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MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES

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MAR 10 1986

SUBJECT _____

FILE _____

VANCOUVER, B.C.

GEOPHYSICAL AND GEOLOGICAL REPORT

TIGRE CLAIM

TRAIL CREEK MINING DIVISION

82 F ¹/₄ W, 4E
49 ° 3.5' N, 117 ° ~~11~~⁴⁶ W

Owner; Eric W. Godfreyson

Operator: Inland Au. - Ag. Resources Ltd.

Author: D. K. Bragg

Date: Feb. 15, 1986

FILMED

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,345

TABLE OF CONTENTS

Introduction	page I
Property location and Accessibility	page 3
Geology	page 3
Field work	page 5
Results	page 7
Conclusions	page 8
Statment of costs	page 8
Statment of qualifications	page 9
References	page IO

ILLUSTRATIONS

Index map	Fig I	page 2
Magnetometer survey	Fig. 2	In pocket
Topography & Geology	Fig 3	In pocket

INTRODUCTION

The Rossland mining camp has been one of the major gold and silver producers of British Columbia. It had its beginning in the early 1890's when some of the first claims were staked. Since then the camp has produced in excess of some five million tons of ore. Since the late 1920's little production has taken place except for leasors on some of the old properties and the production from the southern flank of Red Mountain.

It was in the Rossland camp that the Consolidated Mining and Smelting Company got the start that enabled it to become one of the worlds major producer of lead, zinc, and silver. This company is now Cominco.

Most of the early production was centered around the north and western part of the camp where the veins are predominantly copper and gold producers ie: the War Eagle, Centre Star and the Le Roi claims. However many properties satellite to the main producing area were discovered. It is on these satellite properties that most of the recent exploration work has taken place, although sporadic.

The writer has been involved in the Rossland camp since 1970 and was actively mining on the BlueBird crown grant from 1972 to 1976. Since then he has been involved in exploration on claims in what is known as the South Belt area.

The Tigre claim was recorded on Dec 8, 1983 by D. K. Bragg as agent for Eric W. Godfreyson. It was a relocation of the S D R claim.

Some geophysical and geochemical work had been done on the S D R claim between 1980 and 1982 and on the Tigre claim in 1984. The scope of the work during 1985 was to test the reproducibility of some of the previous magnetometer work and to extend the survey. Since the price of zinc had been steadily increasing we wanted to investigate the possibility of mining the ' Zinc Vein '. Since the existing road into the vein traversed through considerable swampy areas and would require considerable fill we decided to run levels into the area and plot a new road with the minimum grade. An attempt was made to start an S P survey in the vicinity of the 'Zinc Vein ' to better define the vein.

