



Airborne Gravity & Seismic Services Ltd.

Calgary

Alberta

#311, 330 - 9TH AVE. S.W.  
CALGARY 2, ALBERTA  
PHONE 403 - 264-3434

June 8th, 1971

007712  
Lyn Group  
Gravity Survey

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

Bill:

Before I last talked with you, I had looked at Overland's computations for line 134 (you had sent me these earlier). In comparing these to ours, I found the following:

1. Latitude corrections are the same in both cases.
2. Elevation corrections are essentially the same. That is, method is the same, although there are some minor local differences in station elevation.
3. The difference lies in the observed gravity entirely. On line 134, between stations 29 and 64, our observed gravity increases from 501.46 to 553.72; theirs from 60.00 to 80.63. Change in gravitational effect due to elevation difference alone between stations 29 and 64 (using \*.06) is about 52½ mgals.
4. In moving decimal points around in the meter constant or in the meter readings, I could not account for the discrepancy.
5. I worked backwards, assuming that the observed gravity difference between 29 and 64 from our work was correct, and figured out a new constant for Overland's meter. One which would yield an observed gravity difference of 52+ mgals, from the Overland instrument readings, is 0.215±. I didn't know what kind of instrument they used, and I have never seen a meter constant like this.

My preliminary conclusion was that something may have gone wrong with their meter and the .08351 constant didn't apply.

The computation sheets you sent Friday gave me a chance to look for some consistency in this, although I hardly expected to find it. A wonky meter could be expected to change radically with time. However, such may not be the case. After some fiddling around, I found something consistent all right: but I am not completely certain of its meaning.

\* Combs - Bouguer - Free air Const.

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JUN 9 1971

KERR ADDISON

MINES LTD

Per.....

In the batch you sent, there are five lines that traverse very steep topography. In each case, I picked a steep section, computed gravity change due to elevation change and compared this to the observed gravity change (using dial divisions x .08351). Here are the results:

<u>Line</u>	<u>Elev.diff.x.06</u>	<u>Obs. grav.diff.</u>	<u>grav.diff. elev.corr.</u>
134	52½ mgal.	20½ mgal.	.390
90	28 mgal.	11 mgal.	.393
82	8½ mgal.	3½ mgal.	.412
118	37 mgal.	14 mgal.	.379
122	38½ mgal.	15 mgal.	.389
		mean	<u>.393</u>

Now, the above ignores drift correction and any legitimate change in the gravity field. Even the 0.06 elev. factor may be in slight error. It is remarkable that the ratios in the right hand column are so close. They do suggest that, for some reason, the original survey measured the local variations at a 40% rate. It brings us back near a 0.215 meter constant (roughly 2½ times 0.08351). \*Perhaps re-doing the computation sheets with this constant would be a legitimate thing to do. However, it would be well to find out the "why" of this before embarking. You'd never trust the results unless you knew. Perhaps the history of meter 806 since last June would shed some light.

Yours very truly,



R. B. Galeski

\* Is it possible to have such a constant in this meter except by damage & if damage took place would the constant be reliable? Factory would know.

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G.M. Hogg

W.M. Sirola

LYN GROUP, Magundy River Area, Y.T.  
Check Gravity Surveys

June 9, 1971.

We have received from Bob Galeski of Calgary the results of his gravity work on lines 82 west, 118 west and 134 west.

The results indicate that the topographic work done by Overland is reasonably accurate, but their gravity profiles were grossly inaccurate. Overland indicated a total gravity gradient from north to south of approximately 40 milligals, whereas Galeski over the same lines indicates 6 milligals. It is Galeski's belief that the error in the Overland work results from a faulty meter. Duncan Crone arrived at the same conclusion independently.

I have telephoned Bill Salt of Overland regarding the difference in results and thus far he shows no inclination to agree with Galeski's work. However, Galeski is willing to talk with Salt in an effort to resolve the matter and to try to encourage Salt to redo enough of the work to prove that an error has taken place. Galeski will telephone me as soon as he has accomplished this mission.

In a more cheerful vein, it does appear as though there may be meaningful anomalies on lines 134 west at 56 north and 118 west at 47 north. These anomalies occur close to the granite-limestone contact where stringers of lead-zinc mineralization have been located. It is also interesting that in the case of line 134 there is a coincident 550 millivolt S.P. anomaly. If we examine the anomaly on line 134, there is a definite suggestion of a north dip rather than the south dip which prevails over most of the outcrop on the property. This in itself may indicate a fold, and it may be just what the doctor ordered in terms of mineralization.

In order to better appreciate what is going on, please consult Map #5 in Fred Chow's Glenlyon Project Report - 1969. In the meantime I will hope that Salt is amenable to redoing the faulty survey.

