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MAUDE LAKE GOLD MINES LIMITED

1984 REPORT

ON

EXPLORATION

( OM84 - 6 - P - 70 )

FEBRUARY 12, 1985

SUDBURY, ONTARIO

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Consulting Geological Engineer

**MAUDE LAKE GOLD MINES LIMITED**

**SUMMARY - 1984 REPORT ON EXPLORATION**

Maude Lake Gold Mines Limited has been exploring its large, 11,400 acre gold property in the Matheson Area of Northeastern Ontario over the past 4 years. During 1984, the Company completed 23,733 feet of diamond drilling, 61,000 cubic yards of overburden stripping, and extensive preliminary exploration over most of its mining claims. The results have not only significantly increased the Tonnage and Grade Estimates for the 5 ZONE DEPOSIT, but also located new gold showings and several gold targets throughout the properties.

**PART A - MAIN GROUP**

**For the 5 ZONE GOLD DEPOSIT**

**1. - DIAMOND DRILLING**

Thirty-six diamond drill holes totalling 18,920 feet were drilled into the 5 ZONE DEPOSIT in hopes of increasing the "open pittable" mining tonnages and to test the underground mining potential. The results not only confirm the earlier interpretations, but also added greatly to both the ore estimates and the overall economic potential of the DEPOSIT.

**5 ZONE DEPOSIT ORE RESERVE ESTIMATES**

OPEN PIT MINING to 240' Level	Selective Mining Methods		Bulk Mining Methods		Tons/vertical ft.
	TONNAGE	GRADE	TONNAGE	GRADE	
		cut    uncut		cut    uncut	
	290590	.145    .210	457485	.100    .143	1200 / 1900
UNDERGROUND MINING 240 to 400" Level	157450	.196	157450	.196	985
<b>TOTALS -</b>	<b>448040</b>	<b>.163    .205</b>	<b>614935</b>	<b>.143    .158</b>	<b>1120 / 1540</b>

All 5 of the deeper holes beneath the 400 ft Level intersected "ore grade" gold mineralization. Although this data is too sparse to permit reserve estimates, more tonnage can be visualized at depth. Much more drilling is required to estimate these reserves.

**2. OVERBURDEN STRIPPING**

Approximately 61,000 cubic yards of overburden were removed from over the 5 ZONE DEPOSIT to facilitate additional detailed sampling and bulk testing. This work was to provide higher grade ore for metallurgical testing that would have helped to determine if and/or how much assay "cutting" is necessary. The work could not be completed due to severe winter weather conditions,

and has been re-scheduled for the Spring 1985.

### **3. - METALLURGICAL TESTING**

Preliminary metallurgical bench testing of the 5 ZONE mineralization was completed to help establish the ore's "millability". More work is necessary before the best beneficiation options can be analysed.

#### **For the FIELD ZONE**

IP/Resistivity surveys and 2740 feet of diamond drilling were completed in a previous untested area of the MAIN GROUP. The IP work located trends similar to those over the 5 ZONE and the diamond drilling intersected a major alteration zone that returned significant gold assays. This NEW DISCOVERY has been coined the *FIELD ZONE* and more drilling is recommended to define the mineralization. In addition, the entire area between the *FIELD ZONE* and the 5 ZONE is recognized as Prime Prospecting Ground capable of hosting other gold deposits. More exploration is also recommended here.

### **PART B - *OUTSIDE PROPERTIES***

Preliminary exploration was completed over a large portion of Maude Lake Gold Mines' *OUTSIDE PROPERTIES* which include the *WILKIE-CARR*, the *SALVE LAKE*, and the *BENNETT-BEATTY GROUPS*. Geological mapping and prospecting was done over 147 claims, and gridding, magnetometer, radiometric, and two electromagnetic surveys were completed over 132 claims. Two boreholes totalling 938 ft were also drilled. The work has not only better defined the geological understanding for the areas, but also has outlined specific geological and geophysical targets that warrant follow-up exploration

#### **For the WILKIE-CARR GROUP**

Three electromagnetic anomalies adjacent to the Pipestone Fault were found and two known gold showings were better defined. All are recommended for follow-up diamond drilling. Other gold and basemetal targets associated with graphitic horizons within felsic lavas, secondary structures within the mafic volcanics, and mineralized porphyries and off-sets to the Pipestone Fault require further definition. Reverse circulation basal till prospecting with diamond drill follow-up is recommended.

#### **For the SALVE LAKE GROUP**

EM-defined graphitic interflow beds, mineralized variolitic lavas, and a large alteration zone within felsic lavas were located during 1984, and require detailed sampling and drill testing. The Pipestone Fault is interpreted to cross

the property and should be tested for associated gold mineralization using reverse circulation basal till prospecting. Diamond drilling will also be required and is recommended.

**For the BENNETT-BEATTY GROUP**

Auriferous quartz structures in altered lavas and sediments, gold-quartz veins in diorite, mineralized variolitic basalts, and gold-molybdenite bearing porphyries have been located or are interpreted to fall within the Group. A major strike fault along the volcanic-sediment contact has high potential for hosting associated gold mineralization. Continued exploration in the form of detailed geological and sampling studies and basal till prospecting is recommended for these gold targets. Diamond drill follow-up may also be needed.

An Exploration Program has been recommended for all this work and includes:

<b>MAIN GROUP</b>	5 ZONE Bulk Sampling, Site Prep, Metallurgical Work, etc	80,000.00
	5 ZONE Diamond Drilling, Assays, Core Splitting etc	270,000.00
	FIELD ZONE Diamond Drilling, Assays etc	178,000.00
	IP Surveys and other work	24,000.00
	Supervision, Reports, Rentals, Accomodation, etc	<u>48,000.00</u>
		\$ 600,000.00
<b>OUTSIDE PROPERTY</b>	Preliminary Exploration	45,000.00
	Detailed Geology and Geophysics	27,000.00
	Reverse Circulation Basal Till Drilling	60,000.00
	Diamond Drilling, Assays, Core Cutting, etc	180,500.00
	Supervision, Reports, Rentals, Accommodation, etc	<u>37,500.00</u>
		350,000.00
	<b>TOTAL</b>	<b>\$ 950,000.00</b>



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## 1984 REPORT ON EXPLORATION

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*5 ZONE GOLD DEPOSIT*

SECTION 1+00E	Hole 84-29	1"-40'	Pocket
SECTION 2+00E	Hole 84-10		"
SECTION 3+00E	Hole 84-11		"
SECTION 4+20E	Hole 84-19		"
SECTION 5+00E	Holes 84-18 and 36		"
SECTION 6+00E	Holes 84-12, 13, and 35		"
SECTION 7+00E	Holes 84-14, 15, 34, 40, and 41		"
SECTION 8+00E	Holes 84-16, 17, 25, and 37		"
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SECTION 9+50E	Hole 84-24		"
SECTION 10+00E	Holes 84-1, 3, 4, 23, and 33		"
SECTION 11+00E	Holes 84-7, 8, 9, 26, and 28		"
SECTION 12+00E	Hole 84-20		"
SECTION 14+00E	Hole 84-21		"
SECTION 10+27S	Hole 84-27		"
OFF-SECTION	Hole 84-22		"

*FIELD ZONE*

SECTION 28+00W	Hole 84-28		Pocket
SECTION 32+00W	Holes 84-31 and 39		"

LIST OF LEVEL PLANS - 1984 PROGRAM

SUBCROP - 0'	900 ELEVATION	1"-40'	Pocket
100 ft LEVEL	800 ELEVATION		"
200 ft LEVEL	700 ELEVATION		"
300 ft LEVEL	600 ELEVATION		"
400 ft LEVEL	500 ELEVATION		"

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MAP CV-004	VLF-EM SURVEY [21.8 KHz] - Carr Claims	"
MAP CR-005	RADIOMETRIC SURVEY - Carr Claims	"
MAP SLG-011	GEOLOGICAL PLAN - Salve Lake Group	Pocket
MAP SM-002	MAGNETOMETER SURVEY - Salve Lake Group	"
MAP SV-003	VLF-EM SURVEY [24.0 KHz] - Salve Lake Group	"
MAP SV-004	VLF-EM SURVEY [21.8 KHz] - Salve Lake Group	"
MAP SR-005	RADIOMETRIC SURVEY - Salve Lake Group	"
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MAP BB-003	VLF-EN SURVEY [24.0 KHz] - Bennett-Beatty Group	"
MAP BB-004	VLF-EM SURVEY [21.8 KHz] - Bennett-Beatty Group	"
MAP BB-005	RADIOMETRIC SURVEY - Bennett-Beatty Group	"

**1984 REPORT ON EXPLORATION**

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**INTRODUCTION**

For the past 4 years, Maude Lake Gold Mines Limited has been exploring and developing its large gold property in the Matheson Area of Northeastern Ontario. This work had outlined significant gold ore tonnages in the 5 ZONE deposit that can be mined by open pit methods, and drill-indicated underground gold reserves in the SHAFT and 2 VEINS. In addition, several other gold-bearing veins and gold 'target' areas were located by preliminary exploration surveys.

The principal OBJECTIVES of the 1984 PROGRAM were to:

1. detail diamond drill the 5 ZONE deposit to the 350 foot level to upgrade the tonnage estimates to evaluate the feasibility of an on-site gold mill;
2. exploration diamond drill the 5 ZONE below the 350 foot level to evaluate the deeper ore and underground mining potential;
3. strip additional overburden from the 5 ZONE deposit to facilitate channel and percussion sampling and bulk testing;
4. located and test other gold targets near the 5 ZONE and VEINS area (Mine Area);
5. continue preliminary exploration over most of Maude Lake's other mining claims to locate new gold targets for future follow-up exploration; and
6. ensure all the claims are held in good standing until they have been thoroughly evaluated for economic mineralization.

The first 4 operations will be presented in PART A of this report [Advanced Exploration, MAIN GROUP] and the last two in PART B [Preliminary Exploration, OUTSIDE PROPERTIES].

The 1984 PROGRAM was completed with the aid of an Ontario Mineral Exploration Program grant, contract number OM84-6-P-70.

**PROPERTY**

Maude Lake Gold Mines Limited holds 5 groups of claims centered around

the Beatty Township area that are the equivalent of 285 claims or 11,400 acres. These properties are:

**MAIN GROUP** - consists of patented parcels, patented and staked mining claims in Beatty Township [37 claim equivalent].

- north and south half, lot 11, concession VI [8 claim equivalent]
- north and south half, lot 13, concession VI [8 claim equivalent]
- L3939, L4521, L40779, L40780, L40781, L40782, L41286, L41287, L46938, and L46939 - patented
- L550885, L571647, L618455, L618517, L618518, L618519, L618520, L618521, L618522 - currently being brought to lease
- L772555, and L772556 - staked claims.

**WILKIE-CARR GROUP** - consists of 66 staked mining claims in Wilkie and Carr Townships, west of the Main Group.

- L682425 through L682459 inclusive
- L700911 through L700913 inclusive
- L714793 through L714798 inclusive
- L787130 through L787141 inclusive.

**COULSON GROUP** - consists of 16 staked mining claims in Coulson Township, north of the Main Group.

- L737479 through L787482 inclusive
- L737493 through L787496 inclusive
- L787085 through L787092 inclusive.

**SALVE LAKE GROUP** - consists of 114 staked mining claims in Beatty Township, east of the Main Group.

- L550880 through L550884 inclusive
- L565052 through L565059 inclusive
- L565061 and L565062
- L578942
- L598904 through L598907 inclusive
- L642501 and L642502
- L642505 through L642509 inclusive
- L642513 through L642522 inclusive
- L642572 through L642579 inclusive

continued.....

**SALVE LAKE GROUP - continued**

- L642777
- L642785 and L642586
- L642807
- L650114
- L714769 through L714771 inclusive
- L772550 through L772554 inclusive
- L772557 through L772564 inclusive
- L737478
- L737497
- L772569
- L787093 through L787129 inclusive
- L796676 through L796682 inclusive.

**BENNETT-BEATTY GROUP - consists of 52 staked mining claims  
in central Beatty Township, south of the Salve Group.**

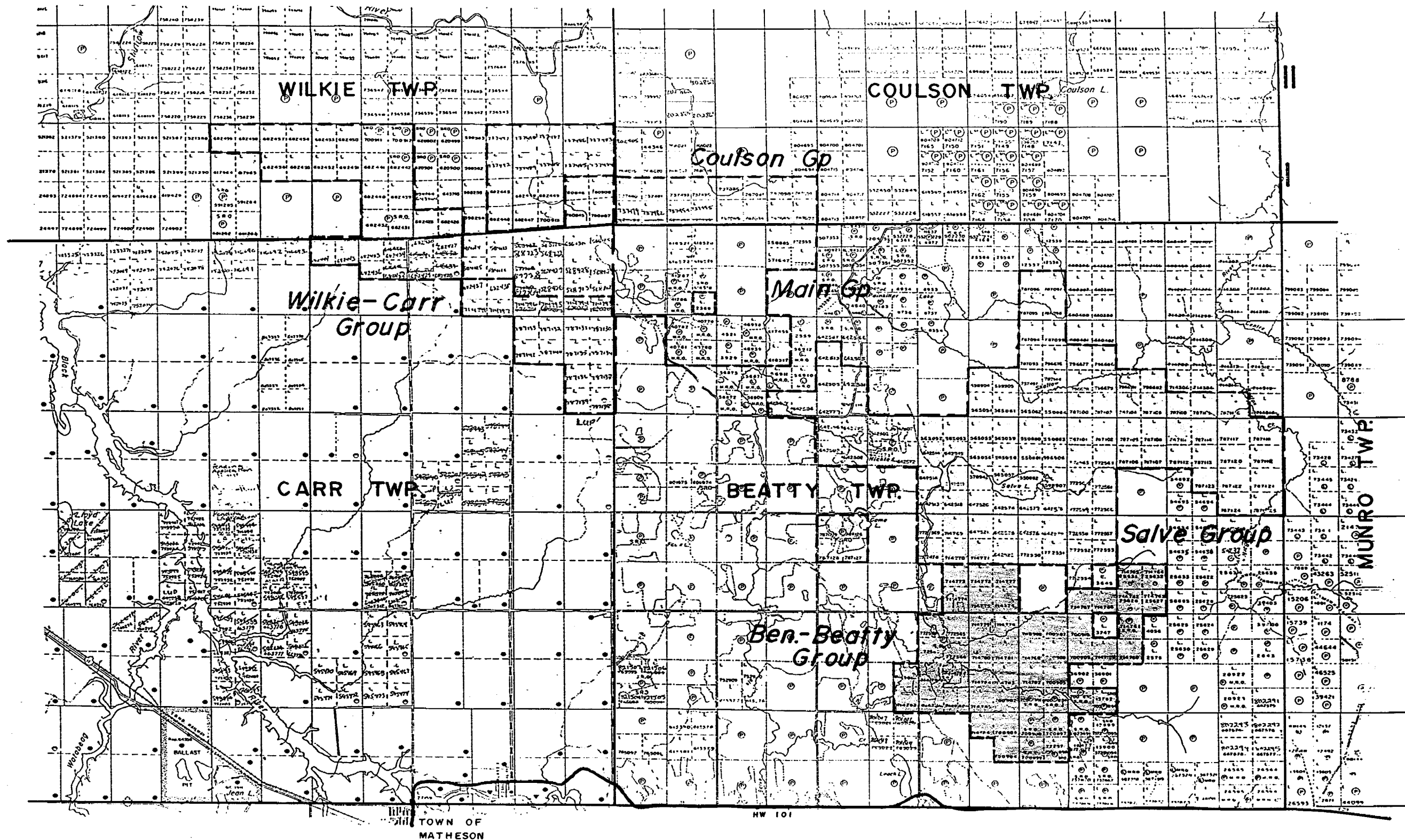
- L700894 through L700910 inclusive
- L714759 through L714768 inclusive
- L714772 through L714792 inclusive
- L772565 through L772568 inclusive.

The registered owner for all these claims is Maude Lake Gold Mines Limited, 300 Elm Street West, Sudbury, Ontario, P3C 1V4. A Property and Location Plan is provided overleaf, Figure 1.

**LOCATION and ACCESS**

The Maude Lake claim GROUPS are located in northwestern (MAIN), central (SALVE LAKE), and southern (BENNETT-BEATTY) Beatty Township; in southwestern Coulson Township (COULSON); and in northeastern Carr Township and southeastern Wilkie Township (WILKIE-CARR), within the Larder Lake Mining Division, District of Cochrane [NTS: 42A9W].

The WILKIE-CARR GROUP is best accessed by the all-weather gravel road that runs due north from the Town of Matheson for 6 miles. The MAIN, COULSON, SALVE LAKE, and BENNETT-BEATTY GROUPS are best accessed by Highway 101 east from Matheson and then north along all-weather gravel Township



MAUDE LAKE GOLD MINES LIMITED.

PROPERTY and LOCATION  
PLAN

Scale: 1 inch = 1 mile.

FIGURE I.

Dec. 1984



roads. An old bush road extends north from Beatty Road 6 to the 5 ZONE Deposit.

## 1984 PROGRAM

### **PART A - Advanced Exploration, MAIN GROUP**

#### *5 ZONE GOLD DEPOSIT*

#### **DIAMOND DRILL PROGRAM**

Thirty-six diamond drill holes totalling 18,920 feet were drilled into the 5 ZONE Gold Deposit between July 17 and November 17, 1984 by McKnight Diamond Drilling Company of Haileybury, Ontario. Twenty-nine of the boreholes were drilled at approximately 100 ft centers to test the Open Pit mining potential above the 350 foot level, 5 holes explored for depth extensions to the 700 ft level, one hole was drilled along the deposit to locate and help determine the width of two diabase dykes, and the final hole was drilled to explore between the 5 ZONE and SHAFT VEIN. The core size was BQ and acid and/or tropari dip tests were taken at bedrock and every 200 ft of core length.

All of the mineralized sections and most of the remaining cores were cut in half using an Otte core-cutting saw with Lamage diamond encrusted blades. The core samples were sent to Bell-White Analytical Laboratories Limited in Haileybury, Ontario and assayed for gold using the fire-assay method. Those samples grading > .10 troy oz/ton and any suspected high grade material were automatically re-assayed for confirmation purposes. The two assays were averaged for grade calculations and are those shown on the sections. Several of the higher grade gold samples were also assayed for silver. A complete list of all the assay certificates is appended [Appendix 2].

Individual borehole logs showing the geology, sample numbers and assay values are appended [Appendix 1]. Drill Sections showing the boreholes, geological interpretation, assays, grades, ore zones and all the past exploration

drilling accompany this report [Sections 1+00E to 14+00E, 10+27S, and Off-Section]. All the split core, sample pulps and rejects are stored at Maude Lake's field office in Matheson.

The diamond drill results not only confirmed the earlier interpretations but also added greatly to both the tonnage estimates and the overall economic potential of the Deposit. A summary of the Borehole data is tabulated overleaf, Table 1.

### RESULTS FOR THE GEOLOGY

The geology of the 5 ZONE DEPOSIT, as seen in the drill cores, differs little from that mapped from exposures in the pit. The deposit is a cross-cutting stockwork structure wholly contained within an iron-tholeiitic pillowed basalt pile that is cut by feldspar porphyry and diabase dykes. It formed by syn-volcanic structural and hydrothermal processes whereby pile tumescence and subsequence collapse formed discharge locii for convectively circulating sea water driven by the volcanic engine. The various units within the 5 ZONE are only alteration phenomena that resulted from these processes rather than actual mappable lithologies.

#### UNIT B

Unit **B** is weakly to moderately altered basaltic lavas that are now **Buff** coloured. All the volcanic features such as pillow rinds and flow top breccias are preserved and readily recognizable. Within the 5 ZONE, the B Unit is iron-carbonatized and sericitized, dips steeply south, is weakly fractured and veined, and usually carries some low gold assays. It is a halo-type 'carbonate enrichment' alteration associated with the main mineralizing event. In the hangingwall of the Deposit is another B-type Unit, and although appearing similar, is marked by predominant clay alteration [sericite] with dry [sulphide-poor] quartz veining that never carry gold mineralization. This alteration dips south at 30 to 40 degree, is associated with porphyry dykes, and likely represents an area of mineral 'leaching'. Although the 'leached' B is slightly more yellow in colour, only a highly trained eye can detect the subtle difference between these two types of alteration.

#### UNIT G

Unit **G** is moderately to strongly altered lavas that are now **Grey** coloured. Unit G1 is moderately altered and fractured with remnant volcanic features still preserved. This unit always carries gold values within the 5 ZONE and

TABLE 1. 1984 "5 ZONE" DRILLING RESULTS SUMMARY

SECTION	BH No	LENGTH	TARGET	RESULTS
1	84-29	575'	West Ext @ 150'	5 ZONE present but weak-.072/5'. More veins with low Au; one with VG - .03 opt(l)
2	84-10	435'	West Ext @ 150'	5 ZONE -.03/17'; 2 Veins @.222/3'..269/2'
3	84-11	59'	West Ext @ 200'	Collared in Diabase stopped hole
4+20	84-19	300'	West Ext @ 200'	Hit diabase at 215'; Diab dips east & strikes NNE
5	84-18	395'	200'Level of Pit	Strong Alteration but only .046/15.6' & .051/10'
	84-36	240'	100'Level of Pit	5 ZONE very weak and narrow, very low assays
6	82-12	405'	150'Level of Pit	3 Strong Altn zones but .038/21.4' & .167/4'
	84-13	498'	250'Level of Pit	Strong Altn-.031/13;.03/10'; VG-tr; Vein-.269/3'
	84-35	385'	200'Level of Pit	Strong Altn but .05/13.3'; 2 veins -.603/3..779/4'
7	84-14	400'	150'Level of Pit	Very strong-.11/12.5;.20/18 or .073/93'
	84-15	500'	250'Level of Pit	Strong Altn but weak assays, Vein-.107/3'
	84-34	375'	200'Level of Pit	Strong Altn-.113/7'; .10/5'; .148/12';Vn-.381/3'
	84-40	160'	50' Level of Pit	Very Strong - .135/48'; .104/10'
	84-41	120'	100'Level of Pit	Strong Altn - .053/15' and .081/8.6'
8	84-16	397'	150'Level of Pit	Very Strong-.188/26; 1.9/21.4 or.192 CUT;.142/2
	84-17	515'	250'Level of Pit	Strong Altn but .022/22'
	84-25	904'	600'Level of ZONE	Weak Altn gave .086/8' at 600 Level
	84-37	404'	200'Level of Pit	Good Altn - .042/12'; VG gave only .026opt
9	84-2	452'	150'Level of Pit	Very Strong-.072/23'..173/6.5';Vein-.129/4'
	84-5	374'	250'Level of Pit	Strong Altn - .116/14' but cut diabase in ZONE
	84-6	411'	350'Level of Pit	Cut 15' wide diabase - dips east parallel to Sect.
	84-30	944'	500'Level of ZONE	Weak Altn-.088/3'; 5A-.220/15' at 600 Level
9+50	84-24	510'	250'Level of Pit	Good Altn-.119/20.5' + several Veins at 300'
10	84-1	420'	150'Level of Pit	Very strong - .27/21'..089/10';.315/10' + Veins
	84-3	540'	250'Level of Pit	Very strong-.234/20'; Veins-.196/2'; .13/2'
	84-4	604'	350'Level of Pit	Strong Altn-.249/30'
	84-33	944'	600'Level of ZONE	Weak Altn-.07/32' or .11/10'; .480/5'-5A
11	84-7	280'	150'Level of Pit	Strong Altn-.134/6 then hit Peridotite, cut-off
	84-8	474'	250'Level of Pit	Strong Altn-.251/13' or .088/51' + other zones
	84-9	634'	400'Level of ZONE	Very Strong-.141/12' sandwiched between Porph. 5A-.119/12'
	84-26	1060'	700'Level of ZONE	Porphyry occupies ZONE, 5A-.09/5'; Vein-.218/5'
	84-28	872'	500'Level of ZONE	Porphyry occupies Zone-.025/15..018/42.4'; Veins-.151/4.6' + Other Zones; Py - 3.5/6.5 AG
12	84-20	124'	400'Level of ZONE	Collared in Diabase
14	84-21	624'	500'Level of ZONE	Hit diabase at 561' before intersecting 5 ZONE
10+27S	84-27	937'	Locate Diabases cutting 5 ZONE	Cut 15' & 100' wide diabase, dip steeply east
OFF-SECT	84-22	1334'	Explore between 5 ZONE & Shaft Vn	5 ZONE extends to 13 East Section @ 550'Level. Upper 5 ZONE-.12/27 or .10/34.8'; Several Veins between but low assays; 2VEIN @ 600'Level-.078; SHAFT VEIN @ 700'Level-.036/3'.
	<b>TOTAL-</b>	<b>18,920'</b>		

where well-veined, represents an important part of the ore reserves. Unit G2 is a highly altered [ferro-dolomitization] and brecciated metasomatic zone where all the volcanic features and primary igneous textures have been completely destroyed. It carries the highest gold assays and represents the main mineralization channelway. Considerable amounts of visible native gold, some being quite coarse, have been seen in veins within the G Units.

### STRUCTURE

The hangingwall contact separating ore [Unit G] and waste [Unit B] is usually very sharp and readily recognizable. It strikes east-west and dips at approximately 70 degrees south near surface, then steepens to about 85 degrees below the 300 ft Level. On the surface exposures, this contact is marked by a distinct rusty shear zone that was coined the **Hangingwall Fault**. This structure is not as obvious in the drill cores since the contact is more commonly marked by minor quartz-carbonate veins that occupy weak fractures. Despite this, there was no doubt, either geologically or economically when the boundary is crossed. No gold mineralization has been found south of the hangingwall contact.

The footwall contact of the 5 ZONE DEPOSIT has yet to be defined. Individual ore shoots do have sharp lower contacts, but the footwall of the overall DEPOSIT east of Section 9E does not. This is because several new and still open en-echelon ore shoots were found at depth beneath the peridotite. These zones will add significant reserves to the DEPOSIT at depth.

The geometry of individual alteration zones and ore shoots has been better defined. They strike east-west, dip steeply south, and appear to rake steeply east, likely parallel to the dip of the peridotite. West of the narrow diabase [Section 8+60E], the zones are lenzoidal and pinch and swell both in plan and section. No ore has been found below the 250 ft Level and the DEPOSIT appears to pinch-out (Only one hole [84-25] has tested for depth extensions however, and more drilling will be needed.). East of the narrow diabase, the zones are more linear and consistent, extend to depth, and carry some of the better grade material below the 250 ft Level. It is obvious that considerable vertical movement must have occurred along the cross-cutting structure now occupied by the diabase.

A feldspar porphyry dyke invades the main shoot on Section 11+00E below the 400 ft Level [500' elevation]. No estimate of the significance this might have on the deeper ore potential can be made from the existing data.

However, the porphyry does carry low gold assays [.02 opt range] and may represent an important target in itself.

The 5 ZONE structure and mineralization gradually fade west of Section 5+00E. The alteration is still quite strong, but only minor fracturing, brecciation, and veining are present. On the east, the 5 ZONE abruptly terminates at the pyrite-tuff volcanopause and ultramafic contact. The mineralization and structure are very strong with both continuing to depth. The new drill cores show that two different types of ultramafic are present. Immediately overlying the pyrite-tuff bed are spinifexoidal komatiitic flows showing typical quench textures and flow top breccias. A massive peridotite body [sill] intrudes the komatiites and is marked by a sharp intrusive contact. Both units can be quite sheared and locally brecciated. Whether or not this sill has invaded the sequence along the Pipestone Fault is still open for debate.

#### **RESULTS for the TONNAGE and GRADE ESTIMATES**

The 1984 diamond drill results and assays have been combined with past exploration results to calculate a new GRADE and TONNAGE ESTIMATE for the 5 ZONE DEPOSIT. Past data also used in the calculations include:

- 1981 diamond drill results
- 1982 percussion and diamond drilling results
- 1983 percussion drilling, channel sampling, and bulk sampling results

Some of the old diamond drill data by past explorers [Argyll, Lake Osu, Rio Rupunini etc] are shown on the sections; but none of this information was used in the calculations.

Preliminary review of all the data suggested that an OPEN PIT mining operation for the 5 ZONE DEPOSIT could be feasible to the 240 ft Level or 660 ft Elevation. Using this open pit model, the reserves of the DEPOSIT were calculated for a SELECTIVE MINING operation whereby the ore and waste are carefully separated; and for a BULK MINING operation where the intervening lower grade material is included as ore. In the SELECTIVE MINING example, most of the Unit G and that part of the Unit B which graded >0.04 oz/ton was



taken as ore. In addition, some design consideration was allowed for practical mining problems such as dilution and access. For the BULK MINING example, all of Unit G and most of Unit B was considered as ore. This would also include small, isolated gold-bearing veins and structures that were not taken in the Selective Mining example. Separate calculations were made using all the assays at face value, and cutting all assays greater than 1 ounce down to 1 ounce.

Tonnage and grade estimates were also calculated for the ore-grade mineralization below the 240 ft Level and above the 400 ft Level that might be mined by underground methods. Although substantial gold mineralization was intersected below the 400 ft Level, the drill data is too sparse to permit ore reserve calculations. The results of the Tonnage and Grade Estimates are tabulated on Table 2 and summarized below

**5 ZONE ORE RESERVE ESTIMATES**

**OPEN PIT MINING to 240' Level**

	<u>Selective Mining Methods</u>			<u>Bulk Mining Methods</u>		
	TONNAGE	GRADE		TONNAGE	GRADE	
		cut	uncut		cut	uncut
	290590	.145	.210	457485	.100	.143
<b>UNDERGROUND MINING</b> 240 to 400' Level	157450	.196		157450	.196	
<b>TOTALS</b>	<b>448040</b>	<b>.163</b>	<b>.205</b>	<b>614935</b>	<b>.143</b>	<b>.158</b>
	TONS	CUT	UNCUT	TONS	CUT	UNCUT

Expressed as TONS PER VERTICAL FOOT, the results become:

- for Selective Open Pit Mining - 1200 tons/vertical ft
- for Bulk Open Pit Mining - 1900 tons/vertical ft
- for Underground only - 985 tons/vertical ft
- OR**
- for Selective + Underground - 1120 tons/vertical ft
- for Bulk + Underground - 1540 tons/vertical ft

This compares favourably with earlier estimates for the 5 ZONE DEPOSIT.

## OVERBURDEN STRIPPING - 5 ZONE

Overburden stripping over the 5 ZONE DEPOSIT was completed by Leo Alaire and Sons Limited of Matheson, Ontario. A Link Belt K-360 Dragline and Caterpillar 235 Hoe were used for the excavation, and the material was hauled to an established dump site in 4 Volvo 4WD trucks or pushed aside using Caterpillar D-8 Bulldozers. Pit slope was maintained at 3:1 and a total of 61,000 cubic yards were removed.

The Purpose of the stripping was to:

- expose more bedrock to facilitate additional detailed mapping of the deposit,
- expose more bedrock for channel sampling and percussion sampling operations,
- expose and access another Bulk Sample site in the higher grade areas of the Deposit for additional metallurgical testing, and
- stabilize the existing slopes to avoid additional caving.

Overburden stripping over the 5 ZONE DEPOSIT during 1983 provided only partial exposure of the mineralization. A thorough channel and percussion sampling program could not be completed because a large percentage of the mineralization, especially in the eastern part of the DEPOSIT, was still buried. Additional channel and percussion sampling of the ZONE were scheduled for the 1984 Program.

The 1983 Bulk Sample results for the 5 ZONE pit suggested that the gold, at least in the lower grade mineralized zones was very fine and evenly distributed. Observations from the 1983 channel sampling and the 1984 diamond drilling program show that important coarse native gold is also present in the higher grade areas, especially at depth and east of the narrow diabase on section 8+60E. This has led to "traditional" **cutting** of the assays for grade and tonnage calculations. Assay cutting is practiced in many established gold mines in Canada. The amount the assays are cut varies from mine to mine because it is based on a numerical attempt to balance the reported mining grades with mill recoveries. The 5 ZONE DEPOSIT is not an established mine, and mill recoveries have yet to be determined. The economic viability of the 5 ZONE DEPOSIT at today's gold prices may, at least in part, hinge on some of this higher grade ore being recovered. Thus, it is extremely important that a Bulk Sample be taken from one of the high grade areas.



This would not only help to establish if assay cutting is necessary, but also, by how much. Another 1000 ton BULK SAMPLE was scheduled to be taken from 9+00E to 10+00E during the 1984 Program. Unfortunately, both the diamond drilling program and stripping operations ran longer than originally expected. By the time the site was readied for the channel, percussion, and bulk sampling work, severe winter weather conditions had set-in. This would have greatly hampered if not prevented the work from being completed, and the decision was made to suspend operations until Spring. With the stripping completed, the slopes stabilized at 3:1, and additional access provided to the eastern end of the pit, all the above operations can efficiently be completed early in the Spring of 1985.

### **METALLURGICAL TESTING - 5 ZONE**

A 30 kilogram composite sample of all the sampling tower assay splits for the 1000 ton BULK SAMPLE taken in 1983 was shipped to Lakefield Research in Lakefield, Ontario for preliminary metallurgical bench tests. Mr. F. Clyde Lendrum, PEng., Maude Lake's consulting metallurgist directed all the Lakefield investigations which were designed to help evaluate the "millability" of the 5 ZONE mineralization. Although the sample is just from a lower grade area of the DEPOSIT, it represents the largest single sample taken from the property and is considered the most indicative ore-type on hand and thus, valid for preliminary bench work.

The Lakefield report for the metallurgical test results is appended, Appendix 3. A summary of their findings is tabulated below.

Head sample assay	- 4.29 g/t +0.36 Gold, 3.5 g/t + 0.1 Silver
Arsenic	- 0.13%, Sulphur - 2.09%, Silica - 49.2%
Bond Work Index	- 15.6 kWh per short ton
Heavy Liquid Separation	- 21.4% wt > 2.9SG contained 60.5% of Au
Flotation Test	- 90% Au in 20% of wt at 58% minus 200M
Cyanidation test	- 94.1% -200M gives 83.5% Au extraction
Acid Consuming Ability	- 225 kg/t
Acid Producing Potential	- 64 kg/t

The head sample assays compare favourably with those from Noranda, Bell-White, and Swastika Labs on the same material. All the Lakefield data

and that of the local mill operators who earlier tested Maude Lake's ore will be used to assist the Company in choosing the best beneficiation process for the ore. Additional and more detailed testing, especially of the higher grade material must be completed before all the options can be analysed.

### ***FIELD ZONE AREA***

Advanced exploration elsewhere on the MAIN GROUP included an IP/Resistivity survey and diamond drilling. The purpose of the work was to locate new gold mineralization in previously untested areas along strike from the MINE AREA. Resistivity and chargeability patterns over known mineralization would guide any follow-up drilling. The area chosen lies approximately 3/4's of a mile west-northwest of the 5 ZONE DEPOSIT and has subsequently been coined the *FIELD ZONE*. The IP/Resistivity survey was contracted to JVX Limited of Thornhill, Ontario who used a Scintrex IPC-7/2.5kW Transmitter and Scintrex IPC-11 Broadband Time Domain Receiver. Four miles of picket lines had to be cut for the work.

The results of the IP/Resistivity survey outlined two major and one minor chargeability trends associated with resistivity anomalies. Some of the trends closely resembled those seen over the 5 ZONE DEPOSIT, and based on this, drill holes were spotted. A copy of JVX's Report is appended, Appendix 4. Plate IIIa overleaf illustrates the IP survey results and locates the 4 borehole collars. Map MC-1a on page 14a locates the *FIELD ZONE* with respect to the 5 ZONE and the MAIN GROUP of claims.

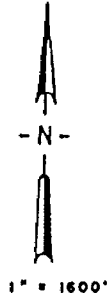
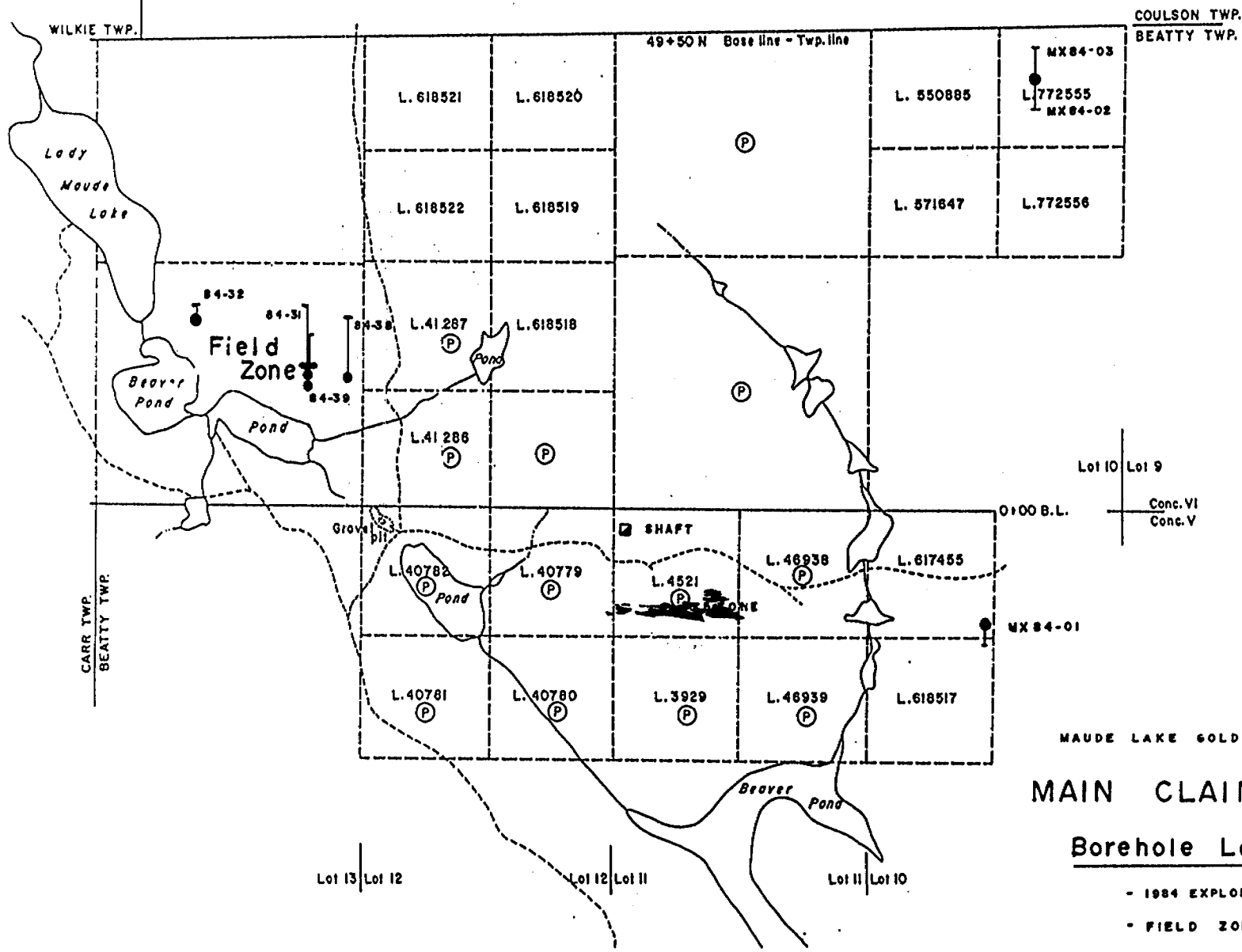
The four diamond drill holes [totalling 2740 feet] were spotted to test the best geophysical targets. The logs and assays for these holes are appended, Appendix 1; and the drill sections accompany this report.

**HOLE 84-31** • 32W, 16N -48°N for 955 ft.

This hole was drilled to test the sharp east-west resistivity anomaly and the southwestern extensions of an interpreted fault structure.

The hole collared in highly iron-carbonatized basaltic lavas that appear identical to that in the 5 ZONE. A section of Unit G2 returned assays of .326 oz/t over 3 ft or .181 oz/t over 7 ft. Other fractured and mineralized sections [pyrite, sphalerite, chalcopyrite, arsenopyrite] of the core within the same zone returned only low to trace gold assays; but from their appearance,





MAUDE LAKE GOLD MINES LTD  
**MAIN CLAIM GROUP**  
Borehole Location

- 1984 EXPLORATION HOLES
- FIELD ZONE HOLES

Map. MC-1a

they certainly have the potential to host gold mineralization. These altered and mineralized lavas must be considered an important and NEW GOLD DISCOVERY. Close-spaced detailed follow-up diamond drilling is warranted and recommended. Four other alteration zones were cut further down the hole, but failed to return significant assays. The lower two zones have mostly sericite alteration [clay] which indicates areas of mineral leaching.

**HOLE 84-32** • 44W, 22+60N -48°N for 180 ft.

This hole was drilled to test another resistivity and chargeability high near Lady Maude Lake.

The hole encountered very deep overburden and hit bedrock at 161 feet. Only twenty feet of weakly altered pillow basalt was recovered in core before the hole sanded-in and had to be abandoned. The target was not tested and is scheduled for re-drilling in 1985.

**HOLE 84-38** • 28W, 15+50N -50°N for 890 ft.

This was a step-out hole to test the eastern extension of the geophysical anomaly and GOLD DISCOVERY intersected in hole 84-31.

The hole collared in fresh pillow basalt then hit a strong alteration zone at 328 ft. Two sections of these altered lavas assayed .05 oz/t over 3 ft and .06 oz/t over 5 ft while the remaining assays were only low or trace. It is likely that this is the eastern extension of the second alteration zone cut in hole 84-31 and not the Discovery Zone. Perhaps the step-out was too ambitious and the hole collared too far to the north. More drilling is needed. Two more sections of altered lavas were intersected near the bottom of the hole, but they returned only trace assays. The lower zone is, again mostly clay-type.

**HOLE 84-39** • 32W, 15N -48°N for 715 ft.

This was an undercut hole to test for depth extensions of the DISCOVERY.

