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ABERMIN CORP.

LARA PROJECT

GRAVITY SURVEY 1986

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September 1986

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SUMMARY

A Gravity test survey has been completed on Abermin Corp.'s Lara project. The purpose of this survey was to determine the applicability and usefulness of gravity survey methods to outline the mineralized zone. The survey was conducted over a known mineralized zone uncovered by trenching and including several parallel lines where the overburden was less disturbed. The field methods used, scientific principles employed and conclusions drawn follow.

Respectfully submitted,

Gordon Ellis, P.Eng.

DWB, JSM, BGS

Memo from:
RICK BAILES

Re Agar, Berretta gravity Survey.

It appears that gravity is a ineffective tool for the location of small massive sulphide pods such as the one found in Trench 43 on Lava. A 0.072 mgal anomaly was received directly over the trench. Noise level on a survey of this sort is usually 0.1 mgal or more.

The gravity profiles on either side of the trench did not detect the zone. The broad gravity low detected over the zone could be caused by the rhyolite or by a recessive unit. In either case it is not a direct method and can not be justified due to the high cost of gravity.

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LIST OF FIGURES

At the request of Abermin Corp., Ager, Berretta & Ellis Inc. (ABE) conducted a gravity survey at the Lara project. The Lara project is located east of Chemainus on Vancouver Island (See Figure 1).

PURPOSE

The purpose of the survey was to determine the applicability and usefulness of gravity survey methods to sphalerite ore zone investigations at this site.

FIELD PROCEDURE

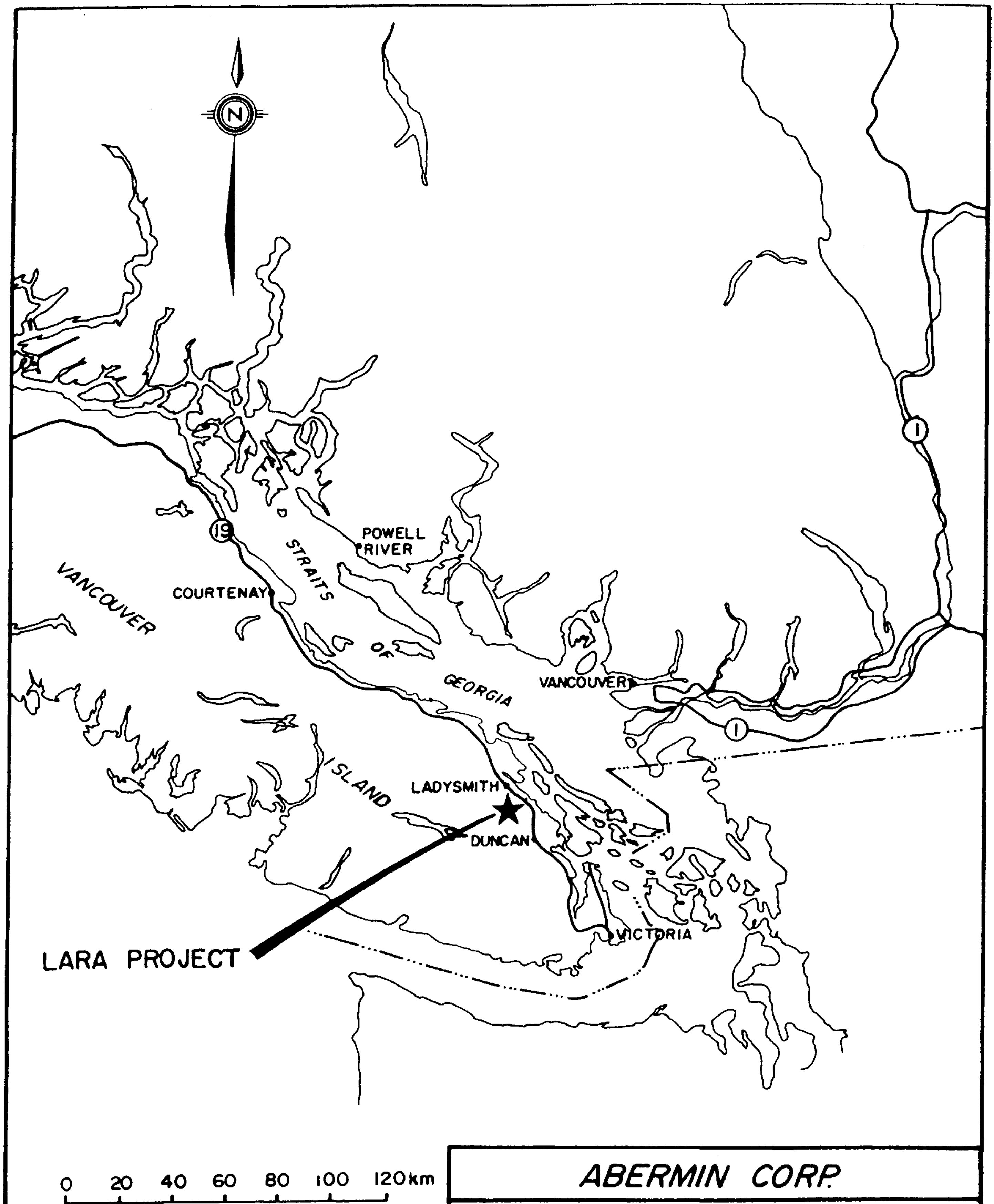
The ABE geophysical surveyor stayed in a hotel in Chemainus and travelled to the job site in a four wheel drive truck. The field portion of the work was performed the third and fourth of September 1986.

