

4721

A
GEOPHYSICAL - GEOCHEMICAL REPORT

ON
"PAT" 1 TO 6 MINERAL CLAIM GROUP
DUFFY CREEK AREA
KAMLOOPS MINING DIVISION

BY
DOMINION EXPLORATION SERVICES LTD.
CALGARY, ALBERTA
APRIL 1973

Department of
Mines and Technical Resources
ASSESSMENT REPORT

NO. 4721 MAP

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#1 Magnetic Map	in pocket
#2 Electromagnetic & Geochemical Map	in pocket
#3 Location map	
#4 Aeromagnetic series	

INTRODUCTION

General

A Geophysical - Geochemical and line-cutting program consisting of the following:

Line cutting	-	3.4 miles
Magnetics	-	2.8 miles
Electromagnetics	-	3.2 miles
Geochem	-	1.1 miles

was carried out on the "PAT" 1 to 6 (125460 - 465) Mineral Claim Group in the Duffy Creek area, Kamloops Mining Division for P. J. MacLean, Victoria, B. C.

The field work was done by R. J. Arsenault, Geophysical Supervisor for Dominion Exploration Services Ltd., Calgary, Alberta, with the help of one field employee. The compilation of this report was also done by R. J. Arsenault, under the supervision of J. B. Prendergast, P. Eng., of Calgary, Alberta. The program was carried out during the month of April 1973.

Location and Access

The "PAT" Group is located some twelve miles west of Kamloops, B. C., along the Trans Canada Highway and some 4 miles south of the highway along a bush road originating opposite the Silver Sage Ranch. Access to the property was by means of a 4-wheel drive vehicle, however, this type of vehicle is not mandatory during the summer season. The Duffy Creek crosses the property on the "PAT" 1 and 2 claims, in the vicinity of an old abandoned homestead.

Purpose

The purpose of the survey was to evaluate the property for the possibility of ore-type mineralization and to satisfy existing work commitments. Due to a limited budget, the work was concentrated on what was deemed to be the area of greater interest.