WMS/jm

W.M. Sirola.

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W.M. Sirola

LYN GROUP, Magundy River Area, Y.T.  
Comments on Gravity Survey Problems by R.B. Galeski

June 15, 1971.

Herewith a copy of Galeski's review of the differences between some of the lines of the Overland survey and the recent check work by Galeski.

Galeski concludes that something went wrong with Overland's gravity meter, and he has met with Bill Salt of Overland since writing this letter on June 8th. He told me over the phone yesterday that Overland are now quite concerned about what they now concede was an error, and they are attempting to determine what the problem actually was and what to do about it. I expect to hear from either Salt or Galeski by the end of the week. It would be my guess that Overland will try to arrive at some factor which they can apply to their calculations and submit those figures as being corrected results. I would be very reluctant, however, to accept such a recalculation, unless it can be definitely indicated as being the solution to the problem.

I enclose part of the graph of line 134 which Galeski sent me. He seems to feel that the slope on the south side of the graph is too steep to be caused by a difference in rock type, but this is not too meaningful unless similar curves could be obtained on adjacent lines. I also enclose a copy of Galeski's calculation sheets for lines 82, 118 and 134 west.

I have talked with Arctic Diamond Drilling about the cost of getting a drill into the Lyn Group, and they are working on this problem. I do not feel, however, that drilling should be undertaken until more accurate gravity data is available. We should bear in mind also that one can only group sixteen claims in the Yukon, and one drill hole would not satisfy assessment requirements for more than one group. It would be necessary to do E.M. or S.P. or magnetics on the remainder of the claims to keep them in good standing.

WMS/jm  
Encls.

W.M. Sirola.

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June 18, 1971.

Mr. R.B. Galeski,  
Airborne Gravity & Seismic  
Services Ltd.,  
#311 - 330 - 9th Ave., S.W.,  
Calgary 2, Alberta.

Dear Bob,

Because of the questionable nature of the first gravity survey on the Lyn Group, we have decided to redo lines 82W to 186W and to extend those lines to 70 north. The purpose in extending the lines to 70 north is of course to give better definition to the anomalies which occur near the granite contact at approximately 50 to 56 north. There will, therefore, be 20 lines each 5,600' long, for a total of 112,000', or approximately 22 miles. Of this you have completed lines 82W, 118W and 134W for a total of 15,900', or approximately 3 miles, leaving 19 miles to do. All but one (186W) of the new lines will need to be extended from approximately 56 north to 70 north, and you will therefore require a surveyor to do this work.

As per our telephone conversation today, we will wish to extend the northwest corner of the claim block to the northeast, and I have shown the 12 claims involved in red outline on the accompanying sketch. The new claims will be called Lyn 135 to 146 inclusive and these should be staked by running one location line parallel to, and 1,500' northeast of the boundary. I have enclosed more specific staking instructions as a separate enclosure.

Should your crew require any additional information or maps, would you please contact me at your earliest convenience. We should also have something in writing regarding the cost of this work, and again we would like to have this as soon as you can get it together.

Yours truly,

WMS/jm  
Encls.

W.M. Sirola.

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

*Sketch showing location of New Claims  
Lyn 135 - 154 inclusive - in Lyn Survey Claims  
Data file*

COPY

June 21, 1971.

Mr. John Palfreeman,  
Airborne Gravity & Seismic  
Services Ltd.,  
#311, 330 - 9th Ave., S.W.,  
Calgary 2, Alberta.

Dear Mr. Palfreeman:

On June 18 we mailed Mr. Galeski a sketch showing the claims that we wanted staked, together with instructions for doing so. The claims were numbered Lyn 135 to 146. We have since decided on an additional eight claims and the total staking picture is now indicated on the accompanying sketch.

Please extend the location line an additional 1,500' to the northwest and add Lyn 147 and 148. Then move northwest 3,000' to the final posts of Lyn 133 and 134 and put in Lyn 149 and 150 on the same bearing as Lyn 133 and 134. Then move another 3,000' northwest and locate Lyn 151 and 152 from the final posts of Lyn 125 and 126. Do the same with Lyn 153 and 154 by first locating the final posts of Lyn 117 and 118.

Since there will be a total of 20 claims, and since each man is only allowed to stake 8 claims, then two men should stake 8 claims each and the third man should stake the last 4. Each man will have to record his ground on his return to Whitehorse, and in each case this should be no more than 27 days from the date of staking. If there is some danger that all of the crew will not have returned to Whitehorse by the time 27 days have elapsed, then it will be necessary for us to send a Commissioner of Oaths to the property and the claims can then be recorded in the field provided the staking forms are complete.

