

4343

JAY BUTTERWORTH
MAGNETOMETER SURVEY

92H/10E

on the
NU Claim Group
Similkameen M.D.

49°35' N. 120°34' W.

Author: A. Homenuke, Geologist

P. Eng: D.C. Malcolm,

May 9th 1973

DATE of WORK: APRIL 8-27/73

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO 4343 MAP

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Part of NTS 92H/10

1" = 4 miles

JAY BUTTERWORTH

LOCATION & CLAIMS MAP

NU CLAIMS

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4343 MAP #1

NU 14	15	30	29
16	17	32	31
		34	NU 33



SUMMARY

During the month of April, 1973, Tri-con Exploration Surveys Ltd. carried out a magnetometer survey on the NU Group of mineral claims, Similkameen Mining Division, on behalf of Mr. Jay Butterworth.

The survey covered 10 line miles and showed a strong northwest trending magnetic high. From knowledge of the area and communications with associates, the author feels that this magnetic high is probably associated with an intrusive body, which in turn could be associated with copper sulfide mineralization.

The property definitely merits further exploration, especially in the form of a geological survey.

CONCLUSIONS AND RECOMMENDATIONS

A 10 line mile magnetometer survey was carried out on the NU claim group. The results of the survey indicated a strong magnetic high trending from southeast to northwest across the property. The high is probably associated with an intrusive body. Other scattered highs on the grid are thought to be structurally controlled.

As copper mineralization is known to be associated with intrusive contacts (magnetic high response), further exploratory work, especially in the form of a geological survey, is recommended.

INTRODUCTION:

During the period April 19th to April 24th, 1973, Tri-con Exploration Surveys Ltd. on behalf of Mr. Jay Butterworth carried out a ground magnetometer survey on the NU Claim Group, Similkameen Mining Division. A grid had been previously established by Messrs. Jay Butterworth and Evan Sleeman.

LOCATION AND ACCESS

The NU claims are located 11 miles north of Princeton, B.C., on the ridge between Allison and Summers Creeks. The exact location is $49^{\circ}35'$ N. Lat. and $120^{\circ}34'$ W. Long. (See Fig. 1).

The claims may be reached from the East by a dirt road leading off the pipeline road East of Highway 5. Access is also provided by a dirt road leading up from the Highway on the west side of the claims. However, at the time of the survey this road was blocked by a slide a mile short of the claim block.

PHYSICAL FEATURES

The grid is located on the ridge between Allison and Summers creeks. A series of smaller north and northwest trending ridges transect the property. Small lakes and swamps are present in depressions.

Typical vegetation is ponderosa pine - bunchgrass with spruce and fir at higher elevations. The growth is thicker with deciduous trees in depressions and shaded areas.

Snow was present over part of the grid at the time of the survey.

CLAIMS

The claims covered by the survey are owned by Jay Butterworth. They have been grouped as the NU Group and include the following:

<u>Name</u>	<u>Record No.</u>
NU 14-17	35307 - 35310
NU 29-34	35315 - 35320

The claims are shown on Fig. 1 and also on the maps of the survey, Fig. 2 and 3.

GEOLOGY:

The geology of the area is described by D.C. Malcolm, Consulting Geologist and Professional Engineer, as follows:-

"The area north of Princeton is underlain by Nicola volcanics intruded by numerous granitic rocks. It is faulted by major north to northwest striking faults and the rocks are crushed between these faults and northeast striking ones. Most of the crushed rocks are intensely altered and contain pyrite and chalcopryrite.

Some areas of these older rocks are overlain unconformably by green purple tuffs and agglomerates, by coal formations and by gravel and overburden.

Mineralization is extensive and a belt of chalcopryrite - pyrite deposits extend from north of Princeton to Aspen Grove along the contacts of grandodiorite intrusives in crushed Nicola Volcanics and diorite indtrusives.

In addition the green and purple tuffs contain stringers and disseminations of metallic chalcocite in some beds and secondary chalcocite depostis occur beneath the coal formations and areas formerly covered by these rocks".

During the magnetometer survey, outcrops of intermediate intrusives and various volcanic rocks were observed.

GRID

10 line miles of grid were established previous to the magnetometer survey by Messrs. Jay Butterworth and Evan Sleeman. The line spacing was 400 feet with a 200-foot station interval.

MAGNETOMETER SURVEY

A Sharpe MF-1 fluxgate magnetometer was used to take readings at 100-foot intervals along the grid lines. Control was established using a base station and by looping back to the base line every 1-2 hours. Sampling error was also checked at various locations over the property by taking readings at several 10-foot intervals.

