2099

GEOPHYSICAL REPORT

Gravity Survey of SWEDE 5, 6 and 7
Mineral Claims, Hope, B.C.
Near American Creek, 49° 121° S.E.
New Westminster Mining Division

for

Kelso Exploration Ltd.
Vancouver, B. C.

by

Geo Cal Limited
West Vancouver, B. C.

August 27 & 28 and
September 11, 1969

C. B. Selmser, P. Eng.
Geophysicist

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

TO WIT:

In the Matter of KELSO EXPLORATIONS LTD. (NPL)

Geophysical Survey conducted on the SWEDE 5, 6 & 7 Mineral Claims, Hope, B.C., New Westminster Mining Division.

I, PATRICK CONNELL

of 6107 Buchanan St.,
Burnaby 2, B.C.

in the Province of British Columbia, do solemnly declare that the following was expended to carry out a Gravity Meter Survey on the Swede 5, 6 & 7 Mineral Claims, August 25 - 29, and September 11, 1969.

Wages - Aug. 25 - 29 & Sept. 11/69

Instrument Man & Survey Eng.	5 days	$ 350.00	
Rod Man	5 days	175.00	
Gravity Meter Operator	6 days	350.00	
Line Cutting (bush clearing)	3 days	75.00	
			950.00
Gravity Meter Rental		400.00	
Transit, Tripod & Rod Rental		65.00	
4 x 4 Utility Vehicle Rent		150.00	
Room & Board		169.30	
Mapping & Calc. Contour & Gravity Grids		75.00	
Geophysicist Interpreation & Reports		700.00	
Survey Materials		17.68	
Map Printing Costs		11.00	
			1587.98
Total Expenditure			$ 2,537.98

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 5th day of November, A.D.

Patrick Connell

Fees

A Commissioner for taking Affidavits within British Columbia or ~~*A Notary Public in and for the Province of British Columbia.*~~

In the Matter of

Statutory Declaration

(CANADA EVIDENCE ACT)

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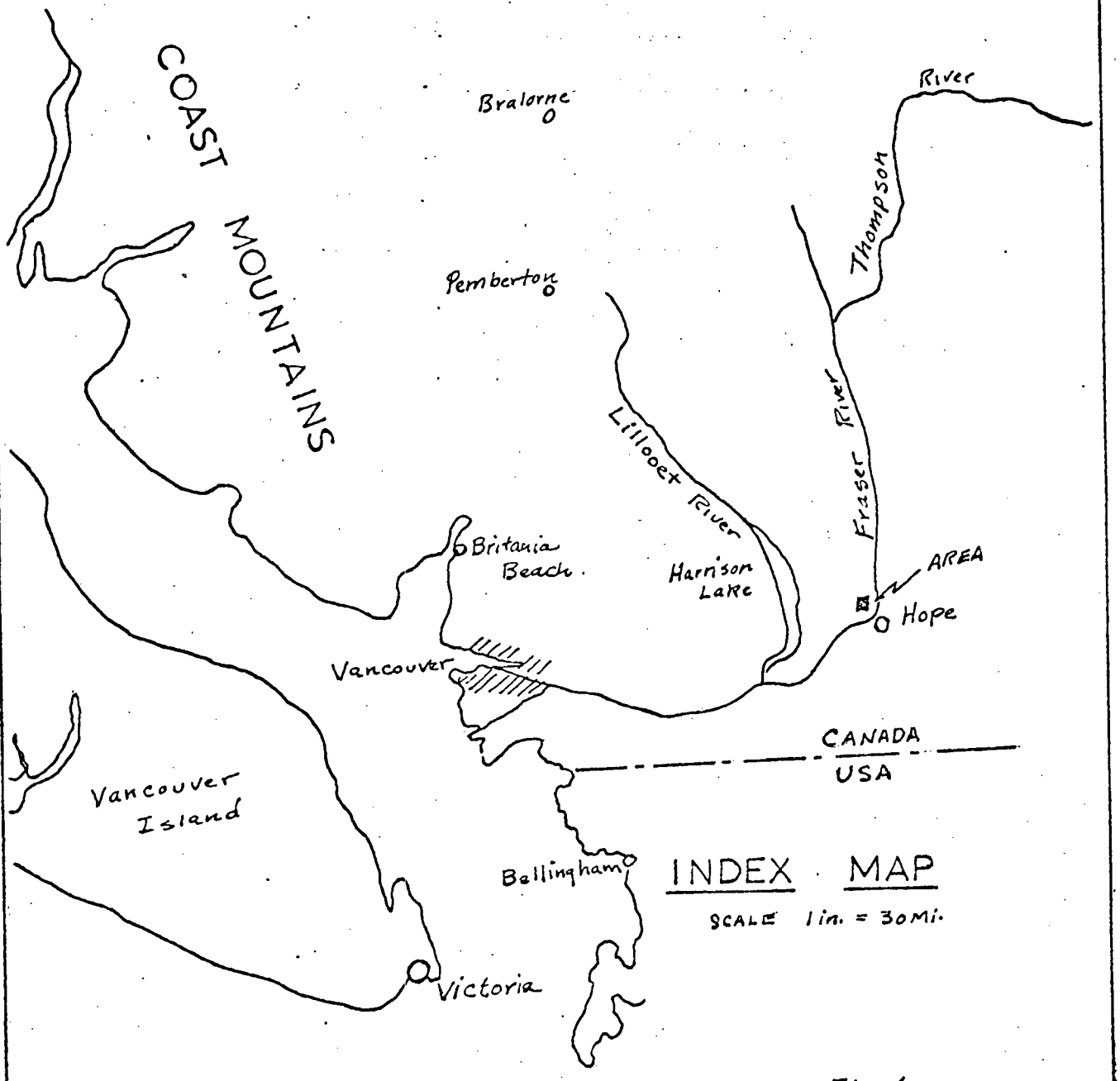
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2099 MAP #1

