

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

JUN 17 1971  
y/s D

007700

To G.M. Hogg

From W.M. Sirola

LYN GROUP, Magundy River Area, Y.T.

Y-3

Subject Comments on Gravity Survey Problems by R.B. Galeski Date June 15, 1971.

J.H.S.
P.M.K. ✓
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
<u>E.C.J.</u>

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.

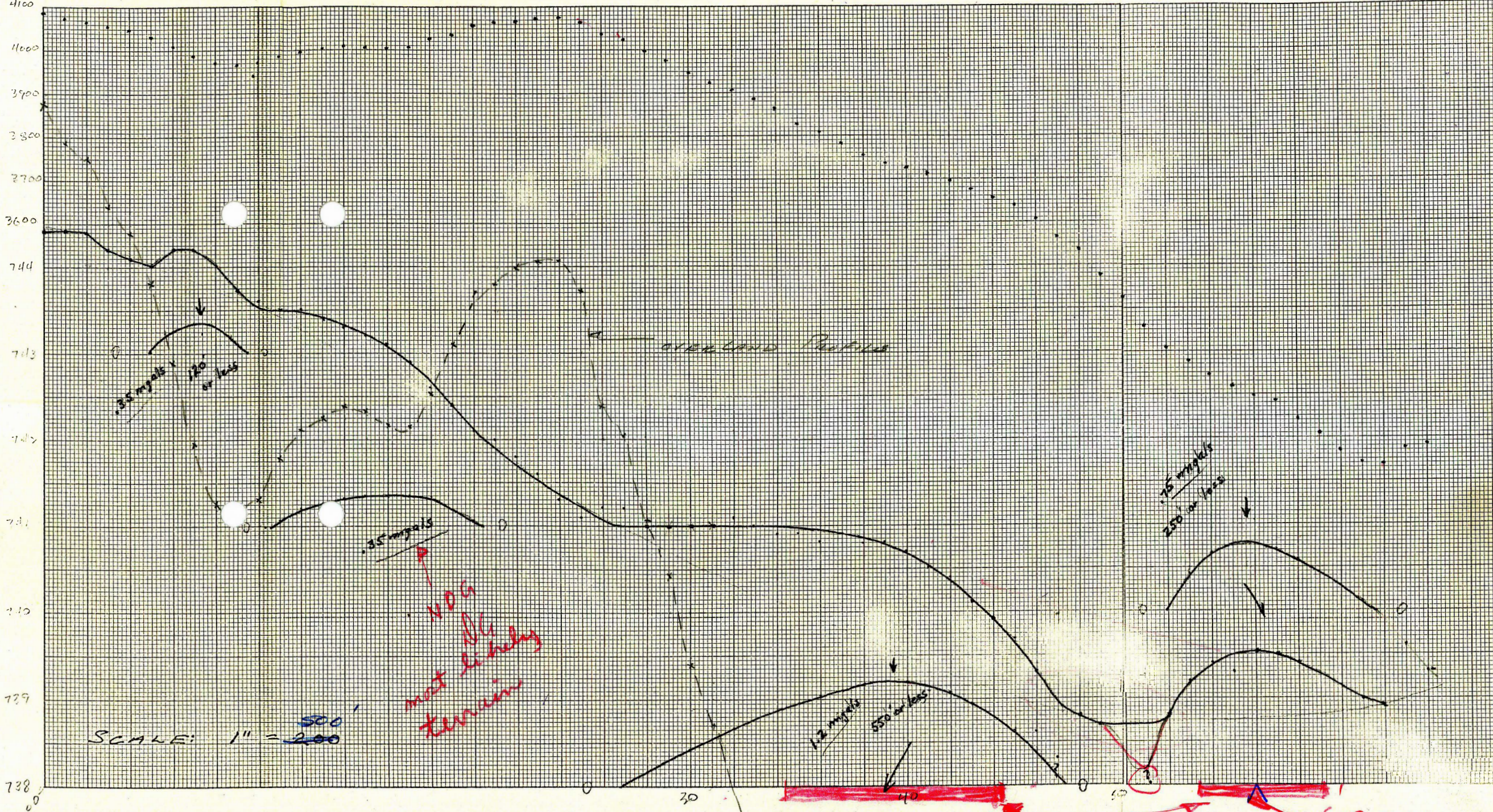
I have talked with Arctic Diamond Drilling about the cost of getting a drill into the Lyn Group, and they are working on this problem. I do not feel, however, that drilling should be undertaken until more accurate gravity data is available. We should bear in mind also that one can only group sixteen 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.

