

84-#145 - 12069
3

GEOPHYSICAL REPORT

on the

TOQ 1 MINERAL CLAIM 4376(3)

KAMLOOPS MINING DIVISION

NTS 921/14-E

Lat. $50^{\circ} 48'$

Long. $121^{\circ} 03'$

for

RICHARD CAREY

Owner & Operator

by

JAY D. MURPHY, P. ENG.

Consulting Geological Engineer

1984-03-05

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,069

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ADDENDA

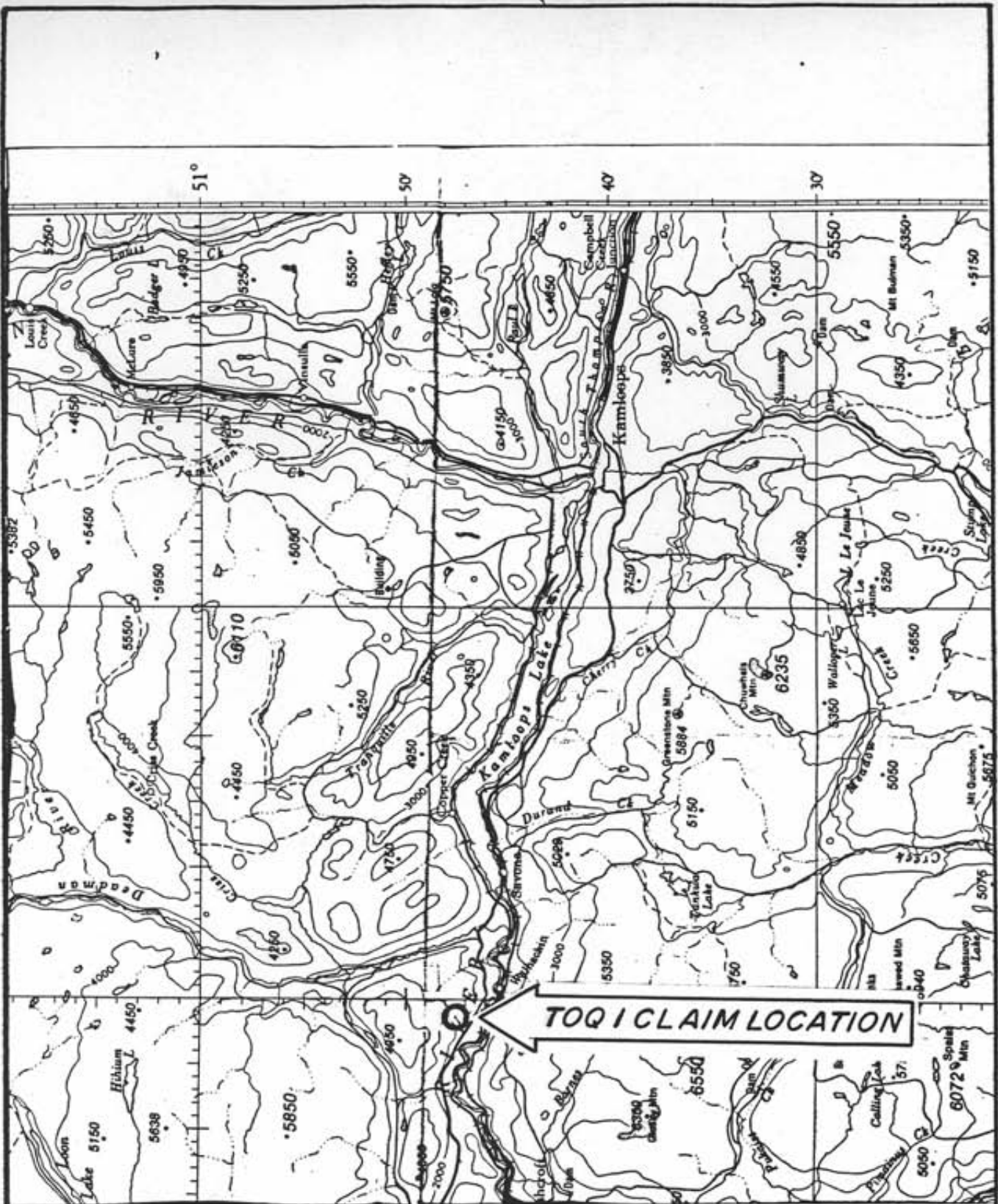
APPENDIX 1	Geochemical Lab Report G1032	12
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INTRODUCTION

The TOQ 1 mineral claim consists of 20 units staked under the modified grid system. The claim is situated one kilometre north of the Trans Canada Highway about midway between Savona and Cache Creek, (Plate No. 1). Access is by a little used dirt track that turns north off the T.C.H. one kilometre west of the Walhachin turn-off. (Plate No. 2).

The claims area occupy a gentle, south facing slope between the Thompson River on the south, and the vast, basalt capped Interior Plateau to the north. Elevations vary from about 335m at river level to over 1675m on the plateau 12 km north. Within the claims the southerly slope is dissected by a main north-south gully (Cabin Gulch) and two northwest trending tributaries manifested by steep sided, "V" shaped gullies a few tens of metres in depth. Cabin Gulch is a broader, more "U" shaped feature with steep walled rock or talus slopes to 200m in height. Consequently, traversing within the claims is relatively easy along north-south lines, but considerably more arduous in an east-west direction. Maximum elevation within the claims is about 760m with a total relief of 300m approximately.