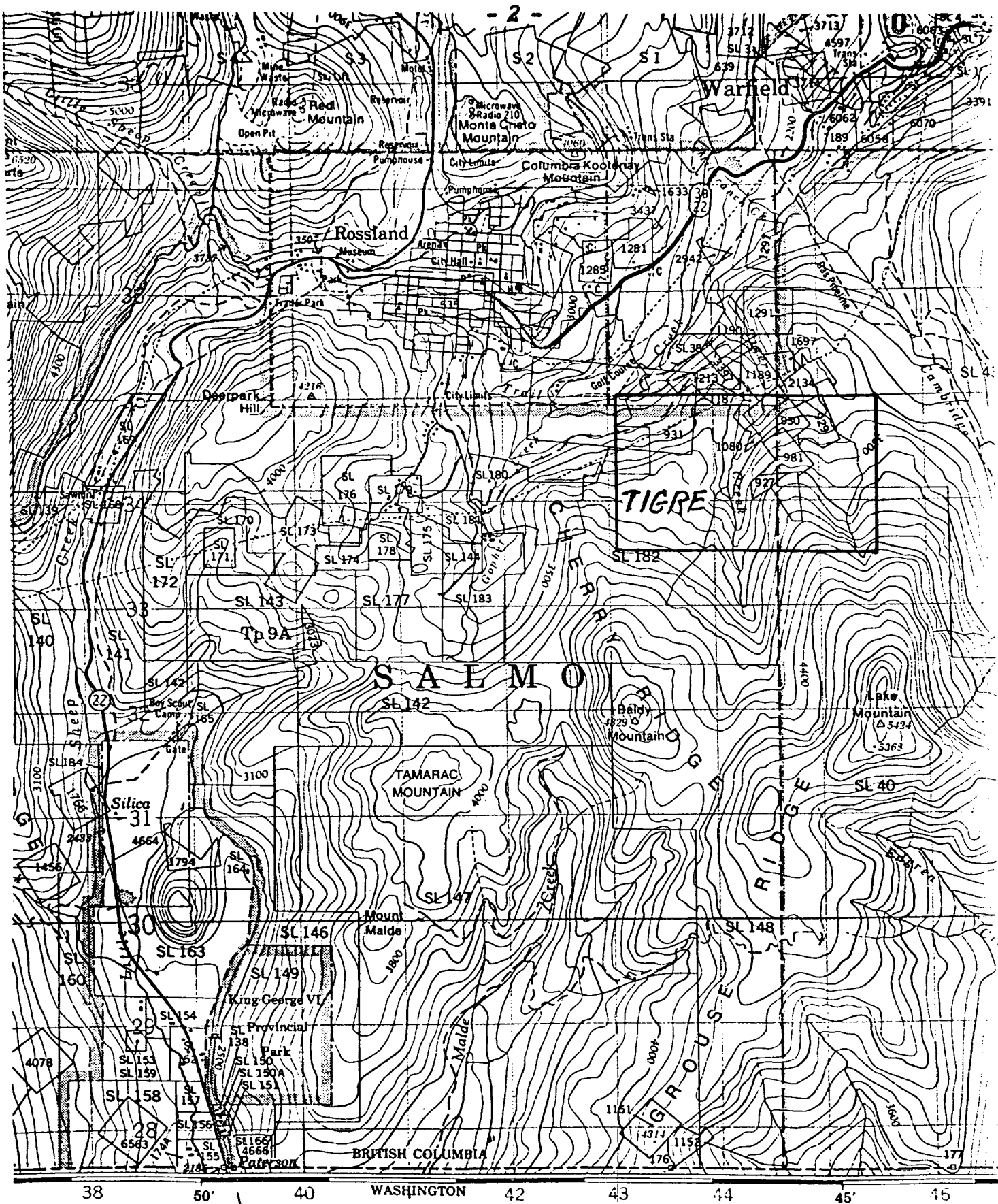
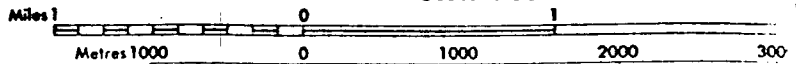


Fig. I
INDEX MAP

Location of the Tigre Claim

ROSSLAND-TRAIL
BRITISH COLUMBIA
82 F / 4
Scale 1 50 000 Échelle



PROPERTY LOCATION AND ACCESSIBILITY

The Tigre claim, centered about three kilometers south east of the City of Rossland, lies on the northern slopes of Baldy and Lake mountains to Gopher Creek. Elevations range from 800 metres to 1200 metres. Access to the north western portion of the claim is by good all weather roads from the City of Rossland or by means of the abandoned rail grade. Much of the rest of the area is only accessible by four wheel drive on old logging roads, many of which have become impassable by washouts and secondary growth. However the terrain is for the most part fairly gentle and accessible by foot.

Forest cover is mainly second growth Hemlock, larch, fir, cedar and both white and jack pine with some poplar and birch, The undergrowth is fairly open and nowhere is it impassible.

GEOLOGY

The Rossland area is underlain by sedimentary and volcanic rocks which have been intruded and metamorphosed by igneous rocks (see G S C Memoir 308 by L.W. Little).

The oldest formation is the Mount Roberts Formation (Pennsylvanian) which are sediments consisting of slates, limestones, quartzites and green stones (andesites and banded tuffs).

This in turn is overlain by the Rossland Formation (Lower Jurassic) which consists mainly of lava flows of andesitic to basaltic composition, augite porphyry, and bodies of tuff and argillite.