*Bill*  
W.M. Sirola.

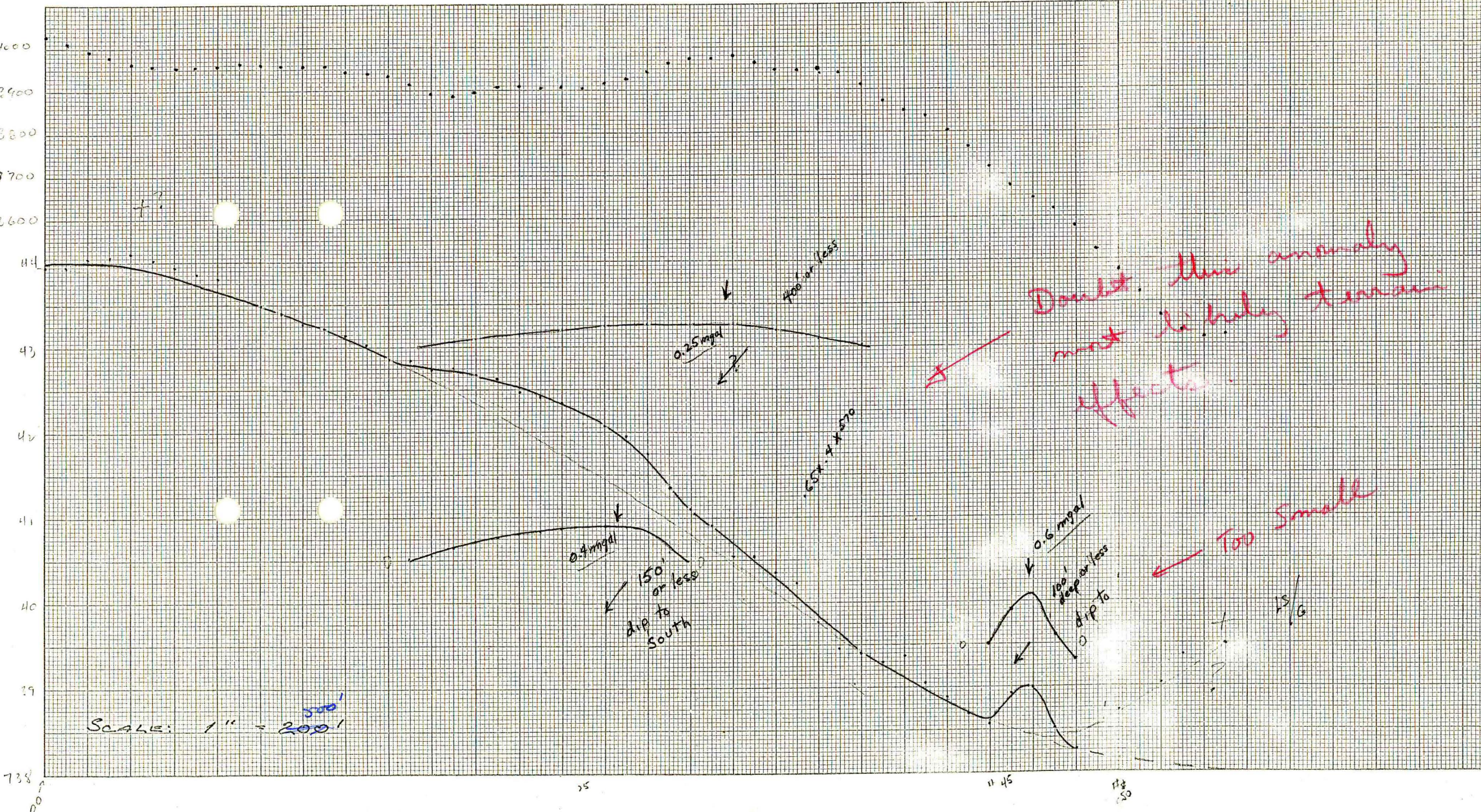
*This matter has been discussed previously. This should be re-run.*

