1699

RECONNAISSANCE

# MAGNETOMETRIC SURVEY REPORT

on the

BEA GROUP MINERAL CLAIMS

BEA 78 to 84, inclusive

Latitude 49°27'N.: Longitude 121°29'W.

N.T.S. 92 H/6 W.½

Owned by

KELSO EXPLORATIONS LTD. (N.P.L.)

Work done between August 3 and August 6, 1968

J. A. Mitchell, P.Eng.

November, 1968

Vancouver, B. C.

# TABLE OF CONTENTS



## ILLUSTRATIONS

# C E R T I F I C A T I O N

I, JAMES A. MITCHELL, of 2991 Mathers Avenue, West Vancouver, British Columbia, do hereby certify that:

1. A am a graduate of the University of British Columbia, 1932, and hold the Degree of Bachelor of Applied Science in Mining and have practised my profession since that time.
2. I am a registered Professional Engineer of the Province of British Columbia.
3. This report is based on a Magnetometric survey made by J. M. Ashton, B.A.Sc., in August, 1968, on the Bea 78 to 84 Group Mineral Claims.
4. I have no interest directly or indirectly in the properties or securities of Kelso Explorations Ltd. (N.P.L.), nor do I intend to hold any such interest.

J. A. Mitchell, P.Eng

Vancouver, British Columbia
November 30, 1968

## STATEMENT OF QUALIFICATIONS OF J. M. ASHTON

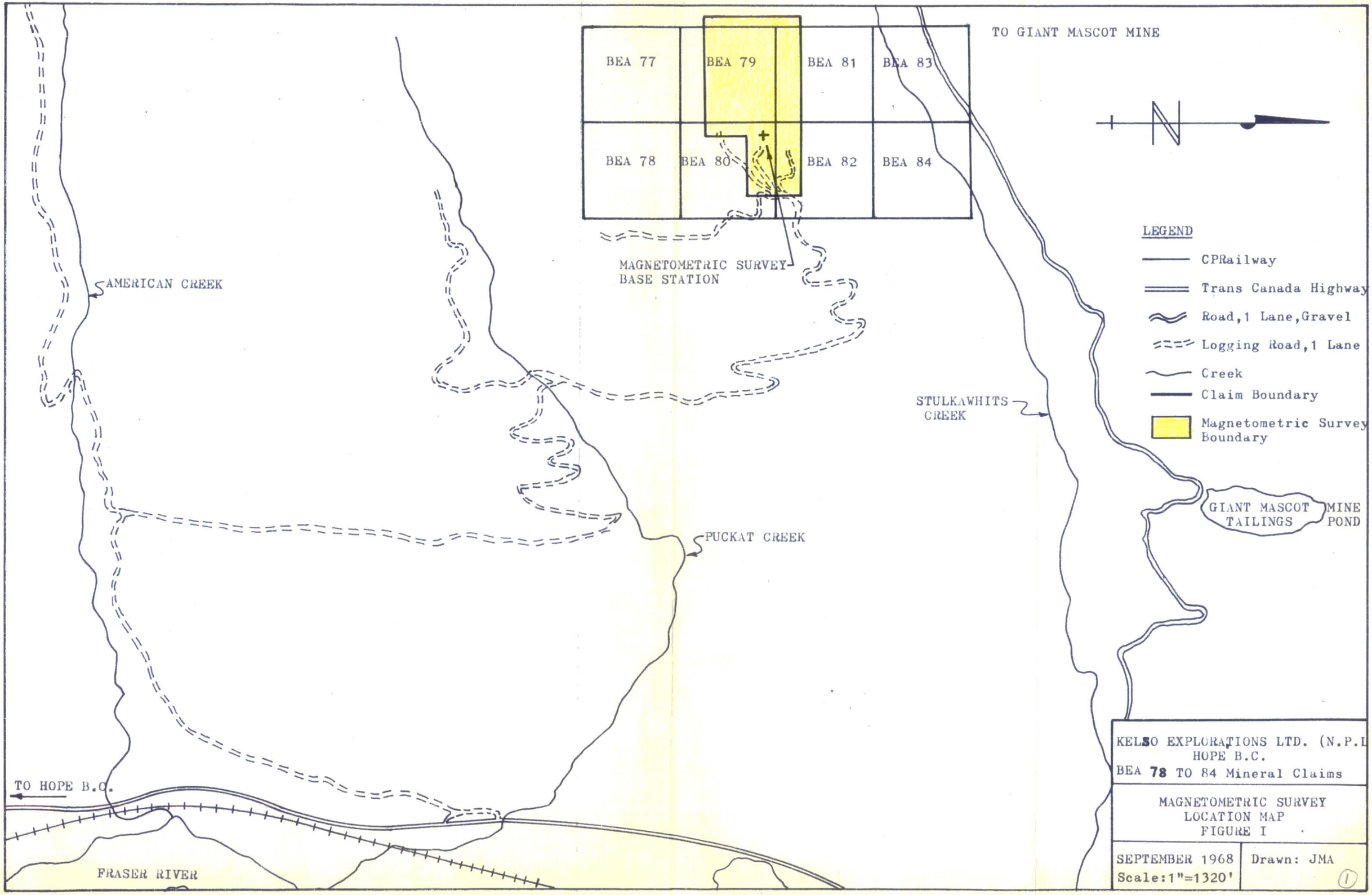
Mr. J. M. Ashton, B.A.Sc., is a graduate of the University of British Columbia, 1965, in Electrical Engineering. He is presently engaged by M. A. Thomas & Associates Ltd., Consulting Electrical Engineers.

