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Α

REPORT

on the

MAGNETOMETRIC SURVEY

on the

923/16E

JAM 16 CLAIM

LOUIS CREEK AREA

KAMLOOPS MINING DIVISION

for

** RAMCO INDUSTRIES LIMITED

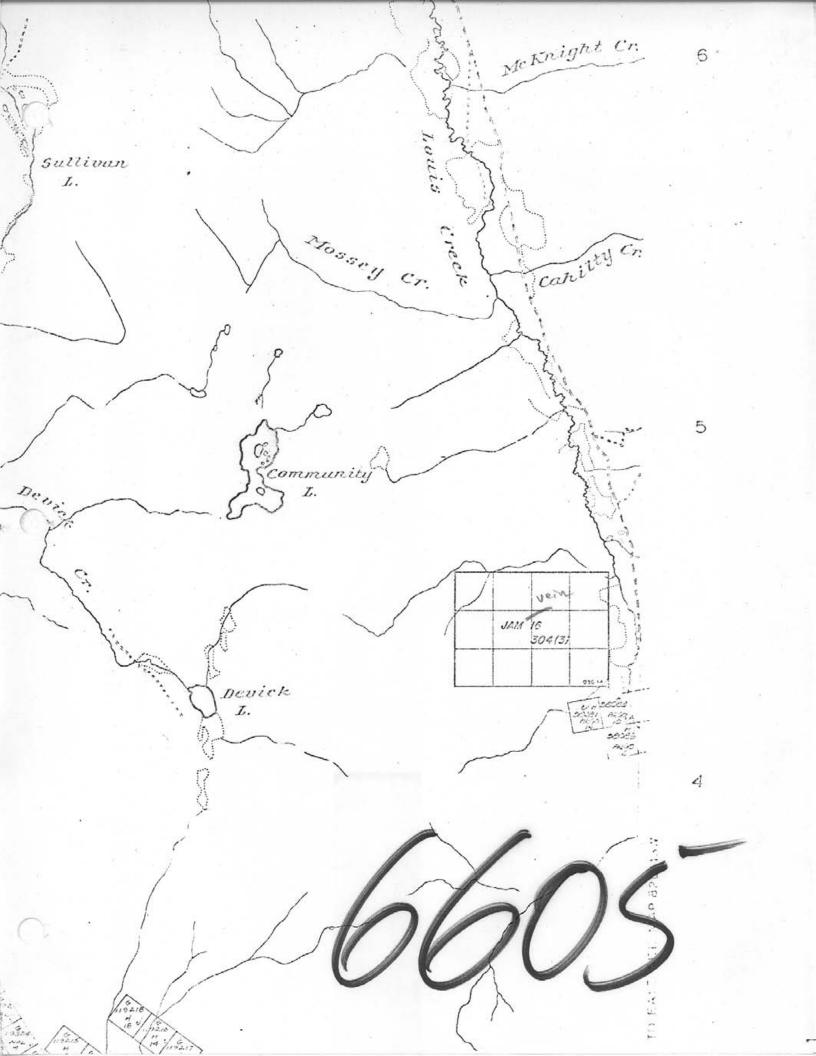
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C.T. PASIEKA, P.ENG.

April 24, 1977

MINERAL RESOURCES MANCH ASSESSMENT RAPORT

MAP NO.



SUMMARY

During the month of March, 1977 a magnetometric survey was completed over the east half of the Jam 16 claim. Louis Creek area, Kamloops Mining Division, Province of British Columbia. Three areas of interest were indicated within the area surveyed and it is recommended that the exploration programme be continued to determine the positive factors of the magnetic anomolies as a part of the over-all search for metallic minerals. The previously recommended programme entailing soil sampling, geological mapping and electromagnetic survey should be carried out as soon as weather conditions permit. To be followed in turn by the subsurface sampling by means of diamond drilling. The various methods to be used in the course of the exploration programme are contingent upon one another so that various phases of the programme may be either expanded or limited as conditions Since chalcopyrite has already been observed on the property the geological environment for finding additional cupriferous mineralization is a favourable one.

The recommended continuing exploration programme to include geological mapping, electromagnetic survey and geochemical soil sampling followed by a diamond drilling programme would entail the expenditure of some \$37,380.00.

PROPERTY

The property under discussion consists of the Jam 16 Claim comprised of twelve units situated on the northwest valley slope of Louis Creek. The property is within the Kamloops Mining Division, Province of British Columbia.