*WMS*



KE 10 X 10 TO THE CENTIMETER 46 1510  
 KEUFFEL & ESSER CO.  
 MADE IN U.S.A.

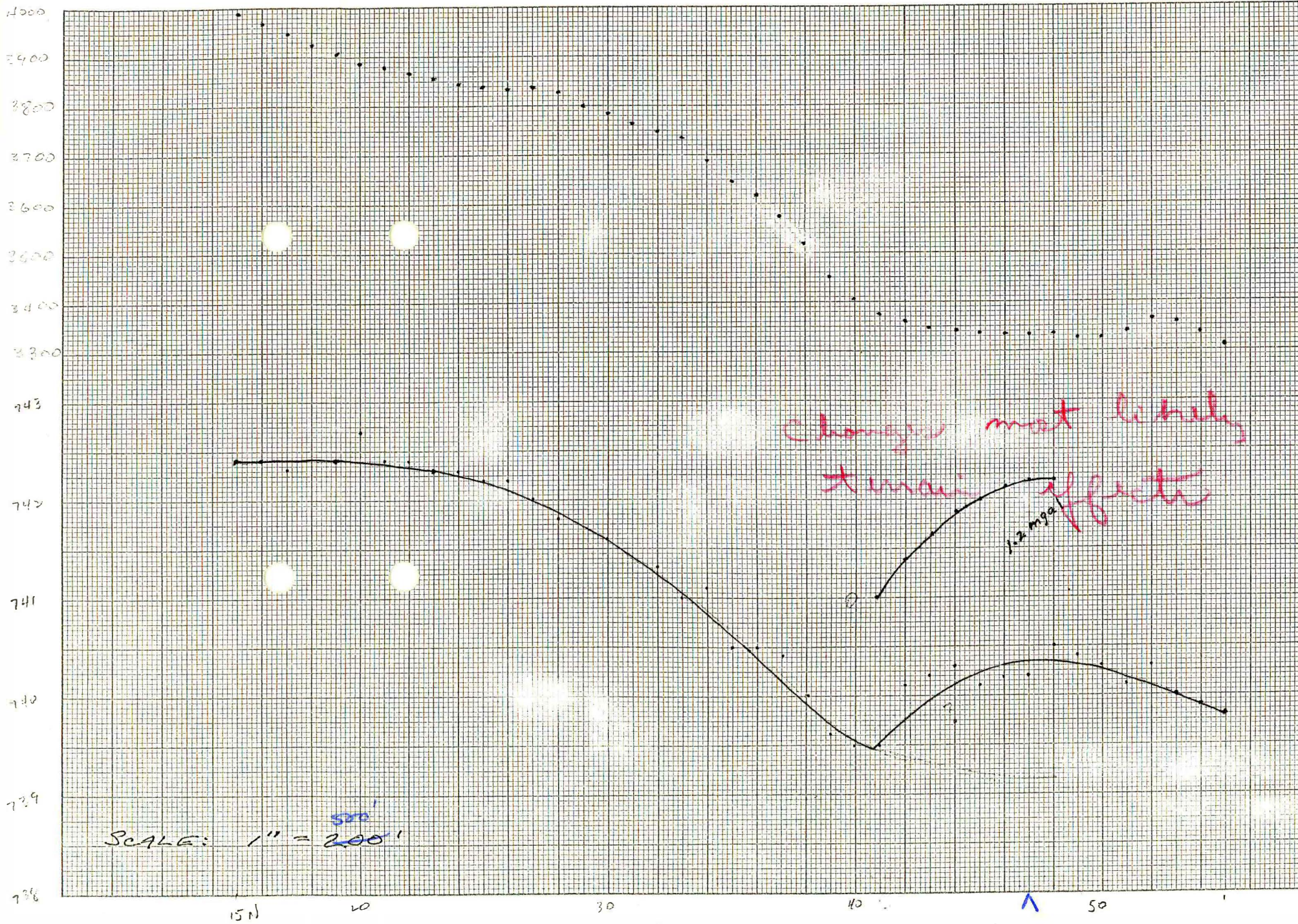
54  
 502 SHALLOW  
 POSSIBLE TARGETS DEPTH > 300'

