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GEOPHYSICAL REPORT

ON A

GROUND MAGNETIC SURVEY

(With Some Geological Mapping
and Soil Sampling)

OVER THE

DOG CLAIM GROUP

CANNELL CREEK

KAMLOOPS MINING DIVISION

BRITISH COLUMBIA

PROPERTY	: 28 km N35°W of Kamloops, B.C. on Cannell Creek
	: 50° 52.5' North Latitude 120° ~~34'~~ 33' West Longitude
	: N.T.S. 92I/15E
WRITTEN FOR	Owner: Eugene Dodd Operator: TRANS-ARCTIC EXPLORATIONS LTD. 815-850 West Hastings Street Vancouver, B.C., V6C 1E2
SURVEYED BY	: TRANS-ARCTIC EXPLORATIONS LTD. 815-850 West Hastings Street Vancouver, B.C., V6
WRITTEN BY	: David G. Mark, Geophysi GEOTRONICS SURVEYS LTD. 530-800 West Pender Str Vancouver, B.C., V6C 2V
DATED	: October 16, 1986

GEOTRONICS

GEOTRONICS SURVEYS LTD.
Engineering & Mining Geophysicists
VANCOUVER, CANADA

15192

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SUMMARY

A magnetic survey was carried out over the Dog Claim Group owned by Trans-Arctic Explorations Ltd of Vancouver, B.C. from July 11th to 19th, 1986. The claims are located on Cannell Creek, 28 km N35°W of the City of Kamloops. Access is easily gained by vehicle, preferably 4-wheel drive. The terrain consists of mainly gentle to moderate slopes forested with light to moderately dense coniferous trees. The purpose of the survey was to map the window of Cache Creek sedimentary rocks within the background of Tertiary volcanics of the Kamloops group.

The Dog Claims are staked adjacent to the property containing of the old Allies showings which were previously explored for gold. The mineralization consists of pyrite, chalcopyrite, bornite, and galena within quartz veins. These veins are within dark grey porphyry dykes cutting serpentine of the Cache Creek group. Overlying the Cache Creek rocks on and around the Dog claims are Tertiary volcanics of the Kamloops Group.

The magnetic readings were taken every 50 meters on 100-meter separated east-west lines. The magnetic readings were diurnally corrected, plotted and contoured. The soil samples were dug every 50 m of three of the same lines, subsequently tested for gold and plotted.

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BRITISH COLUMBIA

INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data and the interpretation of a ground magnetic survey carried out over the Dog Claim Group located on Cannell Creek within the Kamloops M.D. from July 11th to the 19th, 1986. Some geological mapping and soil sampling was done as well.

The work was done by Pat Crook, instrument operator, and Guy Royer, geologist and poject manager, both of whom are of Trans-Arctic Explorations Ltd. A total of 31.5 line km of magnetic survey was done over the property and 78 soil samples were picked up.

The object of the magnetic survey was to aid in the geological mapping of lithology and structure for the purpose of exploration of gold mineralization. In other words, it was hoped to map

Cache Creek sediments and volcanics against the background of Kamloops Tertiary volcanics.

The Cache Creek group is the favoured host rock for gold mineralization in the area.

PROPERTY AND OWNERSHIP

The property consists of three 20 - unit claims totalling 60 units as shown on Map 2 and as described below:

Claim Name	No. Units	Record No.	Expiry Date
Dog 2	10	4118	July 19, 1988
Dog 3	12	4119	July 19, 1987
Dog 4	4	6343	July 19, 1988
Dog 5	5	Tag #104438	July 19, 1987

The expiry dates shown takes into account the surveys under discussion as being accepted for assessment credits.

The property is owned by Trans-Arctic Explorations Ltd. of Vancouver, British Columbia.

LOCATION AND ACCESS

The property is found 28 km N35°W of the City of Kamloops, B.C. on Cannell Creek located within the Tranquille Plateau.

The geographical coordinates are 50° 52' north latitude and 120° 34' west longitude.

Access to the property is by the Pass Lake dirt road to Pass Lake. This road starts approximately one mile north of the city

centre of North Kamloops along the west side of the North Thompson River. From the agricultural research station at Pass Lake, one travels northwesterly for 1 km where one turns west and travels a further 8.5 km northwest to the Allies showing over a logging road.