Readings were taken on the 1000 and 3000 gamma scales for maximum sensitivity.

INTERPRETATION

Variations in values recorded by looping back to the baseline were not significant when related to sampling error (generally less than 30 gammas, compared to as much as 100-gamma variation over a 10-foot interval) so in most cases a correction was not made for diurnal variation.

A constant of 2000 gammas was added to the field data to eliminate negative values for contouring. Values ranged from 870 to 4990 gammas (on the adjusted data) and were contoured at 200-gamma intervals. The results of this interpretation are shown on the Isomagnetic Plan (Fig. 2).

A cumulative frequency distribution was done on the data to indicate the levels of magnetic response. The graph of this distribution and the areas covered by the different intensities are shown on the General Interpretation Map (Fig. 3). Magnetic linears are also shown on this map.

DISCUSSION OF RESULTS

The major magnetic feature is a high trending from southeast to northwest across the property. The trend includes several small anomalous highs which strike north to northeast and is broken up by areas of lower magnetic values which also strike northeast. There are several other scattered smaller highs and lows over the grid, especially in the northeast.

From communications with associates who have done much work in the region, the author feels that the major trend is probably associated with an intrusive. And, as sulfide mineralization is known to be associated with intrusive bodies and contacts, the claim group definitely warrants further exploration.

The other scattered highs are probably associated with structures but this and the previous hypothesis will have to be investigated through geological mapping.

Respectfully Submitted
Tri-con Exploration Surveys Ltd.



A.M. Homenuke,
Geologist

A P P E N D I X I
Instrument Specifications

MAGNETOMETER

- A. Instrument
 - (a) Type - Fluxgate
 - (b) Make - Scintrex MF-1
- B. Specifications
 - (a) Measurement - Vertical Magnetic Field
 - (b) Range - $\pm 100K$ gammas in 5 ranges
 - (c) Sensitivity - Maximum 20 gammas per scale division
 - (d) Accuracy - ± 10 gammas
- C. Survey Procedures
 - (a) Method - ground survey with base station recorder
 - (b) Corrections - (i) Base
 - (ii) Diurnal
 - (iii) Addition of constant to eliminate negative values for contouring
 - (c) Station relationship - each station read for intensity of vertical magnetic field

APPENDIX II

CERTIFICATES:

1. A. Homenuke, Geologist
2. D.C. Malcolm, P. Eng.

1. STATEMENT OF OPERATOR'S QUALIFICATIONS

I, Alexander M. Homenuke, DO HEREBY CERTIFY:

- That I am a graduate in Mining Technology from the British Columbia Institute of Technology.
- That I have further studied Geological Engineering at the Colorado School of Mines.
- That I have been employed by Tri-con Exploration Surveys Ltd. since June of 1969 in mineral exploration as a geochemical, geological and geophysical operator.
- That I am presently employed by Tri-con Exploration Surveys Ltd. in the capacity of Geologist.

DATED at Vancouver, British Columbia this 9th day of May 1973

TRI-CON EXPLORATION SURVEYS LTD.



A.M. Homenuke,
Geologist

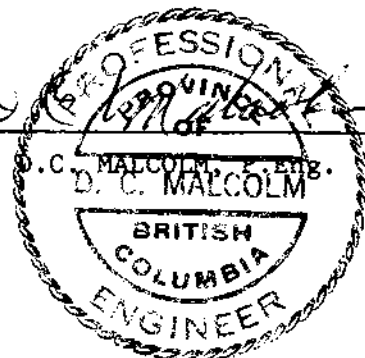


2. CERTIFICATE

This is to certify that:

1. I, DOUGLAS C. MALCOLM a resident of Vancouver, B.C., and live at 2290 West 23rd Avenue.
2. I am a graduate of the University of British Columbia with the degree of Bachelor of Applied Science in Geological Engineering (1935).
3. I am a member of the Association of Professional Engineers of British Columbia and Ontario and have practised my profession continuously since graduation.
4. I have not, directly or indirectly, received or expect to receive, any interest, direct or indirect, in the property of AALENIAN RESOURCES LTD., or of any affiliate; or beneficially own, directly or indirectly, any securities of the company or of any affiliate.
5. I have reviewed a report dated MAY 9th, 1973, based on work conducted by TRI-CON EXPLORATION SURVEYS LTD. This work was conducted during the month of April 1973.

