

84-#429-12380

GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL

ASSESSMENT REPORT ON THE BASIN, LAKE AND ISLE CLAIMS

HESQUAIT LAKE

ALBERNI MINING DIVISION

92E/8W, 9W

49°30' 126°23'

Report by: Virginia Kuran  
Consulting Geologist

June 12, 1984

Operator: FLOW RESOURCES LTD.

Owners: Peter Buckland  
Lorne Hanson

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

12,380

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## STATEMENT OF COSTS "A"

iii

May 26 - May 28, 1984

## A. Wages (Soil Sampling, Stadia Survey, Mapping)

Virginia Kuran	3 days @ \$130/day	\$ 390.00	
Dave Kuran	3 days @ \$130/day	<u>390.00</u>	
			\$ 780.00

## B. Geochemistry

87 samples @ \$6.00/sample	I.C.P. Analysis	\$ 522.00	
87 samples @ \$4.00/sample	Geochem Au assay	348.00	
87 samples @ \$0.60/sample	Sample preparation	<u>52.20</u>	
			\$ 922.20

## C. Transportation

\$ 40.00 boat trip			
45.50 float plane			
40.00 truck rentals			
<u>\$125.50</u>	20% of 125.50		\$ 25.60

## D. Room &amp; Board

6 man days @ \$30.00/day		\$ 180.00	
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## E. Report Writing &amp; Drafting

2 days @ \$130.00/day		<u>\$ 260.00</u>	
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\$ 2,167.80

## STATEMENT OF COSTS "B"

iv

May 29 - June 3, 1984

## A. Wages (Rock Sampling, Trench Mapping, Blasting, VLF EM16 Survey)

Virginia Kuran, geologist	6 days @ \$130/day	\$ 780.00
Dave Kuran, geologist	6 days @ \$130/day	780.00
Dave Murphy, prospector, blaster	4 days @ \$130/day	<u>520.00</u>
		\$ 2,080.00

## B. Assays

59 Au, Ag, Fa	\$12.50/sample	\$ 737.50
42 Zn	\$6.75/sample	283.50
34 Cu	\$3.75/sample	127.50
32 Pb	\$3.75/sample	120.00
3 As	\$7.50/sample	22.50
59 Rock Preparation	\$2.75/sample	<u>162.25</u>
		\$ 1,453.25

## C. Blasting Supplies

Dynamite & Amax		\$ 171.25
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D. VLF - EM16 Rental	3 days @ \$25/day	\$ 75.00
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## E. Room &amp; Board

16 man days @ \$30/day		\$ 480.00
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## F. Transportation

Boat	2 trips @ \$70/day	
Truck	1 day rental @ \$40/day	
	20 % of \$110.00	\$ 22.00

## G. Report Writing &amp; Drafting

4 days @ \$130/day		\$ <u>520.00</u>
		<u>\$ 4,801.50</u>

## SUMMARY

Between May 26 and June 3, 1984, FLOW RESOURCES LTD. carried out an exploration program on the Hesquait Lake gold-silver showing under the supervision of Dave Kuran, consulting geologist. The work program included geological mapping, prospecting, soil and geophysical surveys, blasting and trench - underground working sampling. Encouraging gold values up to 3.86 oz/ton gold were obtained from the rock chip sampling. A small scale drilling program is recommended to follow up the gold assays as well as prospecting and VLF EM16 surveying to the north and south of the presently worked area.

## 1.0 INTRODUCTION

This assessment report discusses work done on the Hesquait Lake Brown Jug gold and silver prospect located on the west coast of Vancouver Island. A program consisting of geological mapping, geophysical and soil geochemical surveying, rock sampling, blasting and trenching was carried out between May 26 and June 3, 1984. The work has been separated into two stages as seen in the Statement of Costs for assessment purposes.

## 2.0 LOCATION AND ACCESS

The Hesquait Lake claims are located 55 kilometers northwest of Tofino on the west coast of Vancouver Island. The center of the claim block is located at 49 degrees 28'N latitude and 126 degrees 23'W longitude, on NTS maps 92 E 8W and 9W. Access is by float plane or boat from Tofino to Stewardson Inlet at which point a main haulage logging road begins and then passes within 1.5 km of the main showing. At this point, travel by boat along Hesquait Lake is the easiest access to a blazed trail leading to the showings, which begins approximately 1.5 km north of the logging road on the eastern shore of the lake.

## 3.0 PHYSIOGRAPHY

The claims are heavily timbered by large stands of first growth hemlock and cedar with minor fir. Numerous small creeks cut across the property which would provide water for drilling. Topography in the immediate vicinity of the showing is fairly steep with some cliffy sections. Elevations range from sea level to 840 meters on the claims.

## 4.0 CLAIM STATUS

The Hesquait Lake claims consist of 6 claim blocks totalling 49 units located in the Alberni Mining Division. All the claims are owned by agreement between Lorne Hanson (50%) and Peter Buckland (50%). The property is currently optioned by FLOW RESOURCES LTD.

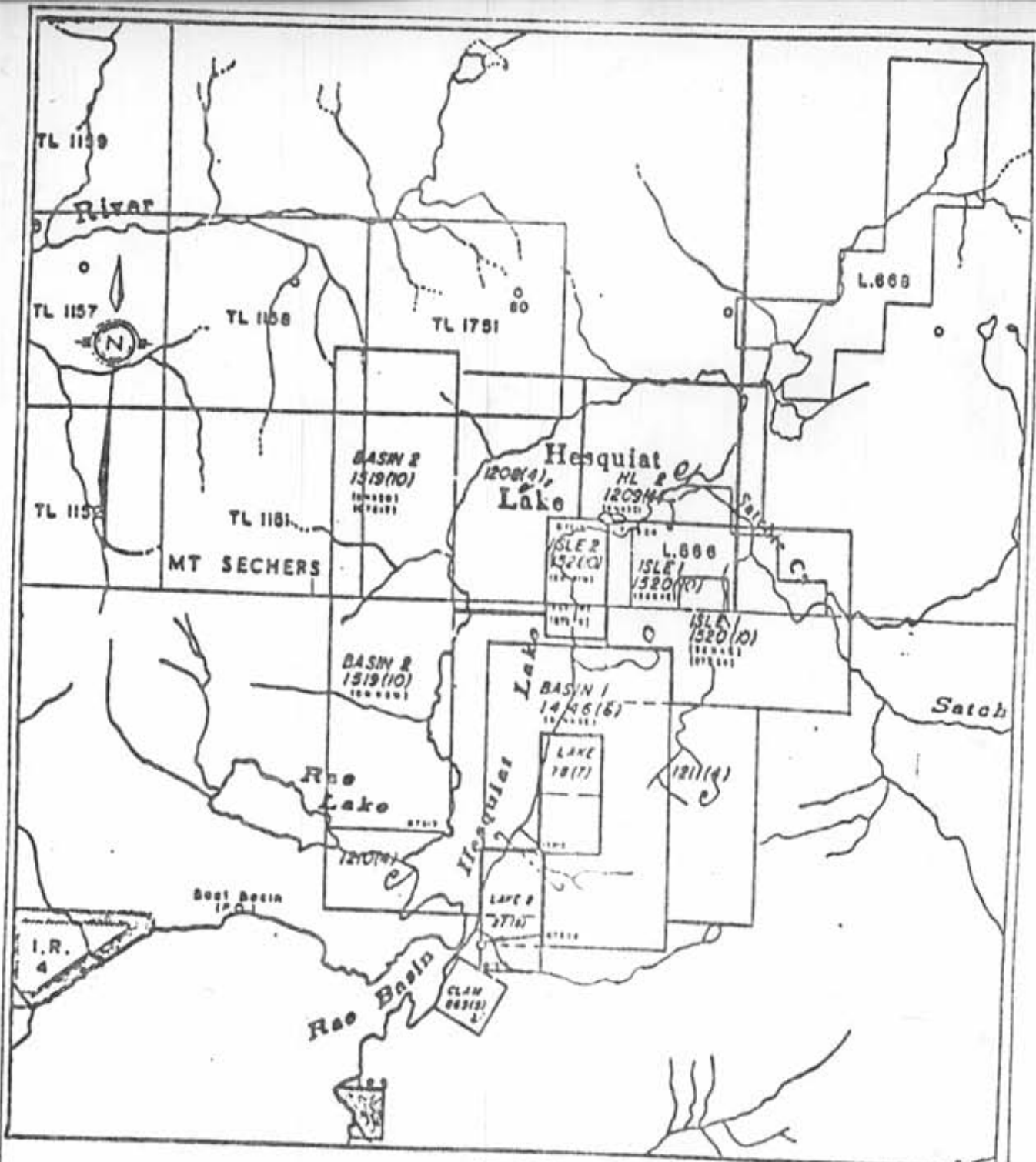
<u>Claim Name</u>	<u>Units</u>	<u>Record #</u>	<u>Month</u>
Lake	2	78	July
Lake 2	2	27	June
Basin 1	15	1446	June
Basin 2	16	1519	October
Isle 1	12	1520	October
Isle 2	2	1521	October



**Property**

<b>FLOW RESOURCES LTD.</b>		
<b>PROPERTY LOCATION MAP</b>		
<b>Basin, Lake and Isle claims</b>		
DRAWN BY: <i>V. KURAN</i>	DATE: <i>June 12/84</i>	FIGURE: <b>1</b>

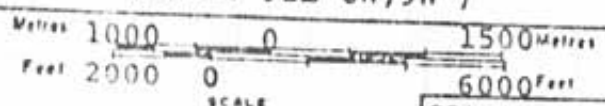




**FLOW RESOURCES LTD.**

**Basin, Lake and Isle claims**  
Claim Location

(after 92E 8W, 9W)



SCALE 1:50,000

DRAWING NUMBER

**June 12/84**  
DATE

**2**

## 5.0 HISTORY AND PREVIOUS WORK

The Hesquait Lake Brown Jug showing is first mentioned in the 1899 Minister of Mines Annual Report in which the vein is reported to be mineralized by galena, zinc blende and minor copper. The vein was traced for 1,500 feet by trenching and reported to be 20 feet wide in places. The ore was said to average \$9.00/ton and upward in gold and silver. Minor adit work was carried out until 1925. The 1966 MMAR states that 1,500' of diamond drilling was completed on a magnetite-chalcopryrite occurrence north of the Brown Jug showing.