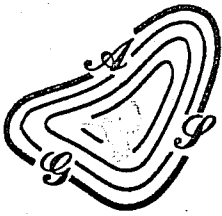


S

82100 WEST

N





*Airborne Gravity & Seismic Services Ltd.*

Calgary

Alberta

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

June 8th, 1971

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  $52\frac{1}{2}$  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.

RECEIVED  
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	.393

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.

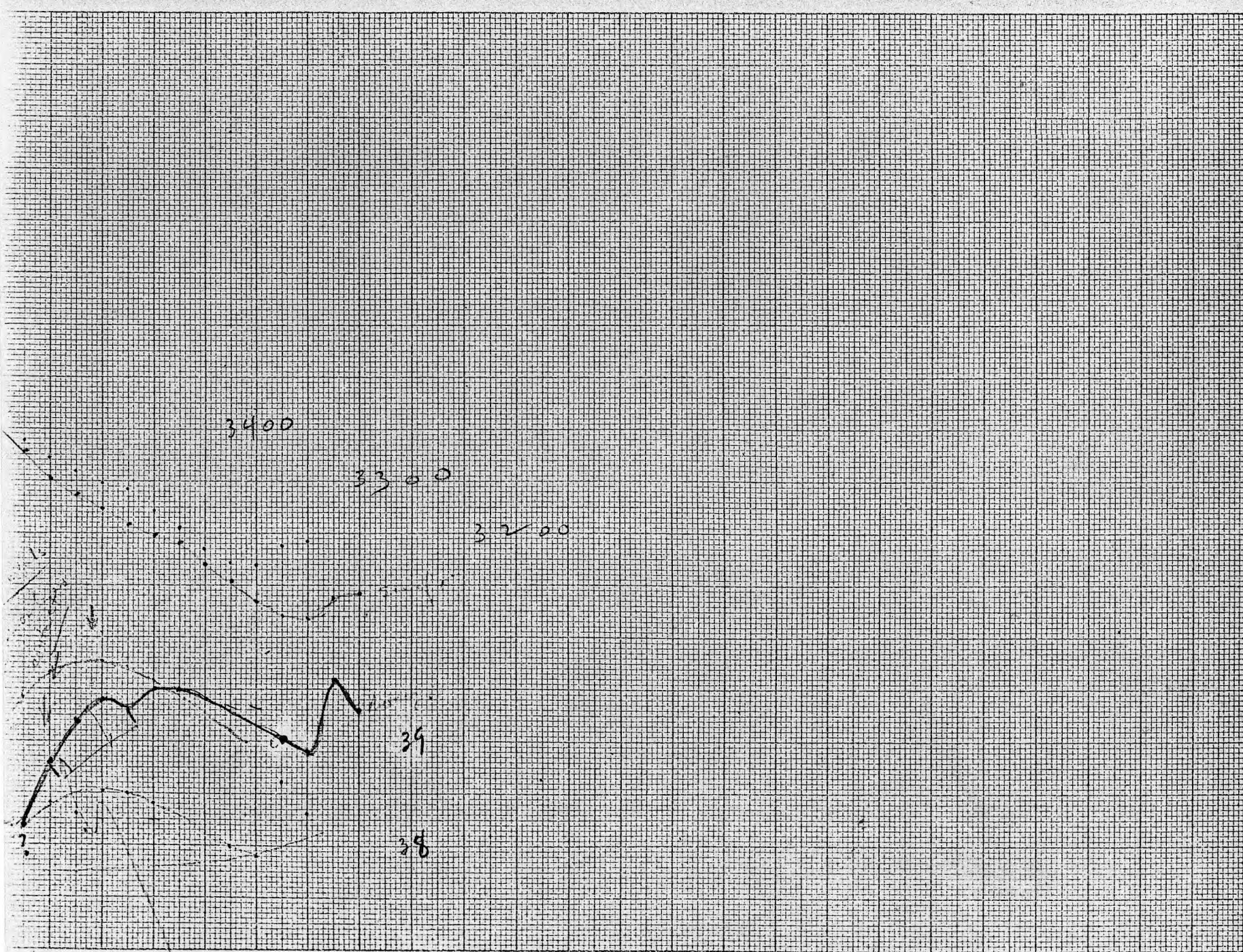
Yours very truly,



R. B. Galeski

134W

N



Bill: This is really steep. It indicates shallow depth + more contrast than you'd expect between metasediments + granite, also, the amplitude of  $1\frac{1}{4}$  mgals is pretty beefy (2.5 m. dis.)

K&E 10 X 10 TO THE CENTIMETER 46 1510  
 MADE IN U.S.A.  
 KEUFFEL & ESSER CO.



Airborne Geophysical Surveys  
Calgary, Alberta.

GRAVITY COMPUTATION SHEET

Client Kelt Addison

Line No. 82+00 West

Area Lynn Group

Meter Factor 1.05931

Elevation Corr. Factor 0.060

Prospect Corr. 500.00 mgals

Date	Sta. No.	Elevation	H.H. H.I.	Corrected Elevation	Elevation Corr.	Observed Gravity	Lat. Corr.	Terr. Corr.	Bouguer Gravity	Date	Report	Bouguer Gravity
	15 N	3990.0			229.40	501.44	+1.52		742.36			42.4
	16	3968.4			232.10	502.81	+1.50		742.41			42.4
	17	3948.6	?		236.92	503.92	+1.47		742.31			42.3
	18	3927.8			238.67	NR	+1.45		NR			-
	19	3907.1			234.92	506.53	+1.43		742.39			42.4
	20	3890.2			232.41	507.88	+1.41		742.70			42.7
	21	3878.3			232.70	508.32	+1.39		742.41			42.4
	22	3866.0			231.92	509.12	+1.36		742.44			42.4
