

007714

COPY

February 27, 1970

Mr. William G. Crook,
Overland Exploration Services Ltd.,
1347 - 12th Avenue S.W.,
Calgary 3, Alberta.

Dear Mr. Crook:

Re: Proposed Gravity Survey, Lyn Group
Magundy River Area, Y.T.

We wish to conduct a gravity survey on part of a claim group located about 10 miles southwest of Swim Lakes, Y.T. There will be 25 line miles of work. Most of the lines are 4,000 feet long and spaced 400 feet apart. Others are about 6,500 feet long. The greatest spacing between lines is 800 feet.

The work required is similar to the one your company conducted at our Swim Lakes property in 1969. This includes line cutting, establishing hubs 100 feet apart, surveying, metering, etc.

The property is located about 4 miles from the Carmacks-Ross River highway. A winter road leads to the edge of the survey area. There are no camping facilities and entry into the area is restricted to helicopter transportation.

The survey area lies along a rolling hillside composed of benches with a steep (15 - 30% grade) one near the bottom. Maximum relief is about 1,000 feet ranging from 3,400 - 4,400 feet elevation. Proposed survey lines are nearly perpendicular to the topographical contour. Artic willow (2 feet to 5 feet high bushes with 1/4" branches) grow on the upper 2/3 of the area; and scattered, small trees are found on the lower 1/3 of the ground. Thick alders are confined to a few narrow drainages.

This work could begin in the first week of June.

(continued - Page 2)

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1. B.C.

- 2 -

COPY

If your group is interested in this work, would you please provide us with a quotation at your earliest convenience.

Yours very truly,

Fred Chow.

FC/lk

P.S. Lines on Swim Lake job were cut unnecessarily wide and left dirty. Use of power saw on bush and branches slowed down job.

COPY

July 29, 1970

Overland Exploration Services 1969 Limited,
1347 - 12th Avenue S.W.,
Calgary 3, Alberta.

Attention: Mr. Bill Salt

Gentlemen:

Under separate cover we are returning the following data:

- 1) blue line print of Bouger Map.
- 2) 2 sepias of the original base map.
- 3) xerox copies of the gravity data sheets.

In accordance with the terms of the agreement, we would like you to provide a residual map together with your interpretation thereof.

At Line 118 our contouring indicates a positive anomaly centered at 3150N instead of the negative feature you show at 28N on Line 122. A print of our contouring is enclosed.

We have become accustomed to looking at 0.1 milligal contours on most of our gravity maps but we realize that with the severe gradient which exists in this particular area, this would require a great deal of effort but possibly you could contour the anomalies using that interval.

The anomaly shown on your Bouger map fit all too well with topography but the situation deserves further investigation in the light of other evidence we have accumulated.

Yours very truly,

W. M. Sirola.

WMS/lk

COPY

July 29, 1970

Dr. Duncan Crone,
Crone Geophysics,
979 Lakeshore Road,
Port Credit, Ontario.

Dear Duncan:

Paul Kavanagh has requested that I mail you all of the gravity data compiled by Overland Exploration Services of Calgary on a recent job we had on the Lyn Group in the Magundy River area of the Yukon.

Under separate cover we are mailing you a topographic plan, a Bouger plan, a base map, and all of the gravity calculations with the exception of the terrain correction charts which we do not have.

It is rather disconcerting that here are gravity anomalies coincident with all of the hilltops in the area. I have discussed this problem with Overland and they maintain that the terrain corrections did nothing to the Bouger profiles. They also tried different density fits in one or two cases and these apparently had little effect on the Bouger figures. Certainly it is hard to see how they could use a density greater than 3 for any of the known rock types on the property. The rock types by the way are phyllites with some intercalated limestones. On the extreme north portion of the survey, there are granitic gneisses but I can't think that these gneisses have anything to do with the anomalies on the hilltops.

The only reason we are considering pursuing these anomalies further is that downslope on the north side from the anomaly on Line 134 is a geochemical fan much like the one at Swim Lakes. There is therefore some possibility that there could be a heavy mass which is coincident with a hilltop.

(continued - Page 2)

cc-PMK - July 30/76

COPY

- 2 -

There is a severe gradient in the order of 8 milligals per thousand feet on the north slope of the hill and there is no obvious geologic reason for such a gradient unless it simply reflects the presence of the Tintina Trench to the north.

