

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

'85-11-13453  
01/86

13,453

PART  
1 of 2

REPORT

on the

VIDETTE LAKE CLAIM GROUP

CLINTON MINING DIVISION

NTS 92P/2W

Lat. 51 10'

Long. 120 55'

for

TUGOLD RESOURCES INC.

Kamloops, B.C.

Owner & Operator

by

JAY D. MURPHY, P. ENG.

Kamloops, B.C.

Consulting Geological Engineer

1984 - 08 - 07

Claim Record Numbers

863, 864, 865, 876, 949,

950, 951, 952, 953, 954,

592, 1725

Crown Grant Lot Numbers

4744, 4740

TABLE OF CONTENTS

	<u>PAGE NO.</u>
INTRODUCTION	1
SUMMARY AND CONCLUSIONS	4
RECOMMENDATIONS	5
HISTORY	6
FIELD PROCEDURES	7
GEOLOGY AND STRUCTURE	8
GEOFYSICS	10
GEOCHEMISTRY	11
VEINING AND MINERALIZATION	13
ECONOMIC CONSIDERATIONS	14
STATEMENT OF COSTS	17 (a)
STATEMENT OF QUALIFICATIONS	18
BIBLIOGRAPHY	19

LIST OF ILLUSTRATIONS

PLATE NO. 1	Location Map	3
PLATE NO. 2	Claim Map	4
PLATE NO. 3	Copper Geochemistry Lots 4741, 4754, 4755, 4756	12
PLATE NO. 4	Surface Geology	Back Cover
PLATE NO. 5	Copper Geochemistry	Back Cover
PLATE NO. 6	Gold-Silver Geochemistry	Back Cover
PLATE NO. 7	VLF Survey Contours of Filtered Data	Back Cover
PLATE NO. 8	Surface Sample Locations and Underground Workings	Back Cover

ADDENDA

APPENDIX 1	Mine production statistics	20
APPENDIX 2	Ore reserve data, January 1939	21

ADDENDA

APPENDIX 3	Geochemical Lab Report G-1049	22 to 27
APPENDIX 4	Certificates of Assay K6477, K6284, K6275	28
APPENDIX 5	Geochemical Lab Report G-1042	29
APPENDIX 6	Geochemical Lab Report G-1048	30
APPENDIX 7	Geochemical Lab Report G-1052	31 to 33
APPENDIX 8	Geochemical Lab Report G-1055	34 to 35
APPENDIX 9	Geochemical Lab Report G-1062	36
APPENDIX 10	Geochemical Lab Report G-1126	37

## INTRODUCTION

The subject property is located 47 km straight line distance nearly due north of Savona, a small community on the west end of Kamloops Lake (Plate No. 1). Road access from Savona is by Trans Canada Highway 6.5 km west to the Deadman Valley turnoff, then 45 km north on a winding but well maintained gravel road to the site of the former Vidette Gold Mines Ltd. at the north end of Vidette Lake.

The property consists of two Crown Grants, 10 reverted crown grants and two claims, Vidette 1 and 2, located under the modified grid system. Vidette 1 overstakes part of Lot 4745, Vidette 2 overstakes adjacent ground to the west by about 250m. Included within the property boundary is a privately held parcel not under option to Tugold Resources Inc. This is Searcher No. 2 Fraction, Lot 4742, containing 1.5 hectares.

Following is a breakdown of the claims within the property. Areas given are exact as determined from legal survey plans, except as noted.

<u>CLAIM NAME</u>	<u>LOT NO.</u>	<u>RECORD NO.</u>	<u>AREA (HECTARES)</u>
Searcher No. 2	4755	953	19.02
Searcher No. 3	4745	864	15.16
Searcher No. 4	4756	876	14.5 (calculated)
Searcher No. 5	4739	949	7.32
Searcher No. 6	4743	951	13.72
Pioneer	4746	863	20.90
Monarch	4754	952	14.86
White Pass	4741	950	10.41
T. F. Fraction	4762	865	16.62
E. B. Fraction	4760	954	4.8 (calculated)
Searcher No. 1	4744	-	18.13
Searcher No. 1 Fraction	4740	-	6.98
Vidette No. 1	-	592	500.0
Vidette No. 2	-	1725	500.0
NOMINAL PROPERTY AREA			1162.42

Overstaked by Vidette No. 1	4.8 (calculated)
Overstaked by Vidette No. 2	50.0 (estimated)
ACTUAL TOTAL PROPERTY AREA	1108 (approximate)

The property includes the northern third of Vidette Lake, the Hamilton Creek Valley from Vidette Lake to the Coal Creek junction, and approximately five km of the Coal Creek Valley. Also included are adjacent areas of the flat and relatively featureless interior plateau. Maximum relief within the claims is approximately 200m with elevations varying from 900m at lake level to over 1100m above sea level in the plateau.

The northeast side of the valley is steep to precipitous, with many open grassy areas interspersed with mixed coniferous forest cover. Trees are generally in the 20-30cm diameter range with occasional individuals to 50cm or larger. Traversing and access is relatively easy. The southwest side of Deadman Valley, in contrast, rises sharply from Vidette Lake to the rim of the plateau, forming a steep heavily wooded scarp. Access and travel on foot is difficult in this area. The plateau itself is mainly flat, open and parklike, easily accessible to vehicles as well as by foot.

An alternate means of reaching the west side of the lake has recently been provided by a new mining access road through the plateau. This road leaves Hihium Lake road seven km west of Deadman Valley and runs approximately 12km north and east to about the middle of Vidette Lake. The road was constructed by Lakewood Mining Company Ltd. to facilitate exploration on their claim group on the southwest side of the lake. Road conditions are fair but might become difficult in wet weather since no gravel has been applied.

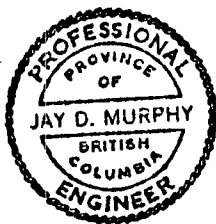
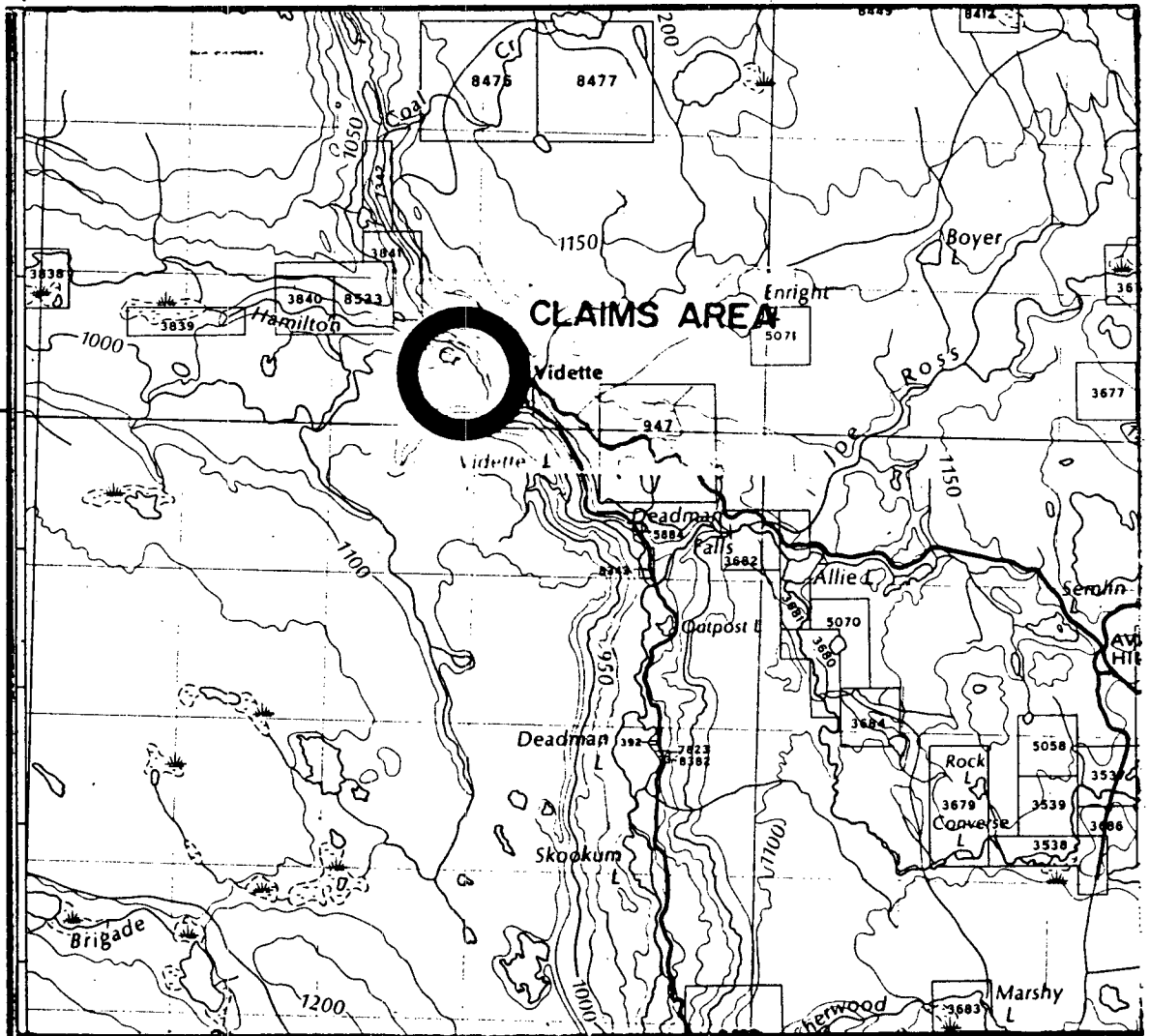
The property is well drained by Hamilton Creek, which empties into Vidette Lake, and by its' main tributaries, Coal and Yard Creeks. Exceptions are the Hamilton Creek valley between Coal Creek and Yard Creek junctions, and the final 450m north of Vidette Lake. In those sections the valley is drowned and swampy and the stream sluggish and meandering. Several abandoned beaver dams contribute to the flooded conditions.

Regional geology is relatively simple. The predominant unit is flat lying Miocene age basalt having great areal extent throughout the interior plateau, covering approximately 7000 square kilometres within NTS92P alone. Locally, this unit has a thickness of at least 30m near Deadman Falls, but little is known regarding thickness elsewhere.



121°

51°10'



TUGOLD RESOURCES INC.

VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W

LOCATION MAP

J.D.M

1:100 000

84-07-24

PLATE NO. 1

Where erosion has removed the basalt, as in the Deadman Valley and large areas around Bonaparte and Canim Lakes, greenstones of the Nicola Group (Triassic) are exposed, intruded by granitic rocks of the Thuya and Takomkane batholiths of Triassic or Jurassic age. Vidette Lake appears to be situated near the southwest contact of the Thuya Batholith which has an east west dimension of approximately 70 km, extending east to the North Thompson Valley, by 45 km north south.

Outcrops within the claims area are scarce, being confined mainly to the steep valley walls, lake shore, stream channels and road cuts. Overburden cover is considered light (1-2m), especially in the plateau areas. Deeper cover may occur in valley bottoms and fault zones. For example, hole CP-831 was collared on the downdropped side of a normal fault where overburden thickness was found to exceed 25m. (Plate No. 4)

The Deadman River valley, especially the chain of lakes from Vidette at the head of the valley to Mowich Lake, the most southerly, is extensively utilized as a tourist and recreation area. Much of the upland area north and east of Vidette Lake is range land for local cattle ranching operations. There are two active logging operations within the general area but these activities exclude the Deadman Valley itself and the claim group under discussion.

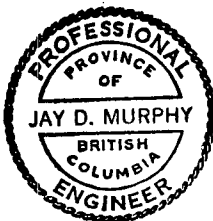
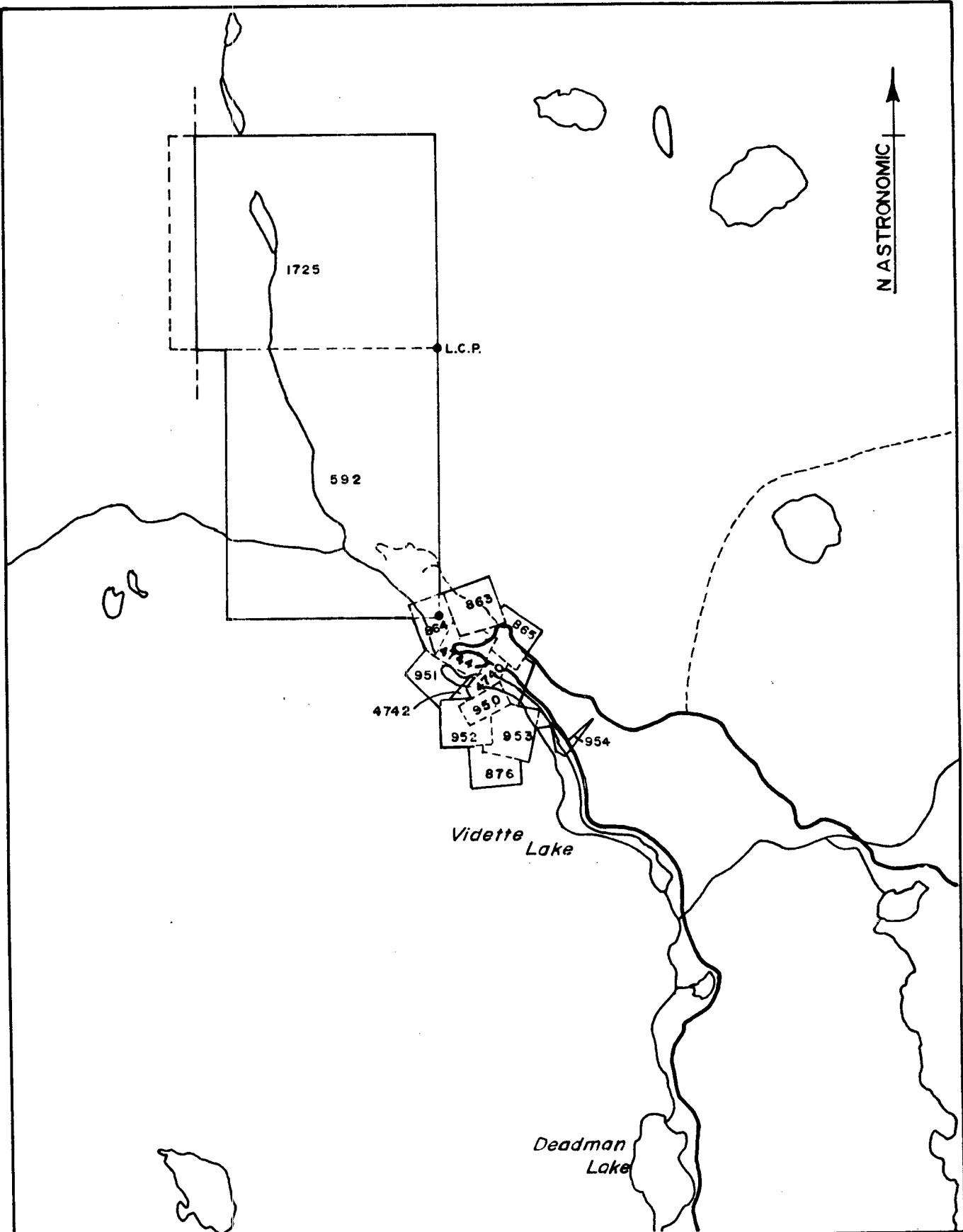
The surface rights to Lots 4744, 4746 and 4762 are held by L. Woolman of Campbell River, B.C. Work is in progress to develop this area for tourist purposes.