In his undergraduate days he spent time in the summer on mineral exploration, and at present most of his spare time is devoted to this field. He shows a keen interest in geophysics and the related earth sciences and has the necessary engineering and ethical approach to his work.

He has supervised geochemical, geophysical, and geological programmes under the direction of the writer, on a much larger scale than the survey described herein, and did a thoroughly satisfactory job. The quality of his work is reflected by the maps attached herewith.

Respectfully submitted,

J. A. Mitchell, P.Eng.


BEA 77
BEA 79
BEA 81
BEA 83
BEA 78
BEA 80
BEA 82
BEA 84
TO GIANT MASCOT MINE
MAGNETOMETRIC SURVEY
BASE STATION
AMERICAN CREEK
STULKAWHITS
CREEK
PUCKAT CREEK
GIANT MASCOT
TAILINGS
MINE
POND
TO HOPE B.C.
FRASER RIVER
LEGEND
CPRailway
Trans Canada Highway
Road,1 Lane,Gravel
Logging Road,1 Lane
Creek
Claim Boundary
Magnetometric Survey
Boundary
KELSO EXPLORATIONS LTD. (N.P.L
HOPE B.C.
BEA 78 TO 84 Mineral Claims
MAGNETOMETRIC SURVEY
LOCATION MAP
FIGURE I
SEPTEMBER 1968
Scale:1"=1320'
Drawn: JMA
(1)

GENERAL STATEMENT

The reconnaisance magnetometric survey was carried out on August 3, 4, 5 and 6, 1968, on the Bea Group Mineral Claims Bea 78 to 84 inclusive by J. M. Ashton, B.A.Sc., under the direction of J. A. Mitchell, P.Eng., at the request of Kelso Explorations Ltd. (N.P.L.).

PROPERTY

The Bea Group Mineral Claims described herein are comprised of seven claims located approximately 121°29'W. longtitude, and 49°27'N. latitude. The claims adjoin the Giant Mascot Mine property on their West boundary, and form part of a larger block of claims, also owned by Kelso Explorations Ltd., on their East and South boundaries.

The property is reached by driving approximately six miles North of Hope, British Columbia, along Trans Canada Highway 1 to the American Creek logging road. The American Creek road is followed to the first turnoff to the North, 1¼ miles from the highway. From this turnoff, the property is reached by approximately 6 miles of gravel logging road which winds its way up the East side of a topographic feature which strikes approximately North 30 degrees east. Driving difficulty was encountered on some of the steeper sections where the road is partially washed away. (See Location Map - Figure I)

MINERAL CLAIMS AND OWNERSHIP

The Bea 78 to 84, inclusive, Mineral Claims are held by record by Kelso Explorations Ltd. (N.P.L.), 411-470 Granville Street, Vancouver 2, British Columbia.

The mineral claims comprising this Bea Group and their corresponding record numbers are as follows:

| Claim Names | Record Numbers |
|---|---|
| Bea 78 to Bea 84, inclusive | 14759 to 14765, inclusive |

TOPOGRAPHY

The topography is mountainous with the highest elevation on this group of claims being approximately 3,900 feet above sea level. Stulkawhits (Texas) Creek to the north and American Creek to the south flow in steep V-shaped valleys easterly to the Fraser River. The east side of this claim group slopes into a north-south valley which intersects Stulkawhits Creek to the north and American Creek to the south.