In the trenching that has been done on the property thus far, only narrow stringers of lead-zinc mineralization have been found but sometimes these narrow stringers emanate from a much larger mass and we therefore must be very sure that nothing is overlooked. In the case of the anomaly on Line 134, we recognize that the north side is purely a reflection of the gradient but the south side would have to result from a buried valley having a depth of approximately 200 feet. We can probably determine whether or not such a bedrock depression exists by using resistivity profiling which we can do with our I.P. set.

It is difficult to think of these anomalies as being representative of massive mineralization in view of their coincidence with topography. We would however appreciate your comments in this regard. By the way, all of the rocks dip southwestward at approximately 25°.

Best regards,

Yours sincerely,

W. M. Sirola.

WMS/lk

COPY

P. M. Kavanagh

W. M. Sirola

Lyn Group Gravity Anomalies,
Glenlyon Project, Y.T.

July 29, 1970

Enclosed please find a tracing of Overland's Bouger map on which we have superimposed the position of part of the geochemical anomalies. The gravity anomaly on Line 134 is depicted in cross-section and the two possible causes are shown. Much as we would like to think that the anomaly is caused by massive sulphides, it is more realistic to think that it is caused purely by topography which for some reason does not seem to respond to any of the calculations applied by Overland. The Overland people seem to feel that we have unusually heavy hilltops in this area. By that they mean rocks with a density in excess of 3.

We have given full sway to our imaginations in the case of the sulphide source and by showing this sulphide mass as being more or less strata-bound, any upward migration of lead and zinc values would produce the type of geochemical pattern which is found below the anomaly. It is easy to think that the stringer type mineralization found thus far emanates from a larger concealed mass of sulphides. On the other hand, there is an unfortunate coincidence between each hilltop with a gravity anomaly and this is disconcerting to say the least.

We have sent all of the data we have to Duncan Crone but since it may take Duncan a little while to review this information, perhaps we should send Ted LaRose with two assistants to run I.P. and resistivity traverses over Lines 118 and 134.

W. M. Sirola.

WMS/lk
Encl.

CANADIAN NATIONAL • CANADIAN PACIFIC
TELECOMMUNICATIONS

CANADIEN NATIONAL • CANADIEN PACIFIQUE

6115B(12-67)

ØBE321(121154)

MMA765·NSA150

NS HSD075 NC CAN 36/23 PDB

HOUSTON TEX 12 1125A CDT

1970 AUG 12 PM 1 06

2 lines

S.P. → 1
NONE → - 4°
200'
I.P. NONE

CRONE GEOPHYSICS

3607 WOLFEDALE RD MISSISSAUGA ONT

SCALE CONSTANT OF WORDEN METER NUMBER 806 IS .08474 MGLS/DIAL

DIVISION WITH THERMOSTAT SETTING 93.0 DEGREES F SEE PERFORMANCE

TEST SHEET DATED 3-6-70

R CURTIS HENDRY TEXAS INSTRUMENTS.

→ 54 M

806 .08474 93.0 3-6-70.(1129)

~~2743704~~
TELEPHONED
BY *[Signature]*
TO *[Signature]*
TIME *116*

134 →

2800 LAKE SHORE BLVD. W. 259-3708

Monday—Friday - 8 a.m.—5.30 p.m.

After Hours Call—

Main Office - 151 Front St. W. Always Open

To File Telegrams 368-6041

Enquiry Re Telegrams 363-3956

I.P. →
S.P. →

270 0096

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1. B.C.

COPY

P. M. Kavanagh

W. M. Sirola

Lyn Group, Y.T. - Gravity Survey

Aug. 31/70

Enclosed are copies of correspondence and maps which have been sent to Duncan Crone.

There is considerable correlation between the gravity highs and the geochem highs but the coincidence of gravity anomalies with topographic highs is too good altogether.

The probable cause of the anomalies is variations in the depth to bedrock but we were not able to prove this point using the resistivity technique. Since there is no permafrost on the south sides of these hills, a seismic procedure using blasting caps would probably provide a fair idea of variations in bedrock. I am not however advocating this until we have done our own checking on the calculations using different densities.

W. M. Sirola.

WMS/lk
Encl.

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1. B.C.

COPY

November 30, 1970.

Dr. Duncan Crone,
Crone Geophysics Ltd.,
3607 Wolfedala Road,
Mississauga, Ontario.

Dear Duncan,

We are still trying to sort out the problem of the gravity results on the Lyn Group in the Yukon Territory.