Forest cover consists of open, parklike stands of Ponderosa pine covering most of the claim area. Toward the lower, southern end of the TOQ 1 claim, conifers give way to open areas of grass and sagebrush.



TOQ I CLAIM LOCATION



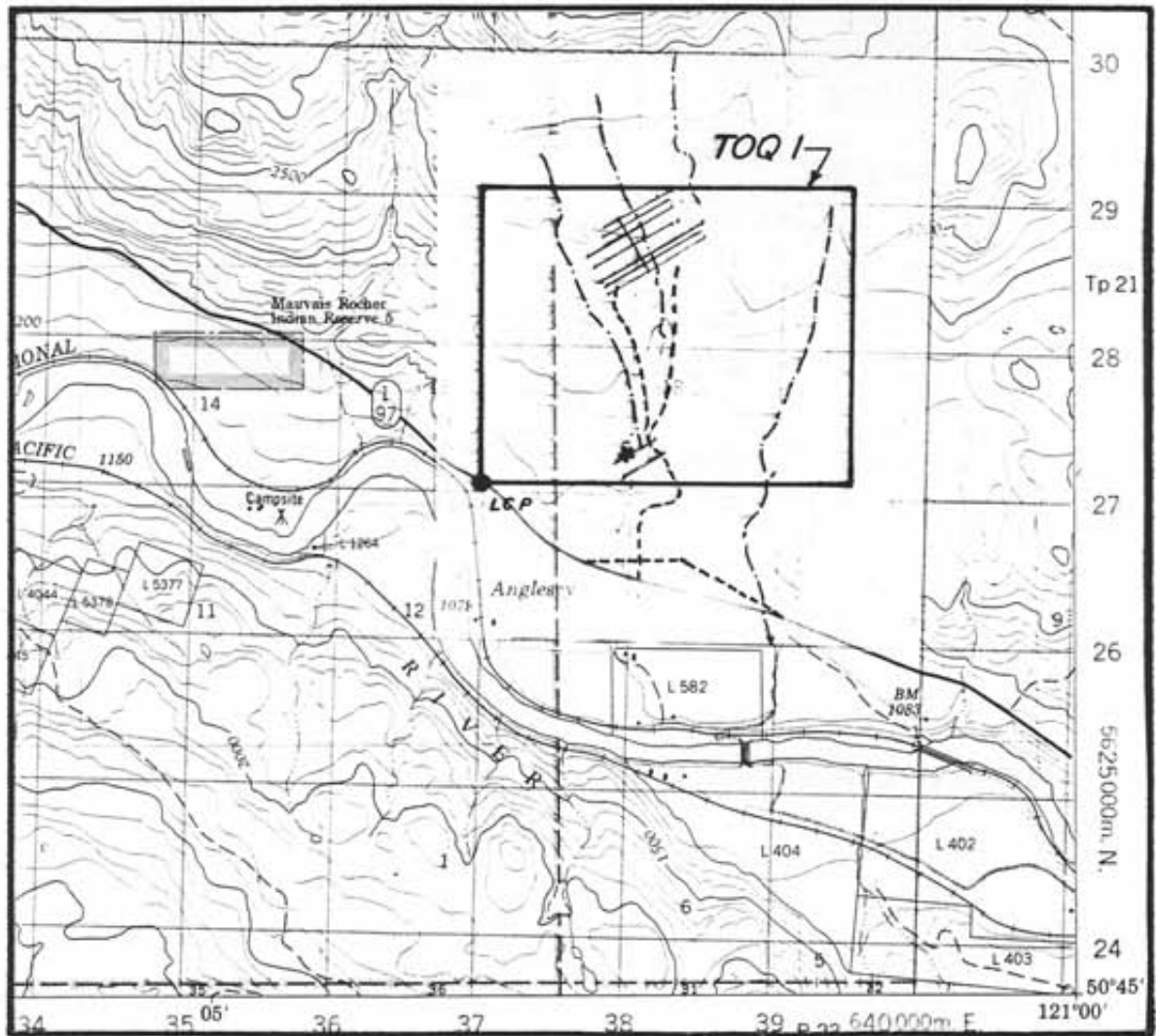
<p>PLATE NO. 1</p>		
<p>KAMLOOPS N.D. 021/14E</p>		
<p>LOCATION MAP</p>		
<p>J.D.M.</p>	<p>1:80000</p>	<p>83-12-18</p>

Water supply throughout the area is meagre but Cabin Gulch contains a low dam at about the 760m elevation that had backed up a small pool at the time of the most recent work. The source is presumed to be a spring described by previous workers, and reported to be the only local water supply suitable for diamond drilling. Cabin Gulch and the tributaries described above probably carry a good flow of water for a short period during spring runoff.

Between the claim and the Trans Canada Highway the better, flatter land is utilized for hay production using spray irrigation supplied from the Thompson River. The claim itself, and surrounding areas at equal or higher elevations appear suitable only for pasturage.