Pass Lake is accessible by a two-wheel drive vehicle all year around, the road being kept open in winter. A four-wheel drive vehicle is recommended from Pass Lake to the property during summer months and a skidoo during winter months.

PHYSIOGRAPHY

The property lies at the southern end of the Tranquille Plateau which forms part of the physiographic division known as the Thompson Plateau System. The terrain varies from gentle and moderate slopes throughout most of the property to steeper slopes occurring along gullies and creeks.

Elevations vary from 1,020 meters a.s.l. on Cannell Creek at the southern property boundary to 1,530 meters a.s.l. within the northwest and southwest corners of the Dog 1 claim.

The main water sources would be Cannell Creek and its tributaries which cross the property as well as Sydney Lake located 850 m west of the Dog 5 claim.

The forest cover consists of fir, pine and spruce and varies from closely growing, immature stands to widely spaced, mature stands.

HISTORY OF PREVIOUS WORK

The adjacent claim was previously known as the Allies Group upon which work was done in exploration for gold during the 1920's and 1930's. At this time several trenches, shafts and adits were dug out.

The property was staked as the Dog Claims in 1969-70 and in 1973, magnetic, VLF-EM, limited soil sampling and limited geologcial surveys were carried out. In 1976, further soil sampling was carried out producing gold-copper anomalies that were subsequently diamond drilled. No mineralization was encountered.

Over Trans-Arctic's property, the only previous work was a combined airborne magnetic and VLF-EM survey carried out in July of 1983. The results are in a report by the writer dated October 20, 1983.

GEOLOGY

The geological description of the property is taken from Cockfield and Saleken. (See Selected Bibliography.)

Much of the general area is underlain by Tertiary volcanics of the Kamloops Group. These consist of rhyolites, andesites and basalts with associated tuffs, breccias and agglomerates.

Forming a window in the Tertiary volcanics and underlying much of the Dog claims are rocks of the Carboniferous Cache Creek group. This group in this area consists of argillite, quartzite, hornstone, limestone, sheared conglomerate, breccia, greenstone, and serpentine. The units have a northwest trend with varied dips.

Cutting the Cache Creek rocks but not the Kamloops volcanics are light grey and dark grey porphyry dykes (or flows?). The dark grey porphyry is a dense rock with phenocrysts of hornblende and feldspar.

The mineralization of the Allies prospect occurs as pyrite, chalcopyrite, bornite and galena within quartz veins which occur within the dark grey porphyry dykes (or flows?). Up to 1.42 oz/ton of gold has been assayed with the sulphides.

MAGNETOMETER SURVEY

(A) Instrumentation and Theory

The magnetic survey was carried out with a Scintrex MF-1 fluxgate magnetometer. This instrument reads directly in gammas the Earth's total magnetic field to an accuracy of $\pm$ 1 gamma, over a range of 0 - 100,000 gammas. Operating temperature range is -35° to +50° C, and gradient tolerance is up to 10,000 gammas per meter.

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite; magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Magnetics is also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

(B) Field Procedure

The magnetic survey was carried out reading the instrument every 100-m separated east-west lines. A total of 31.5 line km were surveyed.

The diurnal variation was monitored in the field by the closed loop method to enable the variation to be removed from the raw data prior to plotting.

(C) Compilation of Data

The total magnetic field values were plotted on Map 4 at a scale of 1:5,000 and contoured at a 5-gamma interval.

SOIL GEOCHEMISTRY

(A) Survey Procedure

The samples were picked up at 50-meter centers on three of the same east-west lines as that for the magnetic survey. The lines were 3+00N, 12+00N and 14+00N. They were dug with a D-handled shovel at about a 15- to 20-cm depth. The horizon sampled was B. Samples were placed in brown, wet-strength, paper bags (gussett bags) with the sample number marked thereon. A total of 78 samples were picked up.

(B) Testing Procedure

All samples were tested by Chemex Labs Ltd. of North Vancouver, B.C. The sample is first thoroughly dried and then pulverized in a ring pulverizer. It was then rolled on a rolling sheet to homogenize it.