We have enclosed an additional twenty Form A's.

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Mr. John Palfreeman,

- 2 -

June 21, 1971.

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The staking should be done prior to the commencement of the gravity survey, but it really doesn't require 3 men, so that one man could be reading the meter while two are staking. If you have any questions at all about the staking procedure, please give me a call before you leave for the project.

Yours truly,

WMS/jm

Encl.

W.M. Sirola.

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

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W.M. Sirola

LYN GROUP 1971 Gravity Survey

July 22, 1971.

Herewith profiles of Line 138W and 154W to illustrate the type of anomaly which was obtained in the recent gravity survey.

Line 138W suggests a south dip on a broad anomaly but is a little difficult to interpret because we don't know what happens beyond 63N.

Line 154W illustrates an almost textbook type of gravity anomaly with a suggestion of a northward dip. However, I am skeptical of anything but south dips in this area and the anomaly is virtually symmetrical. Both look like drilling targets.

I will send the rest of the information to you as soon as possible.

WMS/jm  
Encls.

W.M. Sirola.

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G.M. Hogg

W.M. Sirola

LYN GROUP, Y.T. - 105K-3  
Gravity Survey 1971

July 26, 1971.

I talked with Bob Galeski at some length this morning regarding the validity of the surveying and the metering on the lines which his crew have done to date.

I have not sent you the balance of the profiles because Galeski had done them very hurriedly and because there were numerous readings which his crew had not been able to take because of soft muskeg. Also, some of the profiles were so ragged that there had to be errors either in surveying or metering. Galeski concedes that there could be metering errors resulting from unstable ground conditions, but he thinks that most of the raggedness may be the result of errors in elevation.

To make a long story short, we propose to extend lines 122 to 138 to 70N and to re-meter and check the elevations on line 138W from 57N to 70N.

Since there is a very good anomaly on line 154W at 48N, we propose to run lines 150 and 158, which have not been metered thus far.

Galeski's surveyor, John Palfreeman, will hire two Indian line cutters for extending the lines northward. Galeski hopes to get this work underway by midweek.

The situation may now be summarized by saying that the section from line 122W to 142W appears to be of considerable interest, but the anomalies need better definition to be properly interpretable.

The anomaly at 48N on line 154W looks very good indeed but will be rechecked and its continuity established by running lines on either side.

WMS/jm

W.M. Sirola.

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To..... P. M. Kavanagh..... From..... G. M. Hogg.....

Subject..... Lyn Group (Y-3)..... Date..... July 26, 1971.....

Attached is a memo from Bill Sirola with gravity profiles of lines 138W and 154W recently completed by R. Galeski.

The main response extends from line 122W to line 146W, with the anomaly indicated on line 154W isolated (lines 150W and 158W were not run).

Bill proposes (a) some extension of lines (such as 138W) to the north, (b) some check work on irregularities (such as that existing at 60N on 138W), and (c) some additional lines to be run (such as 150W and 158W). The crew is in the area, and the additional coverage is definitely warranted.

Also about 8 more claims will be added along the northwest side of the group to ensure good coverage of the anomalous location. Ted Larose will probably do this staking.

With completion of the foregoing, and when the drill presently located on the Swim "A" group becomes available, we will start drilling on the Lyn group. This work will probably start around the middle of August. Should encouragement be encountered on the Swim "A" work of course, another drill will be contracted. Bill will be checking on availability of another machine in case we need it.

I have also mentioned to Bill that the Tay River and Glenlyon Project work should be reviewed - especially in regard to a geochemically anomalous area some four miles north and west of the Lyn Group. For additional mapping, staking, and/or geochemical work the two-man crew in the Findlay River area at present can be used, or if necessary Fred Chow and his crew can be moved into the area. Bill feels, however, that it would be best to wait for the completion of the gravity survey before such work is undertaken. I concur with this view.

Re the area between the Tay River and Glenlyon Project areas which has not been flown aeromagnetically by ourselves, the Government aeromagnetic sheets will suffice for exploration purposes. We need not then consider additional flying there with our Elsec unit.

GMH:lfr

G. M. Hogg

cc: W. M. Sirola ✓

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W.M. Sirola

LYN GROUP  
Galeski Gravity Survey (1971)

June 28, 1971.

I have arranged with Bob Galeski to redo lines 82 to 190. Paul had mentioned over the telephone that in his discussions with Duncan Crone they had decided to terminate the work at lines 166W. They probably arrived at this coverage from looking at the geological map which did not show a 500 ppm zinc contour which extends from line 178W to line 194W at approximately 2100 to 2500 north. It was my feeling that since this is the same magnitude of geochemical anomaly as the more central anomalous zone, it should be covered in the survey.