Geologically, the TOQ 1 claim is located in a small window of Triassic Nicola Group volcanics intruded by a north-west trending granitic apophysis from the northernmost end of the Guichon Batholith of Jurassic Age. Small granitic plugs described as Copper Creek intrusions of probable Cretaceous age also occur near the claim area. The older rocks have been exposed by erosion along the Thompson River valley that has removed the overlying cap of Tertiary basalts covering extensive areas both sides of the river.

Structurally, the subject area is located near the south end of the Intermontane Belt. This structural province is host to most of the important porphyry copper deposits of B.C., including the Highland Valley.



Grid lines



Plotted location of Zn showing



PLATE NO. 2

TOQ 1 MINERAL CLAIM 4378 (3)

PLAN SHOWING CLAIM
BOUNDARY & GRID LINES

J.D.M

1: 50000

84-03-03

Purpose of current work was to close off VLF anomalies A and B as determined by previous work on the KAT mineral claims in December 1983⁶. Results of the extended VLF survey, together with those from limited work in the area of a reported zinc vein, constitute the subject of this report.

SUMMARY AND CONCLUSION

The main area of interest consists of two parallel VLF anomalies each 400m in strike length, separated by 175m giving no EM response, but characterized by numerous faults and sulphide showings, and containing anomalous copper in soil. The trend of anomalies and faults is predominantly north to slightly west of north. The entire area is considered of economic interest, representing a block of ground measuring approximately 400m by 300m. The possibility of extending the favourable zone south is considered good. Both VLF anomalies are open to the north but because of geological consideration it is unlikely that these features can be extended any significant distance in this direction. With regard to the reported zinc zone near the south boundary of the TOQ 1 claim, the limited work done to date has not provided any encouragement, but possibilities are far from exhausted.

Anomalies A and B are both considered valid drill targets but because of the costs involved a less expensive initial approach is favoured.

The apparent effectiveness of the VLF method applied to a small area of the claim would warrant a recommendation for complete VLF coverage of the TOQ 1 claim. However, it would be prudent to determine the type of mineralization represented by the present anomalies before embarking on a survey to cover the entire claim. The above considerations are incorporated in the following recommendations.

RECOMMENDATIONS

- (1) Examine surface outcrop in the area of Anomaly B to determine whether bedrock mineralization can be evaluated effectively by surface sampling.

- (2) There appears to be no rock outcrop in the vicinity of Anomaly A, so bulldozer trenching to bedrock is recommended, followed by bedrock sampling to evaluate this feature. At least two trenches are recommended on Anomaly A. A similar programme may be required to evaluate Anomaly B, depending on the results of recommendation (1).

- (3) Provided economic mineralization is indicated by recommendations (1) and (2) a VLF survey should be conducted to cover the untested portion of the claim. This should be preceded by a geological reconnaissance of the TOQ 1 claim to eliminate those areas that may not warrant VLF coverage.

FIELD PROCEDURES

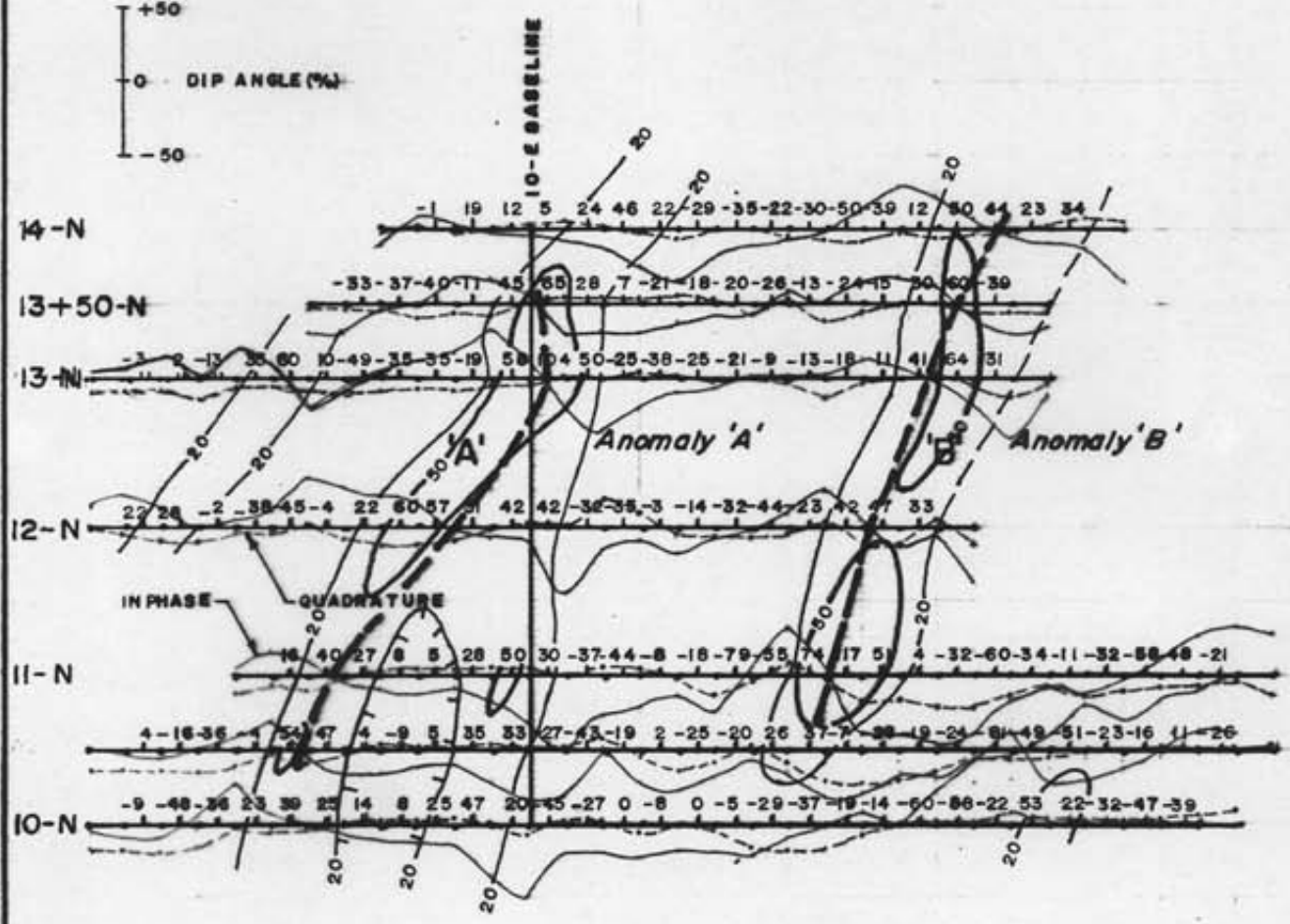
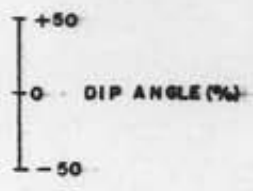
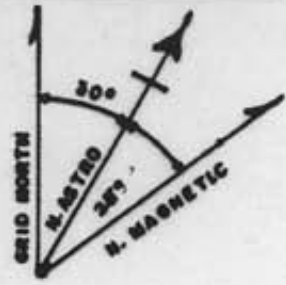
In the area of VLF anomalies A and B the original grid was extended north 100m by establishing lines 13+50N and 14-N. Line 13-N was extended east 150m to cover the projected northern extension of Anomaly B.

