

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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GEOCHEMICAL REPORT  
ON THE  
DAR CLAIM, LIARD M.D.

N.T.S. 94E/12E

LATITUDE 57°33'N LONGITUDE 127°32'W

OWNER: Newmont Exploration of Canada Limited  
OPERATOR: Newmont Exploration of Canada Limited  
BY: B. W. Downing  
DATE: August 23, 1985

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### **SUMMARY**

The DAR property is underlain by Lower to Middle Jurassic Toodoggone Group volcanics consisting of grey to maroon tuffs. Four massive quartz veins, less than one metre wide and up to five metres in length, occur in a fault zone. Mineralization consists of galena, sphalerite and chalcopryrite erratically distributed within these veins. There is no pervasive silicification or other alteration visible in the vicinity of these veins.

Prospecting and geochemical surveys have not located any additional areas of quartz veins, alteration or silicification.

## **1.0 INTRODUCTION**

### **1.1 Location**

The Dar property, consisting of 6 units in one claim, is centered 11.5 km northwest of the confluence of Abesti and Moyez Creeks or about 326 km north of Smithers, B.C. The property is located at latitude 57°33'N, longitude 127°32'W on N.T.S. sheet 94E/12E. (Figure 1)

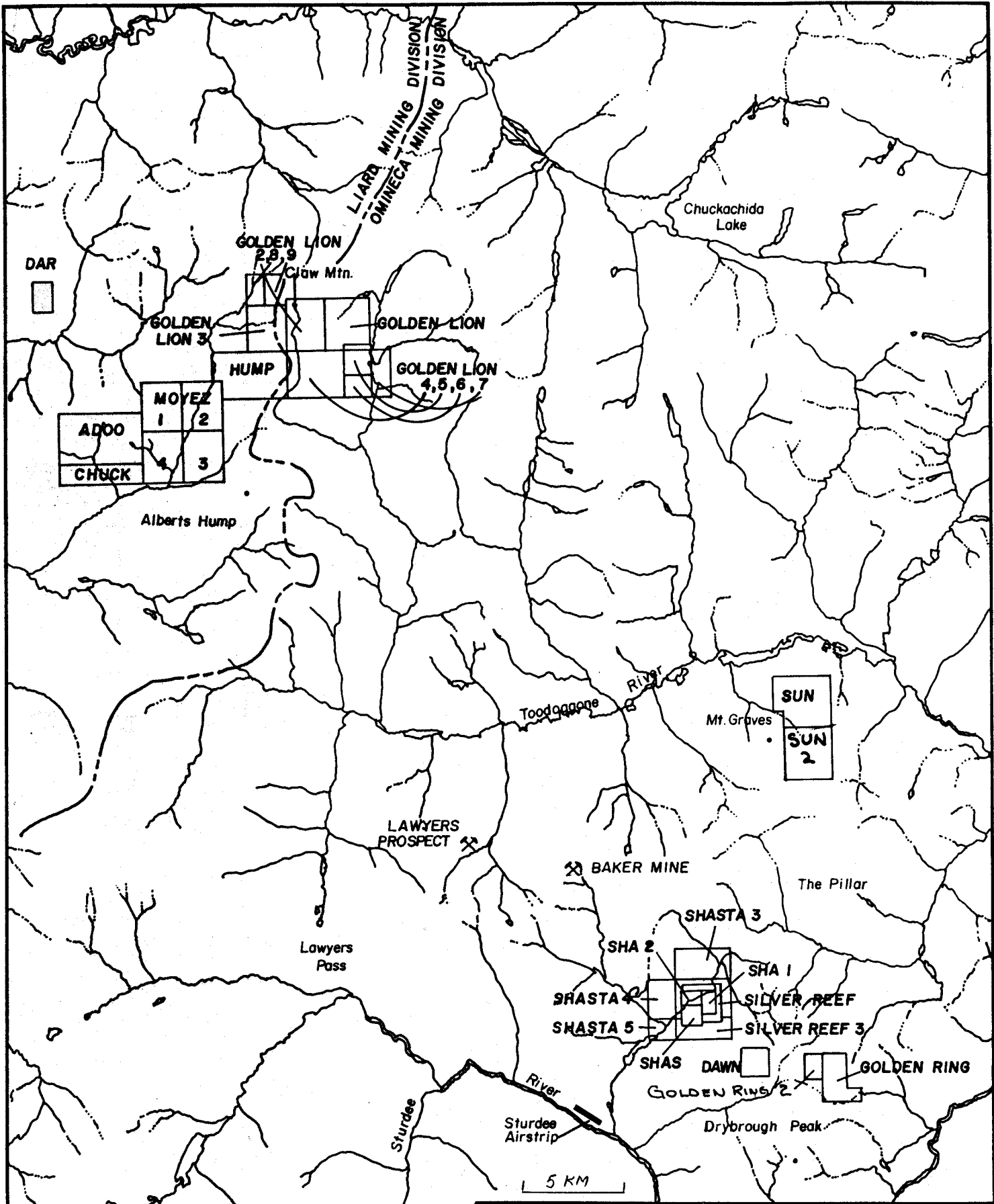
### **1.2 Access and Physiography**

Access to the property is by charter aircraft from Smithers to the Sturdee airstrip (274 km), then by helicopter for 36 km northwest to the property.

The terrain is moderate to rugged and varies in elevation from 1680 to 1900 meters. The claim is centered around a small lake in a cirque.

### **1.3 Claim and Ownership**

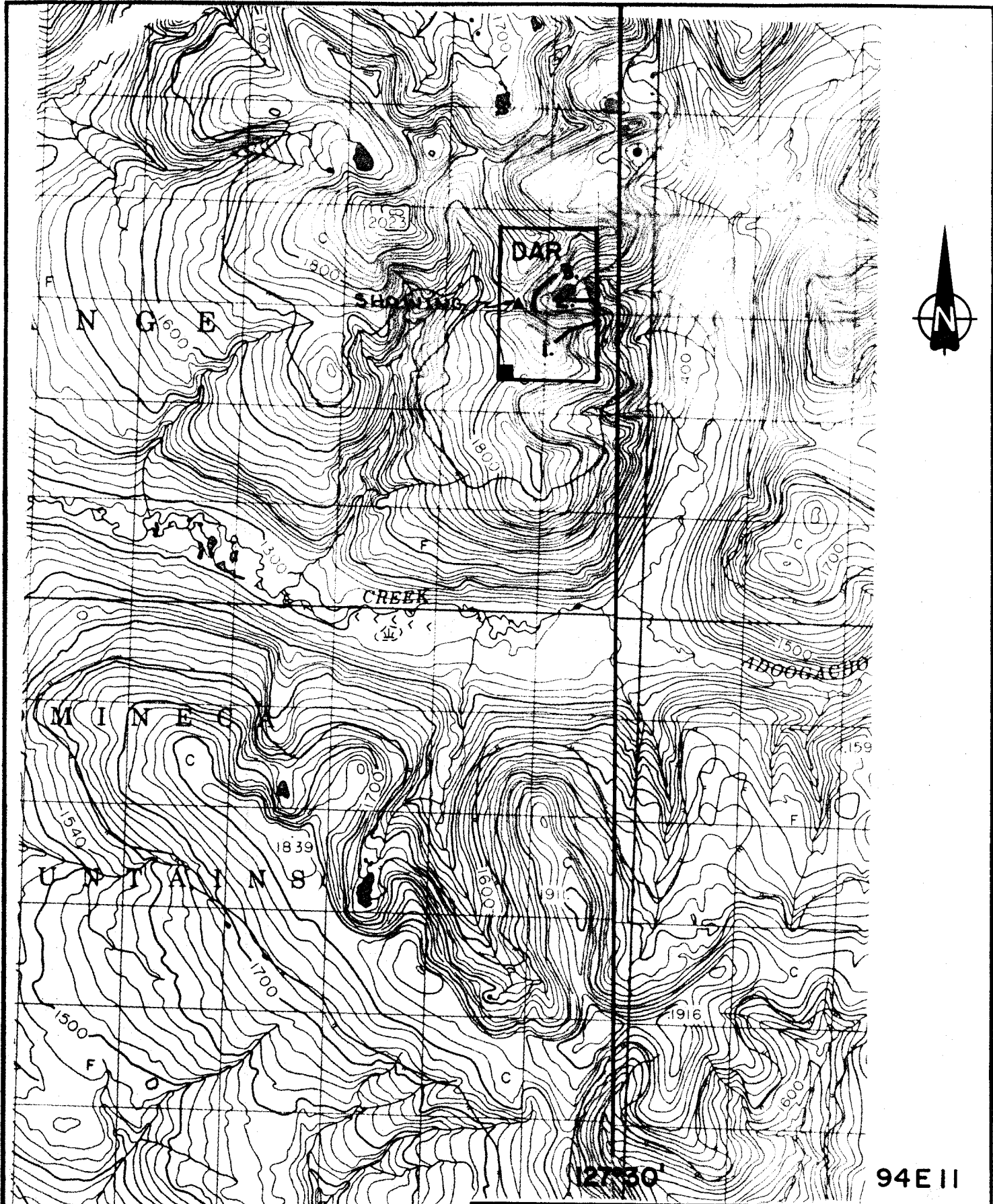
The Dar claim, consisting of 6 units, was staked on August 17, 1982 and was recorded on September 14 with record number 2463, Figure 2. The claim is recorded in the Liard Mining Division. The owner and operator is Newmont Exploration of Canada Limited, 900-808 West Hastings Street, Vancouver. The results of 1982 exploration work are recorded in the Assessment Report by D. A. Visagie dated March 9, 1983.