The hole intersected the extension of the Discovery Zone at 257 feet, but it had only weak alteration and returned only .098 oz/t over 4 ft or .036 oz/t over 13 ft. Similar pinch-outs are common in the 5 ZONE and considerably more drilling will be needed before the true potential of the gold mineralization can be realized. Another weak alteration zone occurs

near the foot of the hole that returned only trace gold assays. This alteration is predominantly clay [sericite] and represents an area of mineral 'leach'.

A limited amount of diamond drilling in a small and previously untested area of the MAIN GROUP has located an important NEW GOLD DISCOVERY. This *FIELD ZONE* has many of the characteristics displayed in the 5 ZONE DEPOSIT that lies 3/4's of a mile to the southeast. Although only a few high assays were returned from the *ZONE*, the nature and degree of the alteration suggest that a major mineralization event has occurred. The *FIELD ZONE* and intervening area toward the 5 ZONE must be considered prime prospecting ground with enormous potential for finding more gold mineralization. Additional IP/Resistivity surveys may locate similar targets. Detailed diamond drilling of the *FIELD ZONE* may outline another gold deposit.

### ***EXPLORATION DRILLING - MAIN GROUP***

Three diamond drill holes totalling 1104 ft were put down elsewhere on the MAIN GROUP to test various geological and geophysical targets, and complete the required assessment work to hold the staked claims in good standing. The drilling was done by McKnight Drilling Limited of Haileybury, Ontario using a Longyear "Super 24" wireline drill that produced AQ core. The drill logs are appended, Appendix 1 and drill sections accompany the logs. Map MC-1a on page 14a locates all the holes within the MAIN GROUP. None of the exploration core could be cut for assay because the diamond saw broke down. When the needed parts are received, the saw will be repaired and the core cut and assayed for gold.

**HOLE MX84-01    @ 39+70E,12+15S    -45°S for 200 ft.**

This hole was drilled to test a mineralized porphyry dyke that is known to contain gold mineralization about 1/2 mile to the east. The dyke follows an east-west electromagnetic feature that trends toward the 5 ZONE.

The hole intersected rather fresh pillow basalt cut by three quartz-feldspar porphyry dykes. Two of the dykes were massive, fresh, brick-red in colour, and contained finely disseminated cubic pyrite. The central porphyry is

weakly altered, grey, contains areas of quartz enrichment and has silicified the hosting lavas. This dyke and the few quartz veins and fracture fillings will be cut and assayed for gold. It is likely that the gold-mineralized porphyry lies to the north of the collar and another hole is needed to test the target.

**HOLE MX84-02** • 44E, 44+50N -45°S for 457 ft.

This hole was drilled to test mineralized porphyry dykes, several quartz vein structures seen cutting the lavas in outcrop, and the six channel airborne Input• electromagnetic anomaly shown on OGS Map 80585.

The hole collared in basaltic pillow lavas that carry heavy concentrations of pyrite and pyrrhotite in the interpillow material. Two narrow, barren feldspar porphyry dykes were cut at 82 ft and 316 ft, and the several quartz veins failed to carry significant mineralization. The bottom of the hole contained sulphide-rich pillow lavas again, but not enough sulphide was present to explain the Airborne EM anomaly. All of the porphyry and quartz structures, and some of the sulphide-rich lavas will be cut and assayed.

**HOLE MX84-03** • 44E, 44+50N -45°N for 447 ft.

This hole was drilled to test several quartz veins and breccia structures seen in outcrop, and the six channel Input• anomaly shown on OGS Map 80585.

The hole collared in sulphide-rich pillow lavas containing up to 10 percent pyrite and pyrrhotite. A few quartz veins and breccia zones are also present. The lower half of the hole is dominated by a thick dioritic flow and then bottoms in sulphide-rich pillow lava. All the quartz veins and mineralized lavas will be cut and assayed.

The six channel Input• electromagnetic anomaly was not explained. The Input• system apparently penetrates through surficial noise to outline deeper conductive sources. This being the case, perhaps a massive sulphide body exists at depth. More careful study and interpretation of the original Input• flight tapes as well as ground survey follow-up data might better evaluate the cause of this anomaly.

**CONCLUSIONS AND RECOMMENDATIONS - PART A**

**5 ZONE GOLD DEPOSIT**

**1 - DIAMOND DRILLING**

Thirty-six diamond drill holes totalling 18,920 feet were drilled into the 5 ZONE DEPOSIT in hopes of increasing the open pitable mining tonnage and to test the underground mining potential. Thirty-one of the boreholes were drilled to test the DEPOSIT above the 350 ft Level while the remaining 5 holes explored the deeper ore. The results not only confirmed the earlier interpretations but also added greatly to both the ore estimates and the overall economic potential of the DEPOSIT.

**5 ZONE ORE RESERVE ESTIMATES**

OPEN PIT MINING to 240' level	Selective Mining Methods		Bulk Mining Methods		Tons/vertical ft		
	TONNAGE	GRADE		TONNAGE		GRADE	
		cut	uncut			cut	uncut
	290590	.145	.210	457485	.100	.143	1200 / 1900
UNDERGROUND MINING 240 to 400' level	157450	.196		157450	.196		985
<b>TOTALS -</b>	<b>448040</b>	<b>.163</b>	<b>.205</b>	<b>614935</b>	<b>.143</b>	<b>.158</b>	<b>1120 / 1540</b>

All 5 of the deeper holes beneath the 400 ft Level intersected 'ore grade' mineralization. Although this data is too sparse to permit reserve estimates, more mineable tonnages can be visualized at depth; thus greatly enhancing the economic potential of the DEPOSIT.

A limited amount of deep exploration drilling under the 5 ZONE is recommended to estimate the larger potential of the DEPOSIT. Detailed development drilling could more economically be done from underground.

**2 - OVERBURDEN STRIPPING**

Approximately 61000 cubic yards of overburden were removed from the 5 ZONE to facilitate additional detailed sampling and bulk testing. This work would have provided higher grade ore for metallurgical testing and helped to determine if and/or how much assay "cutting" is necessary. The work could not be completed due to the lateness of season and severe winter weather



conditions, and has been re-scheduled for the Spring 1985.

**3 - METALLURGICAL TESTING**

Preliminary bench testing of Maude Lake mineralization was completed at Lakefield Research to test the "millability" of the ore. More work will be necessary before the best beneficiation options can be analysed.

**FIELD ZONE**

IP/ Resistivity surveys and 2740 feet of diamond drilling were completed in a previously untested area of the MAIN GROUP to the west-northwest of the Mine Area. The IP work located trends similar to those over the 5 ZONE and the diamond drilling intersected a major alteration zone containing significant gold assays. This NEW DISCOVERY has been coined the *FIELD ZONE*. More drilling is recommended to evaluate the *ZONE*. In addition, the entire area between Lady Maude Lake and the SE boundary of the MAIN GROUP is recognized as Prime Prospecting Ground capable of hosting other gold deposits. More IP and drilling is recommended to locate these targets.

**EXPLORATION DRILLING - MAIN GROUP**

Three boreholes totalling 1104 ft were drilled elsewhere on the MAIN GROUP to test geological and geophysical targets. No obvious gold mineralization was found and further work can only be recommended after the core assays have been returned.

**PROPOSED BUDGET for 1985**

5 ZONE Site Prep, Bulk Testing, Sampling, Assays	56,000.00
Metallurgical Testing, Flow Sheet	24,000.00
5 ZONE diamond Drilling 12,000 ft @ 20	240,000.00
FIELD ZONE Diamond Drilling 8,000 ft @ 20	160,000.00
IP Surveys and other work	24,000.00
Assaying, Core cutting etc	48,000.00
Supervision, Reports, Rentals, Accomodation etc	<u>48,000.00</u>
TOTAL =	\$ 600,000.00

**PART B - Preliminary Exploration, OUTSIDE PROPERTIES**

[Wilkie-Carr, Salve, Ben-Beatty Groups]

Preliminary exploration work was completed over a large portion of Maude Lake Gold Mines' OUTSIDE PROPERTIES which include the WILKIE-CARR GROUP, the SALVE LAKE GROUP, and the BENNETT-BEATTY GROUP. Geological mapping and prospecting, magnetometer, radiometric and electromagnetic surveys were done to characterize the underlying formations and help locate new Gold Target areas. A summary of all the work completed is tabulated below.

**TABLE 3. PRELIMINARY EXPLORATION WORK - 1984**

GROUP NAME	GRIDDING [Miles]	EXPLORATION WORK COMPLETED				
		[Number of Claims]				
WILKIE-CARR	60.3	GEOLOGY [66]	MAGNETIC [66]	VLF-EM [66]	VLF-EM [66]	RADIOMETRIC [66]
SALVE LAKE	12.4	GEOLOGY [29]	MAGNETIC [14]	VLF-EM [14]	VLF-EM [14]	RADIOMETRIC [14]
BEN-BEATTY	47.5	GEOLOGY [52]	MAGNETIC [52]	VLF-EM [52]	VLF-EM [52]	RADIOMETRIC [52]
<b>TOTALS</b>	<b>120.2 mi.</b>	<b>147</b>	<b>132 cl.</b>	<b>132 cl.</b>	<b>132 cl.</b>	<b>132 cl.</b>

The exploration results for each GROUP will be presented separately.

**WILKIE - CARR GROUP**

**INTRODUCTION**

The WILKIE-CARR GROUP consists of 66 contiguous staked mining claims located in southeastern Wilkie Township and northeastern Carr Township, approximately 6 miles north of the Town of Matheson. The GROUP is accessed by all-weather gravel Township roads the run north from Matheson. Several bush roads and trails provide additional access. A property and general location map is provided overleaf, Figure 2.



## HISTORY - WILKIE-CARR GROUP

The earliest work in the area was a regional reconnaissance mapping survey in 1919 by C. W. Knight and his associates; Abitibi-Night Hawk Gold Area. Carr Township and the southern part of Wilkie Township were later mapped by V. K. Prest during 1945-46 and a report was released in 1951, The Geology of Carr Township Area.

Previous exploration work was done on the claims by Wilcarr Mines, Young Davidson Mines, and Hollinger Consolidated Mines Limited. From 1944 to 1946, Wilcarr Mines Limited completed geological mapping and a magnetometer survey over most of the GROUP, and drilled 39 boreholes, 21 of which fall on Maude Lake's claims. The results of Wilcarr's work outlined the Pipestone Fault structure which falls along a volcano-sedimentary contact that is, at least in part, invaded by a large granitic intrusive. Wilcarr's diamond drill results returned several significant gold intersections. Eight close-spaced holes were drilled into the "Carlo Showing" that lies just east and south of the bulk of GROUP. Although the highly altered and quartz-veined lavas that gave high gold assays in surface trenches were intersected, only low gold assays were returned from the cores. (Cominco Ltd is currently exploring this property for economic gold mineralization.)

Wilcarr Holes #22 and #31 in current claim L.682429 gave significant gold assays in highly altered sediments. Holes #32 and 35 in current claim L.682452 returned important gold assays from an alteration phase containing pyrite and arsenopyrite within the granite. The several holes drilled to test the Pipestone Fault were all collared in granite and drilled south. Little of the southern contact of the Structure was tested. Holes #38 and #39 in claim L.714793 were drilled to test a magnetic high along the volcanic - sediment contact. Hole #38 was collared too far south and only intersected sediments; hole #39 cross-sectioned the contact but apparently did not explain the magnetic anomaly. The location for most of Wilcarr's diamond drill holes is shown on the Geological Plans, Maps WCG-011 and CG-001.

In 1965, Young Davidson Mines completed an electromagnetic survey over part of the GROUP in Wilkie Township. Although three conductive zones were located, none were considered "sufficiently strong to encourage further exploration efforts" (ODM assessment files, report by L.G. Hobbs).

During 1939, Hollinger Consolidated Gold Mines drilled one hole in the

northeastern corner of claim L.787130 (Borehole E-3) that intersected immature sediments consisting mostly of greywacke and black slate. Several narrow quartz-carbonate stringers were logged but no assays were reported. During 1977, Hollinger completed VLF-EM and Horizontal Loop EM surveys over a 25 claim property which includes Maude Lake's current claims L.682425 & 26, L.682431 & 32, L.682439 to 42, and L.700911 & 12. Most of the remaining 25 claims are now being explored for base metals and gold by Kidd Creek Mines Limited [ McChristie Option]. The EM results outlined numerous west-northwest striking conductive zones. A single diamond drill hole tested one of the conductors and intersected graphitic horizons within intermediate composition volcanoclastics. The location of this hole is shown on Map WCG-011.

No other work has been reported for the WILKIE-CARR GROUP of claims, although several pits and trenches were found and charted during the course of the exploration work.

## **EXPLORATION WORK - WILKIE-CARR GROUP**

### **GRIDDING**

A grid of picket lines totalling 54 miles and 6.3 miles of baseline was cut over the GROUP during June and July 1984 by Maude Lake personnel. All the baselines strike due east-west; the 0+00 baseline follows the survey boundary between concessions I and II in Wilkie Township; the 60+00S baseline approximates the boundary between Wilkie and Carr Townships; and the Southern baseline is the western extension of Maude Lake's original baseline on the MAIN GROUP in Beatty Township. All the picket lines are perpendicular to the baselines and spaced at 400 foot intervals. Pickets were chained and set every 100 feet along all the cut lines.

Base Stations were established at Line 0+00, 59+50S, at Line 48+00E on the 0+00 baseline, and at Line 112+00W on the Southern baseline for geophysical survey tie-in purposes.

### **GEOLOGICAL SURVEY**

Geological and topographical mapping of the GROUP was completed during June, July, and August 1984 by N. Bussolaro and K. Lacey. The grid lines

were used for control but in outcrop areas, many pace and compass traverses were made in-between to ensure every outcrop was mapped. A representative suite of rock specimens was collected from the bedrock exposures and closely examined with the aid of a binocular microscope.

The general geology of the area is described by V. K. Prest (ODM Volume LX, Part IV - 1951, Geology of Carr Township Area) as being underlain by Precambrian sediments and mafic volcanics that are cut by north-striking Matachewan diabase dykes, a northeast-striking Keweenawan olivine diabase dyke, and intruded by a large Algoman granitic body. A major east-west fault zone, the Pipestone, which is a sister structure to the Porcupin-Destor System is interpreted to traverse part of the claim group.

Known gold mineralization in the immediate area occurs as simple to complex cross-cutting quartzose fractures and stockworks within highly iron-carbonatized sediments and mafic volcanics, and as quartz-arsenopyrite zones within alteration phases of the granite.

Bedrock exposures are limited to five small areas centered around claims L.737483 in the far eastern part, L.682425 in the central part, and L.682452 in the northwestern part of the Wilkie Township GROUP; and in claims L.787140 and L.714794 in Carr Township. Outcrop represents less than 1 percent of the total surface area of the claim GROUP. The Geological Plans, Maps WCG-011 and CG-001 illustrate these exposures, the overburden conditions, roads, trails, past drill collar locations, and the interpreted geology.

#### **UNIT 1 - Sediments**

The Precambrian sediments represent the oldest formations in the area. They are only exposed in several small, low-lying outcrops in the Carr Township claims, but are interpreted to underly the southern half of the entire GROUP. The outcrops show well-bedded, immature, granular greywacke and lesser interbedded arkose that strike at 111 degrees and dip vertically to steeply south. Grading in some of the beds suggest tops are to the north; thus, the sediments are locally overturned. A few barren, white quartz 'sweats' were noted striking at 130° azimuth. From the drill logs of past explorers, the sediments are described to contain black slate and fine grained arkosic greywacke beds as well.

A major carbonate-sericite alteration zone was intersected in Wilcarr holes

22, 28, 29, 31, and 33. Some significant gold assays were returned and include:

0.160 opt over .5 ft @ 411.2 ft in hole #22

0.050 opt over .7 ft @ 210.8 ft in hole #28

0.015 opt over 3.5 ft @ 218.7 ft in hole #31

These auriferous zones are described to occur in strongly "buff" coloured alteration with quartz fracture-fill veins and varying amounts of pyrite and some galena. Although the intersections can in no way be considered economic, they may be a pathfinder to possible larger deposits along strike or to depth. Follow-up exploration is certainly warranted.

The sediments immediately south of the Pipestone Fault have only been tested by one borehole, Wilcarr #18. The other holes along the Break either bottomed in granite and volcanics or just penetrated the sediments. Gold mineralization is known to occur along and/or near this structure and more detailed exploration is justified.

#### UNIT 2 - Mafic Volcanics

Basaltic lavas are exposed in three widely-spaced outcrop areas within the Wilkie Township claims and are interpreted to underly most of the remaining claims as well. The mafic volcanics are typically fine to locally medium grained, pale grey to dark green in colour, usually quite massive and unaltered, and are believed to have an iron-tholeiite affinity. The basalts can occur as massive, featureless flows and as well-pillowed units. Where exposed, the pillow configurations show a marked east-west elongation with stratigraphic tops always to the north. Pillow margins are usually quite rusty and contain noticeable amounts of finely disseminated pyrite and pyrrhotite. A westerly trending flow top breccia is exposed in claim L.737484 [Sample W-37] and is characterized by glassy, silicified and mafic "balls" up to 10 centimeters in diameter within a chloritic and sheared matrix having abundant [5%] fine pyrite.

East-west [90-105 Az] and lesser north-south [0-20 Az] striking milky-white quartz veins are common within the mafic lavas. Some of these veins are fracture-fill type and occur as en-echelon veinlet systems; others occur as isolated quartz and grey-black chert 'sweats'. One vein in claim L.682451 was up to 1.6 ft wide and could be traced for more than 30 feet. All the exposed veins contain minor amounts of pyrite but did not show any significant wallrock alteration.

**UNIT 3 - Felsic Volcanics**

Felsic volcanics are not exposed within the claim GROUP. However, several low lying rhyolite to dacite composition outcrops were noted just east of L.682442 and south of the bush road. W.R. Sutton [Wilcarr Report, 1946] describes sheared felsic volcanics striking approximately east-west and dipping steeply north. He also describes the shearing and flow contacts as closely parallel. Locally, there is extensive carbonate alteration and quartz veining.

The 1977 Hollinger diamond drill hole located approximately 1000 feet west of L.737492 intersected dacitic volcanoclastics and flows with graphitic sections. The dacite is described as greyish-green to grey in colour, carbonatized, locally bleached, and becomes lighter colour towards the foot of the hole.

**UNIT 4 - Ultramafics**

A recognizable and continuous unit described as soapstone and/or talc-chlorite schist [Wilcarr and ODM reports] occupies the contact area between the sediments and mafic volcanics. This unit is only found in drill core and is called the Pipestone Fault. Both Prest and Wilcarr geologists believed this soapstone horizon to be an alteration phenomenon caused by movement along the Pipestone Fault. However, further to the east in Beatty Township on Maude Lake's MAIN GROUP [former Argyll Mines], similarly described soapstones and schists have proven to be serpentized peridotite. It is likely that the soapstone horizon within the WILKIE-CARR GROUP is also a peridotite sill or flow and acted as the plane of weakness for any subsequent shearing. Regardless of its origin, the ultramafic horizon is an important locus around which gold exploration should focus. The boreholes drilled by Wilcarr only tested the northern contact of this Break; the southern contact and underlying units have not been explored. The only significant gold mineralization known to date in the immediate area that is associated with the Pipestone Structure falls to the south of the Break. More exploration south of the Pipestone is recommended.

**UNIT 5 - Graphite**

Very fine grained and black graphitic beds, graphitic tuffs, and sooty irregular stringer-like graphite are described in the Hollinger borehole in Wilkie Township. They occur in 'dacitic' fragmentals and are interpreted to occur near or at the upper contact of the felsic volcanics. Strong and



continuous airborne and ground electromagnetic anomalies fall directly along strike. Other parallel anomalies may also be graphite-rich horizons.

#### UNIT 6 - Granite

A large, steeply north dipping, lenticular intrusive body of Algonian granite is interpreted [from Wilcarr drill data] to occupy the central portions of the GROUP just north of the Pipestone Fault. The granite outcrops only in claim L.682425 where it is coarse grained, greenish to grey in colour, and contains numerous veinlets of coarsely crystalline quartz. A few old pits and trenches expose several large quartzose areas within the granite. In Wilcarr hole #19, a 0.2 ft wide quartz vein in a 'greenstone' xenolith within the granite assayed 0.07 oz/ton Au. In holes #32 and #35 along the northern contact of the granite in association with shearing, quartzose, pyrite and/or arsenopyrite [mispickel] -rich areas, the following gold assays were returned:

##### Hole #32

0.10/3.7 ft @ 276.3 ft

0.11/0.9 ft @ 367.8 ft

##### Hole #35

0.08/0.7 ft @ 210 ft

0.05/1.3 ft @ 220.4 ft

These and all the other significant gold assays occur within a "light coloured alteration phase" of the granite. Strike and/or dip extensions may contain important gold mineralization.

#### UNIT 7 - Porphyry

Narrow feldspar porphyry dykes cut both the sediments and volcanics. These porphyries are white to buff in colour and often contain weakly disseminated pyrite [as described in Wilcarr drill logs] and are believed to be derivatives of the Algonian granite. No bedrock exposures of the porphyry were found during the mapping program.

#### UNIT 8 - Diabase

North-south striking, vertically dipping Matachewan-type quartz diabase dykes cut all areas of the GROUP. In outcrop, these dykes grade from very fine grained chilled contacts to very coarse grained central zones. The diabases can be up to 300 feet wide. Sharp contacts of later, more mafic diabase were found within the larger dykes. The diabase consists of feldspar, quartz [5 up to 40%], chlorite [after amphibole], magnetite, and very minor pyrite. The dykes have strong magnetic susceptibility and can be easily traced from the magnetometer survey. Crustal expansion by the Matachewan diabase invasion approaches 30 % locally [L.682426].

**UNIT 9 - Olivine Diabase**

A large and very strong northeast striking magnetic anomaly in the western part of the claim GROUP [L.682454 and 456] is interpreted to be a Keweenawan olivine diabase dyke.

**MAGNETOMETER SURVEY**

A magnetometer survey was completed over the GROUP by K. Lacey during June and September 1984 using a Sharpe Instruments MF-1 Fluxgate Magnetometer. Readings were taken every 100 feet along all the cut lines for a total of 3,191 readings. Daily magnetic readings were tie to the base stations and corrected for diurnal drift. In addition, secondary base stations along the baselines at crossline intersections were re-read as each loop was completed.

The results of the magnetometer survey are plotted on Maps WCM-012 and CM-001. Diurnal variations were a maximum of 260 gammas for any given day and 510 gammas for the entire survey. This caused considerable problems in bringing the data to a common base and several lines had to be re-read. The magnetic susceptibility for the GROUP falls between 600 and 2600 gammas with average background being 750 gammas.

The sharpest magnetic anomaly is a northeast trending feature in the western part of the GROUP [L.682454 and 456]. This anomaly is interpreted to be caused by a large Keweenawan olivine diabase dyke. Old borehole data to the west and along strike support this conclusion [ODM Map 1951-1]. Most of the remaining magnetic anomalies trend north-south and are interpreted to be caused by Matachewan diabase dykes. The high magnetic susceptibilities of all these dykes have, for the most part effectively masked the attitude of the major rock formations underlying the GROUP. A few exceptions could include the small northwest feature at 100E and 104E about 9+00S. This anomaly represents a pyrrhotite-rich flow top breccia within the mafic lavas. Another northwest anomaly at 52E, 50S to 72E, 56S could also be a magnetic flow top. A more adventurous interpretation for this anomaly is that it represents the displaced eastern extension of the Pipestone Fault that seemingly disappears east of Wilcarr Hole #11. This anomaly warrents careful consideration for it could have an important bearing on the economic potential of this area within the GROUP.

A very weak magnetic trace of the known location of the Pipestone Fault

could be evidenced by the anomalies at 20W, 48S and 4W, 52S.

The sharp northwesterly trending magnetic feature at 56W, 8N in Carr Township could be due to another ultramafic body along or near the volcanic-sediment contact.

#### ELECTROMAGNETIC SURVEYS

Two VLF-Electromagnetic surveys were completed over the claims during June, September and October 1984 by N. Bussolaro and W. Fuller. The Phoenix VLF-2 EM Unit was used and readings were taken every 100 feet along all the grid lines. At each station, the dip angle, phase angle and field strength readings were measured. The first station [F1] used the 24.0 KHz frequency from Cutler, Maine to test for easterly striking structures and/or conductive zones. The Cutler station was usually read on Tuesday, Wednesday, and Thursday. The second station [F2] used the 21.8 KHz frequency from Annapolis, Maryland to test for northerly striking structures and/or conductive zones. The Annapolis station was usually read on Friday, Saturday and Monday. The claims were traversed separately for each survey. All the dip angles are plotted at 1 inch - 40 degrees. The field strength readings were tied into the base stations on a daily basis as the individual station strengths showed considerable variance during the course of the surveys.

The results of the two electromagnetic surveys are plotted on:

for F1 - Maps WCV-013 and CV-003 - 24.0 KHz, Cutler, Ma.

for F2 - Maps WCV-014 and CV-004 - 21.8 KHz, Annapolis, My.

For each survey, 2877 stations were read.

The cross-over anomalies have been categorized into two groups: those having high field strengths and those with low field strengths. As a general rule of thumb, the high strength anomalies usually reflect bedrock features whereas the low strength anomalies typically are caused by overburden effects.

For the F1 survey, several strong cross-over anomalies were found. Most trend west-northwest and likely reflect bedrock features. All the significant anomalies and their probable causes are tabulated overleaf, Table 4.

**TABLE 4. F1 - VLF-EM SURVEY RESULTS [24.0 KHZ] WILKIE-CARR GROUP**

<b>ANOMALY NUMBER</b>	<b>PROBABLE CAUSE</b>
A - A1	Contact effects of the olivine diabase
B	Possible graphite horizon
C - C1	Graphite horizon and/or base of the felsic volcanics
D - D1	Graphite beds that were intersected in Hollinger hole
E	Geological structure or contact , possibly the Pipestone
F	Geological contact or overburden effects
G	Northeast striking shear zone in mafic volcanics
H	Possible conductive zone associated with Granite contact
I	Possible structure or overburden effects
J	Pipestone Fault
K	Pipestone Fault
L	Pipestone Fault
M	Farmers fence line
N	Structure associated with known gold mineralization
O	Possible flow top breccia sulphide mineralization or shear
P	Possible flow top breccia sulphide mineralization of shear
#1	Swamp-clay boundary in the overburden or shear
#2	Possible conductive shear zone
#3	Overburden - outcrop contrast effects
#4	Conductive overburden in a swampy area
#5	Farmers fence line
#6	Possible structure/shear zone from sed-volcanic contact
#7	Overburden contrasts along a drainage
#8	Overburden contrasts or a weak shear zone

The remaining cross-over anomalies have average to low field strengths and fall in or near swampy areas and drainages marked by topographical depressions. All these anomalies are interpreted to be caused by overburden contrasts.

For the F2 survey, only a few rather weak cross-over anomalies were found. those interpretable are tabulated overleaf, Table 5.

**TABLE 5. - VLF-EM SURVEY RESULTS [21.8 KHz] WILKIE-CARR GROUP**

<b>ANOMALY NUMBER</b>	<b>PROBABLE CAUSE</b>
R	Contact effects of olivine diabase
S	Weak shear zones or contact effects
T	Overburden effects
U	Overburden effects
V	Farmers fence line as with anomaly M
W	Possibly associated with known gold mineralization

The remaining cross-overs are single-line anomalies that have average to lower field strengths. A few of these anomalies fall along or near the contacts of Matachewan diabase and are caused by shearing and/or contact contrasts. All the other cross-overs are interpreted to be caused by overburden effects.

#### **RADIOMETRIC SURVEY**

A radiometric survey was completed over the claim GROUP during June, July, and November 1984 to assist the geological interpretation and test for potassium-rich felsic intrusives and/or alteration zones that can be associated with gold mineralization events. A McPhar TV-1A Radiation Spectrometer was used and total field readings were taken every 100 feet along all the grid lines. In all, 2,876 readings were taken. The readings were tied into the base stations and corrected for diurnal drift using the time-linear method. The general topography and outcrop areas were also charted during the survey.

The total field readings ranged from 1 to 21 counts per minute for the survey area. These can be grouped into distinct populations based on the surface conditions. The lowest readings [1 to 5 cpm] always fall over wet and swampy areas such as alder/willow swamps and open beaver ponds. Readings over the spruce swamps usually ranged between 4 and 10 counts per minute. Sandy, jack pine areas ranged between 8 and 14 cpm and poplar bush-clay areas returned readings between 12 and 18 counts per minute. The highest values [15 to 21 cpm] always fall over the open fields where lacustrine clay deposits are likely the thickest. This reflects the higher potassium concentrations in the clays.

In the outcrop areas, readings over basalt and diabase ranged from 5 to 10 counts per minute, the sediments gave readings averaging 8 cpm, and the area underlain by exposed granite returned a reading of 16 counts per minute. No significant radiometric anomalies were found during the survey.

### **CONCLUSIONS AND RECOMMENDATIONS - WILKIE-CARR GROUP**

Preliminary exploration work over Maude Lake Gold Mines' WILKIE-CARR GROUP of claims consisted of geological mapping and prospecting, magnetometer, two electromagnetic, and radiometric surveys. The work has not only better defined the geological understanding for the area, but also outlined specific geological and geophysical targets that warrant follow-up exploration.

The claims are underlain by a west-northwest striking, steeply dipping pile of Precambrian metasediments, mafic volcanics, felsic flows and volcanoclastics, and minor interflow sediments, some being graphitic. A large Algomian granitic body invades the contact zone between the sediments and volcanics just north of the Pipestone Fault which is marked by an ultramafic body. At least 2 ages of diabase cut the sequence; north striking Matachewan quartz diabase and northeast trending Keweenaw olivine diabase.

Compilation of all past work as well as that of the current surveys suggest that the Pipestone Structure has not been fully tested by past explorers. In addition and although highly interpretable, new evidence may suggest the Pipestone Fault that seemingly dies eastward has been offset northward. A more detailed magnetic survey with reverse circulation basal till sampling follow-up is recommended as the next exploration step. This would not only define the magnetic feature, but also test for gold mineralization. Diamond drilling targets areas could uncover new gold mineralization.

Electromagnetic anomalies along or near the Pipestone Fault [J and K] may be caused by sulphide mineralization or more intense shearing which could carry gold mineralization. Reverse circulation basal till sampling could test these targets, but diamond drilling is recommended.

Highly carbonatized and sericitized sediments south of the Pipestone contain known gold mineralization. A co-incident easterly striking electromagnetic

cross-over anomaly [N] may reflect the extension of this zone. Close-spaced diamond drilling is recommended to further test this mineralization. Another easterly cross-over anomaly [#6] near the volcano-sediment contact could be an important new structure and warrents drill testing.

A light-coloured alteration phase containing disseminated pyrite and minor arsenopyrite within and near the northern contact of the granite intrusive contains low but widespread gold values. Diamond drilling is warrented to test this target.

The thick band of felsic flows and volcanoclastics that crosses the claim GROUP is known to contain interbeds of graphitic material. These and other contacts within the volcano-sedimentary pile may be favourable locii for both stratabound gold mineralization and base metal deposits. Continued exploration for these targets should include reverse circulation basal till sampling and more penetrative electromagnetic surveys such as Max-Min.

## ***SALVE LAKE GROUP***

### **INTRODUCTION**

The SALVE LAKE GROUP consists of 114 contiguous staked mining claims located in central and eastern Beatty Township approximately 7 miles northeast of the Town of Matheson. This report presents the exploration results for only the 29 claims worked during the 1984 PROGRAM:

**SALVE 14 GROUP [14 claims]**

L.714769 through L.714771 inclusive

L.772550 through L.772554 inclusive

L.772557 through L.772560 inclusive

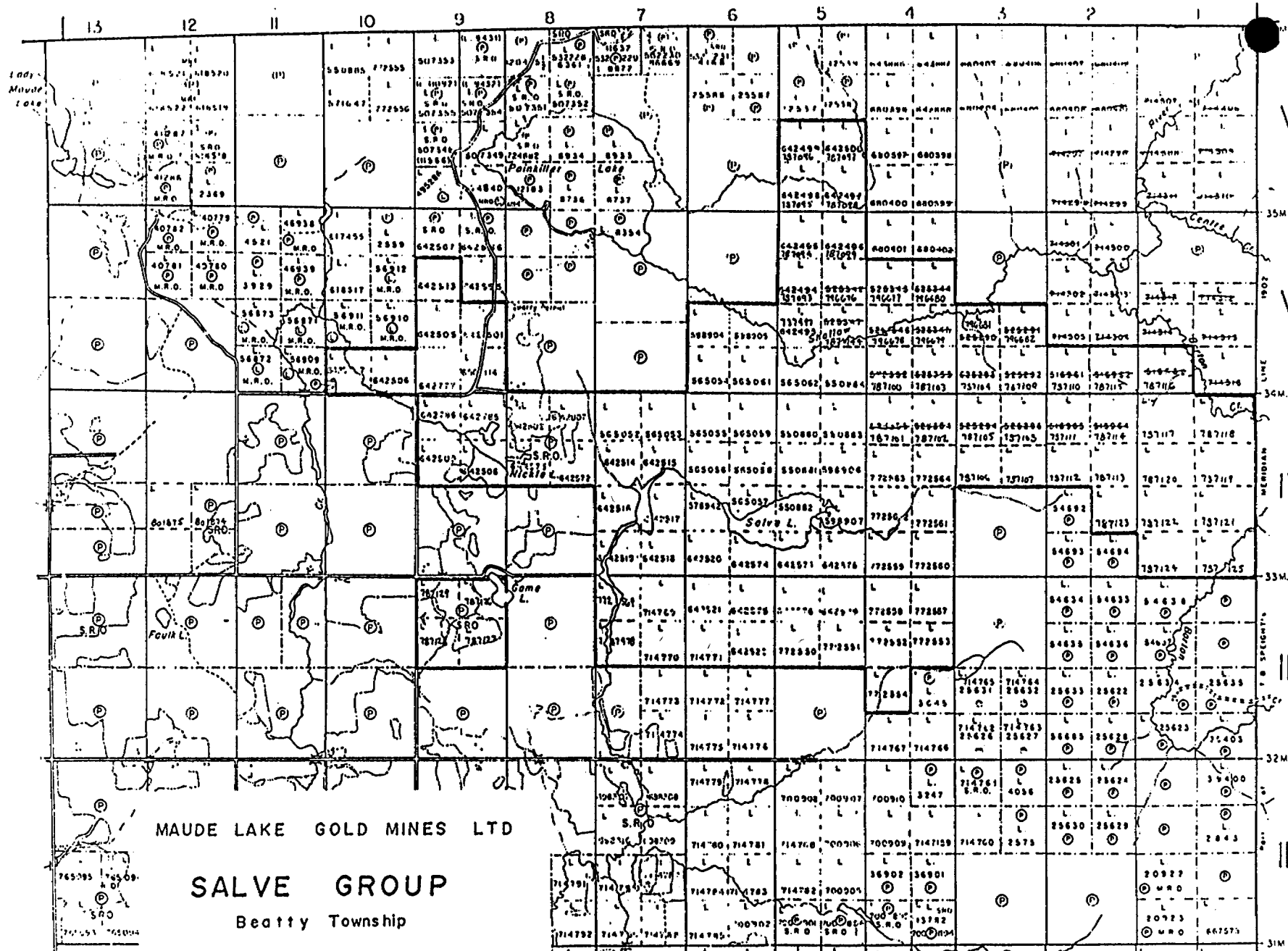
L.772569 and L.737478

**SALVE SOUTH GROUP [15 claims]**

L.642514 through L.642522 inclusive

L.642574 through L.642579 inclusive.

Access to the claims is by Highway 101 east from Matheson to the Beatty-Carr Township boundary road and then north and east along all-weather gravel roads to within 1/2 mile of the western boundary. An old farm track and bush trails provide excellent access to the center of the GROUP. A claim and location map is provided overleaf, Figure 3.





**HISTORY - SALVE LAKE GROUP**

The earliest work in the area was a regional mapping survey of the Beatty-Munro Township area in 1914 by Hopkins and Greenland [OBM Volume XXIV, Part 1, 1915]. Beatty Township was later mapped by Satterly and Armstrong in 1947 [ODM Volume LVI, Part 1].

This part of the SALVE LAKE GROUP has seen only limited exploration in the past. In 1939, Cominco completed a geophysical survey over part of the area and drilled one 290 ft borehole near the western line of L.772552. The hole intersected rhyolite containing quartz stringers with pyrite and low grade gold values.

In 1945, Clodan Gold Mines held 45 claims around Salve Lake. They drilled seven short X-ray holes in the outcrop area south of the lake that reportedly intersected mafic and felsic volcanics and pyroclastics cut by minor quartz veins containing gold values. The exact location of the holes is not known, but some old core boxes and oil drums were found near the northeastern corner of L.642576, and old oil cans at 44E, 5+60S.

In 1979, Gulf Minerals held the 40 claims west and south of Salve Lake. They drilled a north-bearing fence of 3 diamond drill holes totalling 3409 feet along the western claim line of L.642522 and L.642575. The holes cut mafic and felsic volcanics and minor graphitic interflow horizons. The few sections of core assayed failed to return any significant values. All the Gulf core is stored at the OGS Core Farm located in Swastika.

During 1982 and 1983, Maude Lake Gold Mines completed gridding, geological mapping, magnetic and electromagnetic surveys over most of the remaining GROUP.

No other work is recorded in the assessment files for the claims, although several pits and trenches were seen and noted during the exploration work.

**EXPLORATION WORK - SALVE LAKE GROUP****GRIDDING**

A grid of picket lines totalling 10.5 miles and 1.9 miles of baseline was cut over part of the GROUP [Salve 14] during May 1984 by Maude Lake

personnel. The grid over the Salve South claims was cut in 1982 and cleaned out in May 1984. The baseline strikes east-west and approximates the boundary between concessions III and IV. The picket lines are perpendicular to the baseline and spaced at 400 ft intervals. Pickets were chained and set every 100 feet along all the cut lines. Base stations were established along the baseline at 16W and 52E for geophysical tie-in purposes.

#### **GEOLOGICAL SURVEY**

Geological and topographical mapping of the 29 claim GROUP was completed during June 1984 by the author and N. Bussolaro. Bedrock exposures are limited to only the eastern part of the claims and represent about 5 percent of the total surface area. A representative suite of rock specimens was collected during the mapping.

The general geology of the area is described by J. Satterly and H. Armstrong in ODM Volume LVI, Part VII, 1947 - Geology of Beatty Township. Immature Precambrian sediments underly a mafic and felsic volcanic pile. Both units face north and the contact is marked by a major strike fault. Four types of intrusive rocks occur in the area and include mafic to ultramafic sills, quartz and/or feldspar porphyry, Matachewan diabase, and Keweenaw olivine diabase dykes.

A geological plan for the SALVE LAKE claims, Map# SLG-011 illustrates all the bedrock exposures, the overburden conditions, access trails, past drill collar locations, and the interpreted geology.

#### **UNIT 1 -Mafic Volcanics**

The mafic volcanics are andesitic to basaltic in composition, very fine to medium grained, and green to dark green in colour. The andesitic phases are pale green, fine grained, typically massive and have recognizable quartz grains [under the microscope]. The basalts can occur as massive featureless flows and as pillowed units. Where the pillows are well exposed and close-packed, top direction appears to be north. A few flow top breccias were seen during the mapping but could not be traced very far due to limited or poor exposure. Variolitic basalts were found in drill core [Hole SX84-04] but not in outcrop. All the mafic lavas have a tholeiitic chemical affinity.

A few veins were seen within the basalts [L.772550 and L.772551] and consisted of white to locally grey quartz with lesser carbonate. They strike due east-west and are cut by a series of fine en-echelon quartz veinlets that

strike at 35 degrees. An old pit and trench in the southeast corner of L.642577 expose rusty, weakly sheared lavas with a few narrow quartz veinlets. Only minor pyrite mineralization was seen. The trench at 44E, 5+50S is now filled in, but several old oil cans and a rusty pail nearby suggest that this likely was one of the sites Clodan drill-tested in 1945. Another old trench at 32E, 1S exposes rusty basalt. A few white quartz and black chert 'sweats' were seen in the pillowed flows. Apart from minor zones of iron oxidation, usually within the interpillow material, no significant sulphides or zones of alteration were seen in outcrop.

#### UNIT 2 - Felsic Volcanics

The felsic volcanics inter-finger with the basaltic lavas and consist of rhyolite to quartz-eye dacitic flows and volcanoclastics. Recent whole rock analyses by the OGS suggest these felsics have a tholeiitic affinity as well [R.Johnson, personal communication]. Several contacts between the mafic and felsic volcanics were charted during the course of the mapping survey. At 52+40E, 12S, the contact is very sharp, strikes northeasterly, and shows only very minor alteration. At 22E, 2N and 32E, 1S both the upper and lower contacts of rhyodacitic tuff units can be seen. These contacts are very sharp, strike westerly, dip steeply south, and show no significant alteration. A north-east trending fault is interpreted to disrupt the volcanic stratigraphy in claim L.682479. This linear is evidenced by the geophysical survey results and its displacement cannot be calculated.

The rhyolite flows are usually grey in colour but weather an ash-white. They are very fine to medium grained, quite massive to locally fractured, and contain distinct quartz and feldspar crystals. In a few outcrops, the flows appear porphyritic. Most of the rhyolite exposures exhibit excellent flow banding, with some forming concentric or ovoid structures. Most of the shearing in the rhyolites is minor and trends northeasterly. A northwest trending fault was mapped in the central part of L.772557. Here the rhyolites show strong sericite alteration, considerable iron oxidation, and numerous secondary shears [20° Az]. Several white quartz veins are also present and strike at 80 to 90 degrees with dips of 40 to 45 degrees. A few old pits and trenches tested several of the quartz veins and alteration zones.