The above rocks in turn have been intruded by a number of different intrusions in the following sequence:

Ultrabasic intrusions	(Lower Cretaceous)	serpentinized peridotite
Rossland Monzonite	(Lower Cretaceous)	Monzonite
Nelson Plutonic rocks	(Lower Cretaceous)	Granite and other phases
Coryell Plutonic rocks	(Tertiary)	alkali granite and syenite
Sheppard Intrusions	(Tertiary)	alkali granite and syenite

Most of all these formations have been subjected to faulting and the intrusion of numerous dykes of various composition from monzonites to basalts. In general these dykes are steeply dipping and trend to the north.

In the area to the south and south east of Rossland there are east west fractures or faults along which mineralized stopes are formed. These stopes seem to be well developed vertically, but are limited horizontally. One such stope on the Blue Bird crown grant measures about a hundred feet horizontally and has been drilled vertically to a depth of two hundred and forty feet and is still open downward.

There are two known mineralized fractures of considerable length in what is known as the south belt. The Blue Bird - Mayflower vein system has been traced over a distance of 1200 meters from the eastern portion of the Hattie Brown crown grant through the Blue Bird, Copper Queen, Olla Podrida and on to the Alfi crown grant and still may be open on both ends. The second vein system is the Homestake vein, and although it is not known for certain that this is a continuous system, mineralization has been found along a strike distance of 2200 metres. This system runs through the Monday, Homestake, Gopher, Maid of Erin, Robert E. Lee, Celtic Queen crown grants and on to the Tigre claim.

There are numerous other short fractures in the area along which mineralization has been found, but since information is scarce and it is not known whether these mineralized occurrences are aligned along continuous fracture systems.

FIELD WORK

In the early part of the summer of 1985 the price of zinc had moved up to the point where the 'Zinc Vein' could possibly be economic to mine. We wanted to better evaluate the potential of extracting the ore.

Consequently during the summer of 1985 considerable time was spent on the 'Zinc Vein' doing various surveys and trying to clear some of the timber from the caved shafts and to clean out some of the old trenches in order to better view the structure along which the mineralization is emplaced and the vein itself.

However, for the purpose of this report only a portion or 13 man days of the time spent on the Tigre claim is being submitted for assessment work requirements. The time was allocated as follows.

Three man days were spent to re-establish some of the old lines and into putting in the new lines. As there was considerable rubbish on the ground from recent logging the lines were cut out by chainsaw. The lines were run 25 metres apart with stations established every 5 metres along the lines by means of compass and topo chain for control. A total of 2.2 km of line were put in and cut out.

Four man days were spent in running the levels using an Astro transit over approximately 550 metres of line during which 106 separate elevations were determined. These readings were then plotted on a 1 - 500 scale map and the elevations contoured on a five metre interval. From this has been plotted in a proposed new access road into the 'Zinc Vein'. The profile of the top of the vein itself was determined.

Two man days were spent on the magnetometer survey during which 1.350 km of line were surveyed, in which 300 readings were taken using a M^CPhar M - 700 vertical field magnetometer which works on a fluxgate principle. A base station was set up on the area to be surveyed and numerous readings were taken prior to commencing the survey in order to establish an average reading for the base station in order to maintain control over the diurnal fluctuations. The magnetometer had been previously calibrated at a control station for all the surveys so that the lower range scales on the magnetometer would be used in the surveys. As the survey progressed the base station was checked into on a regular basis in order to

monitor the diurnal drift.

As part of the reason for the survey other than to extend it beyond what had been done previously was to test the reproducibility of the previous survey as this area was one of the first that I had done in the camp, 175 duplicate readings were taken. These duplicate readings also served as a control over the continuity of the survey itself .

During the progress of the magnetometer survey a Thommen altimeter was carried and elevations were taken every 25 metres. As with the magnetometer the base station was checked into on a periodic basis for control on pressure and temperature fluctuations. These altimeter readings were also correlated with the level elevations and plotted on the map.