Current work on the Vidette property has involved surface geological mapping by the writer and fieldwork by Tugold personnell that included grid preparation, ground geophysics, soil geochemistry and prospecting. The combined objective was to locate geophysical and geochemical anomalies and to gain a better geological understanding to assist in the interpretation of these anomalies.

Survey work was concentrated on the Vidette 1 claim where little previous work had been done.

Geological work also emphasized Yard Creek, which is interpreted to represent a fault zone, and adjacent areas where numerous outcrops of felsic intrusive rock are found. The objective was to determine the magnitude and direction of fault movement by mapping offset portions of the same intrusive. This data could be pertinent to solving movement on the Big Fault and location of the faulted portion of the Broken Ridge vein.

Combined results of the total fieldwork constitute the subject of this report.



TUGOLD RESOURCES INC.

VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W

**CLAIM MAP**

J.D.M

1:50000

84-07-24

PLATE NO. 2



### SUMMARY AND CONCLUSIONS

Current work has outlined some areas of interest that warrant further investigation. These include VLF and geochemical anomalies and vein structures on surface yielding encouraging assays.

A review of the records pertaining to the Vidette Gold mine operation gives encouragement for the location of additional ore below the limits of previous mining. Between 4th and 5th Levels new ore could conservatively be expected to contain \$36000 per vertical metre in gold values alone. Below 5th Level potential new ore in all known veins, including the faulted Broken Ridge vein, is calculated to contain approximately \$135,000 per vertical metre in gold. These calculations are based on the past production of the various vein structures and a grade equivalent to average mill heads during the life of the mine.

A careful study of ore reserve calculations made in 1939 by the mine staff indicate probable reserves of 7500 tons in place between 2nd and 5th Levels. Gold content is valued at \$2.916 million.

Records show that mill tailings total at least 50000 tons with a grade of .055 oz/ton. This represents a value of \$1.283 million. Presumably this material went directly into Vidette Lake and should be readily recoverable. The feasibility of doing so remains to be proven.

In summary, there are good opportunities for developing additional ore both from previously mined veins in the mine area and from new zones of interest outlined by recent work.

The following conclusions are taken into consideration in making subsequent recommendations.

The majority of rock outcrop in the area covered has been seen and mapped.

Gold soil geochemistry appears effective even where soil development is poor.

Silver values enhance gold anomalies to a degree but provide too little additional information to warrant cost of analysis.

Copper soil geochemistry is not effective on steep hillsides with poorly developed soil but appears useful in flatter areas where normal soil profile occurs.

Ground magnetics has not been helpful in locating areas of economic interest.

Gold bearing quartz veins and associated shears do not necessarily respond to VLF methods. The Sylvanite vein zone, for example, was not picked up by VLF.

RECOMMENDATIONS:

The recommended work programme is divided into three phases as follows:

Phase 1 - Surface surveys, sampling and diamond drilling.

Phase 2 - Mine dewatering, camp construction and surface installations.

Phase 3 - Underground hoist installation and shaft rehabilitation.

Phase 1

- (1) With reference to Plate No. 6, Anomaly A, take additional soil samples as required to try and prove the continuity of this feature and either extend it or close it off to the northwest. Analyse for gold only.
- (2) Take additional samples as required to prove the continuity of Anomaly D and check for the possibility that Anomaly B can be extended to join D. Analyse for gold only.
- (3) Examine the upslope edge of Anomaly B for any vein exposures that might have been overlooked.
- (5) Open up the vein zone associated with monzonite intrusive at the upper switchback to obtain fresh samples of vein material at sample location 172, Plate No 8. Test the location of samples VID 1 and VID 11 in the same manner.
- (6) Clean out and examine the trench containing suspected tetrahedrite mineralization at sample location 180, Plate No. 8.
- (7) A small diamond drill programme could be recommended to prove the continuity of the Sylvanite vein and test soil Anomaly B, but it would be preferable to complete the foregoing recommendations in case additional drilling is proven warranted by this work.

Drilling the Sylvanite vein and Anomaly B might also provide information helpful in interpreting the significance of VLF Anomaly 1.

Phase 2

- (1) Grade and repair approximately 1.5 km of old access trail from main logging road near the Coal Creek - Hamilton Creek junction to North Portal adit.
- (2) Muck out the Main Shaft collar and North Portal adit entrance to provide ventilation and two means of access to First Level shaft station.
- (3) Conduct a preliminary ventilation survey to determine quality and flow characteristics of the air underground, on and above First Level.
- (4) Collect and analyse a mine water sample as required by Ministry of Environment to obtain a dewatering permit.
- (5) Muck out the North Portal adit from collar to First Level station and provide ground support as required in unstable areas.
- (6) Establish camp and cookery facilities suitable for 6 to 10 men. Provide surface installations and services required to support an underground operation.
- (7) When a permit is obtained from Ministry of Environment, install pumps and dewater Main Shaft and Second Level workings.
- (8) Establish a temporary sump at Second Level station and install pump to handle water from Second Level to surface. Install a second, portable pump of similar capacity to dewater below Second Level, pumping to the Second Level sump.
- (9) Conduct a preliminary inspection of the dewatered portion of the Main Shaft to determine timber condition, ground stability, etc.
- (10) Continue dewatering to below Fourth Level.

Phase 3

- (1) Slash the North Portal adit to a suitable cross section to provide access for an underground hoist and to serve as a future main haulage drift. Drive a short connector drift to the underground hoistroom location and slash out this excavation. Drive a rope raise to connect with the Main Shaft above First Level.
- (2) Install hoist, shaft conveyances and auxiliary equipment to permit underground diamond drilling on Fourth Level to locate the Broken Ridge vein structure at depth.
- (3) Map the topography, geology and structure of the underground workings as dewatering and hoist installation progresses.

Cost Estimates

Phase 1

(1) (2) & (3)			
70 fill in sample collections @ \$5.00	\$ 350.00		
70 sample preparation & Au analyses @ \$6.30	<u>441.00</u>		
TOTAL	\$ 791.00	791.00	
(4) 9 km soil sampling at 25m intervals			
350 sample collections @ \$5.00	\$1750.00		
350 sample preparations and analyses for Au & Cu @ \$7.60	<u>2660.00</u>		
TOTAL	\$4410.00	4410.00	
(5) 8 man days drill & blast @ \$100/day	\$ 800.00		
8 days gas plugger & steel rental @ \$50./day	400.00		
Blasting supplies	250.00		
1 day chip sampling @ \$100.	100.00		
20 Au-Ag assays @ \$13.75	<u>275.00</u>		
TOTAL	\$1825.00	1825.00	
(6) 4 days hand mucking & sampling @ \$100	\$ 400.00		
10 Au-Ag assays @ \$10.50	<u>105.00</u>		
	\$ 505.00	505.00	
(7) Allow for 550m of BQ or NQ surface drilling @ \$65./m			35750.00
			<hr/>
	Sub Total		\$43281.00
	10% Contingencies		4328.00
			<hr/>
	TOTAL PHASE 1		\$47609.00
	say		<u>\$48,000.00</u>

Phase 2

(1)	Mobilize & demobilize D-6 Cat & blade from Clinton - 4 hrs. @ \$63.00	\$ 252.00	
	12 hrs. Caterpillar rental @ \$100.00	<u>1200.00</u>	
	TOTAL	\$1452.00	1452.00
(2)	Mobilize & demobile from Kamloops 5 hrs. @ \$63.00	\$ 315.00	
	Standby: 4 hrs. @ \$39.00	156.00	
	8 hrs. backhoe rental @ \$100.00	800.00	
	Supervision & transportation	<u>400.00</u>	
	TOTAL	\$1671.00	1671.00
(3)	Ventilation surveyer equipment	\$ 286.00	
	Labour & transportation	<u>400.00</u>	
	TOTAL	686.00	686.00
(4)	Collect mine water sample	\$ 100.00	
	Analysis	<u>120.00</u>	
	TOTAL	\$ 220.00	220.00
(5)	Muck & haul 500 tonnes @ \$10/tonne	\$5000.00	
	Timber & rockbolt as required	<u>2000.00</u>	
	TOTAL	\$7000.00	7000.00
(6)	(a) Tent camp complete including cookery, dining room, bunkhouse and office tent	\$7900.00	
	(b) Camp water supply	1067.60	
	(c) Propane supply	720.00	
	(d) Wash house trailer rental & installation	2068.75	
	(e) Septic tank & field	5000.00	
	(f) Radio telephone installed	1000.00	
	(g) Power supply including 6kw single phase & 15kw 3-phase generators	7562.00	
	(h) Lamp room & first aid	3971.40	
	(i) Safety ropes and scaling bars	392.72	
	(j) Cookery labour & supplies for 3 months	<u>15700.00</u>	
	TOTAL	\$45382.47	45382.47
(7)	3 months submersible pump & hose rental	\$1884.00	
	Labour	<u>480.00</u>	
	TOTAL	\$2364.00	2364.00
(8)	Second Level sump and pump: Installation	\$ 300.00	
	Labour	<u>480.00</u>	
	TOTAL	\$ 780.00	780.00
(9)	Shaft inspection	\$ 240.00	240.00
(10)	81 x 2 man days labour @ \$120.00	\$19440.00	19440.00
			<hr/>
	TOTAL PHASE 2		\$79235.47
	say		<u>\$80000.00</u>

Phase 3

(1)	Slash & service 245m of adit @ \$150/m	\$36750.00	
	50 m access drift @ \$63./m <sup>3</sup>	22050.00	
	Slash 162m <sup>3</sup> of hoistroom @ \$63./m <sup>3</sup>	10206.00	
	18m of 1.2 x 1.8 rope raise @ \$300./m	5400.00	
	TOTAL	<u>\$74406.00</u>	74406.00
(2)	1 year lease purchase of Rand double drum 36 x 24 hoist (estimated)	\$15000.00	
	Hoist foundation	5000.00	
	Sheave wheels & shaft conveyors	7000.00	
	2000' of 3/4" hoisting cable @ \$2.50	5000.00	
	Electrical installations & controls	5000.00	
	TOTAL	<u>\$37000.00</u>	37000.00
(3)	15 days underground mapping & sampling @ \$400.	\$6000.00	
	100 assays for Au & ag @ \$13.75	1375.00	
	TOTAL	<u>\$7375.00</u>	7375.00
			<hr/>
	TOTAL PHASE 3		\$118781.00
	say		<u>\$119000.00</u>
			<hr/>
	TOTAL RECOMMENDATIONS		<u>\$247,000.00</u>

## HISTORY

Mineral exploration in the Vidette Lake area began at least as early as 1926, the White Pass mineral claim being located in September of that year. Most of the reverted crown grants and the two existing Crown Grants now held by Tugold Resources Inc. were located in May and June of 1931.

Reports indicate that at or about this time the key claims were optioned by Douglas B. Sterrett and Associates of Kamloops. Initial exploration was done on the Dexheimer Vein (or Trans Lake Area) on the west side of Vidette Lake. Results here were discouraging as near surface values were found to be less than ore grade, but with the discovery of the rich Tenford and Broken Ridge veins on the east side, the property made rapid progress towards production. During this development stage a reported 335m of underground work was completed, a small test mill built, and a test run of 517 tons of development muck was treated averaging .79 ounces of gold per ton.

Vidette Gold Mines Ltd., (N.P.L.) was incorporated in May 1933 with an authorized capitalization of one million shares. The first shipment of concentrates to the Tacoma smelter was made in September 1933.

From date of incorporation until May 1939 underground mine development included 199m of three compartment inclined shaft, 289m of winzes, 4984m of drifts and crosscuts and 1478m of raises. Underground diamond drilling totalled 474lm.

From incorporation to closure in 1940 the Vidette Mine produced 54,199 tons of ore with a recovery of 29,869 ounces of gold, 46,573 ounces of silver and 48 tons of copper. At today's prices (1984-07-12) this represents a gross value of 14.1 million dollars.

The Vidette Mine has been inactive since 1940 and consequently is flooded to lake level, which corresponds to an elevation just below first mine level. The area has seen sporadic interest over the past 10 or 15 years but all work has been confined to surface exploration. The most recent programme was carried out by Cons. Paymaster Resources Ltd. in 1983. Three diamond drill holes totaling 1016.8m were drilled from surface to investigate the area between the Vidette Mine workings and the Savona Mine area to the northwest. (Plate No. 4). No ore grade intersections were cut and Paymaster subsequently dropped their option on the property, although they still own ground in the immediate area.

Tugold Resources Inc. acquired the 10 reverted crown grants, two Crown Grants and Vidette 1 in early 1984. The Vidette 2 claim was staked for Tugold in late March of this year.

## FIELD PROCEDURES

### (a) Grid Preparation

A new grid system was established covering the southeast corner of Vidette 1 claim and oriented with cross lines roughly perpendicular to the northwest strike of topography, geology and known gold bearing structures (Plate No. 4). The northwest portion of this grid overlaps the south end of a previously established grid oriented with cross lines approximately east-west. In the following discussion the new grid will be referred to as the Tugold Grid, the old grid as the Main Grid.

The Main Grid was re-established and extended as required. A new baseline (7+50-W) was established to correct errors in the old system.

Line spacing on the Tugold Grid was set at 50m with 25m station intervals. On the Main Grid cross lines are 100m apart with 25m station intervals. In all cases control was by compass and chain with distances slope corrected.

A stadia survey approximately 5.4km long was run, closing on the southwest corner pin of Lot 4746 with an error of 30.36m. Purpose of the survey was to accurately locate both grid systems relative to topography, and tie in important features such as roads, adit portals etc. The network of over 50 stadia stations established also provided control for geological mapping outside the gridded area.

On the Tugold Grid 1.75km of baseline and approximately 4km of cross lines were established. On the Main Grid approximately 3km of baseline and 12km of cross lines were established or re-established.

### (b) Geology

Part of the surface mapping was done using a Forestry map enlarged from 1:31680 to a scale of 1:5000 as a base map. The theoretical positions of the grid lines were added to provide mapping control. Difficulties were encountered when several of the lines could not be correlated with topographic features as found in the field. Geological mapping was therefore postponed until completion of the stadia survey previously discussed, which successfully resolved these discrepancies. During the interim a proper base map on 1:5000 scale was prepared by Nadir Mapping Corporation of Vancouver. This, together with stadia survey data, provided excellent control for subsequent mapping concentrated on Yard Creek. Complete results are shown on Plate No. 4.



(c) Geophysics

Ground magnetics consisted of reading all stations on the Tugold Grid with a Sharp MF-1 fluxgate magnetometer measuring vertical field in gammas relative to an arbitrarily selected base. Results failed to establish any coherent patterns, and are not included with this report.