At the south end of the grid, lines 10-N and 10+50-N were extended from the 10-E Baseline west to cover the projected southern continuation of Anomaly A.

A Ronka EM-16 VLF unit was then used to determine in phase and quadrature values of electromagnetic field strength expressed as dip angle percentages at each station spaced at 25m intervals. New lines were read and the old lines reread as a double check on anomalous results. Transmitter NLK near Seattle was used throughout.

In addition to geophysics in the grid area, some time was spent locating various relevant features such as old pits mineralized areas, roads, drill holes, etc. Prominent gullies were also plotted since most are considered to represent fault zones with potential importance in the localization of mineralization. Results of the surface location survey are shown on Plate No. 5. One mineralized rock sample was taken and analyzed geochemically. Results are detailed on Appendix 1.

In addition to the main area of interest discussed above, considerable time and effort was spent trying to locate



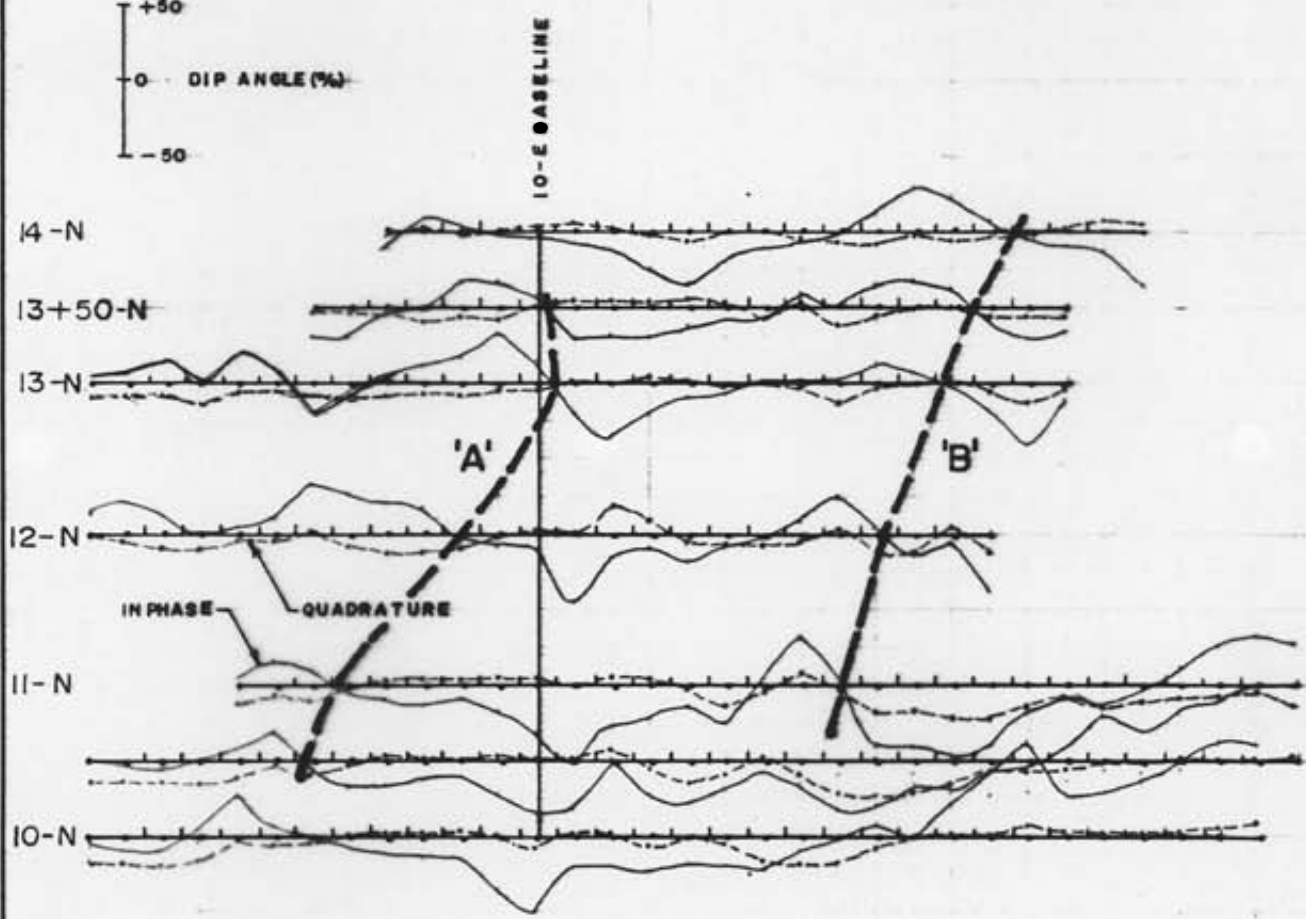
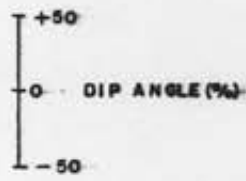
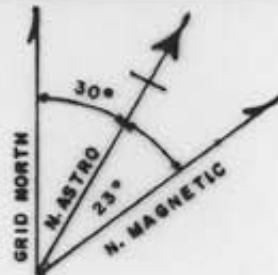
TO TRANSMITTER NLK