BRITISH COLUMBIA



INDEX MAP

SCALE 1 in. = 30 Mi.

Fig. 1

GEOPHYSICAL REPORT

Gravity Survey of SWEDE 5, 6 and 7
Mineral Claims, Hope, B. C.
Near American Creek, 49° 121° S.E.
New Westminster Mining Division

INTRODUCTION:

This area as seen on the Index Map (Fig. 1) is some 3 miles north of the town of Hope, B. C. The geographic coordinates of this area are 49° 25' north latitude and 121° 27' west longitude. Access may be had to the SWEDE 5, 6 and 7 claims by trail and lumbering road to base station B-1. These lumbering roads are connected to a gravel road up American Creek from Canadian Highway No. 1, north of Hope, B.C.

This survey was accomplished in order to discover ultra basic host rocks that would contain economic amounts of copper and nickel sulphide ore. These ultrabasic intrusives are composed mostly of the mineral olivine, which gives the rock a higher specific gravity and thus a higher Bouguer value in gravity units (G.U.).

WORK SUMMARY:

This survey was carried out over lines used formerly in a Geochemical survey. All stations have been relocated using a transit and level rod. The main part of the work was performed August 25 to 29. Due to an instrument light failure the survey was finished September 11, 1969.

This survey was done by a three man crew consisting of:

Instrument man	-	Mr. J. Sluggett
Rodman	-	Mr. K. Wile
Meter Observor	-	Mr. P. Connell

The above named men lived at the Cariboo Motel near the property. They commuted to the survey location each day using a four-wheel

drive vehicle. These men have had at least two years' experience in mining surveys of this nature.

This area although of reasonably flat terraine had been recently cut over. Since a great deal of slash was left from the lumbering operation there was great difficulty in finding suitable station set-ups. This not only delayed the survey but made it necessary to delete some of the stations which were suspect. The weather during the latter part of the survey was extremely wet..

INSTRUMENTATION:

The gravity station values were read with a Worden Gravity Meter No. XP2, which was manufactured by the Houston Technical Laboratories, Houston, Texas.

This instrument automatically compensates for normal temperature changes, which were all that were encountered in this survey. A daily diurnal record was kept of the meter, while in operation for this survey..

The elevation control was made using a Theodolite of Japanese manufacture.. Distances were measured using the stadia hairs of the instrument and a level rod. Elevations have been computed using vertical angles and a zero closure error was made to the nearest 1/10th of a foot.

SURVEY PROCEDURE AND CALCULATIONS:

The dial constant for this meter has been calculated to be 0.1202 milligal per division and readings were recorded directly from the spring compensating micrometer dial. On poor set-ups several spaced readings were taken and averaged for a finally accepted reading. This meter has been proved to give accurate operation over the past 12 years.