	23	3856.1			231.27	509.72	+1.34		742.43			42.3
	24	3845.2			230.71	510.23	+1.32		742.26			42.3
	25	3839.4			230.32	510.53	+1.30		742.19			42.2
	26	3834.4			230.06	510.87	+1.27		742.21			42.2
	27	3838.3			230.30	510.46	+1.25		742.01		510.43	42.0
	28	3829.0			229.74	510.78	+1.22		741.75			41.8
	29	3799.7			227.98	512.42	+1.21		741.61			41.6
	30	3783.8			227.03	NR	+1.19		NR			-
	31	3761.4			225.69	514.40	+1.17		741.34			41.3
	32	3749.0			224.90	514.86	+1.14		741.04			41.0
	33	3735.8			224.15	515.42	+1.12		741.05			41.1
	34	3689.5			221.37	518.03	+1.10		740.30			40.5
	35	3645.3			218.22	520.74	+1.08		740.54			40.5
	36	3618.5			217.11	522.22	+1.05		740.39			40.4
	37	3574.1			214.48	524.53	+1.03		740.01			40.0
	38	3517.1			211.02	527.55	+1.01		739.89			39.6
	39	3450.3			207.02	531.51	+0.99		739.59			39.5
	40	3405.9			204.25	534.15	+0.97		739.47			39.5
	41	3373.8			202.42	536.73	+0.95		740.11			40.1
	42	3360.1			201.61	537.67	+0.92		740.25			40.2
	43	3347.2			200.83	538.57	+0.90		740.30			40.3
	44	3341.0			200.46	538.78	+0.88		740.12			40.1
	45	3336.9			200.21	539.10	+0.86		740.17			40.2
	46	3324.4			200.06	539.33	+0.84		740.23			40.2
	47	3333.3			200.00	539.65	+0.81		740.35			40.5
	48	3333.6			200.02	539.60	+0.79		740.40			40.4
	49	3325.5			199.52	540.03	+0.77		740.32			40.3
	50	3324.0			199.44	540.05	+0.75		740.24			40.2
	51	3338.2			200.29	539.26	+0.73		740.29			40.3
	52	3362.0			201.72	537.61	+0.71		740.04			40.0
	53	3357.2			201.43	537.81	+0.68		739.85			39.9
	54	3334.2			200.05	539.12	+0.66		739.82			39.8
	55	3308.7			198.52	NR	+0.64		NR			-