Through the 1960's Cannex and Asarco reviewed the property, though they were primarily interested in the magnetite-chalcopryrite showing to the north of the Brown Jug. In 1975 Texada Mines reviewed the Brown Jug showing, but was primarily interested in the magnetite-chalcopryrite showings. In 1982 Cominco Ltd. evaluated the Brown Jug showing by minor rock sampling and detailed soil sampling. Assays from the most southerly adit on the property averaged 1.33 oz/ton gold and 7.9/ton silver over 13.2 feet.

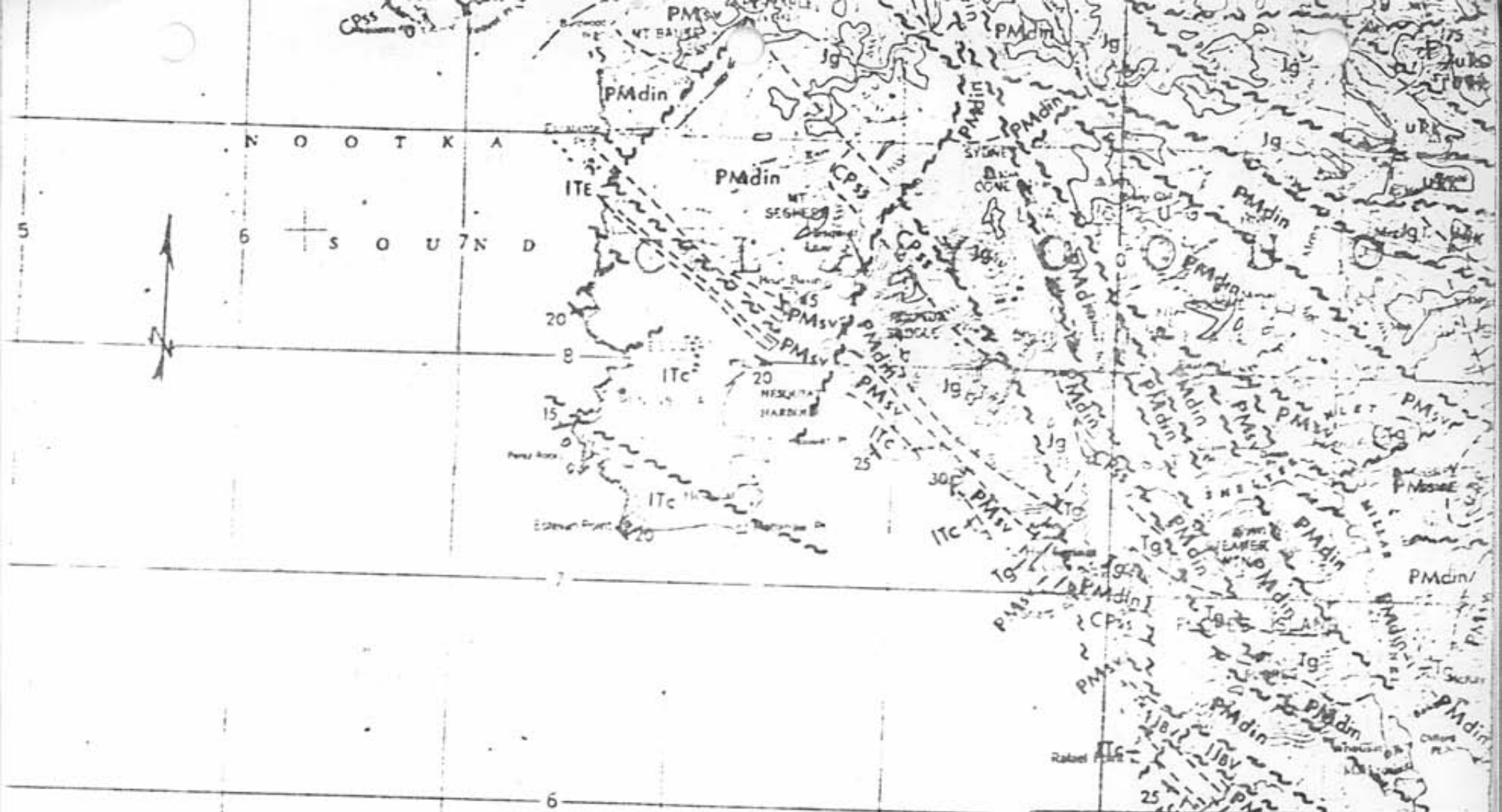
## 6.0 REGIONAL GEOLOGY

The Brown Jug showing is located within Unit CPss - the Sicker Group (see Figure 3 and Table 1) of Pennsylvanian Age near the Sicker contact with Unit PMain intrusives. The Sicker belt extends 3 km to the northwest and 9 km southeast of the Brown Jug showing. The Brown Jug claims consists of sediments and metasediments striking generally northwest-southeast and dipping to the northeast. (Muller O.F. 463)

## 7.0 PROPERTY GEOLOGY

In the immediate vicinity of the Brown Jug showings, the property is underlain by metasedimentary rocks which appear to be the metamorphosed equivalent of interbedded dacite and andesite tuffs or tuffaceous sediments. Light layers in the rock are resistant and poorly foliated while the dark layers are well foliated to gneissic in texture. The local general foliation in the rocks strikes N 20° E dipping steeply to the southeast (Unit MS - Appendix 1). A greenish-white, very fine grained dyke containing up to 10% hornblende and biotite phenocrysts strikes northeast, forming the hanging wall and footwall of the Brown Jug vein system (Unit AV - Appendix 1).

The Brown Jug vein was initially identified as an aplite dyke, but has been tentatively identified as a vein filled by the mineral armenite (Hudson, 1983). This mineral has the chemical composition  $Ba Ca_2 Al_2 Si_9 O_{30} \cdot 2H_2O$  and is a rare vein mineral first identified at the Armen Mine near Kongsberg, Norway. Unit ARS (Appendix 1) consists of pale green armenite with up to 15% sericite with minor epidote as well as 3 to 8% combined sphalerite, arsenopyrite, pyrite, chalcopryrite, galena and manganese oxides. Unit ARSS (Appendix 1) consists of the armenite vein material containing greater than 10% of the same sulphides. Primarily, the vein is mineralized by sphalerite and arsenopyrite with minor chalcopryrite, galena and pyrite.



**FLOW RESOURCES LTD.**

**Basin, Lake and Isle claims**

**REGIONAL GEOLOGY**

0 5 10 15 km

1:250,000

DRAWN BY: U. KURAN	DATE: JUNE 12/84	FIGURE: 3
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# LEGEND - TABLE 1

CENOZOIC	}	<b>TERTIARY</b>
		<p><b>EOCENE and OLIGOCENE</b></p> <p><span style="border: 1px solid black; padding: 2px;">ITC</span>    CARMANAH FORMATION: sandstone, siltstone, shale, conglomerate</p> <p><span style="border: 1px solid black; padding: 2px;">ITE</span>    ESCALANTE FORMATION: conglomerate, sandstone</p> <p><b>EOCENE</b></p> <p><span style="border: 1px solid black; padding: 2px;">Tg</span>    Quartz diorite</p>
		<b>CRETACEOUS</b>
MESOZOIC	}	<p><b>LOWER CRETACEOUS</b></p> <p><span style="border: 1px solid black; padding: 2px;">IKL</span>    LONGARM FORMATION: greywacke, conglomerate, siltstone</p> <p><b>JURASSIC and CRETACEOUS</b></p> <p><span style="border: 1px solid black; padding: 2px;">JKsv</span>    PACIFIC RIM COMPLEX: greywacke, siltstone, conglomerate, pillow lava, ribbon-chert</p> <p><b>JURASSIC</b></p> <p><b>UPPER JURASSIC</b></p> <p><span style="border: 1px solid black; padding: 2px;">UJs</span>    KAPOOSE FORMATION: siltstone, argillite, conglomerate</p> <p><b>LOWER and MIDDLE JURASSIC</b></p> <p><span style="border: 1px solid black; padding: 2px;">Jg</span>    ISLAND INTRUSIONS: quartz diorite, granodiorite, quartz monzonite, quartz feldspar porphyry</p> <p><b>TRIASSIC and JURASSIC</b></p> <p style="padding-left: 40px;">VANCOUVER GROUP</p> <p><b>LOWER JURASSIC</b></p> <p><span style="border: 1px solid black; padding: 2px;">IJBV</span>    BONANZA VOLCANICS: andesitic to rhyodacitic lava, tuff, breccia</p> <p><b>UPPER TRIASSIC</b></p> <p><span style="border: 1px solid black; padding: 2px;">URPB</span>    PARSON BAY FORMATION: calcareous siltstone, shale, limestone, greywacke, conglomerate, breccia</p> <p><span style="border: 1px solid black; padding: 2px;">URQ</span>    QUATSINO FORMATION: limestone</p> <p><span style="border: 1px solid black; padding: 2px;">URK</span>    KARMUTSEN FORMATION: basaltic lava, pillow lava, breccia, aquagene tuff</p>
		<b>PENNSYLVANIAN</b>
		<span style="border: 1px solid black; padding: 2px;">CPss</span> SICKER GROUP: greywacke, argillite, limestone, includes sills of metadiabase
		<b>PALEOZOIC and LOWER MESOZOIC</b>
		WEST COAST CRYSTALLINE COMPLEX
		<span style="border: 1px solid black; padding: 2px;">PMsv</span> actinolite schist, amphibolite, metasediments
		<span style="border: 1px solid black; padding: 2px;">PMdin</span> quartz diorite, tonalite, agmatite, hornblende gneiss, amphibolite

Geological boundary (approximate).....	-	-
Fault, lineament (approximate).....	~	~
Bedding, tops known (horizontal, inclined).....	X	/
Bedding, tops unknown (vertical).....	x	
Foliation (inclined, vertical).....	/	x

## 8.0 SOIL SAMPLING GEOCHEMISTRY

### 8.1 Introduction

A total of 87 soil samples were collected on lines spaced 10 meters apart at a sample interval of 5 meters. This closely spaced grid was chosen due to the character of the mineralization being confined to a vein ranging between 0.7 and 10 m wide. Soils were taken from the rusty brown "B" horizon where possible, but a significant number of samples were taken from the overlying organic layer that was 1 meter deep in places. During the trenching a two to three meter thick layer of concrete-like till was noted below the organic layer in places. This till layer would definitely subdue any geochemical response in the soils. The samples were shipped to Acme Analytical where they were dried and sieved for the -80 mesh fraction. A 0.5 gram sample of the sieved material was digested with 3 ml of acid at 95° C for one hour and then diluted with 10 ml water. The sample was then treated by ICP (inductively Coupled Argon Plasma) for Mo, Cu, Pb, An, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Cu, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K and W. Analysis for gold included atomic absorption from a 10 gram sample of sieved soil which had been digested in hot aqua regia leach.