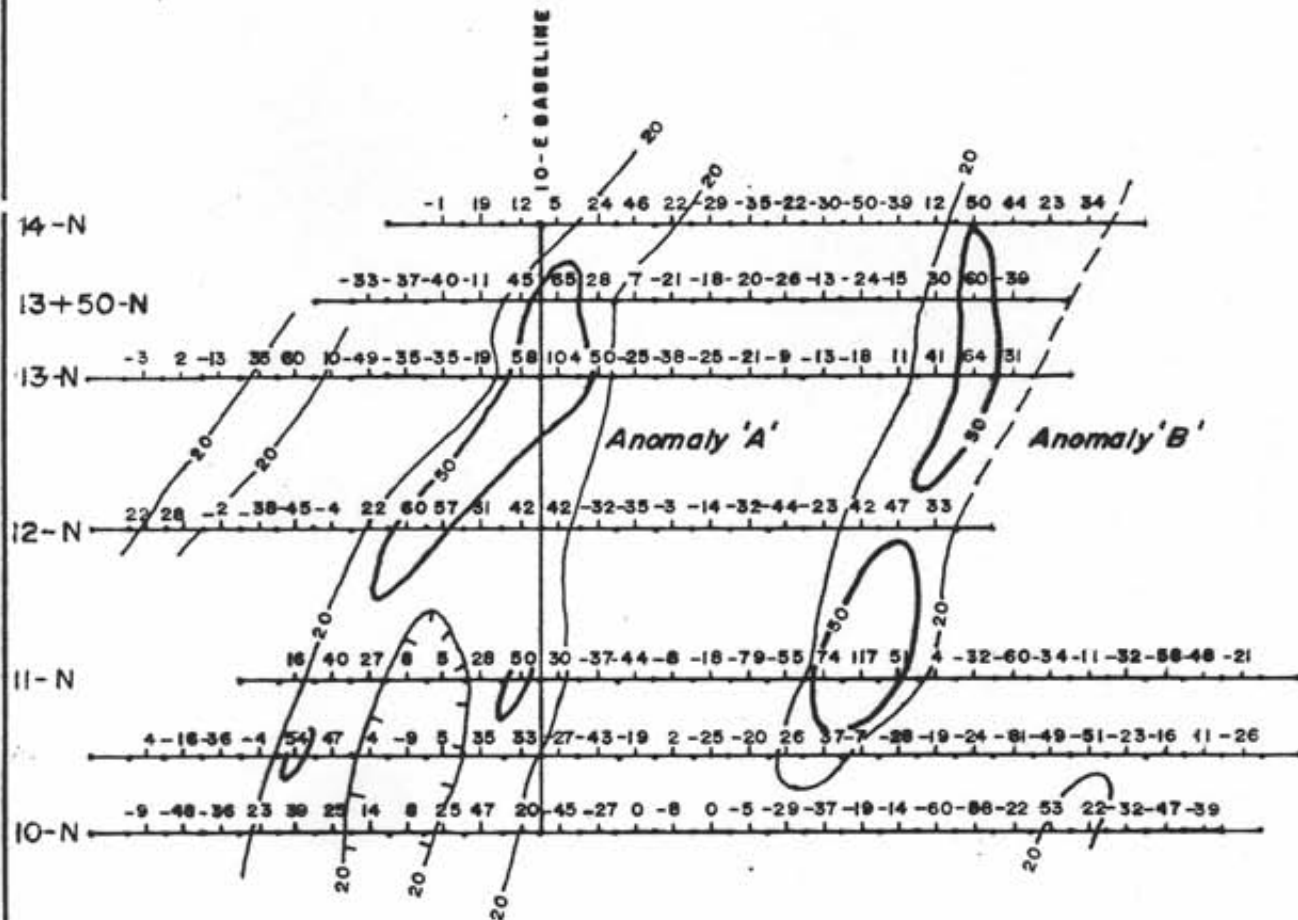
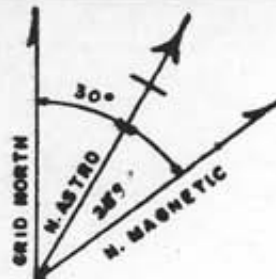
PLATE NO. 3

