and a small Cat Tractor with drum et cable attached- With this capital the plant can be installed ready for operation within 60 days from day of shipment-

No further stock will be offered at anything like this price after equipment is installed- And not then without authority from the Board od Directors-

89-Sample assays from the low-grade ledges gave an average return of $14.10 per ton in values-

The only U.S. Geological Report on the District was Bulletin No-542-issued in 1912- This onlya few hours visit by Dr. Brooks- To see the Outcroppings of one of the large veins on the Lucky Strike groups that could be seen from the lake.

Cordova-Alaska-
Nov-Eight-1938

(signed) W. H.Chase-
Gen.-Manager
"McKinley Lake Gold Mines-Ltd-Inc-"