### 8.2 Results

Results from the ICP and the atomic absorption are shown in Appendix 3. Only copper, lead, zinc, silver and gold results were plotted and contoured as they were the only elements that showed any slightly anomalous values (Appendix 4). Contour limits were chosen after drawing histograms of the elements.

#### 8.2.1 Copper Geochemistry

Copper values ranged from 1 ppm to 216 ppm. Contour limits of 30 ppm and 50 ppm were chosen to outline slightly anomalous areas. The contouring showed the copper anomalies to be centered on the baseline between L 0+605 and L 0+90S. The second area occurs between L 1+10S and 1+30S at station 0+15E. The other anomalous areas were caused by one isolated value.

#### 8.2.2 Lead Geochemistry

Lead values ranged between 1 ppm and 644 ppm. Contour limits of 10, 30, 60 and 100 ppm were chosen after drawing the histogram. The contoured anomalies were all centered on L 0+60S to L 0+70S near the baseline.

#### 8.2.3 Zinc Geochemistry

Zinc values ranged between 1 ppm and 589 ppm. Contour limits of 20, 30, and 100 ppm were chosen after referring to the histogram. The main two zinc anomalies were centered between L 0+90S and L 0+60S at the baseline and between L 0+80S and L 1+00S centered at stations 0+10 W. Generally, the other zinc anomalies are caused by a single sample result.

#### 8.2.4 Silver Geochemistry

The silver values ranged between .1 and 7.7 ppm and contour limits of .5 and 1 ppm silver were chosen from the histogram. The main silver anomalies are on L 0+60S at station 0+35 E and between stations 0+10 E to 0+5 W on L 0+60S.

#### 8.2.5 Gold Geochemistry

Throughout the grid, gold values ranged between 5 and 315 ppb. Contour limits of 10, 20 and 40 ppb were chosen from a histogram plot. The gold anomalies were located between L 0+80S and L 0+60S centered on the baseline. Two other isolated values occur on L 0+70S at stations 0+25 E and 0+35 E.

### 8.3 Interpretations and Conclusions

Overall the geochemical response in the soils was very weak. The vein is outlined somewhat by the copper-lead, zinc-silver and gold geochemistry between L 0+60S and L 0+80S. The highest values in all the elements occurred on L 0+60S at 0+05 W station. This anomaly was probably caused by contamination from the 2S adit dump. A zinc-copper-gold anomaly occurs west of the baseline on L 0+90S which is isolated from the vein. This area deserves further prospecting. A possible extension of the vein is seen between L 1+10S and 1+30S centered at station 0+15 E in copper. Generally, the soil sampling does not appear to be a very effective tool for outlining the vein extension, due to the very thick compact overburden till which overlays the "B" horizon soil.

## 9.0 ROCK SAMPLING

### 9.1 Introduction

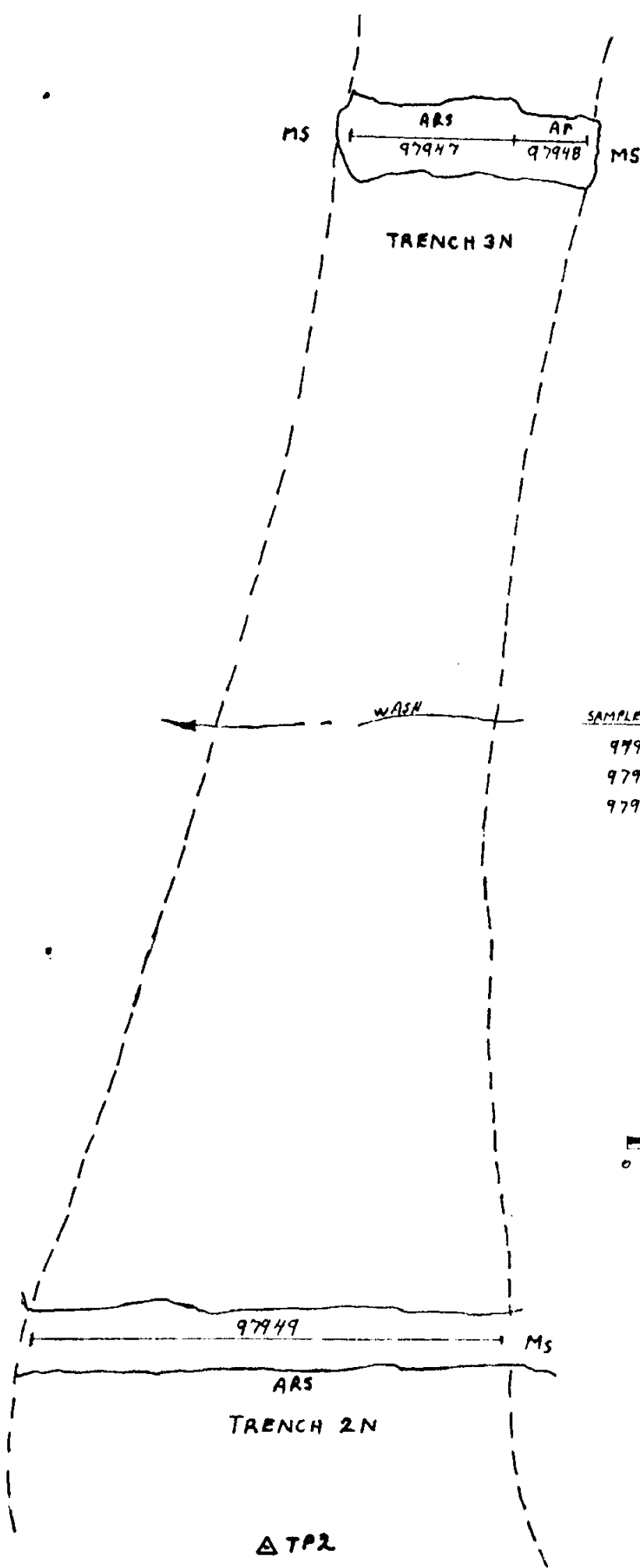
Fifty-nine rock samples were collected from underground workings and trenches on the vein system. They were sent to Acme Analytical where they were crushed and pulverized to -100 mesh. A 14.6 gram pump sample was fire assayed for gold and silver. A one gram sample was dissolved in hot aqua regia solution and then analyzed by atomic absorption for copper, lead, zinc and arsenic.

### 9.2 Results

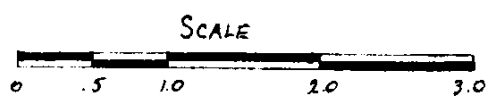
The best gold assays were taken from Adit 2S, Trench 2.5S, Adit 1S and Trench 3N (see Appendix 1 for location of workings and trenches). The average grade in Adit 2S was .29 oz/ton gold over 3.3 meters. Trench 2.5S assayed 3.86 oz/ton gold over 0.7 meters. Adit 1S ran .325 oz/ton gold over 0.7 meters and the most northerly showing Trench 3 N assayed .122 oz/ton gold over 1.4 meters. Detailed maps and assays from the adits and trenches can be seen in Figures 4 to 15 inclusive.

### 9.3 Interpretations and Conclusions

Over a total of 180 meters of strike length four separate showings on the armenite vein contain significant gold values. However, the gold values are erratic along this strike length as the other low assays indicate.

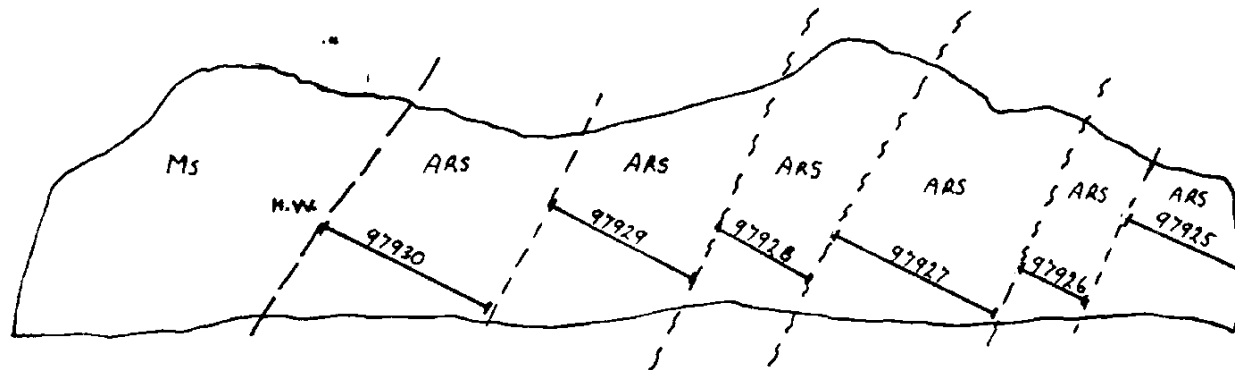


SAMPLE #	m. WIDTH	Cu %	Pb %	Zn %	Ag %	Au oz
97947	1.4	.35		1.13	2.42	.122
97948	0.6				.31	.005
97949	4.0	.58		.62	1.48	.058



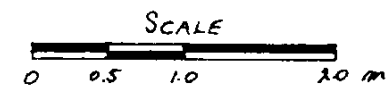
1:50

FLOW RESOURCES			
TRENCHES 2N, 3N			
PLAN MAP			
BROWN JUG			
D.L.K.	JUNE 84	1:50	FIG. 4



SAMPLE N	WIDTH	Cu%	Pb%	Zn%	Ag oz	A.M.O.
97925	0.9	0.08	0.15	0.56	0.32	0.001
97926	0.5	0.02	0.26	0.56	0.12	0.006
97927	1.2	0.15	0.25	0.96	0.51	0.022
97928	0.7	0.16	0.30	1.33	0.51	0.10
97929	1.0	0.32	1.46	2.32	2.39	0.001
97930	1.2	0.96	0.25	1.61	1.81	0.007