NEWMONT EXPLORATION OF CANADA LTD.

CLAIM INDEX MAP-TOODOGGONE SURVEY

SCALE	1: 250000	LOCATION	NTS 94E	DATE	Aug 185
SURVEY BY		DRAWN BY	I. CASIDY	NO.	1



57°30' 94E 12



94E 5

NEWMONT EXPLORATION OF CANADA LTD.

TOODOGGONE SURVEY  
DAR CLAIM-LOCATION MAP

SCALE 1:50,000	LOCATION 94E 12	DATE Aug 185
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SURVEY BY	DRAWN BY	NO. 2
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#### **1.4 Work Summary**

Purpose of the geochemical survey was to locate areas of mineralization by delineating anomalous gold and silver zones in the soil. Two separate reconnaissance lines were established and flagged using chain and compass comprising 625 and 200 meters, respectively. A third line was established along the 1725 meter contour level comprising 475 meters. A total of 55 soil samples were taken and sent to Chemex Labs, North Vancouver, for Cu, Pb, Zn, Ag, and Au analysis.

The property was also re-mapped and the showings re-evaluated.

The survey was conducted on August 6, 1985. Personnel were B. W. Downing (geologist), I. Casidy (geological technician) and J. Drobe (junior assistant).

#### **2.0 PROPERTY GEOLOGY**

Approximately 60% of the property is covered by outcrop and felsenmeer. Regional and property mapping have shown the claim to be underlain by Lower to Middle Jurassic Toodoggone Group rocks, an assemblage which locally consists of relatively flat lying grey to maroon coloured feldspar crystal tuffs. Geologically, the western edge of the property consists of tuffs with a moderately developed columnar structure overlying massive units in fault contact at the northwestern edge with a fragmental tuff unit. It is



at this fault contact area where the four weakly mineralized quartz veins occur. The massive white quartz veins are all less than one meter wide with an average strike of 060° and sub vertical dip. These disrupted veins are curvilinear along strike with the longest exposure being four to five meters in length. Slickensides were noted in a few places along the vein - tuff contacts. The quartz veins contain scattered drusy cavities lined with small (<.1 cm) quartz crystals. Quartz stockwork occurs up to one meter, in places, on either side of a quartz vein. Neither chalcedony nor secondary quartz veins were observed. There is no pervasive silicification or other alteration in the vicinity of these veins.