The same grid was surveyed with a Ronka EM-16 unit using station NSS in Annapolis, Maryland as transmitter. Results were filtered according to the Fraser algorithm and are plotted in contour form on Plate No. 7.

The Main Grid was surveyed with a Sabre VLF instrument tuned to station NLK, Jim Creek, Washington. Contoured results are also shown on Plate No. 7. Surveys covered an area approximately 200m by 800m on the Tugold Grid and approximately one square kilometre on the Main Grid.

(d) Geochemistry

The Tugold Grid was soil sampled at 25m intervals on the cross lines. Part of the Main Grid was sampled in a similar manner. All samples were analysed by Kamloops Research and Assay Laboratories Ltd., Kamloops, B.C. for gold, silver and copper. Gold-silver results are shown on Plate No. 6, copper results on Plate No. 5.

(e) Prospecting

This work located a previously unknown adit east of the small lake on Line 12-N of the Main Grid, and surface cuts in sulphide bearing quartz west of the same lake. A few additional surface workings were found and sampled within the Main Grid.

GEOLOGY AND STRUCTURE

Rock types as mapped consist essentially of two units, dark green andesites of the Triassic Nicola Group, and pinkish grey quartz-monzonite intrusive probably related to the nearby Thuya Batholith of Triassic or Jurassic age. The volcanic unit can usually be subdivided into massive or porphyritic andesite on the basis of the presence or absence of augite phenocrysts.

Quartz-monzonite is a fairly uniform, medium grained, equigranular rock, usually carrying 5% pyrite. Numerous related varieties, usually occurring as narrow dikes, include both fine grained felsitic rocks and coarse grained crowded porphyries. All felsic rocks are lumped together as Unit 4 on the surface geology map (Plate No. 4).

No Tertiary basalts were found within the area mapped although this rock type was noted on the east side of Coal Creek valley about a kilometre north of the small lake on the Main Grid.

Nicola Volcanics were observed in nearly every outcrop. The augite porphyry variety appears more prominent in the topographically lower areas, while the massive variety dominates the higher elevations. Reports indicate much of the underground workings are in augite porphyry and this rock type was also intersected near the bottom of drill hole CP-831, the deepest of the three surface exploration holes drilled last year. Several readings on what appear to be flow bands indicate that Nicola volcanics strike northwest and dip east at moderate angles.

The larger felsic units, described as pyritic quartz-monzonite, are relatively small plugs 100m to 250m long by 50m to 80m wide. There is a spatial relationship between these intrusives and linear features interpreted as fault zones, such as Yard Creek and Hamilton Creek valley.

There is abundant evidence of widespread and complex faulting throughout the study area. Slickensided fault surfaces with a variety of attitudes are common. Numerous vertical or near vertical rock scarps several tens of metres high occur in valley walls and bordering linear creek beds. The major fault structures as proven by underground work and interpreted from diamond drilling and mapping, are illustrated on Plate No. 4.

The structural interpretation shown postulates a major north-northwest fault zone represented by the valleys of Hamilton and Coal Creek. This major break has been offset by 700m of left hand movement along the west-northwest striking Yard Creek fault between the junction of Yard Creek and Coal Creek. Yard Creek fault merges with the Hamilton Creek structure from Yard Creek to Coal Creek junction, at which point it resumes a west-northwest strike to follow Hamilton Creek west of the main valley. Coal Creek valley represents the northward continuation of the offset portion of Hamilton Creek fault.

The foregoing interpretation is highly speculative and is based more on topography than geology, but it does explain factual observation relevant to both fields of study.

Outcrop mapping both sides of Yard Creek, combined with drill hole data, has been interpreted to indicate 75m of left hand offset along the postulated Yard Creek fault. This is based largely on one good observation of contact attitude on the west side of the intrusive north of the creek. This data was used to interpret the other three contacts both sides of Yard Creek as illustrated. (Plate No. 4). An interpretation indicating no offset at all might be equally valid.

Accepting the interpretation indicating 75m offset along Yard Creek fault, it is necessary to reconcile this with the proposal that the same structure has produced 700m displacement of the Hamilton Creek fault valley. This can be explained by an early, major displacement along the Yard Creek-Hamilton Creek fault system followed by emplacement of felsic intrusives and a later fault movement in the same left hand sense, but of smaller magnitude.

Previous work by the writer, based on government and company reports on the Vidette mine, divided the principal faults into two systems.

System 1 faults strike northwest sub parallel to the vein systems, but dip southwest at 70 , opposite to the flatter, northeast dipping veins. Movement has been described as rotational with measured displacements up to 20m.

System 2 faults strike N-80-W to east-west, and dip north at 45 to 80 . One such structure has a reported horizontal displacement (sense not reported) of 67m. The Yard Creek fault is also a System 2 structure so the interpreted offset of 75m compares closely with measured displacement on a similar structure as noted above.

The Big Fault is a prominent and important structure in the mine workings and, while considered a System 1 fault, has a steep dip to the northeast, opposite to the southwest dip more characteristic of this system. The two parallel faults as interpreted from intersections in holes CP-831, 2 and 3, are parallel to the Big Fault in strike and dip.

#### GEOPHYSICS

Results from the Ronka EM-16 survey were filtered using the Fraser method and results, in contoured form, are shown on Plate No. 7. Maximum values (over 50) occur as several small one line anomalies widely spaced over a length of 600m trending N-75-W. This zone, referred to as Anomaly 1, closely parallels the adjacent Hamilton Creek valley and has a close spatial relationship with the east wall of this valley. This section of Hamilton Creek valley as discussed under "Geology and Structure", represents a strong zone of movement as a result of merging of the Hamilton Creek and Yard Creek faults. It is apparent from Plate No. 7 that Anomaly 1 is situated on strike with the section of Hamilton Creek west of Coal Creek junction, and which is interpreted as the continuation of Yard Creek fault.

The foregoing data strongly suggests Anomaly 1 represents faulting or shearing related to the main Hamilton Creek structure between Yard Creek and Coal Creek. This is supported by the fact that outcrops in the anomalous area show no significant mineralization, but shearing was noted that closely parallels the adjacent Hamilton Creek valley.

Results from the Sabre VLF survey of the Main Grid are also plotted in contour form on Plate No. 7. On the east side of the 7+50-W Baseline anomalous north-south trends with maximum values exceeding 30, and occasionally 40, extend the full length of the surveyed area. The size, continuity and relative strength of these zones suggest a geological or structural source rather than mineralization. There is little rock exposure to assist interpretation.

West of the baseline the same north-south trend persists over 800m of strike length but includes one better quality anomaly (Anomaly 2) with values exceeding 50 for 200m of strike. Anomaly 2 is located adjacent to the east wall of Coal Creek valley which closely parallels the plus 30 portion of the anomaly. Insufficient outcrop was found within the area of Anomaly 2 to assist in making a realistic assessment regarding the economic significance of the feature.

The data from both VLF surveys were reduced according to an algorithm, also developed by Fraser, that permits the filtered data to be plotted at various depths that together constitute a pseudosection similar to induced polarization results. Sections were contoured to indicate the relative strength, size and attitude of anomalous zones.

Both Anomaly 1 and Anomaly 2 appear in section as relatively strong features with steep to moderate easterly dips and good persistence to approximately 100m. Anomaly 1 is the smaller feature with widths to 30 or 40m compared to 80 or 90m for Anomaly 2.

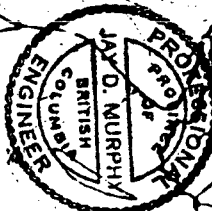
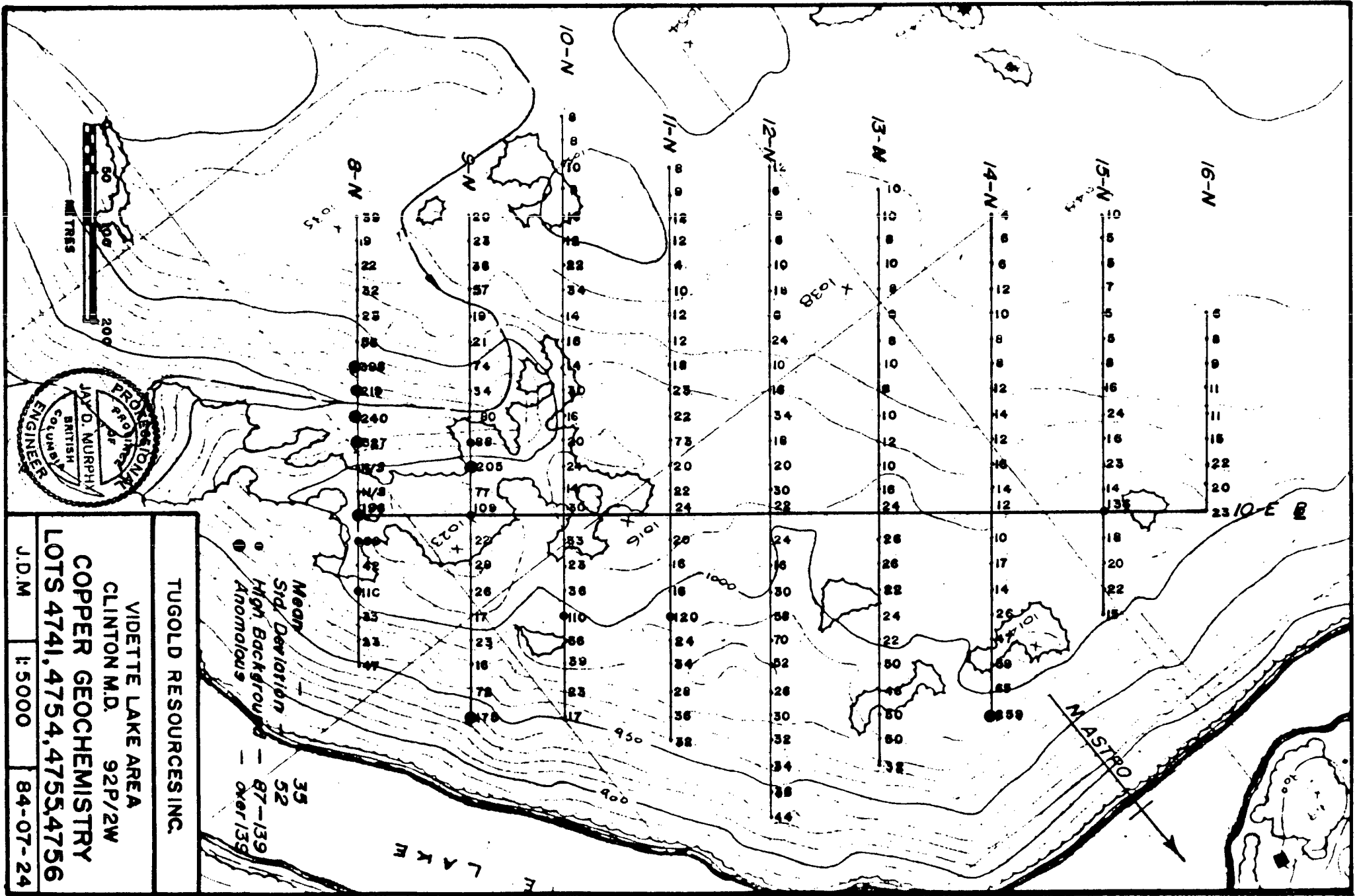
#### GEOCHEMISTRY

For the sake of completeness the results of geochemical sampling done last year for the owner of reverted crown grants on the west side of Vidette Lake are included here. These claims (Lots 4741, 4754, 4755 and 4756) are now part of Tugold's property. Results are detailed in a separate report for Whopper Holdings Ltd. and R. Carey by Dirk N. Moraal dated June 1983.

A total of 203 soil samples were taken and analysed for copper. Statistical calculations gave a mean value of 35ppm and a standard deviation of 52ppm. Plate No. 3 illustrates the plotted results. The only concentration of anomalous values occurs in a topographically low area, strongly suggesting a seepage anomaly. This could easily be checked by analysing a number of anomalous samples for cold extractable (Cx) copper. A high ratio of Cx copper to total copper would indicate that the anomaly is a hydromorphic feature.

With respect to current work, copper values from over 200 soil samples from both grids are plotted on Plate No. 5. Most copper values greater than 100ppm are concentrated in that portion of the Tugold grid corresponding to the steep slope, much of which is talus covered, immediately east of Hamilton Creek valley.

In many cases copper values for a particular line increase down slope, while values less than 100ppm are confined almost exclusively to the flatter areas east of the sidehill. This suggests a relationship between copper values and topography and the possibility of two populations within the sample group. An arithmetic histogram of grouped data using a 20ppm interval does in fact indicate two populations separated at 250ppm. A line was drawn separating sample values at the arbitrarily chosen 100ppm point, thus dividing results into Population 1 and Population 2 data, the former



TUGOLD RESOURCES INC.

VIDETTE LAKE AREA  
 CLINTON M.D. 92P/2W  
 COPPER GEOCHEMISTRY  
 LOTS 4741, 4754, 4755, 4756

J.D.M. 1:5000 84-07-24

PLATE NO. 3

representing lower values corresponding to the flatter, most easterly portion of the Tugold area, and all values from the Main Grid. Population 2 data represents the distinctly higher copper values found on the sidehill. The dividing line closely parallels contour lines between lines 5+50-N and 9-N, which also indicates a relationship between topography and copper values. A possible explanation for this is that the flatter areas adjacent to the sidehill has a fairly distinct B horizon, used as the sample medium. In contrast, much of the sidehill area is talus covered and it was necessary to excavate fairly deep to reach material fine enough for a suitable sample. This material may have become enriched in the heavier minerals, including copper sulphides, through the natural process of mechanical weathering, the lighter, fine, barren material being removed by the winnowing action of wind and/or carried away by surface water. In any case, samples taken from the sidehill represent mechanically transported, non residual material and as such, cannot be equated with B zone samples from a normally developed soil profile.

A statistical treatment of the two population groups gave the following results:

	<u>Population 1</u>	<u>Population 2</u>
No. of samples	96	108
Mean	82	258
Standard Deviation	68	194
High Background	150 - 218	452 - 646
Threshold	218	646
Anomalous	over 218	over 646

Using these parameters the only significant anomaly in the Population 1 area is around the small lake between lines 11-N and 13-N, Main Grid. Here there is a small area (100m by 200m) of high background supporting the one anomalous copper value of 357ppm. Single point anomalies on line 9-N and 10-N are not considered significant.

Regarding Population 2 samples, only a few high background and anomalous values are found scattered over the sidehill area of the New Grid. Only the group of three anomalous copper values on lines 6-N and 6+50-N, all with high gold values, is considered significant. This small anomaly probably represents bedrock mineralization coincident with or upslope from these sample points.

The one anomalous copper value on line 3-N is probably related to dump material from the Savona main adit.

Plate No. 6 illustrates the gold-silver geochemistry of the property representing the same sample group analysed for copper. Only those gold values of 10ppb or greater are plotted. Only anomalous silver values are shown.

In making the statistical calculations for gold, values exceeding 100ppb were excluded in order to get meaningful results. These six high values apparently represent a separate sample population characterized by strong gold values with little associated silver.