MATERIAL MOVED  
 1.5 m x 1.0 m x 8.0 m  
 = 12 m<sup>3</sup>



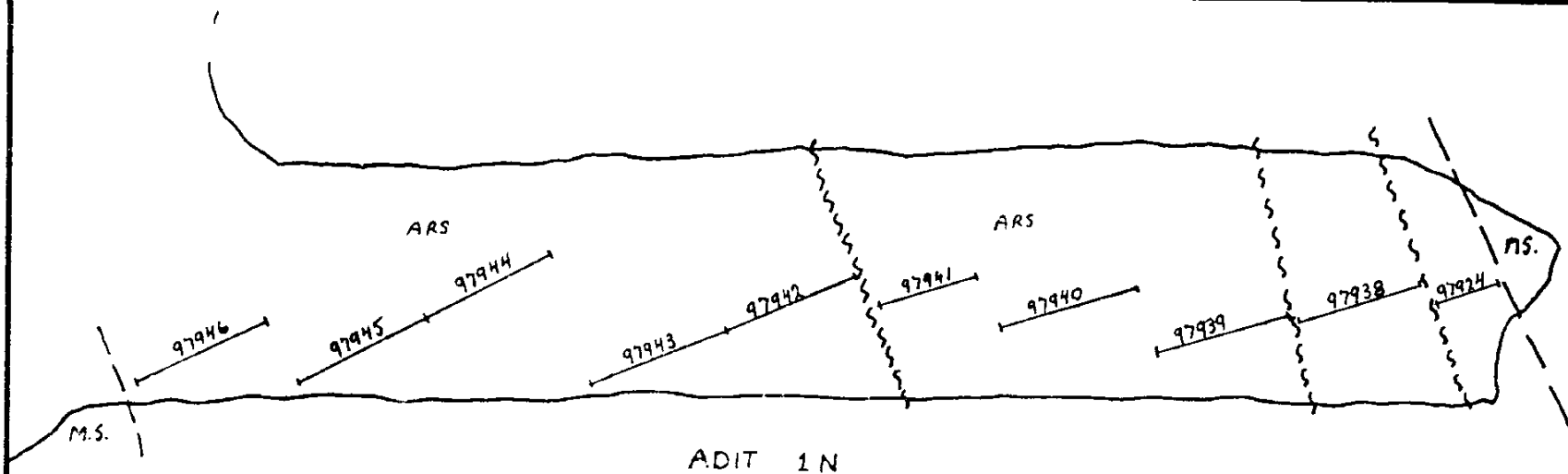
FLOW RESOURCES

TRENCH 1 N  
 (LOOKING SOUTH)

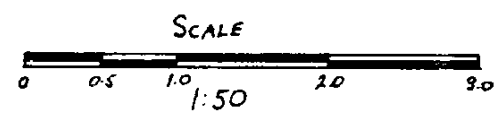
BROWN JUG

D.L.K. | JUNE/94 | 1:50 | Fig. 5

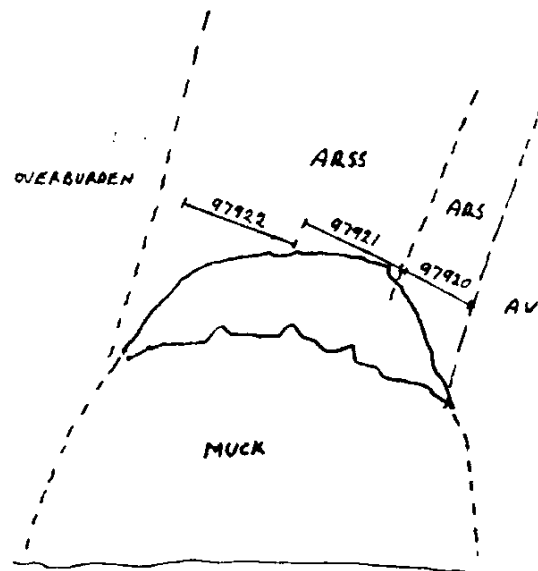




SAMPLE #	m width	Cu %	Pb %	Zn %	Ag oz	Au oz
97924	0.5	.37		6.32	1.82	.013
97938	1.0				.14	.011
97939	1.0				.23	.018
97940	1.0				.37	.004
97941	0.7				.16	.020
97942	1.0			.14	.12	.008
97943	1.0				2.02	.004
97944	1.0	.15			.69	.016
97945	1.0				.32	.001
97946	1.0				.30	.003



<h1>FLOW RESOURCES</h1>		
SCALE: 1:50	APPROVED BY:	DRAWN BY P.L.K.
DATE: JUNE/84		REVISED
ADIT IN LOOKING NORTH		
BROWN JUG		DRAWING NUMBER FIG. 6

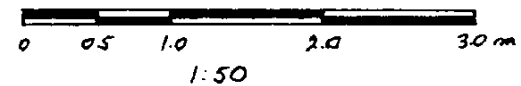


ADIT 1 SOUTH

LOOKING SOUTH

SAMPLE #	WIDTH	Cu %	Pb %	Zn %	Ag oz	Au oz	As %
97920	0.5		.76	.52	1.91	.014	
97921	0.7	.18	2.55	3.47	2.43	.325	7.65
97922	0.8	.11	.80	3.63	1.38	.024	.52

SCALE



## FLOW RESOURCES

SCALE: 1:50

APPROVED BY:

DRAWN BY D.L.K.

DATE: JUNE, 1984

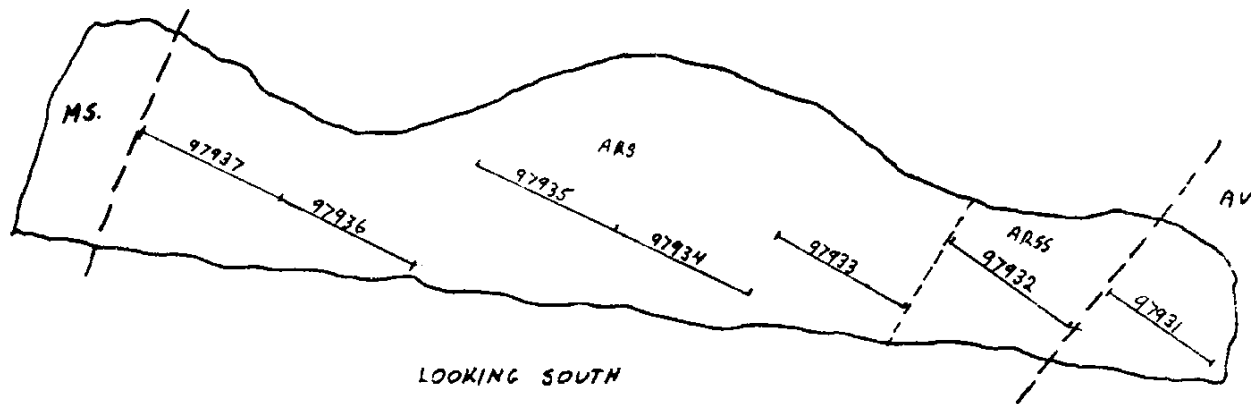
REVISED

ADIT 1 SOUTH (LOOKING SOUTH)

BROWN JUG

DRAWING NUMBER

Fig 7

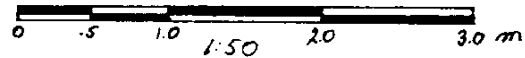


STAMPLE N	WIDTH	Cu %	Pb %	Zn %	Ag oz	Au oz
97931	0.8	.02	.97	.09	.96	.001
97932	1.0	.47	.39	1.11	4.06	.190
97933	1.0	.21	.67	1.38	1.55	.016
97934	1.0	.03	.27	.32	.37	.007
97935	1.0	.11	.54	.53	.83	.001
97936	1.0	.30	.79	1.51	1.89	.011
97937	1.0	.86	.90	6.27	2.96	.215

MATERIAL MOVED

$$8 \text{ m} \times 1 \text{ m} \times 1.5 \text{ m} = 12 \text{ m}^3$$

SCALE



## FLOW RESOURCES

SCALE: 1:50

APPROVED BY:

DRAWN BY PLK.

DATE: JUNE, 1984

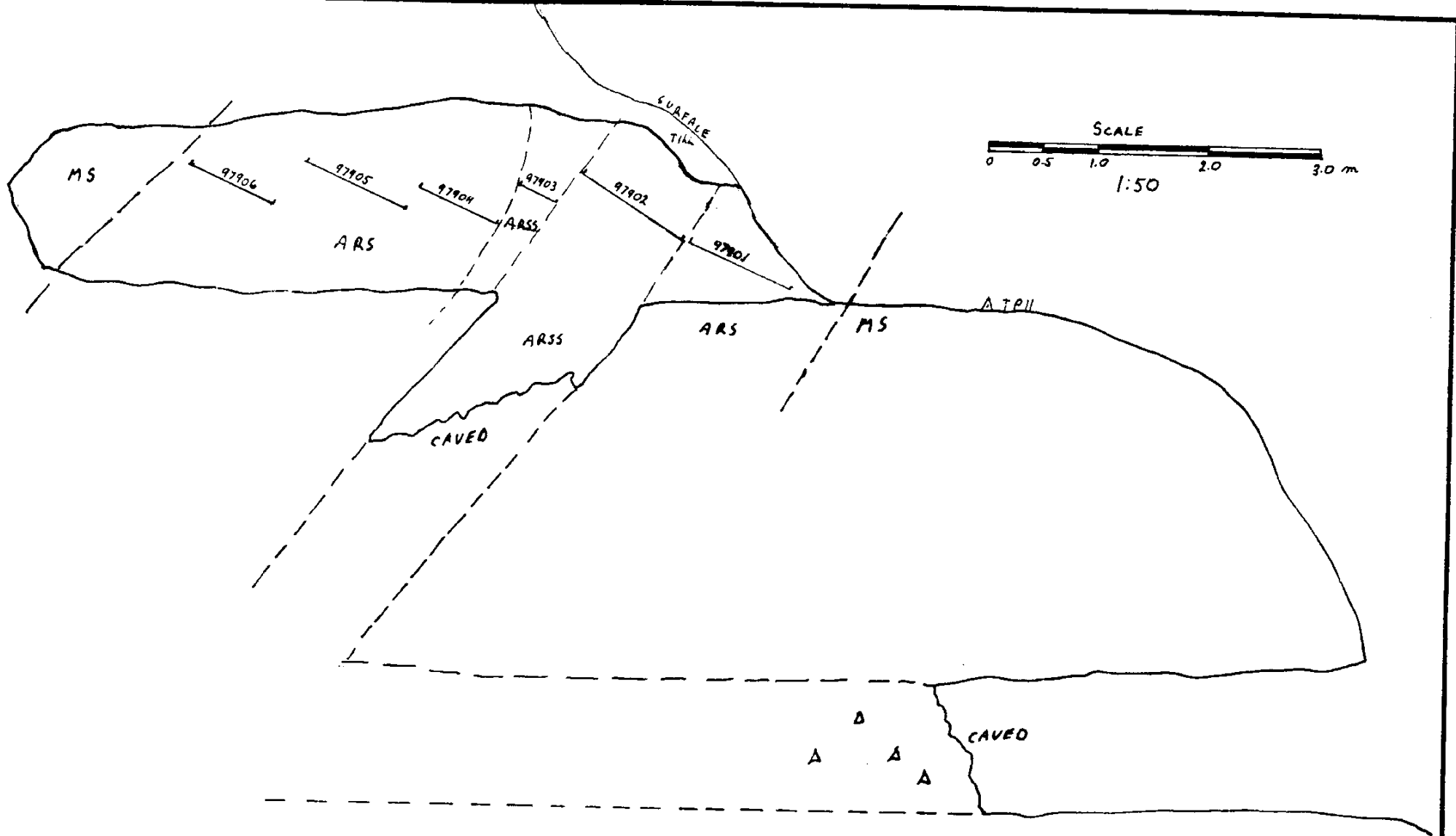
REVISED

TRENCH 15 (LOOKING SOUTH)