For the gold analysis, 10 grams of the sample was then fire-assayed with standard techniques. 2 mg of silver was then added to collect the gold. The lead button from the fire assay was then cupelled and the silver-gold prill was dissolved in aqua regia. It was next analyzed by the atomic absorption technique to a detection limit of 5 parts per billion (ppb).

The results were plotted on Map 3 with the geology.

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DATA REDUCTION AND COMPILATION

The observant magnetic total field was recorded on analogue strip charts. These were played-back together with audio recordings containing fiducial markers, and the fiducial markers were transferred to the strip charts. The fiducial markers were identified with topographic features along the flight lines.

The magnetic data were taken from the strip charts and plotted on Sheet 3 at a scale of 1:10,000 (1 cm = 100 m). The data were then contoured at a 100-gamma interval.

The VLF-EM anomalies were taken from the strip charts and plotted on the sheet with the magnetics. For each anomaly, a heavy line along the flight line was drawn showing its half-width. An 'S' or an 'A' designated the anomaly as being from the Seattle transmitter or the Annapolis transmitter.

A question mark on the anomaly indicates that it could be caused by terrain. The survey area was somewhat rugged causing numerous VLF-EM anomalous responses most of which was easily sorted out as being caused by terrain. However, some were difficult to sort out and they were therefore plotted with a question mark.

Strong anomalies were plotted with exclamation marks, and anomalies without any marks indicate average responses. Other symbols are explained on the sheets.

DISCUSSION OF RESULTS

The magnetic survey has shown the magnetic field over the Dog claims to vary from 500 gammas to 4500 gammas within a distance of 600 meters giving a very high range of 4000 gammas.

Most of the property, however, has a magnetic field varying from about 1500 to 2500 gammas. The window of Cache Creek rocks, as mapped by the G.S.C., is located within this magnetic low. Therefore, it is quite possible that the 2500-gamma contour is mapping the Cache Creek window within the Kamloops volcanics. That is, the magnetic values less than 2500 gammas are found over the Cache Creek rocks.

The magnetic field to the southeast, to the south, to the west, and partially to the north has a much higher amplitude and is much noisier (that is, goes from lows to highs within short distances). This is a typical description of Tertiary volcanics, which in this case consists of a capping of Kamloops Group rocks. It shows most of the Dog 2 claim is underlain by these volcanics, as well as the west side of the Dog 1 claim and the southeast corner of the Dog 3 claim.

The very strong low of 500 gammas is located a few hundred meters southeast of the Allies workings. Therefore this low could well be related to the original source of the rich float discovered in this area.

The strong magnetic high of 4500 gammas is 600 meters south of the low. It is lineal in shape, strikes easterly, and has a length of about 1500 meters. It is probably reflecting a magnetic flow of the Tertiary basalts though it could be reflecting a basic dyke within the Cache Creek rocks.

The major cause of VLF-EM anomalies, as a rule, are geologic structure such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But in the writer's experience, when VLF-EM anomalies correlate with sulphide mineralization, the anomalies are usually reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying close to the same direction as the direction to the transmitter can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may not be picked up at all if it is at too great an angle.

Lineal trends considered to be indicative of geological structure have been drawn on Sheet 3 taking into account:

a) Magnetic lows which are often caused by the magnetite within the rocks being altered by geological structure processes.

b) VLF-EM anomalies which more often than not are reflecting structure.

c) Topographic depressions such as creek valleys which are usually caused by structure.

Several lineations that are indicative of faults have been mapped across the property striking in virtually all direc-

tions. The lineations cross each other on the property in different areas. Structure is often important for the emplacement of mineralizing fluids especially where lineations intersect. Thus these areas may have greater exploration interest. The Allies workings are located witin an area of cross lineations. Another zone occurs about 1900 m to the east.

There are also some moderately strong EM conductors occurring on the Stryder property that could well be related to mineralization. These conductors are marked as such on Sheet 3.

The VLF-EM survey has revealed numerous EM conductors throughout the claims area. Most of these are broad and of low amplitude. Several of these type of conductors can be related to broad swampy areas such as are found along Cannell Creek.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark,
Geophysicist

October 16, 1983

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GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #403-750 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

2. I have been practising my profession for the past 18 years and have been active in the mining industry for the past 21 years.

