

KERR-ADDISON GOLD MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

MAR 29 1963

Ops
K.I.

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To..... P. M. KAVANAGH..... From..... W. M. SIROLA.....

Subject KULAN LITTLE SALMON PROPERTY (105-L)..... Date..... March 27th, 1963.....

I have discussed the sequence of events regarding the impending exploration of this property with Al and have arrived at the following impressions:

- (1) The contact metamorphic zone which was outlined by the magnetic survey already constitutes a drilling target without requiring further geophysical work.
- (2) The replacement mineralization to the southeast of the contact metamorphic zone is probably not detectable with E.M. equipment and, at some stage of the game, this area should be covered with S.P.
- (3) In the vicinity of the known mineralization the lines will have to be brushed out and re-chained and a pair of Indians should be sent to the property before the geophysical crew moves in. They could then come out in the same aircraft that takes the geophysical crew to the property.
- (4) It would be wise to determine which type of geophysical equipment functions best on the known mineralization before committing to any kind of survey of the entire 32 claim group. The geophysical crew should go in armed with both E.M. and S.P. equipment.

We looked for the Little Salmon file today and were unable to find it. Do you, by any chance, have it in Toronto?

WMS

for William M. Sirola.

of 1723 1963
K.I.

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A. KULAN

W. M. SIROLA

Option
LITTLE SALMON LINE CUTTING

April 22nd, 1963.

C
O
P
Y

Since we have decided to limit the E.M. Survey, at least for the time being, to the area covered previously, I think the line cutting should be done on the same pattern as before and, if possible, simply by brushing out the old lines.

The N. base line should be run with the E.M. equipment and if an anomaly is encountered at the intersection of line 10E. and the N. base line, then some detailed work should be done in that area. However, I see no need for cutting a separate grid at the present time. In case this is somewhat confusing to you, there is a N.-S. trending anomaly centred at the junction of the N. base line and line 10E. Obviously, whatever is producing this magnetic anomaly is elongated in a N.-S. direction, hence the need for at least one E.-W. line in that area. The base line, however, is ideally located for that purpose. I would think that this line cutting could be done in two weeks' time, particularly if it is a matter of brushing out old lines.

In summary then, just cut out the lines as they had been cut before unless Dr. Kavanagh has any changes which he may wish to inject.

If you do not have a plan showing the previous line cutting, let me know at once and I will send you one.

I would plan on having Carter and his partner on the property on or about June 1st but I will give you at least two weeks' notice before Carter leaves here.

Regards,

pp William M. Sirola.
RL

C.C. P. M. Kavanagh

KERR-ADDISON GOLD MINES LIMITED JUL 24 1963

(FOR INTER-OFFICE USE ONLY)

	W.S.R.
	K.C.G.
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	E.L.D.
	M.R.
	E.C.J.
	D.V.B.

To.....CLARENCE WILTON.....From.....W.M. SIROLA.....
 Subject...LITTLE SALMON PROPERTY, YUKON TERRITORY (105 - L).....Date.....JULY 23rd., 1963.....

The self potential equipment we used was manufactured in Denver, Colorado, and consists of a Null-balance, transistorized potentiometer equipped with a 10-turn dial. I believe I once sent Paul a brochure on this equipment and I also sent one to Bill Nyman, c/o Noranda's Toronto office. At the moment I cannot find the original.

We use two porous-pot electrodes connected through 2,000' of wire on a commutator-equipped aluminium reel.

Interpretation of Self Potential Anomalies.

Self potential work was greatly hampered by a heavy cover of talus which prevented proper grounding of electrodes. Where anomalies were found, such as on lines 2 W - 3 E, they occur over the main gossan zone which is known to contain magnetite, pyrrhotite, chalcopyrite and sphalerite, the percentages of the various minerals are not known but magnetite and pyrrhotite predominate. The shape of the S.P. contours suggests that the dip of the mineralized zone is steep.

The anomaly on line 8 + 00 occurs on the Cliff showing which consists of two steeply dipping veins of galena which occur at the junction of a steep northsouth fault and a bedding plain fault dipping 45° S.W.

The anomaly between lines 10 E and 12 E occurs over massive galena exposed in a small hand trench. The shape of this structure is not clear but it would appear to have a northwesterly trend much like the Cliff zone.

Interpretation of E.M. Anomalies.

I do not have a copy of the E.M. data, but I remember that the curves were what Crone would call, "typical magnetite" anomalies. We were fully aware of this during our visit to the property but the field evidence indicates the presence of massive pyrrhotite with bands of galena and a dissemination of chalcopyrite. I have no doubt that the magnetite content produces the anomalies, but what is the percentage of other sulphides? A 1% Copper ore, for example, would contain 3% disseminated chalcopyrite. What would the effect of such a dissemination be on an E.M. instrument? I would think that it would have no effect.