Three lines were surveyed for this test. These were lines 63W (31 stations), 63+28W (28 stations) and 64W (30 stations). Line 63+28W ran through a trench cut orthogonally to the ore body. Stations were at 50 metre spacings beginning at the extremities of these lines and systematically reduced to five metre spacings over the ore zone. The starting elevation was obtained from the approximate elevation of drill hole 85-36. The relative elevations of the stations were determined by a system of optical measurements.

Gravity measurements were made using a LaCoste and Romberg model G Gravity Meter (Serial number 728) with a reading accuracy of $\pm$.01 milligals (See Appendix A) . A gravity base station was established and each line was internally tied to it to correct for diurnal drift and to ensure correctness of the meter drift.

DATA REDUCTION

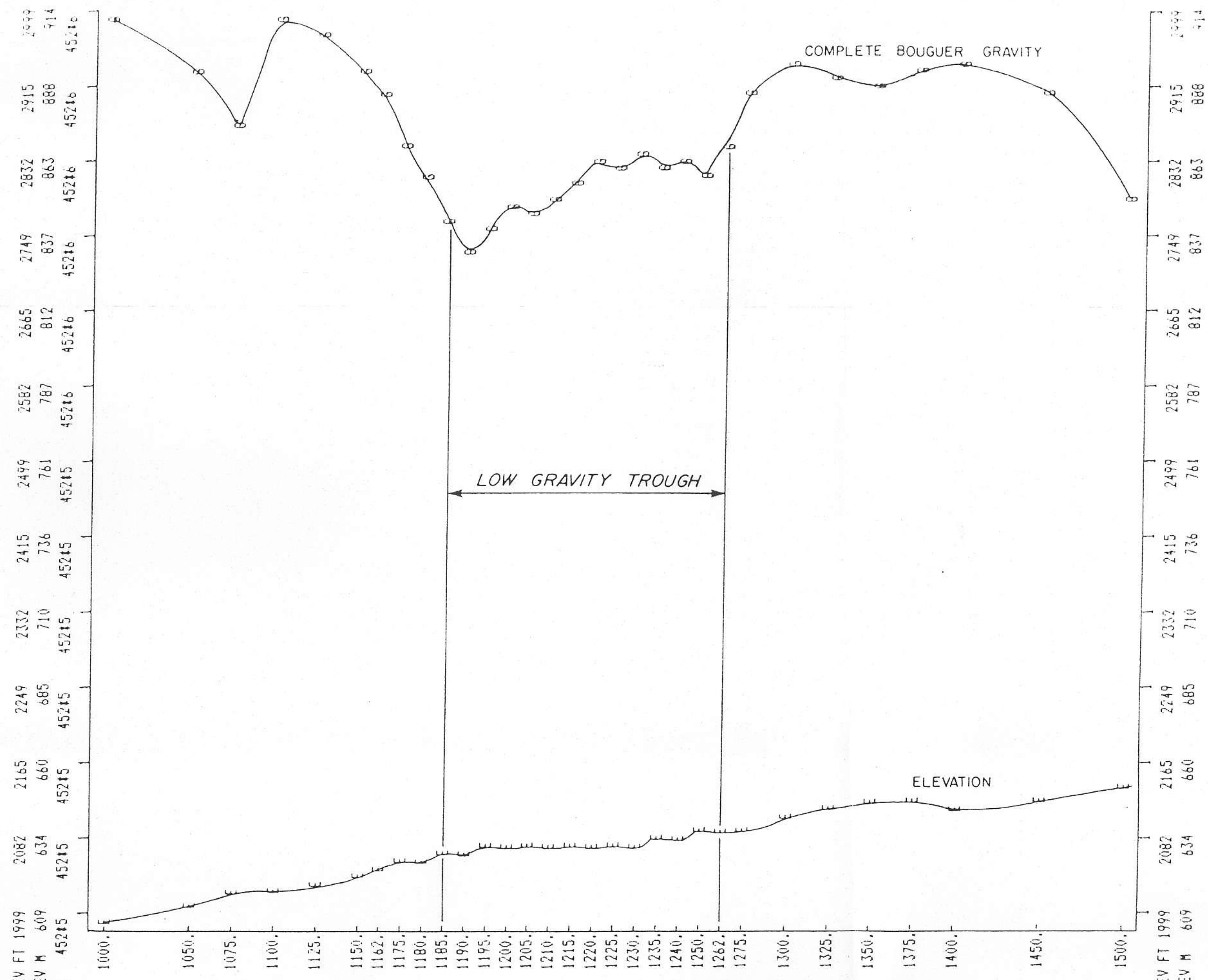
The elevation values obtained required no adjustment with the loop closures ties being 0.9 cm., 2.4 cm. and 4.0 cm. The gravity values were corrected for diurnal drift and meter drift. Local terrain corrections to 60 metre radius (see Appendix B) were also applied to the data. Gravity profiles (See Figures 2, 3 & 4) were derived and prepared in the field as well as the Vancouver office.



ABERMIN CORP.