Three man days were spent on the Self Potential survey over 1.2 km of line taking 136 readings using the gradient method with stations every 12.5 metres apart. The S P survey was discontinued because of the problems that were encountered in the field. We had experienced difficulty in calibrating at the base stations and in the two loops that were made we were unable to close within acceptable limits of error of 10 milli volts. In fact upon testing further we found that we could only duplicate readings wherever the soil was moist or where we let the pots sit for a fair length of time and were forced to the conclusion that most of the ground was much too dry even at depths of up to eight inches in the mineral soil. It was definitely not a problem of undersaturated solution of copper sulfate in the pots.

Because of these problems it was felt that the results that we had obtained could not be accepted with any degree of confidence. The plot of the results have not been included in this report since they do not agree even closely with the results of the S P survey done on 100 ft. spacing by Ross Island Mines in 1947.

One man day was spent on cleaning out the trenches and mapping the topography and geology of the survey area. The vein itself was measured and calculations of the possible extractable tonnages were made.

RESULTS

The levels run by the Astro Transit closed within .219 metres, and for the most part the elevations taken with the pocket altimeter corresponded well with the levels although some adjustment did have to be made.

The most surprising thing in regard to the magnetometer survey is that the 'Zinc Vein' did not respond well to the magnetometer and the only anomalous situation along the vein is in the vicinity of the most easterly shaft where there is a 300 gamma anomaly along the vein. For the most part the vein shows as a magnetic low. Although there is some pyrrhotite in the vein itself the structure along which the vein is emplaced is badly sheared and shattered and the magnetic minerals may have weathered out.

The most interesting anomalous situation is the four highs along a ring like configuration with the individual highs centered at 67+00 E 51+00 S, 66+50 E 51+55 S, 62+25 E 52+00 S and 52+50 S 60+20 E. This ring like structure intersects the 'Zinc Vein' almost at right angles.

At first it was thought that there was some systematic error in the survey in that much of the length of lines 65+75 E and 66+25 E the magnetometer readings were low. However 65+75 E seems to be along the strike of a N-S dike and 66+25 E is where the overburden is probably deeper and there may also be a buried dike.

It would appear that for the most part the magnetometer surveys are reproducible. Of the 175 duplicate readings taken over the old survey 112 or 64% of the readings were within 25 gammas and 151 or 86% were within 50 gammas.

It is most unfortunate that the S P survey did not turn out as it might have helped in understanding the results of the magnetometer survey and what is happening with the 'Zinc Vein'.

There is very little out crop within the survey area as most of the area is drift covered. The dike rocks comprise most of the outcrops as they tend to stick up above the other rocks and through the overburden. No attempt was made to differentiate them. The volcanics within which the 'Zinc Vein' is emplaced is badly sheared and weathered where they are exposed in the shafts and as such might result in some considerable dilution if the vein can be mined.

CONCLUSIONS

The magnetic surveys are for the most part reproducible and the results of individual survey areas can be coordinated by means of taking duplicate readings over each survey area and applying the proper calculations. The magnetometer survey should be followed up by another attempt with the S P survey during such a time when the ground is a little more moist. VLF and EM should be employed in the vicinity of the 'Zinc Vein' although it is unlikely that the 'Zinc Vein' itself will respond to the EM.

From the measurement of the 'zinc vein' it has been calculated that there is in excess of three thousand tons of ore that could be mined from the surface with an average grade of 15 % zinc, 1% lead, 1 oz. silver and .15 oz gold.

Statement of costs

D.K. Bragg	June 25, 26 & 29, July 1, 3, & 5, Dec. 1	
	Total 7 man days at \$ 180.00 per day	\$ 1260.00
E.S. Warner	June 25, 26, & 29, July 1, 3, & 5	
	Total 6 man days at \$ 180.00 per day	\$ 1080.00
Board	13 man days at \$ 40.00 per day	\$ 520.00
Truck	7 days at \$ 50.00 per day	\$ 350.00
Equipment rent and field supplies		\$ 100.00
Pro rated transportation costs to Rossland and back		\$ 100.00
Report preparation		\$ 800.00
		<hr/>
	Total	\$ 4210.00

D.K. Bragg

STATEMENT OF QUALIFICATIONS

D.K. Bragg supervised and did most of the work involved in this investigation, including the line cutting, prospecting, mapping the geology, soil sampling, magnetometer survey and report preparation. His qualifications are as follows:

Graduated Armstrong High School, Armstrong B.C. 1951.