DATED this 19th day of MAY, 1973



DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

In the Matter of *GEOPHYSICAL SURVEY*

To Wit:

LINE CUTTING

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. **4343** MAP

I, J. Butterworth
4727 Wesley Drive,
Delta, B. C.

of

in the Province of British Columbia, do solemnly declare that The following is the true cost of survey:

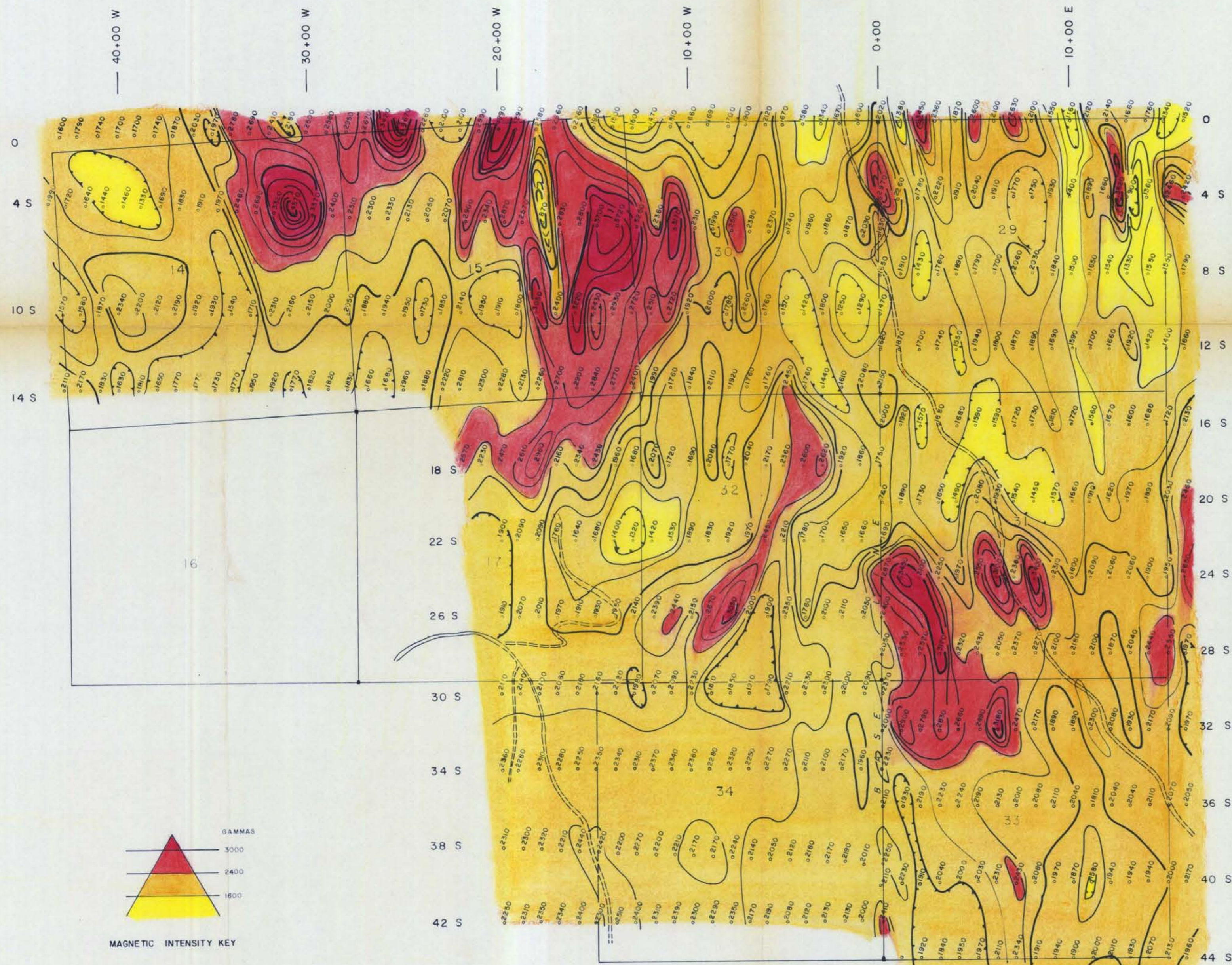
<u>NAME</u>	<u>DATE OF WORK</u>	<u>MAN DAYS</u>	<u>COST/DAY</u>	<u>TOTAL</u>
A. Homenuke	April 24-27/73.	4	75	\$ 300.00
J. Butterworth	April 8-12/73.	5	50	250.00
E. Sleeman	April 8-12/73.	5	50	250.00
Administration -----				300.00
Food & Accomodation @ \$20.00/Day @ 14 Days -----				280.00
Vehicle @ \$15.00/Day + 10¢ / mile @ 5 Days -----				135.00
Instrument Rental: -----				
2 Magnetometers & 1 Chart Recorder @ \$35.00/Day @ 4 Days				140.00
Report & Maps -----				550.00
Secretarial -----				50.00
			TOTAL	\$2,055.00

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 *27*
day of *April* *1973*, A.D.