LARA PROJECT

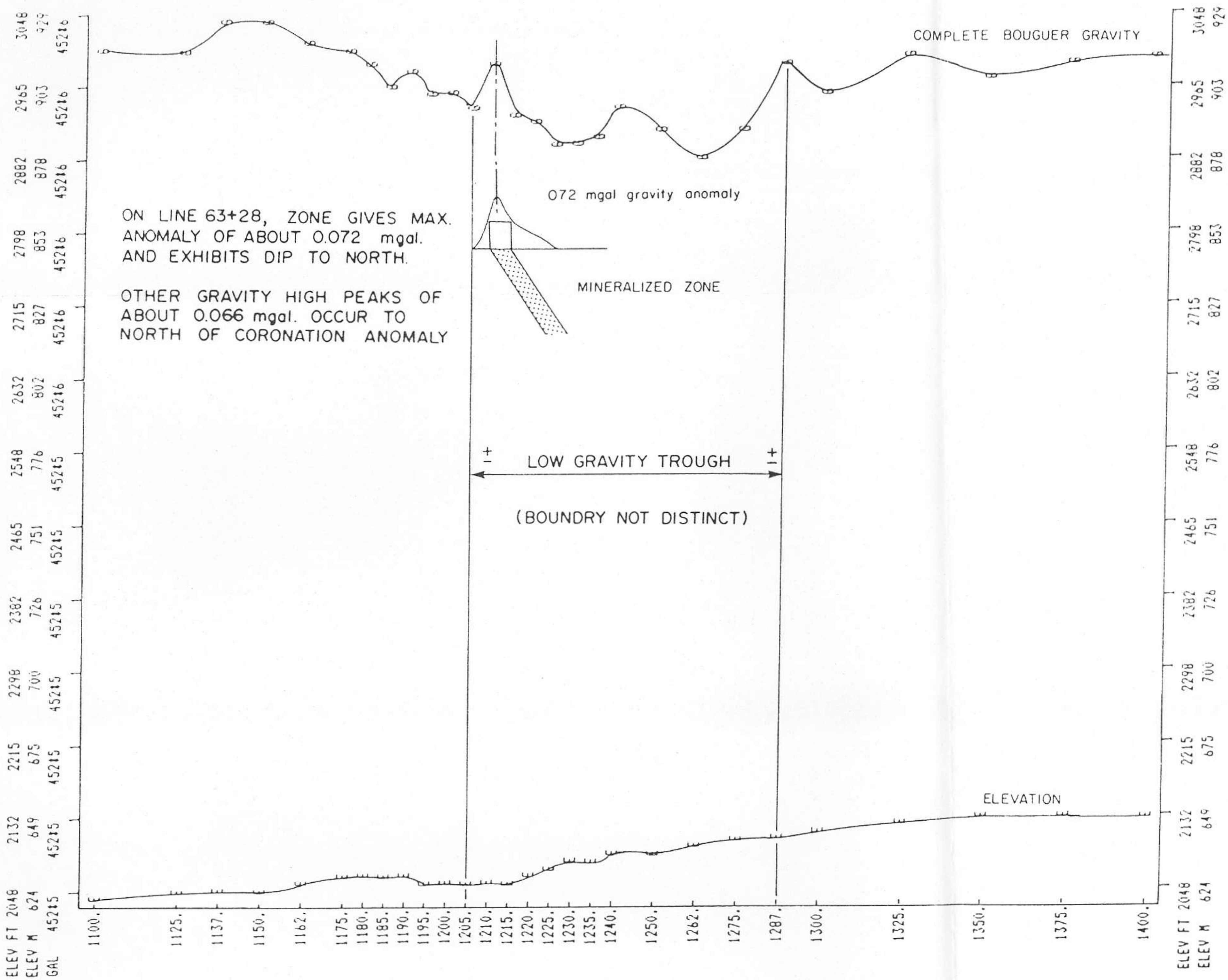
Ager, Berretta. & Ellis Inc.	DWN BY: P.A.	FIG. NO.
	DATE: SEPT. '86	1