Distinct fragmental felsics were seen in L.772558 and form the bulk of the exposed bedrock south of Salve Lake. These rhyodacitic volcanoclastics are characteristically grey in colour, medium grained, with white angular clasts of rhyolite up to several inches in diameter [average less than 1"]. The

matrix consists of much smaller rhyolite clasts, individual quartz and feldspar grains, and varying amounts of chlorite. The quartz 'eyes' are clear and rounded; the feldspars are typically subhedral. Numerous rusty patches were noted throughout the fragmentals and several massive pyrite clasts were seen. All of the volcanoclastics show weak sericitization. No mappable contacts between the flows and fragmentals were seen. Several quartz veins were seen within the felsic volcanoclastics. They are milky-white, have irregular shapes and dips, but usually strike northeast. The veins contained occasional carbonate patches [calcite] and only rare pyrite. Adjacent wallrock showed only very weak alteration.

#### **UNIT G - Graphite**

Four black graphitic horizons were intersected in the 1979 Gulf and the 1984 Maude Lake diamond drill cores. These horizons do not outcrop but are always within or near rocks described as andesite or dacite. The graphite in Hole SX84-04 forms an EM anomaly ['A'] and occurs at the top of a dacitic tuff. The graphite in Hole SX84-05 forms a marked EM cross-over anomaly and is reported to carry low gold values [Clodan]. It forms an excellent marker horizon. The Gulf drill sections through the graphite suggest the volcanic pile dips about 76 degrees to the south; thus, the stratigraphy may be overturned.

#### **UNIT 3 - Ultramafics**

A northwest trending ultramafic body along the Pipestone-Munro Fault is interpreted to cross the northern portions of the GROUP. Ground magnetic results, diamond drill data and outcroppings (to the east only) on adjoining properties both east and west of the claims support this interpretation. The komatiitic basalt flows found in Hole SX84-04 interfinger with variolitic lavas and fall a few hundred feet south of the Break.

#### **UNIT 4 - Diabase**

Three north-striking Matachewan diabase dykes cut the volcanic stratigraphy south of Salve Lake. Two of the dykes outcrop, while the third is interpreted from the magnetic data. The dykes are massive, medium grained, dark green-black and consist of feldspar, augite [chlorite], and rare quartz. They exhibit sub-diabasic textures and their contacts have good chill margins.

#### **MAGNETOMETER SURVEY**

A magnetometer survey was completed over the SALVE 14 claims in June

1984 by K. Lacey using a Sharpe MF-1 Fluxgate Magnetometer. Readings were taken every 100 feet along all the grid lines for a total of 578 readings. Daily diurnal corrections were made and all the mag readings were adjusted so as to correlate with the results of earlier surveys on the adjoining claims.

The results of the magnetometer survey are plotted on Map SM-002. Background magnetic susceptibilities for the survey fall between 750 and 850 gammas. The general trend of the data is west-northwest and approximates the known strike of the volcanic stratigraphy. The mag high in L.772552 and L.772553 closely parallels the interpreted upper contact of a pillow lava. Perhaps this sharp and shallow feature is caused by a pyrrhotite-rich flow top breccia. The other sharp mag anomaly in eastern L.772557 may have the same cause, or be due to the western extension of the peridotite body that is found in outcrop three claim lengths to the east. The two north-trending highs parallel to 24E and 32E are caused by diabase. The mag low in L.772551 occurs over rhyolite outcrop. The broad and rather flat magnetic susceptibilities in the western five claims may reflect more the depth of overburden than the underlying bedrock and the slight magnetic rise on the north end of line 80E is interpreted to be due to the Pipestone/Ultramafic Structure.

#### **ELECTROMAGNETIC SURVEYS**

Two electromagnetic surveys were completed over the SALVE 14 GROUP during June 1984 by N. Bussolaro. A Phoenix VLF-2 EM Unit was used and readings were taken every 100 feet along all the grid lines. At each station, the dip angle, phase angle and field strength were measured. The first station [F1] used the 24.0 KHz frequency from Cutler, Maine and the second survey [F2] used the 21.8 KHz frequency from Annapolis, Maryland. The results of the two surveys are plotted on Maps SV-003 [24.0 KHz] and SV-004 [21.8 KHz]. For each survey, 578 stations were read.

For the F1 survey, several good cross-over anomalies were found. Anomalies A, B, C, D, and E all have high field strengths and appear bonafide. Anomaly A parallels the felsic-mafic volcanic contact that is known to have graphite. Anomaly B appears to be the eastern extension of anomaly O located in 1983. This anomaly is caused by a graphitic interflow horizon. Anomaly C is directly associated with a high mag feature and is likely caused by sulphides. Anomalies D and E fall near the contact between felsic and mafic volcanics and likely are caused by graphite. The remaining

cross-overs all have low field strengths and fall in areas of suspected deep clay deposits. These are likely caused by overburden effects.

For the F2 survey, only two cross-over anomalies appear bonafide. The three-line northwest-trending anomaly in L.772557 falls directly on a known shear zone found in highly altered outcrop. Should gold mineralization be associated with this structure, the anomaly could be an important target for follow-up exploration. The cross-over at 48E, 13S falls along the interpreted northeasterly fault structure. The remaining cross-overs are all isolated and have low field strengths. Those at 16W, 1+50S, 4W, 8+50S, and 56E, 17S fall in thick clay areas and are due to overburden effects. The two cross-overs at 48E, 20S and 60E, 8S occur in overburden areas near outcrop and are probably due to rock-clay contrasts.

#### **RADIOMETRIC SURVEY**

A radiometric survey was completed over the claims in June 1984 using a McPhar TV-1A Radiation Spectrometer to test for potassium-rich alteration zones that can be associated with gold mineralization. The total field readings were taken every 100 feet along all the grid lines for a total of 578 readings. All readings were corrected for diurnal drift.

The results of the radiometric survey are plotted on Map SR-005. The total field readings ranged from 1 to 20 counts per minute and they can be grouped into distinct populations based on the rock types and overburden conditions. The lowest readings [1 to 5 cpm] always occur in wet swampy areas. This is best exemplified in claims L.772559 and L.772560 which are mostly covered by wet spruce swamp. In the clay covered areas forested by poplar, the readings ranged from 8 to 18 cpm; with the higher readings occurring in areas of thicker clay. The basalt outcrops returned total count readings between 6 and 12 cpm. The felsic lavas typically gave values between 10 and 18 cpm. This reflects the higher concentrations of K-spar in the felsics. The highest readings [19 and 20 cpm] occur directly over the highly sericitized rhyolitic outcrops in L.772557. This highly altered and quartz-veined area is suspected to carry gold values [Clodan work]. High total count readings are also seen along strike on lines 68E at 1S and 80E at 6S. These areas may be extensions of the highly sericitized lavas under the shallow overburden.

**DIAMOND DRILLING**

Two exploration boreholes totalling 968 feet were drilled in the SALVE LAKE GROUP between September 6 and October 13, 1984 by McKnight Diamond Drilling Comany of Haileybury, Ontario. A Longyear "Super 24" wireline drill was used and the core size was AQ. The drill logs and sections are appended, Appendix 1. These exploration holes could not be sampled due to a break-down in the core-splitting saw; but they will be when the necessary parts are received to repair the equipment.

**HOLE SX84-04 @ 77E, 1S, -40° at 20 Az for 518 ft.**

This hole was drilled to test the highly altered felsic volcanics, a mafic/felsic contact, and an electromagnetic cross-over anomaly.

The hole collared in altered rhyolitic tuff that grades to a dacitic tuff down the hole. The dacite appeared re-worked [laharic] and contained graphite near its top [EM Conductor]. The felsics are overlain by massive and variolitic basalt that carries minor pyrite and chalcopyrite. A few basaltic komatiites with considerable talc development [after olivine] interfinger with the variolitic lavas. The hole bottomed in pillowed and variolitic basalts. The altered felsics, graphitic beds, sulphide-rich basalts, and the several small quartz veinlets are scheduled to be cut and assayed early in 1985.

**HOLE SX84-05 @ 48E, 1S, -45° at 180 Az for 450 ft.**

This hole was drilled to test several quartz veins in rhyolite and the graphitic interflow material [EM anomaly] reported to contain gold [Clodan].

This hole collared in felsic volcanoclastics with interfingering mafic lavas and breccias. The 2 ft thick graphite horizon [Conductor] was intersected at 245 ft and occurs at the top of a thick pile of flow-banded rhyolite and rhyodacite breccia. Several quartz veins and a few shears were also intersected. All the veins, altered felsics and graphite zones will be cut and assayed for gold.

## CONCLUSIONS AND RECOMMENDATIONS - SALVE LAKE GROUP

Preliminary exploration work over part of Maude Lake Gold Mines' SALVE LAKE GROUP of claims consisted of geological mapping and prospecting, magnetometer, radiometric, and two electromagnetic surveys. In addition, two exploration boreholes were drilled. The work has located specific geological and geophysical targets that warrant follow-up exploration.

The graphitic interflow horizons are reported to contain gold mineralization and could represent ideal loci for stratabound gold mineralization along strike. Core already drilled must be assayed for gold. Follow-up drilling may be necessary. The quartz veins in mafic lavas, and the large carb-sericite alteration zone in rhyolite with cross-cutting structures and quartz veins that were found in outcrop and in drill cores should be detail sampled. Trenching and additional drilling may be needed to test these targets. Most importantly, the Pipestone Fault is interpreted to cross the GROUP. Cross-cutting structures in the mafic lavas associated with the Pipestone may carry stockwork gold mineralization as is found in Maude Lake's 5 ZONE DEPOSIT to the northwest. Also, stratabound gold mineralization could be associated with interflow beds along this horizon. Reverse circulation basal till sampling south of the Break may locate new gold targets for diamond drilling.

Angular clasts of massive pyrite were seen in outcrop within the felsic pyroclastics ["Mill Rock"] south and east of Salve Lake. This suggests that massive sulphides were exhaling at the same time as the felsic volcanism. Perhaps a base metal deposit lies nearby. This type of target must certainly be considered in all future exploration.

## *BENNETT - BEATTY GROUP*

### INTRODUCTION

The BENNETT-BEATTY GROUP consists of 52 contiguous staked mining claims located in south-central Beatty Township, approximately 6 miles east of the Town of Matheson. The GROUP is accessed by Highway 101 east from



Matheson for 5 miles and then north along a gravel Township road to the southwestern boundary. A general Claim and Location Map is provided overleaf, Figure 4.

#### HISTORY - BENNETT-BEATTY GROUP

Previous exploration work was done on the claim GROUP by Stewart-Abate Mines, Amax Limited, and Hollinger Mines. From 1913 to 1919, the very southeastern part of the group was staked by Mr. Abate, prospected, trenched, and pitted. Two shafts were sunk to test outcropping quartz veins: the first was 104 feet deep in a diorite sill and lies approximately .3 miles east of the claim group (now held by Canadian Johns-Manville Co.); the other is 25 feet deep in sediments on present claim L.700896. From 1934 to 1937, Stewart-Abate Mines completed surface diamond drilling and sampling which led to deepening of the shaft (SE shaft) to 122 feet and 210 ft of lateral development. Results of that work outlined a 180 ft by 4 ft wide section of the vein that graded 0.31 troy oz/ton Gold. In 1958, Stewart-Abate drilled 6 short diamond drill holes in claims L.700903 and 700904 that intersected diabase and altered sediments. No assays are available.

In 1964, Hollinger Gold Mines completed geological mapping, magnetometer and electromagnetic surveys over most of the group. Two diamond drill holes were drilled to test Mark III electromagnetic anomalies. The results outlined a peridotitic body along the volcanic-sediment contact (L.700910) and an altered and brecciated section of sediments south of the olivine diabase (L.700903). No significant gold or base metal assays were returned. Seven additional boreholes were recommended (mostly along the volc-sed. contact) but not drilled.

From 1979 to 1981, Amax Minerals (now Canamax Ltd) reconnaissance mapped most of the claim group and completed partial airborne magnetic and electromagnetic surveys. Follow-up exploration was recommended but not done.

No other work is on record in the assessment files for the Bennett-Beatty claim group, although several old pits and trenches were seen and noted during the course of the exploration work.



## EXPLORATION WORK - BENNETT-BEATTY GROUP

### GRIDDING

A grid of picket lines totalling 42.75 miles and 4.80 miles of baseline was cut over the claims between July 23 and October 24, 1984 by Maude Lake personnel. The two baselines strike due east-west; the 0+00 Baseline follows the boundary between concessions II and III, and the 52+80 S Baseline follows the boundary between concessions I and II. Picket lines are perpendicular to the baselines and spaced at 400 ft intervals. Pickets were chained and set every 100 feet along all the cut lines.

Base Stations were established at Line 16+00 East on the 0+00 Baseline and at Line 16+00 East on the 52+80 South Baseline for geophysical survey tie-in purposes.

### GEOLOGICAL SURVEY

Geological and topographical mapping of the claims was completed during September and October, 1984 by N. Bussolaro and assisted by K. Lacey and J. Smyth. The grid lines were used for control but in outcrop areas, many pace and compass traverses were made in-between to ensure every outcrop was mapped. A representative suite of rock specimens was collected from the bedrock exposures and closely examined with the aid of a binocular microscope.

The general geology of the Beatty Township area is described by J. Satterly and H.S. Armstrong in ODM Volume LVI, Part VII, 1947 - Geology of Beatty Township. Immature Precambrian sedimentary rocks underly a mafic and felsic volcanic pile. Both units face north and the contact is interpreted to be marked by a major strike fault. Four types of intrusive rocks occur in the area and include, from oldest to youngest, mafic to ultramafic sill-like and irregular masses, quartz and/or feldspar porphyry dykes and plugs, Matachewan-type quartz diabase dykes, and Keweenawan olivine diabase dykes.

Known gold mineralization in the immediate area occurs as simple cross-cutting quartz veins and fracture-fills within the sediments, mafic volcanics, and a diorite sill; as quartzose stockworks within the mafic volcanics; as

disseminated auriferous pyrite/pyrrhotite within variolitic lavas; and, as disseminated gold in association with molybdenite within altered porphyry plugs.

Bedrock exposures are limited to the eastern half of the claim group and represent approximately 10 percent of the total surface area. Many of the smaller sedimentary rock outcrops were low-lying and covered by moss. The volcanic and diabase outcrops were generally well-exposed.

The Geological Plan, Map #BB-001 (accompanying this report) illustrates all these bedrock exposures, the overburden conditions, trails, past drill collar locations, and the interpreted geology.

#### Unit 1 - Sediments

Precambrian sediments underly the southern 3/4's of the Bennett-Beatty Group and are believed to represent the oldest formations in the area. They consist of medium grained, granular greywacke and lesser quartzite with interbeds of fine grained arkosic greywacke and argillite. The sediments are well-bedded and range in thickness from less than 1 inch to more than a foot. A few rounded granite and basaltic pebbles were seen within the greywacke in claim L.700900. The sediments strike at 100 to 130 degrees and have variable dips. In the southern areas, the sediments dip steeply south; in the northern areas, the sediments generally dip steeply north.

The greywacke is typically grey to greenish-grey in colour, medium to coarse grained and shows some graded bedding (tops are to the north in claim L.700898). The quartzite is grey in colour, medium grained and contains abundant rounded to semi-rounded quartz grains. The arkosic greywacke is usually fine grained, grey in colour, and well bedded. The argillite is very fine grained, dark grey to black in colour, and only forms a small portion of the sedimentary pile. Disseminated and 'bleby' pyrite is ubiquitous in the sediments and can represent up to 5% of the total rock volume (Sample B-8). Numerous white to grey quartz with lesser carbonate veins cut the sediments. Most veins strike northeasterly and likely represents products of diagenism (ie: quartz "sweats"). At the old Shaft in L.700896, a large but irregular quartz vein strikes 70 to 80 degrees for more than 100 feet, dips steeply north, and cuts weakly altered greywacke. A grab sample of this vein material assayed 0.018 troy oz/ton Gold. Several other small patches of lighter coloured, carbonate-altered sediments were also seen to be associated with small quartz veins and/or porphyry dyklets (L.700909 & L.714760).

### Unit 2 - Mafic Volcanics

Basaltic lavas are exposed in the northeastern portion of the claim group. They are typically fine to locally medium grained, green to grey-green in colour, usually quite massive and unaltered, and are thought to have an iron-tholeiitic affinity. The mafic volcanics occur as massive featureless flows, as well pillowed units, and as distinct variolitic lavas. The pillowed lavas show a marked east-west elongation with pillow configuration suggesting stratigraphic tops are to the north. Pillows usually contain amygdules, minor disseminated pyrite, and occasionally black chert 'sweats'. Pillow rindes are very fine grained, dark grey in colour and weather a light-grey colour. Interpillow material is often hyaloclastite-rich, quite chloritic, and contains abundant pyrite (up to 10% locally).

Variolitic basalt was found in L.714761. It occurs in irregular zones and patches. These flows are fine grained, dark green with rounded lighter varioles ranging from pinhead size to more than 1 inch in diameter. The variolitic lavas carry abundant disseminated pyrite and pyrrhotite, locally to 6 percent. To the east on the Pat Gold Property, similar lavas carry up to 0.25 troy oz/ton gold (personal communication, L. Cunningham). The mineralized areas occur as irregular patches and are not recognizable from other areas within the variolitic flows. A detailed, systematic channel sampling program may uncover significant gold mineralization in the variolitic lavas.

Several northerly striking quartz veins were mapped in the mafic volcanics. They are mostly simple fracture fillings, contain only occasional specks of pyrite, and show very little wall-rock alteration. Old pits have been blasted on many of the exposed quartz veins.

### Unit 3 - Felsic Volcanics

A narrow east to east-northeast striking band of rhyolite was mapped in claim L.714765 in the very northernmost part of the group. It is aphanitic to very fine grained, light grey in colour, and very siliceous. Although mapped as a felsic volcanic, this unit may simply be an aplite dyke (?).

### Unit 4 - Ultramafics

A narrow ultramafic body is interpreted to occupy part of the strike fault between the sediments and mafic volcanics. The old Hollinger borehole in claim L.700907 intersected 325 feet of "serpentinized peridotite and talc-serpentine schist". Nowhere does the ultramafic unit outcrop, but similar rocks are described along the same contact in Wilkie and Carr Townships to

the northwest. Faulted contacts between volcanics and sediments that have been invaded by ultramafics are often good locii for gold mineralization. Hollinger geologists recommended in 1965 that 6 more boreholes be drilled along this contact at 1200 ft centers. The newer technique of reverse circulation basal till sampling may more effectively test the target.

#### Unit 5 - Porphyry

A narrow feldspar porphyry body (Algomian-aged?) is interpreted to occupy the northern contact zone along the strike fault in claim L.714761. The unit does not outcrop, but it is reported in an old borehole shown on Satterly's map (ODM Map 1947-2). On the same map, quartz porphyry is shown outcropping on the patented claims to the east. A large feldspar porphyry plug is interpreted to underly the central portion of the claim group (L.714783 and L.700902) in an area of low magnetic susceptibility. A somewhat similar magnetic low to the east on Johns-Manville ground contains areas of altered and quartzose porphyry with disseminated molybdenite and pyrite that carry low but significant gold values. Evaluation of this potential target area by reverse circulation basal till sampling techniques could uncover important new gold mineralization.

#### Unit 6 - Diorite

A north-west striking diorite sill traverses the southern half of the claim group. It outcrops in L.700900, has high magnetic susceptibility, is medium to coarse grained, massive, and has a mottled appearance. In the same sill to the east on the old Stewart-Abate Property, a northeast striking quartz-carbonate vein contains very high-grade gold shoots. Although small, these types of deposits can prove very profitable for a small mining company. A few exposed quartz veins within the diorite must be detail sampled. The sill has approximately two miles of strike extension under the Bennett-Beatty Group and could be an important target area. However, due to the nature and size of this type of mineralization, locating these targets may only be possible as a spin-off from other exploration work.

#### Unit 7 - Diabase

At least three north-striking Matachewan-type quartz diabase dykes cut the volcano-sedimentary pile underlying the claims. Three large outcrop areas of diabase are exposed in the southern part of the group. The dykes grade from very fine grained chill margins to very coarse grained central cores and can be over 300 feet wide. They consist of feldspar, chlorite (after amphibole), quartz (2 to 20 percent), magnetite, and very minor pyrite.

Some of the feldspars form large 'clots' or patches that can approach 2 inches in diameter. The diabases have strong magnetic susceptibility and are easily traced by the magnetometer survey results. The diabases weather a distinct rust colour, and are very massive with widespaced joint sets.

#### Unit 8 - Olivine Diabase

Two Keweenawan olivine-bearing diabase dykes cut the southern part of the claim group. These dykes are highly weathered, very coarse grained, dark grey to black in colour, and soft to almost crumbly. They consist of feldspar, amphibole (after pyroxene), magnetite, and olivine. These dykes are very highly magnetitic and often mask the magnetic patterns of the surrounding country rock.

#### MAGNETOMETER SURVEY

A magnetometer survey was completed over the claims by K. Lacey and W. Fuller during October 1984 using a Sharpe Instruments MF-1 Fluxgate Magnetometer. Readings were taken every 100 feet along all the cut lines for a total of 2445. Daily magnetic readings were tied to the base stations and corrected for diurnal drift. In addition, secondary base stations along the baselines at crossline intersections were re-read as each loop was completed. All the readings were adjusted to correspond to those magnetic results on the adjoining Maude Lake claim groups.

The results of the magnetometer survey are plotted on Map BB-002 that accompanies this report. Diurnal variations were a maximum of 120 gammas for any given day and 250 gammas for the entire survey.

The range of magnetic susceptibilities for the claim group fall between 500 and 5900 gammas with the average background being 850 gammas. The sharp, east-northeast striking magnetic high anomaly in the southern portion of the group falls directly over bedrock exposures of olivine diabase in claim L.700895. A similar, but weaker trend in claims L.700904 and L.700897 fall over the narrow olivine diabase dyke.

Two parallel magnetic high anomalies striking north-south along lines 60E to 68E and 76E to 80E correspond to the two large Matachewan diabase dykes exposed in the southern part of the group.

The west-northwest magnetic anomaly in claims L.714788, L.714785, and L.700897 is interpreted to be caused by the diorite dyke that outcrops but is magnetically masked (by diabase) in L.700900. Another west-northwest striking magnetic anomaly in claims L.700907 and L.714761 may reflect the ultramafic sill along the volcanic-sediment contact.

A weak magnetic low in claims L.714783 and L.700902 is interpreted to be caused by a porphyry plug. Similar magnetic susceptibilities occur over an exposed feldspar porphyry to the east of the claim group. The flat magnetic features in the western portions of the group may reflect more the depth of overburden than the underlying geology. A vertical sonic overburden hole drilled by the OGS in November 1984 at 15+00E, 55+00S reached 156 feet before hitting bedrock (OGS Map P.2736, Hole 84-10).

#### ELECTROMAGNETIC SURVEYS

Two VLF-Electromagnetic surveys were completed over the claims during November and December 1984 by N. Bussolaro and W. Fuller. The Phoenix VLF-2 EM Unit was used and readings were taken every 100 feet along all the grid lines. At each station, the dip angle, phase angle, and field strength were measured. The first station (F1) used was that at Cutler, Maine (24.0 KHz) to test for easterly striking structures and/ or conductive zones. The Cutler station was usually read on Tuesday, Wednesday, and Thursday. The second station (F2) used was that at Annapolis, Maryland (21.8 KHz) to test for northerly striking structures and/ or conductive zones. The Annapolis station was usually read on Friday, Saturday, and Monday. The claims were traversed separately for each survey. All the dip angles are plotted at 1"- 40 degrees. The field strength readings were tied into the base stations on a daily basis.

The results of the two electromagnetic surveys are plotted on:

for F1 - Map #BB-003 - Cutler, Maine [24.0 KHz]

for F2 - Map #BB-004 - Annapolis, Maryland [21.8 KHz]

that accompany this report. For each survey, 2292 stations were read.

The cross-over anomalies have been categorized into two groups; those having high field strengths, and those with low field strengths. As a general



rule of thumb for interpreting VLF-EM data, high field strength cross-over anomalies usually reflect bedrock features whereas low field strength cross-over anomalies typically are caused by overburden contrasts. Both surveys failed to detect any anomalies in the western third of the claim group. This may reflect more the depth of overburden than the underlying bedrock conditions.

#### Map #BB-003

For the F1 survey, several strong VLF-EM anomalies were found. Most trend west-northwest parallel to the stratigraphy and likely reflect bedrock features. All the significant anomalies and their probable causes are tabulated below.

**TABLE 6. F1 - VLF-EM SURVEY RESULTS [24.0 KHZ] BENNETT-BRATTY GROUP**

<b>ANOMALY NUMBER</b>	<b>PROBABLE CAUSE</b>
Q	Contact shear, graphite horizon, or sulphide-rich flow top in mafic volcanics
R	Contact shear or conductive flow top in mafic volcanics
S	Strike fault between sediments and volcanics; sheared ultramafic body and/ or contact effects
T	Likely overburden contrast between clay and swamp
U	Contact effects of olivine diabase
V	Strike shear or sulphide/graphite horizon in sediments
W	Cross-cutting structure parallel to the olivine diabase dykes.

The anomaly in L.700906 falls in the center of a spruce swamp and likely is caused by overburden effects. Most of the remaining cross-overs are single-line anomalies near the diabase dykes and are likely caused by contact contrasts.

#### Map #BB-004

For the F2 station, only a few cross-over anomalies were found and most of these compared well with the results from the F1 survey. Anomaly Q1 corresponds with Anomaly Q and is likely due to a strike-shear or conductive horizon. Anomaly S1 falls directly along the contact fault/ultramafic horizon. Anomaly U1 is due to contrasts along the olivine diabase contact, and

Anomaly V1 is due to a shear or graphite/sulphide horizon in the sediments. The anomalies in L.700898 occur in a scattered outcrop area and are likely caused by overburden - bedrock contrasts. The remaining cross-overs are interpreted to be caused by diabase dyke contact-contrasts and/or overburden effects.

#### **RADIOMETRIC SURVEY**

A radiometric survey was completed over the claim group during November and December 1984 to assist the geological interpretation and test for potassium-rich felsic intrusions and/or alteration zones that can be associated with gold mineralization events. A McPhar TV-1A Radiation Spectrometer was used and total field readings were taken every 100 feet along all the grid lines. In all, 2292 readings were taken. All the readings were tied into the base stations and corrected for diurnal drift using the time-linear method. The general topography and outcrop areas were also charted.

The total field readings ranged from 1 to 17 counts per minute for the survey area. These can be grouped into distinct populations based on rock types and overburden conditions. For the outcrop areas, three range groups correspond closely to the geology. Readings over basalt outcrops had a very narrow range between 3 and 5 cpm. One exception of 12 cpm at 132E, 23N falls directly over the small rhyolitic unit within the mafic lavas. Another high reading (10 cpm) at 108E, 13N cannot be explained and should be further investigated. Readings over diabase outcrops ran 6 or 7 counts per minute. The sedimentary rocks showed the largest value range of 6 to 13 counts per minute with an average of 9. This reflects the varying compositions of the sediments and their respective feldspar quantities. No significant potassium enrichment zones were found in the sedimentary rock outcrop areas.

For the overburden areas, the lowest readings of 1 to 4 cpm always fall in low, wet areas such as alder, willow and/or spruce swamp. Open fields and poplar bush areas had readings between 6 and 17 counts per minute (average of 12 cpm). These areas have thick lacustrine clay overburden and the high readings are due to the high potassium concentrations in the clays.

**CONCLUSIONS AND RECOMMENDATIONS - BENNETT-BEATTY GROUP**

Preliminary exploration work over Maude Lake Gold Mines' BENNETT-BEATTY GROUP of claims consisted of geological mapping, magnetometer, two electromagnetic, and radiometric surveys. The work has defined specific geological and geophysical targets that merit follow-up.

The claim group is underlain by a west-northwest striking, steeply dipping pile of Precambrian metasediments overlain by mafic volcanics. The contact between the two is marked by a strike fault that has been invaded by an ultramafic body and felsic porphyry. Another west-northwest structure in the sediments is occupied by a dioritic sill known to contain a high grade gold vein just east of group. At least two ages of diabase dykes cut the sequence; north striking Matachewan quartz diabase and northeast striking Keweenawan olivine diabase. An Algoman-type felsic porphyry plug is interpreted to intrude the sediments.

Potential gold targets located and/or suspected from the results of the exploration work include:

For the Sediments - auriferous cross-cutting quartz veins as seen in the shaft area; gold-bearing sulphide-rich horizons within the sedimentary pile (Anomalies T and V); auriferous stockwork and/or metasomatic zones associated with the strike fault and ultramafic body.

For the Volcanics - high grade cross-cutting gold-quartz veins; gold-quartz stockworks associated with structural zones; auriferous sulphide-rich interflow horizons (anomalies Q, R, S); gold-bearing, sulphide-rich variolitic basalts.

For the Diorite - high grade gold-quartz veins.

For the Felsic Plug - disseminated gold-moly alteration zones.

Exposed target areas warrant more detailed prospecting and sampling. Follow-up exploration recommended for the buried targets is basal till sampling using a reverse circulation drill.

**CONCLUSIONS AND RECOMMENDATIONS - PART B**

Preliminary exploration was completed over a large portion of Maude Lake Gold Mines' OUTSIDE PROPERTIES which include the WILKIE-CARR, the SALVE LAKE, and the BENNETT-BEATTY GROUPS. Geological mapping and prospecting was done over 147 claims, and gridding, magnetometer, radiometric, and two electromagnetic surveys were completed over 132 claims. Two boreholes totalling 938 ft were also drilled. The work has not only better defined the geological understanding for the areas, but also has outlined specific geological and geophysical targets that warrant follow-up exploration.

**FOR THE WILKIE-CARR GROUP**

- Two electromagnetic anomalies along the Pipestone Fault and another along the volcanic-sediment contact may be caused by sulphide mineralization or shearing which could carry gold mineralization. Diamond drilling is recommended.
- A co-incident EM anomaly and highly carbonatized/sericitized area of sediments with known gold mineralization south of the Pipestone merits drill testing.
- Light-coloured alteration phases within and near the northern contact of the granite carry disseminated pyrite, arsenopyrite, and gold. Drill testing is recommended for this target as well.
- Several other targets within the Wilkie-Carr Group could best be tested by reverse-circulation basal till sampling. These include:
  - . Stratabound gold mineralization and/or base metals associated with a thick, previously uncharted felsic volcanic and graphite horizon
  - . Secondary structures within the volcanics and sediments
  - . The extension of the Pipestone Fault that is interpreted to be off-set to the north onto Maude Lake claims
  - . Mineralized porphyries and stockwork structures near the Pipestone.

**FOR THE SALVE LAKE GROUP**

- Graphitic interflow beds marked by EM anomalies are reported to contain gold mineralization. Drill testing and sampling are recommended.
- A large exposed area of highly altered felsic volcanics must be detail sampled and prospected.
- Angular sulphide clasts in the felsic volcanics south of Salve Lake indicate that massive sulphides were exhaling during volcanism. This environment can host base metal deposits. More detailed geological mapping and EM work is recommended as the next step.
- Most important, the Pipestone Fault is interpreted to cross the property through Salve Lake and in areas of deep overburden. Reverse-circulation basal till sampling would best evaluate potential targets along this Break. Diamond drilling follow-up may also be needed.

**FOR THE BENNETT-BEATTY GROUP**

- Several potential gold-bearing targets were located in outcrop during the preliminary exploration and include:
  - . Quartz structures in altered volcanics and sediments that carry low gold assays
  - . Variolitic flows with disseminated sulphides and gold
  - . Quartz veins in diorite that carries high grade gold just east of the claims
  - . Mineralized porphyries associated with structureMore detailed mapping and sampling could locate significant gold mineralization.
- A major strike fault along the volcanic-sediment contact has high potential for hosting associated gold mineralization. Since the contact is buried, basal till sampling is recommended.
- A broad magnetic low in the center of the Group is interpreted to represent a feldspar porphyry plug. Similar magnetic patterns east of the Group occur over an exposed porphyry that carries disseminated molybdenite

and gold mineralization. Reverse circulation basal till sampling is recommended to test this target and the remainder of the property that is covered by thick overburden.

**PROPOSED BUDGET for 1985**

The 1985 Program will follow-up on targets located and described in the foregoing. Preliminary exploration for the newly-acquired claims is also budgeted.

Preliminary Exploration	45,000.00
Detailed Geological Mapping	12,000.00
Geophysical Surveys	15,000.00
Reverse Circulation Basal Till Sampling	60,000.00
Diamond Drilling 8200 ft @ 20	164,000.00
Assays, Core Cutting	16,500.00
Supervision, Reports, Rentals, Accomodation, etc	<u>37,500.00</u>
TOTAL	= \$ 350,000.00

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Waisberg, S. PEng

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## CERTIFICATE OF QUALIFICATIONS

I, Robert A. Bennett do hereby certify that:

1. - I reside at 577 Pearson Street, Sudbury, Ontario, P3E 4M9
2. - I am a Registered Professional Engineer of the Province of Ontario, and a member in good standing of the Canadian Institute of Mining and Metallurgy, and the Prospector's and Developers Association.
3. - I am a graduate of the Haileybury School of Mines two year Mining Technology course [1967]; and I hold a Bachelor of Science Degree in Geological Engineering [1970], and a Masters of Science Degree in Geology [1971] from Michigan Technological University.
4. - I have been continuously engaged in my profession since graduation.
5. - The foregoing report entitled " 1984 REPORT ON EXPLORATION " for Maude Lake Gold Mines Limited dated February 12, 1984 is based on:
  - a) My knowledge of the Property through direct supervision of all the operations described herein,
  - b) Published government reports and maps, and unpublished Private Company Reports by myself and other professionals as listed in the references,
  - c) My personal knowledge of the Abitibi Greenstone Belt from 14 years of continuous geological work throughout the Area.
6. - I am a director and shareholder in the private company MAUDE LAKE GOLD MINES LIMITED.



Dated this 12th Day of  
February in the Year  
1985 at Sudbury, Ontario.

Robert A. Bennett, PEng.  
Consulting Geological Engineer



MAUDE LAKE GOLD MINES LIMITED

**1984 REPORT ON EXPLORATION**

**APPENDIX**

( OM84 - 6 - P -70 )

APPENDIX 1. - 1984 BOREHOLE LOGS

APPENDIX 2. - ASSAY CERTIFICATES

APPENDIX 3. - LAKEFIELD METALLURGICAL TESTING REPORT

APPENDIX 4. - IP/ RESISTIVITY REPORT by JVX LIMITED

FEBRUARY 12, 1984

## MAUDE LAKE GOLD MINES LIMITED

## 1984 BOREHOLE SUMMARY

84-1

HOLE # 84-1 CO-OR 10+00E, 12+20S DIP 45 N LENGTH 420 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-52.5	casing					DIP TESTS
52.5-118	basalt					•53' - 45
118-132	basalt-B					•300-44
132-136	B	70	50601	tr		•420-44
136-137.2	B		50602	tr		
137.2-140	G1		50603	tr		ELEV-918.0
140-143	G1-B		50604	tr		
143-146.3	G1-B		50605	tr		July 17-21/84
146.3-151.3	B		50606	tr		
151.3-156.6	B		50607	tr		
156.6-159.8	G1-B		50608	tr		
159.8-164.5	Porphyry	50	50609	tr		
164.5-174.5	Porphyry					
174.5-176.8	Porphyry	70	50610	tr		
176.8-181	B		50611	tr		
181-186	B		50612	tr		
186-191	B	30	50613	tr		
191-196.3	B-G1		50614	0.010		
196.3-197	Vein		50615	0.028		
197-199.5	G2		50616	0.150		
199.5-204	G2		50617	0.262		.378 or .27 .10 opt Ag
204-208.5	G2		50618	0.265		15' 21'
208.5-212	G2-VG	75	50619	0.836		.35 opt Ag
212-216	B		50620	0.006		.49 opt Ag
216-221	B		50621	tr		
221-226.5	B		50622	0.008		
226.5-230.4	B+5Veins	30	50623	0.078		
230.4-235	B		50624	tr		
235-240	B		50625	tr		
240-245	B		50626	0.004		
245-250	B		50627	tr		
250-255	B		50628	tr		
255-260	B		50629	tr		
260-265	B		50630	tr		
265-270	B		50631	0.016		
270-273	B		50632	0.020		
273-276.2	B	70	50633	0.016		
276.2-276.7	Vein		50634	0.090		
276.7-279	B		50635	tr		
279-283.8	G1-G2		50636	0.032		
283.8-287.7	B		50637	0.004		

BOREHOLE 84-1 ..continued page2.

287.7-292	B		50638	tr		
292-297	B		50639	0.002		
297-302	B		50640	0.004		
302-307	B		50641	0.008		
307-312	B		50642	0.032	.089	.12 opt Ag
312-316	B		50643	0.161		
316-321	B		50644	0.002		
321-326	B		50645	0.002		
326-331	B		50646	0.002		
331-336	B		50647	tr		
336-339	G1-B		50648	0.002	.315	.20 opt Ag
339-344	G1-Vein		50649	0.620		
344-346	G1-B		50650	0.020	10'	
346-351	B		50651	tr		
351-356	B		50652	tr		
356-360	B	65	50653	0.050		
360-364	B		50654	0.004		
364-367	B		50655	0.008		
367-370	Py	55	50656	0.018		
369.6-420	Pd	27				

420 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-2

HOLE # 84-2 CO-OR 9+00E, 12+30S DIP 45 N LENGTH 452 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-54	casing					DIP TESTS
69-97	Basalt					e54 -47
97-122	Basalt					e204-45
122-124	B					e300-44
124-129	B		50657	tr		e400-43
129-134	B		50658	tr		ELEV-914.8
134-139	B		50659	tr		
139-143.4	B		50660	tr		July 21-25/84
143.4-150	B	75	50661	tr		
150-156	Porphyry		50662	tr		
156-162	Porphyry		50663	0.002		
162-166.6	Porphyry	40	50664	tr		
166.6-173	B		50665	tr		
173-177	B		50666	tr		
177-183	B		50667	tr		
183-188	B		50668	tr		
188-193	B		50669	tr		
193-198	B		50670	tr		
198-203	B		50671	tr		
203-208	B		50672	0.002		
208-211	G1-B		50673	0.004		
211-214	G1		50674	0.006		
214-217	G2		50675	0.006		
217-220	G2	75	50676	0.060	.10	
220-222	G2-Vn	70	50677	0.219	8'	.13 opt Ag
222-225	G2-Vn	60	50678	0.060		
225-228	G2		50679	0.018	.072	
228-232	G2		50680	0.036	23'	
232-235	G2-Vn	76	50681	0.109		.08 opt Ag
235-240	B		50682	0.066		
240-245	B		50683	0.004		
245-250	B		50684	tr		
250-255	B		50685	0.002		
255-260	B		50686	tr		
260-265	B		50687	tr		
265-270	B	35	50688	tr		
270-275	B		50689	tr		
275-280	B		50690	tr		

BOREHOLE 84-2 ..continued page2.

280-285	B		50691	tr		
285-287	G1	55	50692	0.002		
287-292	B		50693	tr		
292-297	B		50694	tr		
297-302	B		50695	tr		
302-307	B		50696	0.002		
307-311	B		50697	0.002		
311-313.5	B-G1		50698	0.022		
313.5-317	B-G1		50699	0.040		
317-320	G2-Vn VG		50700	0.329	.173	.27 opt Ag
320-325	B		50701	0.004	6.5'	
325-330	B		50702	0.002		
330-336	B		50703	0.002		
336-337	Sand-Mud seam					
337-342	B		50704	tr		
342-347	B		50705	0.036		
347-352	B		50706	0.012		
352-358	B		50707	0.010		
358-362.4	G2	50	50708	0.064		— Arsenopyrite
362.4-365	B		50709	0.004		
365-368.6	B		50710	tr		
368.6-371	B-Vein	60	50711	0.030		
371-376	B		50712	0.002		
376-381	B		50713	tr		
381-386	B		50714	tr		
386-391	B		50715	tr		
391-396	B		50716	0.004		
396-401	B		50717	0.002		
401-406	B		50718	0.006		
406-411	B		50719	0.034		
411-415	B		50720	0.002		
415-419	B-Vein	50	50721	0.129	—	.10 opt Ag
419-424	Basalt		50722	0.010		
424-429	Basalt		50723	tr		
429-434	Basalt-Veinlet		50724	0.062		
434-445	Basalt	28				
445-446.2	Diabase Dyklet	60				
446.2-452	Basalt					

452 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-3

HOLE # 84-3 CO-OR 10+00E, 13+00S DIP 45 N LENGTH 540 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-58	casing					DIP TESTS
58-170	Basalt					@ 55 -45
170-176	B		50725	tr		@100 -45
176-181	B		50726	tr		@200 -44
181-186	B		50727	tr		@300 -43
186-191	B+vein	75	50728	0.002		@400 -42
191-196	B		50729	tr		@500 -42
196-200	B		50730	tr		
200-201	Porphyry	40	50731	tr		ELEV-917.7
201-206	B		50732	0.002		
206-210	B		50733	0.002		July 25-28/84
210-214	B+Vein		50735	0.014		sph
217-221	B		50736	tr		
221-224	B		50737	0.024		
224-229	B		50738	0.002		
229-234	B		50739	tr		
234-239	B		50740	tr		
239-244	B		50741	tr		
244-249	B		50742	tr		
249-252.6	B	70	50743	0.002		
252.6-259	Porphyry	75	50744	tr		
259-264	B		50745	0.002		
264-269	B		50746	tr		
269-274	B		50747	tr		
274-279	B		50748	tr		
279-284	B		50749	0.002		
284-289	B		50750	tr		
289-294	B		50751	tr		
294-298	B		50752	tr		
298-301	G1		50753	0.026		
301-304	G1		50754	0.111		.06 opt Ag
304-308	G1		50755	0.040		
308-311.5	G2-Vein		50756	0.317	<u>.234</u>	.39 opt Ag sph.
311.5-316	G1		50757	0.068	20'	
316-321	G2-Vein		50758	0.555		.08 opt Ag
321-326	B+vnltts		50759	0.010		
326-331	Basalt		50760	0.002		
331-335	Basalt		50761	tr		
335-387	Basalt					

BOREHOLE 84-3 ..continued page2.