TOD MINERAL CLAIM
 KAMLOOPS B.C. NTS 02V10E
 COMPILING OF PROCEES DATA
 FROM KA-10 VLF SURVEY

J.D.M. 1:5000 1004-02-20



<p>PLATE NO. 3</p>		
<p>TOBI MINERAL CLAIM KAMLOOPS B.C. NTS 92V/14 E</p>		
<p>DIP ANGLE PROFILES RONKA-16 VLF SURVEY</p>		
<p>J.D.M.</p>	<p>1:5000</p>	<p>1984-02-28</p>



TO TRANSMITTER NLK



PLATE NO. 4

TONGUE MINERAL CLAIM
KAMLOOPS B.C. NTS 92V14 E
CONTOURS OF FILTERED DATA
RONKA 16 VLF SURVEY

J.D.M. 1:5000 1984-02-28

an old pit that according to a report by the G.S.C.¹, contained a strong sphalerite vein. A fairly thorough surface examination was made covering the southern third of the TOQ 1 claim, and the area between the southern claim boundary and the Trans Canada Highway. (Plate No. 2). All this area is gently sloping, open and amenable to prospecting, but no trace of the old pit was found. As a last resort the position of this showing as illustrated on G.S.C. Map 1010A was plotted on the 1:50000 scale topographic map and located in the field relative to a recognizable map reference point. (Plate No.2). No physical evidence of trenching or mineralization was found here. Two short lines of VLF readings were taken to cover the immediate area. Results are shown on Plate No. 6.

DISCUSSION OF RESULTS

The recent VLF survey served to confirm previous anomalous results and to extend the strike length of both Anomaly A and B by 200m as illustrated by Plates 3 and 4.

Anomaly A, as defined by the 20 contour (Plate No. 4) has a strike length of over 400m and is open in both directions. At the south end Anomaly A splits into two parallel branches for 150m and has an overall width of 175m. At the north end the anomaly weakens and narrows to 50m and is expected to terminate against the Copper Creek Intrusion immediately north of line 14-N. The strongest portion of Anomaly A as indicated by the 50 contour extends from line 12-N to line 13+50-N, averaging about 35m in width.

Anomaly B has an indicated strike length of 400m and an average width of approximately 70m. This anomaly is open to the north and possibilities are good for extension in this direction. However, extension by geophysics may be impossible due to the indicated capping of Kamloops Volcanics. Anomaly B is closed off to the south between lines 10-N and 10+50-N, but may pick up again along strike. The strongest portion of the anomaly extends from line 10+50-N to 14-N and varies from 25 to 55m in width.

Plates 3 and 4 illustrating respectively the conductive axes as determined from dip angle profiles, and the contoured values of data filtered according to the Fraser algorithm, show an excellent correlation between conductors and filtered values above the 50 contour.