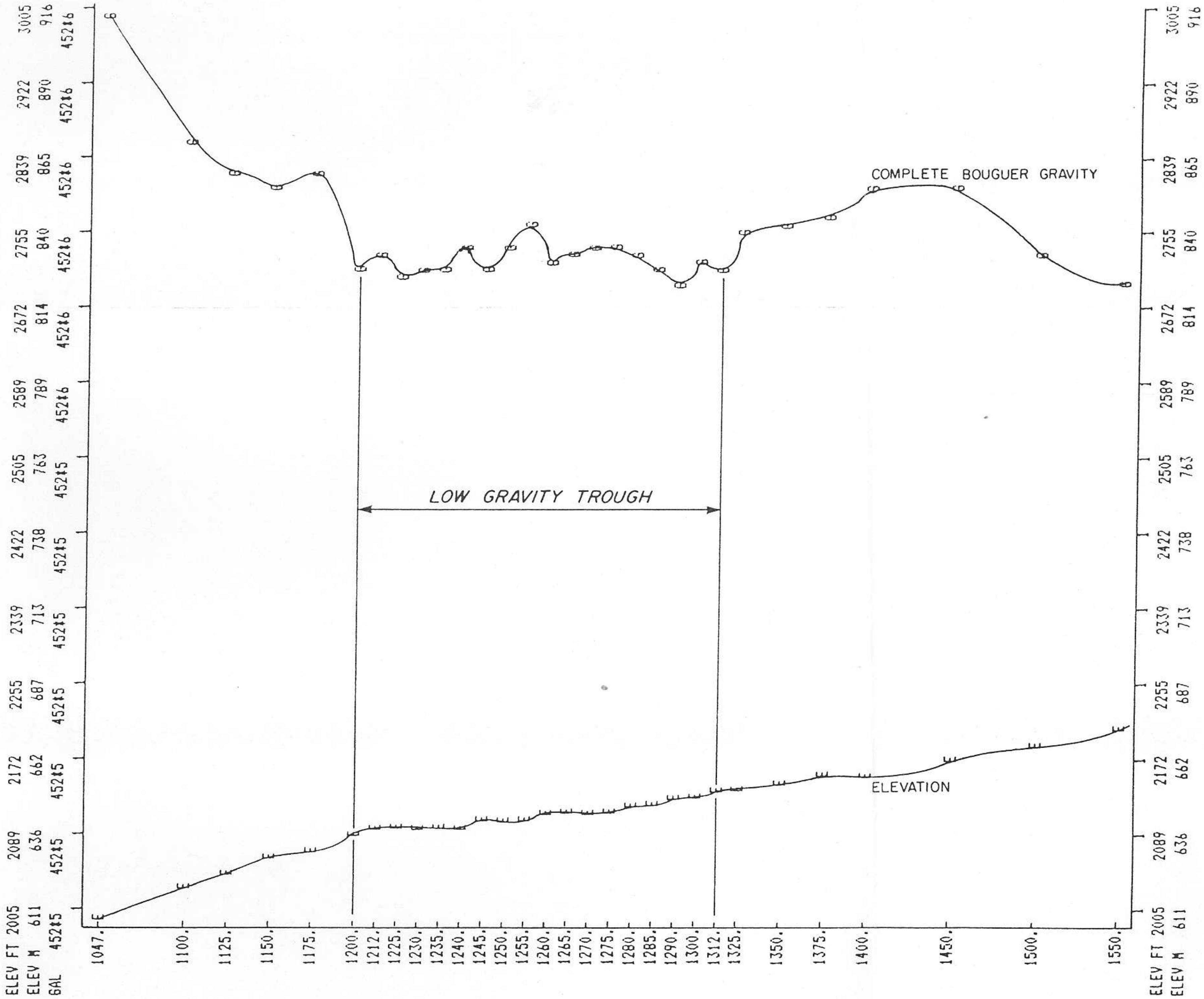
COMPLETE BOUGUER GRAVITY PROFILE

LARA PROJECT
LINE 63+00
LOOKING WESTERLY

FIG. 2



COMPLETE BOUGUER GRAVITY
072 mgal gravity anomaly
ON LINE 63+28, ZONE GIVES MAX. ANOMALY OF ABOUT 0.072 mgal. AND EXHIBITS DIP TO NORTH.
OTHER GRAVITY HIGH PEAKS OF ABOUT 0.066 mgal. OCCUR TO NORTH OF CORONATION ANOMALY
MINERALIZED ZONE
LOW GRAVITY TROUGH
(BOUNDRY NOT DISTINCT)
ELEVATION
ELEV FT
ELEV M
GAL
1100.
1125.
1137.
1150.
1162.
1175.
1180.
1185.
1190.
1195.
1200.
1205.
1210.
1215.
1220.
1225.
1230.
1235.
1240.
1250.
1262.
1275.
1287.
1300.
1325.
1350.
1375.
1400.



COMPLETE BOUGUER GRAVITY PROFILE

LARA PROJECT
LINE 64+00
LOOKING WESTERLY

FIG. 4

INTERPRETATION

Line 63+00W features a 0.15 milligal gravity low trough occupying an area from about 11+85N to about 12+65N (80 metres).

Line 63+28W was surveyed through the centre of a trench and pinpoints a 0.072 milligal high over the mineralized zone in the trench. The gravity low trough is less distinct but occupies an area from 12+05N to about 13+00N(95 metres ±). Other gravity high peaks of about 0.066 milligals occur to the north of the exposed zone.

Line 64+00W features a 0.10 milligal gravity low trough occupying an area from 12+00 to 13+12N (112 metres).