387-389	Bslt+30% qv	35	50762	0.196	.12 opt Ag
389-394	Basalt		50763	0.020	
394-398.5	Basalt		50764	0.004	
398.5-399.5	Vein	45	50765	0.028	
399.5-405	Basalt		50766	0.002	
405-410	Basalt		50767	0.004	
410-412	Vein-Bx	45	50768	0.062	
412-463	Basalt				
463-465	Vein	45	50769	0.130	.06 opt Ag Sph, po
465-497	Basalt				
497-502	Basalt		50770	0.006	
502-540	Basalt				

540 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-4

HOLE # 84-4 CO-OR 10+00E, 13+00S DIP 62N LENGTH 604 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-46	casing					DIP TESTS
46-172	Basalt					e46 -62
172-177	B					e100 -62
177-182	B		50771	tr		e200 -62
182-186	B-Bx	70	50772	0.002		e300 -62
186-190.5	B		50773	tr		e400 -61
190.5-195	B		50774	0.002		e600 -60
195-200	B		50775	tr		
200-206	B		50776	tr		ELEV-917.7
206-211	B	25	50777	0.002		
211-217	B		50778	tr		July29-Aug.1/84
217-223	B		50779	tr		
223-228	B	70	50780	tr		
228-230	Porphyry		50781	tr		
230-236	Porphyry		50782	tr		
236-241	Porphyry		50783	tr		
241-246	B		50784	0.006		
246-251	B-Vein	58	50785	tr		
251-257	B		50786	tr		
257-262	B		50787	tr		
262-267	B		50788	tr		
267-276	B					
276-306	Basalt					
306-311	Basalt		50789	tr		
311-314.5	B	50	50790	tr		
314.5-320	Porphyry		50791	tr		
320-325	Porphyry		50792	tr		
325-351	Porphyry	50				
351-413	Basalt					
413-417.1	B		50793	0.006		
417.1-423	Basalt		50794	tr		
423-428	Basalt		50795	tr		
428-433	B		50796	0.076		
433-438	G2-Veins	50	50797	0.989		
438-443	G1		50798	0.121		
443-448	G1		50799	0.167		
448-453	G1		50800	0.050		
453-458	G1-B		50801	0.088		
458-463	B		50802	0.002		
463-468	Basalt		50803	0.002		

.249  
30



BOREHOLE 84-4 ..continued page2.

468-473	Basalt	50804	tr
473-478	Basalt	50805	tr
478-483	Basalt	50806	0.008
483-488	Basalt	50807	0.010
488-567	Basalt		
567-570	Basalt	50808	tr
570-578	Basalt	50809	tr
578-581	Basalt	50810	0.002
581-584.5	Lamprophyre 52	50811	tr
584.5-586	Lamprophyre		
586-604	Basalt		

604 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-5

HOLE # 84-5 CO-OR 9+00E, 12+90S DIP 51N LENGTH 374 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-56	casing					DIP TESTS
56-124	Basalt					@66 -50
124-128.5	BsIt-bxtd		50924	tr		@200 -52
128.5-134	BsIt-bxtd		50925	0.004		@374 -51
134-147.5	Basalt					
147.5-153	B		50926	0.002		ELEV-915.7
153-158	B		50927	tr		
158-163	B		50928	tr		
163-168	B		50929	0.008		Aug2-9/84
168-172	B		50930	tr		
172-175	B		50931	0.002		
175-180	B		50932	tr		
180-185	B		50933	tr		
185-190	B		50934	tr		
190-195	Basalt		50935	tr		
195-200	Basalt		50936	tr		
200-214	Basalt					
214-219	B					
219-224	B		50937	tr		
224-229	B		50938	tr		
229-234	Porphyry	32	50939	tr		
234-239	Porphyry		50940	tr		
239-243.6	Porphyry	32	50941	tr		
243.6-249	B		50942	tr		
249-254	B		50943	0.006		
254-258	B		50944	tr		
258-261	B		50945	0.004		
261-263	Vein-sph.	84	50946	tr		
263-268	B		50947	0.006		
268-273	B		50948	tr		
273-278	B		50949	tr		
278-283	B		50950	tr		
283-288	B		50951	tr		
288-293	B		50952	tr		
293-296	B		50953	tr		
296-300	B		50954	0.002		
300-304	G1		50955	0.282	.152 or .116 9' 14'	
304-309	G1		50956	0.048		
309-314	G1		50957	0.022		
314-319.5	G1	54	50958	0.008		
319.5-352	Diabase					
352-354	BsIt Incl					
354-374	Diabase					

374 - FOOT OF HOLE.

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-6

HOLE # 84-6 CO-OR 9+00E, 12+90S DIP 61N LENGTH 411 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-64	casing					DIP TESTS
64-149	Basalt					e60 -62
149-155	Basalt					e200 -62
155-160	B		50959	tr		e400 -61
160-165	B		50960	tr		
165-170	B		50961	tr		
170-175	G1-Vein	75	50962	0.002		ELEV-915.7
175-177	Vein-Bx		50963	tr		
177-182	B		50964	tr		Aug9-12/84
182-187	B		50965	tr		
187-194	B		50966	tr		
194-230.5	Basalt					
230.5-235	B		50967	tr		
235-239	B		50968	tr		
239-245	B		50969	tr		
245-249	B		50970	0.002		
249-254	B	40	50971	tr		
254-258.3	B		50972	tr		
258.3-264	Porphyry		50973	tr		
264-268.5	B Inclusion		50974	0.002		
268.5-314	Porphyry					
314-329	Basalt	18				
329-411	Diabase					Hole entered diabase before intersecting 5 Zone.

411 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-7

HOLE # 84-7 CO-OR 11+00E, 12+20S DIP 50N LENGTH 280 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-40	casing					DIP TESTS
40-109	basalt					⊕42' -50
109-114	B					⊕200'-49
114-119	B		31379	tr		
119-124	B		31380	tr		ELEV-918.9
124-129	B		31381	tr		
129-134	B		31382	tr		Aug12-14/84
134-139	B	76	31383	0.010		
139-141	Porphyry	62	31384	0.008		
141-144	G1		31385	0.062		
144-149	B		31386	0.006		
149-154	B		31387	0.008		
154-159	B		31388	0.006		
159-163	B		31389	0.006		
163-165.5	B		31390	tr		
165.5-170	B		31391	0.002		
170-174	B		31392	tr		
174-179	Basalt	45	31393	tr		
179-185.5	Basalt		31394	tr		
185.5-192	Basalt					
192-203	Porphyry					
203-205	Vein		31395	tr		
205-210	B		31396	tr		
210-215	B		31397	tr		
215-219	B		31398	0.024		
219-223	G2	45	31399	0.034		
223-226	G2-Vns		31400	0.078		<u>.134</u> or <u>.094</u>
226-229	G2-Vn		57001	0.189		6' 10
229-232	Pyrite	37	57002	0.020		5 Zone cut-off
232-236	Peridotite		57003	0.020		by Peridotite.
236-240	Peridotite		58004	tr		
240-280	Peridotite					

280 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-8

HOLE # 84-8 CO-OR 11+00E, 13+00S DIP 51N LENGTH 474 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-50	casing					DIP TESTS
50-172.5	Basalt					e50' -50
172.5-179	B		57043	tr		e200'-48
179-184	B		57044	tr		e400'-47
184-188	B		57045	tr		e474'-48
188-192	B		57046	tr		
192-195	B		57047	0.004		ELEV-918.9
195-198	B		57048	tr		
198-201	B		57049	tr		Aug14-16/84
201-204	B		57050	tr		
204-206.5	G1	45	57051	0.008		
206.5-210	Porphyry		57052	0.014		
210-215	Porphyry		57053	tr		
215-220	Porphyry		57054	tr		
220-225	Porphyry		57055	tr		
225-228.5	Porphyry		57056	tr		
228.5-244	Porphyry	45				
244-245	B					
245-248	B+Vein	70	57057	tr		
248-253	B		57058	0.002		
253-258	B		57059	tr		
258-263	B		57060	tr		
263-268	B		57061	tr		
268-273	B		57062	0.002		
273-278	B		57063	tr		
278-283	B		57064	tr		
283-288	B		57065	0.002		
288-292	B+Vein	60	57066	0.030		
292-298	B		57067	0.002		
298-303	Porphyry	40	57068	tr		
303-309	Porphyry		57069	tr		
309-313	Porphyry		57070	0.084		
313-315	G2		57071	0.218		.251 or .088 13' 51'
315-318	G2		57072	0.573		
318-322	G2		57073	0.190		
322-327	B		57074	0.008		
327-330	B		57075	0.034		
330-334	B		57076	0.006		
334-339	B		57077	0.018		
339-342	B		57078	0.006		

BOREHOLE 84-8 ..continued page2.

342-345	B-Gl		57079	0.020
345-350	Porphyry		57080	0.008
350-353.3	B	30	57081	0.036
353.3-360	Porphyry	50	57082	0.052
360-364	B		57083	0.010
364-369	B-Vein		57084	0.012
369-374	B-Vein		57085	0.084
374-379	B		57086	0.044
379-384	B		57087	0.020
384-389	B		57088	tr
389-392	B-Vein		57089	0.010
392-394	Vein	50	57090	0.044
394-399	B-Vein		57091	0.006
399-404	B-Vein		57092	0.062
404-409	B-Vein		57093	0.022
409-414	B-Vein		57094	0.016
414-419	Lamp	45	57095	0.008
419-421	B-Vein		57096	0.024
421-426	B		57097	0.008
426-432	Basalt		57098	tr
432-436.5	Basalt		57099	0.002
436.5-439	Pyrite	45	57100	0.038
439-444	Pyrite		57101	tr
444-450	Pyrite	20	57102	0.008
450-454	Peridotite		57103	tr
454-459	Peridotite		57104	0.002
459-464	Peridotite		57105	0.002
464-469	Peridotite		57106	0.002
469-474	Peridotite		57107	tr

474 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-9

HOLE # 84-9 CO-OR 11+00E, 13+00S DIP 62N LENGTH 634 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-44	casing					DIP TESTS
44-157	Basalt					e50' -64
157-169	Basalt					e200'-63
169-174	Basalt		57253	tr		e400'-62
174-179	B		57254	tr		e600'-62
179-184	B		57255	tr		
184-189	B		57256	tr		ELEV-918.9
189-193.4	B		57257	tr		
193.4-194	Sand seam					
194.0-197	G1-Vn	55	57258	tr		Aug17-22/84
197-201	G1-Vnlts		57259	tr		
201-206	G1-Vn	60	57260	0.004		
206-210	B		57261	tr		
210-215	B		57262	tr		
215-219	B		57263	tr		
219-224	B-Vns		57264	tr		
224-228	B-Vns		57265	0.010		
228-231	B-Vns		57266	tr		
231-236	G1-Vns	45	57267	0.022		
236-239	G1		57268	0.034		
239-243	G1		57269	0.026		
243-248	B		57270	0.002		
248-253	B		57271	0.020		
253-258	B	20	57272	tr		
258-263	Porphyry		57273	tr		
263-270	Porphyry		57274	0.004		
270-343.2	Porphyry	38				
343.2-373.2	Basalt	28				
373.2-413	Porphyry					
413-414	B					
414-419	B		57275	tr		
419-422	B+Zn		57276	0.030		
422-426	B		57277	tr		
426-430	B		57278	0.042		
430-435	B		57279	tr		
435-440	B		57280	tr		
440-445	B		57281	0.046		
445-450	B		57282	tr		
450-455	B		57283	tr		
455-458	B		57284	tr		

BOREHOLE 84-9 ..continued Page2.

458-461	G1-Vn		57285	0.050	} <u>.141</u> 12'
461-464	G1		57286	0.068	
464-467	G2-Vn	47	57287	0.159	
467-470	G2-Vns		57288	0.286	
470-474	B		57289	tr	
474-479	B-Vn	27	57290	0.022	
479-484	B-Vn	25	57291	tr	
484-489	B		57292	0.010	
489-493	B		57293	0.006	
493-496.3	B		57294	0.034	
496.3-502	Porphyry	25	57295	0.016	
502-531	Porphyry				
531-538	Porphyry		57296	tr	
538-541.3	Porphyry	82	57297	tr	
541.3-546	Basalt		57298	tr	
546-551	Basalt		57299	tr	
551-556	Basalt		57300	tr	
556-561	Basalt		57301	0.002	
561-566	Basalt		57302	tr	
566-571	Basalt		57303	tr	
571-576	Basalt		57304	0.012	
576-581	Basalt		57305	tr	
581-586	Basalt		57306	tr	
586-591	Basalt		57307	0.008	
591-593.3	Baslt-Py		57308	0.034	
593.3-596	B-G1-Vn	30	57309	0.062	
596-599	B-G1		57310	tr	
599-602	B-G1-Vn	35	57311	0.080	} <u>.119</u> 12'
602-605	B-G1		57312	0.016	
605-608	B-G1		57313	0.032	
608-611	B-G1-Vn-Py	40	57314	0.348	
611-613	B-G1		57315	0.022	
613-618	Basalt		57316	0.004	
618-623	Basalt		57317	tr	
623-628	Basalt		57318	tr	
628-634	Basalt		57319	tr	

634 - FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-10

HOLE # 84-10 CO-OR 2+00E, 12+00S DIP 45 N LENGTH 435 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-18	casing					DIP TESTS
18-108	Basalt					e 20 -45
108-110	Basalt-.5'qv		50859	0.046		e200 -45
110-125	Basalt					e400 -44
125-129	Basalt					
129-134	Basalt		50860	tr		
134-139	BsIt-Vein-sph		50861	tr		ELEV-926.8
139-143	Basalt		50862	tr		
143-146	Basalt		50863	tr		July 29-30/84
146-206	Basalt					
206-209	Qtz Vein	50	50864	0.222		sph
209-214	B-silicified		50865	0.004		
214-219	B "		50866	tr		
219-224	B "		50867	tr		
224-229	B "		50868	tr		
229-234	B "		50869	tr		
234-239	B "		50870	0.002		
239-244	B "		50871	0.006		
244-249	B "		50872	0.012		
249-251	B "		50873	0.028	.030	
251-256	B "		50874	0.058	17'	
256-261	B "		50875	0.020		
261-265	B "		50876	tr		
265-270	Basalt		50877	0.020		
270-271	Qtz Vein	45	50878	0.008		sph
271-276	Basalt		50879	tr		
276-281	Basalt		50880	tr		
281-300	Basalt					
300-320	Basalt					
320-325	Basalt		50881	0.002		
325-330	Basalt		50882	tr		
330-335	Basalt		50883	0.046		
335-340	Basalt		50884	0.004		
340-345	BsIt-Veins		50885	0.002		
345-350	Basalt		50886	0.002		
350-354	Basalt		50887	0.002		
354-357.5	BsIt-Vein	40	50888	tr		
357.5-361	BsIt-Vein	35	50889	0.002		
361-365	Basalt		50890	0.004		
365-370	Basalt		50891	0.002		

BOREHOLE 84-10 ..continued page2.

370-375	Basalt		50892	tr	
375-380	Basalt				
380-414.7	Basalt				
414.7-416.7	Qtz Vein	50	50893	0.269	Arsenopyrite
416.7-435	Basalt				

435 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-11

HOLE # 84-11 CO-OR 3+00E, 12+60S DIP 45N LENGTH 59 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
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0-40	casing					ELEV-924.2
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40-59	Diabase					
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July 30-31/84

59 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-12

HOLE # 84-12 CO-OR 6+00E. 11+80S DIP 47N LENGTH 405 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-46	casing					DIP TESTS
46-73	Porphyry					• 45 -47
73-78	Porph+qv		50812	tr		• 200 -47
78-83.5	Porphyry		50813	tr		• 400 -45
83.5-87	Porphyry	45	50814	tr		ELEV-918.2
87-92	B		50815	tr		July31-Aug4/84
92-97	B-Bx		50816	tr		Rusty Fracture
97-102	B-Bx		50817	0.012		at 95 ft.
102-107	B		50818	0.002		
107-112	B		50819	tr		
112-117	Basalt		50820	tr		
117-122	Basalt		50821	tr		
122-177.5	Basalt					
177.5-183	Basalt		50822	tr		
183-188.6	Basalt		50823	tr		
188.6	Hangingwall Fault					
188.6-191.7	G2 + Vein	50	50824	0.149	} <u>.038</u> 21.4'	
191.7-197	G1-B		50825	0.012		
197-202	B		50826	0.008		
202-208.7	B-Vein		50827	0.034		
208.7-210	G1-Vein		50828	0.022		2" qv
210-215.6	B		50829	tr		Sph.cpy.fuchsite
215-216	Sand Seam-Fault Zone					
216-220.5	B		50830	tr		
220.5-225	Sand Seam					
225-230	B		50831	tr		
230-235	B		50832	0.010		
235-239.5	B		50833	tr		
239.5-243.4	G2-Bx Vein	45	50834	0.167		4" mud seam • 241'
243.4-248	G1		50835	tr		
248-253	G1		50836	tr		
253-257	G1		50837	tr		
257-262	B		50838	tr		
262-267	B		50839	tr		
267-272	B		50840	tr		
272-277	B		50841	tr		
277-282	B-G1		50842	0.054		
282-287	B-G1		50843	0.002		
287-292	B-G1		50844	0.018		
292-297	B		50845	tr		

BOREHOLE 84-12 ..continued page2.

297-302	B	50846	tr
302-306	B	50847	tr
306-308	Vein	50848	tr
308-312	B	50849	tr
312-317	B	50850	tr
317-322	B	50851	tr
322-327	B	50852	tr
327-332	B	50853	tr
332-336	B	50854	tr
336-340	B	50855	tr
340-345	B	50856	tr
345-350	Basalt	50857	tr
350-354	Basalt	50858	tr
354-405	Basalt		

405 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-13

HOLE # 84-13 CO-OR 6+00E, 11+80S DIP 65 N LENGTH 498 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-41	casing					DIP TESTS
41-69	Porphyry	80				e 48 -66
69-76.5	Porphyry	70	50894	tr		e 200 -65
76.5-82	B	80	50895	tr		e 400 -63
82-87.5	Porphyry	75	50896	0.002		e 494 -62
87.5-92	Basalt		50897	tr		
92-96.5	Basalt		50898	tr		ELEV-918.2
96.5-215	Basalt					
215-220	B		50899	tr		Aug 4-9/84
220-224.8	B		50900	tr		
224.8-225	LC.-Fault Zone?					
225-226	Qtz Vein		50901	tr		Cpy. py. VG ←
226-231	G1	45	50902	tr		
231-236	G1		50903	tr		
236-240	G1	45	50904	tr		
240-244	G1		50905	tr		
244-247.2	G1		50906	0.012		
247.2-249.2	G2-Vein	50	50907	0.080	.031	
249.2-253	G1		50908	0.034	13.1'	
253-257.1	G1		50909	0.020		
257.1-262	B		50910	tr		
262-266	B		50911	tr		
266-345	Basalt					
345-351	Basalt		50912	0.002		
351-355.6	Basalt		50913	0.034		
355.6-360	Baslt+qv		50914	0.026		
360-365	Basalt		50915	0.002		
365-385	Basalt					
385-390	Basalt		50916	tr		
390-395	Basalt		50917	tr		
395-401	Basalt		50918	tr		
401-404	Baslt-Vein		50919	0.004		
404-410	Basalt		50920	tr		
410-415	Basalt		50921	0.008		
415-418	Veins		50922	0.269	-	e 415.4 -4"qv +VG —
418-423	Basalt		50923	0.002		e 416-3"qv+sph
423-498	Basalt					e 417-4"qv

498 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-14

HOLE # 84-14 CO-OR 7+00E, 12+10E DIP 45 LENGTH 400 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-66	casing					DIP TESTS
66-84.5	Basalt					@ 70 -45
84.5-90	Basalt		50975	tr		@200 -44
90-96	Basalt		50976	tr		@400 -42
96-101	B		50977	tr		
101-105	Porphyry		50978	tr		
105-110	B		50979	tr		
110-115	B		50980	tr		
115-120	B		50981	tr		
120-123	Basalt		50982	tr		
123-180	Basalt					
180-185	B		50983	tr		
185-190	B		50984	tr		
190-195	B		50985	tr		
195-198	B		50986	tr		
198-201	G2-Vein		50987	0.014		4" qv
201-204	G2-Vein		50988	0.022		2" qv
204-207	G2-Vein		50989	0.010	<u>.110</u>	8" qv
207-210.5	G2-Veins	30	50990	0.395	12.5'	6 veins
210.5-214	G1		50991	0.004		
214-219	B-G1		50992	0.018		
219-224	B-G1		50993	0.018		
224-229.5	B-G1		50994	0.008		
229.5-233	G1		50995	0.004		
233-236	G1		50996	0.004		
236-239	G2 + qv		50997	0.079		
239-244	G1-B	50	50998	0.012		sheared
244-248	G1-B		50999	0.016		
248-251	G2+qv		51000	0.024	<u>.073</u>	
251-254	G2+qv		31351	0.004	93'	
254-257	G2+qv		31352	0.005		
257-262	G1		31353	0.042		
262-267	G1		31354	0.110		
267-272	G1		31355	0.026		
272-277	G1		31356	0.010		
277-282	G1		31357	0.034		
282-284	G1		31358	0.064		
284-287	G2-Vn+Bx		31359	0.125		
287-290	G2-Vn+Bx		31360	0.439	<u>.20 or .11</u>	
290-292	G2-Vn+Bx		31361	0.016	18 43	
292-297.1	Vein	30	31362	0.296		Sph + fuchsite
297.1-300	G2-Bx	40	31363	0.080		Fuchsite
300-305	G1-Vein	40	31365	0.012		

BOREHOLE 84-14 ..continued page2.

305-310	B	31366	0.006
310-315	B	31367	0.002
315-320	B	31368	tr
320-325	B	31369	0.002
325-330	B	31370	0.002
330-335	B	31371	tr
335-340	Basalt	31372	0.004
340-345	Basalt	31373	0.002
345-350	Basalt	31374	tr
350-354	Basalt	31375	tr
354-358	Basalt	31376	tr
358-363	Basalt	31377	tr
363-369	Basalt	31378	0.002
369-400	Basalt		

400 - FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-15

HOLE # 84-15 CO-OR 7+00E, 12+10S DIP 62N LENGTH 500 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-68	casing					DIP TESTS
68-73	B		57005	tr		e69' -62
73-78	B		57006	0.006		e200'-62
78-83	B		57007	tr		e400'-59
83-89	B		57008	0.002		
89-94.2	Porphyry		57009	0.006		ELEV-916.2
94.2-102	B		57010	0.004		
102-106	Basalt		57011	tr		Aug12-15/84
106-163	Basalt					
163-170	Basalt		57012	0.002		
170-175	B		57013	0.002		
175-180	B		57014	tr		
180-185	B		57015	tr		
185-190	B		57016	tr		
190-195	B		57017	0.006		
195-200	B		57018	tr		
200-205	B		57019	tr		
205-210	B		57020	tr		
210-214	B		57021	0.004		
214-219	G1		57022	0.004		
219-223	G1		57023	0.006		
223-226	G1		57024	0.020		
226-230	B		57025	0.002		
230-235	B		57026	tr		
235-240	B		57027	0.014		
240-244	B		57028	tr		
244-247	B		57029	tr		
247-250	B		57030	0.038		
250-257	B		57031	tr		
257-340	Pillow Basalt					
340-344	B-Vns		57032	0.016		
344-347	B-Vns		57033	0.020		
347-350	B-Vns		57034	0.002		
350-364	B					
364-366	B-Vein		57035	0.042		
366-390	B					
390-392.5	B-Vein		57036	0.008		
392.5-395.5	B-Vns		57037	0.107		
395.5-397	B-Vein		57038	0.010		
397-427.5	Basalt					
427.5-433	Basalt		57039	0.022		

BOREHOLE 84-15 ..continued Page2.

433-438	Basalt	57040	tr
438-443	Basalt	57041	tr
443-447	Basalt	57042	tr
447-500	Basalt		

500 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-16

HOLE # 84-16 CO-OR S+00E, 12+20S DIP 45N LENGTH 397 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-92	casing					DIP TESTS
92-95	B					e90' -46
95-100	B		57158	tr		e200'-44
100-105	B		57159	tr		e397'-42
105-110	B		57160	tr		
110-115	B		57161	tr		ELEV-916.7
115-120	B		57162	tr		
120-125	B		57163	tr		Aug15-16/84
125-130	B		57164	tr		
130-135	B		57165	tr		
135-140	B		57166	tr		
140-145	B		57167	tr		
145-150	B		57168	tr		
150-155	B		57169	tr		
155-160	B		57170	tr		
160-165	B		57171	tr		
165-170	B		57172	tr		
170-175	B		57173	tr		
175-180	B		57174	tr		
180-185	B	50	57175	tr		
185-190	G1	52	57176	0.022		
190-195	G1	50	57177	0.006		
195-198	G1	35	57178	tr		
198-201	G2	47	57179	0.095		
201-205	G2	55	57180	0.103		
205-208.4	G2-Vein		57181	0.695		
208.4-212	Bslt+Bx Vn	25	57182	0.330		
212-216	Bslt		57183	tr		
216-220	Bslt		57184	tr		
220-225	Bslt		57185	0.006		
225-230	Bslt		57186	tr		
230-235	Bslt		57187	tr		
235-240	Bslt		57188	tr		
240-245	Bslt		57189	tr		
245-250	B		57190	tr		
250-255	B		57191	tr		
255-260	B		57192	tr		
260-265	B		57193	tr		
265-270	B		57194	tr		
270-272.6	B		57195	tr		
272.6-276	G1-Vein	40	57196	11.77		VG
276-280	B		57197	tr		

.353 or .188  
14 27

VG-5 blebs

280-285	B		57198	tr	↑ $\frac{1.90}{21.4}$ or $\frac{.192}{21.4}$ CUT
285-290	B		57199	tr	
290-294	G1-Vein	40	57200	0.178	
294-298	B		57201	tr	
298-303	B		57202	tr	
303-308	B		57203	tr	
308-313	B		57204	tr	
313-318	B		57205	tr	
318-323	B		57206	tr	
323-326.4	B		57207	tr	
326.4-328.6	Lamp. Dyke		57208	tr	
328.6-333.5	B		57209	tr	
333.5-336	B-Vein	45	57210	0.142	
336-340	Basalt		57211	tr	
340-345	Basalt		57212	tr	
345-350	Basalt		57213	tr	
350-355	Basalt		57214	tr	
355-397	Basalt				

397 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-17

HOLE # 84-17 CO-OR 8+00E,12+20S DIP 61N LENGTH 515 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-62	casing					DIP TESTS
62-80	Basalt					•62' -61
80-85	Basalt		57108	tr		•200'-62
85-90	Basalt		57109	tr		•400'-61
90-95	B		57110	tr		•515'-60
95-100	B		57111	tr		
100-105	B		57112	tr		ELEV-916.7
105-107.6	B		57113	tr		
107.6-111	Porphyry		57114	tr		Aug17-20/84
111-116	Porphyry		57115	tr		
116-135	Porphyry	25				
135-142.5	Basalt	75				
142.5-160.3	Porphyry	60				
160.3-173.5	Basalt					
173.5-173.6	B					
173.6-178	B		57116	tr		
178-181	B		57117	tr		
181-186	B		57118	tr		
186-190	B		57119	tr		
190-193	B		57120	tr		
193-198	B		57121	tr		
198-203	B		57122	tr		
203-208	B		57123	0.002		
208-213	B		57124	0.002		
213-216	B		57125	tr		
216-219	B		57126	tr		
219-224	G1		57127	0.012		
224-229	G1		57128	0.050		
229-234	B		57129	tr		
234-239	B		57130	tr		
239-244	B		57131	tr		
244-249	B		57132	tr		
249-252	B		57133	0.032		
252-255	B		57134	0.002		
255-260	G1-B		57135	0.036	<u>.022</u>	
260-263	G1-B		57136	0.002	22'	
263-269	G1-B		57137	0.018		
269-271	G1-B		57138	0.016		
271-276	B		57139	tr		
276-281.6	B		57140	tr		

BOREHOLE 84-17 ..continued Page2.

281.6-287	Basalt		57141	0.002
287-364	Basalt			
364-369	Basalt		57142	0.002
369-374	Baslt		57143	tr
374-379	B		57144	tr
379-384	B		57145	tr
384-389	B		57146	tr
389-394	B		57147	tr
394-399	B		57148	tr
399-404	B		57149	tr
404-409	B		57150	tr
409-414	B		57151	tr
414-417	B		57152	0.002
417-417.5	B			
417.5-422	G1+Vein	40	57153	0.030
422-427	Basalt		57154	tr
427-432.5	Basalt		57155	tr
432.5-436	Basalt		57156	tr
436-440	Basalt		57157	tr
440-445.3	Basalt			
445.3-449	Dyket	45		
449-515	Basalt			

515 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-18

HOLE # 84-18 CO-OR 5+00E, 11+65S DIP 55N LENGTH 395 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-50	casing					DIP TESTS
50-64	Basalt					@50' -55
64-66	B-Vns	55	57215	tr		@200'-53
66-71	B-Vns		57216	tr		@390'-49
71-76	B-Vns		57217	tr		
76-80	B-Vns		57218	tr		ELEV-917.6
80-84	B-Vns		57219	tr		
84-87	B	50	57220	tr		Aug21-23/84
87-90	B		57221	tr		
90-93	B		57222	tr		
93-96	B		57223	tr		
96-100	B		57224	tr		
100-105	B		57225	tr		
105-110	B		57226	tr		
110-115	B		57227	tr		
115-120	B		57228	tr		
120-123.3	Basalt		57229	tr		
123.3-181	Basalt					
181-184	Vein	52	57230	0.024		
184-200	BsIt					
200-204	Basalt		57231	tr		
204-206.4	Basalt		57232	tr		
206.4-210	B+Veins	55	57233	0.121	] .046 15.6'	
210-214	B		57234	0.002		
214-218	B		57235	0.010		
218-222	G1-Vns		57236	0.050		
222-226	G1-Vns		57237	0.002		
226-230	G1-Vns		57238	0.002		
230-235	B		57239	0.002		
235-240	B		57240	tr		
240-245	B		57241	tr		
245-248	B		57242	0.006		
248-251	G1	35	57243	0.002		
251-254	G1		57244	tr		
254-257	G1	45	57245	0.010		
257-260	G1-Vns		57246	0.040	] .051 10'	
260-264	G1		57247	0.016		
264-267	G1-Vns		57248	0.110		
267-270	B		57249	tr		
270-273	B		57250	tr		

BOREHOLE 84-18 ..continued Page2.

273-273.8	B			
273.8-294	Basalt			
294-296	BsIt+Vein	60	57251	0.028
296-326.4	BsIt			
326.4-327.4	BsIt+Vein		57252	0.030
327.4-395	Basalt			

395 - FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-19

HOLE # 84-19 CO-OR 4+20E, 12+00S DIP 45N LENGTH 300 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-39.5	casing					DIP TESTS
39.5-73	Basalt					@40' -45
73-75.4	pillow breccia					@200'-43
75.4-125	Baslt-calc vnlft	45				@300'-42
125-130	Basalt-Vns	35	57320	tr		
130-136.5	Basalt					ELEV-919.7
136.5-142	Basalt		57321	tr		
142-147	Basalt		57322	tr		
147-152	Basalt		57323	tr		Aug23-25/84
152-157	Baslt-40% qtz		57324	tr		
157-162	Basalt		57325	tr		
162-167	Basalt		57326	tr		
167-172	Basalt		57327	tr		
172-177	Basalt		57328	tr		
177-182	Basalt		57329	tr		
182-187	Basalt		57330	tr		
187-192	Basalt		57331	tr		
192-197	Basalt		57332	tr		
197-202	Basalt		57333	tr		
202-207	Basalt		57334	0.002		
207-213.5	Basalt		57335	0.002		
213.5-215.5	Basalt					
215.5-226	Diabase-fg					Hole entered diabase before
226-300	Diabase-cg					intersecting "5 Zone".

300 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-20

HOLE # 84-20 CO-OR 12+00E, 15+00S DIP 45N LENGTH 124 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0 -79	casing					ELEV-917.6
79-124	Diabase					Aug 22-23/84

124 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-21

HOLE # 84-21 CO-OR 14+00E, 16+00S DIP 45N LENGTH 624 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-51	casing					DIP TESTS
51-102	Basalt					@50' -44
102-106	Basalt		57377	tr		@200'-44 @ 03Az.
106-111	BsIt-Bx		57378	tr		@400'-44
111-116	Basalt		57379	tr		@600'-42
116-121	Basalt		57380	tr		
121-124	BsIt+Vn		57381	0.004	sph, po	
124-130	Basalt		57382	tr		ELEV - 916.8 ft.
130-135	Basalt		57383	0.006		Aug 24-29/84
135-137.5	Lamprophyre	80	57384	tr		
137.5-140	Basalt		57385	0.004		
140-143	BsIt-Vn	45	57386	tr		Py, Po
143-148	Basalt		57387	tr		
148-152	Basalt		57388	tr		
152-155	Basalt		57389	tr		
155-160	Basalt		57390	tr		
160-164	Basalt		57391	tr		
164-168	Basalt		57392	tr		
168-172	Basalt		57393	tr		
172-176	Basalt		57394	tr		
176-182.4	Basalt					
182.4-188	Lamprophyre	55				
188-367	Basalt					
367-380	B					
380-384	B		57395	tr		
384-388	B		57396	tr		
388-391	B+Vn		57397	tr		
391-396	B		57398	tr		
396-401	B		57399	tr		
401-406	B		57400	tr		
406-411	B		57401	tr		
411-416	B		57402	tr		
416-422	B		57403 tr			
422-425	B+Vn	80	57404	tr		
425-430	Basalt		57405	tr		
430-436	Basalt		57406	tr		
436-490	Basalt					
490-495	Basalt		57407	tr		
495-500	Basalt		57408	tr		

BOREHOLE 84-21 ..continued page2.

500-505	Basalt	57409	tr	
505-510	Basalt	57410	tr	
510-515	Basalt	57411	tr	
515-549	Basalt			
549-552	Basalt+Vn	57412	0.004	po,py
552-555	Basalt	57413	tr	
555-558	Basalt	57414	0.018	
558-561	Basalt	57415	tr	
561-624	Diabase	08		Hole entered diabase before intersecting "5 Zone".

624 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-22 (BILL HOLE)

HOLE # 84-22 CO-OR 7+45E, 10+35S DIP N34W LENGTH 1334 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-6	casing					DIP TESTS
6-10	G1		57479	0.028		@20' -34, Az-323
10-13	G2+Vn	40	57480	0.176		@200-32
13-16	G2-1		57481	0.014		@300-32, Az-329
16-20	G2-1-Vn		57482	0.020		@400-30
20-24.2	G2-Vn		57483	0.255		@600-29
24.2-28	G1		57484	0.028	<u>.12 or .100</u>	@664-28, Az-334
28-33	G1		57485	0.072	27' 34.8'	@800-28
33-37	G1		57486	0.259		@900-24, Az-338
37-40.8	G1		57487	0.038		@1000-24
40.8-46	B-Vns	43	57488	0.008		@1130-24, Az-339
46-50	B-Vn	40	57489	0.016		@1200-22
50-54	B		57490	tr		@1320-20
54-57	B-Vn	50	57491	0.002		
57-61	G1-Vn	50	57492	0.010		ELEV-880.0
61-65	G1		57493	0.008		
65-70	G1		57494	0.002		Sept6-21/84
70-75	G1-Vn		57495	0.018		
75-79	G1		57496	0.054		
79-82.7	G1-Vn	50	57497	0.090		
82.7-88	B		57498	tr	<u>.055</u>	
88-93	B		57499	0.010	22'	
93-97	B		57500	0.141		
97-102	B		57501	0.010		
102-107	B		57502	tr		
107-112	B		57503	tr		
112-116	B		57504	tr		
116-119	Basalt		57505	tr		
119-137	Basalt					
137-138	Vn-sph	55	57506	0.038		
138-185.5	Basalt					
185.5-186.5	Vn	55	57507	0.004		
186.5-215	Basalt					
215-220	Basalt		57508	tr		
220-225	Basalt		57509	tr		
225-228	Baslt-Vn	45	57510	0.026		
228-231	Basalt		57511	tr		
231-234	Basalt		57512	0.006		
234-237	Basalt		57513	0.028		
237-242	Basalt		57514	tr		

## BOREHOLE 84-22 ..continued Page 2.

242-247	Basalt		57515	tr	
247-252	Basalt		57516	tr	
252-257	Basalt		57517	tr	
257-261	BsIt-Vns	75	57518	0.024	py
261-264	Basalt		57519	0.010	
264-269	Basalt		57520	tr	
269-274	Basalt		57521	tr	
274-359	Basalt				
359-360	Bs- Vn	45	57522	tr	
360-453.1	Basalt				
453.1-456	Vn-Bx	70	57523	0.006	sph
456-483.5	Basalt				
483.5-487.5	Basalt		57524	tr	
487.5-492	Basalt		57525	0.010	sph
492-495	Bs+ Vn		57526	0.010	
495-499	Basalt		57527	tr	
499-502	Basalt	80	57528	tr	sph, py
502-568.5	Basalt				
568.5-569.5	Vn	50	57529	0.036	
569.5-619.7	Basalt				
619.7-621.3	Basalt		57530	tr	
621.3-626	Porph dyke	45	57531	tr	
626-631	Porphyry		57532	tr	
631-635.2	Porphyry		57533	tr	
635.2-639	Basalt		57534	tr	
639-659.9	Basalt				
659.9-763	Diabase	24			
763-794	Basalt	20			
794-799	Basalt		57535	tr	
799-804	B		57536	tr	
804-809	B		57537	tr	
809-812	B-Bx	40	57538	tr	
812-815	B		57539	tr	
815-819	B-Bx		57540	0.004	py
819-824	B		57541	tr	
824-829	B		57542	tr	
829-834	B		57543	tr	
834-839	B		57544	tr	
839-844	B		57545	tr	
844-849	B		57546	tr	
849-854	B-Vn	45	57547	0.012	
854-859	B		57548	tr	
859-864	B		57549	0.006	
864-869	B		57550	tr	
869-874	B-Vn	28	57551	tr	

BOREHOLE 84-22 ..continued Page3.

874-880	B		57552	tr	
880-885	B		57553	tr	
885-891	B		57554	tr	
891-921	Basalt				
921-922.5	B-Vn	70	57555	0.046	
922.5-945	Basalt				
945-947	Bs-Bx		57556	tr	sph
947-980.6	Basalt				
980.6-1013	Diabase	50			
1013-1043.5	Basalt				
1043.5-1044.5	Vn	50	57557	tr	
1044.5-1104	Basalt				
1104-1106.5	Basalt		57558	tr	
1106.5-1109	*2 VEIN	20	57559	0.078	Po,Sph,Py —
1109-1113	Basalt		57560	0.008	
1113-1119	Basalt		57561	tr	
1119-1124	Basalt		57562	tr	
1124-1284	Basalt				
1284-1287	Basalt		57563	tr	
1287-1291	BsIt-Vns		57564	tr	
1291-1294	SHAFT VEIN	53	57565	0.036	Po,Zn,Py,VG —
1294-1297	Bs-Bx zone		57566	0.012	
1297-1300	Basalt		57567	tr	
1300-1303	BsIt-Bx Vn	50	57568	tr	
1303-1334	Basalt				

1334 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-23

HOLE # 84-23 CO-OR 10+00E, 13+00S DIP 54N LENGTH 504 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-47	casing					DIP TESTS
47-144	Basalt					@50' -53
144-169	Basalt					@200' -53
169-180	B					@400' -52
180-185	B		57336	tr		@504' -46
185-189	B		57337	tr		
189-194	B		57338	tr		ELEV-916.0
194-199	B		57339	tr		
199-204	B		57340	tr		Sept5-6/84
204-209	B		57341	tr		
209-214	B		57342	tr		
214-219	B		57343	tr		
219-223	B		57344	tr		
223-225	B-Vn	85	57345	0.002		
225-230	B		57346	tr		
230-235	B		57347	tr		
235-240	B		57348	tr		
240-245	B		57349	tr		
245-248	B-Bx-Vn	50	57350	0.010		
248-251	B		57351	tr		
251-256	B		57352	tr		
256-261	B		57353	tr		
261-266	B		57354	tr		
266-271	B		57355	tr		
271-274	B		57356	tr		
274-277.3	B	50				
277.3-298.4	Porphyry	45				
298.4-344	Basalt					
344-348.6	B					
348.6-352	B		57357	0.026		
352-356	B-Vn	45	57358	0.006		
356-358	G1		57359	0.790		
358-361	G1		57360	0.010		
361-364	G1-Vn		57361	0.032		.118 26'
364-367	G1		57362	0.002		
367-372	G1		57363	tr		
372-376	G1		57364	tr		
376-379	G2		57365	0.230		
379-382	G2-Vn		57366	0.220		



BOREHOLE 84-23 ..continued Page2.

382-385	B		57367	tr
385-390	Basalt		57368	0.018
390-395	Basalt		57369	tr
395-400	Basalt		57370	tr
400-404.5	Basalt		57371	tr
404.5-458	Basalt			
458-462	Basalt			
462-467	Basalt		57372	tr
467-468	Basalt		57373	tr
468-473	Basalt		57374	tr
473-476	BsIt-Vn	35	57375	0.006
476-481	BsIt-Vn	30	57376	tr
481-504	Basalt			

504 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-24

HOLE # 84-24 CO-OR 9+50E,12+90S DIP 50N LENGTH 510 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-59	casing					DIP TESTS
59-150	Basalt					@59' -48
150-155	B		57416	tr		@200'-47
155-160	B		57417	tr		@425'-44, 2*30'Az
160-163.4	B-Dol Vn		57418	tr		@500'-44
163.4-169	B		57419	tr		
169-174	B		57420	tr		
174-179	B+Veins		57421	tr		ELEV - 916.6 ft.
179-181.3	B	25	57422	0.002		
181.3-189	Porphyry	40	57423	tr		Sept7-12/84
189-195	B		57424	tr		
195-200	B		57425	0.008		
200-205	B		57426	tr		
205-210	B		57427	tr		
210-215	B		57428	tr		
215-218	G1-Vns	60	57429	tr		
218-221	G1		57430	0.002		
221-224	G1-Vn	70	57431	tr		
224-229	B		57432	tr		
229-234	B		57433	tr		
234-239	B		57434	tr		
239-243	B		57435	tr		
243-245	Vein-Bx zone		57436	tr		
245-249	Porphyry	75	57437	tr		
249-254	B		57438	0.006		
254-259	B		57439	tr		
259-265	B		57440	tr		
265-271	B		57441	tr		
271-276	B		57442	tr		
276-281	B		57443	tr		
281-286	B		57444	tr		
286-290	G1-Vns	50	57445	0.076		
290-294	G1		57446	0.018		
294-297	G1-Vns	50	57447	0.040	.119	
297-300	G1-B		57448	0.016	20.5	
300-303	B		57449	0.018		
303-306.5	G2-Vns	40	57450	0.525		
306.5-312	G1-Vns		57451	tr		
312-317	B		57452	tr		

BOREHOLE 84-24 ..continued Page2.