Mineralization consists of minor galena, sphalerite and chalcopyrite erratically distributed within the quartz veins. Rock chip sampling of these veins in 1982 showed them to contain from 5 to 670 ppb Au and 0.1 to 5.7 ppm Ag.

The fault appears to be regional extending for a kilometer or so from the property.

### 3.0 GEOCHEMISTRY

Soil samples were collected at 25 meter intervals along all three lines. The samples were taken from the B horizon generally at a depth between 10 and 15 cm using a mattock and stored in Kraft paper bags, and then sent to Chemex Labs, 212 Brooksbank, North Vancouver, for Cu, Pb, Zn, Ag, and Au analysis. The areas sampled consisted predominantly of residual soil with little transported glacial material.

### **3.1 Laboratory Procedure**

Preparation for the soil samples consisted of drying the sample at 60°C, sieving to -35 mesh, then pulverizing to a -100 mesh pulp.

For analysis of copper, lead, zinc and silver, a 1.00 gram portion of the sample is weighed into a calibrated test tube and then digested for two hours using hot 70% HClO<sub>4</sub> and concentrated HNO<sub>3</sub>. Subsequently, the sample volume is adjusted to 25 mls using demineralized water. Sample solutions are then homogenized and allowed to settle being analyzed by atomic absorption using a Techtron A. A. 5 unit whose detection limit for copper and zinc is 1 ppm. For gold a 5 gram sample was ashed at 800°C for one hour, digested with aqua regia (twice to dryness), taken up in 25% hydrochloric acid, then the gold extracted as a bromide complex into Methyl Isobutyl Ketone (MIKB). The gold is then determined in the MIKB extract by Atomic Absorption using a background correction.

### **3.2 Results**

The results (Au, Ag and Cu, Pb, Zn) of the soil samples are plotted in Figures 3 and 4, respectively.

#### **3.2.1 Gold, Silver**

No anomalous gold and silver values are present. The analyses, are all quite low, being <5 ppb Au and 0.1 to 0.3 ppm Ag.

### **3.2.2 Copper, Lead, Zinc**

Base metal values are generally low. In the 55 samples, copper generally ranges from 2 to 28 ppm with a single exception to 65 ppm. Lead is consistently low at 3 to 14 ppm. Zinc ranges from 24 to 145 ppm. The peak values are located near the SW end of Line 3 downslope from the showings. No anomalous values are present.

### **4.0 CONCLUSIONS**

No significant gold, silver, copper, lead and zinc values are present in the soils sampled. The results are generally quite low and no geochemical trends are apparent.

The quartz veins are small and isolated. Soil geochemical surveys and prospecting failed to locate any additional quartz veins.

### **5.0 RECOMMENDATIONS**

No further work is warranted on this property.

**6.0 STATEMENT OF COSTS**

**PERSONNEL**

Geologist	August 23	1 day @ \$	162.50	
Assistant	August 23	1 day @	101.00	
Jr. Assistant	August 23	1 day @	<u>72.50</u>	
		3 mandays		\$ 336.00

**TRANSPORTATION**

1.0 hrs. 500D helicopter	@	\$ 515.00	
Personnel			
(Vancouver-Smithers-Sturdee/return)		<u>590.00</u>	\$1005.00
(33% split between 3 projects)			

**LODGING & FOOD**

3 mandays @ \$40.00/day			\$ 120.00
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**GEOCHEMICAL ANALYSES**

55 soil samples for Cu, Pb, Zn,			
Ag & Au @ \$12.95		<u>\$ 712.25</u>	\$ 712.25

**REPORT PREPARATION**

Writing, map drafting, typing, printing			<u>\$ 500.00</u>
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<b>TOTAL</b>			<b>\$2673.25</b>
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**7.0 STATEMENT OF QUALIFICATIONS**

I, B. W. Downing, am a graduate of Queen's University with an honours B. Sc. in geology (1970) and a M.Sc. in geology (1973) from the University of Toronto.