LOCATION AND ACCESS

Access to the property is readily available via the Yellowhead Highway following the North Thompson River valley from Kamloops to Louis Creek and thence by secondary road following Louis Creek itself. From Louis Creek Road a logging road extends through the property in a series of switch-backs suitable for normal vehicular traffic, at least in dry weather. The claim group occurs within the limits of Reference Sheet 92-I-16-East and would have the co-ordinates 51-120 SE. The property occurs some ten miles due west of the village of Vinsulla on the Yellowhead Highway 50 miles north of the city of Kamloops, B. C.

TOPAGRAPHY AND VEGETATION

The Jam 16 Claim occupies a portion of the west valley slope of Louis Creek with elevations varying from 2500 feet to 4000 feet ASL. Slopes are generally moderate to steep with rapid drainage in an easterly direction. The surface is generally forest covered with commercial to subcommercial fir, pine and birch with intermittant areas of sub-alpine meadow. Supplies of water for exploration purposes are generally available through several freshets and minor creeks draining into Louis Creek at the bottom of the valley. The area has been selectively logged in the past, however, timber for mining and construction purposes is still available in the area.

HISTORY

The early history of the property and the surrounding area is not well known, however, some placer activity is documented around the turn of the century, especially in areas down stream from Louis Creek. A small adit and pit were observed on the property exposing a two foot quartz vein and it is assumed that this activity was related to the search for gold. The condition of the showings suggest that they are thirty years plus in age. In more recent years the area has

HISTORY - CONT -

experienced some exploration activity of a reconnaissance nature in the search for base metals. Some eight miles to the west Kamad Silver Limited has recently carried out extensive underground development in preparation for production from an ore body containing silver, lead, zinc and minor copper. Further, an attempt is to be made to produce a high quality barite product derived from the gangue minerals.

GEOLOGY

In the lower areas, ie. to the east, rock exposure available for observation is generally poor and improves to the west as the elevation increases. Facies observed include meta-sediments consisting of quartzite, quartz latite, argelite, and limestone thought to be Triassic in age. Some volcanic members were observed, however, their juxta position in the series is as yet unknown. The beds of meta-sediments are highly disturbed but tend to strike north westerly.

The Louis Creek valley immediately to the east of the property striking NNW is thought to be an expression of a major fault system and offers evidence of a sympathetic joint system, observed on the property striking NNW and ENE. This primace is supported by the recently carried out magnetic survey. The set of joints running normal to the Louis Creek depression are frequently quartz filled and probably owe their origin to the Louis Creek fault in that they appear to be part of the sympathetic joint system.

MINERALIZATION

Mineralization in the form of knots and blebs of sulphides, ie. pyrite and chalcopyrite carried in a quartz vein varying in thickness from a few inches to several feet has been observed in the central area of the property with co-ordinates 8 + 50 N on line 27 + 00 W. Sampling of this mineralization in the past has yielded assays of 4.0% copper, and 2.18 ounces of silver per ton. These samples were selected and don't necessarily represent the tenor of the mineralization. These quartz lenses strike ENE and have been traced for a few hundred feet in length where conditions of over-burden permit.

MAGNETOMETRIC SURVEY

During the early part of March, 1977 an exploration programme consisting of line cutting and magnetometric survey was carried out over the east half of the Jam 16 claim. grid was laid out using a line interval of 300 feet with 100 foot stations established with a total of some 13.2 miles of grid laid out (22 kilometers). Some 8.04 miles of line was read with the magnetometer (13.4 kilometers). Instrumentation used during the course of the survey consisted of Sharp MF-2 fluxgate magnetometers. This instrument is reported to have a sensitivity of 2.5 gammas plus or minus on the 1,000 gamma One instrument was used on the line and the second instrument was permanently set up as a base station and read every half hour so as to catalogue the diurnal variation. The daily diurnal curves plotted from the base station were then used to correct the field readings. No attempt was made to present the data in absolute form so that the readings as presented are relative only to the base station. The data is presented in the form of contours and profiles. Unseasonal weather forced interruption of the survey in that the repeated thawing and freezing made walking the lines quite hazardous.

DISCUSSION OF RESULTS

The arithmetic average of the readings taken over the east half of the property was 120.68 gammas. With the exeption of correcting for diurnal variation, no exotic mathematical treatment of the results is offered. The readings as presented represent the vertical component of the magnetic field.