Airborne Geophysical Surveys  
Calgary, Alberta.

GRAVITY COMPUTATION SHEET

Client Kell Addison

Line No. 1186

Area Lynn Group

Meter Factor 1.05931

Elevation Corr. Factor 0.060

Prospect Corr. 500.00 mgals

Date	Sta. No.	Elevation	H.I. H.I.	Corrected Elevation	Elevation Corr.	Observed Gravity	Lat. Corr.	Terr. Corr.	Bouguer Gravity	Date	Report	Bouguer Gravity
	00			4028.6	241.72	500.37	+1.85		742.94			
	1N			4013.3	240.80	501.31	+1.83		742.94			
	2N			3994.0	239.64	502.60	+1.80		744.04			
	3N			3978.6	237.72	503.54	+1.78		744.04			
	4N			3968.0	236.08	504.26	+1.76		744.10			
	5N			3957.8	237.47	504.82	+1.74		744.03			
	6N			3954.9	237.29	504.93	+1.72		743.97			
	7N			3954.5	237.21	504.90	+1.69		743.96			
	8N			3958.4	237.80	504.63	+1.67		743.80			
	9N			3962.9	237.75	NR	-	-	-			
	10N			3960.1	237.11	504.24	+1.63		742.98			
	11N			3957.3	237.44	504.35	+1.61		742.90			
	12N			3957.1	237.42	504.26	+1.58		743.27			
	13N			3954.9	237.20	504.37	+1.56		743.22			
	14N			3944.6	236.68	504.93	+1.54		743.18			
	15N			3938.6	236.32	505.19	+1.52		743.02			
	16N			3933.1	235.93	505.37	+1.50		742.87			
	17N			3913.4	234.80	506.56	+1.47		742.82			
	18N			3891.8	233.51	507.76	+1.45		742.72			
	19N			3887.9	233.27	508.05	+1.43		742.78			
	20N			3896.5	233.79	507.97	+1.41		742.67			
	21N			3907.5	234.45	506.78	+1.39		742.62			
	22N			3910.4	234.62	506.49	+1.36		742.47			
	23N			3908.6	234.52	506.56	+1.34		742.42			
	24N			3910.2	234.61	506.42	+1.32		742.35			
	25N			3907.8	234.47	NR	+1.30		-			
	26N			3915.8	234.95	505.83	+1.28		742.06			
	27N			3929.5	235.77	504.94	+1.25		741.96			
	28N			3944.0	236.64	503.88	+1.23		741.78			
	29N			3965.3	237.92	502.22	+1.21		741.38			
	30N			3973.6	238.72	501.50	+1.19		741.11			
	31N			3974.7	238.48	501.27	+1.17		740.92			
	32N			3980.4	238.82	500.59	+1.14		740.85			500.59 500.61
	33N			3964.0	237.84	501.57	+1.12		740.53			
	34N			3949.1	236.95	502.30	+1.10		740.35			
	35N			3947.3	236.84	502.31	+1.08		740.22			
	36N			3951.7	237.10	501.61	+1.06		739.76			
	37N			3939.8	236.30	502.04	+1.03		739.46			
	38N			3912.5	234.78	503.63	+1.01		739.39			
	39N			3876.6	232.60	505.70	+0.99		739.29			
	40N			3850.5	231.03	507.32	+0.97		739.32			
	41N			3839.6	230.22	507.72	+0.95		739.05			
	42N			3801.6	228.10	509.81	+0.92		738.83			
	43N			3766.8	226.01	511.77	+0.90		738.68			
	44N			3720.2	223.21	514.47	+0.88		738.56			
	45N			3677.1	220.62	517.43	+0.86		738.92			
	46N			3646.7	218.80	519.35	+0.84		738.99			
	47N			3620.4	217.22	520.48	+0.82		738.51			
	48N			3577.0	214.62	522.85	+0.79		738.26			
	49N			3522.7	211.36	NR	+0.77		-			