Attended U.B.C. from 1958 to 1962 in the faculty of Arts and Science, in Honors Geology.

Has worked in the mineral exploration industry since 1956.

Worked for Kennco Explorations during the summers of 1956, 1957, and 1959 in the Yukon and northern B.C. as an assistant prospector and geochem sampler under the direction of Dr. R Campbell and R. Woodcock.

Worked as head prospector for the Nahanni 60 Syndicate in the Northwest Territories in 1960 under the direction of Doug Wilmont.

Worked as head prospector in the Yukon for Dualco in 1961 under the supervision of E. Wozniak.

Worked as head prospector for Mining Corp. of Canada in southwest B.C. in 1962 under J.S. Scott and Dr. K. Northcote.

Worked as head prospector during the summer of 1963 for the Francis River Syndicate, in the central Yukon, under the direction of Dr. A. Aho.

Worked as field geologist in the Greenwood area of B.C. for Scurry Rainbow Oil in 1965 under the direction of Bill Quinn.

Worked as a field supervisor for Alrae Explorations Ltd. from Sept 1965 to April 1967 under the direction of Rae Jury.

Since 1956 has also worked as a self employed contractor, working for various mining companies in the following fields: prospecting, property examination, staking, line cutting, topographical mapping, geological reconnaissance and mapping, mineral sampler, draughting, air photo interpretation, geochemistry, geophysics and supervising property exploration programs.

Since 1956 has been a self employed prospector working in various areas in B.C. on numerous properties.

Has worked in the Rossland camp since 1971 as a miner on the Snowdrop and Blue Bird claims. Has spent considerable time in the camp as a prospector and mining exploration contractor.

Has recieved the B.C. Provincial Grubstake for the years 1964, 1968, 1969, 1970, 1980, 1981, 1982 and 1983.