In going over the information here, we find that the topographic map produced by Lockwood Surveys does not correspond well with the topographic map made by Overland. In order to resolve some of these differences, we would appreciate your returning all of the data we sent you.

Should you have any comments as a result of your perusal of the Overland data, I would appreciate your sending them on to me.

Best regards.

Sincerely,

WMS/jm

W.M. Sirola.

CRONE GEOPHYSICS LIMITED

MISSISSAUGA, ONTARIO

PHONE 416
270-0096

3607 WOLFEDALE ROAD
MISSISSAUGA, ONTARIO
CANADA

December 7, 1970.

Mr. W. M. Sirola,
Kerr Addison Mines Limited,
Suite 405,
1112 West Pender Street,
Vancouver 1, B. C.

Dear Bill,

RE: Lyn Group Gravity Survey
by Overland

The Lyn group survey has a total elevation difference of approximately 1000' with a corresponding gravity change of 40.00 milligals. Considering geological conditions a gravity change of 10 milligals could be accepted as reasonable - thus there is an apparent error in the order of 30.00 milligals. It is the large magnitude of this discrepancy that makes it difficult to pin down.

With the elevation survey, the elevations would have to be reduced by 1/2 ie. 500' instead of 1000' to bring the survey into line (-500' x .060 equals -30.00 milligals). This would be a difficult error to make and a review of the survey notes shows that check stations were taken confirming that the survey is correct.

Other correction factors that could be in error such as the assumed densities or terrain corrections (not applied) are of no help because they could only produce a maximum change of 3 or 4 milligals.

I therefore suspect the only factor left - that is the gravity meter itself. I wired Texas Instruments re check up and calibration and obtained a calibration constant .08474. Note that Overland used .08351 but this difference would only account for 2% ie. .80 mg out of 40.

continued

RECEIVED
DEC 17 1970

KERR ADDISON MINES LTD.

Per.....

Why was correct scale constant not used? We are looking for something drastically wrong and I wonder if the meter was damaged before the survey?

The notes are being returned under separate cover.

Best regards

A handwritten signature in cursive script that reads "Duncan".

J. Duncan Crone.

JDC:gs
encl. T.I. Wire



OVERLAND EXPLORATION SERVICES (1969) LTD.

1347 - 12th AVENUE S.W.
CALGARY 3, ALBERTA, CANADA

TELEPHONE
403 - 244-2191

GRAVITY
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LINE CUTTING
GEOLOGY

December 15th, 1970

Mr. W. Sirola
Kerr Addison Mines Limited
Suite 405
1112 West Pender Street
VANCOUVER 1, B.C.

Dear Bill:

We finally located the Magundy River field book which is enclosed. Also enclosed is the terrain corrections for Line 134. We only did total corrections on this line. 134 was a representative line which crossed one of the main topographic highs. The terrain corrections are of a blanket quality and if anything accentuate the anomalous highs. Because of this they were not used in the interpretative work.

Enclosed is a work plot of Line 134 which David Chen had done when he determined the value of terrain corrections on this job. Here you can see the profiles of:

1. Topography
2. Bouguer with density of 2.95
3. Bouguer with density of 2.7
4. Bouguer with density of 2.7 plus terrain corrections added.

I hope this will be helpful.

Yours very truly,

OVERLAND EXPLORATION
SERVICES (1969) LTD.

W. T. Salt

RECEIVED
DEC 18 1970

KERR ADDISON MINES LTD.

WTS/jp
Encls. (3)



PERFORMANCE TEST

Worden Gravity Meter No. 806

CUSTOMER Overland Exploration Services, Ltd. DATE March 6 1970

SMALL DIAL CONSTANT	<u>.0847 (4)</u> Milligals/Div. (ABSOLUTE)
With Thermostat Set @ 93.0 Degr. F.	<u>.0849 (4)</u> Milligals/Div. (1942 Solutions, Pendulum Bases) (See Reverse Side)
SMALL DIAL VARIATION	<u>.04</u> %
BACKLASH	LESS than .01 milligal
SMALL DIAL RANGE	<u>186.4</u> Milligals <u>0</u> to <u>2200</u> Divisions.
RECOMMENDED OPERATING RANGE Becomes the same as total, when stabilizer is in use.	<u>976.908</u> to <u>982.294</u> gals. <u>0</u> ° to <u>65</u> ° North or South Approx. <u>16,300</u> ft. elev. at minimum latitude
TOTAL OPERATING RANGE	<u>976.666</u> to <u>983.221</u> gals. <u>0</u> ° to <u>90</u> ° North or South Approx. <u>19,757</u> ft. elev. at minimum latitude
FIELD TEST	Copy of data attached.
PRESSURE	<u>9</u> mm Mercury