Four anomalous zones designated A, B, C, and D are outlined on Plate No. 6. Anomalies consist primarily of gold values enhanced to some degree by silver. All anomalies occur within the Tugold grid. Anomalies A, B, and C lie within the Population 2 area of copper values while anomaly C is associated with Population 1 values.

The upslope edge of Anomaly A shows excellent correlation with the plotted and projected position of the Sylvanite vein, as shown on Plate No. 4, and indicates a possible 50m extension of this structure.

Anomaly B is well defined on Plate No. 6 and is backed up by three anomalous copper values as shown on Plate No. 5.

Anomaly B is approximately parallel to Anomaly A and the Sylvanite vein. This anomaly probably represents a gold bearing structure parallel to the Sylvanite vein, or a continuation of this vein offset 100m west along a left hand fault. Anomaly C is well defined for a length of 150m and is open both ends. There is a definite correlation between Anomaly C and topography as well as with the north end of VLF Anomaly 1. This could be interpreted two ways, as a reinforcement of the validity of Anomaly 1 or, as being a function of topography and as such, having little economic significance at all. The obvious correlation of Anomaly C with base of slope, and a trend that parallels topography rather than known gold bearing structures, leads to the conclusion that this feature is the result of the accumulation and enrichment of auriferous material from higher elevation and has little economic significance per se.

Anomaly D consists of four high gold values (40 to 150 ppb), with no associated anomalous silver values, forming a discontinuous zone 250m long. The interpreted trend of Anomaly D roughly parallels the Sylvanite vein but a different and distinct type of mineralization is suspected.

#### VEINING AND MINERALIZATION

Plate No. 4 illustrates the known quartz veins on the property, both the proven ore making structures and those with economic potential. The veins are plotted from a variety of mine plans so the approximate elevation of each is shown. The same applies to some of the fault structures defined mainly by underground work.

The majority of quartz vein structures and all the former producers, show a persistent, though somewhat variable northwesterly trend. Dips vary from moderate to steep to the northeast.

Mineralization associated with quartz veins, as seen on surface, consists of disseminated pyrite with occasional weak chalcopyrite and secondary copper oxides. Tetrahedrite was tentatively identified in Sample 180 and substantiated by assay results. The sample consisted of mineralized quartz float with copper stain adjacent to a sloughed in trench about 1.5 metres deep and 5 metres long. No outcrop was seen so the significance of the sample cannot be estimated. A review of the literature failed to find any reference to tetrahedrite mineralization, even in those reports that recorded microscopic studies, and nowhere is silver mentioned as occurring in significant quantities. Assay results warrant a closer examination of the trench in question.

Samples 169 to 173 inclusive were taken from a well defined shear zone with quartz veining and associated pyrite and chalcopyrite, at the contact between volcanics and the west side of a small monzonite intrusive at the upper switchback on the new logging road. (Plate No. 8).

Sample 172 included good malachite and was taken from the footwall of the zone. Samples 169, 170 and 171 were taken 6m to the north, and sample 173 was taken 9m south of Sample 172, the only one to give any encouragement. The structure is strong and gold bearing and, while mineralization appears spotty, should be opened up for a closer examination.

Sample 174 was taken from a pit wall representing the surface outcrop of the Sylvanite vein, and sample 175 from the same structure 15m north of the pit. Assays merely confirm the presence of gold in this structure which has seen considerable previous exploration by underground methods and diamond drilling, which reportedly proved a strike length of at least 200m and values to .62 oz/ton gold.

Details of surface sampling, including these samples mentioned above, are listed on Plate No. 8.

#### ECONOMIC CONSIDERATIONS

The Vidette Lake area has several advantages in terms of location and infrastructure that would facilitate the development and operation of a successful mining venture.

Natural assets include an abundance of potable water on site for camp and mine supply, and ample timber for ground support and other underground requirements. Soil in the area under consideration is poorly suited to agricultural purposes.

Good road access to the property both sides of Vidette Lake is a substantial benefit in terms of both convenience and economy. The main lines of both the CN and CP Railways pass within 50km of the property, oil and natural gas pipelines within 25km. The closest power transmission line is within 40km straight line distance.



In assessing the economic potential of the mine itself, positive factors are the excellent grades reportedly carried by the various vein systems and the persistence along strike exhibited by these structures. Negative factors include the narrowness of the veins and the complex faulting to which they have been subjected. Good grades will therefore be partly offset by relatively high mining costs.

The following calculations are based on old records of Vidette Gold Mines Ltd. believed to be accurate and reliable. Most of the information used is found in Appendix 1 and 2.

Calculations of gold values assume a price of US \$350 per ounce and a 75 cent Canadian dollar or C\$466.67 per ounce (\$15. per gram).

In all ore tonnage calculations, quantities are expressed in broken tons, the equivalent of unbroken tons plus 40% dilution factor.

Values given represent gold content only. Production records show that for every ounce of gold recovered, approximately 1.56 ounces of silver will also be recovered

Purpose of these calculations was (1) to determine the inherent value of the property in terms of gold contained in probable ore unbroken in the mine, and in mill tailings dumped into Vidette Lake during production, and (2) to determine the value of ore that can reasonably be expected to be developed by a successfully exploration programme below 5th Level, the deepest level mined.

These figures will assist in estimating what cash flow might be generated during the exploration and development phase and in budgeting the underground exploration programme so that expenditures are appropriate to the dollar value of new ore this work can anticipate proving up.

In order to determine probable ore remaining in the Vidette Mine it was necessary to take total tonnages shown in the last ore reserve calculation of January 31st, 1939 and subtract total tons of ore produced from that date until mine closure in 1940.

Calculations of mine production during the period January 31, 1939 to closure are as follows:

	<u>Tons</u>	<u>Gold Recovered (oz)</u>	<u>Authority</u>
Total mine production to closure	54199	29869	B.C. Dept of Mines
Total production to 1939-05-31	48750	27061	E.Y. Dougherty Appendix 1
Total production 1939-05-31 to closure	5449	2808	

The 2808 ounces of gold recovered is converted to mill head values by using a recovery rate of 94%, giving a total of 2987 ounces contained in ore delivered to the mill. Therefore we can state:

	<u>Tons</u>	<u>Ounces</u>	<u>Grade</u>
Mine production 1939-05-31 to closure	5449	2987	.548
Mine production 39-01-31 to 39-05-31 (APPENDIX 1)	<u>2892</u>	<u>1493</u>	<u>.516</u>
Total production 1939-01-31 to closure	<u>8341</u>	<u>4480</u>	<u>.537</u>

It is believed that all production during the latter stage of mine production came from the 70 vein system. This is supported in part by APPENDIX 1 and the following calculation:

	<u>Tons</u>	<u>Ounces</u>	<u>Grade</u>
70 Vein ore reserves 39-01-31 APPENDIX 2	9300	6740	.725
Total production 39-01-31 to closure (calculated)	<u>8341</u>	<u>4480</u>	<u>.537</u>
70 Vein reserves remaining (calculated)	<u>957</u>	<u>2260</u>	<u>2.362</u>

This proves to the writer's satisfaction that all mine production from 1939-01-31 could have come from the 70 Vein as suspected. Calculated reserve figures for this vein are unrealistic, particularly with regard to grade, which tends to support the statement by R. Avison, (personal communication), former Mine Manager at Vidette, that no broken ore was left in the mine. It is concluded that no broken reserves remain in the 70 Vein and calculated reserves shown above result from tonnage and grade errors in the ore reserve calculation of 1939-01-31. It follows that since the 70 Vein supplied all the mill feed from 1939-01-31 to mine closure, reserves shown for other veins on that date must still be in place. These reserves, as originally calculated by Sterrett are as follows:

	<u>Tons</u>	<u>Ounces</u>	<u>Grade</u>
Bluff Vein above 5th Level	4200	2250	.536
Dexheimer Vein above 4th Level	7000	4000	.571
Totals	<u>11200</u>	<u>6250</u>	<u>.558</u>
	10160		19.1
Value	<u>\$2,916,687.</u>		

Since over 54000 tons were milled it is anticipated that approximately 50,000 tons of tailings are to be found in Vidette Lake below the mill site. Tailings averaged .055 oz/ton so total gold content would be 2750 ounces valued at \$1,283,342.

In estimating the value of prospective new ore, assuming the various structures can be proven to continue down dip, the total production of each structure was divided by the vertical interval over which it was mined to obtain a figure of tons per vertical foot. In the case of the Dexheimer Vein, which has not been mined, original ore reserve figures were used to make the same calculation. In all cases the average mill heads for the life of the mine of .612 ounces per ton was used as grade for the projected new ore. All tonnage figures are broken tons with a 40% dilution factor. Calculations are summarized below.

<u>Vein Structure</u>	<u>Broken Ridge</u>	<u>70</u>	<u>Bluff</u>	<u>Dexheimer</u>	<u>Totals</u>
Tons mined	20950	13704	6782	--	--
Tons in place	--	--	--	7000	--
Mining Interval (ft.)	Surface (3060) to 4th Level(2672)	Above 2nd Level (3240) to 5th Level (2550)	Surface (3240) to 3rd Level (2800)	Above 3rd Level (2507) to 4th Level (2672)	--
Vertical Interval (ft)	388	395	440	235	--
Tons/ft	54	35	15	30	134
Tons/metre	177	114	51	98	440
Ounces/metre	108.32	69.77	31.21	59.97	269.27
Value/metre	50550	32560	14565	27986	125,661
Value/metre	4th Level to 5th Level (Dexheimer Vein)				\$27,986
Value/metre	below 5th Level excluding Broken Ridge Vein				\$75,112
Value/metre	below 5th Level including Broken Ridge Vein				\$125,661

These figures emphasize the importance of locating the Broken Ridge vein below 4th Level.

STATEMENT OF COSTS

The following costs were incurred on the Vidette Lake property for Tugold Resources Inc. Fieldwork was done between 1984-03-26 and 1984-06-30. Report preparation was completed between 1984-06-29 and 1984-08-17. All work was carried out by D. Carsten and R. Elliott, Field Assistants; D. Moraal, Geophysical Operator; B. Elliott, Field Supervisor and J.D. Murphy, P. Eng.

LABOUR

Grid Preparation

Tugold Grid: establish 3.5 km of baselines and crosslines  
Main Grid: establish and re-establish 15 km of baselines and crosslines on old grid system

<u>March</u>		
3 days @ \$150./day	450.00	
5 days @ \$100./day	500.00	
<u>June</u>		
2 days @ \$159./day	<u>318.00</u>	
Total Grid Preparation	<u>\$1268.00</u>	\$1,268.00

Geochemical Surveys

<u>March</u>		
3 days @ \$150./day	450.00	
3 days @ \$100./day	300.00	
<u>April</u>		
15 days @ \$150./day	2250.00	
15 days @ \$100./day	1500.00	
<u>June</u>		
8 days @ \$159./day	1272.00	
1 day @ \$115./day	115.00	
<u>July</u>		
1 day @ \$150./day	<u>150.00</u>	
Total Geochemical Surveys	<u>\$6037.00</u>	\$6,037.00

Geophysical Surveys

3.5 km ground magnetometer survey  
3.5 km EM-16 VLF survey  
15 km Sabre VLF survey

March

6 days @ \$115./day 690.00  
4 days @ \$100./day 400.00

April

15 days @ \$115./day 1725.00  
15 days @ \$100./day 1500.00

June

4 days @ \$159./day 636.00  
8 days @ \$115./day 920.00

Total Geophysical Surveys \$5871.00 \$5,871.00

Stadia Survey

5 days instrument @ \$300./day 1500.00  
5 days rod @ \$100./day 500.00  
29.5 hrs. stadia calculations & plotting  
@ \$37.50/hr. 1106.25

Total Stadia Survey \$3106.25 \$3,106.25

Travel

May and June

4 days @ \$159./day 636.00  
3 days @ \$115./day 345.00

Total Travel \$981.00 \$981.00

Property Examination

May and June

6 days @ \$159./day 954.00  
5 days @ \$115./day 575.00

July

1 day @ \$150./day 150.00  
1 day @ \$100./day 100.00

Total Property Examination \$1779.00 \$1,779.00

General Office

May and June

14 days @ \$159./day 2226.00

10 days @ \$115./day 1150.00

Total General Office \$3376.00 \$3,376.00

Plotting and Calculations

May and June

5 days @ \$159./day 795.00

16 days @ \$115./day 1840.00

Total Plotting and Calculations \$2635.00 \$2,635.00

TOTAL LABOUR \$25,053.35 \$25,053.35

CONSULTING

1 day property examination @ \$350./day 350.00

1/2 day property examination @ \$300./day 150.00

6 days geological mapping @ \$300./day 1800.00

1/2 day travel @ \$350./day 175.00

5 days geological mapping @ \$350./day 1750.00

7.5 hrs. map preparation, meetings  
@ \$42.50/hr. 318.75

TOTAL CONSULTING \$4543.75 \$4,543.75

REPORT PREPARATION

114.25 hrs. reporting @ \$37.50/hr. 4284.37

92.25 hrs. drafting @ \$20./hr. 1845.00

6 hrs. typing @ \$20./hr. 120.00

227 photocopies 8 x 11 @ \$.20 45.40

52 photocopies 8 x 14 @ \$.25 13.00

5 photocopies 11 x 17 @ \$.35 1.75

Blueprinting 52.75

TOTAL REPORT PREPARATION \$6362.27 \$6,362.27

TRANSPORTATION

Highland Helicopters, Kamloops

1.4 hrs. JetRanger rental @ \$415./hr. 581.00  
154 litres fuel @ \$.53 81.52

Total Helicopter Charges \$662.52 \$662.52

March

7 days 4 x 4 rental @ \$20./day 140.00  
322 km @ \$.17/km 54.75  
1 day 4 x 4 rental @ \$25./day 25.00  
388 km @ \$.20/km 77.60

Total for March \$297.35 \$297.35

April

15 days truck rental @ \$17./day 255.00  
1017 km @ \$.16/km 162.72  
15 days 4 x 4 rental @ \$20./day 300.00  
817 km @ \$.17/km 138.89  
7 days 4 x 4 rental @ \$25./day 175.00  
602 km @ \$.20/km 120.40

Total for April \$1152.01 \$1,152.01

May and June

11 days truck rental @ \$17./day 187.00  
1873 km @ \$.16/km 299.68  
11 days 4 x 4 rental @ \$20./day 220.00  
667 km @ \$.17/km 113.39  
10.5 days 4 x 4 rental @ \$25./day 262.50  
1371 km @ \$.20./km 274.20

Total for May and June \$1356.77 \$1,356.77

TOTAL TRANSPORTATION

\$3,468.65 \$3,468.65

FOOD AND LODGING

March

24 man-days food @ \$25./man-day	600.00
6 crew-days lodging @ \$20./day	120.00

April

60 man-days food @ \$25./man-day	1500.00
15 crew-days lodging @ \$20./day	300.00
5 man-days food & lodging @ \$21./day	105.00

May and June

27 man-days food @ \$25./man-day	675.00
11 crew-days lodging @ \$20./day	220.00
10 man-days food @ \$15./man-day	150.00
4 crew-days lodging @ \$10./day	40.00