I am a fellow of the Geological Association of Canada since 1978 and a member in good standing with the Canadian Institute of Mining and Metallurgy.

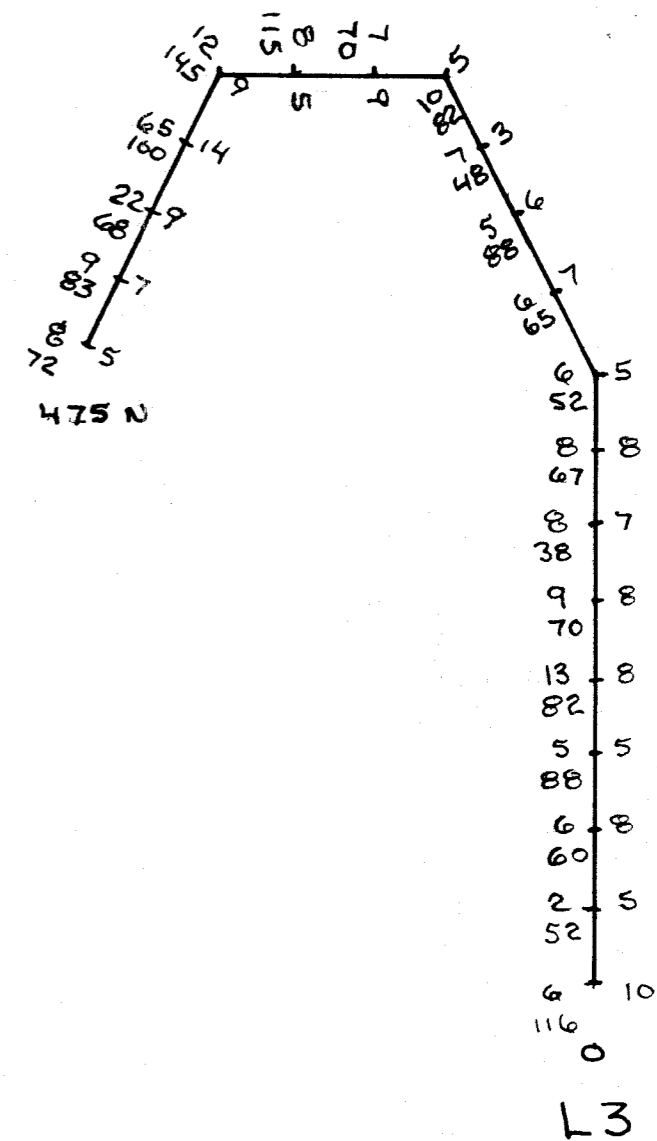