The base station used for hourly diurnal checks was at B-1. These checks were of minor variation and by recording them with their times were used to correct the readings to a constant datum. The base station I-4 was used as an elevation base with an elevation of 1950 feet a.s.l.

A combined Bouguer and free air correction was made using a factor of 0.600. This factor corresponds approximately to a specific gravity of 2.8 grams per cubic centimeter, which is the mean value for the rocks in this area.

GENERAL GEOLOGY:

The rocks in this area are similar to those found in the vicinity of Giant Mascot Mine. These consist of Peridotite, Hornblendite, Pyroxenite, Diorite and Granodiorite. The Peroditites, Hornblendites and Pyrexenites are ultra basic rocks with a rather high specific gravity. These rocks collectively will be referred to as basic rocks with high closures and acid rocks with low closures.

The following densities are quoted as a reference in order to relate the lithology of the survey area with the Bouguer Gravity Values. (Fig. 3.)

Handbook of Physical Constants by Francis Birch, Geological Society of America

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Rocks	Mean Density (c.g.s.units)
Quartz Diorite	2.806
Dacite	2.505
Dunite	3.289
Andesite	2.474

GEOPHYSICAL INTERPRETATION:

In order to study the terrain effect an Elevation Map (Fig.2) has been drawn. This map indicates that the lowest station elevation is at E-8. All stations have been calculated to this station as a base for this area. Since the meter was arbitrarily set at mid scale for this area there is no direct connection with the Bouguer gravity values for this area as compared with the other areas surveyed unless a base tie was made between the individual areas. However, it was not found necessary to make a terrain correction, because of the small variation of the elevation values. Also, no latitude correction has been made since the north and south variation of the station location is only 400 feet.

The Bouguer Gravity Map (Fig. 3) shows that ultra basic lithology is associated with the 500 gravity unit closure on the SWEDE 5 claim. From the maximum to minimum there is a 65 gravity unit change which would more than indicate a change from pyroxinite to granodiorite rocks. Rocks located in the vicinity of the 400 gravity unit closure in SWEDE 7 claim are most probably granitic in nature. This interpretation is in accord with experimental work carried out by Kelso Exploration Limited on the Giant Mascot Mining Property, August 23 to 25, 1969.

Values for stations J-2, H-4, H-1, E-5, M-3, M-5 and K-3 were not used in contouring the Bouguer Gravity Map. As mentioned before these values were not considered to be properly read because of the poor leveling condition.

Another maximum is partly outlined on lines K, L and M which also shows a 75 gravity unit change compared with the minimum just east

of its location. This could again mean the presence of more basic rocks at the maximum location.

CONCLUSION:

That the location of possibly ultra basic rocks exists in the vicinity of lines A, B, C and D and also at the location of lines K, L and M. That the unusually high closure involving stations C-4, and D-2, D-3, D-4 may indicate the presence of sulphide ore deposits.

RECOMMENDATION:

It is recommended that at least one test hole be spotted in the vicinity of station D-3. The hole should be drilled in a vertical position to a mean depth below ground level of 200 feet.

Respectfully submitted,

Geo Cal Limited

C. B. Selmser

C. B. Selmser, P. Eng.

CERTIFICATE OF QUALIFICATIONS

The author is a graduate of McGill University in Mining Geology with a M.Sc. degree, with graduate studies at the University of Toronto in Geophysics. He has also been qualified in both engineering geology and geophysics as a Professional Engineer.

The author has had over 20 years' experience in the fields of Geology and Geophysics. During this time he was a gravity supervisor for Texaco Exploration Company for 5 years and did gravity work for International Nickel Company as Chief Geophysicist and for Spartan Air Services as Chief Engineer in their Exploration Department.

The author has been a member of the Association of Professional Engineers of Ontario, Alberta and British Columbia for the past 15 years. He has been active in exploration in this province for the past 5 years.

His knowledge of the property outlined in this report has neen gained from geophysical surveys performed personally on this property. Reference has been also made to government reports and pertinent text books.

The author has no financial interest in this property, other than the present survey. Any remuneration received has been for expenses incurred during the survey.