3. That I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.

4. This report is compiled from data obtained from a magnetic survey carried out by Trans-Arctic Exploration Ltd., under the supervision of E.A. Dodd during July 11th to 19th, 1986.

5. I have no direct or indirect interest in any of the properties mentioned within this report, nor in Trans-Arctuc Explorations Ltd, nor do I expect to receive any interest as a result of writing this report.

David G. Mark
Geophysicist

October 16, 1986

AFFIDAVIT OF EXPENSES

Magnetometer survey of the Dog 2 and 3 mineral claims, located in the Kamloops Mining Division, of B.C.

N.T.S.: 92I/15E
Base Line: North South
Crosslines: 100 meter spacing
Station: 50 meter spacing
Instrument: Fluxgate magnetometer - Model MF-1 (Sharp)
Personnel: P.Crook, instrument operator
G. Royer, geologist and assistant
Dates: Commenced July 11th, 1986
Completed July 19th, 1986 - 9 days total

FIELD:

Instrument operator, 81 hours at $25/hour	$ 2,025.00
Geologist and surveyors assistant, 81 hours at $30/hour	2,430.00
Two-wheel drive crew van, 9 days at $90/day (incl. gas and mileage)	810.00
Room and board, 9 days at $100/day for 2 men	900.00
Instrument rental, 9 days at $35/day	315.00
Survey supplies	175.00
	$ 6,655.00

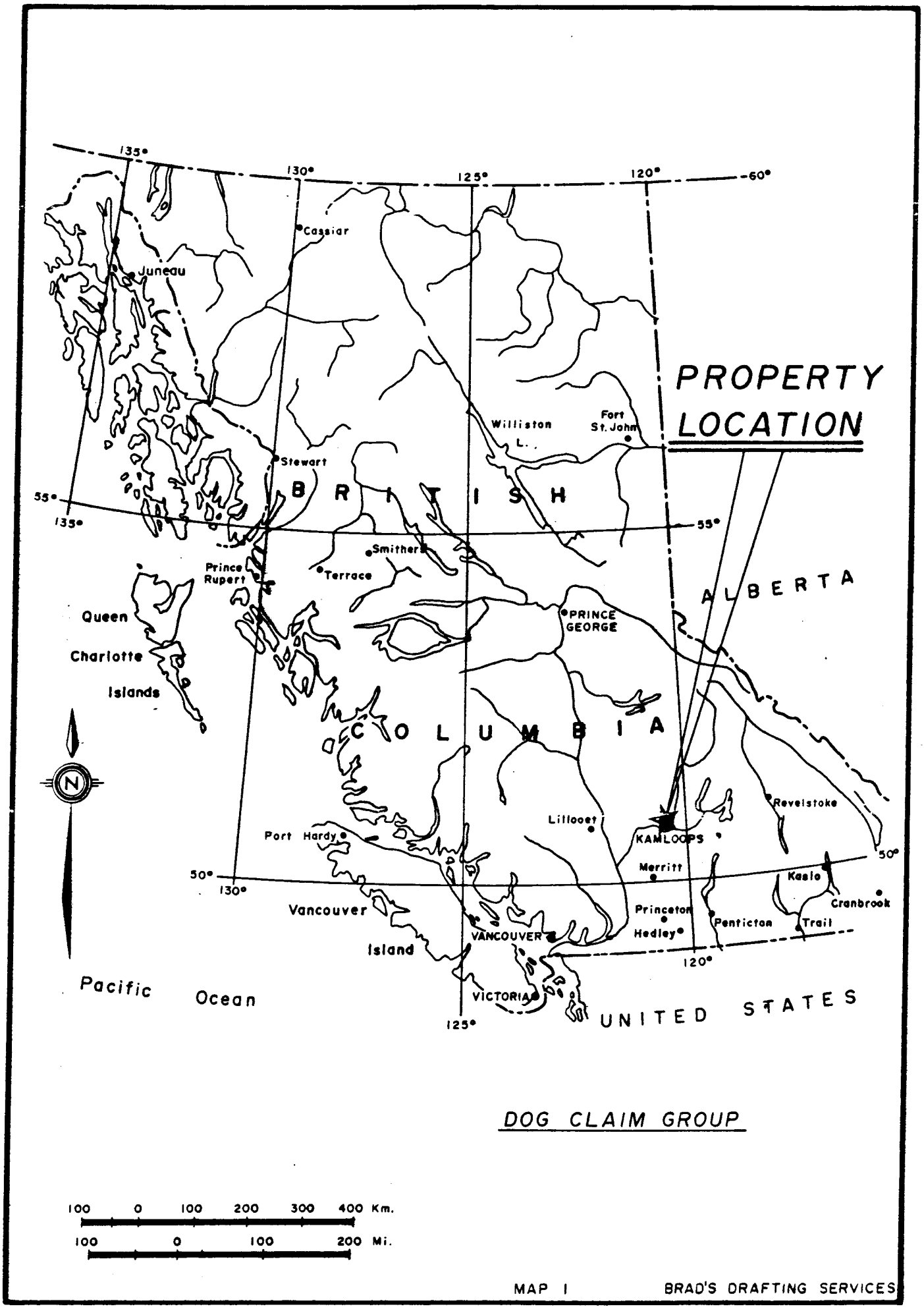
REPORT:

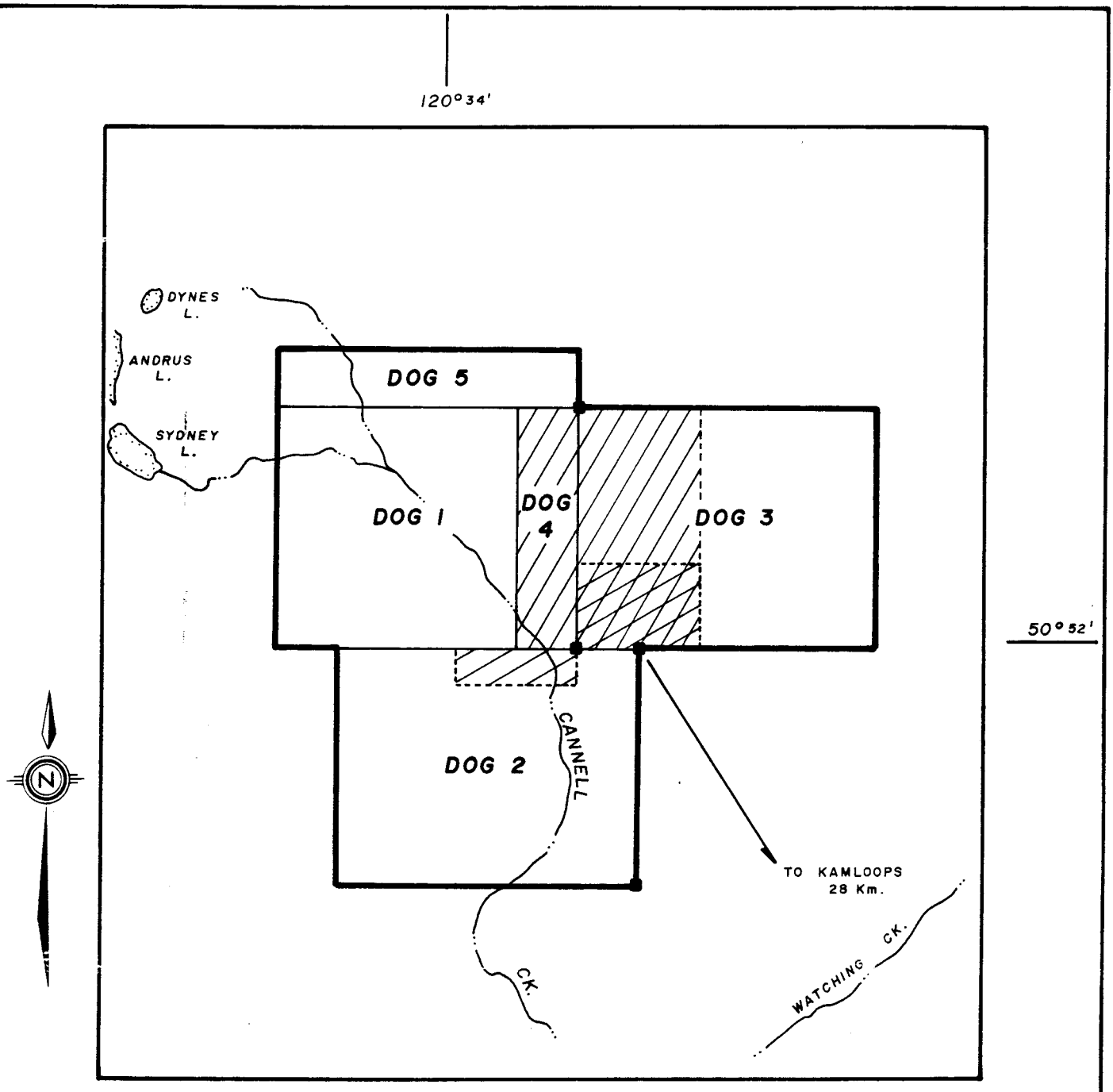
Geophysicist	$ 900.00
Drafting and printing	400.00
Typing and copying	100.00
	$ 1,400.00
TOTAL	$ 8,055.00