In your assessment report, you could simply say the anomalies were due to a mixture of magnetite and sulphides and the ratio of magnetite and sulphides is unknown.

William Sirola.

NOV 11 1963

KERR-ADDISON GOLD MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

Little Salmon

Exploration

Y 3 / B

To P.M. KAVANAGH From W.M. SIROLA

Subject LITTLE SALMON PROPERTY, Y.T. (105-L) Date November 5th, 1963.

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J.I.B.	
E.C.J.	
D.V.B.	

I have consulted Kulan, Wolfe and McRae about the orientation of the current crop of 31 claims on the Little Salmon Property. The consensus of opinion is that this group is oriented in a direction approximately 77° W. and is parallel to a long draw which shows up very well on the areal sheets. It was staked in this manner largely because this was the path of least resistance. Since the base line orientation is N. 79° E., we therefore have an angle between the location lines and the base line of 24°. Basically the problem results, not so much from the orientation of the claim group, but from the fact that the work was not carried far enough east to cover claims 29, 30, 31 and 32. I should point out, however, that on Page 16, Clause 53, Paragraph 2 of the Yukon Quartz Mining Act, it states that all work done outside of a mineral claim with intent to work the same shall, if such work has direct relation and is in direct proximity to the claim, be deemed, if to the satisfaction of the mining recorder, for the purpose of this section, to be work done on the claim. In view of this clause, I would judge that the mining recorder would look with favour on using this work as credit on the aforementioned four claims.

I do not recall the reason for the orientation of the claim group as it was shown on the maps drawn by C. Good, but it appears to be exactly the orientation used on the Prospectors Airways' maps.

KERR-ADDISON GOLD MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To.....From.....

Subject.....Date.....

contd/..

- 2 -

Claims 29, 30, 31 and 32 were staked by David McRae rather than A. Kulan and McRae simply extended Kulan's previously established location line for the more northerly block of claims. Neither Kulan, nor McRae, know precisely the bearing of this location line, and, as we both know, Wolfe and McRae did not tie in to any existing claim posts.

I enclose a sketch map showing what is the probable orientation of the claims and also the area covered by Wolfe and McRae in their last effort on the property.

Obviously, all this points up the need to admonish any other technical crew with the need for knowing where they are, or, more properly, where the claims are.



William M. Sirola.

P.S. Since writing the above, I have found that claim No. 29 is pretty well covered by the survey, and, consequently, there should be no trouble in getting the work approved. Actually, the problem applies equally well on the S.W. end of the claim group where claim No. 15 is only partially covered by the work.

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Y/3 c

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J.B.S.	
G.P.R.	
E.L.D.	
J.I.B.	
✓ E.C.J.	
D.V.B.	

January 10, 1964.

Mr. F. A. McCall,
Mining Recorder,
P.O. Box 2703,
Whitehorse, Yukon Territory.

Dear Mr. McCall:

This letter is further to the one dated January 6, 1964 which our Mr. Jacka wrote to you concerning our submission of assessment work covering a contiguous group of 16 claims in our overall 32 claim group in the Little Salmon Lake area.

You will note when studying the maps accompanying the report submitted with Mr. Jacka's letter that the claim group has a different location and orientation from those on the maps accompanying the reports attached to Mr. Jacka's letter to you of August 7th, 1963 concerning our submission of assessment work covering the central group of 16 claims in our overall Little Salmon Lake group.

The reason for this is that when our crew went in to do the programmes of work we have just recently submitted the crew became vividly aware that the claim group's location and orientation were not as our first maps showed them to be.

It is our intention to submit to you very shortly corrected versions of the two maps accompanying our earlier assessment work submission report, and to advise you to put them in the earlier reports and to discard the maps presently accompanying it.

We very much regret this inconvenience to you.

Best wishes to you all for the New Year.

Yours sincerely,

Paul M. Kavanagh
Chief Geologist - Exploration

PMK:dh

cc Sirola
Kulase

APR 8 1964

KERR-ADDISON GOLD MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

W.S.R.	
K.C.S.	
R.D.S.	
C.B.R.	
P.W.K.	✓
G.M.	
H.A.P.	
I.S.R.	
E.P.R.	
(Circular stamp)	

To P.M. KAVANAGH From W.M. SIROLA

Subject LITTLE SALMON DRILLING. (105-L) Date April 7th, 1964.

Enclosed are sections showing tentative drill holes 1 - 4 on the Little Salmon Property. I have deliberately delayed hole No. 5 until such time as we have completed some of the drilling and can best judge the requirements for another drill hole. In other words, holes 1 and 2 may provide results which justify a deeper hole in that vicinity.