Airborne Geophysical Surveys  
Calgary, Alberta.

GRAVITY COMPUTATION SHEET

Client \_\_\_\_\_

Line No. 134 W

Area \_\_\_\_\_

Meter Factor 1.05931

Elevation Corr. Factor 0.000

Prospect Corr. \_\_\_\_\_

Date	Sta. No.	Elevation	H.H. H.I.	Corrected Elevation	Elevation Corr.	Observed Gravity	Lat. Corr.	Terr. Corr.	Bouguer Gravity	Date	Report	Bouguer Gravity
	00			4086.1	246.17	497.40	+1.85		744.43			44.4
	1N			4076.7	244.60	497.99	+1.83		744.40			44.4
	2N			4066.8	243.03	498.56	+1.80		744.37			44.4
	3N			4057.0	241.46	499.01	+1.78		744.21			44.2
	4N			4048.6	240.92	499.46	+1.76		744.14			44.1
	5N			4031.3	241.11	500.42	+1.74		744.04			44.0
	6N			4009.0	240.84	501.90	+1.72		744.16			44.2
	7N			3986.2	239.17	503.32	+1.69		744.19			44.2
	8N			3970.2	238.01	504.16	+1.67		744.04			44.0
	9N			3966.2	237.97	504.04	+1.65		743.66			43.7
	10N			3970.2	238.21	503.79	+1.63		743.63			43.6
	11N			3986.5	239.19	502.73	+1.61		743.58			43.5
	12N			3995.2	239.71	502.21	+1.58		743.50			43.5
	13N			4001.2	240.07	501.78	+1.56		743.41			43.4
	14N			4008.2	240.49	501.27	+1.54		743.30			43.3
	15N			4006.4	240.38	501.32	+1.52		743.23			43.2
	16N			4002.7	240.16	501.47	+1.50		743.13			43.1
	17N			4005.0	240.30	501.15	+1.47		743.02			42.9
	18N			4023.1	241.39	499.79	+1.45		742.63			42.6
	19N			4032.1	242.29	498.69	+1.43		742.41			42.4
	20N			4053.4	243.20	497.51	+1.41		742.12			42.1
	21N			4063.3	243.93	496.76	+1.39		741.95			42.0
	22N			4066.2	243.97	496.44	+1.36		741.72			41.8
	23N			4071.3	244.28	495.97	+1.34		741.59			41.6
	24N			4075.0	244.30	495.52	+1.32		741.34			41.3
	25N			4063.9	243.83	495.94	+1.30		741.07			41.1
	26N			4034.8	242.09	497.79	+1.28		741.16			41.2
	27N			4022.0	241.30	498.65	+1.25		741.22			41.2
	28N			3996.6	239.80	500.00	+1.23		741.02		Base 'A'	41.0
	29N			3971.7	239.30	501.46	+1.21		740.97			41.0
	30N			3946.7	236.80	502.97	+1.19		740.96			41.0
	31N			3927.2	235.63	504.15	+1.17		740.95			41.0
	32N			3904.2	234.09	505.65	+1.14		741.02			41.1
	33N			3885.0	233.10	506.73	+1.12		740.95			41.0
	34N			3860.9	231.65	508.14	+1.10		740.89			40.9
	35N			3826.4	229.58	510.04	+1.08		740.90			40.9
	36N			3808.8	228.53	511.19	+1.06		740.77			40.8
	37N			3779.6	226.78	513.04	+1.02		740.85			40.9
	38N			3753.6	225.22	514.60	+1.01		740.83			40.8
	39N			3735.9	224.13	515.62	+0.99		740.76			40.8
	40N			3723.5	223.41	516.32	+0.97		740.70			40.7
	41N			3710.1	222.61	516.96	+0.95		740.52			40.5
	42N			3694.0	221.64	517.79	+0.92		740.35			40.4
	43N			3674.0	220.44	518.75	+0.90		740.09			40.1
	44N			3653.3	219.20	519.86	+0.88		739.94			39.9
	45N			3638.2	218.29	520.52	+0.87		739.67			39.7
X	46N			3605.2	216.31	522.15	+0.84		739.30			39.3
	47N			3564.3	213.86	524.62	+0.81		738.09		???	
X	48N			3533.9	212.03	525.93	+0.79		738.75			39.8
	49N			3475.3	208.52	529.42	+0.77		738.71			39.7