Respectfully submitted,
TRANS-ARCTIC EXPLORATIONS LTD.

Richard S. Simpson,
General Manager

35/G350


PROPERTY LOCATION
135°
130°
125°
120°
60°
Cassiar
Juneau
Williston L.
Fort St. John
Stewart
B R I T I S H
55°
135°
55°
Smithers
Prince Rupert
Terrace
ALBERTA
Queen Charlotte Islands
PRINCE GEORGE
C O L U M B I A
N
Revelstoke
Lillooet
Port Hardy
KAMLOOPS
50°
Merritt
Kaslo
130°
Vancouver Island
Princeton
Penticton
Cranbrook
Hedley
Trail
VANCOUVER
120°
Pacific Ocean
VICTORIA
125°
UNITED STATES
DOG CLAIM GROUP
100 0 100 200 300 400 Km.
100 0 100 200 Mi.
MAP 1
BRAD'S DRAFTING SERVICES



MAP 2

VLF-EM SURVEY 1985

MAGNETOMETER SURVEY 1986

1 0.5 0 1 2
KILOMETRES

TRANS-ARCTIC EXPLORATIONS LTD.

DOG CLAIM GROUP

CANNELL CREEK, KAMLOOPS AREA

KAMLOOPS M. D., B. C.

CLAIM MAP

SCALE:	DATE:	N.T.S.	DRAFTED BY:
1: 50,000	OCT. 86.	92 I/15 E	B. D. S.

5 + 00 W

Baseline

5 + 00 E

10 + 00 E

DOG 5

L 20 + 00 N

L 15 + 00 N

L 10 + 00 N

L 5 + 00 N

L 0 + 00 N

PB

AB

PB

PB

VA

VA

AB

AB

VB

PB

LIMIT OF OUTCROP

CANNELL CREEK

WV

AGL

WV

LIMIT OF OUTCROP

AGL

DOG 1
DOG 4

DOG 3

DOG 2

N

LEGEND

- Road
- Creek
- Station (soil sample Au ppb)
- Claim boundary
- Legal corner post

AB	Aphanitic Basalt
PB	Porphyritic Basalt
VB	Vesiculor Basalt
VA	Vesiculor Basalt
WV	Strongly weathered Volcanics
AGL	Volcanic Agglomerate

200 0 500

METRES

TO ACCOMPANY REPORT BY: DAVID G. MARK, GEOPHYSICIST.

TRANS-ARCTIC EXPLORATIONS LTD.

DOG CLAIM GROUP

CANNELL CREEK, KAMLOOPS AREA

KAMLOOPS M. D., B. C.

GEOLOGY & SOIL SAMPLES

GOLD-ppb

SCALE:	DATE:	N.T.S.	MAP:	DRAFTED BY:
1: 5,000	OCT. 86.	92 I/15 E	3	B. D. S.