CONCLUSIONS

1. The mineralized zone can be seen only on the line through the trench (63+28W) where it has about 0.072 milligal gravity high.

2. On the remaining two lines, east and west of the trench line, the gravity gives a characteristic 'low' trough but no discernable gravity high to the zones.

3. The gravity low trough is interpreted to be caused by either:

   a. A less dense host rock contains the mineralized zones; or
   b. An overburden response.

4. If the gravity low treugh is caused by 3a, then it may potentially be used as an indirect geophysical marker for the mineralized zones. If the low is caused by 3b, gravity appears to be of little use to track the mineralized zones.

PERSONNEL

All field work, data reduction and report preparation was carried out by Tam Mitchell.

CERTIFICATE OF QUALIFICATIONS

I, Gordon L. Ellis, do hereby certify that:

1. I am a practising geophysicist with offices at #206-595 Howe Street, Vancouver, B. C., Canada V6C 2T5.

2. I have received the following University degrees:

   (a) 1972 B.Sc. (Geophysics), University of British Columbia.

   (b) 1974 M.B.A. (Finance), University of British Columbia.

3. I am a member in good standing of the following professional organizations:

   (a) The Society of Exploration Geophysicists
   (b) Association of Professional Engineers of British Columbia.
   (c) Association of Professional Economists of British Columbia.
   (d) Canadian Institute of Mining and Metallurgy
   (e) American Institute of Mining and Metallurgy
   (f) British Columbia Geophysical Society
   (g) Northwest Mining Association

4. Since 1969 I have been engaged in exploration and mining geophysics over numerous projects in North America, Australia, Africa and the Far East.

5. The field work and the interpretation of the results in this report were done under my direct supervision.

Gordon L. Ellis, P.Eng., M.B.A.
Geophysicist

APPENDIX A

GRAVITY CONSTANTS

Elevation Datum:	Sea level
Gravity Datum as Printed:	Arbitrary
Elevation Factor:	187061 mgal./m.
Free Air:	Assumed normal
Apparent Bouguer Density:	2.9 grams per cc.

Gravity Datum: G Base "A": The top of a large rock 75 metres south-south-east of the centre of the trench at the mineralized zone.

Optical Levels: Sokkisha Automatic Level Model N5W

Gravity Meter: La Coste & Romberg model G No. 728, gravity conversion factor as follows:

Meter Reading	Factor for Interval	Value in Milligals
4200	1.02697	4303.37
4300	1.02707	4406.07

Base Station:

Station	Elevation	Relative Complete Bouguer Gravity Value
G Base "A"	625.44 metres	4526.39 milligals

APPENDIX B

GRAVITY FUNDAMENTALS

There are a number of steps required in order to obtain meaningful, relative gravity values from raw field data. The final values are referred to as Complete Bouguer Gravity and are derived from the following components:

go = observed gravity = field observations corrected for drift and adjusted to primary base station gravity datum.

gfa = free air effect = correction for the relative distance of the gravity station from the mass of the earth (point source mass). This calculation assumes a normal free air and corrects for relative differences in distance from the elevation datum.

gbs = Bouguer slab effect = correction for the relative differences in thickness of rock material between gravity station and the elevation datum. This calculation requires that a mean density for rock types between the lowest and and highest grid elevations be established. All stations are then corrected for the gravity effect caused by the assumed slab of the derived density above the elevation datum.

gl = latitude effect = correction for change of observed gravity with change in latitude - due primarily to the difference in the earth's radius between the poles and equator.

gt = terrain effect = correction for variations caused by loeal terrain. The vertical component of the gravitational effect exerted by nearby hills, or not exerted by valleys or gullies, will affect the net reading obtained at any one station. The overall effect on a given line profile or grid area will be a function of the station spacing relative to the frequency of the terrain correction.

Accurate and appropriate application of the above corrections yields Complete Bouguer Gravity values which are, in theory, free from all effects except those caused by relative changes in density within the rock units below the survey area.