317-322	Basalt		57453	tr
322-327	Basalt		57454	tr
327-332	Basalt		57455	tr
332-336	Basalt		57456	tr
336-383	Basalt			
383-388	Basalt		57457	tr
388-393	BsIt-Vn	35	57458	0.018
393-398	Basalt		57459	0.002
398-401	BsIt-Vn	55	57460	0.030
401-404	Basalt		57461	tr
404-409	BsIt-Vn	35	57462	0.050
409-413	BsIt-Vn	40	57463	0.008
413-419	Basalt		57464	tr
419-424	BsIt-Vn	40	57465	0.068
424-430	Basalt		57466	tr
430-449.5	Basalt			
449.5-454	Basalt		57467	tr
454-459	Basalt		57468	0.032
459-464	Basalt		57469	0.002
464-468	BsIt-Vn	50	57470	0.058
468-473	Basalt-Py		57471	tr
473-478	Basalt-Py		57472	tr
478-483	Basalt		57473	tr
483-488	BsIt-Vn	50	57474	0.028
488-493	Basalt		57475	tr
493-498	Basalt		57476	tr
498-503	Basalt		57477	tr
503-506	Basalt		57478	tr
506-510	Basalt			

510 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-25

HOLE # 84-25 CO-OR 8+00E, 16+00S DIP 55N LENGTH 904 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-109	casing					DIP TESTS
109-113.6	Porphyry	55				@150'-53 @359°Az
113.6-244	Basalt					@400'-52
244-249	Basalt		57569	tr		@570'-51 @3°Az
249-253	Basalt		57570	tr		@800'-48
253-258	Basalt		57571	tr		@904'-48 @359°Az
258-263	Basalt		57572	tr		
263-310	Basalt					
310-314	Basalt		57573	tr		ELEV-913.2
314-319	B		57574	tr		
319-324	B		57575	tr		Sept13-21/84
324-328	B-Vn		57576	tr		
328-333	B		57577	tr		
333-339	Basalt		57578	tr		
339-356	Basalt					
356-359	BsIt-Bx-Vns		57579	0.002		
359-435	Basalt					
435-440	BsIt-Bx		57580	tr		
440-446	BsIt-Bx		57581	tr		
446-451	B-Vn-Py		57582	tr		
451-455	Basalt		57583	tr		
455-493	Basalt					
493-498	BsIt-Bx		57584	tr		
498-503	BsIt-Bx-Vn		57585	tr		
503-506	BsIt-Bx		57586	tr		
506-547.8	Basalt					
547.8-549	Bs-cp		57587	tr		
549-558.3	Basalt	60				
558.3-570	Porphyry					
570-575	Porphyry		57588	tr		
575-580	Porph+4"dyke	24	57589	0.004		
580-585	Porphyry		57590	tr		
585-590	Porphyry		57591	tr		
590-595	Porphyry		57592	tr		
595-600	Porphyry		57593	tr		
600-602.6	Porphyry		57594	tr		
602.6-607	Basalt		57595	tr		
607-612	Basalt		57596	tr		
612-617	Basalt		57597	tr		
617-622	Basalt		57598	tr		

● OREHOLE 84-25 ..continued Page2.

622-626	B-Vn	65	57599	0.016	
626-630	B-Vns		57600	tr	
630-634.5	B		57601	tr	
634.5-639	Porphyry		57602	tr	
639-644	Porphyry		57603	tr	
644-649	Porphyry		57604	tr	
649-655	Porphyry		57605	tr	
655-660.8	Porphyry		57606	tr	
660.8-666.6	Porph-Vn		57607	0.030	
666.6-670.8	Porphyry				
670.8-784.4	Basalt				
784.4-788.5	Basalt-Vn	45	57608	tr	
788.5-792	B-Bx-Vns		57609	0.111	} <u>.086</u> 8'
792-796.5	B-Bx-Vns		57610	0.066	
796.5-802	Basalt-Vn	40	57611	tr	
802-806	Basalt		57612	tr	
806-809	Basalt		57613	0.020	
809-812	Basalt		57614	tr	
812-871	Basalt				
871-873.5	Basalt		57615	tr	
873.5-875.6	Vein	40	57616	0.022	
875.6-879.2	Basalt		57617	tr	
879.2-904	Basalt				

904 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-26

HOLE # 84-26 CO-OR 11+00E, 16+00S DIP 55N LENGTH 1060 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-42	casing					DIP TESTS
42-143	Basalt					@200'-53
143-146.4	Porph dyke	78	57618	tr		@400'-53 @3° Az
146.4-187	Basalt					@600'-52
187-189	BsIt-Bx-Vnlts	20	57619	tr		@800'-53 @12° Az
189-212	Basalt					
212-213.5	BsIt-Bx-Vns	63	57620	tr		ELEV-917.8
213.5-225.4	Basalt					
225.4-226.4	Vns	30	57621	tr		Sept21-30/84
226.4-283.5	Basalt					
283.5-286	BsIt-Bx-Vn	30	57622	tr		
286-317.2	Basalt					
317.2-319	Porph dyke	40				
319-356	Basalt					
356-358	B					
358-363	B		57623	tr		
363-368	B		57624	tr		
368-373	B		57625	tr		
373-378	B-Vn		57626	tr		
378-383	B		57627	tr		
383-388	B		57628	tr		
388-393	B		57629	tr		
393-397	B		57630	tr		
397-402	B-Vn		57631	tr		
402-406	B		57632	tr		
406-411	B		57633	tr		
411-414	B		57634	tr		
414-432	B					
432-666.5	Basalt					
666.5-667.5	Vein	30	57635	0.002		
667.5-717.5	Basalt					
717.5-720	Bx-Vn	36	57636	0.006		Py,Zn,Po,
720-769.5	Basalt					
769.5-822.5	Porphyry					
822.5-827	Porphyry		57637	tr		
827-832	Porphyry		57638	tr		
832-837	Porphyry		57639	tr		
837-842	Porphyry		57640	tr		
842-843	Porphyry					
843-848	Porphyry		57641	tr		

848-853	Porphyry		57642	tr	
853-858	Porphyry		57643	tr	
858-861	Porphyry		57644	tr	
861-874	Porphyry				
874-902	Diabase	45			
902-904	Basalt		57645	tr	
904-909	Bs-Bx		57646	0.090	sph, py, po
909-914	BsIt-Bx		57647	tr	
914-919	Basalt		57648	tr	
919-924	Basalt		57649	0.028	
924-929	Basalt		57650	0.064	
929-934	BsIt-B		57651	tr	
934-939	BsIt-B		57652	tr	
939-944	BsIt-B		57653	tr	
944-949	BsIt-B		57654	tr	
949-953	BsIt-Bx	55	57655	tr	sph, Py,Po
953-958	BsIt-Bx		57656	tr	Py
958-962	BsIt		57657	tr	
962-966	BsIt		57658	tr	
966-971	BsIt-Bx		57659	0.038	sph,Po,Py
971-976	BsIt-B		57660	tr	
976-981	BsIt-B		57661	tr	
981-986	BsIt-B-Bx		57662	0.016	Zn
986-991	BsIt-B-Bx		57663	0.014	
991-996	BsIt-B-Bx		57664	0.032	
996-1001	BsIt-B		57665	tr	
1001-1006	BsIt-B		57666	tr	
1006-1011	BsIt-B		57667	0.014	Cp,Po,Zn
1011-1016	BsIt-B		57668	0.028	
1016-1021	Basalt-Bx		57669	0.012	Py,Po,Cp,Zn
1021-1026	Basalt		57670	0.002	
1026-1031	Basalt-Bx		57671	tr	Py,Po,Cp,Zn
1031-1036	Basalt-Bx		57672	0.020	
1036-1039	BsIt-Bx-Vn		57673	tr	
1039-1043	BsIt-Bx		57674	tr	
1043-1048	Basalt		57675	tr	
1048-1053	BsIt-Vns	35	57676	0.218	py
1053-1057	Basalt		57677	tr	
1057-1060	Basalt		57678	tr	

1060 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-27

HOLE # 84-27 CO-OR 7+26E, 10+27S DIP 45E LENGTH 937 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-4	casing					DIP TESTS
4-9	G2		57679	0.016		• 25' -45
9-14	G2		57680	0.118		• 200'-44
14-19	G2		57681	0.051		• 300'-42 •98°Az
19-24	G1		57682	tr		• 400'-43
24-29	G2		57683	0.020	.092	• 600'-41 •100°Az
29-34	G2		57684	0.014	45'	• 800'-40 •113°Az
34-39	G2		57685	0.344		
39-44	G2		57686	0.078	.155	
44-49	G1		57687	0.026	20'	ELEV-880.0
49-54	G1		57688	0.172		
54-59	G1		57689	0.006		Sept21-28/84
59-64	G1		57690	tr		
64-69	B		57691	tr		
69-74	B		57692	tr		
74-79.5	B		57693	tr		
79.5-170	B					
170-176	G1					
176-179	G2-Vn	30				Cp,Zn,Py,VG
179-190	G1-B					
190-221	Diabase	22/30				
221-236	B					
236-420	Basalt-Vns					
420-427	B					
427-435	G1					
435-455	B					
455-476.5	G2-Vn	44				Py,Zn,Cp,VG
476.5-503.5	Porphyry					
503.5-540	B-Vn					
540-553.4	G1-G2					
553.4-608	Porphyry					
608-614.3	Basalt					
614.3-627	Porphyry	53				
627-678	Basalt					
678-686.2	Porphyry					
686.2-773	Basalt					
773-919.6	Diabase	44				
919.6-937	Basalt					

Most of hole not assayed since parallel to "5 Zone".

937 - FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-28

HOLE # 84-28 CO-OR 11+00E,16+00S DIP 47N LENGTH 872 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-41.6	casing					DIP TESTS
41.6-66.4	Basalt					@ 50' -46
66.4-68.6	Porph dyke	70	57694	tr		@ 200'-43 @ 4°30' Az
68.6-133	Basalt	50				@ 400'-43
133-136	Porph dyke	60	57695	tr		@ 600'-40 @ 7° Az
136-141	Basalt					@ 800'-39
141-143	Porph dyke	60	57696	tr		
143-144	Vein		57697	tr		
144-341	Basalt					
341-346	Basalt		57698	tr		ELEV-917.8
346-351	Basalt		57699	tr		
351-356	B		57700	tr		
356-359	B-Vn	43	57701	0.008		Oct 1-10/84
359-364	B		57702	tr		
364-369	B		57703	tr		
369-374	B-Vn	80	57704	tr		
374-379	B		57705	tr		
379-383	B		57706	tr		
383-386	G1		57707	tr		
386-391	B		57708	0.002		
391-396	B		57709	0.006		
396-401	G2-Vn	50	57710	0.002		
401-406	G2-Vn	65	57711	0.002		
406-411	B-Vn		57712	tr		sph
411-416	B		57713	0.002		
416-421	B		57714	tr		
421-427	B		57715	tr		
427-433	B		57716	tr		
433-599	Basalt					
599-600	Shrd Bslt		57717	0.006		
600-619	Basalt					
619-636	Porphyry	50				
636-641	Porphyry		57718	0.002		
641-646	Porphyry		57719	0.026	} <u>.025</u> 15	
646-651	Porphyry		57720	0.034		
651-656	Porphyry		57721	0.014		
656-661	Porphyry		57722	0.008		
661-666	Porphyry		57723	tr		
666-671	Porphyry		57724	tr		
671-676	Porphyry		57725	tr		
676-681	Porphyry		57726	tr		
681-686	Porphyry		57727	tr		

686-691	Porphyry		57728	tr	
691-696	Porphyry		57729	0.010	
696-700	Porphyry		57730	0.010	
700-705	Porphyry		57731	0.014	
705-710	Porphyry		57732	0.014	
710-714	Porphyry		57733	0.014	} <u>.018</u> 42.4'
714-719	Porphyry		57734	0.026	
719-724	Porphyry		57735	0.020	
724-729	Porphyry		57736	0.020	
729-733.4	Porphyry		57737	0.030	
733.4-738	Vn-B-Bx	45	57738	0.151	
738-742	B		57739	0.012	
742-746	B		57740	0.022	
746-750	B		57741	0.008	
750-754	B		57742	tr	
754-759	B		57743	tr	
759-764	G1-B	35	57744	0.008	
764-768	G1-B		57745	0.042	
768-771	G1-B	35	57746	tr	
771-774	B		57747	0.008	
774-779	B		57748	0.008	
779-784	B		57749	tr	
784-789	B		57750	tr	
789-794	B		57751	tr	
794-799	B-Vns		57752	0.008	
799-804	B		57753	0.014	
804-809	B		57754	tr	
809-814	B		57755	tr	
814-819	B		57756	0.010	
819-824	B		57757	tr	
824-829	B		57758	0.004	
829-834	B		57759	tr	
834-839	B-Py		57760	tr	
839-844	B-Py		57761	0.002	
844-849	B-Py		57762	0.002	
849-854	B-Py		57763	0.002	
854-859	B-Py		57764	tr	
859-861.5	B-Py		57765	tr	
861.5-864.3	Py-Gn Vn		57766	tr	2.11 opt Ag - galena
864.3-868	Pd-Py-Gn Vn		57767	0.004	4.61 opt Ag - galena
868-872	Diabase				

872 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-29

HOLE #	84-29	CO-OR	1+00E, 12+00S	DIP	45N	LENGTH	575 ft.
FOOTAGE	GEOLOGY	CA	SAMPLE #	ASSAY	GRADE	Other	
ft				troy opt	opt		
0-16	casing					DIP TESTS	
16-26.6	Basalt					@ 200' - 43	
26.6-28.2	Diabase	45				@ 400' - 40	
28.2-33.6	Basalt					@ 575' - 37	
33.6-34	Diabase						
34-185	Basalt						
185-190	Basalt		57768	tr		ELEV-930.0	
190-195	Basalt		57769	tr			
195-199	Basalt		57770	tr		Oct 4-11/84	
199-204	B-Vn	55	57771	0.012			
204-209	B		57772	tr			
209-215	B		57773	tr			
215-221	B		57774	tr			
221-226	Basalt		57775	0.002			
226-231	Basalt		57776	tr			
231-236	Basalt		57777	tr			
236-240	Basalt		57778	tr			
240-245	B		57779	tr			
245-250	B-vnlts		57780	0.072			
250-255.6	B		57781	0.002			
255.6-259	Vn-B	45	57782	0.014		Py,Po	
259-264	B		57783	tr			
264-269	B-Bx		57784	0.004			
269-274	B-Bx-Vn		57785	tr			
274-279	B-Vn		57786	tr			
279-284	Basalt		57787	tr			
284-289	Basalt		57788	0.002			
289-293	Basalt		57789	tr			
293-298	Basalt		57790	tr			
298-303	Basalt		57791	tr			
303-308	Basalt		57792	tr			
308-313	Basalt		57793	tr			
313-319	Basalt		57794	tr			
319-357	Basalt						
357-363	Basalt		57795	tr			
363-368	Basalt		57796	tr			
368-373	Vein	40	57797	0.030		py, VG ←	
373-378	B		57798	tr			
378-383	B		57799	tr			

383-388	B		57800	tr	
388-393	B		57801	tr	
393-398	B		57802	tr	
398-403	B		57803	0.004	
403-408	B		57804	tr	
408-413	B		57805	0.002	
413-418	B		57806	0.002	
418-423	B		57807	tr	
423-427	B		57808	0.028	
427-432.5	Basalt		57809	tr	
432.5-452	Basalt				
452-455	Basalt		57810	0.002	
455-457.5	Vn-Bx zone		57811	0.060	
457.5-462	Porphyry		57812	0.004	sph
462-467	Porphyry		57813	tr	
467-472	Porphyry		57814	tr	
472-477	Porphyry		57815	tr	
477-482	Porphyry		57816	tr	
482-487	Porphyry		57817	tr	
487-492	B	24	57818	tr	
492-497	B	20	57819	0.002	
497-502	Basalt		57820	tr	
502-510	Basalt		57821	tr	
510-529	Basalt				
529-532	Basalt		57822	tr	
532-535	Baslt-Vn	40	57823	0.068	py, cpy
535-539	Basalt		57824	tr	
539-544	Basalt		57825	tr	
544-548	Basalt		57826	tr	
548-575	Basalt				

575 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-30

HOLE # 84-31 CO-OR 9+00E, 16+22S DIP 48N LENGTH 944 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-76	casing					DIP TESTS
76-111	Basalt	75				①100'-47②353.5°Az
111-117.6	Porphyry	80				②200'-46.5
117.6-304	Basalt					④400'-46 ⑥6° Az
304-305	Cave-lost core					⑥600'-43
305-318	Basalt					⑧800'-41 ⑧8° Az
318-321	Basalt		57903	tr		
321-326	B		57904	tr		ELEV - 910.3
326-331	B		57905	tr		
331-335	B		57906	tr		Oct11-20/84
335-339	B		57907	tr		
339-342	Vn-Bx	72	57908	0.004		
342-345	B		57909	tr		
345-350	B		57910	tr		
350-355	B		57911	0.004		
355-360	B		57912	tr		
360-365	Basalt		57913	0.004		
365-373	Basalt		57914	tr		
373-411.5	Basalt					
411.5-417	Basalt		57915	tr		
417-422	B		57916	tr		
422-427	B		57917	tr		
427-430	B		57918	tr		
430-433	Vn-Bx	72	57919	tr		
433-438	B		57920	tr		
438-444	Basalt		57921	tr		
444-450	Basalt		57922	tr		
450-593.3	Basalt	20				
593.3-623.4	Porphyry	46				
623.4-632	Basalt	40				
632-642	Porphyry					
642-647	Porphyry		57923	tr		
647-652	Porphyry		57924	0.002		
652-656.9	Porphyry	50	57925	tr		
656.9-662	B		57926	0.002		
662-667	B		57927	tr		
667-672	B		57928	tr		
672-677	B		57929	tr		
677-682	B		57930	tr		
682-687	B		57931	tr		

BOREHOLE 84-30 ..continued Page2.

687-692	B		57932	0.004	
692-697	B		57933	tr	
697-702	B		57934	tr	
702-707	B		57935	tr	
707-710	G1-Vns	50	57936	0.020	
710-714	B		57937	tr	
714-717	G1-Vn	40	57938	0.088	Py
717-722	B		57939	tr	
722-727	Basalt		57940	tr	
727-731	BsIt-Vn	55	57941	tr	Py
731-737	Basalt		57942	tr	
737-796	Basalt				
796-799	Basalt		57943	tr	
799-802	G1-B-VnIts	35	57944	0.006	
802-806	G1-B-VnIts	35	57945	tr	
806-812	Basalt		57946	tr	
812-818	Basalt		57947	tr	
818-820	BsIt-fract.	35	57948	0.006	Py
820-825	Basalt		57949	tr	
825-830	Basalt		57950	tr	
830-835	Basalt		57951	tr	
835-838	Basalt		57952	0.030	
838-843	B-fract.	35	57953	0.002	
843-848	Vn-G2	35	57954	0.413	py, sph, gn
848-853	B		57955	0.016	
853-858	G2-Vn	40	57956	0.226	.220 15'
858-863	B		57957	0.002	sph, gn
863-868	Basalt		57958	tr	
868-871.5	Basalt		57959	tr	
871.5-902.5	Basalt				
902.5-904	BsIt-Bx-Vn	50	57960	tr	py
904-909	Basalt				
909-914	Basalt		57961	tr	
914-918	BsIt-Bx-Vn		57962	0.057	
918-922	Vns-Bx	40	57963	0.020	py, sph
922-926.8	Basalt	80	57963	tr	
926.8-929.9	Diabase	40			
929.9-944	Basalt				

944 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-31 (FIELD)

HOLE # 84-31 CO-OR 32+00W, 16+00N DIP 48N LENGTH 955 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-69	casing					DIP TESTS
69-75	Basalt		57827	tr		@250'- 47
75-80	B		57828	tr		@455'- 46
80-85	B		57829	tr		@600'- 43
85-90	B		57830	tr		@800'- 41
90-95	B		57831	tr		@955'- 40
95-100	B		57832	tr		
100-105	B-Vns		57833	tr		
105-108	B-Vns-Py	40	57834	0.004		Oct 13-17/84
108-111	B-Vns-Py	35	57835	0.010		
111-115	B-Vns	40	57836	0.064		Sph,Cpy,Py
115-118	B		57837	0.026		
118-123	B		57838	tr		
123-128	B		57839	tr		
128-134.5	B		57840	tr		lost 1.5' @ 133
134.5-139	G1-Vns	45	57841	tr		
139-143	G1-Vn	50	57842	tr		
143-146	G1-Bx		57843	0.002		
146-151	G1		57844	tr		
151-155	G1		57845	tr		
155-158	G2-Vns	35	57846	0.326	.181	Py,Cpy,Arsno,Zn, VG
158-162	G2-Vns	35	57847	0.072	7'	Py, Cpy,Arsno,Zn
162-166	B		57848	0.004		
166-170	B		57849	tr		
170-175	B-vnlts	35	57850	tr		
175-180	B		57851	tr		
180-185	B		57852	tr		
185-417	Basalt					
417-421	Basalt		57853	tr		
421-426	B		57854	tr		
426-431	B		57855	tr		
431-434	B		57856	tr		
434-437	Vein	53	57857	0.022		Arsno,Py,Cpy
437-440	B-fracturing	45	57858	tr		
440-443	B		57859	tr		
443-446	G1-Vns	40	57860	0.012		Zn,Py
446-451	G1		57861	0.002		
451-455	G1-Vns	50	57862	0.010		Py,Arsno
455-460	B		57863	tr		
460-465	B		57864	tr		
465-470	Basalt		57865	tr		

BOREHOLE 84-31 ..continued Page2.

470-475	Basalt		57866	tr	
475-553.5	Basalt				
553.5-560	Basalt		57867	tr	
560-565	Basalt		57868	tr	
565-570	B		57869	tr	
570-575	B		57870	tr	
575-580	B		57871	0.002	
580-586	B		57872	tr	
586-591	B		57873	tr	
591-595	G1-Vn		57874	tr	Py,Zn,Cpy,VG
595-600	B		57875	tr	
600-605	B		57876	tr	
605-610	B		57877	0.012	
610-615	B		57878	tr	
615-620	B		57879	tr	
620-625	B		57880	tr	
625-630	Basalt		57881	tr	
630-725.5	Basalt				
725.5-730	B-Bx-Vn	45	57882	tr	
730-734	B-Vn	40	57883	0.054	Py
734-739	Basalt		57884	tr	
739-744	BsIt-Vn	50	57885	tr	
744-749	Basalt		57886	tr	
749-752	BsIt-Vn	30	57887	0.012	
752-842	Basalt				
842-847	B		57888	tr	
847-852	B		57889	tr	
852-857	B		57890	tr	
857-862	B		57891	tr	
862-867	B		57892	tr	
867-872	B		57893	tr	
872-876	B-Vn	45	57894	tr	
876-881	B		57895	tr	
881-886	B		57896	tr	
886-891	B		57897	tr	
891-895	B		57898	tr	
895-901	B		57899	tr	
901-906	Basalt		57900	tr	
906-911	Basalt		57901	tr	
911-916	Basalt		57902	0.002	
916-955	Basalt				

955 - FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-32 (FIELD)

HOLE # 84-32 CO-OR 44-00W, 22-60N DIP 48N LENGTH 180 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
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0-161 casing

161-181 Basalt

181 - FOOT OF HOLE

Hole sanded in &  
could not be contd.  
with small "38" drill

Oct18-22/84

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-33

HOLE # 84-33 CO-OR 10+00E, 16+11S DIP 47N LENGTH 944 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-78	casing					DIP TESTS
78-142	Basalt	70				@240'-47 @360°Az
142-149.2	Porphyry	72				@400'-42
149.2-150.5	Basalt					@600'-39
150.5-155.5	BsIt-Bx		58039	tr		@800'-38 @4.5°W
155.5-159	BsIt-Bx		58040	tr		@940'-37
159-163	BsIt-Porph	70	58041	tr		
163-236.5	Basalt					ELEV-917.6'
236.5-237.6	Porphyry	55				Oct 21-28/84
237.6-374	Basalt					
374-376	B					
376-381	B		58042	tr		
381-385	B		58043	tr		
385-389	B-Bx	65	58044	tr		
389-394	B		58045	tr		
394-399	B		58046	tr		
399-404	B		58047	tr		
404-410	B		58048	.004		
410-415	B		58049	tr		
415-420	B		58050	tr		
420-424	B		58051	tr		
424-430	B		58052	tr		
430-435	B		58053	tr		
435-440	B-Vn	70	58054	tr		
440-445	B		58055	tr		
445-450	B		58056	tr		
450-456	B		58057	tr		
456-461	B		58058	tr		
461-466	B-Bx	50	58059	.008		
466-471	B-Vn	50	58060	tr		
471-500	Basalt					
500-555.8	Basalt	75				
555.8-559	Porphyry	70				
559-582.5	Basalt	45				
582.5-590.7	Porphyry	35				
590.7-598.1	Basalt	62				
598.1-625.4	Porphyry	30				
625.4-662	Basalt					
662-665	BsIt-Vn	45	58061	.087		
665-670	Basalt		58062	.002		

BOREHOLE 84-33 ..continued Page2.

670-675	BsIt-Vn	50	58063	tr	
675-677	Basalt		58064	.012	
677-682	Basalt		58065	tr	
682-687	Basalt		58066	tr	
687-692	BsIt-B		58067	tr	
692-697	B		58068	.023	
697-699.2	Vn-G2	50	58069	.175	
699.2-707.7	Porphyry		58070	.020	
707.7-712	B		58071	.008	
712-717	B		58072	.010	
717-720	B		58073	.014	
720-723	Vn		58074	.284	
723-727	B-G1		58075	.010	} <u>.110</u> or <u>.088</u> 10 14
727-730	BsIt-B-Bx		58076	.066	
730-734	BsIt-B-Bx		58077	.036	
734-737	Basalt		58078	tr	
737-774	Basalt				
774-777	BsIt-Bx		58079	tr	
777-780.8	BsIt-Bx		58080	.012	
780.8-786	Lamp-BsIt	55	58081	.008	
786-790	Basalt		58082	tr	
790-794.6	Basalt		58083	tr	
794.6-848	Basalt				
848-849	Vein	40	58084	2.36 *	← Py,Cpy,Zn,Arsno
849-853	Basalt		58085	.010	
853-858	Basalt		58086	tr	
858-862	Basalt		58087	tr	
862-866	BsIt-B		58088	.006	
866-871	BsIt-B-Vn		58089	tr	
871-876	BsIt-B		58090	tr	
876-882	BsIt-B		58091	tr	
882-888	BsIt-B		58092	tr	
888-891	BsIt-B		58093	.020	
891-894	BsIt-B		58094	tr	
894-898	BsIt-B		58095	.018	
898-903	Basalt		58096	tr	
903-907	Basalt		58097	tr	
907-910.5	Basalt		58098	tr	
910.5-944	Basalt				

944 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-34

HOLE # 84-34 CO-OR 7+00E, 12+00S DIP 54N LENGTH 375 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-60	casing					DIP TESTS
60-81	Basalt					@200'-53
81-86	BsIt-B		57965	tr		@375'-51
86-91	BsIt-B		57966	tr		
91-95	BsIt-B		57967	tr		
95-98	Porphyry	70	57968	tr		ELEV-916.3
98-103	B		57969	tr		Oct24-25/84
103-108	B		57970	tr		
108-113	B		57971	tr		
113-119	B-BsIt		57972	tr		
119-158	Basalt					
158-164	Basalt		57973	tr		
164-170	Basalt		57974	tr		
170-175	Basalt		57975	tr		
175-180	B		57976	tr		
180-185	B		57977	tr		
185-190	B		57978	tr		
190-194	B		57979	tr		
194-199	B		57980	tr		
199-203	B		57981	0.002		
203-206	G1-Vns	60	57982	0.082	.113 or .083 7' 10' Cpy, sph	
206-210	G1-Vn	65	57983	0.136		
210-213	G1		57984	0.012		
213-218	B		57985	tr		
218-223	B		57986	tr		
223-228	B		57987	tr		
228-232.5	B		57988	tr		
232.5-235	B		57989	0.086		
235-240	B		57990	tr		
240-245	B		57991	tr		
245-250	B		57992	tr		
250-255	B		57993	tr		
255-260	B		57994	tr		
260-265	B		57995	tr		
265-270	B		57996	tr		
270-275	B		57997	tr		
275-280	B		57998	tr		
280-285	B-Bx-Vn		57999	0.100		
285-290	B		58000	tr		
290-296	B		58001	tr		

BOREHOLE 84-34 ..continued Page 2.

296-300	B		58002	0.024	
300-304	B-Vns	40	58003	0.004	
304-308	B		58004	0.100	
308-312	G1	35	58005	0.034	.148 or .116 Py,Sph 12' 16
312-316	G1-Vn	50	58006	0.309	
316-320	G1-Vn	50	58007	0.022	Py,Po,Sph
320-325	B		58008	0.010	
325-330	Basalt		58009	tr	
330-336	Basalt		58010	0.002	
336-342	Basalt		58011	0.002	
342-345	Vn-Bx	40	58012	0.381	Py,Cpy,Zn
345-375	Basalt				

375 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-35

HOLE # 84-35 CO-OR 6+00E, 11+80S DIP 55N LENGTH 385 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-43	casing					DIP TESTS
43-60.7	Porphyry					•200'-54
60.7-69.9	B	38				•385'-53
69.9-93.6	Porphyry	50				
93.6-105	B					ELEV-918.20
105-195	Basalt					
195-200	BsIt-B		58013	tr		Oct26-29/84
200-205	B		58014	tr		
205-210	B		58015	0.002		
210-214	B		58016	tr		
214-217	G1		58017	0.008		
217-221	G1		58018	0.042	.050 13.3'	
221-225	G1-Vn	40	58019	0.076		
225-230.3	G2-Vn-Bx	35	58020	0.037		Py,Zn
230.3-235	B-fract		58021	tr		
235-240	B		58022	0.002		
240-245	B		58023	tr		
245-250	B		58024	0.002		
250-255	B		58025	tr		
255-260	B		58026	0.004		
260-265	B		58027	tr		
265-270	B		58028	0.002		
270-275	B		58029	tr		
275-280	B		58030	0.002		
280-285	B		58031	0.004		
285-289.4	B		58032	0.002		
289.4-292	G1-Vn	50	58033	0.603		Py,Sph
292-345	Basalt					
345-347	BsIt-B		58034	0.004		
347-351	B-Vn-Bx	40	58035	0.779		Py,Cpy
351-355	Basalt		58036	tr		
355-360	Basalt		58037	0.002		
360-364	BsIt-Bx-Vn		58038	0.010		
364-385	Basalt					

385 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-36

HOLE # 84-36 CO-OR 5+00E, 11+65S DIP -38N LENGTH 240 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-56	casing					DIP TESTS
56-64	Basalt					◉70'-36
64-73.4	B					◉240'-34
73.4-78	B	60	58138	tr		
78-81	B		58139	tr		ELEV-917.6
81-86	B+Vn	50	58140	tr		
86-89	B+Bx	45	58141	tr		OCT30-31/84
89-92	B		58142	tr		
92-104	B					
104-149	Basalt					
149-155	Basalt		58143	tr		
155-159	B		58144	0.008		
159-161	Gl	50	58145	0.014		
161-164	B		58146	tr		
164-196	Basalt					
196-199	B	50	58147	0.012		
199-204	B		58148	0.002		
204-209	B		58149	tr		
209-214	B		58150	0.004		
214-219	B		58151	tr		
219-224	B		58152	tr		
224-229	B+Vn	70	58153	0.004		
229-233	B+Vn	45	58154	0.018		
233-237	B		58155	0.008		
237-240	B		58156	0.008		

240 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-37

HOLE # 84-37 CO-OR 8+00E,12+20S DIP -56N LENGTH 404ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-66	casing					DIP TESTS
66-98	Basalt					e84'-55
98-103	Basalt		58099	tr		e200'-55
103-105.7	Porp	85	58100	tr		e394'-53
105.7-111	B-Bsit		58101	tr		
111-116	Basalt		58102	tr		ELEV-916.7
116-156	Basalt					
156-161	B		58103	tr		Oct29-31/84
161-166	B		58104	tr		
166-171	B		58105	tr		
171-176	B		58106	tr		
176-181	B		58107	tr		
181-185	B		58108	tr		
185-189	B		58109	tr		
189-193	G1		58110	0.036		
193-197	G2	50	58111	0.064		
197-201	G2	45	58112	0.026		VG ←
201-205	B		58113	tr		
205-209	B		58114	0.004		
209-212	B		58115	0.004		Fuchite
212-215	B		58116	tr		
215-218	G2-Vein	50	58117	0.014		Smokey
218-222	G2-Vein	50	58118	0.029		
222-227	B		58119	0.004		
227-232	B		58120	tr		
232-237	B		58121	tr		
237-242	B		58122	tr		
242-247	B		58123	tr		
247-252	B		58124	tr		
252-325	Basalt					
325-329	B		58125	0.010		
329-332	B+Vein	40	58126	0.024	} $\frac{.056}{7}$	Bx zone
332-336	B+Veins	45	58127	0.150		
336-341	B		58128	0.008		
341-346	Basalt		58129	0.006		
346-351	Basalt		58130	tr		
351-356	Bsit+Vn	40	58131	0.040		
356-361	Basalt		58132	tr		
361-366	Bsit+Vn	44	58133	tr		
366-370	Basalt		58134	tr		
370-374.4	Lamprophyre	40	58135	0.042		
374.4-379	Basalt		58136	0.092		
379-384	Basalt		58137	tr		
384-404	Basalt					

404-FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY

84-38

FIELD ZONE

HOLE # 84-38

CO-OR 28+00W, 15+50N

DIP-50N

LENGTH 890 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-56	casing					DIP TESTS
56-80	Basalt					@56'-49
80-81	Vein-qc	45	58157	tr		@200'-48
81-137	Basalt					@400'-47.5
137-141	Vein-carb	10	58158	tr		@600'-46
141-144	BsIt+Vns	45	58159	tr		@800'-45
144-189	Basalt					
189-192.5	BsIt-Bx		58160	tr		Nov 1-9/84
192.5-218	Basalt					
218-219	Veinlets	50	58161	tr		
219-234.5	Basalt					
234.5-236.5	Diabase					
236.5-258	Basalt					
258-258	Veinlets		58162	tr		
259-262	Basalt					
262-265	BsIt-Bx		58163	tr		
265-291.6	Basalt					
291.6-294.5	Porphyry					
294.5-295.4	Basalt	30				
295.4-300.7	Lamprophyre	45				
300.7-323	Basalt					
323-328	Basalt		58164	tr		
328-333.8	B		58165	tr		
333.8-336	Porphyry	50	58166	tr		
336-340	Porphyry	50	58167	tr		
340-345	B-Vns	50	58168	0.004		Arsenopyrite
345-349	B		58169	tr		
349-352	B		58170	tr		
352-355	G1-Vns	48	58171	tr		
355-358	G1		58172	tr		
358-361	G1		58173	0.050		
361-365	B		58174	0.002		
365-370	B		58175	tr		
370-375	B		58176	tr		
375-380	B		58177	tr		
380-385	B		58178	tr		
385-391.7	B		58179	tr		
391.7-395.4	Porphyry	30	58180	0.016		
395.4-400	B		58181	tr		
400-405	B	30	58182	0.020		
405-410	B		58183	tr		
410-415	B		58184	0.002		
415-420	B		58185	tr		

## BOREHOLE 84-38 .. continued Page 2.

420-425	B+Vn	30	58186	tr
425-430	G1		58187	tr
430-435	B		58188	tr
435-440	B+Vn	22	58189	tr
440-445	G1-B	35	58190	0.060
445-450	G1-B	22	58191	0.002
450-455	B		58192	tr
455-460	B		58193	tr
460-465	B		58194	tr
465-470	B		58195	tr
470-475	Basalt		58196	tr
475-517	Basalt			
517-522	Basalt		58197	tr
522-527	Basalt		58198	tr
527-532	Basalt		58199	tr
532-537	Basalt		58200	tr
537-542	Basalt		58201	tr
542-547	Basalt		58202	tr
547-552	Basalt		58203	tr
552-557	Basalt		58204	tr
557-614	Basalt			
614-619	B		58205	tr
619-624	B		58206	tr
624-629	B		58207	tr
629-634	B		58208	tr
634-639	B+Vn	45	58209	tr
639-644	B		58210	tr
644-649	B		58211	tr
649-654	B		58212	tr
654-659	B		58213	tr
659-664	B		58214	tr
664-669	Basalt		58215	tr
669-674	Basalt		58216	tr
674-679	Basalt		58217	tr
679-684	Basalt		58218	tr
684-689	Basalt		58219	tr
689-710	Basalt			
710-715	Basalt		58220	tr
715-718.5	Basalt		58221	tr
718.5-720	Vein	45	58222	0.040
720-725	B		58223	tr
725-729	G1+Vns	45	58224	0.010
729-733	Basalt		58225	tr
733-737	Basalt		58226	tr
737-742	Basalt		58227	tr
742-746	BsIt+Vn	30	58228	tr
746-751	Basalt		58229	tr
751-756	BsIt+Vn	40	58230	tr
756-761	Basalt		58231	tr
761-766	BsIt		58232	tr
766-768.5	BsIt-Bx		58233	tr

768.5-805	Basalt			
805-810	Basalt		58234	tr
810-815	Basalt		58235	tr
815-820	Basalt		58236	tr
820-825	Baslt-B		58237	tr
825-830	B		58238	tr
830-835	B		58239	tr
835-840	G1-B	50	58240	tr
840-845	G1-B	55	58241	tr
845-850	B		58242	tr
850-855	B		58243	0.004
855-860	B		58244	tr
860-865	B		58245	tr
865-870	B		58246	tr
870-875	B		58247	tr
875-880	Basalt		58248	tr
880-885	Basalt		58249	tr
885-890	Basalt		58250	tr

890 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-39

FIELD ZONE

HOLE # 84-39 CO-OR 32+00W, 15+00N DIP 48N LENGTH 715 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-105	casing					DIP TESTS
105-125.8	Basalt	30				•100'-48
125.8-131	B-sheared	45	58308	tr		•300'-48
131-135	B+Veins		58309	tr		•500'-46.5
135-140	B		58310	tr		•700'-45
140-145	B		58311	tr		Nov10-17/84
145-199	Basalt					
199-200	Qtz Vein	33	58312	tr		
200-243	Basalt					
243-248	Basalt		58313	tr		
248-253	Basalt		58314	tr		
253-257	B+Veins	42	58315	0.098		
257-262	B+Veins	34	58316	tr		
262-266	B+Vein	40	58317	0.018		
266-270	Basalt		58318	tr		
270-332	Basalt					
332-334	Basit+Vein	30	58319	tr		
334-347.5	Basalt					
347.5-353	Basit+Vein		58320	tr		
353-354.5	Basit+Vein		58321	tr		
354.5-383	Basalt					
383-384	Vein		58322	tr		
384-450	Basalt					
450-455	Basalt		58323	0.002	3" water seam @ 454'	
455-460	Basalt		58324	tr		
460-465	Basalt		58325	tr		
465-470	Basalt		58326	tr		
470-501	Basalt					
501-502	Basit+Veins	27	58327	tr		
502-527.3	Basalt					
527.3-529	Vein-qtz-carb	45	58328	0.028		
529-567	Basalt					
567-572	Basalt		58329	tr		
572-577	Basalt		58330	tr		
577-582	Basalt		58331	tr		
582-587	B		58332	tr		
587-590	Vein + B	40	58333	tr		
590-595	B		58334	tr		
595-600	B		58335	tr		
600-605	B		58336	tr		
605-610	B		58337	tr		
610-615	B		58338	tr		
615-620	B		58339	tr		

620-625	B+ Vein	50	58340	tr
625-630	B		58341	tr
630-635	B		58342	tr
634-640	B		58343	tr
640-645	B		58344	tr
645-649	B		58345	tr
649-652	Vein + B	60	58346	tr
652-657	B		58347	tr
657-662	B		58348	tr
662-667	B		58349	tr
667-672	B		58350	tr
672-677	B		58351	tr
677-678	Vein + B	40	58352	tr
678-683	B		58353	tr
683-688	B		58354	tr
688-693	Basalt		58355	tr
693-698	Basalt		58356	tr
698-702	Basalt		58357	tr
702-717	Basalt			

717 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-40

HOLE # 84-40 CO-OR 7.00E. 10.30S DIP 70N LENGTH 160 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-2	casing to 6 ft					DIP TESTS
2-6	G1		58251	0.126		• 160'-69
6-11	G2	50	58252	0.175		
11-15	G2		58253	0.022		ELEV-879.1
15-20	G2		58254	0.230		
20-25	G2		58255	0.046	.135	Nov14-16/84
25-30	G2		58256	0.084	48'	
30-35	G2		58257	0.372		
35-40	G1		58258	0.111		
40-45	G1		58259	0.028		
45-50	G1		58260	0.134		
50-55	G1		58261	0.012		
55-60	B		58262	0.008		
60-65	B		58263	tr		
65-70	B		58264	0.002		
65-75	B		58265	0.004		
75-80	B		58266	tr		
80-85	B		58267	tr		
85-89	B		58268	tr		
89-94	G1	40	58269	0.133	.104	
94-99	G1	30	58270	0.074	10'	
99-104.6	B		58271	tr		
104.6-110	B		58272	tr		
110-115	B		58273	0.022		
115-120	B		58274	0.006		
120-125	Basalt		58275	tr		
125-130	Basalt		58276	tr		
130-135	Basalt		58277	tr		
135-140	Basalt		58278	tr		
140-145	Basalt		58279	tr		
145-150	Basalt		58280	tr		
150-155	Basalt		58281	tr		
155-160	Basalt		58282	0.018		

160 - FOOT OF HOLE

MAUDE LAKE GOLD MINES LIMITED

1984 BOREHOLE SUMMARY 84-41

HOLE # 85-41 CO-OR 7+00E, 10+26S DIP 50N LENGTH 120 ft.