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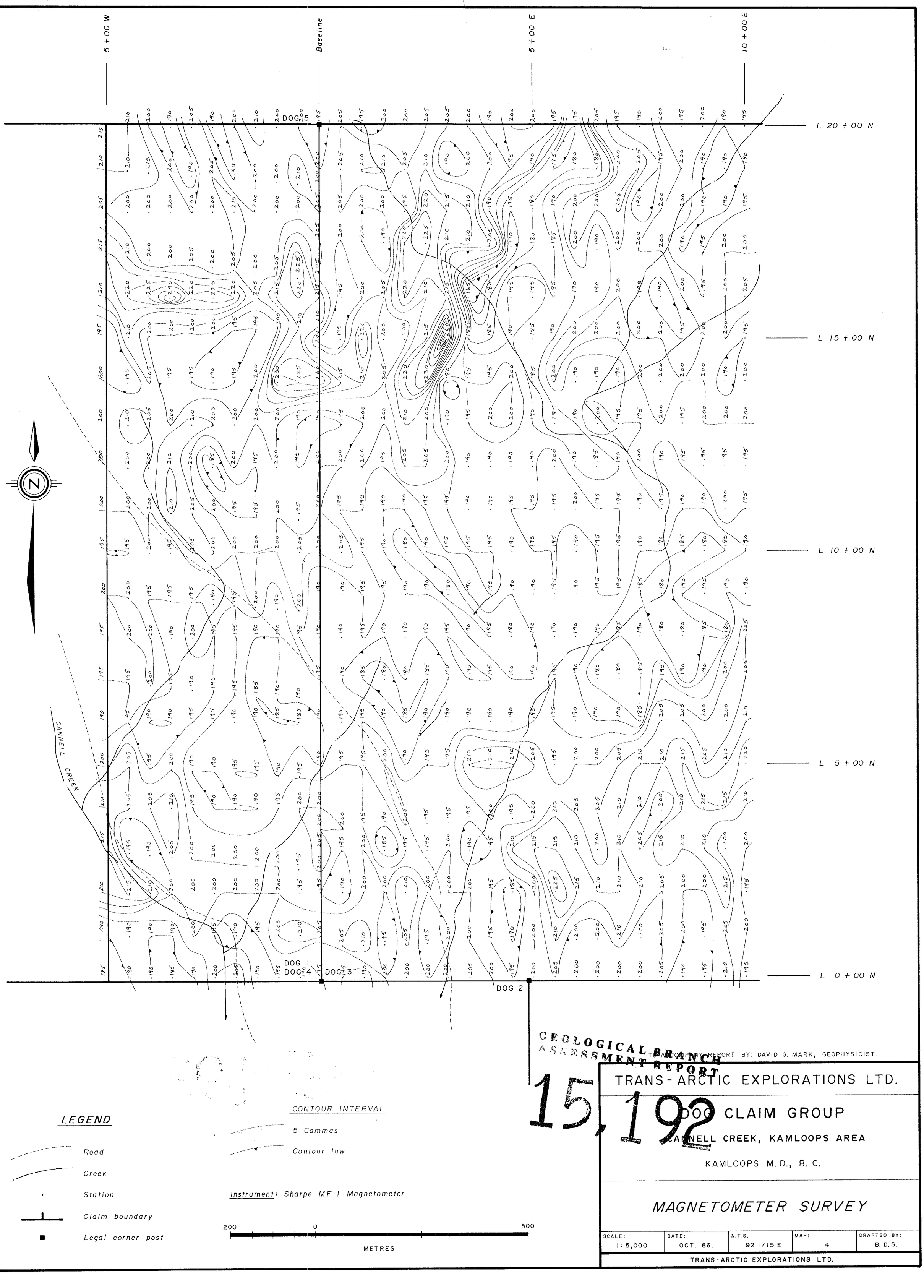

LEGEND

- Road
- Creek
- Station
- Claim boundary
- Legal corner post

CONTOUR INTERVAL

5 Gammas

Contour low

Instrument: Sharpe MF I Magnetometer

200 0 500

METRES

TO ACCOMPANY REPORT BY: DAVID G. MARK, GEOPHYSICIST.

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DOG CLAIM GROUP

CANNELL CREEK, KAMLOOPS AREA

KAMLOOPS M. D., B. C.

MAGNETOMETER SURVEY

SCALE:	DATE:	N.T.S.	MAP:	DRAFTED BY:
1: 5,000	OCT. 86.	92 I/15 E	4	B. D. S.

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