J. Butterworth

Jill Suran
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.
Sub-mining Recorder



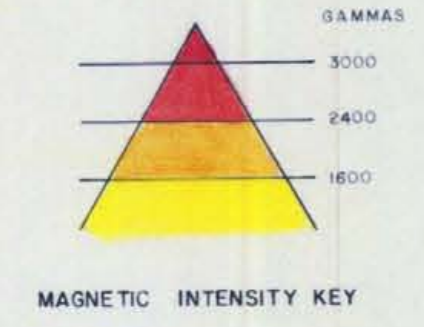
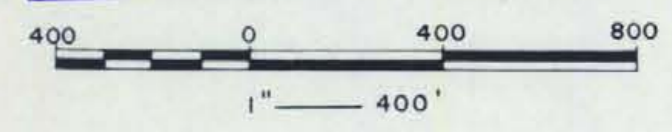
LEGEND

- Claim post + boundaries
- Road
- Survey station + magnetic value (in gammas)
- MAGNETIC CONTOUR**
- 1000 gamma intervals
- 200 " "
- Magnetic depression

4343 M2

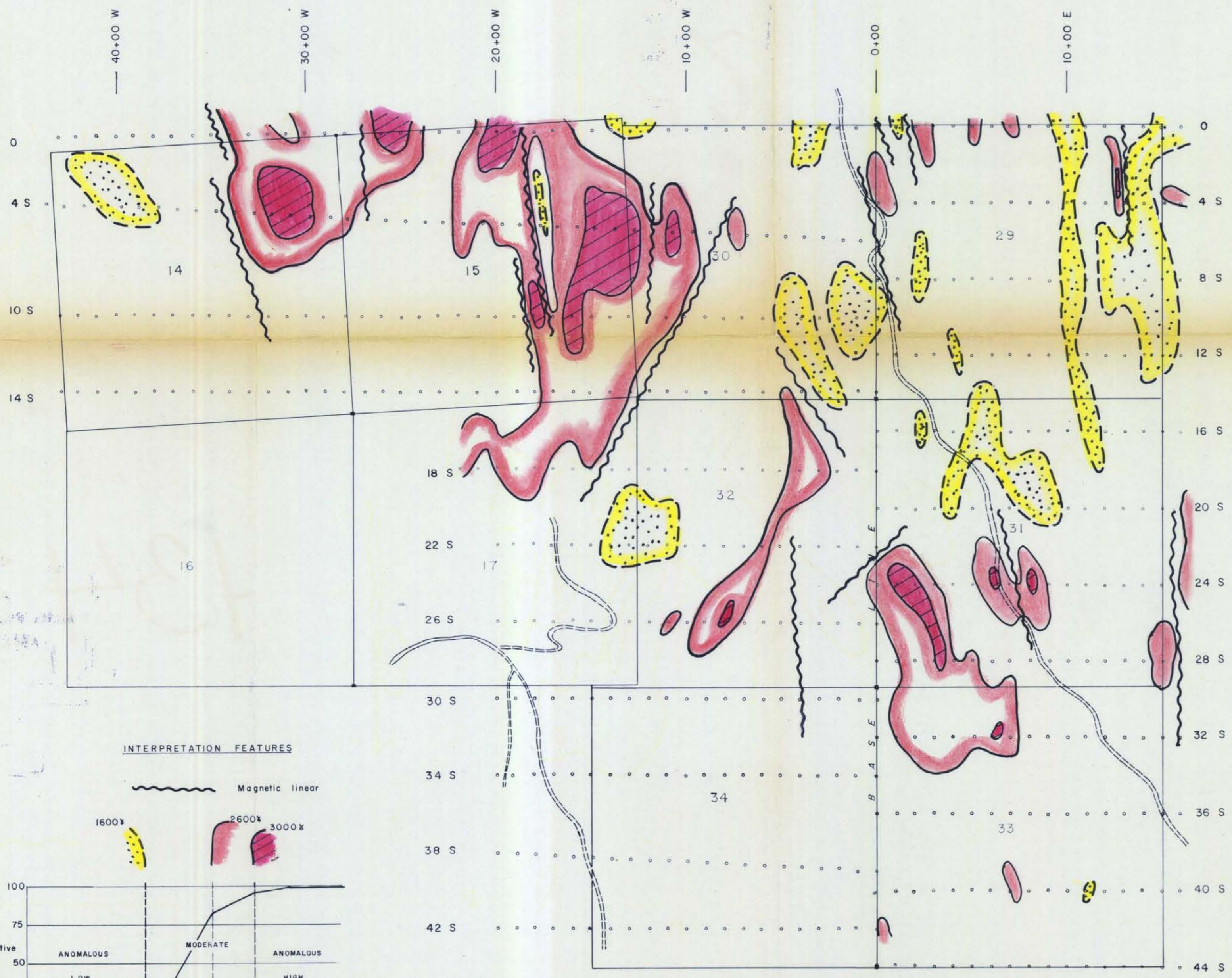
INSTRUMENT - SHARPE MF-1 Fluxgate Magnetometer