The actual set-ups may have to be modified because of the difficulty of setting up on the south side of the mineralized zone. I have placed these set-ups on that side because I suspect that the dip of the zone is, perhaps, 45° south. If we find that the mineralization is steeper than that, then we can position the holes on the north side and drill them south. In the case of drill hole No. 1, I have provided an alternative location for a flat hole from the north side, in case the north side set-up is too rugged.

On the east end of the mineralized zone, the drill holes are designed to intersect either high magnetic anomalies or combinations of magnetic and electrical anomalies. On the northwest end of the magnetic anomaly, the drill holes are aimed, primarily, at the centres of the magnetic highs, but there are feeble electrical anomalies as well.

We will still attempt to bring the machines into the property via the tote road from Ross River, but much depends on when the road from Whitehorse to Ross River is ploughed. If this is too late in the season, we will have to truck the equipment to Carmacks and fly it from there.

William M. Sirola
pp William M. Sirola.

WMS/iw.
Encls:

COPY

W.S.R.
K.C.G.
E.F.
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B.C.B.
P.M.K. ✓
G.W.M.
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C.K.W.
J.B.S.
G.P.R.
K.F.L.
J.P.
E.C.J.

August 18, 1964.

Mr. F. A. McCall,
Mining Recorder,
Box 2703,
Whitehorse, Yukon Territory.

Dear Mr. McCall:

Re: Little Salmon Lake Assessment Work

Further to our Mr. Jacka's letter to you dated August 12th I wish to bring to your attention two further additions to the diamond drill logs which were attached to his letter. First, on page #1 of the diamond drill hole #3 log 0.29% W_3 should be inserted in the proper column beside sample #860 taken between footages 104-108. Second, on page #1 of the diamond drill hole #4 log the assays trace gold and 0.12 ounces silver should be deleted from the bottom line concerning sample #874 taken between footages 231-236. In the far right column on that line 0.19% W_3 should be inserted beside sample #874.

I regret the number of additions etcetera which we have had to make concerning this assessment work submission.

Kindest regards.

Yours sincerely,



Paul M. Kavanagh
Chief Geologist - Exploration

PMK:dh

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J.B.S.
C.P.R.
K.F.L.
H.B.
E.C.J. ○

January 7th, 1965.

Mr. L. H. Green,
Box 969,
Whitehorse,
Y.T.

Kelav
for Little Salmon file

Dear Lew:

Enclosed are the short reports on the Little Salmon option and the Vangorda area which you sent to me for checking.

Thank you very much for letting me have a look at the reports before publication.

Kindest regards to yourself and family. I look forward to seeing you sometime this year.

Yours sincerely,

PMK

Paul M. Kavanagh
Chief Geologist - Exploration.

648
287.54

PMK:sw

Enc.



DEPARTMENT OF MINES AND TECHNICAL SURVEYS

JAN 7 1965

GEOLOGICAL SURVEY OF CANADA

Box 969,
Whitehorse, Y.T.,
Jan. 5, 1965.

Dr. P. Kavanagh,
Exploration Manager,
Kerr Addison Mines Ltd.,
1600, 44 King St. West,
Toronto, Ont.

Dear Paul,

Enclosed are short reports on the Little Salmon option and the Vangorda area prepared for inclusion in the Mineral Industry of Yukon report. I'd appreciate it if you would check them over, correct them where necessary, and return one copy to me.

Very best wishes to yourself and family,

Yours,

L.H. Green,
Resident Geologist.

LHG:ep
Encl.

GLENLYON RANGE AREA

Kerr Addison Mines Limited (Little Salmon Lake Property)
(62°12'N, 132°09'W)

Reference^s: Cockfield (1929, pp. 1-10)*; Campbell (1960)

The property consists of 32 claims; ^{covering a lead-zinc showing;} (Carol 1-8 optioned from A. Kulan, of Whitehorse, Y.T., and Carol 9-32 held by Kerr Addison Mines Limited) ^{but included in the option.} ~~covering a lead-zinc showing.~~ The showing is an old one (Cockfield, 1928) and previous to the present work was explored in 1955 and 1956 by Prospectors Airways Company Limited, now merged in Kerr Addison Mines Limited. The property, seven miles east of the east end of Little Salmon Lake, is reached by a trail about 1½ miles in length that leads from the small lake about 1 mile north of Magundy River. With suitable wind conditions this lake can be used by float-equipped Beaver and Supercub aircraft. Work carried out in the 1963 field season consisted of magnetometer, ^{electromagnetic} and self-potential surveys and in 1964 of 4 diamond drill holes, totalling about 1,200 feet. When visited in late July 1964 a crew of 5 men were engaged in diamond drilling. The drill was moved to and from the property by helicopter. Results of the drilling were discouraging and the option was later dropped.