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49+505

49+505

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,345

2N Post of Tigre
is 100 Metres West
at 64+00 E 50+005

50+005

50+005

51+005

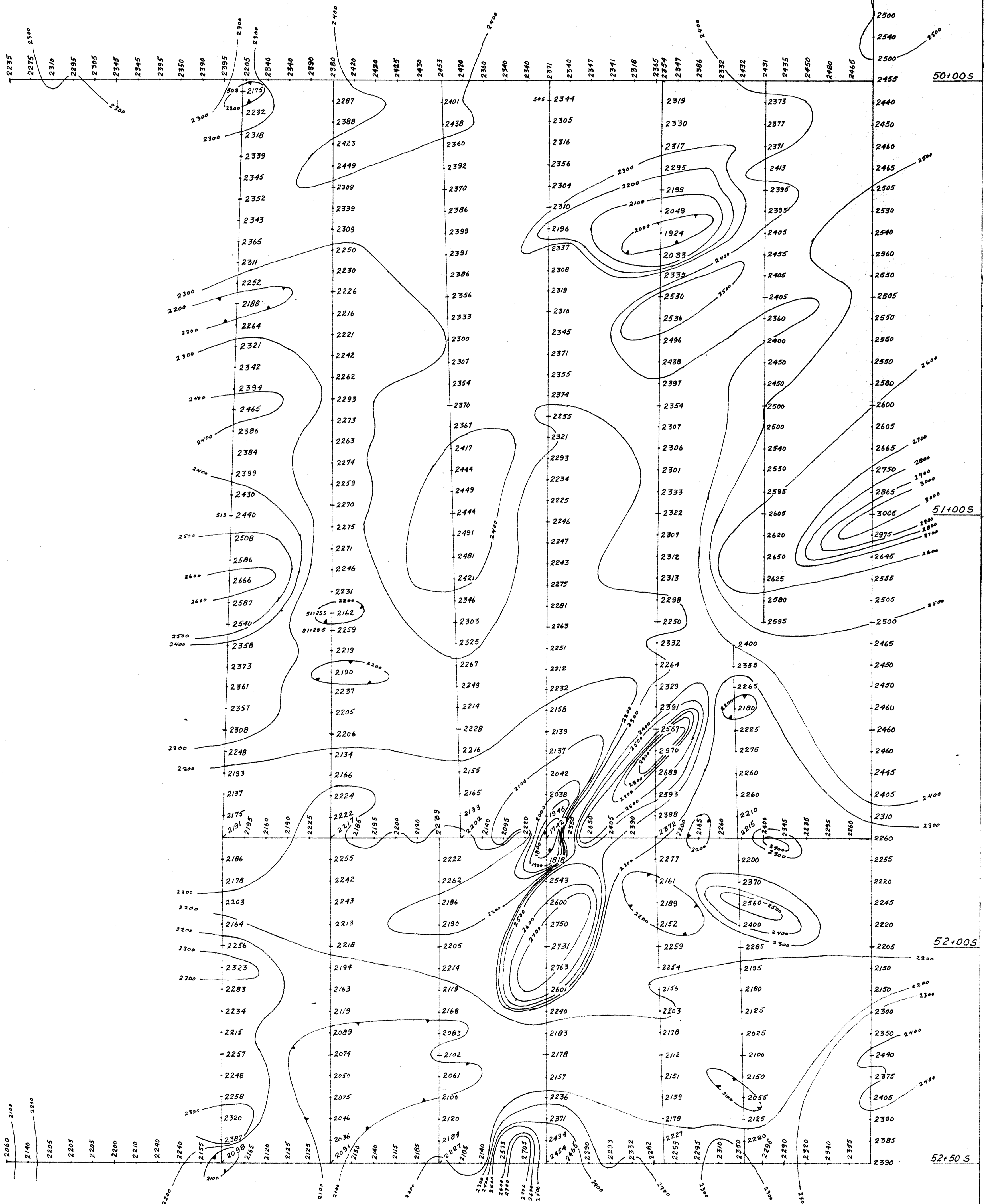
51+005

52+005

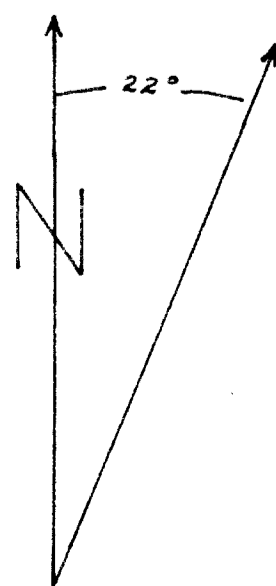
52+005

52+505

52+505



Contour Interval 100 x



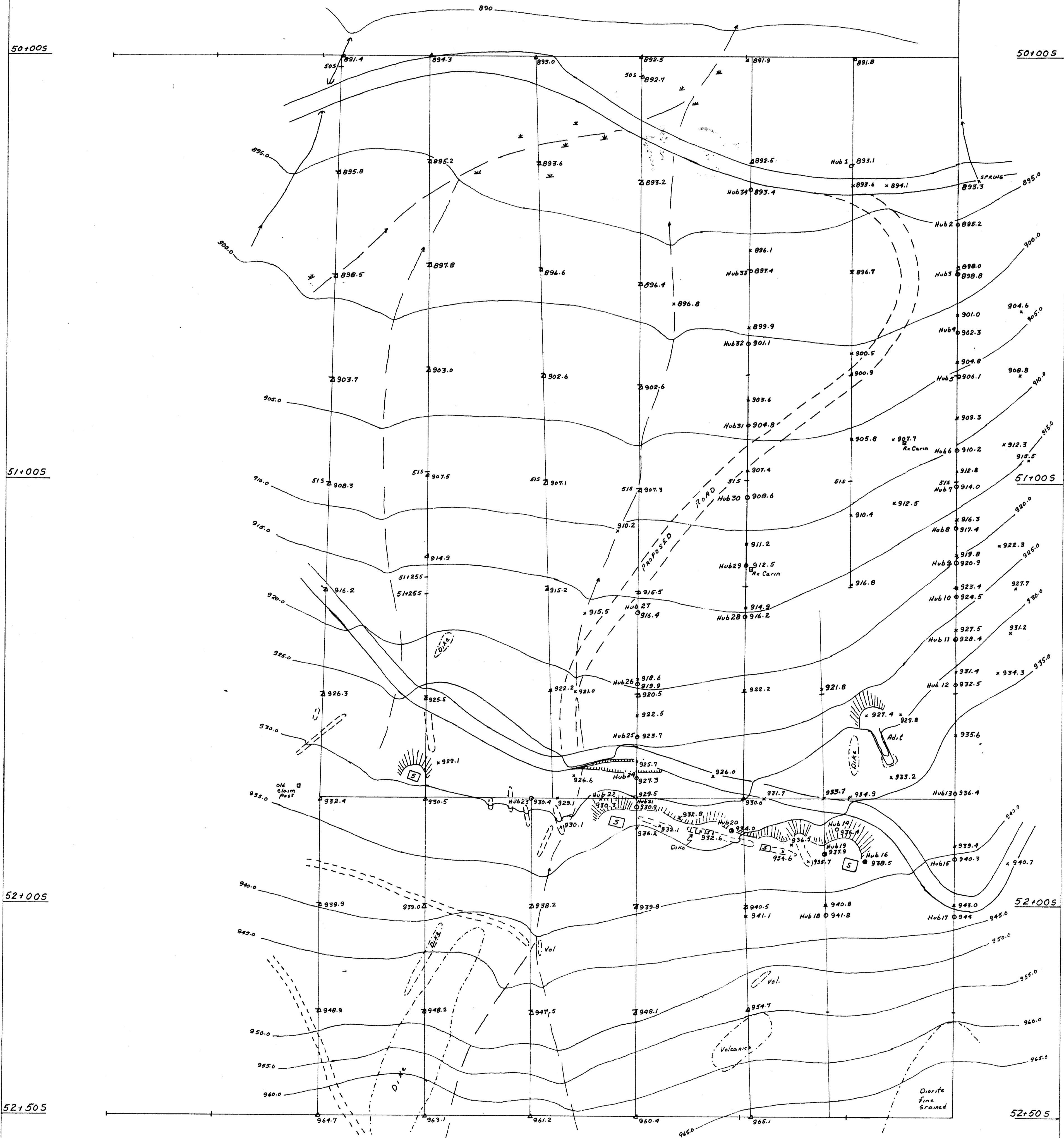
MAGNETOMETER SURVEY

TIGRE CLAIM
ROSSLAND B.C.
82F4 W
49° 3' N, 117° 47' W



To accompany 'GEOLOGICAL & GEOPHYSICAL REPORT' on the Tigre Claim
Rossland B.C. Trail Creek M.D. by D.K. Bragg, Feb 15, 1986
SCALE: 1 = 500 DATE: Feb 15, 1986
DRAWN BY: D.K. BRAGG FIG. 2