C. B. Selmser

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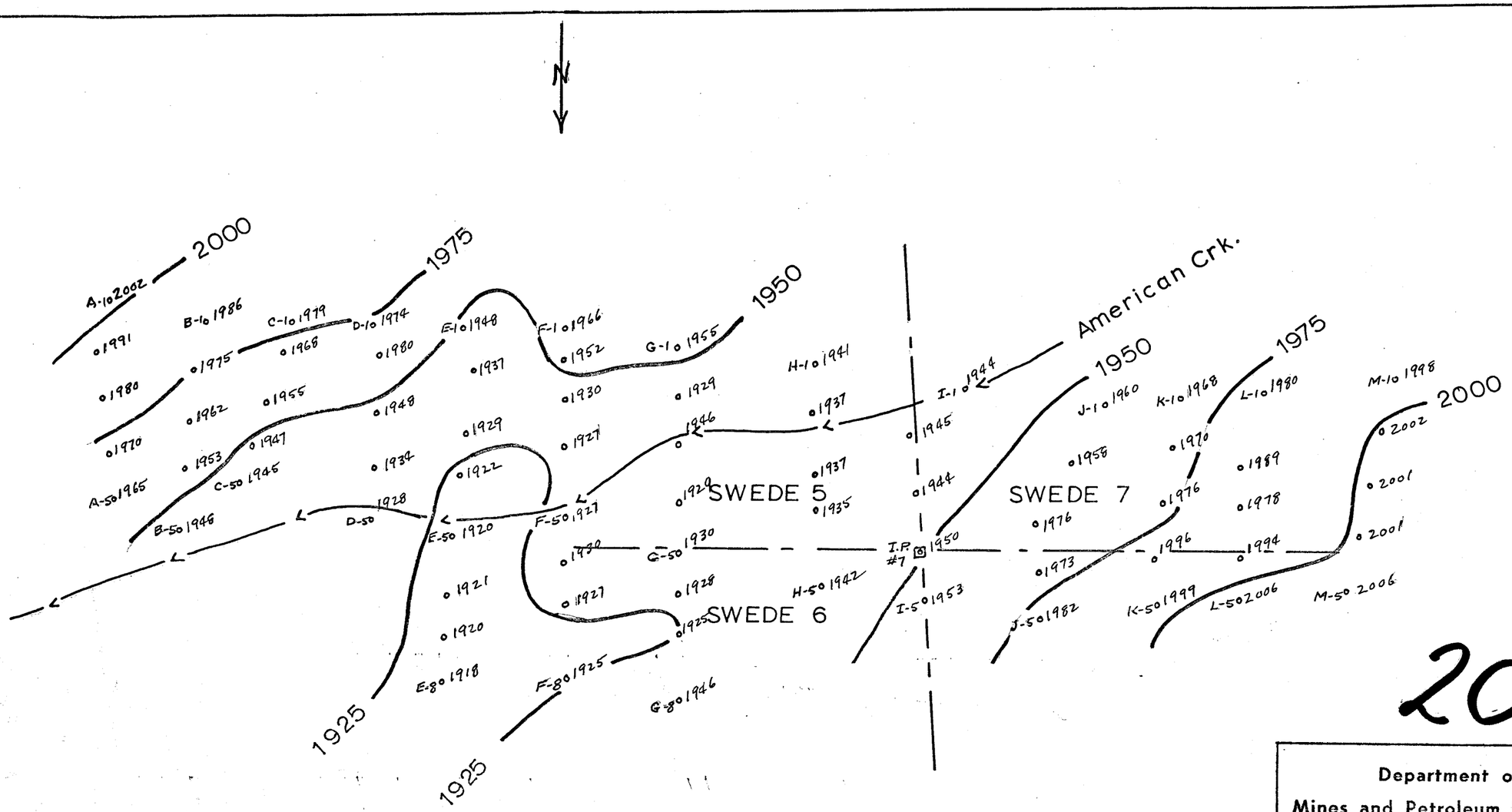

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To accompany a geophysical report by C. B. Selmser, P. Eng. on Mining claims SWEDE 5 6 & 7, American Creek, New Westminster M.D. September 25, 1969.