BROWN JUG

DRAWING NUMBER

Fig. 8



SAMPLE N	m WIDTH	Cu %	Pb %	Zn %	Ag %	Au %
97901	1.0	1.19	1.19	2.49	7.62	.630
97902	1.1	.72	6.27	5.77	12.50	.140
97903	0.4	.45	1.12	2.28	3.14	.058
97904	0.8	.08	.12	5.61	0.61	.170
97905	1.0	.08	.02	.56	.08	.004
97906	0.7	.01	.02	.42	.04	.001

## FLOW RESOURCES

SCALE: 1:50

APPROVED BY:

DRAWN BY D.L.L.

DATE: JUNE 1984

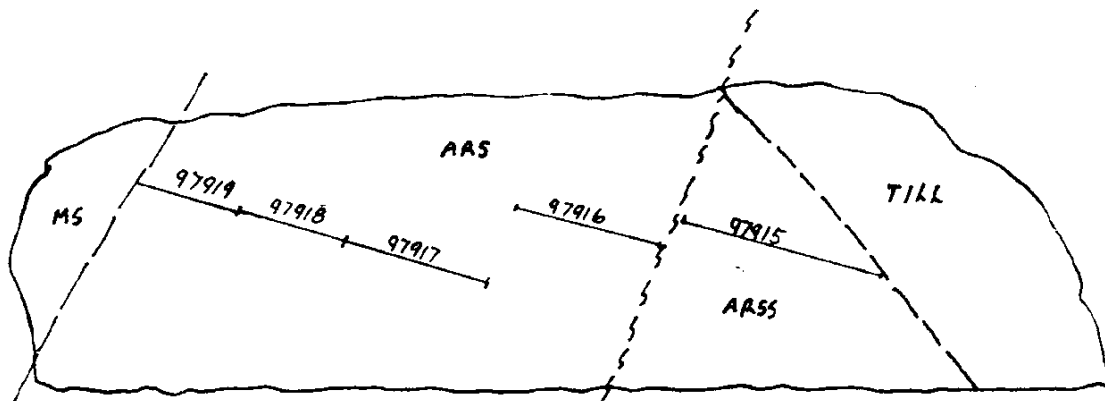
REVISED

ADIT 2 SOUTH (LOOKING SOUTH)

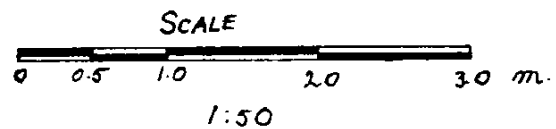
BROWN JUG

DRAWING NUMBER

Fig. 9



SAMPLE N	M. WIDTH	Cu %	Pb %	Zn %	Ag oz	Au oz
97915	1.4			.04	.92	.033
97916	1.0				.35	.009
97917	1.0		.37	.15	.48	.007
97918	.7				1.01	.023
97919	.7			.58	1.00	.081



## FLOW RESOURCES

SCALE: 1:50

APPROVED BY:

DRAWN BY D.LK

DATE: JUNE, 1984

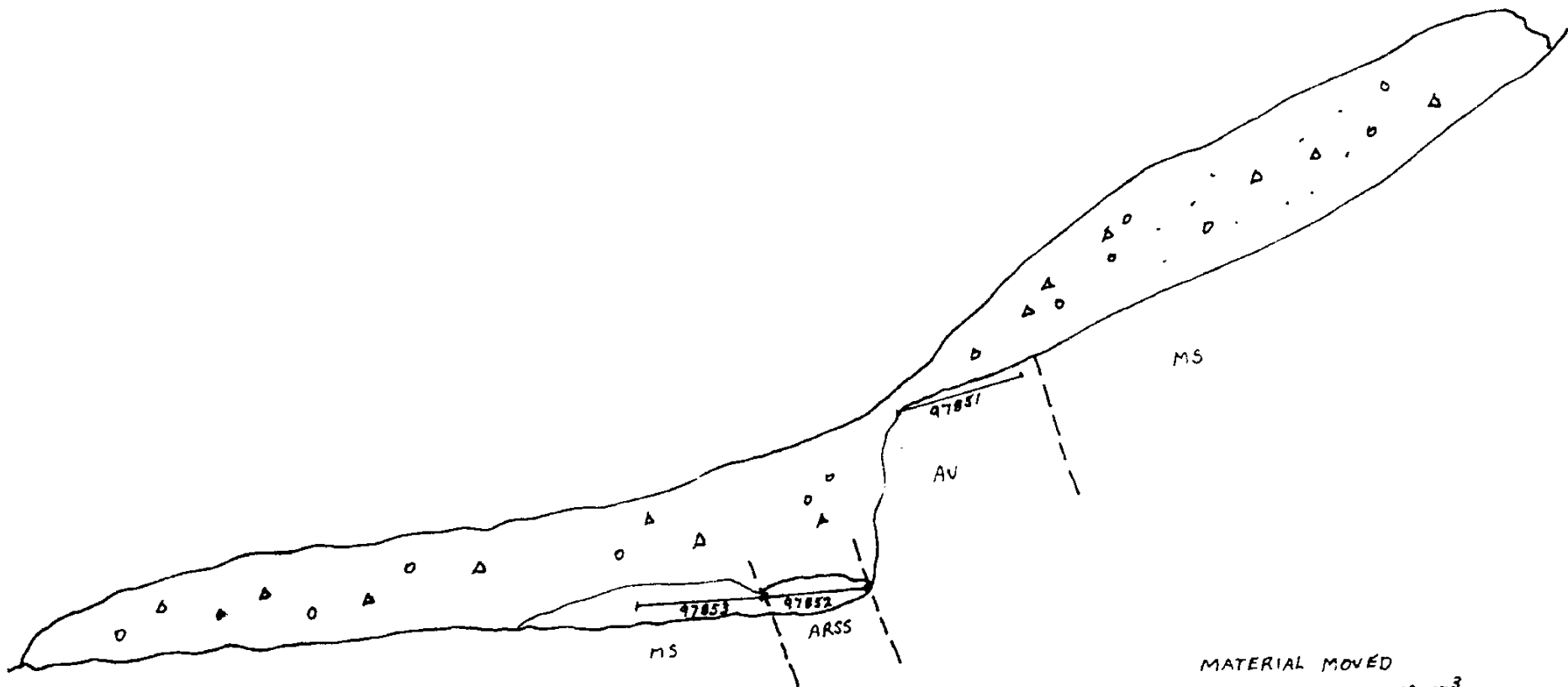
REVISED

TRENCH 2 SOUTH (LOOKING SOUTH)

BROWN JUG

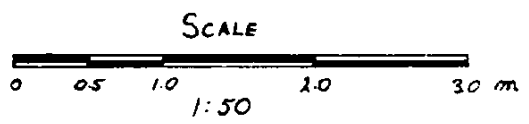
DRAWING NUMBER

Fig. 10

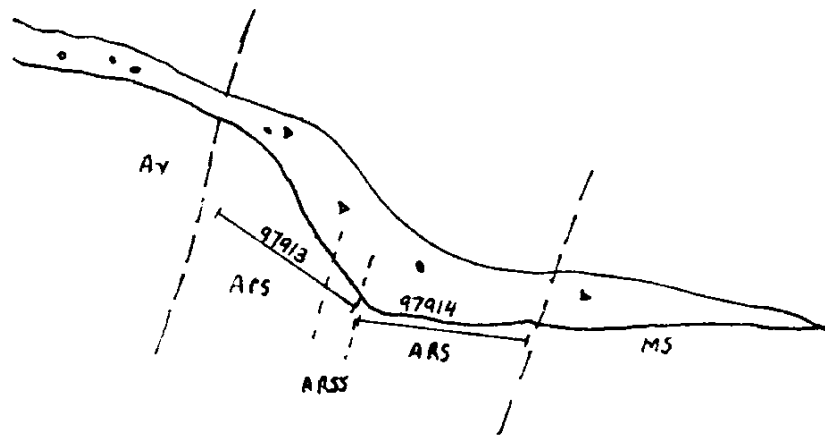


MATERIAL MOVED  
 6 m x 1 m x 2 m = 12 m<sup>3</sup>

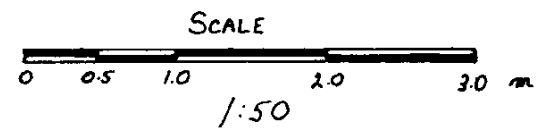
SAMPLE N	width	Cut	Pb%	Zn%	Ag <sub>ppm</sub>	Au <sub>ppm</sub>
97851	1.0				.01	.001
97852	0.7	.21	2.83	.46	15.5	3.86
97853	1.0				.01	.006



<h2>FLOW RESOURCES</h2>		
SCALE: 1:50	APPROVED BY:	DRAWN BY D.L.K.
DATE: JUNE/1984		REVISED
<h3>TRENCH 2.5 SOUTH (LOOKING NORTH)</h3>		
BROWN JUG		DRAWING NUMBER Fig. 11