Airborne Geophysical Surveys  
Calgary, Alberta.

GRAVITY COMPUTATION SHEET

Client \_\_\_\_\_

Line No. 134 W

Area \_\_\_\_\_

Meter Factor \_\_\_\_\_

Elevation Corr. Factor \_\_\_\_\_

Prospect Corr. \_\_\_\_\_

Date	Sta. No.	Elevation	H.H. H.I.	Corrected Elevation	Elevation Corr.	Observed Gravity	Lat. Corr.	Terr. Corr.	Bouguer Gravity	Date	Report	Bouguer Gravity
9	50 N			3422.3	205.34	N.R.	4.76		-			
	51 N			3256.4	201.29	536.10	4.77		738.21		2,??	38.2?
12	52 N			3306.1	197.37	539.71	4.71		739.79			38.8
	53 N			3275.7	196.54	541.95	4.68		739.17			39.2
	54 N			3245.7	194.74	544.00	4.66		739.40			39.4
	55 N			3218.8	193.12	545.55	4.64		739.32			39.3
14	56 N			3197.8	191.87	546.98	4.62		739.47			39.5
	57 N			3182.3	190.04	547.91	4.60		739.45			39.5
	58 N			3142.5	188.55	550.22	4.58		739.25			39.4
16	59 N			3110.3	186.62	562.81	4.56		739.22 X			
	60 N			3070.4	184.02	N.R.	4.55		-			
	61 N			3042.4	182.54	555.95	4.53		739.02			39.0
X	62 N			3039.7	182.38	555.98	4.50		738.86			38.9
	63 N			3076.0	184.56	554.68	4.48		739.64			39.1
	64 N			3084.8	185.09	553.78	4.46		739.27			39.7

JUN 11 1971

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To G.M. Hogg

From W.M. Sirola

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

Y-3

Date June 9, 1971.

I.H.S.
✓ P.M.K. ✓
G.M.H. ✓
R.D.S.
B.C.R.
I.D.B.
M.D.R.
J.H.F.

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 able to redoing the faulty survey.

*The Overland Survey is completely unreliable. Galeski's work shows some gravity response close to the north boundary of the claim area. This could be formation, and it is difficult to assess the response with the limited coverage available. For the moment some additional claims and EMI and SP coverage of the area of interest are recommended.*

W.M. Sirola.

*WMS/jm  
L.H.S. June 11/71*