FOOTAGE ft	GEOLOGY	CA	SAMPLE #	ASSAY troy opt	GRADE opt	Other
0-2	casing to 10 ft					DIP TEST
2-7	G1	40	58283	0.056	.053 15'	@120'-47
7-12	G1	38	58284	0.034		
12-17	G1	38	58285	0.068		Nov16-17/84
17-22	G1		58286	0.022		
22-25	G1		58287	0.034		
25-30	B	35	58288	tr		
30-35	B		58289	0.016		
35-40	B	35	58290	0.014		
40-45	B		58291	0.008		
45-50	G1	40	58292	0.008		
50-55	G1	44	58293	0.020		
55-60	G1	50	58294	0.006		
60-65.5	G1	53	58295	0.026		
65.5-70	B		58296	0.012		
70-75	B		58297	tr		
75-80	B		58298	0.014		
80-84.5	B		58299	tr		
84.4-88.5	B		58300	0.042	.081 8.6'	
88.5-93	G1 + Veins	40	58301	0.116		
93-96	B		58302	0.008		
96-100	B		58303	tr		
100-105	B		58304	tr		
105-110	Basalt		58305	tr		
110-115	Basalt		58306	tr		
115-120	Basalt		58307	tr		

120 - FOOT OF HOLE

**MAUDE LAKE GOLD MINES LTD.**

**BOREHOLE LOG**

**HOLE# MX84-01**

**CO-OR:** 39+70E, 12+15 S **AZ:** 180 **DIP:** 45S

**ELEV:** SURFACE

**LOGGER:** RAB

**TWP:** BEATTY

**CLAIM:** L.617455

**START:** 08/06/84

**FINISH:** 08/10/84

**DIP TESTS:** @ 200 ft - 44 degrees

**DRILLED BY:** McKnight Drilling

**CORE:** AQ

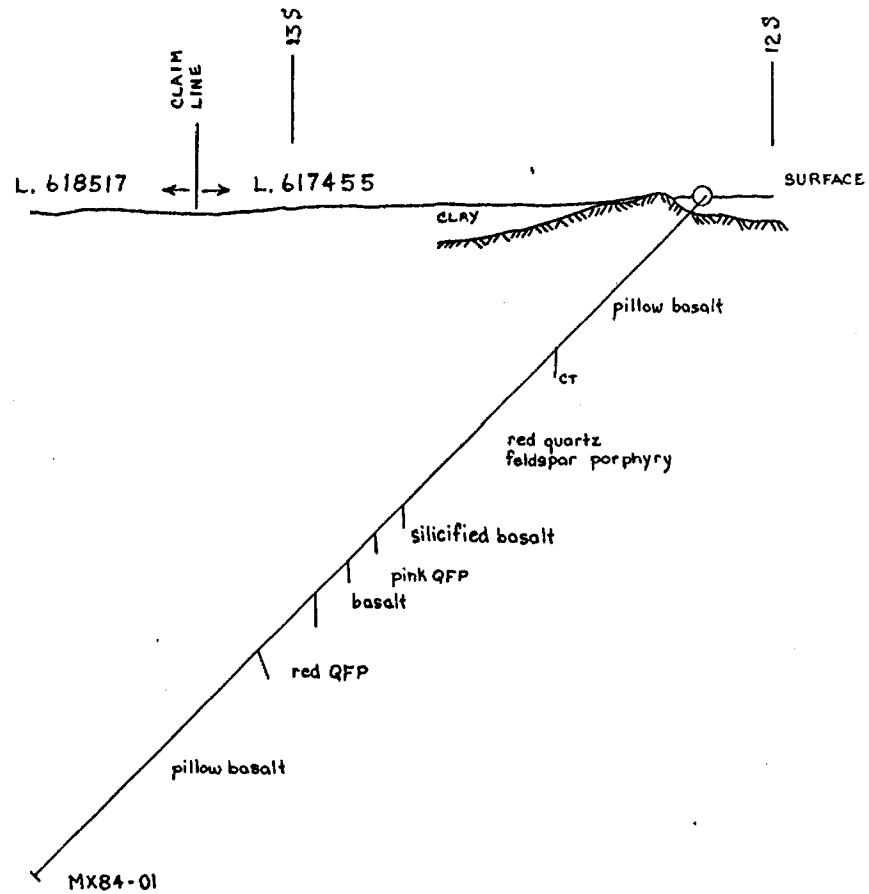
**COMMENTS:** MAIN GROUP

FTAGE	DESCRIPTION	SAMPLE NUMBER	FTAGE from / to	LGTH ft	ASSAY opt
0	collar				
6	casing - bedrock at 4 ft				
44.6	BASALT - fg, green, dense, well-pillowed lava with occasional calcite filled micro-fracture. Sharp lower ct @45.				
90.2	PORPHYRY -mg, brick-red, quartz-feldspar porphyry dyke cut by a few narrow white quartz veinlets. Euhedral feld. Very fine disseminated pyrite. Sharp LC @ 45.				
97.5	BASALT- fg, green, well-pillowd and weakly silicified lava.				
106.2	PORPHYRY-pink to grey, fine to medium grained quartz-feldspar porphyry dyke. Cts @ 50.				
115.6	BASALT- fg, dark green, pillowed lava as above. Lower ct @ 45.				
133.3	PORPHYRY- mg, brick-red quartz-feldspar porphyry as above. Fine cubic pyrite. LC @ 70.				
200	BASALT- fg, dark green, fresh, well-pillowed lava as above. Locally brecciated with carb fill.				

FOOT OF HOLE



MAIN GROUP



MAUDE LAKE GOLD MINES LIMITED

1984 Exploration Drilling

DRILL SECTION

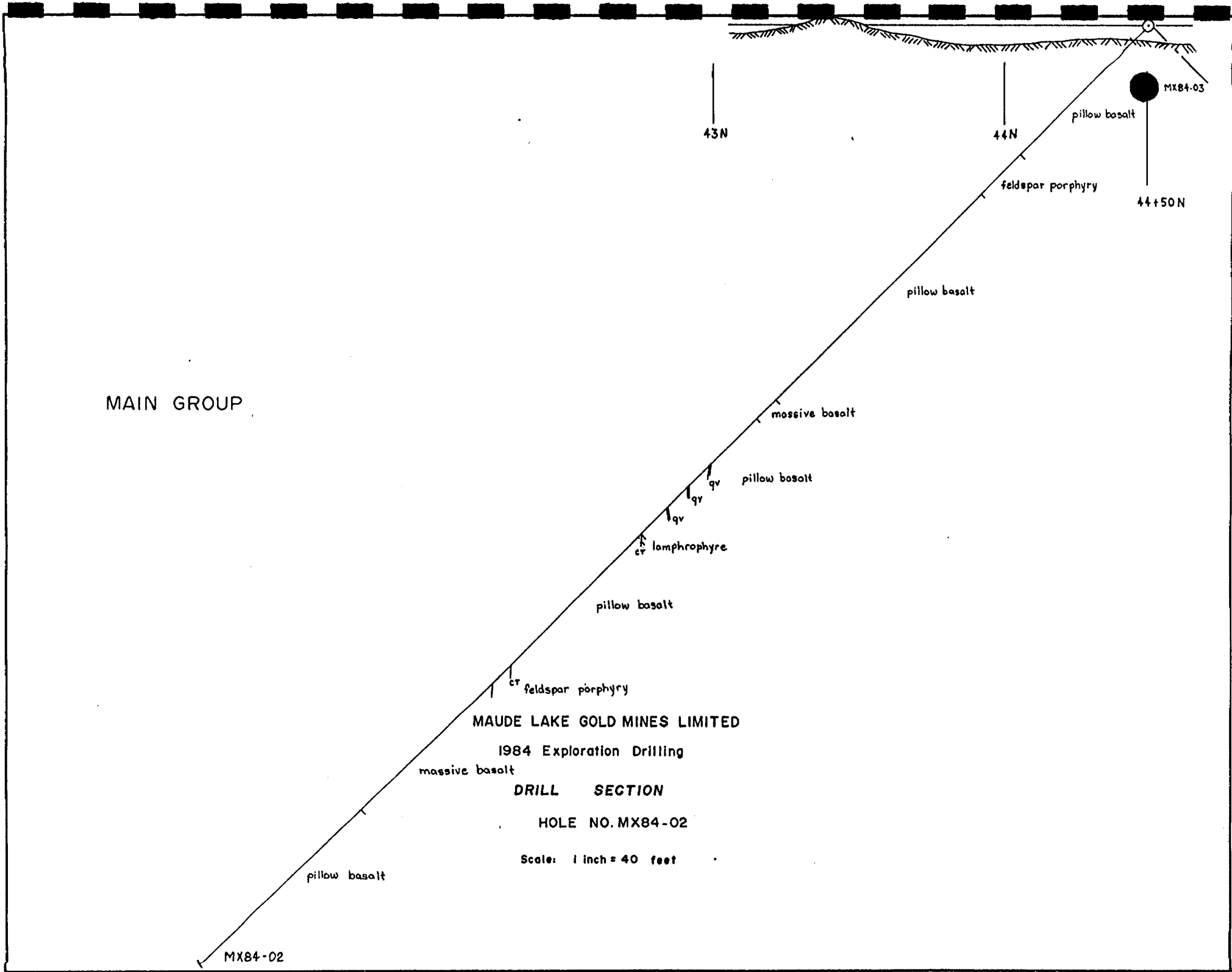
HOLE NO. MX84-01

Scale: 1 inch = 40 feet

CO-OR: 44+00E, 44+50N AZ: 180 DIP: 45S ELEV: SURFACE LOGGER NB  
 TWP: BEATTY CLAIM: L.772555 START: 08/11/84 FINISH: 08/20/84  
 DIP TESTS: @ 8 FT - -45 ; @ 225 FT--45; @ 450 FT--44 degrees  
 DRILLED BY: McKnight Drilling CORE: AQ COMMENTS: MAIN GROUP

FTAGE	DESCRIPTION	SAMPLE NUMBER	FTAGE from / to	LGTH ft	ASSAY opt
0	collar				
8	casing - bedrock at 8 ft				
63	BASALT - dark to light grey, well pillowed, cut by a white qtz vein. Pyrite, pyrrhotite & qtz-carb found in pillow margins.				
81.6	PORPHYRY - dark grey feldspar porphyry. Cts gradational with upper ct over 1', lower ct over 4".				
182	BASALT - fg, dark green to grey, pillowed lava with occasional chlorite clots. Some Py and Po along pillow margins.				
189.6	BASALT - fg, massive, with minor qtz-carb veinlets, and chl atln.				
244.5	BASALT - pillowed as above, with minor chloritic alteration, cut by several white qtz vns at 55 and a section of well developed breccia.				
245.2	LAMPROPHYRE - dyke, cutting pillowed basalt, with blebs of chlorite and Py.				
307.2	BASALT - pillowed, as above, with few qtz veins at 45 to 55 degrees.				
315.6	PORPHYRY - dark grey feldspar porphyry. UC @42, LC @40.				
323	BASALT - light green, weakly altered pillowed basalt.				
379.4	BASALT - fg to mg, massive, cut by minor qtz veinlets. Occasional pillows and chlorite clots. Pyrite.				
457	BASALT - light green, weakly altered pillowed basalt as above. Some Po and Py along pillow margins.				

FOOT OF HOLE



MAIN GROUP

43N

44N

MX84-03

pillow basalt

feldspar porphyry

44+50N

pillow basalt

massive basalt

pillow basalt

lamphrophyre

pillow basalt

feldspar porphyry

MAUDE LAKE GOLD MINES LIMITED

1984 Exploration Drilling

DRILL SECTION

HOLE NO. MX84-02

Scale: 1 inch = 40 feet

massive basalt

pillow basalt

MX84-02

MAUDE LAKE GOLD MINES LTD.

BORHOLE LOG

HOLE# MX84-03

CO-OR: 44+00E, 44+50N AZ:360 DIP:45N ELEV: SURFACE LOGGER NB

TWP: BEATTY CLAIM: L.772555 START:08/21/84 FINISH:08/31/84

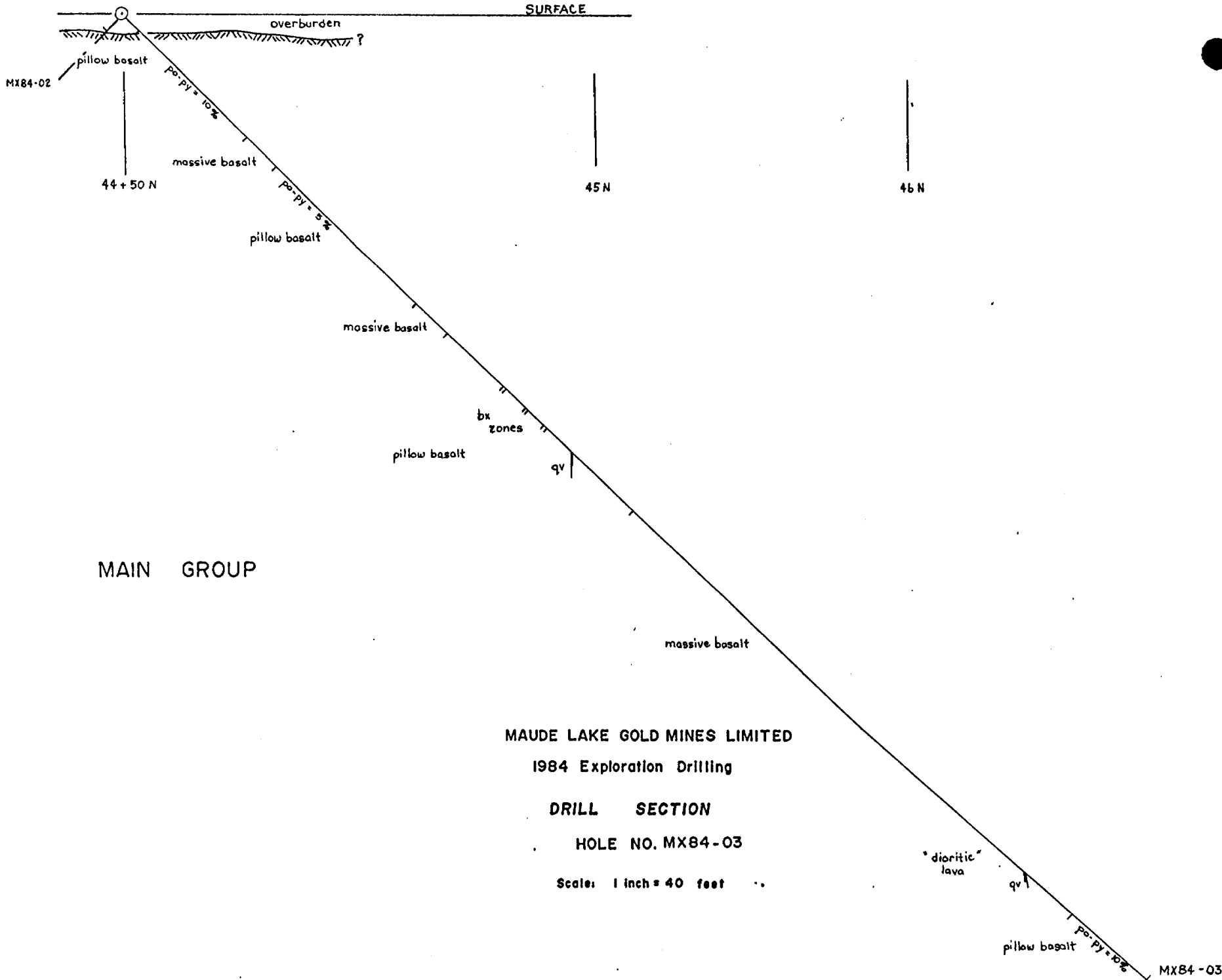
DIP TESTS: @220 ft--43; @447 ft-42 degrees.

DRILLED BY: McKnight Drilling CORE: AQ

COMMENTS: MAIN GROUP

FTAGE	DESCRIPTION	SAMPLE NUMBER	FTAGE from / to	LGTH ft	ASSAY opt
0	collar				
7	casing, bedrock at 7'				
56.6	BASALT - fg, dark grey, pillowed, with fine qtz veinlets. Interpillow breccia, abundant Po, Py and qtz-carb along pillow margins.				
69.4	BASALT - fg, massive basalt with few minor qtz-carb veinlets.				
131.5	BASALT - fg, dark grey, pillowed basalt as above, with light green altn near pillow margins. Abundant Py and Po pillow margins.				
145	BASALT - fine to medium grained, grey-green massive basalt.				
225.8	BASALT - pillow basalt as above, cut by a white qtz vn. ct @ 45. Interpillow qtz-carb brecciation with minor Py and Po.				
413.8	BASALT - f to mg, grey-green massive, with black chl specks throughout. Few pillows, diss py & po assoc with margins. Minor alteration as above. Grades into a cg, light grey dioritic lava down hole. Minor qtz-vns at 40 degrees.				
447	BASALT - fg, dark green, pillowed basalt. Disseminated po and py along pillow margins. Locally heavy Py and Po in Pillow margins.				

FOOT OF HOLE



MAUDE LAKE GOLD MINES LIMITED  
 1984 Exploration Drilling  
 DRILL SECTION  
 HOLE NO. MX84-03

MAUDE LAKE GOLD MINES LTD.

**BOREHOLE LOG**

HOLE# SX84-04

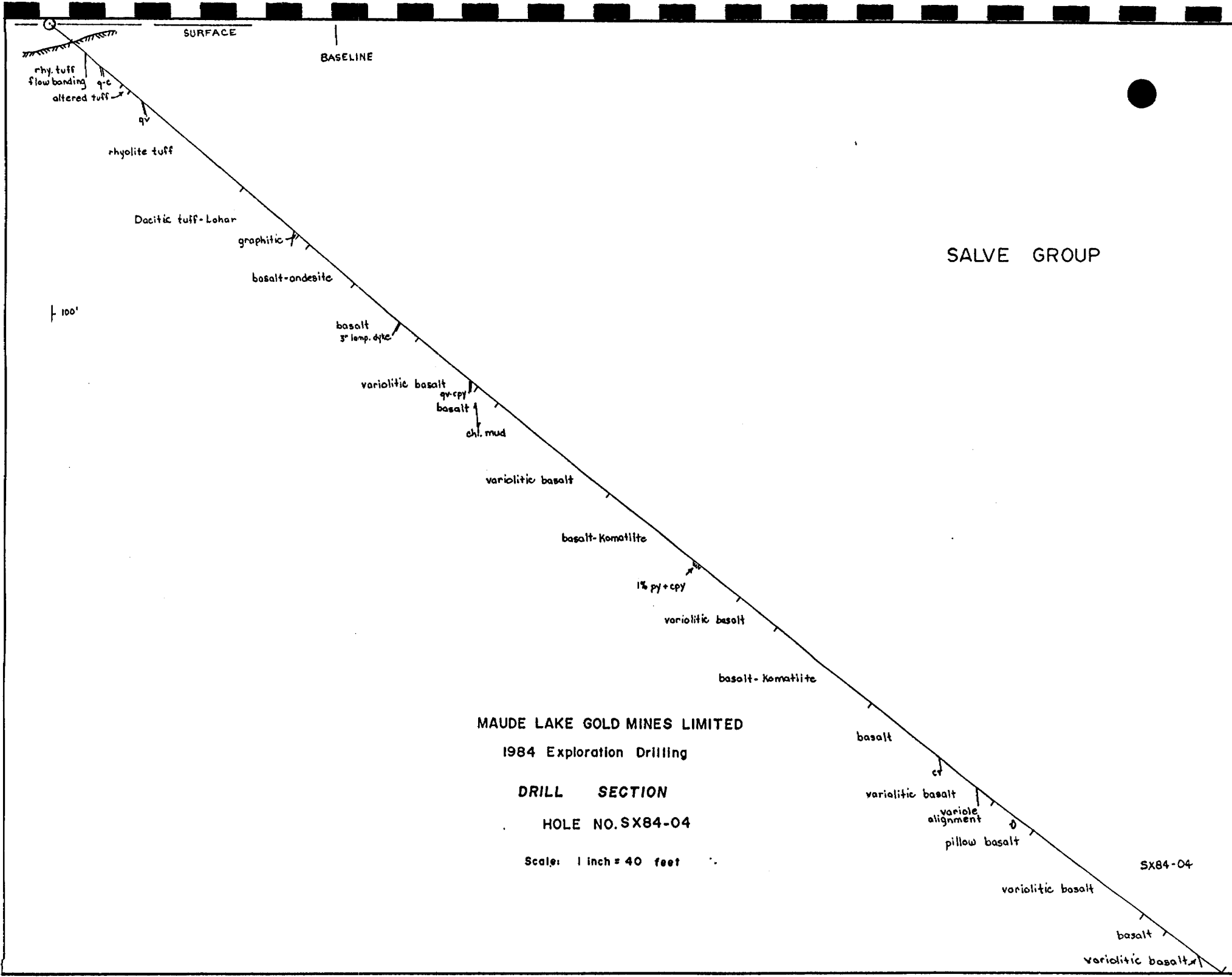
CO-OR: 77E, 1S    AZ: 20    DIP: 40    ELEV: SURFACE    LGTH: 518 ft    LOGGER: RAB  
 TWP: BEATTY    CLAIM: L772557    START: 09/6/84    FINISH: 09/25/84  
 DIP TESTS:  $\phi$ 300 FT - 39 DEGREES,  $\phi$ 518 FT - 37 DEGREES  
 DRILLED BY: McKNIGHT DRILLING    CORE:AQ    COMMENTS: SALVE GROUP

FTAGE	DESCRIPTION	SAMPLE	FTAGE	ASSAY
0	collar			
10	casing, 3 feet overburden			
32	RHYOLITE TUFF, f-mg, grey, rounded qtz grains & anhedral feldspar; several white Rhy fragments, flow banded matrix $\phi$ 50 deg. Fine dissem py & few narrow qtz-carb fracture-fillings $\phi$ 40 deg.			
35	RHYOLITE TUFF as above but altd-buff colour			
56.5	RHY. TUFF as $\phi$ 32', 2" qv at 43.5' $\phi$ 35 deg.			
62.6	RHY. TUFF becoming more dacitic and 're-worked' or laharc. Bedding/banding contacts at 50 deg.			
86.3	RHY. TUFF as $\phi$ 32 ft with 1' white qtz veins at 76 ft $\phi$ 50 deg and 81 ft $\phi$ 40 deg. Sharp LC $\phi$ 65.			
117.4	DACITIC TUFF- LAHAR pale, grey-buff, well banded at 50 deg (Tops N), occasional rhy. pyroclast. Black, graphitic material; few narrow qtz vnls, 1% pyrite throughout. A 2" graphite bed at 112 ft $\phi$ 60 deg - CONDUCTOR. Sharp lower ct with 40% graphite in basaltic flow top breccia.			
138.0	BASALT-ANDESITE fg. pale green, rather massive, mafic lava. Few calcite vnls $\phi$ 60 deg.			
155.0	BASALT altered, buff-green coloured with abundant carbonate-filled fractures (resmbles autobx).			
166.0	BASALT as $\phi$ 138 ft with marked flow top breccia at lower ct. 3" lamp dyke at 158.5 ft $\phi$ 80 deg.			
192.0	VARIOLITIC BASALT f-cg varioles(20-60% of rock) in basaltic matrix. 178-181 ft has graphite matrix to varioles. At 190 ft - .3' qtz vein + cpy and cpy fracture fill. Lower ct is chlorite mud $\phi$ 45 deg.			
200.6	BASALT non-variolitic, locally brecciated.			
250.8	VARIOLITC BASALT as before, quite massive, dark green, sharp LC $\phi$ 45 deg. Few talcose			

shear zones.

- 309.0 BASALT-KOMATIITE fg-mg, chl-talc rich, mottled. At 286-288 ft - 1% pyrite and minor cpy.
- 325.0 VARIOLITIC BASALT as at 250.8 ft.
- 367.5 BASALT-KOMATIITE(?) as at 309 ft.
- 397.0 BASALT-ANDESITE massive, green, fg. At 385-388ft - white carb + qtz vein @ 23 deg. Several narrow carb fracture-fills @ 30-40 deg. Sharp lower contact at 40 degrees.
- 420.1 VARIOLITIC BASALT 60% varioles oriented @ 45.
- 435.2 PILLOW BASALT fg, green, massive .
- 482.9 VARIOLITIC BASALT as before, grnl cts.
- 493 BASALT green, massive flow.
- 518 VARILOITC BASALT as before. Oriented @ 35 deg.

FOOT OF HOLE



SALVE GROUP

100'

MAUDE LAKE GOLD MINES LIMITED  
 1984 Exploration Drilling  
 DRILL SECTION  
 HOLE NO. SX84-04

Scale: 1 inch = 40 feet

SX84-04

variolitic basalt



MAUDE LAKE GOLD MINES LTD. **BOREHOLE LOG** HOLE\* SX84-05

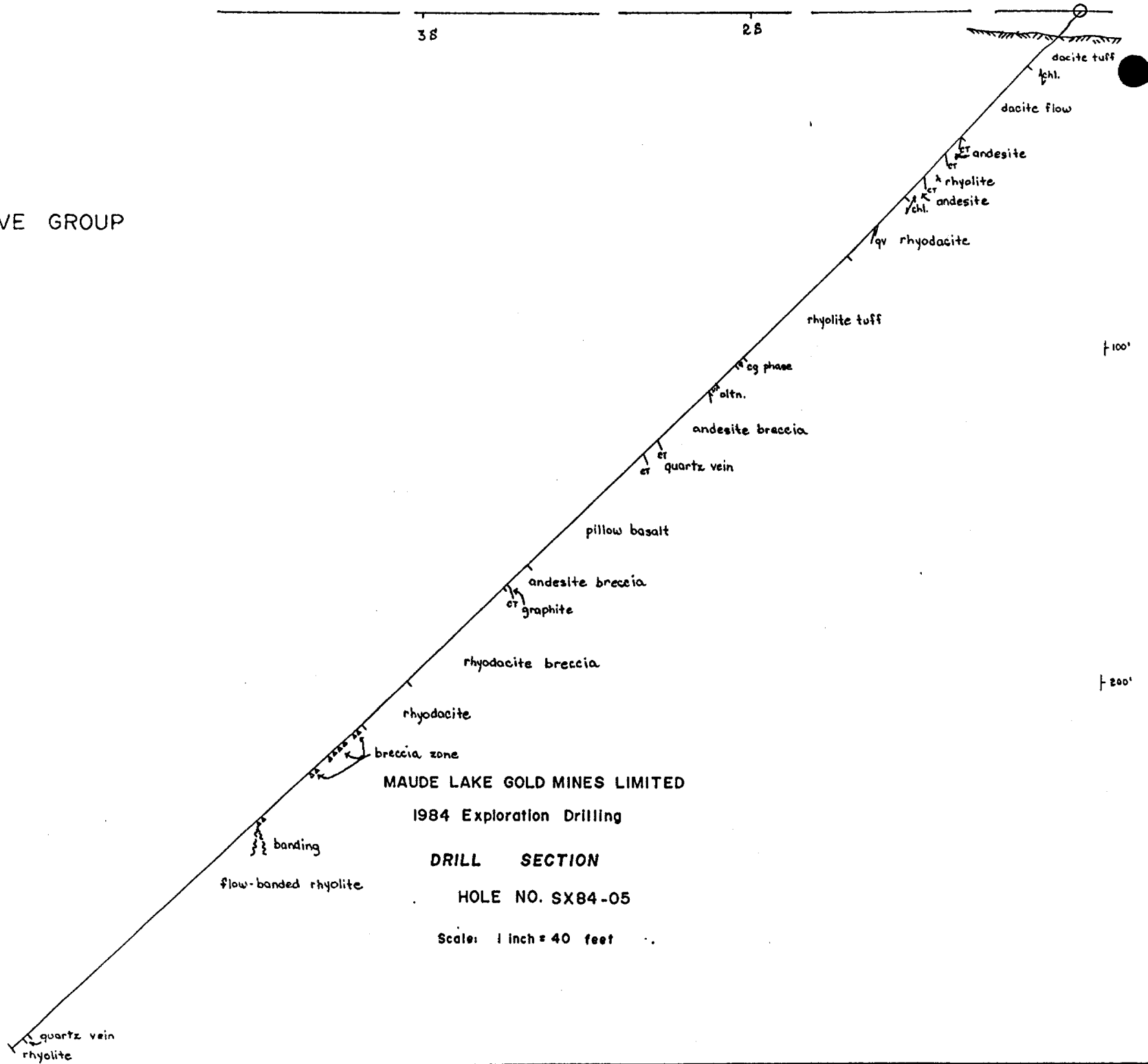
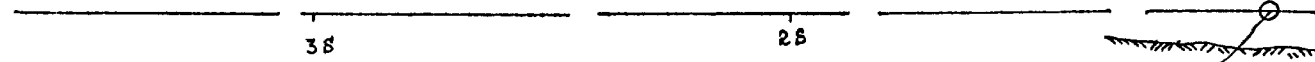
CO-OR: 48E, 1S    AZ: 180    DIP: 45    ELEV: SURFACE    LGTH: 450FT    **LOGGER: RAB**  
 TWP: BEATTY    CLAIM: L642579    **START: 09/26/84**    **FINISH: 10/13/84**  
 DIP TESTS: @ 10 FT - 45 DEGREES, @ 200 FT - 43 DEGREES, @ 450 ft - 41 DEGREES  
 DRILLED BY: McKNIGHT DRILLING    CORE:AQ    **COMMENTS: SALVE GROUP**

FTAGE	DESCRIPTION	SAMPLE NUMBER	FTAGE from/to	ASSAY opt Au
0	collar			
14	casing, 10 feet of overburden.			
23.8	DACITE TUFF vfg, grey, weakly carbonatized, with occasional clasts to 1/2 inch. Few chl slips @ 49 deg and chl. spots(amygdules?), scarce speck of pyrite.			
52.8	DACITE flow - f-mg, grey-buff, rather massive to locally brecciated with occ. chl amygd. LC @ 34 deg.			
59.8	ANDESITE-BASALT f-mg, green-grey, massive flow with sub-diabasic texture. Sharp LC @ 50 degrees.			
69.7	RHYOLITE aphanitic to vfg, buff colour, masive, occ. qtz-carb vnt @ 40-70 deg; locally spherulitic. Sharp lower ct @ 47 degrees.			
77.7	ANDESITE-BASALT as at 59.8 ft. Few chl slips at 20 degrees. Contact altn zones gradational.			
102.0	RHYODACITE Flow aphanitic to fg, grey, massive with occasional white qtz vnt @ 30 deg, some chl spots, gradational LC to buff coloured.			
147.6	RHYOLITE TUFF vfg, grey-buff, with rounded qtz eyes & angular feldspar grains, few angular rhy. clasts, several 1/16 inch qtz vnlts @ 40-60. LC-46.			
150.8	RHYOLITE TUFF as above but medium to coarse grained phase. Contacts @ 35 degrees.			
161.0	RHYOLITE TUFF as at 147.6 ft. LC at 57 degrees.			
182.7	ANDESITE BRECCIA - possibly silicified basalt (due to rhy), grey to dark grey, chlorite slips and foliation at 32 deg. Breccia matrix is black graphitic cherty material. There are a few pillow rindes preserved.			

- 188.7 QUARTZ VEIN barren white qtz with up to 30% chlorite as fracture-fill. Cts @ 70 deg.
- 237.4 BASALT PILLOW LAVA fg, green, massive, few chl fractures @ 30-50 deg and qtz-carb vnlt @ 40-50 degrees. Few specks pyrite.
- 243.0 ANDESITE BRECCIA as at 182.7 ft. Sharp lower contact at 65 degrees.
- 247.0 GRAPHITE black, vfg, hard, graphitic chert bed - CONDUCTOR.
- 287.1 RHYODACITE BRECCIA fg-mg, grey, qtz and feldspar grains (may be a tuff), with mafic matrix containing up to 4% disseminated pyrite. Becomes more massive down hole.
- 306.0 RHYODACITE FLOW . As above but massive.
- 444.6 FLOW BANDED RHYOLITE f-mg, grey, very hard and siliceous, good flow bands at 5 to 85 degrees (mostly @ 50-70 deg), several brecciated to laharc-looking sections at 309-311 ft, 314-322 ft, 326-328 ft, and 351-54.6 ft. Occasional disseminated py and blebs of pyrite. Several 1-2" qtz veins @ 374', 442', 443', 444'.
- 445.5 QUARTZ VEIN barren, milky-white vein with chlorite fracture fill. Contacts a 75.
- 450 FLOW BANDED RHYOLITE as above.  
1 inch qtz vein at 446.2 ft @ 70 deg.

FOOT OF HOLE

SALVE GROUP



100'

200'

MAUDE LAKE GOLD MINES LIMITED

1984 Exploration Drilling

DRILL SECTION

HOLE NO. SX84-05

Scale: 1 inch = 40 feet

SX84-05

quartz vein  
rhyolite



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

APPENDIX 2.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 26289

Page 1 of 3

DATE: August 13, 1984

SAMPLE(S) OF: Core (170)

RECEIVED: August, 1984

SAMPLE(S) FROM: R. A. Bennett  
Maude Lake Gold Mines

Sample No.	Gold/oz.	Silver/oz.	Sample No.	Gold/oz.	Silver/oz.
F50601	Trace	84-1	F50629	Trace	
2	Trace		F50630	Trace	
3	Trace		1	0.016	
4	Trace		2	0.020	
5	Trace		3	0.016	
6	Trace		4	0.090	
7	Trace		5	Trace	
8	Trace		6	0.032	
9	Trace		7	0.004	
F50610	Trace		8	Trace	
1	Trace		9	0.002*	
2	Trace		F50640	0.004	
3	Trace		1	0.008	
4	0.010		2	0.032	
5	0.028		3	0.158	
6	0.153			0.164	0.12
	0.148	0.10	4	0.002*	
7	0.262		5	0.002*	
8	0.270		6	0.002*	
	0.260	0.35	7	Trace	
9	0.836		8	0.002*	
	0.836	0.49	9	0.602	
F50620	0.006			0.638	0.20
1	Trace		F50650	0.020	
2	0.008		1	Trace	
3	0.078		2	Trace	
4	Trace		3	0.050	
5	Trace		4	0.004	
6	0.004		5	0.008	
7	Trace		6	0.018	
8	Trace		7	Trace	84-2

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

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## Certificate of Analysis

NO. 26289

Page 2 of 3

DATE: August 13, 1984

SAMPLE(S) OF: Core (170)

RECEIVED: August, 1984

SAMPLE(S) FROM: R. A. Bennett  
Maude Lake Gold Mines

<u>Sample No.</u>	<u>Gold/oz.</u>	<u>Silver/oz.</u>	<u>Sample No.</u>	<u>Gold/oz.</u>	<u>Silver/oz.</u>
F50658	Trace	84-2	F50685	0.002*	
9	Trace		6	Trace	
F50660	Trace		7	Trace	
1	Trace		8	Trace	
2	Trace		9	Trace	
3	0.002*		F50690	Trace	
4	Trace		1	Trace	
5	Trace		2	0.002*	
6	Trace		3	Trace	
7	Trace	4	Trace		
8	Trace	5	Trace		
9	Trace	6	0.002*		
F50670	Trace		7	0.002*	
1	Trace		8	0.022	
2	0.002*		9	0.040	
3	0.004		F50700	0.338	
4	0.006			0.320	0.27
5	0.006		1	0.004	
6	0.060		2	0.002*	
7	0.222		3	0.002*	
	0.216	0.13	4	Trace	
8	0.060		5	0.036	
9	0.018		6	0.012	
F50680	0.036		7	0.010	
1	0.108		8	0.064	
	0.110	0.08	9	0.004	
2	0.066		F50710	Trace	
3	0.004		1	0.030	
4	Trace		2	0.002*	

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER



Certificate of Analysis

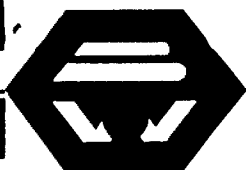
NO. 26289 Page 3 of 3 DATE: August 13, 1984
SAMPLE(S) OF: Core (170) RECEIVED: August, 1984
SAMPLE(S) FROM: R. A. Bennett
Maude Lake Gold Mines

Table with 6 columns: Sample No., Gold/oz., Silver/oz., Sample No., Gold/oz., Silver/oz. containing assay data for samples F50713 through F50770.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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Certificate of Analysis

NO. 30365 Page 1 of 5 DATE: August 22, 1984

SAMPLE(S) OF: Core(257) RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd. (Matheson)

Sample No.	Oz. Gold	Sample No.	Oz. Gold
F31351	0.004	F50774	0.002*
2	0.004 - 0.006	5	Trace
3	0.042	6	Trace
4	0.106 - 0.114	7	0.002*
5	0.026	8	Trace
6	0.010	9	Trace
7	0.034	F50780	Trace
8	0.064	1	Trace
9	0.122 - 0.128	2	Trace
F31360	0.432 - 0.446	3	Trace
1	0.016	4	0.006
2	0.288 - 0.304	5	Trace
3	0.080	6	Trace
F31365	0.012	7	Trace
6	0.006	8	Trace
7	0.002*	9	Trace
8	Trace	F50790	Trace
9	0.002*	1	Trace
F31370	0.002*	2	Trace
1	Trace	3	0.006
2	0.004	4	Trace
3	0.002*	5	Trace
4	Trace	6	0.076
5	Trace	7	0.988 - 0.990
6	Trace	8	0.120 - 0.122
7	Trace	9	0.170 - 0.164
8	0.002*	F50800	0.050
F50771	Trace	1	0.088
2	0.002* 84-4	2	0.002*
3	Trace	3	0.002*

\* Estimated.

(Cont'd.)

PER. [Signature]

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.



Certificate of Analysis

NO. 30365

Page 2 of 5

DATE: August 22, 1984

SAMPLE(S) OF: Core(257)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd. (Matheson)

Sample No.	Oz. Gold	Sample No.	Oz. Gold
F50804	Trace	F50834	0.164 - 0.170
5	Trace	5	Trace
6	0.008	6	Trace
7	0.010	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
F50810	0.002*	F50840	Trace
1	Trace	1	Trace
2	Trace	2	0.054
3	Trace	3	0.002*
4	Trace	4	0.018
5	Trace	5	Trace
6	Trace	6	Trace
7	0.012	7	Trace
8	0.002*	8	Trace
9	Trace	9	Trace
F50820	Trace	F50850	Trace
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace
4	0.152 - 0.146	4	Trace
5	0.012	5	Trace
6	0.008	6	Trace
7	0.034	7	Trace
8	0.022	8	Trace
9	Trace	9	0.046
F50830	Trace	F50860	Trace
1	Trace	1	Trace
2	0.010	2	Trace
3	Trace	3	Trace

\* Estimated.

(Cont'd.)

Handwritten signature

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.





# BELL - WHITE ANALYTICAL LABORATORIES LTD.

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## Certificate of Analysis

NO. 30365

Page 3 of 5

DATE: August 22, 1984

SAMPLE(S) OF: Core(257)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd. (Matheson)

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Sample No.</u>	<u>Oz. Gold</u>
F50864	0.226 - 0.218	F50894	Trace 84-12
5	0.004	5	Trace
6	Trace	6	0.002*
7	Trace	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
F50870	0.002*	F50900	Trace
1	0.006	1	Trace
2	0.012	2	Trace
3	0.028	3	Trace
4	0.058	4	Trace
5	0.020	5	Trace
6	Trace	6	0.012
7	0.020	7	0.080
8	0.008	8	0.034
9	Trace	9	0.020
F50880	Trace	F50910	Trace
1	0.002*	1	Trace
2	Trace	2	0.002*
3	0.046	3	0.034
4	0.004	4	0.026
5	0.002*	5	0.002*
6	0.002*	6	Trace
7	0.002*	7	Trace
8	Trace	8	Trace
9	0.002*	9	0.004
F50890	0.004	F50920	Trace
1	0.002*	1	0.008
2	Trace	2	0.272 - 0.266
3	0.260 - 0.278	3	0.002*

\* Estimated.

(Cont'd.)

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER



Certificate of Analysis

NO. 30365

Page 4 of 5

DATE: August 22, 1984

SAMPLE(S) OF: Core(257)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd. (Matheson)

Sample No.	Oz. Gold	Sample No.	Oz. Gold
F50924	Trace	F50954	0.002*
5	0.004	5	0.278 - 0.286
6	0.002*	6	0.048
7	Trace	7	0.022
8	Trace	8	0.008
9	0.008	9	Trace
F50930	Trace	F50960	Trace
1	0.002*	1	Trace
2	Trace	2	0.002*
3	Trace	3	Trace
4	Trace	4	Trace
5	Trace	5	Trace
6	Trace	6	Trace
7	Trace	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
F50940	Trace	F50970	0.002*
1	Trace	1	Trace
2	Trace	2	Trace
3	0.006	3	Trace
4	Trace	4	0.002*
5	0.004	5	Trace
6	Trace	6	Trace
7	0.006	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
F50950	Trace	F50980	Trace
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace

84-5

84-6

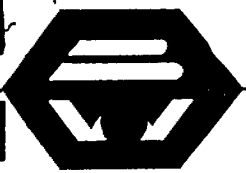
84-14

\* Estimated.

(Cont'd.)