Gcb = go - (gfa + gbs + gl + gt) = Complete Bouguer Gravity

Changes in relative gravity values which may result in "anomalies" are a function of:

The difference in densities between rock units;
The sizes of rock units relative to each other and relative to the grid spacing or "target" size; and
The distance from the area of density contrect to the observation points.

For example: Steeply dipping, near surface massive sulphides deposits or coal seams will give shape featured gravity anomalies, the former greater than background, the latter less than background. Density contrasts at depth, such as slopes or changes in basement stratigraphy, will result in very low frequency changes, often referred to as gradients.

APPENDIX C

GRAVITY DATA LISTINGS

LINE 63+00

LARA63

DENSITY = 2.900 ELEVATION FACTOR = .187061 FOR ELEVATIONS 0.- 10000. METRES

STATION COORD	ELEV(M)	ELEV(FT)	OBS G	LAT G	TER G	CB GRAV
1000.	609.31	1999.05	4412.52	-.01	.03	4526.52
1050.	616.45	2022.47	4411.15	-.05	.03	4526.44
1075.	620.19	2034.74	4410.42	-.07	.02	4526.38
1100.	621.26	2038.25	4410.37	-.09	.03	4526.52
1125.	623.09	2044.26	4410.02	-.11	.03	4526.50
1150.	626.10	2054.13	4409.44	-.13	.02	4526.45
1162.	627.89	2060.01	4409.07	-.14	.04	4526.42
1175.	630.02	2066.99	4408.62	-.15	.03	4526.35
1180.	630.41	2068.27	4408.52	-.16	.02	4526.31
1185.	633.25	2077.59	4407.91	-.16	.04	4526.25
1190.	634.17	2080.61	4407.70	-.17	.05	4526.21
1195.	635.10	2083.66	4407.56	-.17	.05	4526.24
1200.	635.42	2084.71	4407.54	-.17	.04	4526.27
1205.	635.70	2085.63	4407.49	-.18	.03	4526.25
1210.	635.87	2086.19	4407.49	-.18	.02	4526.28
1215.	636.08	2086.88	4407.48	-.19	.02	4526.30
1220.	636.25	2087.43	4407.48	-.19	.02	4526.33
1225.	636.54	2088.39	4407.43	-.20	.02	4526.32
1230.	636.99	2089.86	4407.36	-.20	.02	4526.34
1235.	637.89	2092.82	4407.17	-.20	.02	4526.31
1240.	638.67	2095.37	4407.04	-.21	.03	4526.33
1250.	640.20	2100.39	4406.75	-.22	.02	4526.31
1262.	641.21	2103.71	4406.60	-.23	.03	4526.35
1275.	642.15	2106.79	4406.52	-.24	.02	4526.42
1300.	646.04	2119.55	4405.85	-.26	.02	4526.46
1325.	648.25	2126.80	4405.44	-.28	.02	4526.44
1350.	650.78	2135.11	4404.98	-.30	.01	4526.43
1375.	650.98	2135.76	4404.99	-.32	.01	4526.45
1400.	649.50	2130.91	4405.29	-.34	.01	4526.46
1450.	652.24	2139.90	4404.78	-.38	.01	4526.42
1500.	656.15	2152.72	4403.95	-.42	.01	4526.28