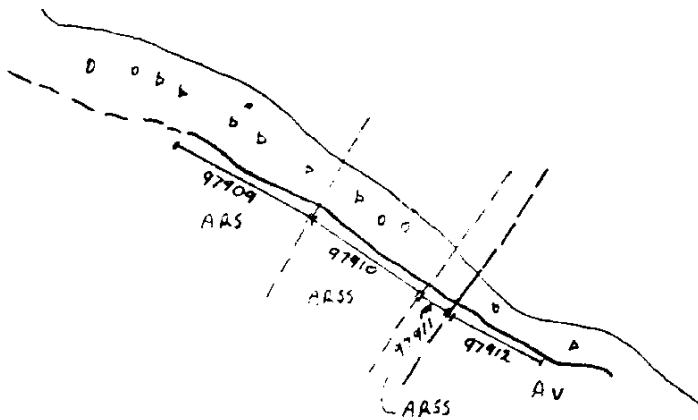


SAMPLE #	WIDTH	Cu %	Pb %	Zn %	Ag pp.	Au oz.
97913	1.1	.74	4.44	1.25	4.67	.023
97914	1.2				.03	.001

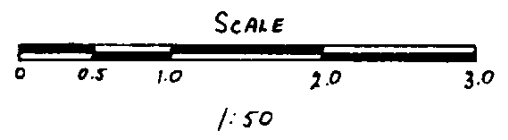


## FLOW RESOURCES

SCALE: 1:50	APPROVED BY:	DRAWN BY D.L.K.
DATE: JUNE, 1984		REVISED
TRENCH 3 SOUTH (LOOKING SOUTH)		
BROWN JUG		DRAWING NUMBER Fig. 12

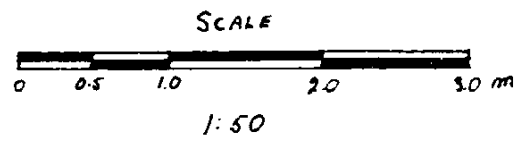
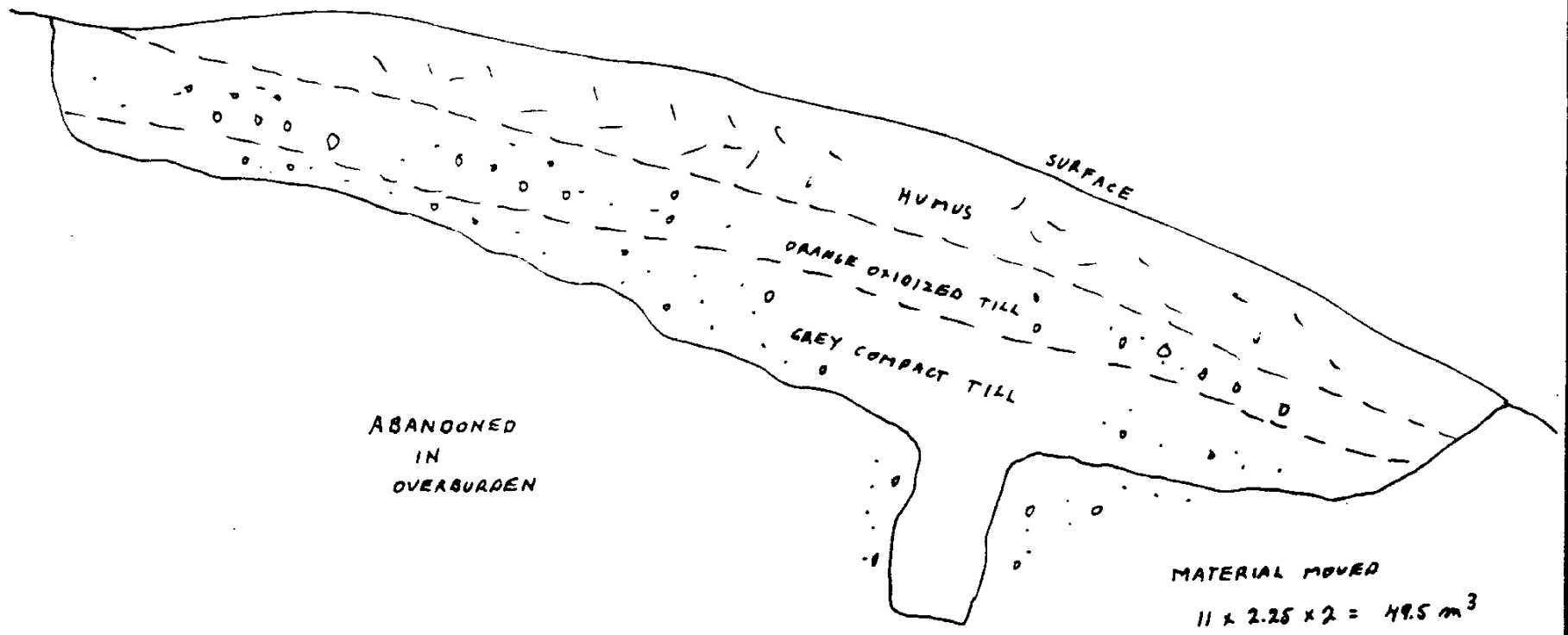


SAMPLE #	FTL. WIDTH	Cu %	Pb %	Zn %	Ag oz	Au oz
97709	1.0	.02	.10	.15	.22	.001
97710	.9	.10	.78	1.07	1.00	.041
97711	.2	.08	.81	1.03	2.10	.030
97712	.7	.01	.08	.11	.12	.001

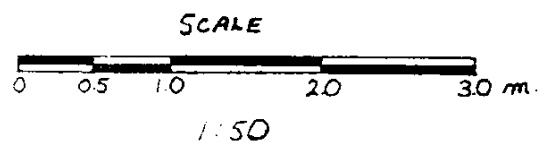
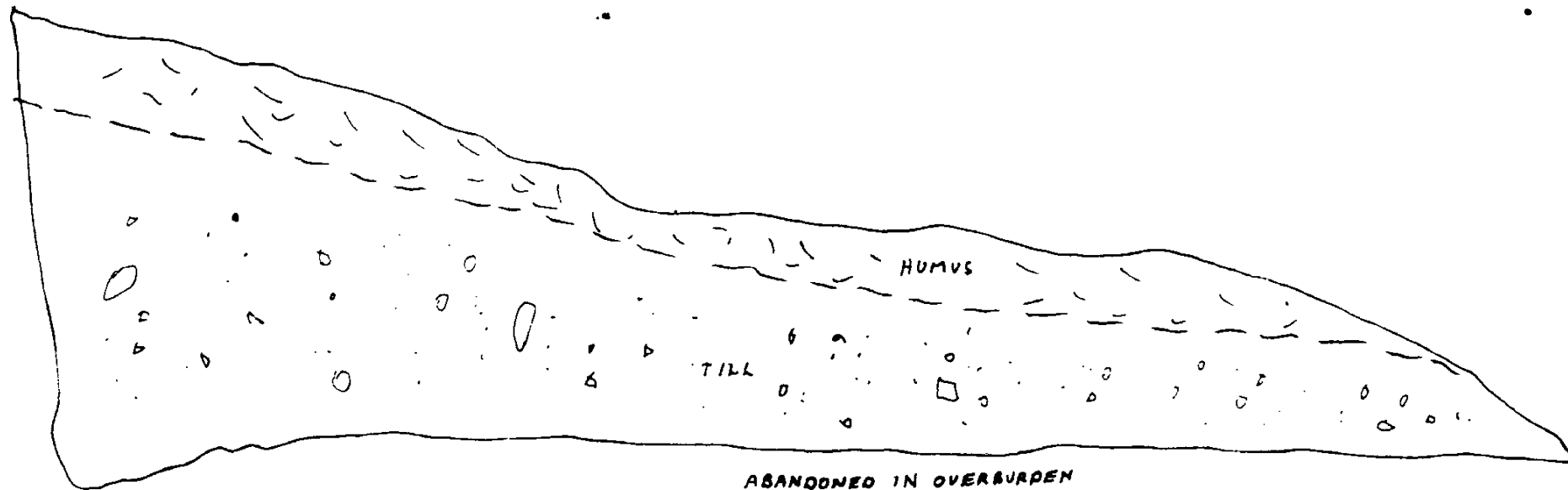


FLOW RESOURCES		
SCALE: 1:50	APPROVED BY:	DRAWN BY D.L.K.
DATE: JUNE, 1984		REVISED
TRENCH 4 SOUTH (LOOKING SOUTH)		
BROWN JUG		DRAWING NUMBER Fig. 13





FLOW RESOURCES		
SCALE: 1:50	APPROVED BY:	DRAWN BY D.LK
DATE: JUNE 1984		REVISED
TRENCH 5 SOUTH (LOOKING SOUTH)		
BROWN JUG		DRAWING NUMBER Fig. 14



MATERIAL MOVER  
 $2 \times 2 \times 2 = 48 \text{ m}^3$

## FLOW RESOURCES

SCALE: 1:50

APPROVED BY:

DRAWN BY D.L.H.

DATE: JUNE 1984

REVISED

TRENCH 6 SOUTH (LOOKING SOUTH)

BROWN JUG

DRAWING NUMBER

Fig. 15

## 10.0 VLF EM-16 SURVEY

### 10.1 Introduction

A VLF EM16 survey was carried out between L 0+20 S and L 1+50 S on lines spaced 10 meters apart with readings taken at 10 meter intervals. Seattle, Washington was used as a transmitting station. A total of 7.6 km of VLF EM16 survey was carried out.

### 10.2 Results

The EM16 readings were plotted on a representation of the grid showing the workings and trenches (Appendix 5). A conductor was traced following the general strike of the armenite vein in the area of the known showings. This conductor was shown to extend from L 0+60 S (Adit 2S) to L 1+50 S.

### 10.3 Interpretations and Conclusions

The VLF EM16 survey was successful in delineating the possible southerly extension of the armenite vein. However, the vein is a fairly weak conductor as seen by the minor variance in the dip angle. This is due to the main sulphide mineral being sphalerite which is a poor conductor. For this reason, it is not recommended that a more sophisticated low frequency EM system be used on the property, as these systems would require a stronger conductor to trace out the vein.

## 11.0 CONCLUSIONS

The Brown Jug gold-silver vein is mineralized by sphalerite and arsenopyrite with minor galena, chalcopyrite and pyrite. Gold values of up to 3.86 oz/ton gold were obtained in the 1984 program. The gold is extremely erratic as seen by the 1984 assay from the 2S Adit averaging .29 oz/ton gold over 3.3 meters. Cominco's assay of the same adit assays 13.2' (3.96 m) of 1.33 oz/ton gold. Four showings on the vein have been found to have appreciable gold values over a total strike length of 120 meters. Soil geochemical response is very subdued on the southerly extension of the vein. This is due to the thick hard pack till overburden. The geophysical survey indicates that a conductor extends 90 meters to the south from the last known vein showing.