Since Galeski will have three men on the property for part of the survey, I have asked them to stake 12 claims on the northeast side, and these claims would be contiguous to existing claims 95, 97, 127, 129, 131 and 133. In order to provide additional protection to the west side of the claim block, I have requested that they add a strip one claim wide and eight claims long on that side. Each man will have to record his claims on the way out from the project and these will be transferred to Kerr Addison Mines.

Galeski telephoned this morning to advise that his crew had left by truck on June 26 and should be leaving Ross River for the property on June 29. The job is expected to take 15 to 20 days to complete. Galeski will get the first information when the job is half complete, and I will relay this information to you as soon as possible.

WMS/jm

W.M. Sirola.

COPY

P.M. Kavanagh

W.M. Sirola

LYN GROUP GRAVITY SURVEY 1971 (Y-3)

August 16, 1971.

Enclosed are copies of the Residual and Bouguer Gravity maps of the Lyn Group. The maps are in rather crude form at the moment, but Galeski tried to get them out as quickly as he could.

Please note that the maps are contoured on a 0.2 milligal interval, and if contoured on 0.1 milligals, the anomaly extending from Line 110W to 142W would be at least as impressive as the anomaly over the mineralized zone at Swim Lakes. The only thing I don't know is how Galeski made the residual map, and I can't discuss it with him because he is in Tahiti.

I have tentatively laid out drill holes on lines 134 to 142W at 56N to be drilled vertically to a depth of 500'. I think the first hole should be drilled on line 138W with the other two holes contingent upon the results of the first hole. Another hole should be drilled at 48N on line 154. This should be drilled vertically to a depth of 300'.

LaRose will lay out these holes and take a diamond driller in with him to determine water supply and access.

Since drill hole A-42 at Swim Lakes was in ore from 508' to 530', I have asked Arctic Diamond Drilling to get another machine underway to the Lyn Group in the next two days. I anticipate that they will take this machine in part way by truck and part way by D6 tractor. Arctic will write up a separate agreement based on a 1,500' minimum at \$15.00 per foot.

Encls.

W.M. Sirola.

G.M. Hogg

W.M. Sirola

LYN GROUP, MAGUNDY RIVER AREA, Y.T. 105K-3  
Correlation between Gravity and E.M. Surveys

October 5, 1971.

Because of our inability to intersect the source of the gravity anomalies which we drilled, we decided to do C.E.M. work on a number of lines to see if any light could be shed by the use of the new E.M. equipment. In so doing, we were fully aware that graphitic schists occur on the property and that the gravity anomalies could be caused by skarn, barite, sulphides or bedrock topography in any combination. Sulphides could either be conformable with the enclosing rocks or completely nonconformable.

Both the field work and the calculations were done by Ted LaRose and John Lund over the following lines: 110W, 134W, 138W, 142W, 154W, 166W and 174W. Of these lines, only line 166W did not have an E.M. conductor coincident with a gravity high.

D.D.H. L-71-1, drilled on line 138W at 57N, could have missed because the E.M. indicates one steeply south dipping conductor (or possibly two, had the line been run further north).

D.D.H. L-71-2, on line 154W at 46N, should have encountered the source of the gravity anomaly, unless there is a small highly mineralized fold very near the surface above the drill hole. This could well be the case because of the sharpness of the anomaly. Since, however, adjacent lines showed no gravity highs, this particular anomaly is probably not worth pursuing. The E.M. anomaly is easily explained by south dipping gravity bands occurring in the drill hole beginning at approximately 100' and having a thickness of perhaps 200'.

D.D.H. L-71-3, on line 166W at 28N, encountered nothing which would explain the second order gravity anomaly and we have to assume that the anomaly reflects bedrock topography or an error in elevations.

In my view, the whole anomalous belt from line 110W to line 142W remains unexplained and is particularly intriguing in view of the coincident E.M. Even the erratic looking Bouguer values on line 110W are borne out by the subsequent E.M. work. On this property the Bouguer results are much more meaningful than residual, perhaps because of the tendency of the anomalous masses to occur in bands rather than in massive bodies. The above may not have been economic, but I don't think we should passively make that assumption.

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LYN GROUP, Correlation between Gravity and  
E.M. Surveys - PAGE TWO

October 5, 1971.

Apart from the 110W-142W area, the combined results on line 174W are most interesting in view of the proximity of this line to the galena found in the adjacent creek and to a new showing turned up by the bulldozer at line 160W + 5850N.

Recommendations:

Have Duncan Crone review the attached profiles, particularly with regard to the dip of the E.M. conductors. Then consider additional drilling on the 110W to 142W anomalies when the budget permits.

WMS/jm  
Encl.

W.M. Sirola.