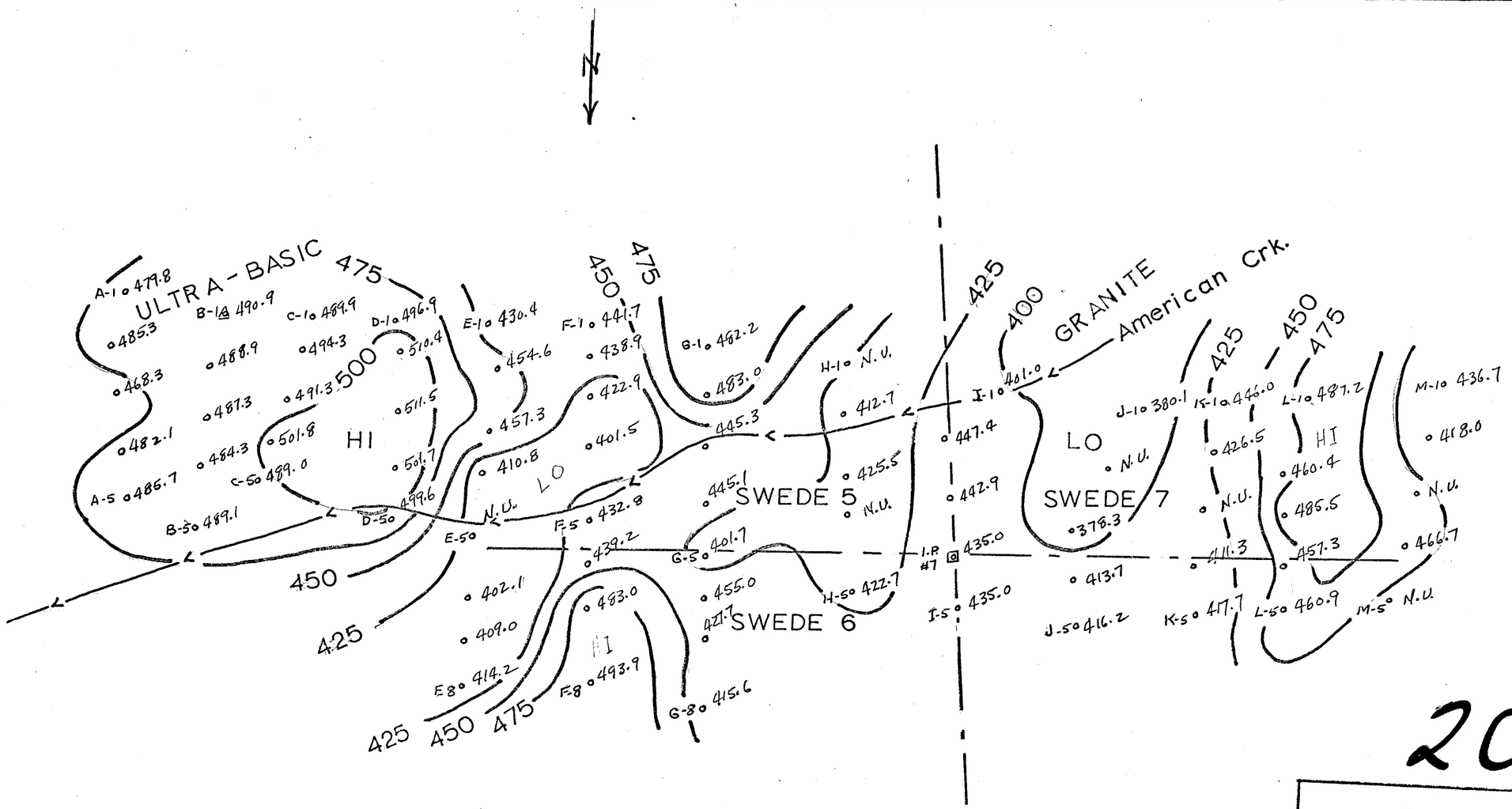
C. B. Selmser

ELEVATION MAP

KELSO EXPLORATION LTD.
SWEDE 5, 6 & 7 M.C., HOPE, B.C.
Scale: 1 in. = 100 ft. Sept. 1969
Contour interval 25 ft.

C. B. Selmser

Fig. 2



2099

To accompany a geophysical report by C. B. Selmser, P. Eng. on Mining Claims SWEDE 5 & 7, American Creek, New Westminster M.D. September 25, 1969.

C. B. Selmser

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BOUGUER GRAVITY MAP

KELSO EXPLORATION LTD.
SWEDE 5, 6 & 7 MC. HOPE, B.C.
Scale: 1 in. = 100 ft. Sept 1969
Contour interval 25 G.U.

Fig. 3