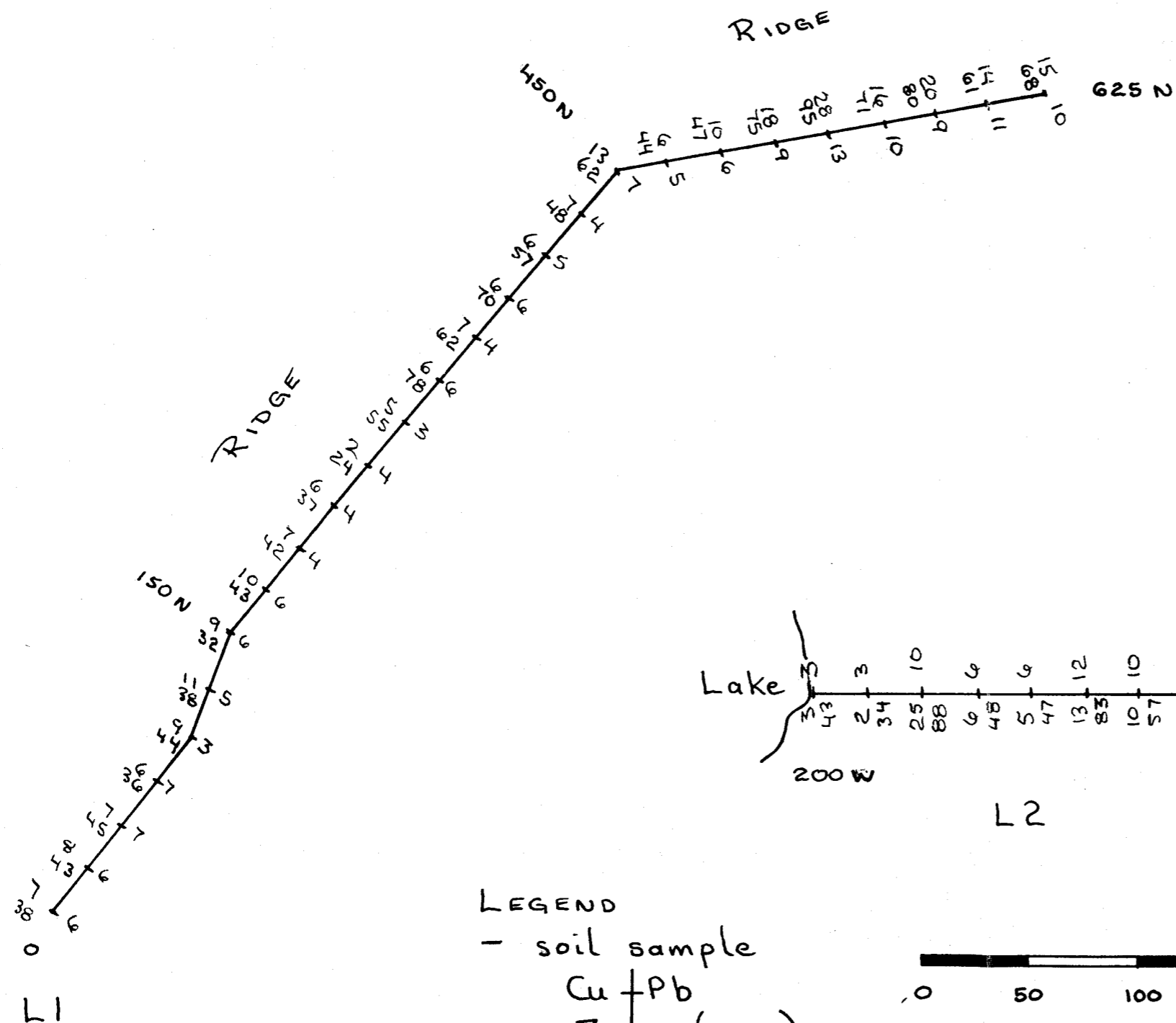
I have been continuously employed in mining exploration work since 1974.

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B. W. Downing

Vancouver, B.C.