## 12.0 RECOMMENDATIONS

A drilling program is recommended for the Brown Jug gold-silver showing. A hydro winkle drill should be employed drilling BX core. Due to the erratic nature of the gold mineralization, down dip intersections on the vein should be on the order of 10 meters from surface in the initial phase. Any step outs along strike should also be 10 meters in length. The following workings should be used as drill hole targets: Adit 2S, Trench 2.5S, Adit 1S, Trench 3N. Further prospecting and VLF EM16 surveying should be carried out to the south of L 1+50 S and to the north of Trench 3N. Prospecting in the vicinity of the known showings should be concentrated on finding parallel structures to the known vein. Adit 1 South should be opened and sampled. The Adit, reported to be some 300 meters north on the Brown Jug Extension should be located and sampled.

STATEMENT OF QUALIFICATIONS

I. Virginia Kuran, of 25630 Bosonworth Avenue, Maple Ridge, in the Province of British Columbia. DO HEREBY CERTIFY THAT:

1. I am a geologist contracted by Flow Resources Ltd.. with offices at 1701 - 701 West Georgia Street, P.O. Box 10080 Pacific Centre, Vancouver. B.C. V7Y 1B6.
2. I am a graduate of the University of British Columbia with an Honours Bachelor of Science Degree in Geology.
3. My primary employment since graduating in 1980 has been in the field of mineral exploration, as a Field Geologist.
4. This report is based on field work which I actively participated in between May 26, 1984 and June 3, 1984.

Dated at Vancouver, British Columbia, this            day of            , 1984.

## BIBLIOGRAPHY

- B.C. Dept. of Mines Annual Report  
1899 p. 793  
1903 p. 208  
1906 p. H185  
1916 p. K337  
1923 p. A272  
1961 p. 101  
1967 p. 77  
1969 p. 216
- Cavey. G. Report on the Basin Lake and Isle Claims, Hesquait Lake, Alberni Alberni Mining Division for FLOW RESOURCES LTD. May 2. 1983.
- Hudson. K.E. Petrology. Genesis and Possible Regional Exploration Parameters for a vein prospect on the West Coast of Vancouver Island, B.C. B. Sc. thesis, U.B.C. April 28, 1983
- Muller. J.E. Geological Association of Canada  
Map 1537A. Geology - Nootka Sound. British Columbia, 1975.
- Muller. J.E. Geological Association of Canada  
Open File 463, 1977.
- Sharp, B. Cominco geochemical maps.

APPENDIX 2,3

Appendix 2

12380

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE 253-3158

DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MS, BA, TI, B, AL, NA, K, W, SI, ZR, CE, SM, Y, ND AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: SOIL AU1 ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: JUNE 6 1984 DATE REPORT MAILED: June 13/84 ASSAYER: D. J. ... DEAN TOYE, CERTIFIED B.C. ASSAYER

FLOW RESOURCES FILE # 84-0984A

PAGE 1

Table with columns: SAMPLE, NO, CU, PB, ZN, AG, NI, CO, MN, FE, AS, U, AU, TH, SR, CD, SB, BI, V, CA, P, LA, CR, MG, BA, TI, B, AL, NA, K, W, AU1. Rows include various sample IDs like 0+605 0+05M, 0+705 0+05M, etc.





## FLOW RESOURCES FILE # 84-09B4A

PAGE 3

SAMPLE#	MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	MG	BA	TI	B	AL	NA	K	W	MU#
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
1+405 0+15E	2	17	3	14	.2	8	5	91	3.90	14	3	ND	2	15	1	2	2	96	.25	.04	2	30	.25	22	.30	2	1.85	.02	.02	2	5
1+405 0+20E	1	8	3	13	.2	5	4	90	2.30	7	2	ND	2	21	1	2	2	95	.30	.03	2	22	.23	13	.27	2	1.00	.02	.02	2	5
1+405 0+25E	2	11	2	12	.3	7	4	89	4.32	13	3	ND	2	8	1	2	2	122	.20	.05	2	26	.17	9	.34	2	1.75	.02	.03	2	5
1+405 0+30E	2	21	3	12	.2	6	4	72	4.49	17	2	ND	2	9	1	2	2	104	.19	.04	2	42	.17	11	.28	3	4.31	.02	.02	2	5
1+405 0+35E	2	10	5	17	.2	8	5	99	5.06	14	2	ND	2	13	1	2	2	172	.33	.02	2	35	.19	15	.41	2	1.31	.02	.02	2	5
1+505 0+00E	1	14	6	16	.1	11	6	135	2.33	7	2	ND	2	17	1	2	2	66	.33	.06	2	23	.25	19	.17	4	1.30	.03	.03	2	5
1+505 0+05E	2	19	8	20	.1	13	10	211	3.30	17	2	ND	2	14	1	2	2	80	.34	.08	2	27	.42	30	.23	2	2.52	.03	.04	2	5
1+505 0+10E	2	24	4	21	.1	13	11	241	3.10	10	2	ND	2	14	1	2	2	76	.32	.08	2	34	.41	23	.22	5	3.31	.02	.03	2	5
1+505 0+15E	1	25	6	19	.2	13	11	349	3.06	13	3	ND	2	16	1	2	2	82	.37	.05	2	32	.42	25	.23	2	3.75	.03	.03	2	5
1+505 0+25E	1	1	1	1	.1	1	1	1	.05	2	2	ND	2	1	1	2	7	2	.01	.01	2	1	.01	2	.01	2	.02	.01	.02	2	5
1+505 0+25E	2	24	3	19	.1	12	10	221	2.66	13	2	ND	2	15	1	2	2	70	.33	.07	2	29	.36	29	.17	5	3.28	.03	.03	2	5
1+505 0+30E	1	25	1	19	.1	13	12	241	3.05	12	2	ND	2	16	1	2	2	73	.36	.05	2	33	.42	29	.21	2	3.14	.03	.02	2	5
1+505 0+35E	1	40	1	20	.1	13	9	191	3.92	24	3	ND	2	13	1	2	2	82	.29	.07	2	37	.39	38	.26	3	5.40	.02	.03	2	5
STD A-1/AU 0.5	2	30	37	185	.3	38	12	1039	2.81	9	2	ND	2	35	2	2	2	57	.65	.10	7	66	.60	244	.10	8	2.02	.02	.18	2	490

*June 12/84*

ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.  
 AG AND AU BY FIRE ASSAYS

Appendix 3-i

ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

FLOW RES FILE# 64-0984B

PAGE# 1

SAMPLE	CU %	PB %	ZN %	AG** OZ/T	AU** OZ/T	AS %
097901	1.19	1.19	2.49	7.62	.630	-
097902	.72	6.27	5.77	12.50	.140	-
097903	.45	1.12	2.28	3.14	.058	-
097904	.08	.12	5.61	.61	.170	-
097905	.08	.02	.56	.08	.004	-
097906	.01	.02	.42	.04	.001	-
097907	.10	.76	3.88	.72	.019	-
097908	.56	.40	2.69	1.84	.045	-
097909	.02	.10	.15	.22	.001	-
097910	.10	.78	1.07	1.00	.041	-
097911	.08	.81	1.03	2.10	.030	-
097912	.01	.08	.11	.12	.001	-
097913	.74	4.44	1.25	4.67	.023	-
097914	-	-	-	.03	.001	-
097915	-	-	.04	.92	.033	-
097916	-	-	-	.35	.009	-
097917	-	.57	.15	.48	.007	-
097918	-	-	-	1.01	.023	-
097919	-	-	.58	1.00	.081	-
097920	-	.76	.52	1.91	.014	-
097921	.18	2.55	3.47	2.43	.325	7.65
097922	.11	.80	3.63	1.38	.024	.52
097923	.20	4.20	10.75	4.65	.680	18.90
097924	.37	-	1.32	1.82	.013	-
097925	.08	.15	.56	.32	.001	-
097926	.02	.26	.56	.42	.006	-
097927	.15	.23	.96	.51	.022	-
097928	.16	.30	1.33	.51	.010	-
097929	.32	1.46	2.32	2.39	.001	-
097930	.96	.25	1.61	1.81	.007	-
097931	.02	.97	.09	.96	.001	-
097932	.47	.39	1.11	4.06	.190	-
097933	.21	.67	1.38	1.55	.016	-
097934	.03	.27	.32	.37	.007	-
097935	.11	.54	.53	.83	.001	-
097936	.30	.79	1.51	1.89	.011	-
097937	.86	.90	6.27	2.96	.215	-