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Signature



Certificate of Analysis

NO. 30365 Page 5 of 5 DATE: August 22, 1984
SAMPLE(S) OF: Core(257) RECEIVED: August, 1984
SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd. (Matheson)

Table with 4 columns: Sample No., Oz. Gold, Sample No., Oz. Gold. Contains data for samples F50984, F50990, F50993, and F51000.

\* Estimated.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Handwritten signature/initials



Certificate of Analysis

NO. 38606

Page 1 of 3

DATE: August 31, 1984

SAMPLE(S) OF: Core (179)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Robert Bennett
Maude Lake Gold Mines Limited

Table with 4 columns: Sample No., Gold/oz., Sample No., Gold/oz. containing analysis data for samples G057001 through G057060.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Handwritten signature and initials at the bottom right of the page.



Certificate of Analysis

NO. 38606

Page 2 of 3

DATE: August 31, 1984

SAMPLE(S) OF: Core (179)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Robert Bennett
Maude Lake Gold Mines Limited

Table with 4 columns: Sample No., Gold/oz., Sample No., Gold/oz. containing analysis data for samples G057061, G057070, G057080, G057090, G057100, and G057110.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Handwritten signature/initials



Certificate of Analysis

NO. 38606

Page 3 of 3

DATE: August 31, 1984

SAMPLE(S) OF: Core (179)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Robert Bennett
Maude Lake Gold Mines Limited

Table with 4 columns: Sample No., Gold/oz., Sample No., Gold/oz. containing analysis data for various sample numbers and gold content.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Signature area with handwritten scribbles and the word 'PER'.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

12

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 39376

Page 1 of 2

DATE: September 7, 1984

SAMPLE(S) OF: Core(117)

RECEIVED: September, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd.

Sample No.	Oz. Gold	Sample No.	Oz. Gold
G057158	Trace	G057188	Trace
9	Trace	9	Trace
G057160	Trace	G057190	Trace
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace
4	Trace	4	Trace
5	Trace	5	Trace
6	Trace	6	11.40 - 12.14
7	Trace	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
G057170	Trace	G057200	0.180 - 0.176
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace
4	Trace	4	Trace
5	Trace	5	Trace
6	0.022	6	Trace
7	0.006	7	Trace
8	Trace	8	Trace
9	0.090 - 0.100	9	Trace
G057180	0.104 - 0.102	G057210	0.140 - 0.144
1	0.744 - 0.646	1	Trace
2	0.322 - 0.338	2	Trace
3	Trace	3	Trace
4	Trace	4	Trace
5	0.006	5	Trace
6	Trace	6	Trace
7	Trace	7	Trace

84-16

84-18

(Cont'd.)

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER



Certificate of Analysis

NO. 39376

Page 2 of 2

DATE: September 7, 1984

SAMPLE(S) OF: Core(117)

RECEIVED: September, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd.

Sample No.	Oz. Gold	Sample No.	Oz. Gold
G057218	Trace	G057248	0.112 - 0.108
9	Trace	9	Trace
G057220	Trace	G057250	Trace
1	Trace	1	0.028
2	Trace	2	0.030
3	Trace	3	Trace
4	Trace	4	Trace
5	Trace	5	Trace
6	Trace	6	Trace
7	Trace	7	Trace
8	Trace	8	Trace
9	Trace	9	Trace
G057230	0.024	G057260	0.004
1	Trace	1	Trace
2	Trace	2	Trace
3	0.124 - 0.118	3	Trace
4	0.002*	4	Trace
5	0.010	5	0.010
6	0.050	6	Trace
7	0.002*	7	0.022
8	0.002*	8	0.034
9	0.002*	9	0.026
G257240	Trace	G057270	0.002*
1	Trace	1	0.020
2	0.006	2	Trace
3	0.002*	3	Trace
4	Trace	4	0.004
5	0.010		
6	0.040		
7	0.016		

84-18

84-9

\* Estimated.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER [Signature]







### Certificate of Analysis

NO. 40201 Page 2 of 2 DATE: September 13, 1984  
SAMPLE(S) OF: Core(102) RECEIVED: September, 1984  
SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Sample No.</u>	<u>Oz. Gold</u>
G57333	Trace	G57355	Trace
4	0.002*	6	Trace
5	0.002*	7	0.026
6	Trace	8	0.006
7	Trace	9	0.812 - 0.768
8	Trace	G57360	0.010
9	Trace	1	0.032
G57340	Trace	2	0.002*
1	Trace	3	Trace
2	Trace	4	Trace
3	Trace	5	0.236 - 0.224
4	Trace	6	0.226 - 0.214
5	0.002*	7	Trace
6	Trace	8	0.018
7	Trace	9	Trace
8	Trace	G57370	Trace
9	Trace	1	Trace
G57350	0.010	2	Trace
1	Trace	3	Trace
2	Trace	4	Trace
3	Trace	5	0.006
4	Trace	6	Trace

\* Estimated.



Certificate of Analysis

NO. 40390 Page 1 of 2 DATE: September 18, 1984
SAMPLE(S) OF: Core(131) RECEIVED: September, 1984
SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Oz. Gold, Sample No., Oz. Gold. Contains analysis data for samples G57377 through G57440 with handwritten annotations like '84-21' and '84-24'.

(Cont'd.)

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]



Certificate of Analysis

NO. 40390

Page 2 of 2

DATE: September 18, 1984

SAMPLE(S) OF: Core(131)

RECEIVED: September, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett, Maude Lake Gold Mines Ltd.

Sample No.	Oz. Gold	Sample No.	Oz. Gold
G57443	Trace	G57476	Trace
4	Trace	7	Trace
5	0.076	8	Trace
6	0.018	9	0.028
7	0.040	G57480	0.182 - 0.170
8	0.016	1	0.014
9	0.018	2	0.020
G57450	0.528 - 0.522	3	0.248 - 0.262
1	Trace	4	0.028
2	Trace	5	0.072
3	Trace	6	0.262 - 0.256
4	Trace	7	0.038
5	Trace	8	0.008
6	Trace	9	0.016
7	Trace	G57490	Trace
8	0.018	1	0.002*
9	0.002*	2	0.010
G57460	0.030	3	0.008
1	Trace	4	0.002*
2	0.050	5	0.018
3	0.008	6	0.054
4	Trace	7	0.090
5	0.068	8	Trace
6	Trace	9	0.010
7	Trace	G57500	0.142 - 0.140
8	0.032	1	0.010
9	0.002*	2	Trace
G57470	0.058	3	Trace
1	Trace	4	Trace
2	Trace	5	Trace
3	Trace	6	0.038
4	0.028	7	0.004
5	Trace		

\* Estimated.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER



Certificate of Analysis

NO. 41483

Page 1 of 2

DATE: October 2, 1984

SAMPLE(S) OF: Core (110)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for various sample numbers and gold content.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Handwritten signature



Certificate of Analysis

NO. 41483

Page 2 of 2

DATE: October 2, 1984

SAMPLE(S) OF: Core (110)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing multiple rows of sample analysis data.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

Handwritten signature



Certificate of Analysis

NO. 41761

Page 1 of 2

DATE: October 12, 1984

SAMPLE(S) OF: Core (76)

RECEIVED: October, 1984

SAMPLE(S) FROM: Maude Lake Gold Mines Ltd.

Sample No.	Gold oz.	Sample No.	Gold oz.
G057618	Trace	G057638	Trace
9	Trace	9	Trace
G057620	Trace	G057640	Trace
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace
4	Trace	4	Trace
5	Trace	5	Trace
6	Trace	6	0.090
7	Trace	7	Trace
8	Trace	8	Trace
9	Trace	9	0.028
G057630	Trace	G057650	0.064
1	Trace	1	Trace
2	Trace	2	Trace
3	Trace	3	Trace
4	Trace	4	Trace
5	0.002*	5	Trace
6	0.006	6	Trace
7	Trace	7	Trace

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

[Signature]



Certificate of Analysis

NO. 41761 Page 2 of 2 DATE: October 12, 1984
SAMPLE(S) OF: Core (76) RECEIVED: October, 1984
SAMPLE(S) FROM: Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for various sample numbers and gold weights.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]





Certificate of Analysis

NO. 42232

Page 1 of 3

DATE: October 24, 1984

SAMPLE(S) OF: Core (159)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for various sample numbers (G057694, G057700, G057710, G057720, G057724, G057730, G057740, G057750) and gold amounts (Trace, 0.008, 0.002\*, 0.006, 0.034, 0.014, 0.008, Trace, 0.014, 0.014, 0.014, 0.026, 0.020, 0.020, 0.030, 0.149 - 0.152, 0.012, 0.022, 0.008, Trace, Trace, 0.008, Trace, Trace, 0.014).

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]



Certificate of Analysis

NO. 42232

Page 2 of 3

DATE: October 24, 1984

SAMPLE(S) OF: Core (159)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G057754 through G057810.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Signature and PER label



Certificate of Analysis

NO. 42232 Page 3 of 3 DATE: October 24, 1984
SAMPLE(S) OF: Core (159) RECEIVED: October, 1984
SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for various sample numbers and gold amounts.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Signature and PER line



### Certificate of Analysis

NO. 42432

DATE: October 29, 1984

SAMPLE(S) OF: Core (2)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett  
Maude Lake Gold Mines Ltd.

<u>Sample No.</u>	<u>Silver oz.</u>	84-28
G057766	2.11**	
G057767	4.61**	

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



Certificate of Analysis

NO. 42431

Page 1 of 2

DATE: October 29, 1984

SAMPLE(S) OF: Core (107)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G057853 through G057900.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER [Signature]



Certificate of Analysis

NO. 42431 Page 2 of 2 DATE: October 29, 1984
SAMPLE(S) OF: Core (107) RECEIVED: October, 1984
SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G057907 through G057930 and G057934 through G057950.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

Signature/Stamp area with handwritten text and lines.



Certificate of Analysis

NO. 43336

Page 1 of 2

DATE: November 5, 1984

SAMPLE(S) OF: Core (90)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for samples G57960, G57970, G57980, G57983, G57990, and G58000.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]



Certificate of Analysis

NO. 43336

Page 2 of 2

DATE: November 5, 1984

SAMPLE(S) OF: Core (90)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for various sample numbers and gold/silver content.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]





Certificate of Analysis

NO. 43629

Page 1 of 2

DATE: November 8, 1984

SAMPLE(S) OF: Core (75)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G58050, G58060, G58070, and G58080.

\* Estimate

Handwritten signature or stamp at the bottom right of the page.



Certificate of Analysis

NO. 43629

Page 2 of 2

DATE: November 8, 1984

SAMPLE(S) OF: Core (75)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G58090, G58100, G58108, G58110, and G58120.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

Handwritten signature



Certificate of Analysis

NO. 43937

Page 1 of 2

DATE: November 14, 1984

SAMPLE(S) OF: Core (80)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for samples G58125 through G58160.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER [Signature]



Certificate of Analysis

NO. 43937

Page 2 of 2

DATE: November 14, 1984

SAMPLE(S) OF: Core (80)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing assay data for samples G58165-170 and G58180-200.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER. [Signature]



Certificate of Analysis

NO. 44784

DATE: November 19, 1984

SAMPLE(S) OF: Core (46)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis results for various sample numbers (G58205, G58210, G58220, G58228, G58230, G58240, G58250) and their corresponding gold content.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

Signature and PER line



### Certificate of Analysis

NO. 44783

DATE: November 19, 1984

SAMPLE(S) OF: Rock (13)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett  
Maude Lake Gold Mines Ltd.

<u>Sample No.</u>	<u>Gold oz.</u>	
F31401	0.044	ROCK SAMPLES
2	Trace	
3	Trace	
4	Trace	
5	0.160 - 0.158	
6	0.002*	
7	Trace	
8	Trace	
9	Trace	
F31410	Trace	
1	0.018	
2	0.002*	
3	0.540 - 0.538	

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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Certificate of Analysis

NO. 45510

Page 1 of 2

DATE: November 27, 1984

SAMPLE(S) OF: Core (78)

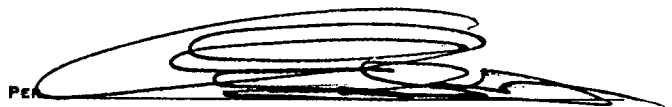
RECEIVED: Nov. 22, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. Includes handwritten '84-40' and '84-41' annotations.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.





Certificate of Analysis

NO. 45510

Page 2 of 2

DATE: November 27, 1984

SAMPLE(S) OF: Core (78)

RECEIVED: Nov. 22, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett
Maude Lake Gold Mines Ltd.

Table with 4 columns: Sample No., Gold oz., Sample No., Gold oz. containing analysis data for samples G58291, G58300, G58310, and G58320.

\* Estimate

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

Handwritten signature





### Certificate of Analysis

NO. 47259

DATE: December 11, 1984

SAMPLE(S) OF: Core (29)

RECEIVED: December, 1984

SAMPLE(S) FROM: Mr. R. A. Bennett  
Maude Lake Gold Mines Ltd.

<u>Sample No.</u>	<u>Gold oz.</u>	
G58329	Trace	84-39
G58330	Trace	
1	Trace	
2	Trace	
3	Trace	
4	Trace	
5	Trace	
6	Trace	
7	Trace	
8	Trace	
9	Trace	
G58340	Trace	
1	Trace	
2	Trace	
3	Trace	
4	Trace	
5	Trace	
6	Trace	
7	Trace	
8	Trace	
9	Trace	
G58350	Trace	
1	Trace	
2	Trace	
3	Trace	
4	Trace	
5	Trace	
6	Trace	
7	Trace	

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 

An Investigation of  
THE RECOVERY OF GOLD

from a sample

submitted by

MAUDE LAKE GOLD MINES LIMITED

(per F.C. Lendrum)

Progress Report No. 1

Project No. L.R. 2892

NOTE:

This report refers to the samples as received.

The practice of this Company in issuing reports of this nature is to require the recipient not to publish the report or any part thereof without the written consent of Lakefield Research.

LAKEFIELD RESEARCH  
A DIVISION OF FALCONBRIDGE LIMITED  
November 30, 1984

I N D E X

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I N T R O D U C T I O N

In a letter dated September 27, 1984, Mr. F. Clyde Lendrum requested us to conduct testwork on a sample of gold ore from Maude Lake Gold Mines Limited to determine the amenability of the ore to straight cyanidation. The tests incorporated the following tasks:

1. Head sample assay
2. Bond Work Index determination
3. Heavy liquid separation and mineralogical examination of products
4. Straight cyanidation with various grinds and retention times

In a letter dated October 22, 1984, Mr. Lendrum requested an additional flotation test, followed by cyanidation on the flotation products.

LAKEFIELD RESEARCH

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S U M M A R Y

1. Head Sample

Two separate head samples were riffled out and each was assayed in duplicate for gold and silver. The No.1 head sample was further assayed for As, S, SiO<sub>2</sub> and pyrrhotite. The results are shown in Table No. 1.

Table No. 1

Head Sample Assay

<u>Element</u>	<u>Average Assay</u>	<u>Individual Duplicate Assay</u>
Au	4.29 g/t ±0.36	{ No. 1, 3.97, 3.97 No. 2, 4.62, 4.59
Ag	3.5 g/t ±0.1	{ No. 1, 3.4, 3.4 No. 2, 3.5, 3.6
As	0.13 %	
S	2.09 %	
SiO <sub>2</sub>	49.2 %	
Fe(Pyrrhotite)	<0.08 %	

The averaged calculated gold assay from this testwork was  
4.28 ± 0.27 g/t.

Summary - Continued

2. Bond Work Index Determination

The Bond Work Index was determined by a standard ball mill closed circuit grindability test. The particle size of mill feed was 10 mesh (as received) and the fineness of classification was 150 mesh. The results obtained are summarized as follows:

Work Index	15.6 (kWh/short ton)
Screen size test in $\mu\text{m}$	104
Net grams of undersize produced per revolution of test mill	1.32
Size in $\mu\text{m}$ with 80 % of test product passes	81.9
Size in $\mu\text{m}$ with 80 % of test feed passes	94.9

3. Heavy Liquid Separation and Mineralogical Examination

A 1000 gram sample was treated with acetylene tetrabromide of specific gravity 2.9. The float fraction was assayed for gold. The sink fraction was briquetted and polished for microscopic examination in reflected light.

The result of the heavy liquid separation is summarized in Table No. 2. 21.4 % weight was heavier than specific gravity 2.9 and contained 60.5 % of the total gold.

Table No. 2

Result of Heavy Liquid Separation

Product	Weight %	Assay Au g/t	% Au Distribution
Sink at s.g. 2.9	21.42	12.10*	60.5
Float at s.g. 2.9	78.58	2.15	39.5
Head (Calc.)	100.00	4.28**	100.0

\* Calculated

\*\* Average head assay

Summary - Continued

3. Heavy Liquid Separation and Mineralogical Examination - Cont'd

There were several fine gold particles in the sink fraction. Twelve particles of gold were present as inclusions in a pyrite particle. Size of these gold particles measured one micrometre and smaller in section. The remaining gold particles were between two and four micrometres in section. The opaque minerals other than pyrite included arsenopyrite, pyrrhotite, chalcopyrite, plus traces of covellite, bornite, chalcocite, sphalerite and galena. Other gangue minerals were quartz, chlorite, mica, goethite and alteration products.

4. Cyanidation Test

Four cyanidation tests were conducted to investigate the effects of grind and retention time on the gold extraction. Samples of 1000 grams were ground in a ball mill for 15, 20 and 25 minutes respectively. The ground pulp was filtered and split into two equal parts. The 500 gram portions were pulped with fresh water to 33% solids in a 2 litre bottle. The pH of the pulp was adjusted to 10.5 with lime. Cyanide at 0.5 g/L NaCN was added and the cyanidation was carried out on rolls for one 24 hour or 48 hour stage. The results are summarized in Table No. 3.

The gold extraction improved slightly when increasing the grind from 83.7 % to 94.1 % minus 200 mesh. Retention time beyond 24 hours had no effect on the extraction of gold. The best gold extraction was 83.5 % after grinding to 94 % minus 200 mesh and leaching for 24 hours. The final residue assayed 0.74 g/t Au. The reagent consumption was 1.35 kg/t NaCN and 0.25 kg/t CaO.

Summary - Continued

4. Cyanidation Test - Cont'd

Table No. 3

Results of Cyanidation Test

Test No.	Grind % -200M	Time Hours	NaCN, kg/t		CaO, kg/t		Residue Au g/t	% Au Extraction	Calc. Head Au g/t
			Added	Cons.	Added	Cons.			
1	83.7	24	2.00	1.12	0.25	0.25	0.82	80.6	4.22
2	94.1	24	2.00	1.35	0.25	0.25	0.74	83.5	4.47
3	98.0	24	2.25	1.51	0.25	0.25	0.67	83.0	3.95
5	94.1	48	2.50	1.50	0.37	0.35	0.75	83.8	4.63

5. Flotation and Cyanidation Test

In test No. 6, a 2000 gram sample was ground to 58 % minus 200 mesh with 50 g/t collector 1:1 343/355, 4 g/t AF208 and 4 g/t AF25. The pulp was transferred to a Denver 1000 g D-1 flotation cell and conditioned with MIBC for 1 minute. Flotation was performed at three 5-minute stages with additional 25 g/t 1:1 343/355 between each stage. The rougher concentrate was combined and cleaned once in a Denver 500 g D-1 flotation cell. A small amount of sample from each product was removed for gold assay.

The cleaner concentrate and the cleaner tailing were combined, reground to 98 % minus 400 mesh in a pebble mill, after adjusting the pulp density to 33 % solids and aerated with lime at pH 10.5 for 20 hours. Cyanidation was carried out on rolls for 48 hours at a solution strength of 0.5 g/L NaCN

The flotation rougher tailing was reground in a ball mill to 95 % minus 200 mesh and cyanided with 0.5 g/L NaCN at pH 10.5 for 48 hours.

Table No. 4 shows the result of the flotation test. With the concentration ratio of 4.89, the rougher concentrate contained 91 % of the gold and assayed 17.5 g/t Au.



Summary - Continued

5. Flotation and Cyanidation Test - Cont'd

The rougher tailing assayed 0.45 g/t. Increasing the concentration ratio to 9.37 by one cleaning stage, the cleaner concentrate contained 86.3 % gold and assayed 31.8 g/t Au.

Table No. 5 shows the cyanidation results obtained on the flotation products. The gold extraction from the rougher concentrate was 84.4 % leaving a residue that assayed 2.81 g/t Au. The gold extraction from the rougher tailing was 80.2 % leaving, a residue that assayed 0.09 g/t Au. The overall gold extraction was 84 %, i.e. 77.1 % from the concentrate and 6.9 % from the tailing. The combined cyanide residue was 0.66 g/t Au.

Table No. 4

Result of Flotation Test (Test No. 6)

Product	Weight %	Assay Au g/t	% Au Distribution
1st Cleaner Conc.	10.67	31.8	86.3
1st Cleaner Tail.	9.78	1.85	4.6
Rougher Tailing	79.55	0.45	9.1
Head (Calculated)	100.00	3.93	100.0

Table No. 5

Results of Flotation and Cyanidation

Test No.	Sample	NaCN, kg/t		CaO, kg/t		Residue Au g/t	% Au Extraction		Calc. Head Au g/t
		Added	Cons.	Added	Cons.		Ind.	O'all	
6A	Ro. Conc.	3.09	2.10	1.72	1.72	2.81	84.4	77.1	18.0
6B	Ro. Tail.	3.16	2.56	0.54	0.47	0.09	80.2	6.9	0.45

Summary - Continued

6. Acid Consuming Potential Test

A 10 gram pulverized head sample was slurried in 100 mL distilled water. A 1 N H<sub>2</sub>SO<sub>4</sub> solution was used to stabilize the pH of the slurry at 3.5. The total amount of the acid required was used to calculate the acid consuming ability. The sulphur content in the sample was used to calculate the acid producing potential. Table No. 6 summarizes the testing result in duplicate. The initial pH of the slurry was 9.2. The acid consuming ability was 225 kg/t, while the acid producing potential was 64 kg/t. The difference of acid producing potential and acid consuming ability is a negative, the sample would not be an acid producer.

Table No. 6

Results of Acid Producing and Consuming Potential

Test No.	% S (1)	Theoretical Acid Production Potential kg/t(2)	Acid Consuming Ability kg/t (3)	(2)-(3)	Expected Acid Producer
A	2.09	64.0	220	-156	No
B	2.09	64.0	230	-166	No

DISCUSSION

The sample submitted was classified as "hard ore" with a Bond Work index of 15.6 at a separation size of 150 mesh. By direct cyanidation the highest gold recovery was just under 84 %, regardless of fineness of grind (84 to 98 % -200 mesh) and contact time (24 to 48 hours). In contrast by flotation 90 % of the gold was recovered in 20 % of the weight at a grind of 58 % minus 200 mesh and by heavy liquid separation 60 % of the gold was recovered in 21 % of the weight at minus 10 mesh (16 % -200 mesh). Again, after regrinding of the flotation concentrate only 84 % of the gold was dissolved by cyanide leaching.

All test results confirm the mineralogical examination of the sink fraction.

Some gold is present as small, exposed flakes and the bulk of the gold is with the sulphides in the form of finely disseminated particles. By fine grinding only about 80 % of the gold is exposed and can be dissolved by contact with a cyanide solution.

Further gold recovery could be expected after decomposition of the sulphides.

SAMPLE PREPARATION

About 30 kilograms of Maude Lake gold ore sample was received at Lakefield. 10 kg was riffled out for work index determination. An assay head sample and twenty 1 kg charges were prepared for the testwork.

DETAILS OF TESTS

Bond Ball Mill Closed Circuit Grindability Test

Sample: Maude Lake Gold Mines

Mesh of Grind: -10 Mesh (as received)

Feed: 19.2 % passing 150 mesh

Cycle	New Feed g	Number of Revolution	Grams of minus 150 mesh			
			In Mill Product	In Mill Feed	Net Product	Net Per Revolution
1	1340.3	100	349.2	250.4	98.8	0.99
2	349.2	309	406.4	67.0	339.4	1.10
3	406.4	268	401.2	78.0	323.2	1.21
4	401.2	245	380.5	77.0	303.5	1.24
5	380.5	242	379.3	73.1	306.2	1.27
6	379.3	236	381.4	72.8	308.6	1.31
7	381.4	229	377.9	73.2	304.7	1.33
8	377.9	226	372.8	72.6	300.2	1.33
9	372.8	227	366.6	71.6	295.0	1.30

Unit Volume (700 mL) = 1304.3 g in mill : Equivalent to 1863.3 kg/m<sup>3</sup> at minus 10 mesh

Ideal potential product = 373.0 g

Average of last 3 periods : 372.4 g : 250.4 % circulating load  
: 1.32 net g minus 150 mesh per revolution

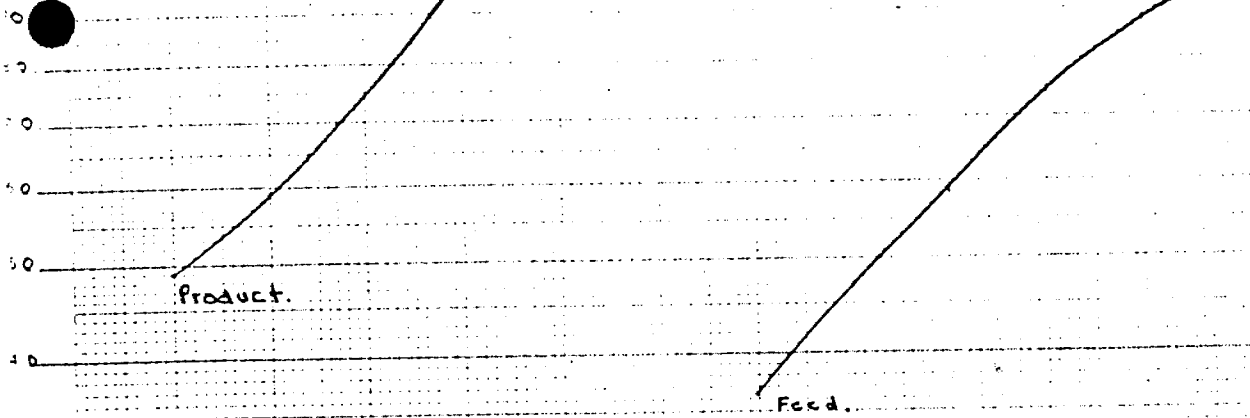
Bonds Formula

$$W_i = 44.5 / (P_1)^{0.23} \times (Gbp)^{0.82} \left( \frac{10}{\sqrt{P}} - \frac{10}{\sqrt{F}} \right)$$

Where:  $W_i$  = Work Index = 15.61  
 $P_1$  = Screen size test in microns = 104  
 $Gbp$  = Net grams of undersize produced per revolution of test mill = 1.32  
 $P$  = Size in microns which 80 percent of test product passes = 81.9  
 $F$  = Size in microns which 80 percent of test feed passes = 949

MESH SIZE

400 270 200 150 100 65 48 35 28 20 14 10



Product.

Feed.

2292 - BUI DETERMINATION  
750 MESH SCREEN

% Passes Curve

GRAPHIC COMPANY'S CANADA LTD.  
MADE IN CANADA

6.3 SEMI-LOGARITHMIC, 2 CYCLES X 10 TO THE HALF INCH

Bond Work Index - Continued

Screen Analyses

-6 Mesh

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 10	0.5	0.5	99.5
14	11.0	11.5	88.5
20	14.2	25.7	74.3
28	15.5	41.2	58.8
35	11.7	52.9	47.1
48	10.7	63.6	36.4
65	7.4	71.0	29.0
100	5.9	76.9	23.1
150	3.9	80.8	19.2
200	3.1	83.9	16.1
270	2.5	86.4	13.6
400	1.6	88.0	12.0
- 400	12.0	100.0	-
Total	100.0	-	-

Bond Work Index Oversize

+ 10	0.1	0.1	99.9
14	1.4	1.5	98.5
20	1.7	3.2	96.8
28	2.3	5.5	94.5
35	3.4	8.9	91.1
48	7.9	16.8	83.2
65	15.6	32.4	67.6
100	29.1	61.5	38.5
150	35.2	96.7	3.3
- 150	3.3	100.0	-
Total	100.0	-	-

Bond Work Index Undersize

+ 150	2.9	2.9	97.1
200	22.5	25.4	74.6
270	15.5	40.9	59.1
400	10.1	51.0	49.0
- 400	49.0	100.0	-
Total	100.0	-	-

Test No. 1

Purpose: To investigate the recovery of gold at a coarse grind.

Procedure: The sample was pulped with water in a four litre bottle. NaCN and lime were added and the cyanidation was carried out on rolls in one 24 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 1000 g -10 mesh ore sample

Solution Volume: 2000 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 1 kg sample ground in the lab ball mill at 65 % solids for 15 minutes.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
0-2	1.05	0.33	1.0	0.25	0.20	0.06	0.80	0.19	10.6-10.4
2-30	0.84	0	0.80	0	0.80	0	0.20	0.06	10.7-10.6
3-5	0.21	0	0.20	0	1.0	0	0	0	10.6-10.5
5-24	0	0	0	0	0.88	0	0.12	0	10.5-10.2
Total	2.10	0.33	2.0	0.25	0.88	0	0.12	0.25	-

Reagent Consumption (kg/t of cyanide feed)

NaCN: 1.12 CaO: 0.25



Test No. 1 - Continued

Metallurgical Results

Product	Amount	Assays, mg/L, g/t	% Distribution
		Au	Au
24 h Preg'n+Wash Solution	4000 mL	0.85	80.6
24 h Cyanide Residue	999.4 g	0.82	19.4
Head (Calculated)	999.4 g	4.22	100.0

Screen Analyses

24 Hour Cyanide Residue

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 65	0.8	0.8	99.2
100	1.3	2.1	97.9
150	4.8	6.9	93.1
200	9.4	16.3	83.7
270	11.5	27.8	72.2
400	12.0	39.8	60.2
- 400	60.2	100.0	-
Total	100.0	-	-

Test No. 2

Purpose: To investigate the effect of a finer grind on the recovery of gold.

Procedure: The sample was pulped with water in a four litre bottle. NaCN and lime were added and the cyanidation was carried out on rolls in one 24 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 1000 g -10 mesh ore samples

Solution Volume: 2000 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 1 kg sample ground in the lab ball mill at 65 % solids for 20 minutes.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
0-2	1.05	0.33	1.0	0.25	0.10	0.02	0.90	0.23	10.6-10.4
2-3	0.95	0	0.90	0	0.90	0	0.10	0.02	10.7-10.6
3-5	0.11	0	0.10	0	1.0	0	0	0	10.6-10.5
5-24	0	0	0	0	0.65	0	0.35	0	10.5-10.1
Total	2.11	0.33	2.0	0.25	0.65	0	1.35	0.25	-

Reagent Consumption (kg/t of cyanide feed) NaCN: 1.35 CaO: 0.25

Test No. 2 - Continued

Metallurgical Results

Product	Amount	Assays, mg/L, g/t	% Distribution
		Au	Au
25 h Preg'n+Wash Solution	4740 mL	0.79	83.5
24 h Cyanide Residue	1002.6 g	0.74	16.5
Head (Calculated)	1002.6 g	4.47	100.0

Screen Analyses

24 Hour Cyanide Residue

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 65	0.4	0.4	99.6
100	0.2	0.6	99.4
150	1.5	2.1	97.9
200	3.8	5.9	94.1
270	9.5	15.4	84.6
400	11.0	26.4	73.6
- 400	73.6	100.0	-
Total	100.0	-	-

Test No. 3

Purpose: To investigate the effect of a finer grind on the recovery of gold.

Procedure: The sample was pulped with water in a four litre bottle. NaCN and lime were added and the cyanidation was carried out on rolls in one 24 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 1000 g minus 10 mesh ore sample

Solution Volume: 2000 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 1 kg sample ground in the lab ball mill at 65 % solids for 25 minutes.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
0-2	1.05	0.33	1.0	0.25	0.10	0.02	0.90	0.23	10.6-10.2
2-3	0.95	-	0.90	-	0.75	0	0.25	0.02	10.6-10.5
3-5	0.26	0	0.25	0	0.90	0	0.10	0	10.5-10.4
5-24	0.11	0	0.10	0	0.74	0	0.26	0	10.5-10.2
Total	2.37	0.33	2.25	0.25	0.74	0	1.51	0.25	-

Reagent Consumption (kg/t of cyanide feed) NaCN: 1.51 CaO: 0.25

Test No. 3 - Continued

Metallurgical Results

Product	Amount	Assays, mg/L, g/t	% Distribution
		Au	Au
24 h Preg'n+Wash Solution	4100 mL	0.80	83.0
24 h Cyanide Residue	1000 g	0.67	17.0
Head (Calculated)	1000 g	3.95	100.0

Screen Analyses

24 Hour Cyanide Residue

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 65	0.3	0.3	99.7
100	0.1	0.4	99.6
150	0.1	0.5	99.5
200	1.5	2.0	98.0
270	5.8	7.8	92.2
400	8.9	16.7	83.3
- 400	83.3	100.0	-
Total	100.0	-	-

●  
Test No. 4A+B

Purpose: To calculate the acid producing potential of the sulphide tailing ore and their waste waters.

Procedure: In duplicate 10 grams of pulverized sample were placed into 100 mL of distilled water and stirred for 15 minutes. After which a natural pH of the sample was then recorded. The sample was then titrated to pH 3.5 with 1.0 Normal sulphuric acid and left stirring. Approximately every 30 minutes the pH of the sample was taken and the acid addition continued to maintain a pH of 3.5.

Sample: 2 x 10 grams of pulverized head sample

Acid: 1.0 Normal sulphuric acid

Acid Producing Potential

Data

Date	Time	Test A		Test B	
		Initial pH	Titration Volume mL	Initial pH	Titration Volume mL
09/10/84	0	9.2	-	9.2	-
	8:30 am	9.2-3.5	15.4	9.2-3.5	15.4
	9:00	4.6-3.5	1.6	4.6-3.5	1.6
	9:30	4.6-3.5	1.6	4.7-3.5	1.6
	10:00	4.6-3.4	1.6	4.6-3.4	1.6
	10:30	4.8-3.5	2.0	4.8-3.5	2.0
	11:00	4.8-3.5	1.0	5.0-3.5	1.0
	11:30	4.8-3.5	2.0	4.8-3.5	2.0
	12:00	4.6-3.5	2.0	4.6-3.5	2.0
	1:00 pm	5.0-3.5	2.0	5.0-3.5	2.0
	1:30	4.6-3.5	2.0	4.6-3.5	2.0
	2:00	4.4-3.5	2.0	4.6-3.5	2.0
	2:30	4.4-3.5	1.0	4.6-3.5	1.0
	3:00	4.4-3.5	1.0	4.5-3.5	1.0
	3:30	4.2-3.4	1.0	4.4-3.4	1.0
	4:00	3.8-3.5	1.0	4.4-3.4	1.0
	4:30	3.8-3.5	1.0	4.4-3.5	1.0
10/10/84	8:00 am	4.8-3.5	1.0	4.8-3.5	1.0
	8:30	3.8-3.5	1.0	3.8-3.5	1.0
	9:00	3.8-3.5	0.2	3.5	0
	9:30	3.8-3.5	0.3	4.1-3.5	0.5
	10:00	3.8-3.5	0.4	4.1-3.5	0.5
	10:30	3.8-3.5	0.4	4.0-3.5	0.5
	11:00	3.8-3.5	0.4	4.0-3.5	0.5
	11:30	3.8-3.5	0.4	4.1-3.5	0.5
	12:00	3.8-3.5	0.4	4.1-3.5	0.5
	12:30 pm	3.8-3.5	0.5	4.1-3.5	0.5
	1:00	3.8-3.5	0.4	4.1-3.5	0.5
	1:30	3.6-3.4	0.2	4.0-3.5	0.5
	2:00	3.5	0	3.8-3.5	0.4
	2:30	3.8-3.5	0.4	3.8-3.5	0.4
	3:00	3.5	0	3.8-3.5	0.4
	3:30	3.8-3.5	0.4	3.8-3.5	0.4
	4:00	3.8-3.5	0.4	3.8-3.5	0.4
4:30	3.5	0	3.6-3.5	0.2	
5:00	3.5	0	3.5	0	
Total			45.0		46.9

Acid Producing Potential - Cont'd

Test A

$$\begin{aligned}\text{Acid Consuming Ability (kg/t)} &= \frac{45 \text{ mL of } 1.0 \text{ N H}_2\text{SO}_4 \times 0.049 \times 10^6}{10} \\ &= 220.5 \text{ (kg/t)}\end{aligned}$$

$$\begin{aligned}\text{Acid Producing Potential (kg/t)} &= \frac{2.09}{100} \times 10^6 \times \frac{98}{32} \\ &= 64.0 \text{ (kg/t)}\end{aligned}$$

Test B

$$\begin{aligned}\text{Acid Consuming Ability (kg/t)} &= \frac{46.9 \text{ mL of } 1.0 \text{ N H}_2\text{SO}_4 \times 0.049 \times 10^6}{10} \\ &= 229.81 \text{ (kg/t)}\end{aligned}$$

$$\begin{aligned}\text{Acid Producing Potential (kg/t)} &= \frac{2.09}{100} \times 10^6 \times \frac{98}{32} \\ &= 64.0 \text{ (kg/t)}\end{aligned}$$



Test No. 5

Purpose: To investigate the recovery of gold with a longer retention time.

Procedure: The sample was pulped with water in a four litre bottle. NaCN and lime were added and the cyanidation was carried out on rolls in one 48 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 1000 g -10 mesh ore sample

Solution Volume: 2000 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 1 kg sample ground in the lab ball mill at 65 % solids for 20 minues.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
0-2	1.05	0.33	1.0	0.25	0.20	0.04	0.80	0.23	10.6-10.3
2-18	0.84	0.05	0.80	0.04	0.50	0	0.50	0.08	10.8-10.2
18-26	0.53	0.05	0.50	0.04	0.90	0	0.10	0.04	10.6-10.5
26-42	0.11	0	0.10	0	0.90	0	0.10	0	10.5-10.2
92-48	0.11	0.05	0.10	0.04	1.0	0.04	0	0	10.5-10.4
Total	2.64	0.48	2.50	0.37	1.0	0.04	1.50	0.35	-

Reagent Consumption (kg/t of cyanide feed) NaCN: 1.50 CaO: 0.35

Metallurgical Results

Product	Amount	Assays, mg/L, g/t	% Distribution
		Au	Au
48 h Pregnant+Wash Sol'n	4000 mL	0.97	83.8
48 h Cyanide Residue	998.8 g	0.75	16.2
Head (Calculated)	998.8 g	4.63	100.0

Test No. 6

Purpose: To float sulphide and precious metal minerals by standard conditions, followed by cyanidation on the products.

Procedure: Bulk flotation, followed by one stage cleaner.

Feed: 2 kg minus 10 mesh sample

Grind: 20 minutes per 2 kg sample in a laboratory ball mill at 65 % solids.

Conditions:

Stage	Reagents Added, g/tonne				Time, minutes			pH
	AX343/ 355	AF208	AF25	MIBC	Grind	Cond.	Froth	
Grind	50	-	-	-	20	-	-	-
Condition	-	4	4	-	-	1	-	8.2
Rougher 1	-	-	-	-	-	-	5	-
Rougher 2	25	-	-	-	-	1	5	-
Rougher 3	25	-	-	10	-	-	5	-
Cleaner	-	-	-	-	-	-	8	-

Stage	Rougher	Cleaner
Flotation Cell	Denver 1000 g D-1	Denver 500 g D-1
Speed: r.p.m.	1800	1500

Metallurgical Results

Product	Weight	Assays, g/t	% Distribution
	%	Au	Au
1. 1st Cleaner Conc.	10.67	31.8	86.3
2. 1st Cleaner Tail.	9.78	1.85	4.6
3. Rougher Tailing	79.55	0.45	9.1
Head (Calculated)	100.00	3.93	100.0

Calculated Grades and Recoveries

Products 1 and 2	20.45	17.5	90.9
------------------	-------	------	------

Test No. 6 - Continued

Flotation + Cyanidation

Product	Amount	Weight %*	Assays, mg/L, g/t	% Distribution
			Au	Au
1. Cy. Leach+Wash Sol'n A (Ro. Conc)	1920 mL	-	3.12	77.1
2. Cy. Leach+Wash Sol'n B (Ro. Tail)	4900 mL	-	0.11	6.9
3. Cyanide Residue A (Ro. Conc)	394.8 g	20.45	2.81	14.3
4. Cyanide Residue B (Ro. Tail)	1484.5 g	79.55	0.09	1.7
Head (Calculated)	1879.3 g	100.00	4.13	100.0

\* Based on flotation products (before removing assay grab sample)

Calculated Grades and Recoveries

Flot. Ro. Conc. Products 1+2	-	1920 mL	3.70	91.4
Flot. Ro. Tail. Products 2+4	-	4900 mL	0.14	8.6

Screen Analyses

Rougher Tailing

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 35	0.7	0.7	99.3
48	0.8	1.5	98.5
65	3.1	4.6	95.4
100	8.2	12.8	87.2
150	14.0	26.8	73.2
200	15.1	41.9	58.1
270	10.7	52.6	47.4
400	8.5	61.1	38.9
- 400	38.9	100.0	-
Total	100.0	-	-

Test No. 6A

Purpose: To cyanide the flotation rougher concentrate.

Procedure: The sample was pulped with water in a two litre bottle. Aerated with lime for 20 hours. NaCN and lime were added and the cyanidation was carried out on rolls in one 48 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 395 g rougher concentrate (1st cleaner concentrate + tailing).