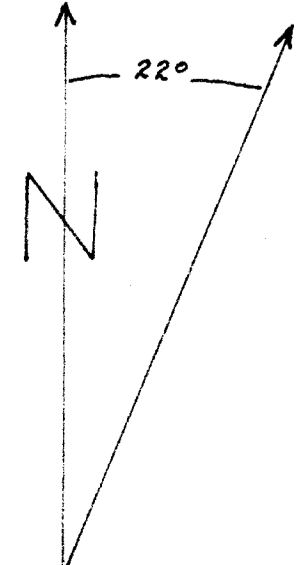
2N Post of TIGRE
is 100 Metres West
at 64+00 E 50+00S



LEGEND

- Shaft
- Trench
- Skid Road
- outcrop boundary
- intermittent Cr or Gully

- Hub 1 \circ 926.0 Survey Hub with elevations
- x 926.0 Elevation point from Survey
- Δ 926.0 Elevations by Thomman Altimeter
- Elevation Contour 5 metre Interval
- \square Rock Carin



TOPOGRAPHY & GEOLOGY

TIGRE CLAIM
ROSSLAND B.C.
82 FA W
49° 3' N, 117° 47' W



To accompany 'GEOLOGICAL & GEOPHYSICAL REPORT' on the TIGRE CLAIM
Rossland B.C. Trail Creek M.D. by D.K. BRAGG, Feb 15, 1986
SCALE: 1 - 500 DATE: Feb 15, 1986
DRAWN BY: D.K. BRAGG FIG. 3