KAMLOOPS LAKE

BRITISH COLUMBIA

KAMLOOPS DIVISION OF YALE LAND DISTRICT

Scale 1:126,720 or 1 Inch to 2 Miles

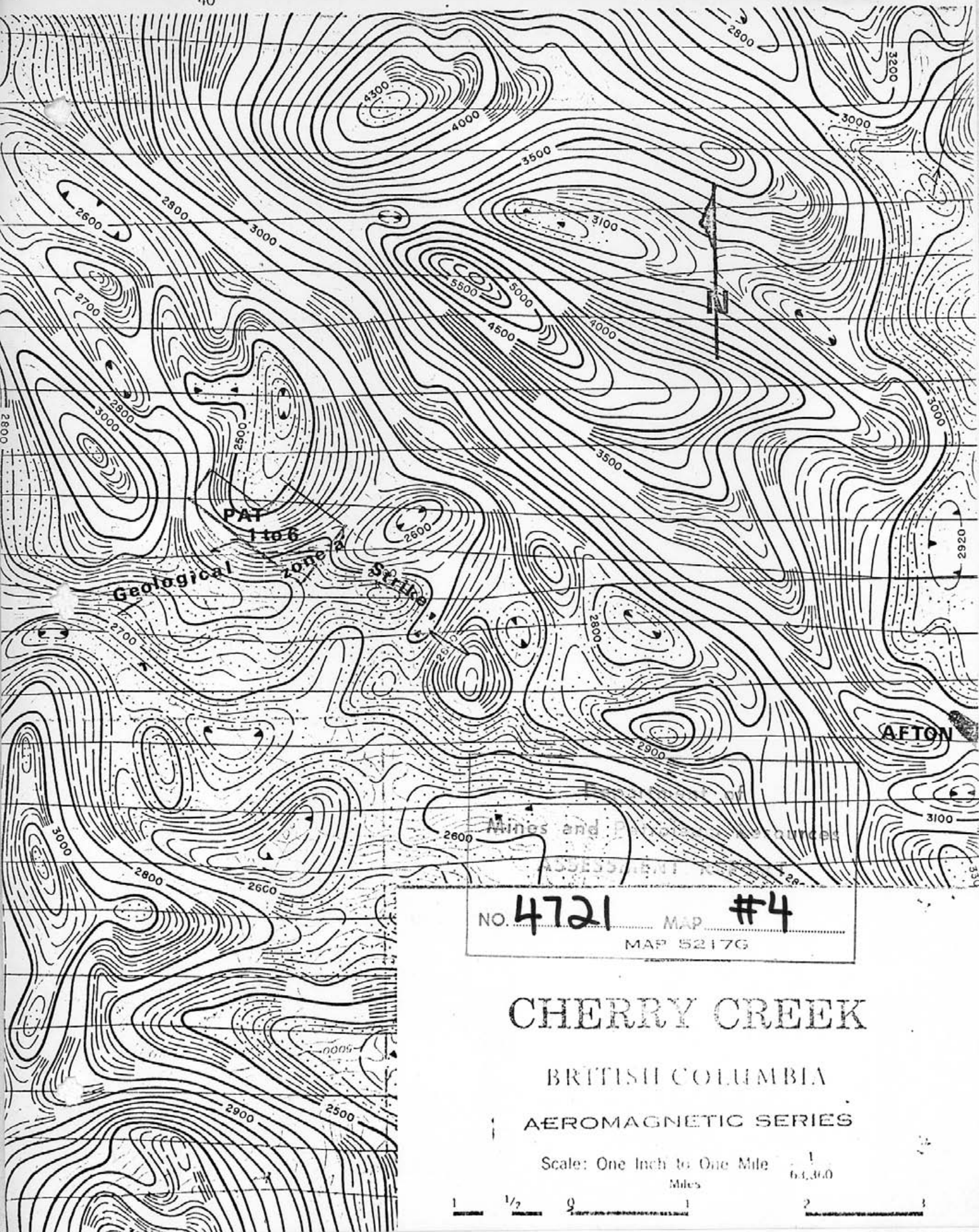
Miles 1 0 2 4 6 8 10 Miles

Scale of Kilometres

1 0 2 4 6 8 10 12 14 16

4721

M3



NO. **4721** MAP **#4**
MAP 5217G

CHERRY CREEK

BRITISH COLUMBIA

AEROMAGNETIC SERIES

Scale: One Inch to One Mile
Miles 1 1/2 3/4 1 2

INSTRUMENTATION

Magnetics

The instrument used was a Scintrex M.F.-2 fluxgate magnetometer. The data was corrected for diurnal variations on a time basis, and tied to the adjoining claim group. The units of measurement are displayed in gammas and do not relate to absolute magnetic values.

Electromagnetics

The instrument used was Geonic's V.L.F. system, the E.M. 1B, employing the Seattle submarine tracking station as transmitting source. The instrument measures the dip and quadrature of the electromagnetic field.

Geochem

The geochemical samples were acquired by means of a stainless steel auger. The samples were taken on the "B" horizon. The hot acid extraction method was employed by Loring Laboratories of Calgary, Alberta, the assayer. The samples were assayed for the copper element only, and the values expressed in parts per million {ppm}.

Line Cutting

The line cutting was done by means of chain and compass with station interval of 100 feet and line spacing of 400 feet. The base line was extended from the adjoining property and all lines were cleared of under brush and sufficiently flagged to make relocation possible.

PRESENTATION OF DATA

Magnetics

The magnetic survey is presented in a plan-contoured form with a contour interval of 200 gammas and a horizontal scale of 1 in. = 200 ft.

Magnetic data from an adjoining property was available to the author and this was incorporated to the present survey in order to enhance the present limited survey.

Electromagnetics

The E.M. survey is presented in the standard profile form on a horizontal scale of 1 in. = 200 ft. and the dip and quadrature angle on a scale of 1 in. = 20°.

Geochem

The geochemical data is presented in profile form on a horizontal scale of 1 in. = 200 ft. and a vertical scale of 1 in. = 10 ppm. Since there is only one line of geochem, the profile was superimposed on the E.M. profile, 12 + 00 NE.

Line Cutting

The grid is presented on the magnetic plan map along with some related topographic features.

DISCUSSION OF RESULTS

General

The limited data acquired on the "PAT" Group does present potential for mineralized zones. There is some correlation between anomalous magnetic and geochem situations with dubious E.M. correlation. The E.M. anomalies are rather weak, and with the possibility that some are caused by topographic features, the author does not attach great importance to the E.M. data. The anomalous areas were labelled Zone A, B, & C, on the magnetic map and are described below.

Description of Anomalies

Zone 'A'

The area under zone 'A' is a relatively narrow magnetic high with an intensity of approximately three times background with the trend striking approximately E - W. Evidence of this localized magnetic anomaly is present on the aeromagnetic map number 52176. The possibility of an intrusive body like the Iron Mask Batholith exists in this area and is a possible cause for this feature. On Line 8 NE at 28 + 00 SE and Line 12 + 00 NE at 27 + 00 SE, there is evidence of weak E.M. conductivity, which is possibly associated with the magnetics. The geochem results do not indicate an anomalous situation in this area, however, this does not preclude the possibility of mineralization at depth.