Two interesting dipoles stand out in the area covered by the survey. The first, and apparently simpler expression, occurs on line 0 + 00 10 + 00 S. A field check has not as yet been made, however, the magnetic expression is thought to owe its origin to a small intrusive dike of fairly high magnetic susceptibility.

The second dipole structure indicated by the survey is a more complex one and is centered about the area $9+00\,\mathrm{N}$ on line $15+00\,\mathrm{W}$. This is a complex structure and probably reflects the intersection of several strong linears caused by faulting with or without the introduction of material of high magnetic susceptibility. The strongly linear outline of the profile through the point $4+00\,\mathrm{N}$ on line $12+00\,\mathrm{W}$ is crudely synchronous with the direction of jointing and faulting observed on the property. In the absence of critical geological information final interpretation of this structure will necessarily be delayed until such information becomes available.

DISCUSSION OF RESULTS - CONT -

An interesting situation exists on line 24+00~W at the point 8+00~N in that this is on strike with the mineralized quartz vein observed on the property and will require field editing as soon as conditions permit.

CONCLUSIONS AND RECOMMENDATIONS

The recently completed magnetic survey over the east half of the Jam 16 claim indicates three magnetic structures worthy of further investigation. Previous observations carried out over the property indicate the presence of sulphide mineralization in quartz veins which have in turn yielded significant copper content. In view of the above it is recommended that the magnetometric survey be extended to cover the remainder of the property and that the previously recommended exploration programme, including soil sampling, geological mapping and electromagnetic survey be carried out over the area of the property. Estimated costs for carrying out the recommended programme are as follows:

1.	Soil Sampling 700 samples @ \$2.50 per sample	\$	1,750.00
2.	Geological Mapping 12 units @ \$150.00 per unit		1,300.00
3.	Electromagnetic Survey 12 miles @ \$175.00 per mile		2,100.00
4.	Consulting Reports and Supervision		2,000.00
5.	Travel and Field Supplies		1,500.00
6.	Contingency at 20%		1,830.00
	TOTAL PHASE 1	\$_	10,980.00

Contingent upon the results of the surface investigations, areas of particular interest would be sampled at depth by means of diamond drilling. The diamond drilling programme would entail the following estimated costs:

1. 1500' of B.Q. Wireline Diamond Drilling @ \$12.00 per foot	\$ 18,000.00
2. Sampling and Assaying	1,000.00
3. Consulting and Supervision	2,000.00

CONCLUSIONS AND RECOMMENDATIONS - CONT -

4. Accomodation, Travel & Supplies \$ 1,000.00 5. Contingency @ 20% TOTAL PHASE 11 \$ 26,400.00

Total Phase 1 and Phase 11

\$ 37,380.00

Completion of the above programme would then facilitate an up to date economic assessment of the property.

Respectfully submitted,

C.T. Pasieka, P.Eng.

CERTIFICATION

- I, Clemens Terence Pasieka, of the City of Kamloops, Province of British Columbia, hereby certify that:
- 1. I am a geologist and reside at 138 Saint Paul Street, Kamloops, B. C.
- 2. That I am a graduate of University College, Dublin, B.Sc. 1963.
- That I have been practicing my profession as a geologist for twelve years.
- 4. That I am a member of the Associations of Professional Engineers of Alberta, Saskatchewan, and British Columbia.
- 5. That I have no interest directly or indirectly, nor do I expect to receive any direct or indirect interest in the property or the securities of Ramco Industries Limited.
- 6. That this report is based on personal knowledge of the area, data from government publications relevant to the area, and from reports of several geologists, and engineers who had worked on the property in the past.

Dated this 24th day of April, 1977, City of Vancouver, Province of British Columbia.

6. (Janika

* A MILGOPS JEEB 2 1 1978

TOTO COMMISSIONER

C.T. Pasieka, P.Eng.
138 St. Paul Street
Kamloops, B.C.
V20 2HS
February #1, 1976

I hereby cartify that the following costs were incurred by and invoiced to and paid for by Ramco industries Ltd:

Magnetometer7.8 miles @ \$80.00 per mile \$624.00

Report (C.T. Fasieka)