The area has been partially logged within the last three years, and there is a network of logging roads on the eastern portion of this claim group. It is these logging roads which give access to the property.

GEOLOGY

The claim area is underlain by a batholith of diorite, granodiorite and granite of early Mesozoic age. The batholithic rocks have been further intruded by a broad belt of pyroxenites and hornblendites occuring in the elongated north-south trending zones along contact zones. The ultrabasic intrusives have in turn been intruded by diorite and quartz diorite and accompanying dikes of felsite and andesite.

On the Giant Mascot Nickel Mine property to the west, nickel mineralization is found in masses of pyrrhotite (ferrimagnetic) occuring in steeply plunging pipe-like ultramafic structures up to 200 feet or more in diameter within a larger ultramafic mass.

The geology of the region is shown on Geological Survey of Canada Map 737A, Hope Sheet.

SURVEY CONTROL

A base line was established and stations were located at intervals of 100 feet using a compass and nylon chain. Lines were run parallel to the base line with control maintained by frequent cross tying to adjacent lines and stations. Lines are blazed and stations numbered in accordance with a grid co-ordinate reference. Lines are run east to west. One section of survey followed a logging road. Horizontal distance along lines was maintained by applying calculated slope corrections.

Magnetic readings were taken at intervals of 50 feet along survey lines. Over zones of interest, readings were taken on a 25 foot grid pattern. A magnetic control station was established and permanently marked at co-ordinates 3000 North, 2000 East. The control station was given an arbitrary background value of 600 gammas (1 gamma = 100 milligauss). At least three readings at spaced time intervals were made at this station during any one survey day to maintain effective diurnal control.

MAGNETOMETER SURVEY

A Sharpe Model MF-1 Fluxgate Vertical Component Magnetometer, Serial No. 705285 was used throughout the survey.

Magnetic readings were recorded at 50-foot intervals along the survey lines and corrected for diurnal variations. The corrected readings and locations are plotted as Figure II, "Magnetometric Survey of Bea Group Mineral Claims. (Map pocket) 326 magnetic readings were recorded. Arithmetic analyses showed the following:

| | |
|---|---|
| Arithmetic Mean | 638 gammas |
| Maximum reading | 1440 gammas |
| Minimum reading | 170 gammas |

Values above 900 gammas are considered anomalous. (See Figure 3, "Histogram of Magnetic Readings") One magnetic anomaly which was detailed on a 25-foot grid spacing was found.

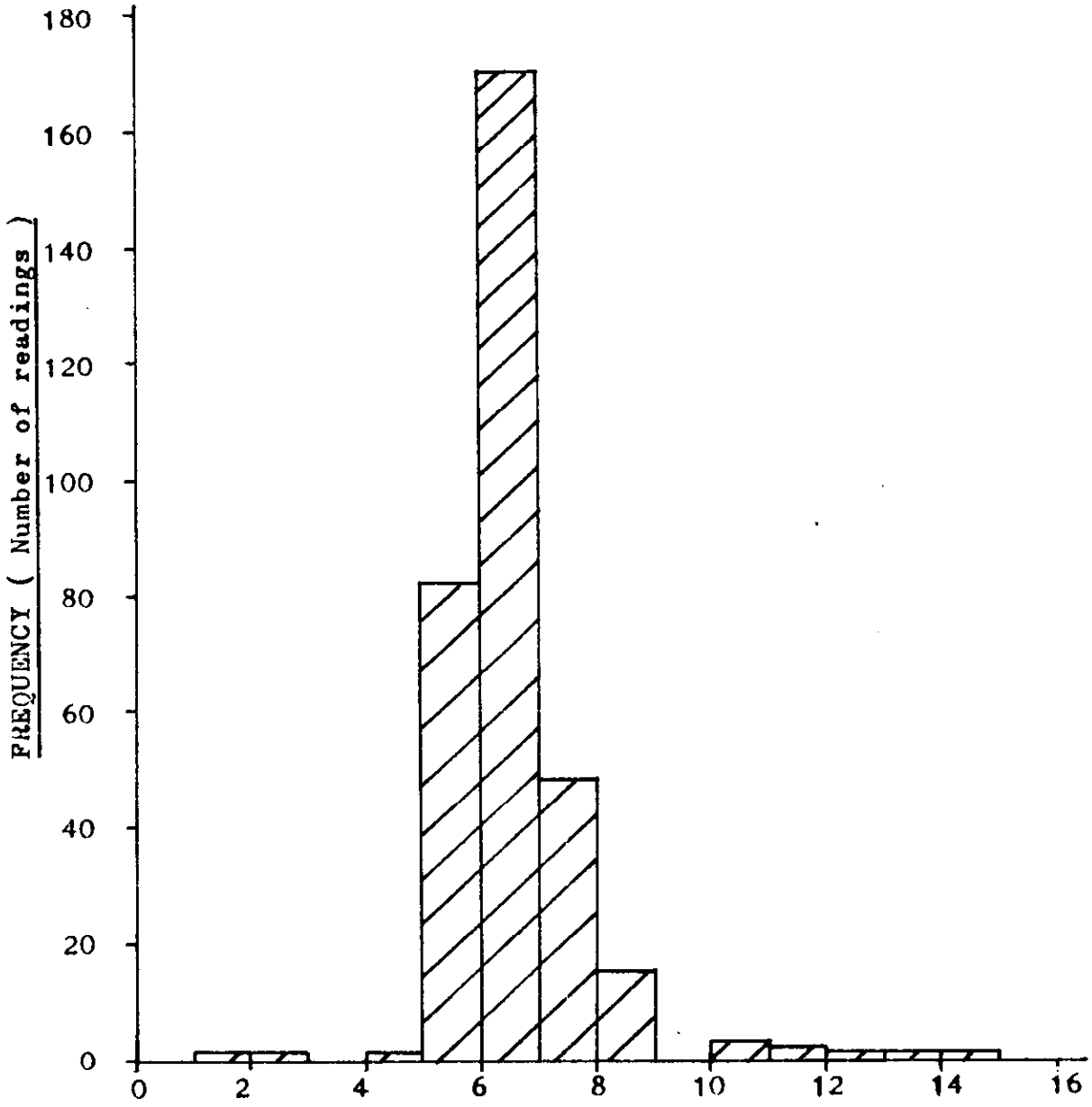
The anomaly is designated as Detail 1 on Drawing - Figure II, "Magnetometric Survey of Sea Group Mineral Claims". The anomaly is approximately 60 feet wide by 80 feet long and trends between 20 and 30 degrees west of north.