Two showings occur on a north-facing slope above a pot-hole lake, an upper vein deposit referred to as the Cliff showing and a lower contact deposit referred to as the Lake showing. The showings are about 150 feet apart in elevation.

The Cliff showing consists of a vein up to 3 feet in width that is exposed in a 30 foot cliff of thinly banded silicated rock. The vein strikes about S70°E and dips steeply southwest and the enclosing rocks strike S60°E and dip 35°SW. Vein matter consists of quartz with minor siderite, sphalerite, galena and pyrite. A specimen rich in sphalerite assayed:* 0.02 ounces of gold and 0.86 ounces of silver per ton, 0.4 per cent lead, 22.5 per cent zinc,

*Reprinted in Geological Survey of Canada, Memoir 284 (Bostock, 1957, pp. 586-595)

*Assayed by George Spalding, Whitehorse, Y.T.

and a trace of copper. A sample of the same vein taken by Cockfield (1929, p.) across one foot of the best mineralization observed assayed: no gold, 23.53 ounces of silver per ton, 48.76 per cent lead, and 1.60 per cent zinc. Page

The Lake showing is exposed on the face of a small cliff above the pot-hole lake. Here, about 60 feet of quartz-feldspar porphyry is overlain by 20 feet of rusty weathering, magnetite-rich rock, that in turn is overlain by pale brown weathering silicated rock similar to that of the Cliff showing. No sulphide minerals were observed in the natural exposure although much of the magnetite-rich rock contains abundant gypsum suggesting that sulphide minerals have weathered out. A gypsum-rich specimen assayed:* 0.05 ounces of gold and 0.36 ounces of silver per ton, 0.3 per cent lead, 0.2 per cent zinc and 0.37 per cent copper. The magnetite-rich rock is not exposed to the west but a magnetometer survey indicated that it extended about 1,400 feet in this direction. Four drill holes were used to test the showing along this length. In general, the drill holes encountered a magnetite-rich zone about 20 feet thick underlain by quartz-feldspar porphyry. Most of the magnetite-rich rock contained some sulphide minerals, chiefly pyrrhotite and pyrite and in the two eastern holes a zone up to 20 feet thick and rich in sulphide minerals occurs in altered rock between the magnetite-rich rock and unaltered porphyry. The sulphide minerals are up to 10 mm in grain size and include galena, sphalerite, pyrrhotite, pyrite and chalcopyrite. In addition, some fluorite was observed.

The thinly banded silicated rock in the vicinity of the showings has irregular, contorted, green and white bands a few mm in thickness. The rock is essentially quartz-free and is composed of fine feldspar, chiefly orthoclase, and diopside. It may have originated through metamorphism of a limy tuff.

The quartz-feldspar porphyry shows a considerable colour variation between pink, light grey, and light green, the colour

*Assayed by Geolrge Spalding, Whitehorse, Y.T.

being controlled, in part, by the amount of alteration. It contains up to 15 per cent phenocrysts to 5 mm in size, including euhedral grey quartz, pink orthoclase, and white to pale green albite. The groundmass is composed of fine grains of the same minerals present in about equal amounts. The feldspar of both the phenocrysts and the matrix shows considerable alteration to indeterminate fine-grained minerals and, in addition, considerable secondary calcite is present in the matrix. One drill-hole cut a skarn band within the quartz-feldspar porphyry composed of calcite, and garnet, with minor amounts of chlorite in very fine ragged grains and of scheelite.

One specimen of the magnetite-rich rock was examined and found to contain dolomite and diopside in addition to the sulphide minerals. X

Exposure in the area is not complete enough to determine the shape of the quartz-feldspar porphyry but, in the author's opinion, it is probably a sill and the magnetite-rich rocks are developed on the contact between it and a silicated rock, probably originally a limy tuff.

Little Salmon
105 L
Bene Hill
1955

Extract from letter written to C. L. Coleman by E. O. Chisholm dated October 4th, 1955.

Y 3/24

Little Salmon Property

A preliminary report of the operation has been submitted to you by Lomer D'Aigle, engineer in charge. He recommended further drilling on the anomalous area outlined, and on your suggestion I requested an extension of the option from Kulan and Law for an additional year to complete this work. They do not look favourably on extending the option and expressed the view that the payment of \$3,000. due October 31st is a very low one. I pointed out the low nature of the assays and our intention to do further work if an extension is granted.

It is interesting ground structurally and containing considerable mineralization. I don't feel that it has been adequately tested by the work done to date.