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4343 MAP #2



JAY BUTTERWORTH NU CLAIMS 14-17, 29-34 SIMILKAMEEN MINING DIVISION B.C.	
MAGNETOMETER SURVEY ISOMAGNETIC PLAN	
INTERPRETED by: A. HOMENUKE	
DRAFTED by: A.M.H.	
CHECKED by:	
PROJECT No. 7304	
FILE D-10	
DATE APRIL 1973	REVISED

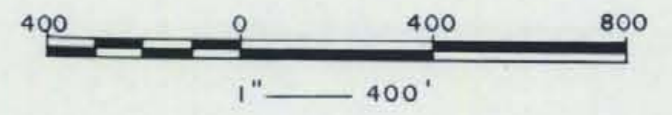
To accompany Geophysical report on the Nu Claims
Similkameen M.D., B.C.
by A. Homenuke, Geologist *A. Homenuke*
dated May 9/73



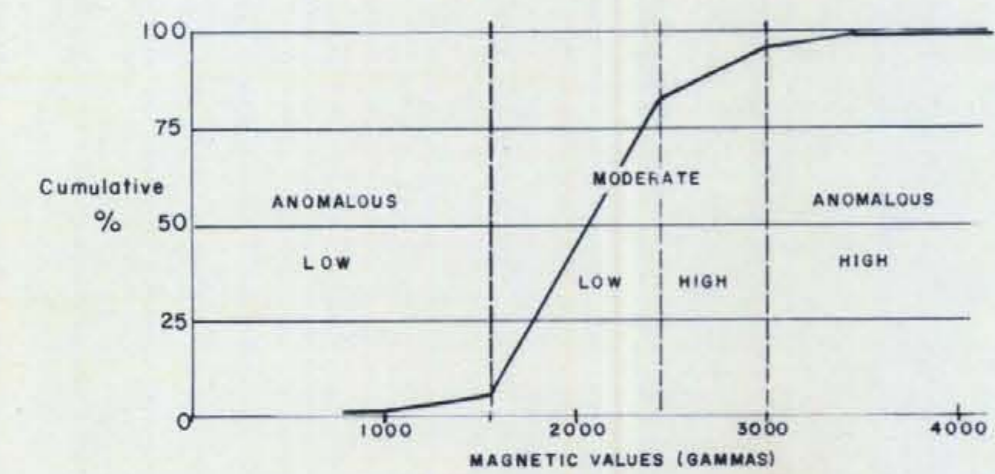
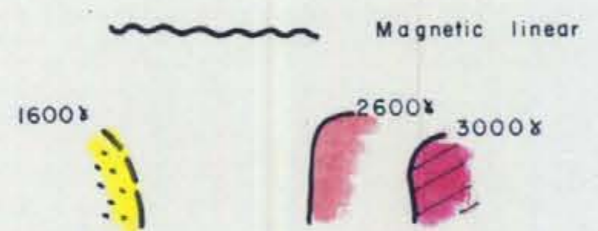
LEGEND

- CLAIM POST & BOUNDARIES
- ROAD
- SURVEY STATIONS

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **4343** MAP #3



INTERPRETATION FEATURES



CUMULATIVE FREQUENCY DISTRIBUTION OF MAGNETIC DATA

To accompany Geophysical report on the Nu Claims
Similkameen M.D., B.C.
by A. Homenuke, Geologist *A. Homenuke*
dated *May 9/73*

JAY BUTTERWORTH NU CLAIMS 14-17, 29-34 SIMILKAMEEN MINING DIVISION B.C.			
MAGNETOMETER SURVEY GENERAL INTERPRETATION MAP			
EXPLORATION SURVEYS LTD.		INTERPRETED by: A. HOMENUKE	
DRAFTED by: A.M.H.		CHECKED by:	
DATE: APRIL 1973		REVISION:	
PROJECT No. 7304		FILE: D-10	