No other areas of interest were found.

SUMMARY AND CONCLUSIONS

One magnetic high was found during the magnetometric survey. The anomaly is approximately 60 feet wide by 80 feet long and trends north west to south east. The anomaly exhibits an oblate circular pattern which could be representative of a circular steeply plunging pipe-like body.

As this anomaly is located close to an area where circular pipe-like nickel bearing bodies have diameters of this dimension, a more detailed magnetic survey combined with an electromagnetic survey and soil geochemistry should be considered. Further successful results should be followed by diamond drilling.




KELSO EXPLORATIONS LTD. (N.P.L.)

FIGURE 3

HISTOGRAM of MAGNETIC READINGS

Date: August 25, 1968

STATEMENT OF EXPENDITURE

The Magnetometric Survey was conducted by J. M. Ashton, B.A.Sc., as recommended by J. A. Mitchell, P.Eng. A statement of expenditure is shown herewith:

| NAME | DATES | |
|---|---|---|
| J. M. Ashton | August 3, 4, 5, 6, 8 | $ 360.00 |
| L. Forrest | August 3, 4, 5, 6 | 120.00 |
| Room & Board | 8 man days @ 8.50/day | 68.00 |
| Vehicle Rental | | 82.50 |
| Magnetometer Rental | 4 days @ 10.00/day | 40.00 |
| Report and Maps | | 140.00 |
| | TOTAL | $ 810.50 |