GRAVITY DATA LISTINGS

LINE 63+28W

DENSITY = 2.900 ELEVATION FACTOR = .187061 FOR ELEVATIONS 0.- 10000. METRES

STATION COORD	ELEV(M)	ELEV(FT)	OBS G	LAT G	TER G	CB GRAV
1100.	624.47	2048.79	4409.64	-.09	.04	4526.40
1125.	628.11	2060.73	4408.98	-.11	.04	4526.40
1137.	627.72	2059.45	4409.13	-.12	.02	4526.45
1150.	629.10	2063.98	4408.88	-.13	.02	4526.45
1162.	631.05	2070.37	4408.48	-.14	.03	4526.42
1175.	632.51	2075.16	4408.23	-.15	.01	4526.41
1180.	632.54	2075.26	4408.21	-.16	.01	4526.38
1185.	632.88	2076.38	4408.11	-.16	.02	4526.36
1190.	632.43	2074.90	4408.21	-.17	.03	4526.37
1195.	630.49	2068.54	4408.55	-.17	.03	4526.35
1200.	631.54	2071.98	4408.35	-.17	.03	4526.35
1205.	630.93	2069.98	4408.41	-.18	.07	4526.32
1210.	631.12	2070.60	4408.44	-.18	.07	4526.39
1215.	632.04	2073.62	4408.21	-.19	.07	4526.32
1220.	633.96	2079.92	4407.87	-.19	.04	4526.31
1225.	636.16	2087.14	4407.46	-.20	.02	4526.28
1230.	638.09	2093.47	4407.08	-.20	.03	4526.27
1235.	638.91	2096.16	4406.94	-.20	.03	4526.29
1240.	639.74	2098.88	4406.80	-.21	.07	4526.33
1250.	640.74	2102.17	4406.61	-.22	.05	4526.30
1262.	643.37	2110.79	4406.10	-.23	.04	4526.26
1275.	645.21	2116.83	4405.81	-.24	.03	4526.29
1287.	646.18	2120.01	4405.73	-.25	.03	4526.39
1300.	648.48	2127.56	4405.28	-.26	.02	4526.35
1325.	650.09	2132.84	4405.05	-.28	.02	4526.40
1350.	652.69	2141.37	4404.55	-.30	.02	4526.36
1375.	653.46	2143.90	4404.45	-.32	.02	4526.39
1400.	652.69	2141.37	4404.62	-.34	.02	4526.39

GRAVITY DATA LISTINGS

LINE 64+00W

DENSITY = 2.900 ELEVATION FACTOR = .187061 FOR ELEVATIONS 0.- 10000. METRES

STATION COORD	ELEV(M)	ELEV(FT)	OBS G	LAT. G	TER G	CB GRAV
1047.	611.42	2005.97	4412.11	-.05	.05	4526.48
1100.	623.22	2044.69	4409.76	-.09	.06	4526.31
1125.	628.07	2060.60	4408.83	-.11	.06	4526.27
1150.	632.31	2074.51	4408.06	-.13	.04	4526.25
1175.	635.15	2083.83	4407.58	-.15	.03	4526.27
1200.	640.28	2100.66	4406.50	-.17	.04	4526.14
1212.	642.38	2107.55	4406.14	-.18	.03	4526.15
1225.	642.92	2109.32	4406.04	-.20	.02	4526.13
1230.	643.16	2110.10	4406.02	-.20	.01	4526.14
1235.	643.52	2111.29	4405.94	-.20	.02	4526.14
1240.	643.89	2112.50	4405.91	-.21	.02	4526.17
1245.	644.58	2114.76	4405.75	-.21	.02	4526.14
1250.	645.32	2117.19	4405.64	-.22	.03	4526.16
1255.	646.15	2119.92	4405.52	-.22	.03	4526.20
1260.	647.11	2123.06	4405.29	-.22	.03	4526.15
1265.	647.86	2125.53	4405.18	-.23	.02	4526.16
1270.	648.68	2128.22	4405.03	-.23	.03	4526.17
1275.	649.08	2129.53	4404.97	-.24	.02	4526.17
1280.	650.22	2133.27	4404.75	-.24	.02	4526.16
1285.	651.53	2137.57	4404.48	-.24	.02	4526.14
1290.	652.40	2140.42	4404.31	-.25	.02	4526.12
1300.	653.56	2144.23	4404.13	-.26	.02	4526.15
1312.	654.69	2147.93	4403.92	-.27	.02	4526.14
1325.	655.23	2149.70	4403.89	-.28	.01	4526.19
1350.	658.24	2159.58	4403.35	-.30	.02	4526.20
1375.	661.52	2170.34	4402.76	-.32	.02	4526.20
1400.	662.02	2171.98	4402.74	-.34	.01	4526.25
1450.	665.06	2181.96	4402.18	-.38	.04	4526.25
1500.	670.16	2198.69	4401.19	-.42	.03	4526.16
1550.	675.05	2214.73	4400.26	-.46	.04	4526.12