12380

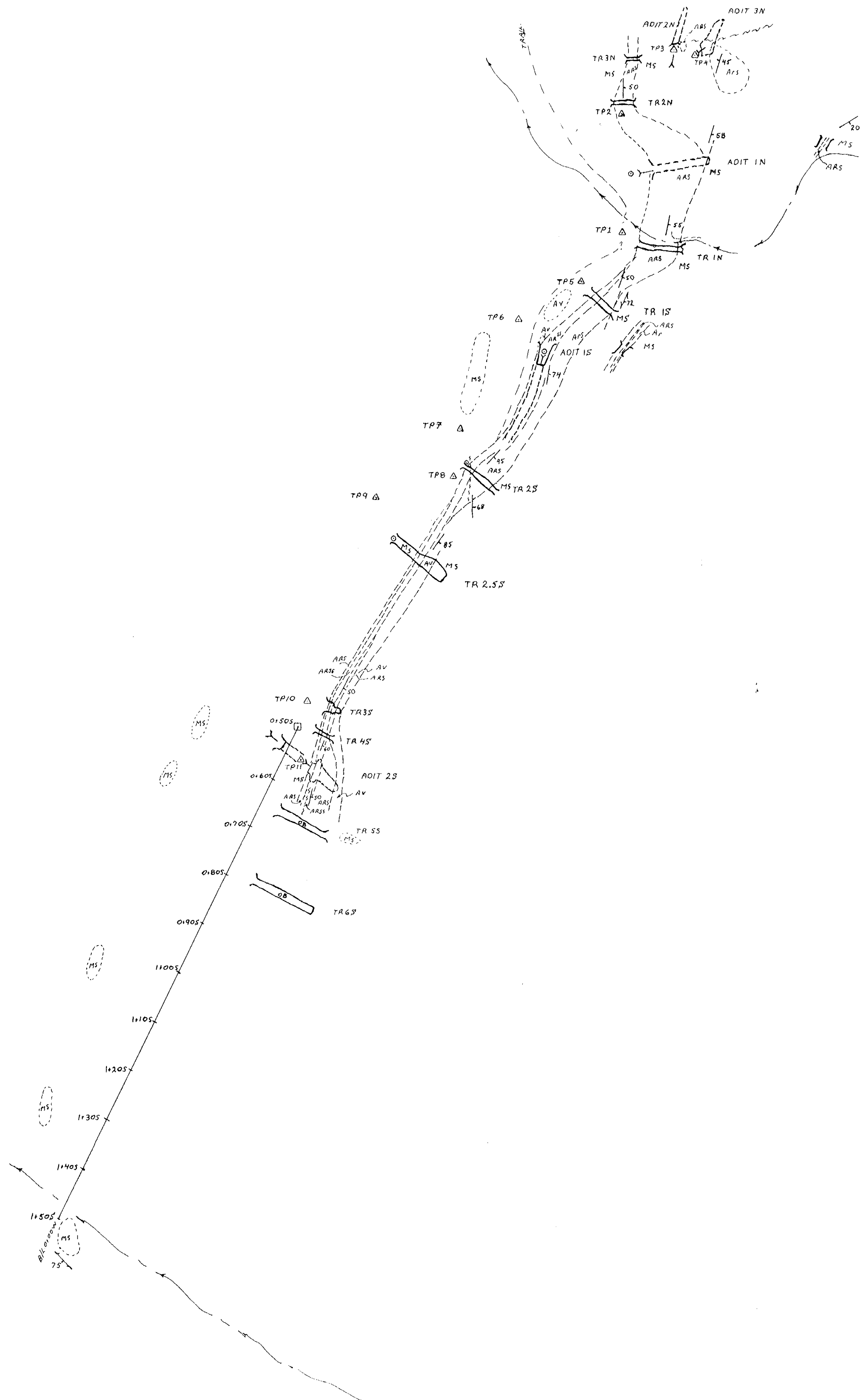
14.6.

SAMPLE	CU %	PB %	ZN %	AG+I OZ/T	AULT OZ/T
097938	-	-	-	.14	.011
097939	-	-	-	.23	.018
097940	-	-	-	.37	.004
097941	-	-	-	.16	.020
097942	-	-	.14	.12	.008
097943	-	-	-	2.01	.004
097944	.15	-	-	.89	.016
097945	-	-	-	.32	.001
097946	-	-	-	.30	.003
097947	.35	-	1.13	2.42	.122
097948	-	-	-	.31	.005
097949	-	-	6.48	1.79	.050
097950	.58	-	.62	1.48	.058
097851	-	-	-	.01	.001
097852	.21	2.83	.46	15.50	3.860
097853	-	-	-	.01	.006
097854	-	-	-	.06	.005
097855	-	-	-	.26	.042
097856	-	-	7.50	8.46	.347
097857	-	-	-	.09	.001
097858	-	-	.13	.03	.001
097859	-	-	21.60	.58	.001

Appendix 3.

APPENDIX 1,4,5

LAKE 78(7)



LEGEND

- ARSS** ARMENITE VEIN; SHEARED, CONTAINS 70% SULPHIDES OF Cu, Pb, Zn, As, Fe, LOCALLY HEAVILY SERICITIZED, USUALLY RUSTY AND OXIDIZED ON F.W. OF VEIN.
- ARS** ARMENITE VEIN; USUALLY CONTAMINATED WITH UP TO 15% SERICITE AND MINOR EPIDOTE; CONTAINS 3-8% SULPHIDES OF Zn, As, Fe, Cu, Pb, AND Mn OXIDES, USUALLY OFF WHITE TO PALE GREEN IN COLOR.
- AV** ACID VOLCANIC DYKE; GREENISH-WHITE IN COLOR, VERY FINE GRAINED, CONTAINS UP TO 10% HORNBLLENDE/BIOTITE PHENOCRYSTS POSSIBLY DACITIC IN COMPOSITION.
- MS** METASEDIMENTARY ROCKS; REGIONALLY METAMORPHOSED EQUIVALENT OF INTERBEDDED DACITE AND ANDESITE TUFFS OR TUFFACEOUS SEDIMENTS; LIGHT LAYERS RESISTANT AND POORLY FOLIATED, DARK LAYERS WELL FOLIATED TO GNEISSIC PRESUMABLY "SICKER GROUP" ROCKS.

SYMBOL LIST

- △ TP<sub>i</sub> TRANSIT STATION
- SURVEY POINT
- ADIT
- TRENCH
- BEDDING
- FOLIATION
- SHEAR
- OUTCROP
- GEOLOGICAL CONTACT
- STREAM
- TRAIL

SCALE



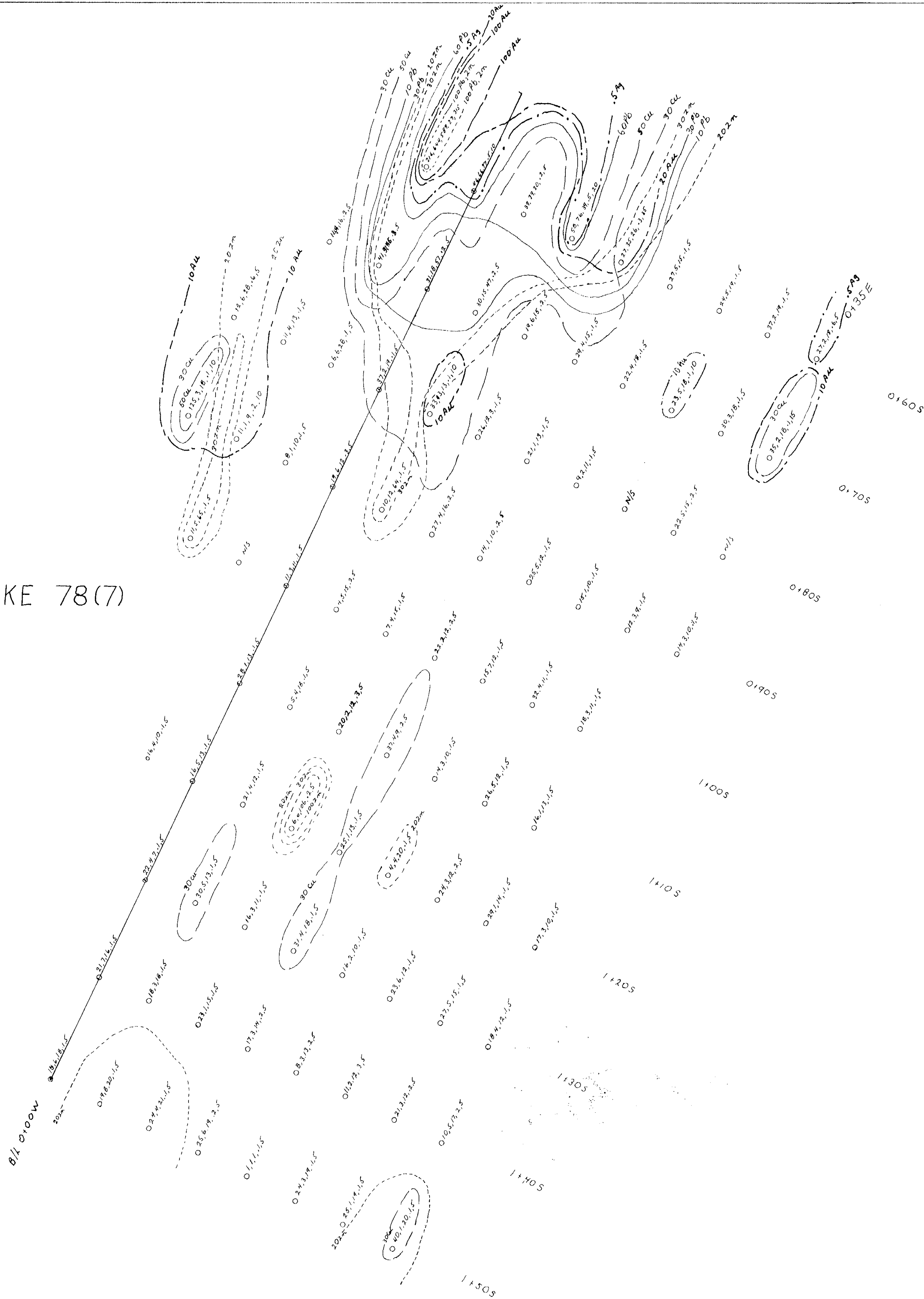
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GEOLOGICAL BRANCH  
 TRENCH AND ADIT LOCATION  
**12,380**

FLOW RESOURCES

GEOLOGY,  
 TRENCH AND ADIT LOCATION  
 MAP

LAKE 78(7)



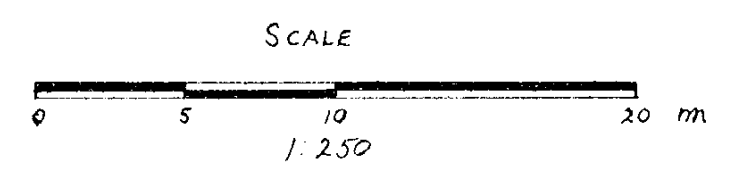
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

12,380

LEGEND

Cu ppm Pb ppm Zn ppm Ag ppm Au ppm  
SAMPLE SITE O 14, 3, 10, 1, 5

- CONTOUR LINES
- COPPER
  - - - LEAD
  - · · ZINC
  - SILVER
  - - - GOLD



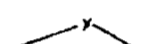
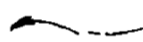



FLOW RESOURCES  
SOIL GEOCHEMISTRY  
Cu, Pb, Zn, Ag, Au

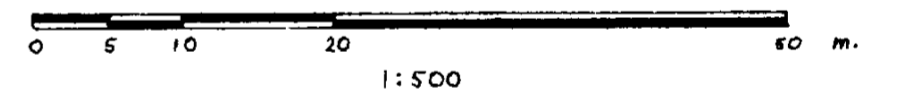
LAKE 78(7)



**SYMBOL LIST**

-  ADIT
-  TRENCH
-  PROFILE PLOT OF EM-16 INPHASE DIP ANGLES
-  STREAM
-  AXIS OF CONDUCTOR

**SCALE**



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,380**

FLOW RESOURCES  
V.L.F-EM-16 SURVEY  
MAP

D.A.K. JUNE/84 1:500 APP.5