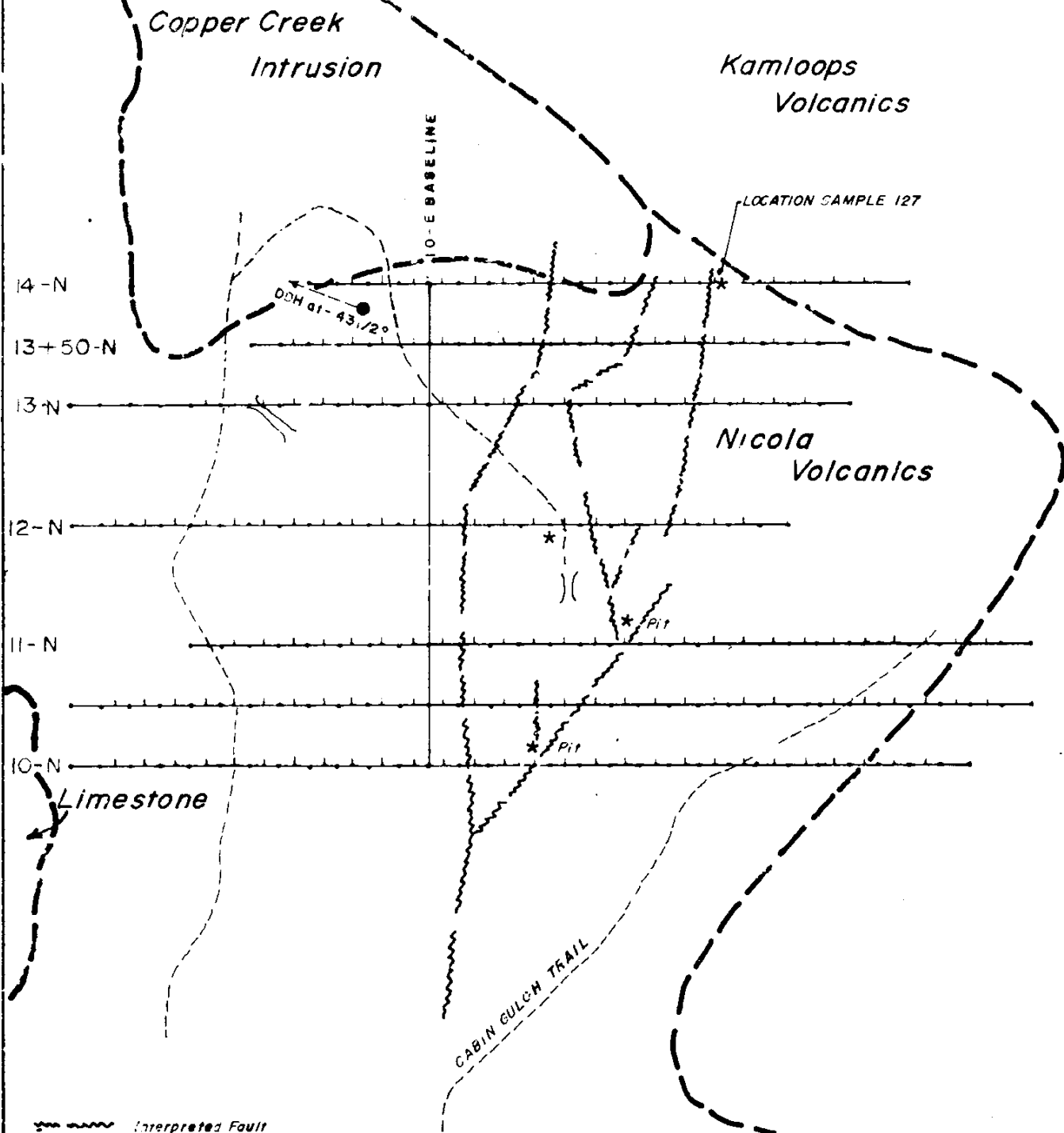
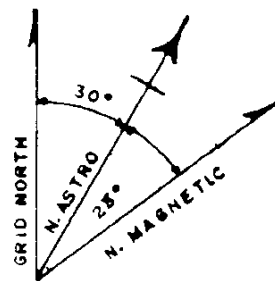
Results of the VLF survey over the suspected zinc showing are shown in profile form on Plate No. 6. Only very weak positive in phase dip angles were obtained. No definite conductivity is indicated in the very restricted area tested.

Regarding property geology and structure, Plate No. 5 shows an apparent relationship between known sulphide mineralization and the zone of faulting as determined by recent mapping of prominent gullies. This same area of faulting and sulphide mineralization is also host to anomalous copper values in soil as determined by previous work³ and clearly represents a zone of low conductivity between Anomalies A and B (Plate No. 4).

It is uncertain whether the associated copper anomaly is due to down slope movement from copper mineralization manifested by Anomalies A and B, or to copper mineralization in the underlying bedrock. Physical evidence in the form of numerous copper bearing sulphide zones in the area in question favours a non transported origin for anomalous copper values, with the corollary that Anomalies A and B probably do not represent copper mineralization. The actual nature of presumed bedrock mineralization indicated by Anomalies A and B can only be speculated upon at this stage. However, as suggested previously⁶, primary mineral zoning is a possibility, consisting of a central copper zone flanked on both sides by a zinc zone (Anomalies A & B) containing sufficient conductive mineralization (probably pyrite) to give the electromagnetic response indicated. This theoretical model is supported to some degree by anomalous zinc in soil flanking Anomaly B to the west.⁶

The one geochemical rock sample taken from a sulphide zone just west of Anomaly B on line 14-N was found anomalous in all elements tested which included gold, silver, copper and zinc. Silver content is especially anomalous exceeding 200 times background, whereas the other three elements are all about 10 times the crustal average.

Geology from assessment report 6527
by W. Gruenwald



~ Interpretated Fault
* Sulphide Mineralisation

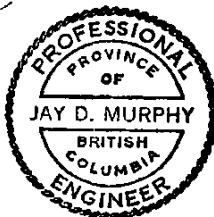


PLATE NO. 5

T061 MINERAL CLAIM
KAMLOOPS B.C. NTS 921/14 E

GEOLOGY AND STRUCTURE

J.D.M.