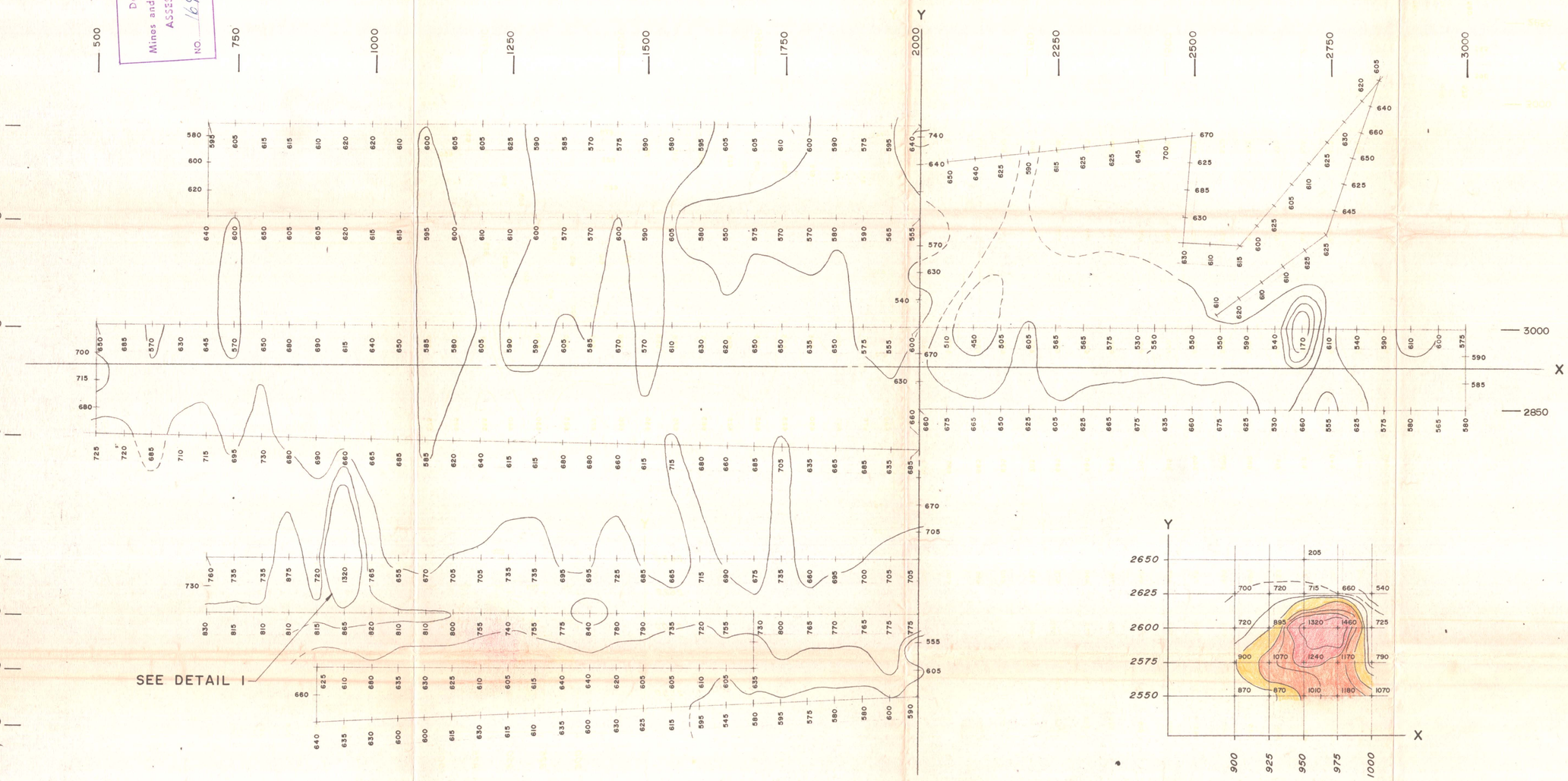
Vancouver, British Columbia
November, 1968

J. A. Mitchell, P.Eng.

## REFERENCES


Aho, A. E. 1954 - Geology and Ore Deposits of the Property of Pacific Nickel Mines Near Hope, B. C. Ph.D. Thesis, University of California

Cairnes, C. E. 1942 - Geology Map of the Hope Area, B. C. Map 737A, Geological Survey of Canada







DETAIL I

SCALE 1"=40'

LEGEND

700 MAGNETIC FIELD STRENGTH IN GAMMAS

SCALE: 0 100 200 300 400 FEET

TO ACCOMPANY THE RECONNAISSANCE MAGNETOMETRIC SURVEY REPORT ON THE BEA GROUP MINERAL CLAIMS, BEA 78 TO 84 INCLUSIVE. OWNED BY KELSO EXPLORATIONS LTD. (N.P.L.) AND SITUATED IN THE NEW WESTMINSTER MINING DIVISION BY J.A. MITCHELL, P.ENG., VANCOUVER BRITISH COLUMBIA SEPTEMBER 1968

| KELSO EXPLORATIONS LTD. (N.P.L.) | | |
|---|---|---|
| SCALE: 1" = 100' | APPROVED BY: | DRAWN BY: W.J. & J.A. |
| DATE: SEPT. 1968 | | REVISED |
| MAGNETOMETRIC SURVEY OF BEA GROUP MINERAL CLAIMS | | (2) |
| SURVEY DATE: AUGUST 3,4,5,6, 1968 | | DRAWING NUMBER FIGURE I |

1699