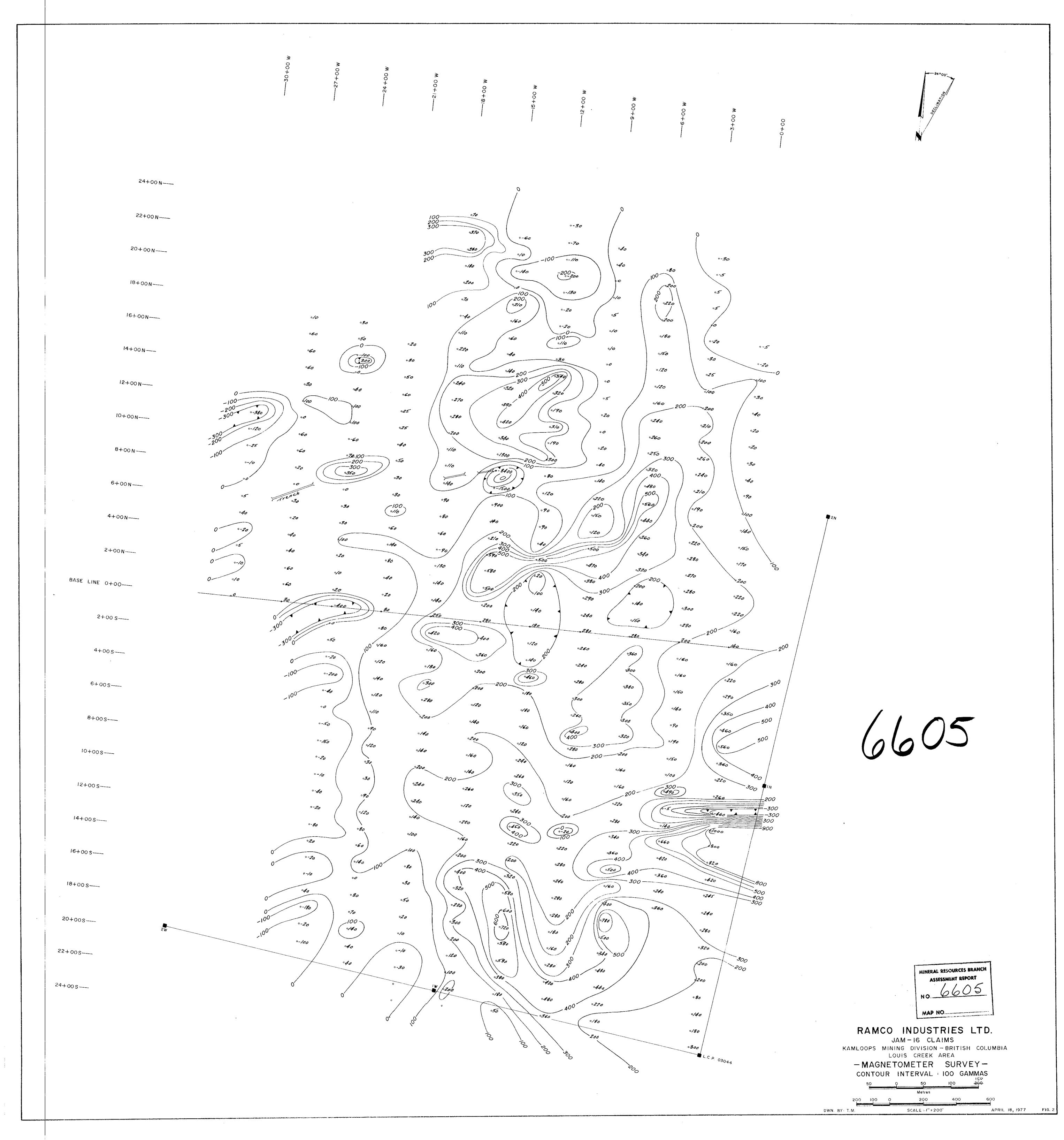
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Total

\$1329,00

This 21st day of February, 1978, in the City of Kamloops., Province of British Columbia.

C.T. Pasieka, P.Eng.



24+00 N---SS+00 N----SO + 00 N----18+00N---16+-00N---14+00 N---15+00N---10+00 N----8+00 N----64-00 N----4+00 N---S+00N-BASE LINE 0+00-2+00 S---4+00s---6+00S-8+005-10+00s-12+005-14+005---16+005-18+00 S-20+005---25+002---MINERAL RESOURCES BRANCH AUSSESMENT REPORT 24+005-MAP NO. JAM-16 CLAIMS LOUIS CREEK AREA -MAGNETOMETER PROFILES -

RAMCO INDUSTRIES LTD.

KAMLOOPS MINING DIVISION - BRITISH COLUMBIA

SCALE :- I" = 200' APRIL 18, 1977 FIG. 3 DWN. BY: T.M.