Zone 'B'

This area is over a magnetic depression and is also very localized. There is a slight geochem correlation with this feature and a weak E.M. conductor on the edge, on Line 12 + 00 NE and 19 + 00 SE.

Zone 'C'

This zone is primarily a geochem anomaly with an intensity of twice background and is partially supported by E.M. conductors on Line 8 + 00 NE at 26 + 50 NW and on Line 4 + 00 NE at 27 + 00 NW. No significant magnetic correlation is evident in this case.

SUMMARY AND RECOMMENDATIONS

A combined geophysical and geochemical evaluation program was conducted on the "PAT" Mineral Claim Group which resulted in outlining some three anomalous zones which warrant further investigations. It is recommended that the magnetic and geochemical surveys be extended to cover the entire property in order to better outline the existing anomalies and that a program of Induced Polarization be carried over the group, employing several electrode separations in order to sample possible narrow mineralized zones close to surface and simultaneously investigate the area for deeper buried zones of interest.

The urgency of the continuing program should be dictated by local mining activity and general market trends.

Respectfully submitted,

R. J. Arsenault

R. J. Arsenault

J. B. Prendergast

J. B. Prendergast, M.A., P. Eng.,
P. Geoph.



Expiry Date: May 28, 1974

DECLARATION OF WORK AND EXPENDITURES

I, ROBERT JOSEPH ARSENAULT, of the City of Calgary, in the Province of Alberta, DO HEREBY DECLARE:

That the following work was carried out on the PAT 1 to 6 Mineral Claim Group in the Duffy Creek area of the Kamloops Mining Division, of the Province of British Columbia on behalf of P. J. MacLean, Victoria, B. C., during the period of April 22nd to 27th, 1973:

Mobilization and Demobilization {from Calgary to Kamloops to Calgary}

<u>Personnel</u>	Mr. Arsenault - April 22 & 27 at \$100.00/day	\$200.00
	Helper - April 22 & 27 at \$50.00/day	100.00
<u>Room & Board</u>	at \$20.00/man-day x 4 days	80.00
<u>Vehicle Cost</u>	{4-wheel drive} 800 miles at \$.20/mile	160.00
	Sub Total	<u>\$540.00</u>

Survey Mileage Rates

Line Cutting	- 3.4 miles at \$125.00 per mile	\$ 425.00
Magnetics	- 2.8 miles at \$ 90.00 per mile	252.00
Electromagnetics	- 3.2 miles at \$100.00 per mile	320.00
Geochem	- 1.1 miles {incl. assays} at \$150.00 per mile	165.00
	Sub Total	<u>\$1162.00</u>

Compilation of Report

Total all inclusive cost {preparation, typing, drafting etc.}	\$ 525.00
Total	<u><u>\$2227.00</u></u>

DATED, this 23rd day of November, 1973,


R. J. Arsenault

QUALIFICATIONS AND WORKING EXPERIENCE

I, ROBERT JOSEPH ARSENAULT, of the City of Calgary, in the Province of Alberta, do hereby declare that I personally carried out the field work on the PAT 1 to 6 Claim Group and compiled the report and maps under the direct supervision of J. B. Prendergast, M.A., P. Eng., P. Geoph., of Calgary, Alberta. The following is a brief resume of my personal status and working experience.

Born: January 23, 1944, Wellington, Prince Edward Island, Canada.
Canadian Citizen.

Native tongue: French, fluent in English, working knowledge of Spanish.

Education: St. Dunstan's University, Charlottetown, P.E.I.,
2 years Engineering, no degree.

Experience:

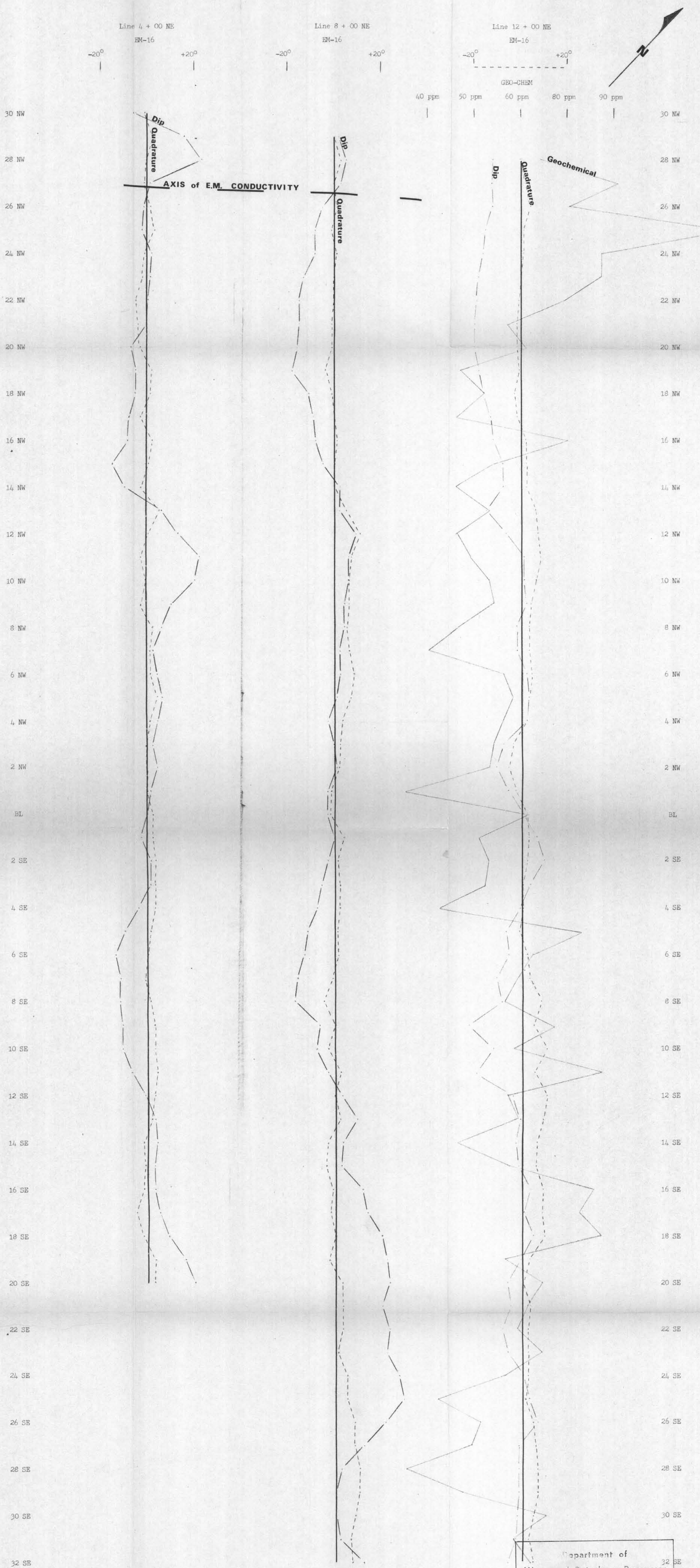
1960-63	Farming, fishing, trucking, P.E.I.
1963-65	Royal Canadian Engineers, commissioned 2nd Lieutenant, bridge and road construction, surveying, etc.
1965-66	Scope Mining and Exploration Consultants, Toronto, Field Technician in surveying and geophysics.
1966-70	Sr. supervisor and geophysical technician, Spartan-Sulmac-Velocity group, mining geophysics in Eastern Canada, Manager Costa Rican exploration program including drilling, prospecting, driving adits, sampling and geophysical surveying, field geophysical surveys for the petroleum and mining industries of Western Canada, particularly in the Arctic and Central B. C.
1970-72	Geophysical Supervisor, Kenting Earth Sciences; Induced Polarization, gravity, magnetics, electromagnetics, Alberta, B.C. and the Arctic. Co-developer with J.B. Prendergast of the Induced Polarization method for coal exploration; engineering studies, seismic, and resistivity for dam site investigations and for water table studies.

1972-present Secretary and Geophysical Supervisor for
Dominion Exploration Services Ltd.,
Induced Polarization work in the Kamloops
area and the foothills of Alberta.

DATED this 23rd day of November,
1973, in the City of Calgary, in
the Province of Alberta,

A handwritten signature in dark ink, appearing to read 'R. J. Arsenault', with a stylized flourish at the end.

R. J. Arsenault



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **4721** MAP **#2**
EM-16 & GEOCHEMICAL SURVEYS
PAT CLAIM GROUP
DUFFY CREEK AREA
KAMLOOPS MINING DIVISION
by
Dominion Exploration Services Ltd
Calgary, Alta
Scale 1" = 200' April 1973
Compiled by RJ Arsenault

4721-M2