TOTAL FOOD AND LODGING	<u>\$3710.00</u>	\$3,710.00
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ASSAYING

392 soil sample preparations @ \$.70	274.40
62 rock sample preparations @ \$3.25	201.50
214 geochem analyses for Cu,Au,Ag @ \$8.80	1883.20
220 geochem analyses for Au,Ag @ \$7.90	1738.00
4 Cu,Au,Ag assays @ \$15.75	63.00
12 Au,Ag assays @ \$10.5	126.00
1 Au,Pb assay @ \$13.00	13.00
1 Au, W assay @ \$17.50	17.50

TOTAL ASSAYING	<u>\$4316.60</u>	\$4,316.60
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EQUIPMENT RENTAL

3 week Magnetometer & VLF rental @ \$100./week (84-03-28 to 04-18)	300.00
1 week Magnetometer & VLF rental @ \$100./week (June)	100.00
Em-16 rental (84-04-02 to 15)	545.79
Em-16 rental (84-04-16 to 30)	517.00
1 week theodolite & stadia rod rental @ \$25./week (84-05-07 to 14)	25.00

TOTAL EQUIPMENT RENTAL	<u>\$1487.79</u>	\$1,487.79
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MAPS AND REPRODUCTION

Base map preparation by Nadir Mapping, miscellaneous blueprints	3113.35	
Map reproductions - March	10.78	
Prints, enlargements, etc. - April	50.52	
Photocopies - May	<u>1.00</u>	
TOTAL MAPS AND REPRODUCTION	<u>\$3175.65</u>	\$3,175.65

FIELD SUPPLIES

Flagging	416.01	
Hardware	<u>334.30</u>	
TOTAL FIELD SUPPLIES	<u>\$750.31</u>	\$750.31

MISCELLANEOUS

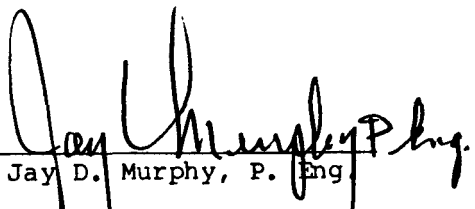
Property title search	21.50	
Long Distance Telephone Calls	10.12	
Typing 4 pages @ \$5.00	<u>20.00</u>	
TOTAL MISCELLANEOUS	<u>\$51.62</u>	\$51.62

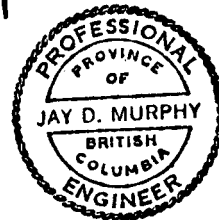
TOTAL COSTS		<u>\$52,919.89</u>
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STATEMENT OF QUALIFICATIONS

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 or Tugold Resources Inc.
7. That this report or excerpts therefrom may not be published in any Prospectus or Statement of Material Facts without written permission from the undersigned.

  
Jay D. Murphy, P. Eng.



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VIDETTE GOLD MINES LIMITED

SYNOPSIS OF MINING, MILLING & SMELTING RETURN FIGURES FROM DATE OF INCORPORATION,  
MAY, 1933 to MAY 31st, 1939.

Year Ending Sept. 30th	<u>SOURCES OF ORE PRODUCTION</u>					Total Tons Mined	Tons Milled	Heads Oz./Ton	<u>MILL AVERAGES</u>		Total Tails Ozs.	Recov. Value Ozs.	Aver. Recov. %	<u>SMELTER RETURNS Conc. Produced Ozs.</u>
	Tenford	Broken Ridge	Eluff	Same vein 370 470					Total Hds. Ozs.	Tails Oz./Ton				
1934	3788	1893				5,681	5,427.7	.634	3515.26	.0857	444.87	.5483	86.5	2935.26
1935	6131	1926) 210)*	112			8,379	8,348.0	.621	5186.63	.0914	720.76	.5296	85.3	4565.23
1936	1638	6864	1038			9,540	9,486.0	.726	6902.01	.0757	761.16	.6523	89.6	6158.03
1937	820	8823	3561	12		13,216	13,278.0	.618	8205.80	.0510	629.99	.5670	91.7	7498.39
1938	386	1073	1922	2986	241	6,608	6,663.0	.445	2966.94	.0280	177.11	.4170	93.6	2765.64
Oct. 1938		65	124	288	164	641	579.5	.617	357.66	.0310	16.81	.5860	94.9	344.61
Nov. 1938		38	25	422	124	609	647.3	.565	365.74	.0296	17.87	.5354	94.8	350.15
Dec. 1938		34		460	112	606	590.4	.599	354.08	.0300	16.38	.5690	95.0	340.85
Jan. 1939		17		365	189	571	579.3	.586	339.54	.0330	17.70	.5530	94.4	321.84
Feb. 1939		3		277	470	750	703.1	.543	381.93	.0280	18.27	.5150	94.8	350.91
Mar. 1939		1		201	699	901	935.8	.500	467.93	.0306	26.87	.4694	94.0	435.21
Apr. 1939		3		138	581	722	737.2	.446	329.06	.0310	21.52	.4150	93.0	318.64
May 1939				78	448	526	532.5	.590	314.22	.0290	14.28	.5610	95.1	299.94
	<u>12763</u>	<u>20950</u>	<u>6782</u>	<u>5227</u>	<u>3028</u>	<u>18,750</u>	<u>48,507.8</u>	<u>.612</u>	<u>29686.85</u>	<u>.0550</u>	<u>2883.59</u>	<u>.5570</u>	<u>91.2</u>	<u>26684.70</u>

172.8 dry tons @ 2.178 ozs per ton of Crude Ore mined and shipped from Broken Ridge Surface during 1934/5:

376.37

-Total production - concentrates and crude ore, per Smelter Return

27061.07 ozs.

DETAILED INFORMATION

APPENDIX 2

ORE ESTLMATES:

"70" VEIN

370 Stopes - with 30% dilution	780 tons @ .577 ozs. = 450 ozs.
370 #1 Area - " 40% "	1400 " @ .571 " = 800 "
370 #2 Area - " " "	840 " @ .643 " = 540 "
Say	<u>3000 tons @ .597 ozs. = 1790 ozs.</u>
370 - 470 Levels 40% dilution	2800 tons @ .786 ozs. = 2200 ozs.
470 - 570 " " "	3500 " @ .786 " = 2750 "
	<u>9300 tons @ .725 ozs. = 6740 ozs.</u>

Available with 94% Mill recovery = .682 ozs. = 6335 ozs.

Also probable additional ore in "70" Vein with 30% dilution -  
1820 tons @ .571 ozs. = 1040 ozs.

<u>Under-Lake area - with dilution -</u>	400 tons @ .75 ozs. = 300 ozs.
<u>Old Mine Pillars - " "</u>	250 " @ .80 ozs. = 200 "
	<u>650 tons = 500 ozs.</u>

<u>Trans-Lake area - " "</u>	7000 tons @ .571 oz. = 4000 ozs.
<u>Bluff Vein, above 5th Level</u>	4200 " @ .536 " = 2250 "

With 27 tons per day, or 770 tons per 28½ day month milled, the 470 Stopes would last 3.6 months. By this time, the 570 Stopes would be developed. With ore coming from 570 after 2½ months, the life of the 470 Stopes would be extended beyond the 3.6 months given above.

2 MONTHS DEVELOPMENT PROGRAM

370 North Drift	80 feet	\$800.00	
370 #1 Sub-Level Crosscut	120 "	1200.00	
370 #1 Sub-Level Drifts	200 "	2000.00	
370 #2 Winze	40 "	800.00	
370 #2 North Drift	60 "	600.00	
	<u>500 "</u>	<u>\$5400.00</u>	\$5400.00
470 South Raise	35 "		
470 " " #3	35 "		
470 " " #4	60 "		
470 Sub-Level Raise	35 "		
470 Sub-Level North Raise	75 "		
	<u>240 feet</u>	3000.00	3000.00
470 Sub-Level Drifts	200 feet	2000.00	2000.00
470 South Drift	450 "	4500.00	4500.00
470 Winze Station & Winze	150 "	5000.00	<u>5000.00</u>
	<u>800 feet</u>		
	1540 feet		19900.00
5 Singel-Jackers on ore			1300.00
			<u>21200.00</u>
Diamond Drilling - 1000 feet			1500.00
			<u>\$22700.00</u>

(Note: The Single-jackers would produce more than \$1300 worth of ore during this time.)

KAMLOOPS RESEARCH  
&  
ASSAY LABORATORY  
LTD

B. C. CERTIFIED ASSAYERS  
912 LAVAL CRESCENT  
PHONE 372-2784 - TELEX 048-8320

GEOCHEMICAL LAB REPORT

ARMAG HOLDINGS LTD  
204 156 VICTORIA ST  
KAMLOOPS B C  
V2C 1Z7

DATE APRIL 23 1984  
ANALYST  
FILE NO. G 1049

PAGE 1 / 6

KRAL NO.	IDENTIFICATION	AU	CU	AG
1	1+25E L250N	50.0	590.0	1.0
2	1+50E	10.0	285.0	1.4
3	1+75E	1.0	86.0	1.1
4	2+00E	25.0	125.0	0.9
5	0+25E L300N	20.0	338.0	1.5
6	0+50E	10.0	210.0	0.7
7	0+75E	45.0	778.0	2.1
8	1+00E	20.0	142.0	2.0
9	1+25E	20.0	314.0	1.5
10	1+50E	1.0	136.0	1.5
11	1+75E	1.0	131.0	1.1
12	2+00E	1.0	91.0	1.0
13	1+00E L350N	10.0	479.0	1.4
14	1+25E	25.0	275.0	1.0
15	1+50E	1.0	286.0	1.1
16	1+75E	1.0	172.0	0.9
17	2+00E	1.0	96.0	0.9
18	0+50E L400N	15.0	405.0	1.5
19	0+75E	5.0	304.0	1.1
20	1+00E	10.0	309.0	1.1
21	1+25E	70.0	559.0	2.3
22	1+50E	10.0	303.0	1.1
23	1+75E	1.0	141.0	1.0
24	2+00E	1.0	159.0	0.9
25	0+75E L450N	1.0	105.0	1.1
26	1+00E	1.0	59.0	0.6
27	1+25E	1.0	120.0	1.0
28	1+50E	10.0	91.0	1.1
29	1+75E	10.0	176.0	1.0
30	2+00E	10.0	209.0	1.0

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.  
GEOCHEMICAL LAB REPORT

FILE NO G 1049

PAGE 2 / 6

KRAL NO.	IDENTIFICATION	AU	CU	AG
31	1+00E L500N	1.0	328.0	1.0
32	1+25E	1.0	152.0	0.9
33	1+50E	5.0	240.0	1.1
34	1+75E	1.0	192.0	0.7
35	2+00E	5.0	660.0	2.2
36	0+00E L550N	5.0	412.0	1.5
37	0+25E	1.0	225.0	1.0
38	0+50E	1.0	179.0	1.0
39	0+80E	1.0	287.0	0.9
40	1+00E	5.0	292.0	1.5
41	1+25E	1.0	261.0	1.1
42	1+50E	1.0	140.0	0.7
43	1+75E	10.0	175.0	1.5
44	2+00E	10.0	203.0	1.6
45	0+00E L600N	1.0	391.0	1.3
46	0+25E	1.0	331.0	0.9
47	0+50E	1.0	337.0	1.2
48	0+75E	35.0	356.0	1.3
49	1+00E	420.0	549.0	2.5
50	1+25E	10.0	845.0	2.0
51	1+50E	1.0	192.0	0.8
52	1+75E	1.0	34.0	0.6
53	2+00E	1.0	35.0	0.4
54	0+25E L650N	1.0	287.0	1.0
55	0+50E	1.0	201.0	0.8
56	0+75E	1.0	339.0	1.1
57	1+00E	1.0	362.0	1.7
58	1+25E	30.0	1500.0	1.9
59	1+50E	1.0	165.0	0.7
60	1+75E	1.0	68.0	0.6
61	2+00E	15.0	56.0	0.8
62	0+25E L700N	15.0	362.0	1.0
63	0+50E	1.0	245.0	1.1
64	0+75E	1.0	357.0	1.2
65	1+00E	1.0	232.0	1.0
66	1+25E	1.0	255.0	1.1
67	1+50E	1.0	189.0	1.1
68	1+75E	10.0	47.0	0.6
69	2+00E	1.0	30.0	0.4
70	0+00E L750N	10.0	385.0	1.2

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.  
GEOCHEMICAL LAB REPORT

FILE NO G 1049

PAGE 3 / 6

KRAL NO.	IDENTIFICATION	AU	CU	AG
71	0+25E	1.0	280.0	1.0
72	0+50E	10.0	118.0	0.6
73	0+75E	1.0	167.0	0.9
74	1+00E	15.0	199.0	0.9
75	1+25E	1.0	121.0	0.8
76	1+50E	10.0	60.0	1.3
77	1+75E	0.0	78.0	0.7
78	2+00E	130.0	119.0	0.6
79	0+25W L800N	120.0	426.0	1.9
80	0+50W	1.0	66.0	0.4
81	0+00E	1.0	468.0	1.3
82	0+25E	1.0	97.0	0.6
83	0+50E	1.0	176.0	0.8
84	0+75E	1.0	266.0	1.1
85	1+00E	1.0	608.0	1.0
86	1+25E	5.0	335.0	1.6
87	1+50E	1.0	94.0	0.6
88	1+75E	1.0	90.0	0.6
89	2+00E	1.0	96.0	0.6
90	0+00 L850N	1.0	174.0	0.7
91	0+25W	10.0	267.0	1.5
92	0+50W	10.0	306.0	1.2
93	0+75W	25.0	221.0	0.9
94	1+00W	180.0	273.0	1.1
95	0+25E	110.0	171.0	1.6
96	0+50E	1.0	128.0	0.7
97	0+75E	1.0	137.0	1.4
98	1+00E	1.0	91.0	1.2
99	1+25E	1.0	96.0	0.6
100	1+50E	150.0	65.0	0.7
101	1+75E	1.0	66.0	0.5
102	2+00E	1.0	37.0	0.4
103	0+00 L900N	1.0	163.0	0.8
104	0+25W	1.0	60.0	0.6
105	0+50W	1.0	86.0	0.6
106	0+75W	65.0	392.0	1.4
107	1+00W	20.0	243.0	1.0
108	1+25W	1.0	169.0	0.9
109	4+50W	1.0	21.0	0.4
110	4+75W	1.0	24.0	0.4



## KAMLOOPS RESEARCH &amp; ASSAY LABORATORY LTD.

## GEOCHEMICAL LAB REPORT

FILE NO G 1049

PAGE 4 / 6

KRAL NO.	IDENTIFICATION	AU	CU	AG
111	5+00W	1.0	30.0	0.4
112	5+25W	1.0	52.0	0.6
113	5+50W	1.0	72.0	0.5
114	5+75W	1.0	163.0	0.6
115	6+00W	1.0	164.0	0.6
116	6+25W	1.0	80.0	0.6
117	6+50W	1.0	24.0	0.4
118	6+75W	1.0	80.0	0.6
119	7+00W	1.0	67.0	0.7
120	7+25W	1.0	69.0	0.5
121	7+50W	1.0	223.0	0.5
122	0+25E	1.0	66.0	0.5
123	0+50E	0.0	56.0	0.7
124	0+75E	1.0	26.0	0.4
125	1+00E	1.0	53.0	0.5
126	1+25E	40.0	78.0	0.6
127	1+50E	1.0	54.0	0.6
128	1+75E	1.0	31.0	0.5
129	2+00E	1.0	16.0	0.4
130	0+00E L950N	1.0	133.0	0.6
131	0+25E	1.0	120.0	0.6
132	0+50E	1.0	223.0	0.8
133	0+75E	1.0	35.0	0.4
134	1+00E	1.0	127.0	0.8
135	1+25E	1.0	61.0	0.6
136	1+50E	1.0	100.0	0.7
137	1+75E	1.0	30.0	0.4
138	2+00E	1.0	21.0	0.4
139	0+50W	10.0	278.0	1.0
140	0+75W	30.0	226.0	1.2
141	1+00W	20.0	251.0	1.0
142	1+25W	1.0	322.0	0.6
143	2+00W	1.0	164.0	0.7
144	0+00 L1000N	1.0	189.0	0.7
145	0+25E	1.0	123.0	0.6
146	0+50E	1.0	94.0	1.1
147	0+75E	1.0	126.0	0.5
148	1+00E	1.0	99.0	0.7
149	1+25E	1.0	147.0	0.7
150	1+50E	1.0	67.0	0.5

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.