August 23, 1985



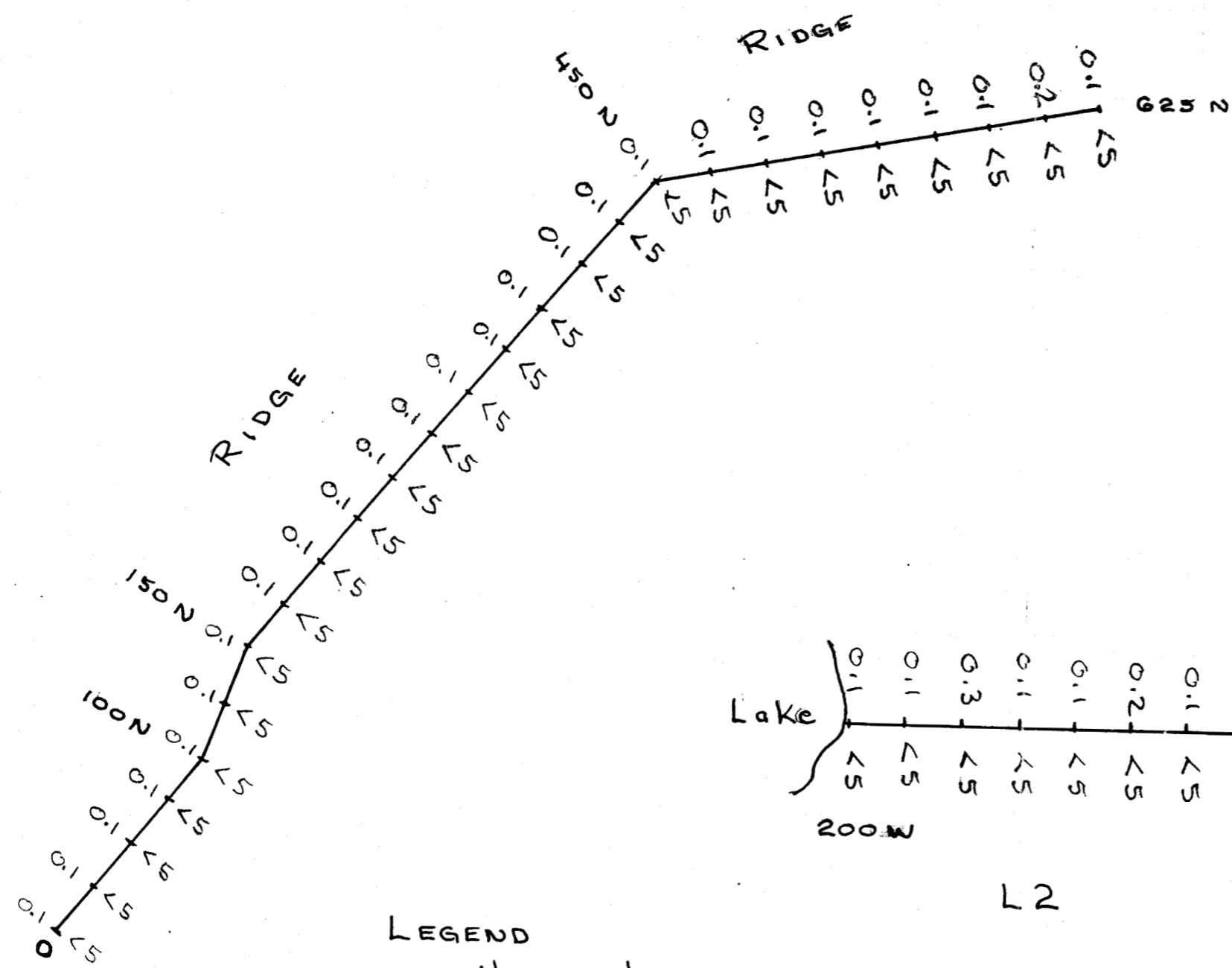
LEGEND  
 - soil sample  
 Cu + Pb  
 Zn (ppm)



NEWMONT EXPLORATION OF CANADA LTD.		
DAR Cu / Pb / Zn		
SCALE 1:2500	LOCATION Toodoggone	DATE Aug /85
SURVEY BY BWD	DRAWN BY BWD	NO. 4