TEST DATA ATTACHED
FINAL
57
INSP

RECEIVED

JUN 21 1971

TEXAS INSTRUMENTS

IN KERO ADDITION RAMINES LTD.
3809 BUFFALO SPEEDWAY
P. O. Box 58022 DALLAS TEXAS 75258

Don Robinson
QUALITY ASSURANCE

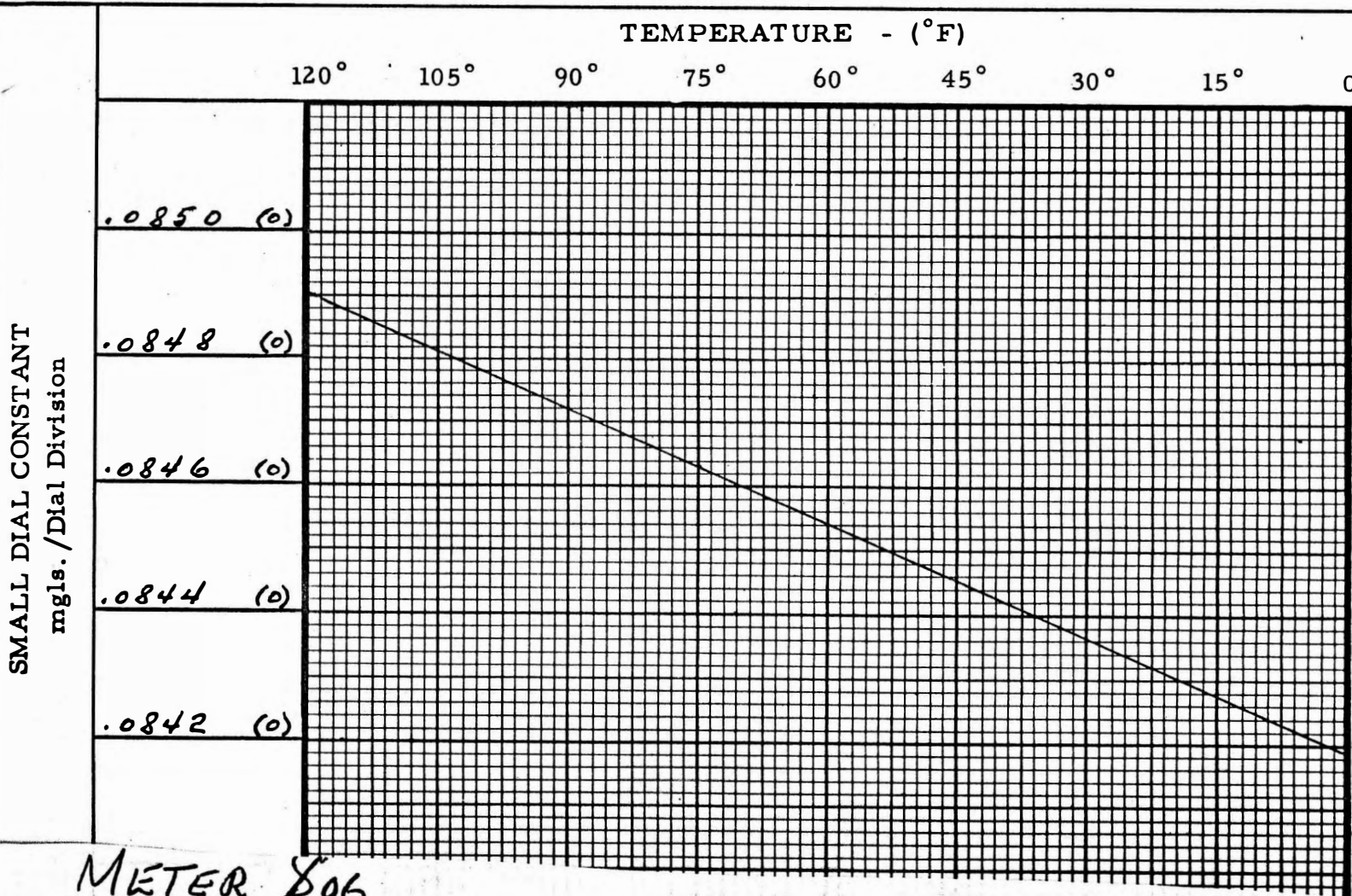


EXPLANATION OF GRAPH SMALL DIAL CONSTANT VERSUS TEMPERATURE

All fused quartz element gravity meters are subject to a change in dial constant with a change in temperature of the quartz element. This dial constant change is approximately 1% for a temperature change of 140° F. For normal geophysical exploration, this dial constant change with temperature is not important. For long range base ties which may be run at different ambient temperatures, this change of dial constant with temperature may cause an apparent change in the base differences.