GEOCHEMICAL LAB REPORT

FILE NO G 1049

PAGE 5 / 6

KRAL NO. IDENTIFICATION AU CU AG

KRAL NO.	IDENTIFICATION	AU	CU	AG
151	1+7SE	60.0	94.0	0.5
152	2+00E	1.0	39.0	0.4
153	4+50W	1.0	23.0	0.3
154	4+75W	1.0	34.0	0.4
155	5+00W	1.0	29.0	0.4
156	5+25W	1.0	27.0	0.4
157	5+50W	1.0	43.0	0.5
158	5+75W	1.0	63.0	0.6
159	6+00W	1.0	196.0	0.8
160	6+25W	1.0	92.0	0.5
161	6+50W	1.0	95.0	0.6
162	6+75W	45.0	417.0	1.0
163	7+00W	1.0	47.0	0.4
164	7+25W	1.0	29.0	0.5
165	7+50W	1.0	54.0	0.6
166	5+50W L1100N	1.0	23.0	0.4
167	5+75W	1.0	31.0	0.5
168	6+00W	5.0	204.0	1.2
169	6+25W	1.0	145.0	0.8
170	6+50W	1.0	49.0	0.5
171	6+75W	1.0	58.0	0.5
172	7+00W	1.0	25.0	0.5
173	7+25W	1.0	27.0	0.5
174	7+50W	1.0	18.0	0.4
175	5+50W L1200N	1.0	65.0	0.6
176	5+75W	1.0	49.0	0.5
177	6+00W	1.0	25.0	0.4
178	6+25W	1.0	167.0	1.2
179	6+50W	1.0	192.0	1.0
180	6+75W	5.0	175.0	1.2
181	7+00W	10.0	150.0	1.2
182	7+25W	1.0	357.0	1.1
183	7+50W	1.0	165.0	0.6
184	6+00W L1225N	1.0	38.0	0.5
185	6+25W	1.0	185.0	1.2
186	6+50W	1.0	164.0	0.9
187	5+50W L1250N	1.0	52.0	0.5
188	5+75W	1.0	38.0	0.4
189	6+00W	1.0	23.0	0.4
190	6+25W	1.0	22.0	0.4

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.  
GEOCHEMICAL LAB REPORT

FILE NO G 1049

PAGE 6 / 6

KRAL NO.	IDENTIFICATION	AU	CU	AG
191	6+50W	1.0	116.0	1.2
192	6+75W	1.0	162.0	1.3
193	7+00W	1.0	156.0	1.0
194	7+50W	1.0	86.0	0.8
195	5+50W L1300N	1.0	27.0	0.5
196	5+75W	1.0	43.0	0.7
197	6+00W	1.0	41.0	0.6
198	6+25W	1.0	48.0	0.7
199	6+50W	1.0	42.0	0.6
200	6+75W	1.0	145.0	1.0
201	7+00W	1.0	127.0	0.8
202	7+25W	1.0	105.0	0.6
203	7+50W	1.0	151.0	1.2

IN AU COLUMN 1 INDICATES LESS THAN 5 PPB

AU METHOD -80 MESH FIRE ASSAY ATOMIC ABSORPTION

AG METHOD -80 MESH HOT ACID EXTRACTION ATOMIC ABSORPTION



# KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.

912 - 1 LAVAL CRESCENT — KAMLOOPS, B.C.

V2C 5P5

PHONE: (604) 372-2784 — TELEX: 048-8320

## CERTIFICATE OF ASSAY

B.C. LICENSED ASSAYERS  
GEOCHEMICAL ANALYSTS  
METALLURGISTS

TO Armag Holdings Ltd.  
204-156 Victoria St.,  
Kamloops, B.C. V2C 1Z7

Certificate No. K 6477

Date July 20, 1984.

I hereby certify that the following are the results of assays made by us upon the herein described \_\_\_\_\_ samples

Kral No.	Marked	Au	Ag	Cu					
		ozs/ton	ozs/ton	percent					
1	180	.004	2.13	.14					
Kral No.	Marked	Au	Ag	Cu					
		ozs/ton	ozs/ton	percent					K 6284
1	L1225N 740W	.004	.03	.12	QUARTZ VEIN RUSTY PYRITE ZONE (GOLD ADIT) FAULT ZONE				April 24/84
2	L1250N 650W	.009	.01	.01					
3	L1500N 950W	.009	.03	.04					
Kral No.	Marked	Au	Ag						
		ozs/ton	ozs/ton						K 6215
1	BL 750W L1225N	.030	.96						April 19/84
			QUARTZ VEIN.						APPENDIX 4





**KAMLOOPS  
RESEARCH & ASSAY  
LABORATORY LTD.**

B.C. CERTIFIED ASSAYERS

912 LAVAL CRESCENT — KAMLOOPS, B.C.  
V2C 5P5  
PHONE: (604) 372-2784 — TELEX: 048-8320

**GEOCHEMICAL LAB REPORT**

Armag Holdings Ltd.  
204-156 Victoria St.,  
Kamloops, B.C.  
V2C 1Z7

DATE April 26, 1984

ANALYST \_\_\_\_\_

FILE NO. G 1052

FILE NO. \_\_\_\_\_

KRAL NO.	IDENTIFICATION	ppb Au	ppm Ag		KRAL #	Identification	ppb Au	ppm Ag	
1	<i>MINI-CLUB</i> L850/1 PY 1	860	2.5		31	L2050N 10+00W	70	.4	
2	<i>1800W</i> EDC 1	885	1.4		32	10+50W	L5	.2	
3	TSL 1	L5	.3		33	10+75W	L5	.2	
4	L1500N 7+50W	L5	.5		34	11+00W	L5	.3	
5	7+75W	L5	.6		35	11+10W	L5	.2	
6	8+00W	L5	.6		36	11+25W	L5	.4	-31-
7	8+25W	L5	.6		37	11+50W	L5	.3	
8	8+50W	L5	.8		38	11+75W	L5	.4	
9	8+75W	L5	.7		39	12+00W	10	.8	
10	9+00W	L5	.6		40	12+25W	L5	.7	
11	9+25W	L5	.3		41	13+00W	L5	.4	
12	9+50W	20	1.2		42	L2100N <sup>1</sup> 10+25W	L5	.2	APPENDIX 7
13	9+75W	10	.9		43	12+50W	20	.2	
14	10+00W	L5	.5		44	L2150N 7+50W	L5	.2	
15	10+25W	L5	.5		45	7+75W	L5	.2	
16	10+50W	L5	.5		46	8+00W	L5	.2	
17	10+75W	L5	.4		47	8+25W	45	.2	
18	11+00W	L5	.8		48	8+50W	L5	.3	
19	11+25W	5	.5		49	8+75W	10	.2	
20	11+50W	35	.6		50	9+00W	L5	.2	
21	L2050N 7+50W	L5	.3		51	9+25W	L5	.3	
22	7+75W	L5	.3		52	9+50W	L5	.2	
23	8+00W	L5	.2		53	9+75W	L5	.3	
24	8+25W	L5	.2		54	10+00W	145	.2	
25	8+50W	L5	.2		55	10+25W	5	.2	
26	8+75W	L5	.3		56	10+50W	L5	.2	
27	9+00W	L5	.2		57	10+75W	L5	.3	
28	9+25W	15	.3		58	11+00W	L5	.2	
29	9+50W	55	.4		59	11+25W	L5	.2	
30	9+75W	150	.6		60	12+25W	L5	.2	

**KAMLOOPS  
RESEARCH & ASSAY  
LABORATORY LTD.**

**GEOCHEMICAL LAB REPORT**

FILE NO. G 1052

PAGE 2

KRAL NO.	IDENTIFICATION	ppb Au	ppm Ag		KRAL #	Identification	ppb Au	ppm Ag	
61	L2150N 12+50W	L5	.2		91	L2350N 13+50W	L5	.9	
62	12+75W	L5	.3		92	13+75W	L5	.2	
63	13+25W	L5	.3		93	14+00W	940	.2	
64	13+50W	L5	.2		94	14+25W	10	.2	
65	13+75W	L5	.2		95	14+50W	L5	.2	
66	14+00W	L5	.2		96	L2450N 7+50W	L5	.2	-32-
67	L2350N 7+50W	L5	.2		97	7+75W	L5	.2	
68	7+75W	L5	.2		98	8+00W	L5	.2	
69	8+00W	L5	.2		99	8+25W	L5	.2	
70	8+25W	L5	.2		100	8+50W	L5	.2	
71	8+50W	L5	.1		101	8+75W	L5	.2	
72	8+75W	L5	.2		102	9+00W	L5	.2	
73	9+00W	L5	.2		103	9+25W	L5	.2	
74	9+25W	L5	.4		104	9+50W	L5	.2	
75	9+50W	L5	.2		105	9+75W	L5	.2	
76	9+75W	L5	.3		106	10+00W	L5	.2	
77	10+00W	L5	.2		107	10+25W	L5	.2	
78	10+25W	L5	.3		108	10+50W	L5	.2	
79	10+50W	L5	.4		109	10+75W	L5	.3	
80	10+75W	L5	.2		110	11+00W	60	.3	
81	11+00W	L5	.3		111	11+25W	L5	.3	
82	11+25W	L5	.2		112	11+50W	10	.3	
83	11+50W	L5	.3		113	11+75W	L5	.2	
84	11+75W	L5	.2		114	12+00W	L5	.3	
85	12+00W	L5	.2		115	12+25W	L5	.2	
86	12+25W	L5	.2		116	12+50W	L5	.3	
87	12+50W	L5	.2		117	12+75W	L5	.3	
88	12+75W	L5	.5		118	13+00W	L5	.4	
89	13+00W	L5	.2		119	13+25W	L5	.2	
90	13+25W	L5	.4		120	13+50W	L5	.2	





**KAMLOOPS  
RESEARCH & ASSAY  
LABORATORY LTD.**

B.C. CERTIFIED ASSAYERS

912 LAVAL CRESCENT — KAMLOOPS, B.C.  
V2C 5P5  
PHONE: (604) 372-2784 — TELEX: 048-8320

**GEOCHEMICAL LAB REPORT**

Armag Holdings Ltd.  
204-156 Victoria St.,  
Kamloops, B.C.  
V2C 1Z7

DATE April 30, 1984.

ANALYST \_\_\_\_\_

FILE NO. \_\_\_\_\_

FILE NO. G 1055

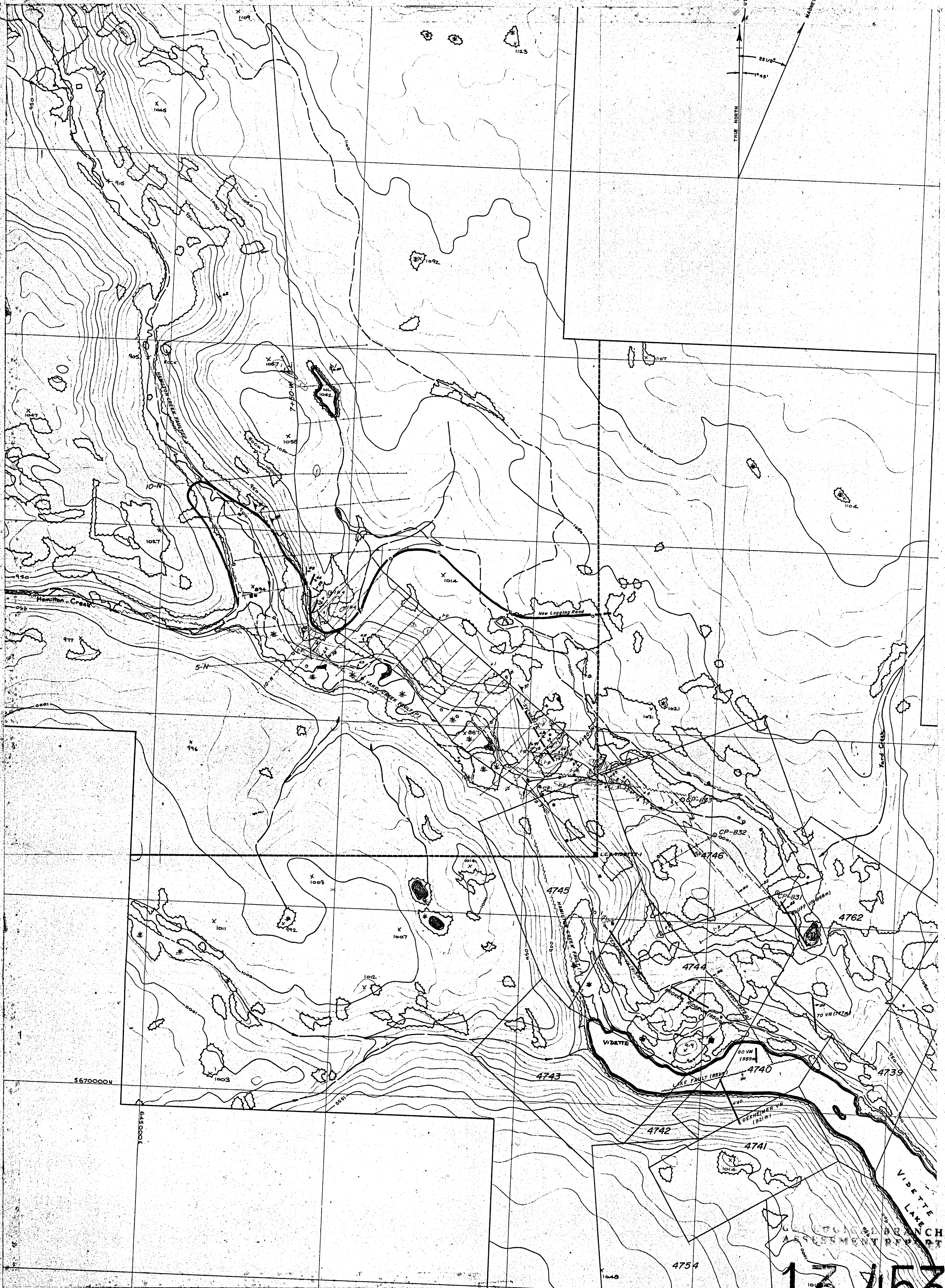
NO.	IDENTIFICATION	ppb Au	ppm Ag	KRAL#	Identification	ppb Au	ppm Ag
1	L1600N 7+50W	L5	.7	31	L1700N 11+00W	L5	.7
2	7+75W	10	.8	32	11+25W	L5	.7
3	8+00W	L5	.6	33	11+50W	L5	.7
4	8+25W	5	.7	34	11+75W	L5	.6
5	8+50W	5	.7	35	12+00W	10	.6
6	8+75W	L5	.8	36	12+25W	L5	.5
7	9+00W	L5	.8	37	12+50W	5	.5
8	9+25W	L5	.7	38	12+75W	115	1.3
9	9+50W	L5	1.2	39	L1800N 7+50W	5	.4
10	9+75W	L5	.7	40	7+75W	L5	.4
11	10+00W	L5	.6	41	8+00W	L5	.5
12	10+25W	L5	.6	42	8+25W	L5	.5
13	10+50W	L5	.7	43	8+50W	L5	.5
14	10+75W	10	.8	44	8+75W	L5	.5
15	11+00W	5	.7	45	9+00W	L5	.5
16	11+25W	L5	.7	46	9+25W	L5	.4
17	L1700N 7+50W	L5	.4	47	9+50W	L5	.9
18	7+75W	L5	.4	48	9+75W	L5	.8
19	8+00W	L5	.5	49	10+00W	L5	.8
20	8+25W	L5	.5	50	10+25W	L5	.7
21	8+50W	L5	.8	51	10+50W	L5	.9
22	8+75W	L5	.8	52	10+75W	10	1.7
23	9+00W	L5	1.0	53	11+00W	L5	.8
24	9+25W	L5	.7	54	11+25W	L5	.7
25	9+50W	5	.8	55	11+50W	L5	.9
26	9+75W	40	.9	56	11+75W	L5	.8
27	10+00W	15	.9	57	12+00W	L5	1.1
28	10+25W	L5	1.0	58	12+25W	L5	.6
29	10+50W	L5	.7	59	12+50W	L5	.6
30	10+75W	L5	.7	60	12+75W	L5	.7