1:5000

1964-02-28

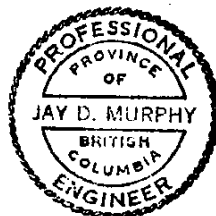
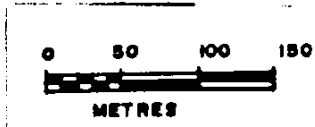
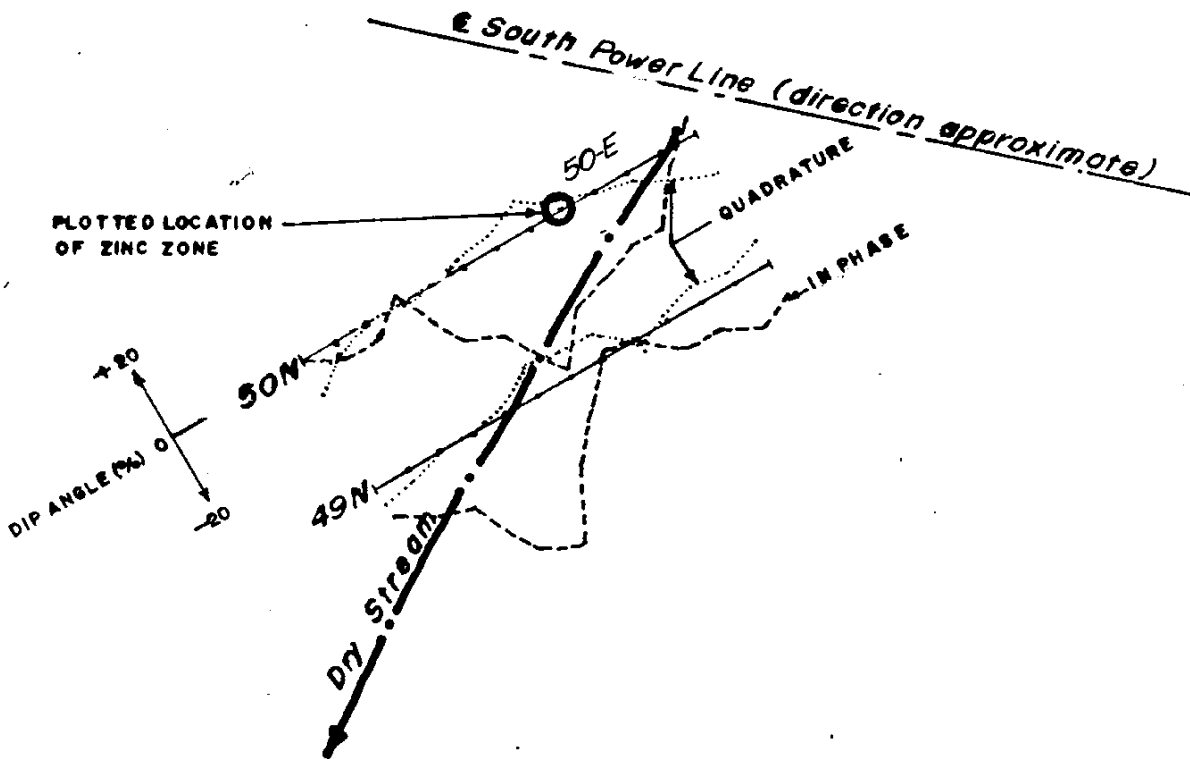


PLATE NO. 6		
TERRITORIAL CLASH KAMLOOPS M.D.		
RONKA VLF SURVEY		
ZINC ZONE		
J. D. M.	1:5000	84-03-04

STATEMENT OF COSTS

The following costs were incurred on the TOQ 1 mineral claim between the periods 1984-02-12 and 03-07. All work was conducted by Jay D. Murphy, P. Eng. and Leo Loranger, geophysical contractor.

FIELDWORK

2½ days prospecting and mapping @ \$350/day	\$ 875.00	
1 day linecutting @ \$350/day	350.00	
1 day VLF survey @ \$115/day	115.00	
4.925 km @ \$23/km	113.27	
1 day Ronka EM-16 rental @ \$20/day	<u>20.00</u>	
Total Fieldwork	<u>\$1473.27</u>	\$1473.27

TRANSPORTATION

3.5 days 4x4 rental @ \$25/day	\$ 87.50	
573 km @ \$.20/km	<u>114.60</u>	
Total Transportation	<u>\$ 202.10</u>	\$ 202.10

ASSAYING

1 rock sample preparation and analysis for Au, Cu, Zn & Ag	<u>\$ 12.20</u>	\$ 12.20
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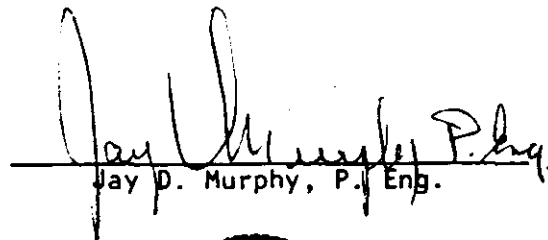
REPORT PREPARATION

4 days drafting and reporting @ \$350/day	\$1400.00	
Blueprints	2.62	
Photocopies	16.25	
Typing 11 pages @ \$4.00	<u>44.00</u>	
Total Report Preparation	<u>\$1462.87</u>	\$1462.87
TOTAL COSTS		<u>\$3150.00</u>

STATEMENT OF QUALIFICATIONS

I, Jay D. Murphy, hereby certify:

1. That I am a Consulting Geological Engineer, resident at 1335 Todd Road, Kamloops, B.C.
2. That I am a graduate from the University of Manitoba, (1954) with a B. Sc. in Geological Engineering.
3. That I have practiced my profession continuously since graduation.
4. That I am a member of the Association of Professional Engineers of British Columbia and Ontario.
5. That the information contained in this report is based on a personal examination of the subject property.
6. That I have no financial interest in the subject property.


Jay D. Murphy, P. Eng.



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