For the Worden MASTER Gravity Meter, with the temperature stabilization feature, the thermostat may be set at any temperature, and the dial constant read from the graph. As long as the maximum ambient temperature does not exceed the thermostat setting, the dial constant will not change, and apparent base variations with ambient temperature variation will be eliminated.

The graph can also be used to make dial constant corrections for non-thermostatted meters by making an estimate of the gravity meter element temperature and using the dial constant indicated at this temperature.



METER #06

Calibrated Mar. 19/70 at Cal. Stations

Const. .08351

- Meter #1806 was checked out
& calibrated by Texas Instruments
on March 6, 1970

- Calibrated by O. E. S. on March 19

- 1st job after this calibration
was Magandy River, Yukon

R. G. AGARWAL PH.D., P.GEOPH.

GEOPHYSICAL CONSULTANT

*Box 6455 Station 'D',
Calgary 2, Alberta.*

March 9, 1971

Mr. W. Sirola
Kerr - Addison Mines Ltd.
405 - 1112 West Pender Street
Vancouver, B. C.

Dear Bill:

On examining the gravity data in the Magundy River area, B. C., it seems that the field data obtained is quite in order. The problem lies with the interpretation, the variation in density in the area has not been taken into account. The density varies in different parts of the property and could be evaluated from the existing data. In addition, there are various gravity anomalies north of line 28+00 N which are obscured due to regional and improper density used in reducing the data. In any case, it may still be wise to run the gravity meter over 4 or 5 lines to check the previous results. I am returning the gravity maps etc. under separate cover.

I would suggest that the entire gravity data should be re-interpreted which may solve some of the existing ambiguities. If you wish, I would be glad to look after the interpretation.

COST ESTIMATE FOR RE-INTERPRETATION

Geophysicist's time - 4 days at \$150.00 per day	\$	600.00
Computa time, estimate cost	(less than)	<u>300.00</u>
Total cost	\$	<u>900.00</u>

If I could be of any assistance in this respect, please do not hesitate to contact me.

Yours truly,

R. G. Agarwal

R. G. AGARWAL

RGA:bk1

RECEIVED
MAR 10 1971

KERR ADDISON MINES LTD.

Per.....



Telecommunications

send this message subject to the terms on back
dépêche à expédier aux conditions énoncées au verso

July 5, 1971.

Mr. W.T. Salt,
Overland Exploration Services,
1347 - 12th Avenue S.W.,
Calgary 3, Alberta.

DO NOT BELIEVE THAT SWITCHING METER CONSTANTS WOULD BE AN ACCEPTABLE
ALTERNATIVE TO AN ACCURATE SURVEY. SUGGEST YOU CONSIDER WHAT
LIABILITY OVERLAND MAY HAVE IN THIS SITUATION.

W.M. Sirola.

check
mots

full rate
plein tarif

day letter
lettre de jour

night letter
lettre de nuit X

tolls
coût

charge account no.
numéro du compte 122549

cash number
numéro de caisse

sender's name for reference only
nom de l'expéditeur pour référence seulement

address and telephone
adresse, téléphone

6102b

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1. B.C.

COPY

July 13, 1971.

Mr. William G. Crook,
Overland Exploration Services
(1969) Ltd.,
1347 - 12th Avenue, S.W.,
Calgary 3, Alberta.

Dear Mr. Crook:

Thank you for your letter of July 6 in which you offer to re-meter our Lyn Group in the Yukon Territory.

It would better serve our purposes if you would simply refund to Kerr Addison Mines the cost of doing the work you propose. This was to consist of a meter man and his assistant, together with the cost of their transportation, with the exception that Kerr Addison would bear a portion of the helicopter costs involved.

We have been suggesting for some time (one year) that something was faulty with this survey, but I am afraid our protestations fell on rather deaf ears. We would, however, welcome the arrangement I have just suggested.