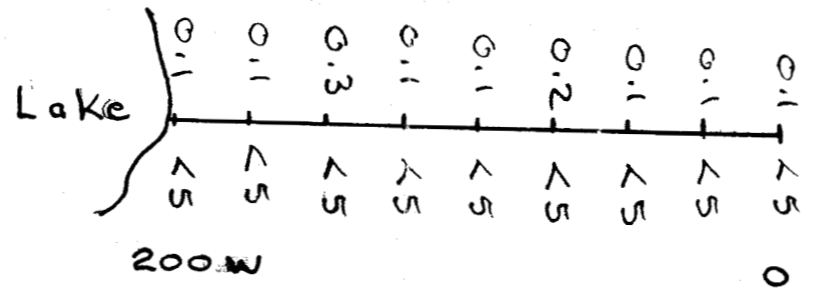
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NOTE: For Locations of these Lines, see Figure 2.

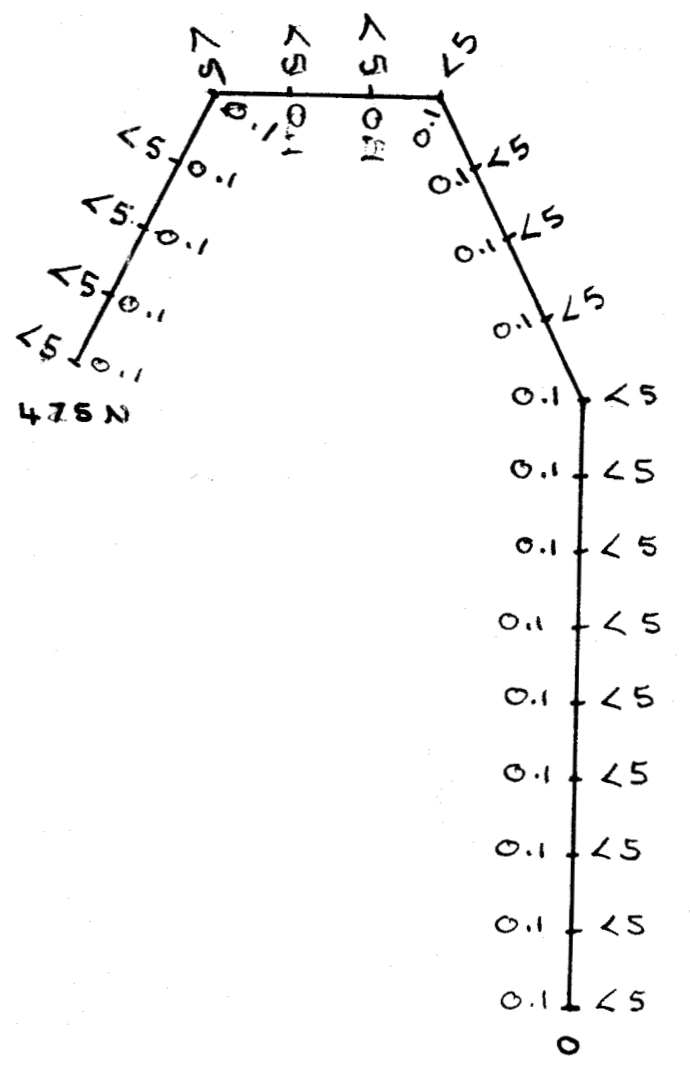


L1

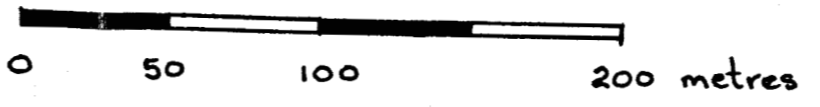
LEGEND  
 — soil sample  
 Ag Au  
 ppm ppb



L2



L3



13,846

NEWMONT EXPLORATION OF CANADA LTD.		
DAR Ag / Au		
SCALE 1:2500	LOCATION Toodoggone	DATE Aug/85
SURVEY BY BWD	DRAWN BY BWD	NO. 3