-34-  
APPENDIX 8







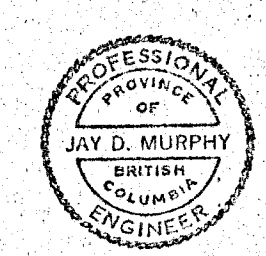


- SYMBOLS**
- Mine grid line and stations
  - Grid stations surveyed in
  - Stadia station in place, destroyed
  - Adit portal
  - 4745 Crown Grant Lot Number
  - Boundary Line
  - CP-831
  - D.D. Hole location, trace & number
  - Outcrop boundary, small outcrop
  - Geological contact defined, inferred
  - Fault or shear defined, inferred
  - Flow banding
  - Quartz vein defined, projected
  - (859) Elevation of below surface structure

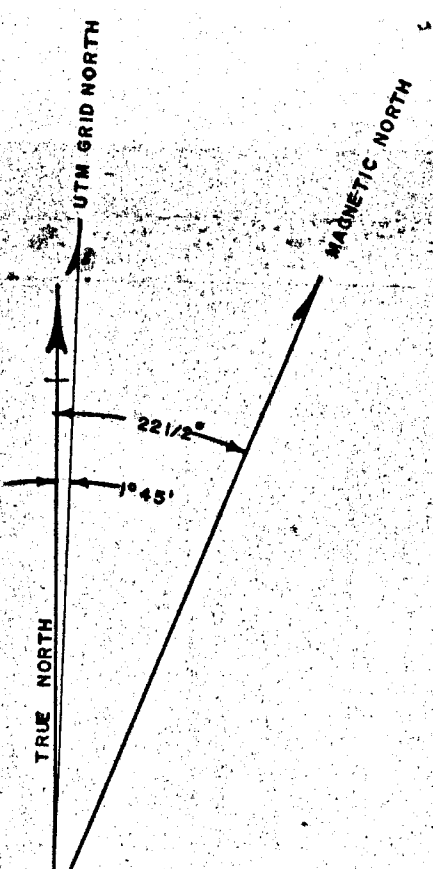
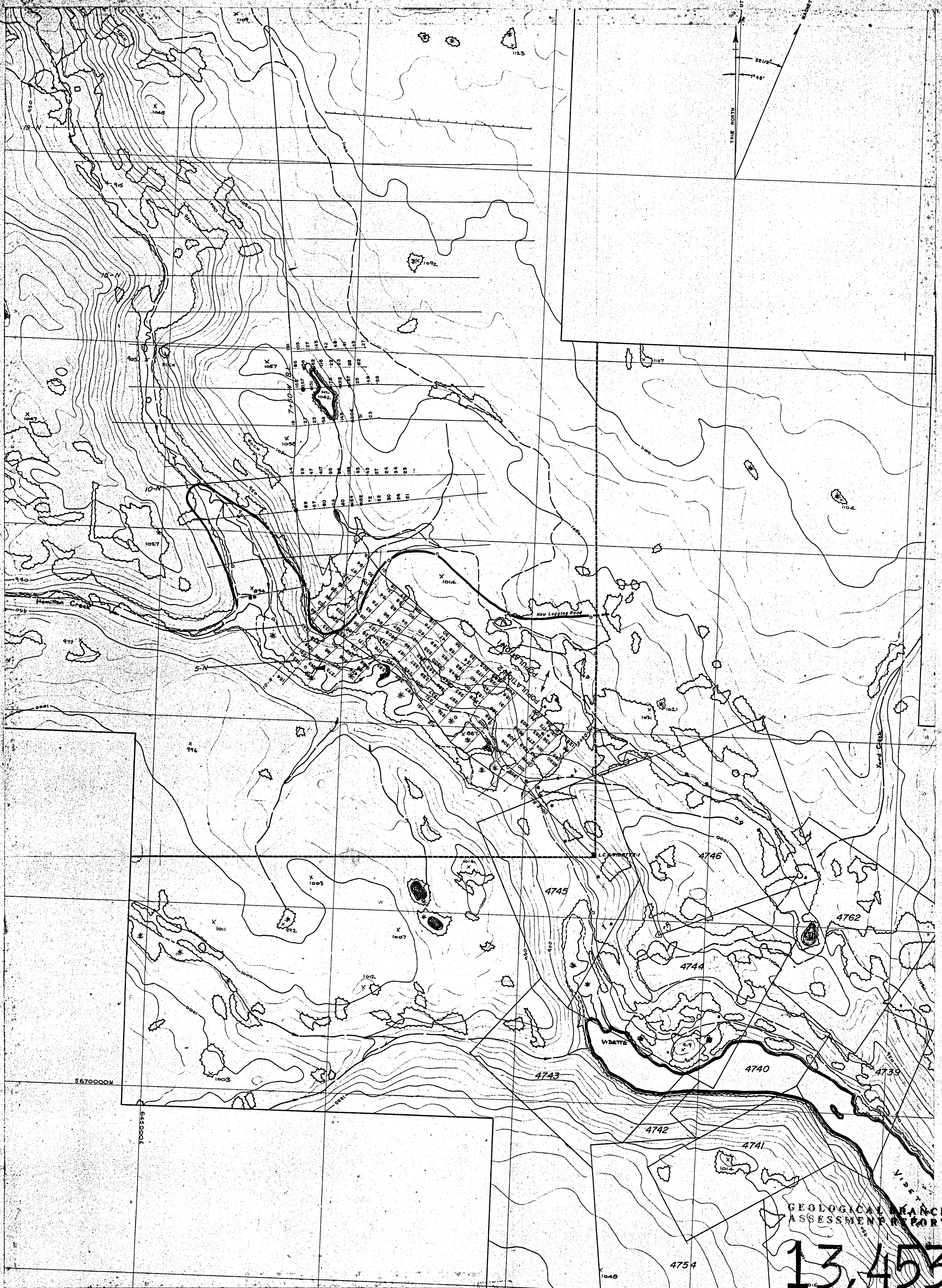
- LEGEND**
- 4 Pyritic quartz monzonite & related porphyritic dikes
  - 
  - 
  - 1/10 Andesite, massive to agglomeratic, p-porphyrific

13,453  
PART 1 OF 2

0 100 200  
METRES



TUGOLD RESOURCES INC.  
VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W  
**SURFACE GEOLOGY**  
J.D.M. 1:5000 1984-07-05 PLATE NO. 4

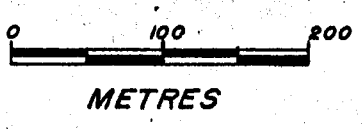


**SYMBOLS**

- Mine grid line and stations
- o Grid stations surveyed in
- o Stadia station in place, destroyed
- o Adit portal
- 4745 Crown Grant Lot Number
- o Boundary Line
- o Population 1 Anomalous - High background
- o " 2 " " " "

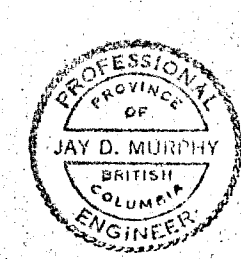
**GEOCHEMICAL DATA**

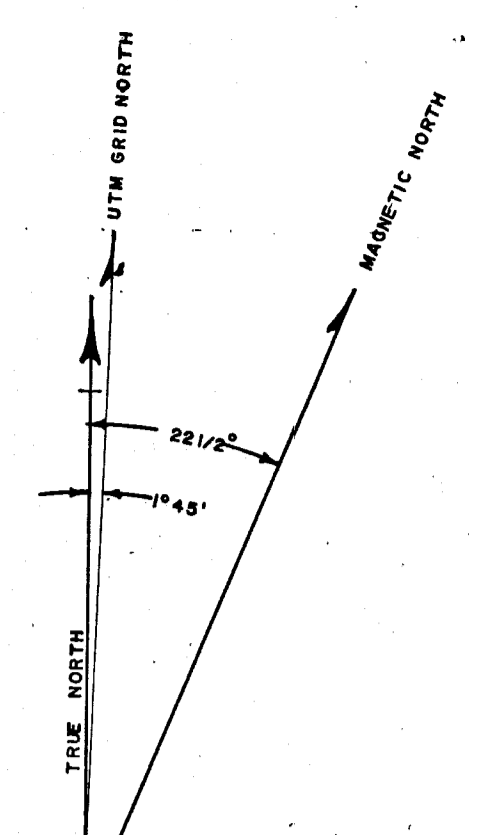
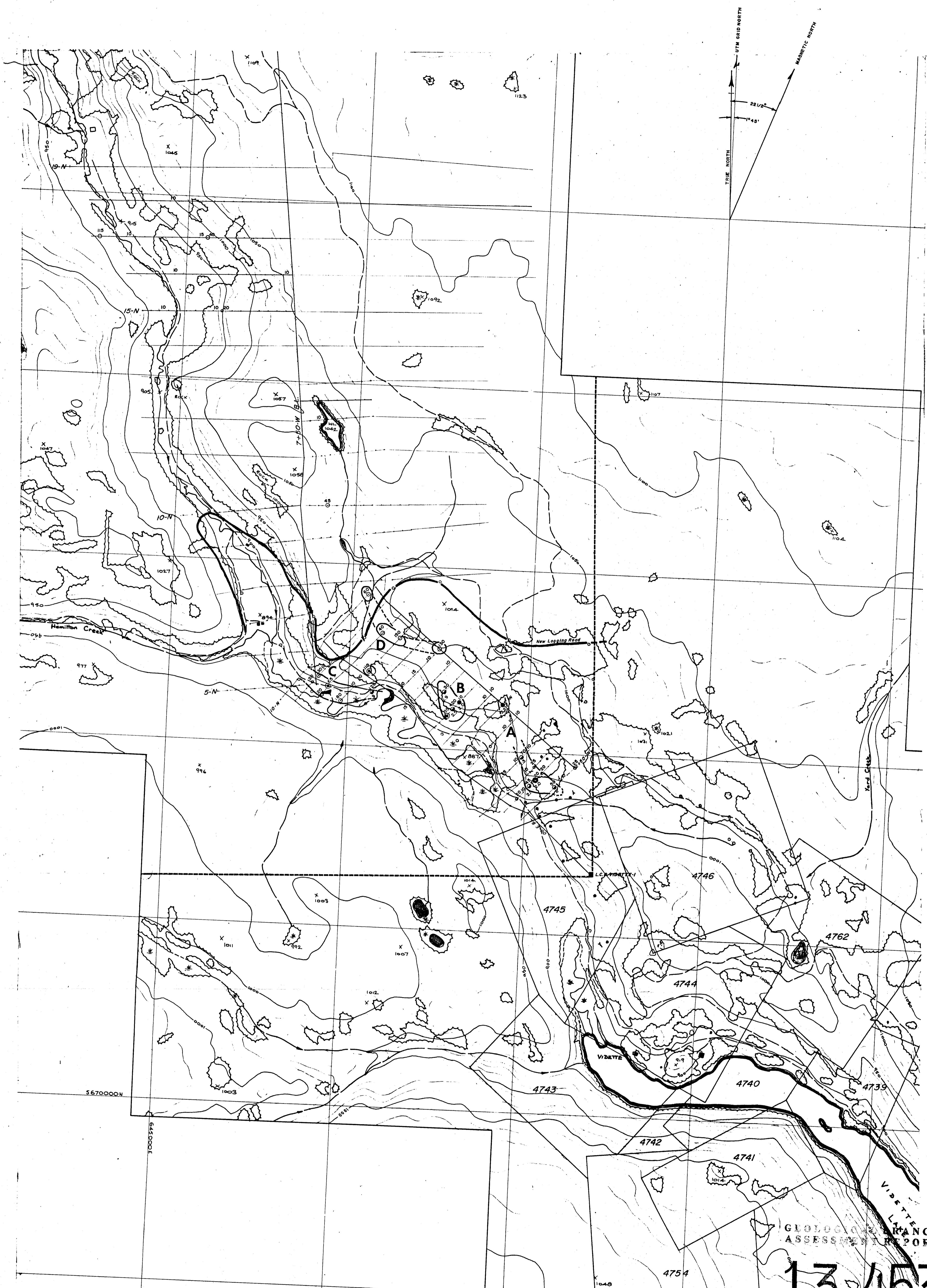
	POPULATION 1	POPULATION 2 (ppm)
Mean	82	258
Std. Deviation	68	194
High Background	150-218	452-646
Anomalous	over 218	over 646



GEOLOGICAL BRANCH  
ASSESSMENT REPORT  
**13,453**  
PART 1 OF 2

TUGOLD RESOURCES INC.  
VIDETTE LAKE AREA  
CLINTON MD. 92P/2W  
**COPPER GEOCHEMISTRY**  
B.E. & J.D.M. 1:5000 1984-07-05 PLATE NO. 5



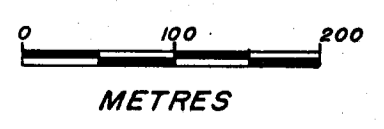


- SYMBOLS**
- Mine grid line and stations
  - Grid stations surveyed in
  - Station in place, destroyed
  - Adit portal
  - 4745 Crown Grant Lot Number
  - Boundary Line
  - <sup>35</sup> Gold, Anomalous - High background (ppb)
  - <sup>20</sup> Silver, " " " " (ppm)
  - <sup>25</sup> Anomalous Au and Ag showing both values
  - <sup>10</sup> Au and high background Ag showing Au value only
  - <sup>20</sup> Ag " " " Au showing both values
  - AD Soil anomaly with letter designation

**GEOCHEMICAL DATA**

	GOLD (ppb)	SILVER (ppm)
Mean	7	0.9
Std. deviation	11	0.4
High Background	18-29	1.3-1.7
Anomalous	over 29	over 1.7

NOTE - Au values under 10ppb not plotted.  
Anomalous Ag values only plotted.