Yours very truly,

WMS/jm

W.M. Sirola.

c.c. Mr. G.M. Hogg - Toronto



OVERLAND EXPLORATION SERVICES (1969) LTD.

1347 - 12th AVENUE S.W.
CALGARY 3, ALBERTA, CANADA

TELEPHONE
403 - 244-2191

GRAVITY
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GEOLOGY

July 6th, 1971

Mr. W. Sirola
Kerr Addison Mines Limited
Suite 405
1112 West Pender Street
VANCOUVER 1, B.C.

Dear Mr. Sirola:

We have received your telegram of today's date with respect to the Magundy River Gravity Survey.

We have the following thoughts on the matter.

We consider that the physical (topographic) survey is absolutely sound and accurate.

We further consider that the metering done with the Worden Gravity Meter was sound and accurate, but we have subsequently discovered that this particular meter has an erratic meter constant when used off temperature. As you are well aware this meter had been checked in the factory, a matter of weeks before it was used on your job, and it tested out reliably. Furthermore, we ran field checks on gravity bases established here in southern Alberta before the meter went to your job. Considering these above tests it was not unnatural for us to assume that the field reading computations were in fact reliable.

.....Continued.....

RECEIVED
JUL 7 1971

KERR ADDISON

MINES LTD.

Per.....

Copy sent to E.M. Noyes - July 12/71

Kerr Addison Mines Limited July 6th, 1971

In light of the dissatisfaction you have expressed with this work we hereby offer to re-meter the project with a different gravity meter and to re-compute the results. There will be no charge to Kerr Addison for the men, meter or the re-computation, however, because of the great expense involved in transportation we feel that Kerr Addison should bear a portion of the helicopter costs involved.

Yours very truly,

OVERLAND EXPLORATION
SERVICES (1969) LTD.


William G. Crook

WGC/jp

COPY

July 19, 1971.

Mr. William G. Crook,
Overland Exploration Services
(1969) Ltd.,
1347 - 12th Avenue S.W.,
Calgary 3, Alberta.

Dear Mr. Crook:

This will reply to your letter of July 15 and specifically to your final paragraph.

I cheerfully concede that Overland put much time and effort on recalculation of the field results. Furthermore, you did write several different reports explaining the meaning of these results. What you did not do was indicate any willingness to believe that there might be an error in the field work or in the behaviour of the instrument, despite the fact that the gradients obtained over the property were most unlikely to be realistic, and despite the fact that variations of as much as three milligals occurred between stations 100 feet apart.

Your offer to re-meter the work would have been much appreciated at the time when we first raised some doubts regarding the accuracy of the survey, but I am afraid it is a little late in the day for our purposes.

Yours very truly,

WMS/jm

W.M. Sirola.

copy - Mr. G.M. Hogg - Toronto



OVERLAND EXPLORATION SERVICES (1969) LTD.

1347 - 12th AVENUE S.W.
CALGARY 3, ALBERTA, CANADA

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GRAVITY
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GEOLOGY

July 15th, 1971

Mr. W. Sirola
Kerr Addison Mines Limited
Suite 405 -1112 West Pender St.
VANCOUVER 1, B.C.

Dear Mr. Sirola:

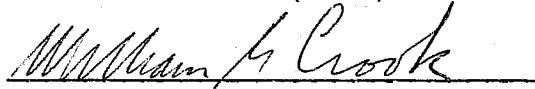
I have your letter of January 13th, 1971.

I repeat the offer extended to you in my letter of July 6th, 1971, to re-meter and re-compute the gathered data on this gravity prospect. We here at Overland believe that we have a professional responsibility to you as a client to present you with the results you will find satisfactory. We contracted to provide the work and it is not our intention to opt out without completing the job. We currently have a crew at work not far from your prospect and within the next few weeks will find it convenient and expeditious to re-meter the whole program.

I disagree emphatically with your statement that your "protestations fell on rather deaf ears". Nothing could be further from the truth. Our whole staff re-worked your prospect as much as four times in order to satisfy your apprehensions. We spent more time on your job than others which are many times larger. The cause of the problem is one that fell beyond our control and we feel that this situation must be rectified to our professional standards.

Yours very truly,

OVERLAND EXPLORATION
SERVICES (1969) LTD.


William G. Crook

RECEIVED
JUL 19 1971

WGC/jp

KERR ADDISON MINES LTD.

Per.....