**13,453**

**PART 1 OF 2**

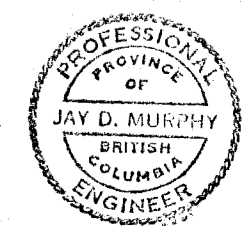
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

TUGOLD RESOURCES INC.

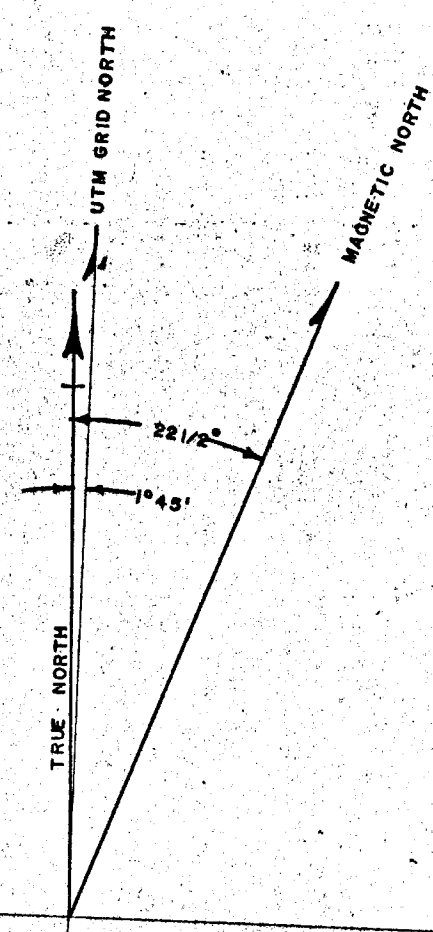
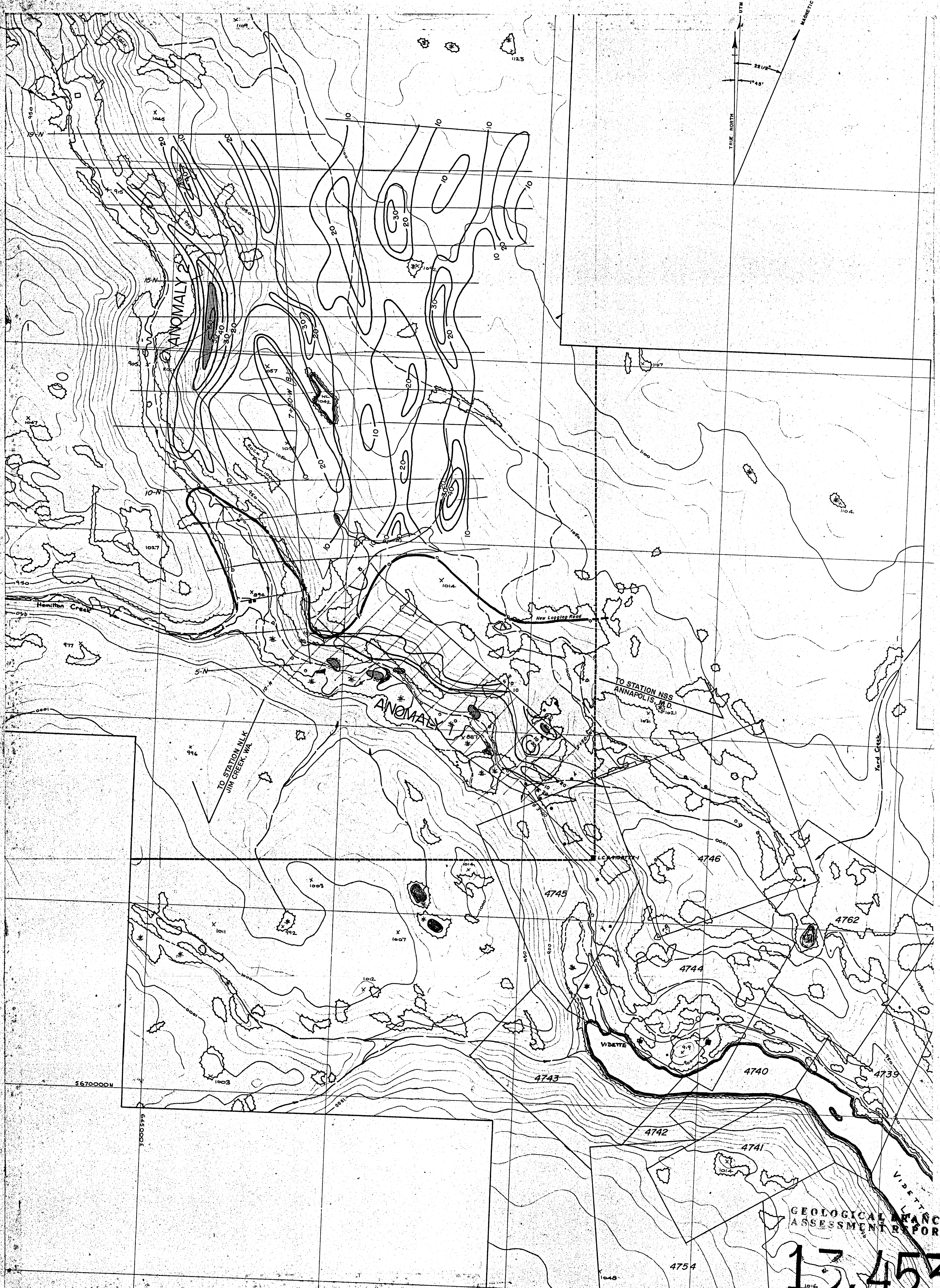
VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W

GOLD-SILVER GEOCHEMISTRY

J.D.M. 1:5000 1984-07-05 PLATE NO. 6







- SYMBOLS**
- Mine grid line and stations
  - Grid stations surveyed in place
  - o Grid station in place, destroyed
  - ▲ Adit portal
  - 4745 Crown Grant Lot Number
  - Boundary Line
  - Filtered VLF values over 50
  - Contour value for Ronka EM-16 survey
  - 20- " " " Sabre " "

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

13,453

PART 1 OF 2

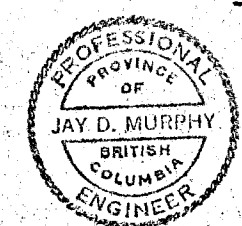
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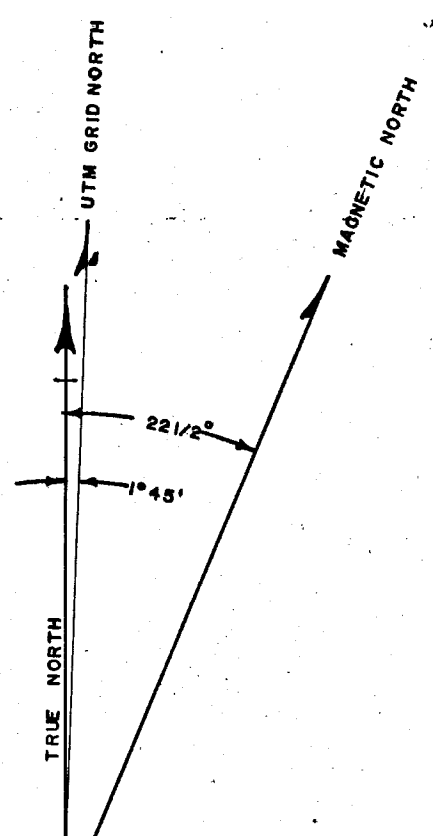
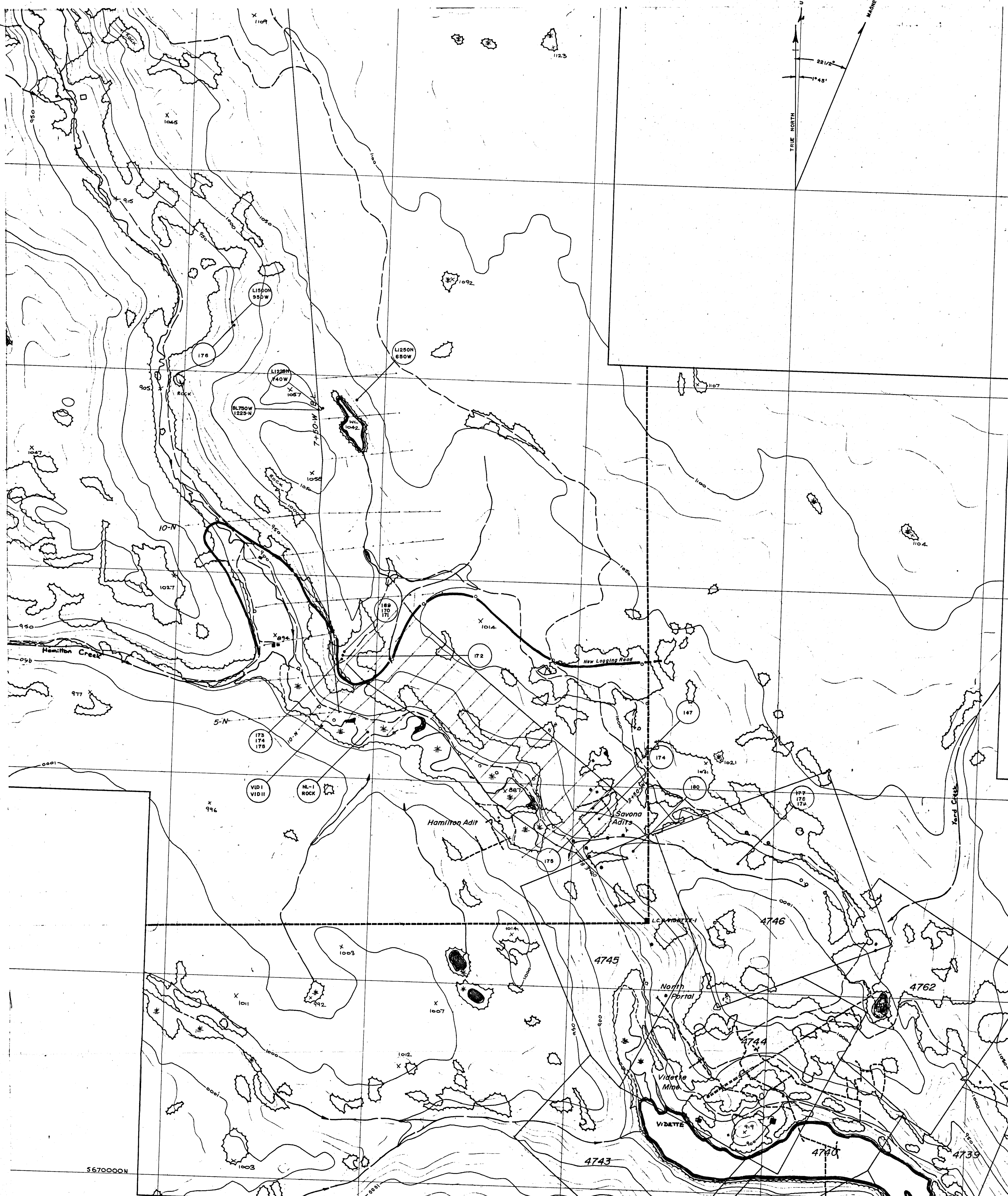
TUGOLD RESOURCES INC.

VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W  
VLF SURVEY

CONTOURS OF FILTERED DATA

BE & J.D.M. | 1:5000 | 1984-07-05 | PLATE NO. 7

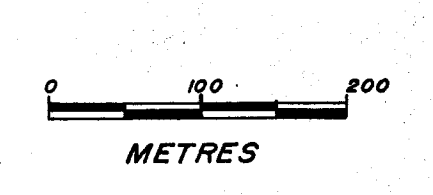




- SYMBOLS**
- Mine grid line and stations
  - Grid stations surveyed in
  - Grid stations in place, destroyed
  - Adit portal
  - 4745 Crown Grant Lot Number
  - Boundary Line
  - 172 Sample location and number

ASSAYED SAMPLES						
SAMPLE NO.	WIDTH(m)	TYPE	ASSAYS			DESCRIPTION
			Au (g/t)	Ag (g/t)	Cu(%)	
LI225-N 740-W	—	—	.14	1.03	.12	Qtz vn W of small lake
LI250-N 650-W	—	—	.31	.34	.01	Rusty pyrite from adit
LI500-N 950-W	—	—	.31	1.02	.04	Fault zone - old pit
BL750-WI225-N	—	—	1.03	33.6	—	Qtz vn W of small lake
180	—	grab	.14	73.03	.14	Cu stain in qtz - old trench
GEOCHEMICALLY ANALYSED SAMPLES						
169	.35	chip	L.005	.01		F.wall shd str zone - 60% qtz
170	.60	"	L.005	.4		Qtz in volc - adjoins 169
171	.35	"	.005	.3		H.wall shr-20% qtz
172	.30	"	.120	.7		F.wall shr 6m S of 169 & 171
173	.30	"	.005	.1		15m S of 169 - 20% qtz
174	.25	"	.240	.2		Sylvanite vn in pit
175	.50	"	.060	.3		" 15m N of 174
176	.20	"	L.005	L.1		Shd volc in old pit
177	1.9	core	.05	L.1		CP-833 6.4 - 8.3m
178	2.3	"	L.005	L.1		" 8.3 - 10.6m
179	.6	"	L.005	L.1		" 10.6 - 11.2m
147	—	grab	L.005	2.4		5cm qtz with Cpy
NL-1 Rock	—	—	.370	1.9		Below drag fault
VID I	—	chip	1.425	.9		Volcanics
VID II	—	—	.780	.8		Intrusive

NOTE: g/t = grams/tonne



GEOLOGICAL BRANCH ASSESSMENT REPORT

13,453

PART 1 OF 2



TUGOLD RESOURCES INC.

VIDETTE LAKE AREA  
CLINTON M.D. 92P/2W

**SURFACE SAMPLE LOCATIONS  
AND  
UNDERGROUND WORKINGS**

J.D.M. | 1:5000 | 1984-07-05 | PLATE NO. 8