Solution Volume: 790 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 40 minutes in a laboratory pebble mill at 65 % solids.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
<u>Aeration</u>									
0-20	-	0.70	-	0.53	-	-	-	-	10.6- 9.0
<u>Cyanidation</u>									
0-3	0.41	0.20	0.39	0.15	0.08	-	0.31	-	10.8-10.8
3-6	0.33	-	0.31	-	0.15	-	0.24	-	10.8-10.8
6-12	0.25	-	0.24	-	0.24	-	0.15	-	10.8-10.8
12-24	0.16	-	0.15	-	0.30	-	0.09	-	10.8-10.6
24-34	0.09	-	0.09	-	0.35	-	0.04	-	10.6-10.5
34-48	0.04	-	0.04	-	0.39	0	0	0.68	10.5-10.3
Total	1.28	0.90	1.22	0.68	0.39	0	0.83	0.68	-

Reagent Consumption (kg/t of cyanide feed) NaCN: 2.10 CaO: 1.72

Test No. 6A - Continued

Metallurgical Results

Product	Amount	Assays, %, mg/L, g/t					% Distribution				
		Au	Ag	Cu	As	S	Au	Ag	Cu	As	S
Cy. Preg'n+Wash Sol'n	1920 mL	3.12	2.06	192.0	5.0		84.4	54.7	99.99	97.8	-
Cyanide Residue	394.8 g	2.81	8.30	0.10	0.54	10.1	15.6	45.3	0.01	2.2	-
Head (Calculated)	394.8 g	17.98	18.3	0.093	0.002	-	100.0	100.0	100.00	100.0	-

Screen Analyses

Cyanide Residue

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 200	0.1	0.1	99.9
270	0.4	0.5	99.5
400	1.2	1.7	98.3
- 400	98.3	100.0	-
Total	100.0	-	-

Test No. 6B

Purpose: To cyanide the flotation rougher tailing.

Procedure: The sample was pulped with water in a 10 litre pail. NaCN and lime were added and the cyanidation was carried out with a mechanical mixer in one 48 hour stage. The pulp was filtered and the residue washed three times with water.

Feed: 1480 g rougher tailing

Solution Volume: 2960 mL Pulp Density 33 % solids

Solution Composition: 0.5 g/L NaCN

pH Range: 10.5 with Ca(OH)<sub>2</sub>

Grind: 20 minutes in a laboratory ball mill at 65 % solids.

Reagent Balance:

Time Hours	Added, Grams				Residual		Consumed		pH
	Actual		Equivalent		Grams		Grams		
	NaCN	Ca(OH) <sub>2</sub>	NaCN	CaO	NaCN	CaO	NaCN	CaO	
0-6	1.56	0.66	1.48	0.50	0.74	-	0.74	-	10.6-10.3
6-20	0.78	0.20	0.74	0.15	0.05	-	1.43	-	10.8-10.0
20-28	1.51	0.20	1.43	0.15	0.18	-	0.30	-	10.7-10.6
28-36	0.31	-	0.30	-	0.74	-	0.74	-	10.6-10.6
36-48	0.78	-	0.74	-	0.89	0.10	0.59	0.70	10.6-10.6
Total	4.94	1.06	4.69	0.80	0.89	0.10	3.80	0.70	-

Reagent Consumption (kg/t of cyanide feed) NaCN: 2.56 CaO: 0.47

Test No. 6B - Continued

Metallurgical Results

Product	Amount	Assays, mg/L, g/t	% Distribution Au	
		Au	Ind.	O'all
Cy. Preg'n+Wash Sol'n	4900 mL	0.11	80.2	7.3
Cyanide Residue	1484.5 g	0.09	19.8	1.8
Head (Calculated)	1484.5 g	0.45	100.0	9.1

Screen Analyses

Cyanide Residue

Mesh Size (Tyler)	% Retained		% Passing Cumulative
	Individual	Cumulative	
+ 100	0.1	0.1	99.9
150	0.7	0.8	99.2
200	3.5	4.3	95.7
270	8.2	12.5	87.5
400	12.3	24.8	75.2
- 400	75.2	100.0	-
Total.	100.0	-	-

MINERALOGY



I N T R O D U C T I O N

A sample identified as Maude Lake Head, sg > 2.90 fraction was received in the Mineralogy laboratory from Clyde Lendrum. The sample was submitted for determination of the association of the contained gold and for a general mineralogical examination.

SUMMARY

Twelve particles of gold were identified, all of which were present as inclusions in pyrite. Six of these gold particles measured one micrometre and smaller in section. The remaining gold particles were between two and four micrometres in section. The opaque minerals other than pyrite included arsenopyrite, pyrrhotite, chalcopyrite plus traces of covellite, bornite, chalcocite, sphalerite and galena. Other gangue minerals were quartz, chlorite, mica, goethite and alteration products.

PREPARATION AND PROCEDURE

A portion of the sample was briquetted and polished for microscopic examination in reflected light. Another portion of the sample was pulverized and submitted for x-ray powder diffractometry.

RESULTS

Gold was identified as small inclusions in pyrite and in no other association. Six particles of gold measured one micrometre in section while the remaining seven were elongated in one direction measuring between two and four micrometres in length and one micrometre in thickness (breadth and width). Arsenopyrite and pyrrhotite were present associated with one another, with pyrite and as discrete particles. Pyrrhotite often was partly oxidized to goethite. Chalcopyrite was present as one discrete grain and associated with pyrite and pyrrhotite forming mixed/middling particles and as inclusions in pyrite. Bornite, covellite and chalcocite were present associated with chalcopyrite or discrete grains, all after chalcopyrite. The traces of sphalerite and galena were identified as inclusions in pyrite.

The non-opaque minerals identified included quartz, mica, feldspar and goethite. Some secondary non-opaque alteration minerals were seen but no gold minerals were identified in any of the non-opaques.

LAKEFIELD RESEARCH  
A Division of Falconbridge Limited  
Lakefield, Ontario  
November 30, 1984 / slk

# APPENDIX 4.

REPORT ON GROUND GEOPHYSICAL  
SURVEYS  
CONDUCTED OVER THE MAUDE LAKE  
MINES MAIN CLAIM GROUP  
BEATTY TOWNSHIP  
LARDER LAKE MINING DIVISION  
NORTHERN ONTARIO

On Behalf Of:

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By:

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JVX

REPORT ON GROUND GEOPHYSICAL SURVEYS  
CONDUCTED OVER THE MAUDE LAKE MINES  
MAIN CLAIM GROUP  
BEATTY TOWNSHIP  
HARDER LAKE MINING DIVISION  
NORTHERN ONTARIO

On Behalf Of

MAUDE LAKE GOLD MINES LTD.

1. INTRODUCTION

Induced polarization and resistivity surveys were conducted on behalf of Maude Lake Gold Mines Ltd. by JVX Ltd., between August 24th and August 27th, 1984.

The object of the survey was to identify geology favourable for gold mineralization that has been mapped along strike, approximately one-half mile east of the survey area. The lithology consists of a peridotite unit of expected width 200-300 feet and more importantly, an altered (silicified), sheared basalt, that is known to host gold mineralization in the area.

Short segments of eight grid lines were surveyed. In total 17,800 line-feet of pole-dipole array induced polarization/resistivity were conducted with an 'a' spacing of 100 feet and with n=1 to 6. A total of 872 readings were obtained.

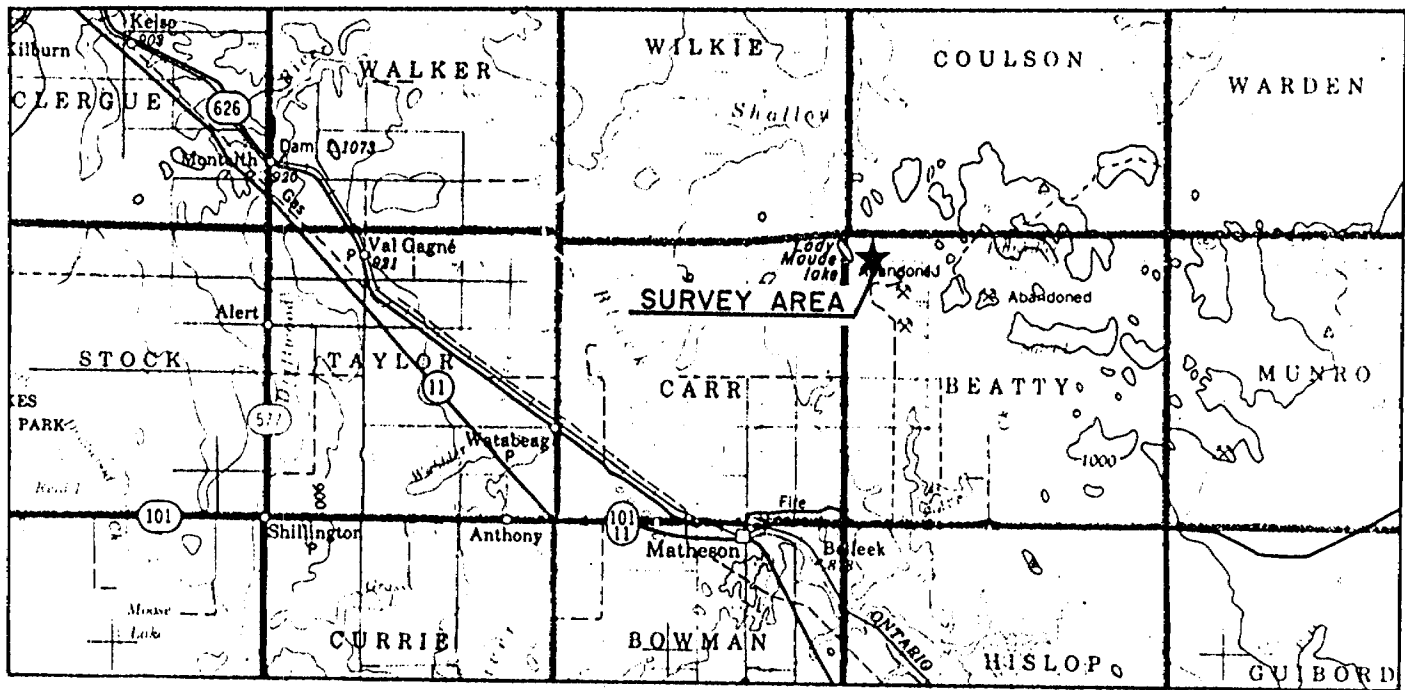
This report includes all IP and resistivity data, spectral IP data and an interpretation of these data.

2. SURVEY LOCATION

The Maude Lake Gold Mines property is accessible by secondary road off the Beatty-Carr Township Road, which in turn is accessed from Highway 101, east of Matheson. (Figure 1)

3. SURVEY GRID AND SURVEY COVERAGE

The survey lines were oriented north-south, spaced 400 feet apart and cut and picketed at 100 foot intervals. Lines 44W to 24W and lines 18W and 14W were surveyed. (Figure 2) The survey coverage achieved along each survey line is outlined in Table 1 below.



LOCATION MAP

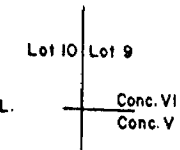
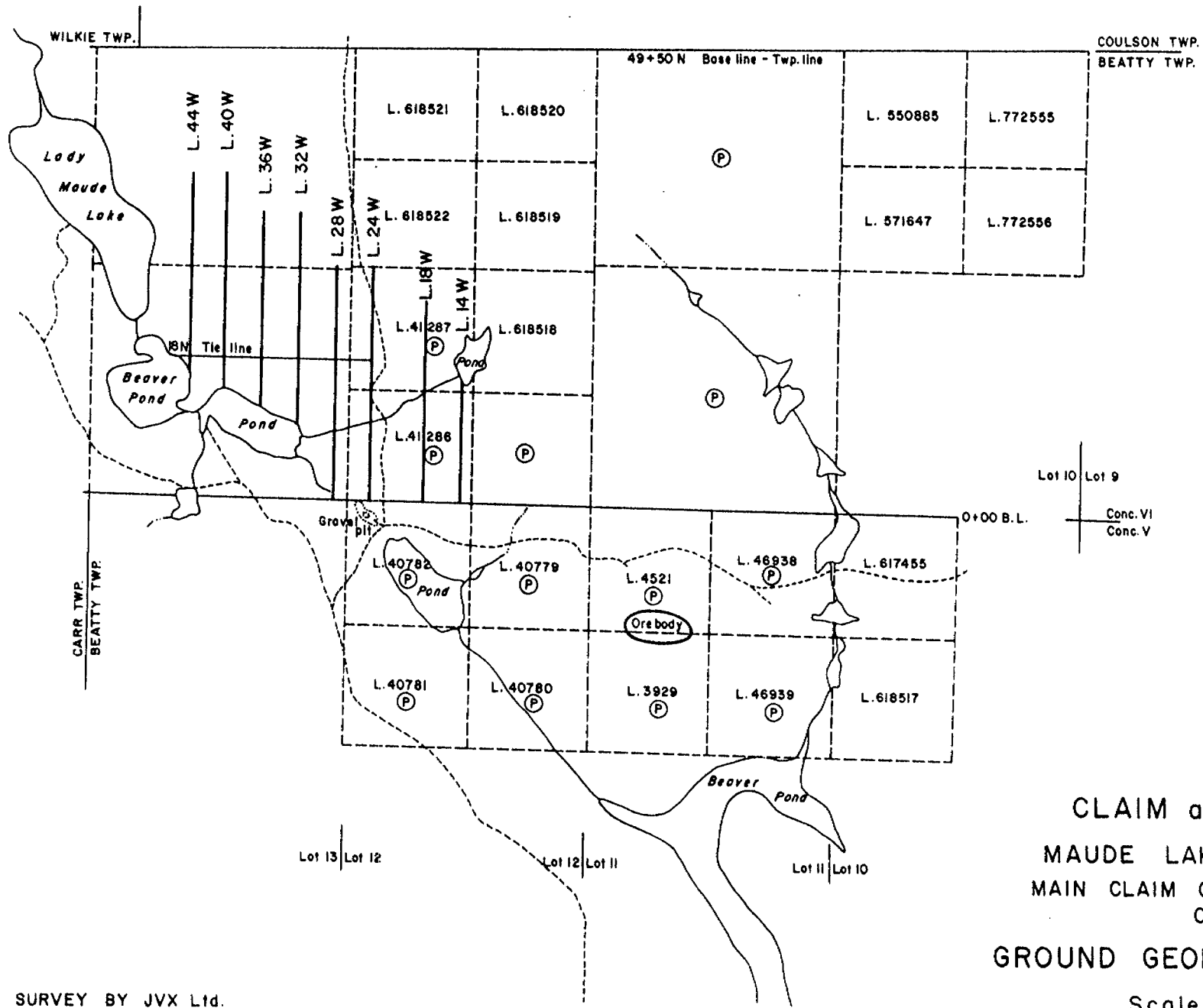
MAUDE LAKE GOLD MINES  
 MAIN CLAIM GROUP, BEATTY TWP.  
 ONTARIO

GROUND GEOPHYSICAL SURVEY

Scale : 1 : 250,000

SURVEY BY JVX Ltd.  
 AUGUST, 1984  
 8414 - G

FIGURE 1



CLAIM and GRID MAP  
 MAUDE LAKE GOLD MINES  
 MAIN CLAIM GROUP, BEATTY TWP.  
 ONTARIO  
 GROUND GEOPHYSICAL SURVEY  
 Scale : 1" = 1600'

SURVEY BY JVX Ltd.  
 AUGUST, 1984  
 8414 - G



TABLE 1

## PRODUCTION SUMMARY

Pole-Dipole Induced Polarization-Resistivity

a=100 feet; n=1-6

LINE	COVERAGE		LINE LENGTH (Feet)	NO. OF READINGS
	FROM	TO		
44W	14N	41N	2,700	126
40W	14N	40N	2,600	132
36W	12N	36N	2,400	122
32W	12N	36N	2,400	123
28W	10N	30N	2,000	99
24W	10N	30N	2,000	96
18W	0N	20N	2,000	96
14W	0N	17N	<u>1,700</u>	<u>78</u>
		TOTAL	17,800 feet	872

#### 4. PERSONNEL

Dave Marcotte - Consulting Geophysicist

Mr. Marcotte operated the IP receiver and compiled the data with the Apple IIe and Scintrex Soft II program.

Gojko Mijac - Technician

Mr. Mijac operated the transmitter and assisted in data compilation.

Blaine Webster - Consulting Geophysicist

Mr. Webster maintained overall supervision from the JVX office in Toronto and prepared this report.

In addition, Maude Lake mines provided three assistants who helped in data collection. Bob Bennett supervised the project on behalf of Maude Lake Gold Mines Ltd.

#### 5. INSTRUMENTATION

##### 5.1 Receiver

The Scintrex IPR-11 Time Domain Microprocessor-based Receiver was employed. This unit operates on a square wave primary voltage and samples the decay curve at ten time gates or slices. The instrument continuously averages primary voltage and chargeability until convergence takes place and the averaging process is stopped. Accepted data is stored internally on solid-state memory.

##### 5.2 Transmitter

The survey employed the Scintrex IPC-7/2.5 kw Time Domain Transmitter. Current output was accurately monitored by the Fluke digital multimeter placed in series to the current loop.

##### 5.3 Data Processing

The survey data were archived, processed and plotted by an Apple IIe microcomputer interfaced with an Epson FX-80 dot matrix printer. This system was configured to run the Scintrex Soft II software system, a suite of programs which was written specifically to interface with the IPR-11 IP receiver. At the conclusion of each day's data collection, data resident in the

receiver's memory was transferred, via a serial communication link, to the computer -- thereby facilitating editing, processing and presentation operations. All data was archived on floppy disc.

The instrumentation is described in greater detail in the instrument specification sheets appended to this report.

6. SURVEY PROCEDURES

The pole-dipole array was used for this survey.

6.1 Pole-Dipole Array

The array was used with an 'a' spacing of 100 feet. Six potential dipoles were measured at all current locations.

For this current configuration a current pole was located on the survey line. A series of potential dipoles (six) were set up on the survey line every 100 feet. The electrode configuration is illustrated in Figure 3.

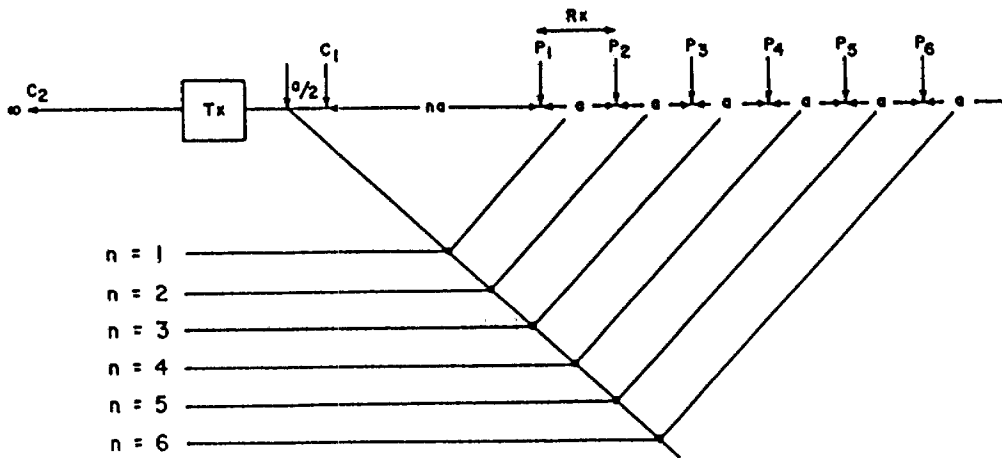


Figure 3

Pole-Dipole Array (multiple n spacings)

The apparent resistivity ( $\rho_a$ ) is given by:

$$\rho_a = 2\pi na (n+1) \frac{V_p}{I}$$

where  $\rho_a$  is in ohm-meters

$V_p$  is in millivolts

$I$  is in millamperes

This equation includes a geometry dependent factor and a factor dependent on ground resistivity. The geometry dependent factors for  $a=100$  feet and  $n=1-6$  are given below:

n	Geometric Factor
1	383
2	1,150
3	2,300
4	3,830
5	5,750
6	8,050

For any array, the value of resistivity is a true value of subsurface resistivity only if the earth is homogeneous and isotropic. In nature, this is very seldom the case, and apparent resistivity is a qualitative result used to locate relative changes in subsurface resistivity only.

The transmitted waveform is a square wave with equal on and off times. In this case there was a 2 second 'on', 2 second 'off' and a reverse polarity cycle. During the 'off' times the decay transients ( $V_s$ ) are measured by integrating the decay curve. This integration can be over one long period or over several shorter periods, depending on the mode of operation. In this case, ten integrations or slices were recorded.

Chargeability ( $M$ ) is measured over several periods of the transmitted waveform and normalized for:

1. the length of the integration interval
2. the steady state voltage
3. the number of pulses

Mathematically this is described as:

$$M_a = \frac{V_s}{V_p} \times 1,000 \text{ (in Mv/v)}$$

where  $V_s = \frac{1}{t_r} \int_{t_2}^{t_1} V_s dt$

$V_s$  = secondary voltage

$V_p$  = primary steady state voltage

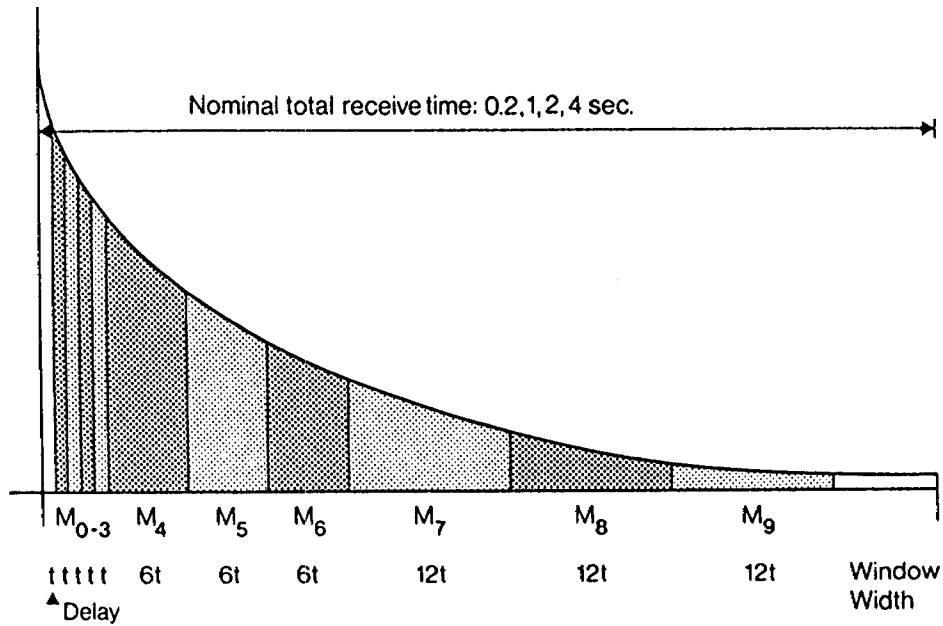
and

$t_r$  = integration interval ( $t_2 - t_1$ )

$t_1$  = time at beginning of integration

$t_2$  = time at end of integration

By adjusting  $t_1$  and  $t_2$  the chargeability is sampled at different points of the decay. Figure 3a illustrates the decay waveform and the 10 slices of integration.



IPR-11 transient windows

Figure 3a

For a 2 second transmit and receive time the slices of integration are as follows:

SLICE	DURATION ms	FROM ms	TO ms	MIDPOINT ms
1	30	30	60	45
2	30	60	90	75
3	30	90	120	105
4	30	120	150	135
5	180	150	330	240
6	180	330	510	420
7	180	510	690	600
8	360	690	1,050	870
9	360	1,050	1,410	1,230
10	360	1,410	1,770	1,590

Traditionally slice M7 is presented in the pseudosections; however, slices M1 and M3 are also presented for line 44W in order to detect any subtle chargeability anomalies which may have attenuated later in the decay curve.

Also presented are the spectral parameters  $M_0$  and  $\mathcal{J}$ . The third spectral parameter C is calculated but not presented.

### 6.2 Spectral Parameters

Johnson (1984) summarizes the spectral parameters as follows:

$M_0$ : The chargeability ( $M_0$ ) is the relative residual voltage which would be seen immediately after shut-off of an infinitely long transmitted pulse (Seigel, 1959). It is related to the traditional chargeability as measured some time after the shut-off of a series of pulses of finite duration.

$\mathcal{J}$ : The time constant ( $\mathcal{J}$ ) and exponent (C) are those newly measurable physical properties which describe the shape of the decay curve in time domain or the phase spectrum in frequency domain. For conventional IP targets, the time constant has been shown to range from approximately .01 seconds to greater than 100 seconds and is thought of as a measure of grain size. Fine grained mineralization loses charge quickly, coarse grained mineralization holds charge longer.

C: The exponent (C) has been shown to have a range of interest from 0.1 to 0.5 or greater and is diagnostic of the uniformity of the grain size (0.5 single grain size - 0.1 - many grain sizes).

## 7. PRESENTATION OF RESULTS

The data are presented as 25 pseudosections named and numbered according to the following scheme. Chargeability and resistivity anomalies are marked and classified as strong, medium and weak. Resistivity highs are marked with an H, the accompanying bracketted number H(3) indicates the "n" value or depth to the top of the resistivity high in the pseudosection.

### 7.1 Contour Plan Maps Plate Index (Table 2)

I	Chargeability Plan Map	Scale 1"=200 ft.
Ia	"	Scale 1"=400 ft.
II	Resistivity Plan Map	Scale 1"=200 ft.
IIa	"	Scale 1"=400 ft.
III	Interpretation Plan Map	Scale 1"=200 ft.
IIIa	"	Scale 1"=400 ft.

### 7.2 Pseudosection Plate Index (Table 3)

LINE NO.	PSEUDOSECTION PARAMETER			SCALE
	CHARGEABILITY M7 AND RESISTIVITY	SPECTRAL TAU and Mo	ILLUSTRATIVE MODEL	
	PLATE NO.	PLATE NO.	PLATE NO.	
44W	1 (Plate 1b is slice M3 and M7)	1a	1c	
40W	2	2A	2C	
36W	3	3a	3c	
32W	4	4a	4c	
28W	5	5a	5c	
24W	6	6a	6c	
18W	7	7a	7c	
14W	8	8a	8c	

8. DISCUSSION OF RESULTS

8.1 Overview

A. Theory of Resistivity and Chargeability Data

The main goal of the induced polarization/resistivity survey was to locate zones of increased resistivity with an associated chargeability anomaly. The geological model for the project is an alteration zone (sheared, silicified basalt) striking east-west from the northwesterly striking peridotite. (Figure 4)

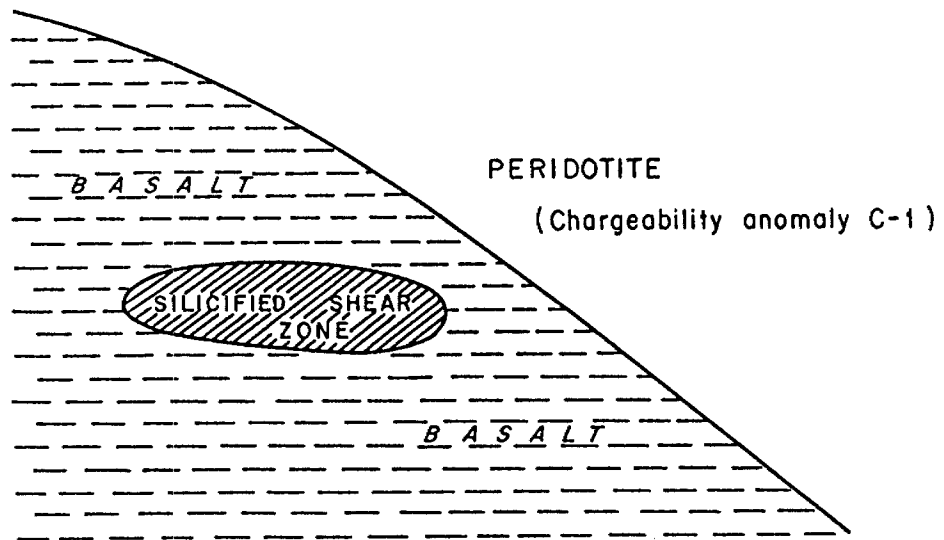
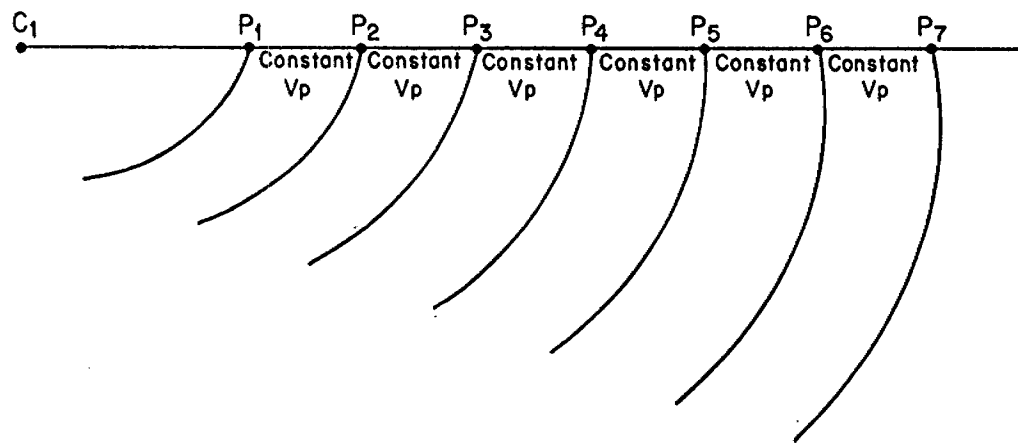


Figure 4

GEOLOGIC MODEL



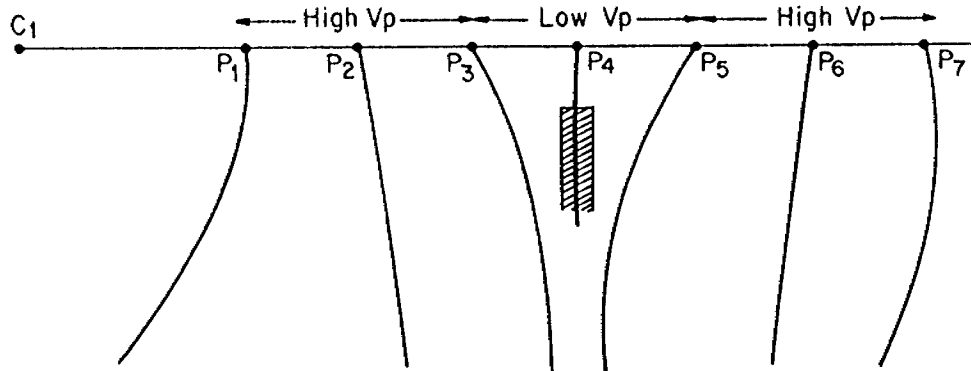
Therefore it should be straightforward to conduct an IP/resistivity survey and delineate areas of high resistivity with associated chargeability anomalies. However, some caution must be exercised because all areas with high apparent resistivities may not be caused by increases in bedrock resistivities. Figure 5 illustrates how the lines of equal voltage are distributed about a single current electrode where the bedrock has a uniform resistivity.



EQUIPOTENTIAL LINES ABOUT A CURRENT ELECTRODE  
WITHOUT A CONDUCTOR PRESENT

Figure 5

Figure 6 illustrates how the equipotential lines are distorted in the presence of a resistivity low.



EQUIPOTENTIAL LINES ABOUT A CURRENT ELECTRODE WITH A CONDUCTOR PRESENT

Figure 6

A possible model that would fit the data for Figure 6 is:

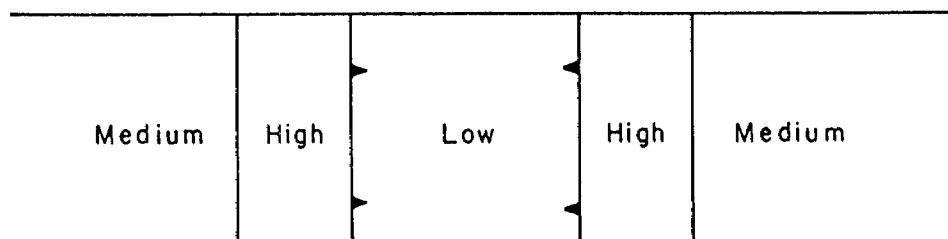


Figure 7A - ILLUSTRATIVE MODEL 1

The real distribution of the bedrock resistivities may in fact be:

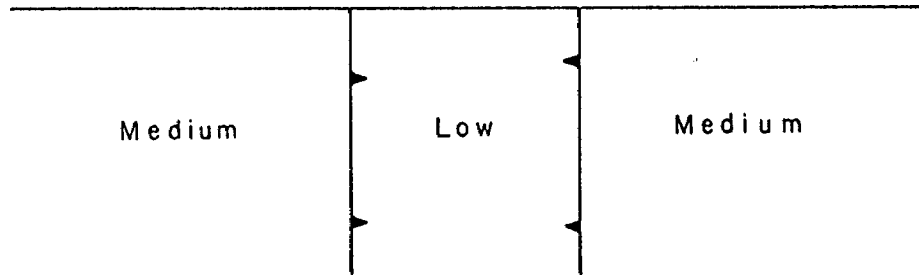


Figure 7B - ILLUSTRATIVE MODEL 2

Also, there may be more than one resistivity model for any data set (i.e. there are no unique solutions).

In the Maude Lake data the low resistivity surface layer makes the interpretation more difficult. However, if the high apparent resistivities are in the  $n=1$  and 2 contours then it is very likely the high resistivity body is under the interpreted anomaly.

The Illustrative Model Pseudosections (Plates 1c-8c) attempt to illustrate the possible distribution of bedrock resistivities and chargeabilities.

#### B. Plan Maps (Plates I, II, III)

The interpreted IP/resistivity anomalies have been compiled on Plate III as an Interpretation Plan Map. The object of the Interpretation Plan Map is to present all the interpretations of the various data sets on one map so they can be inter-related. Some of the interpretations are in the "possible" category and should be carefully screened by the geologist as he is more familiar with other geophysical, geochemical and geological information for the area.

## 8.2 Discussion of Plan Maps (Plates I, II, III)

### Interpretation Plan Map - (Plate III)

#### Anomaly C-1

Chargeability anomaly C-1 is associated with a moderate resistivity low and correlates with what may be a peridotite. The cause of chargeability and associated resistivity lows may be shear zones within the peridotite where serpentinization is developed.

The chargeability contours are distorted between lines 28 and 24W near 22N and may be caused by a fault F1. The existence and strike of any fault in this area could be important for the development of alteration zones in the basalt. The magnetic data should be examined for the expression of a fault in this region.

#### Anomaly C-2

Chargeability anomaly C-2 is a weak to moderate chargeability trend that is variously associated with resistivity lows and highs. The associated highs may be caused by zones of silicified basalt. Exploration could be concentrated in areas where the high resistivities cross C-2. In particular resistivity trend R-high (4) should be examined. R-high (4) is a shallower expression of R-high 2, 3 and 5 and it must be stressed that there is only one resistivity high. Parts of R-4 may be caused by current distribution associated with R-low 1 as was explained in 8.1A. However, areas where resistivity highs come very close to surface should be examined and are marked by an asterisk \*.

#### Anomaly C-3

Anomaly C-3 is a weak chargeability anomaly that may be caused by the associated resistivity high. The anomaly warrants field examination.

## 8.3 Anomaly Summary

The following is a line by line description of the chargeability, resistivity and spectral data summarized in Table 4. Review Plates 1c to 8c (Illustrative Models) while reading this table.

Table 4  
ANOMALY SUMMARY

LINE NO.	LOCATION	STRENGTH	J	M <sub>0</sub>	M7	ρ <sub>0</sub>	DEPTH	COMMENTS
Plate 1c	17N-19N	VW, W (chargeability anomaly)	N.A.	N.A.	2.5	661	3	Weak chargeability anomaly associated with high resistivity zone (dyke). Source may be a resistive geologic unit (barren) of sulphides.
	20 -21N	Resistivity low				199	2	A resistivity low is located between two high resistivity zones. No associated chargeability anomaly (conductive shear zone?).
	22N-25N	Resistivity high				560	3	A deep (n=3,4,5,6) resistive body.
	24N-27N	3W (chargeability anomaly)			3.9	518	4	A wide zone of weak chargeabilities with an associated resistivity low. A possible low resistivity low is located near 25+50N on the southern flank of a high resistivity zone (27N-30N). There may be some minor sulphides below 25-50N.
40W Plate 2c	21N-24N	W, M, W (chargeability anomaly)	N.A.	N.A.	2.2	253	2	A wide weak to medium strength IP anomaly correlating with a narrow resistivity low (shear zone with minor sulphide?).
	27N-28N	Resistivity low	N.A.	N.A.	0.30	307	3	A narrow resistivity low on southern flank of resistivity high. No chargeability associated with the resistivity low.
	28 -31N	Resistivity high	N.A.	N.A.	0.00	4.07	3	A resistivity high occurring on a possible zone of chargeability contrast the background chargeabilities at 32N change from 1 to 0.3 MV/V.

LINE NO.	LOCATION	STRENGTH	$\tau$	$M_0$	M7	$\rho_0$	DEPTH	COMMENTS
40W Plate 2C	35N-37N	W, M (chargeability anomaly)	1.0	112	3.7	140	2	Weak to moderate charge-abilities associated with resistivity low. Moderate time constants indicate source losing charge slowly.
36W Plate 3c	15N-17N	Resistivity high	.1	87	2.7	266	2	High resistivity zone on southern flank of charge-ability anomaly. May be local background cut by resistivity low at 17-21N.
	16N-19N	W, M, W (chargeability anomaly)	.03	61	3.3	240	2	Chargeability anomaly associated with resistivity low. Good drill target.
	17N-21N	Resistivity low						Resistivity low with two possible sources: one at 17N-18N, that correlates to chargeability anomaly and another at 20-21N which may be a shear zone or a geological contact.
	21 -22N	Resistivity high	N.A.	N.A.	1.4	300	2	Resistivity high on northern flank of resistivity low. May be background resistivity cut by resistivity low 17-21N.
	24N-26N	Resistivity low	N.A.	N.A.	0.4	215	2	Resistivity low located between two resistivity highs. The low is associated with very low chargeabilities.
	28N-29N	Resistivity high	N.A.	N.A.	.10	231	2	Resistivity high on southern flank of resistivity low. Correlates to very low chargeabilities.
	30N-32N	Resistivity low	.01	94.4	2.8	145	2	Resistivity low on southern flank of chargeability anomaly.
	31 -34N	W, M, W	1.0	119.3	3.9	143	2	Moderate chargeability anomaly may be associated with resistivity low. Anomaly has slightly longer time constants than that at 16N-19N. (Coarser grained source?)

LINE NO.	LOCATION	STRENGTH	$\sigma$	$M_0$	M7	$\rho_0$	DEPTH	COMMENTS
32W Plate 4c	15N-17N	Resistivity high				418	2	Background area of higher resistivities on south flank of resistivity low.
	17N-19N	Weak resistivity low				392	3	Weak resistivity low separating resistivity highs at 15N-17N and 19N-21N.
	19N-21N	Resistivity high					4	Background area of higher resistivities on north flank of resistivity low.
	23N-26N	Resistivity low				297	4	Very weak resistivity low correlates to area of very weak chargeabilities (-0.30 MV/V).
	28N-32N	Chargeability W, 2M, W	30	219	7.6	186	4	Moderate chargeability anomaly associated with a weak resistivity low and long time constants. Chargeability source peridotite?
28W Plate 5c	18N-19N	Resistivity high			0.80	450	1	Resistivity high in an area of very low chargeability. May be caused by poor current contact. Should be checked in the field.
	26N-29N	Resistivity low			-.10	269	3	A very weak (narrow) resistivity low is associated with very low chargeabilities on the northern flank of a moderate chargeability anomaly.
	26N-29N	Chargeability W, M, M	.01	206	6.4	132	2	A moderate chargeability anomaly associated with a moderate resistivity low and short time constants.
24W	18N-22N	Chargeability W, S, M, W	.30	161.29	90	530	1	A strong chargeability anomaly associated with a weak resistivity low and short time constants. The anomaly is on the southern flank of a resistivity high that has moderate chargeabilities and long time constants.

LINE NO.	LOCATION	STRENGTH	$\tau$	$M_0$	M7	$\rho_0$	DEPTH	COMMENTS
18W	1N-4N	Chargeability W, 2M, W	.10	53.6	3.2	170	3	Weak to moderate chargeability anomaly with very weak resistivity low. May be eastern extension of anomaly C-2.
	12N-15N	W, M, W	.10	33.35	3.20	117	1	Weak to moderate chargeability anomaly with an associated resistivity low.
14W	1N-2N	Chargeability W			1.60	208	3	Edge of chargeability anomaly.
	4N-6N	Resistivity low			.20	187	3	Weak resistivity low.
	9N-12N	Chargeability W, M, W	1.0	24.81	3.8	191	4	Moderate chargeability anomaly associated with resistivity low and moderate time constants.



#### 8.4 Illustrative Models (Plates 1c to 8c)

Plates 1c to 8c attempt to illustrate the possible distribution of the bedrocks chargeable sources and the associated variations in resistivity. The "models" are for illustration only because of the factors discussed in Section 8.1A.

#### 9. CONCLUSIONS AND RECOMMENDATIONS

The survey outlined two main and one minor chargeability anomaly trends that were variously associated with resistivity highs and lows.

The main chargeability trend (C-1) likely correlates to a peridotite unit which may be slightly altered to serpentinite. The products of serpentinization (asbestos, etc.) are chargeable. A second chargeability trend C-2 appears to be caused by a chargeable source (disseminated pyrite?). Anomaly C-2 is 400 feet southwest of C-1 and strikes parallel to it. Also several zones of apparent high resistivity cross C-2 and these may fit the geological model that is the exploration target (R-high 4).

Again, care must be taken in exploring the resistivity highs as they may be caused by equipotential distortion by a unit with a low resistivity. Areas of shallow high resistivity sources are also indicated on the Interpretation Plan Map (Plate III).

Stratigraphic drill sections should be made across chargeability anomaly C-2 where it is crossed by R-high 4. The place to start would be 40W/24N and 32W/24N.

Also the strike of fault F1 must be determined as it may have an affect on alteration in the basalt.

The recommendations contained herein are subject to other geological and geophysical data gathered by Maude Lake.

Respectfully submitted,

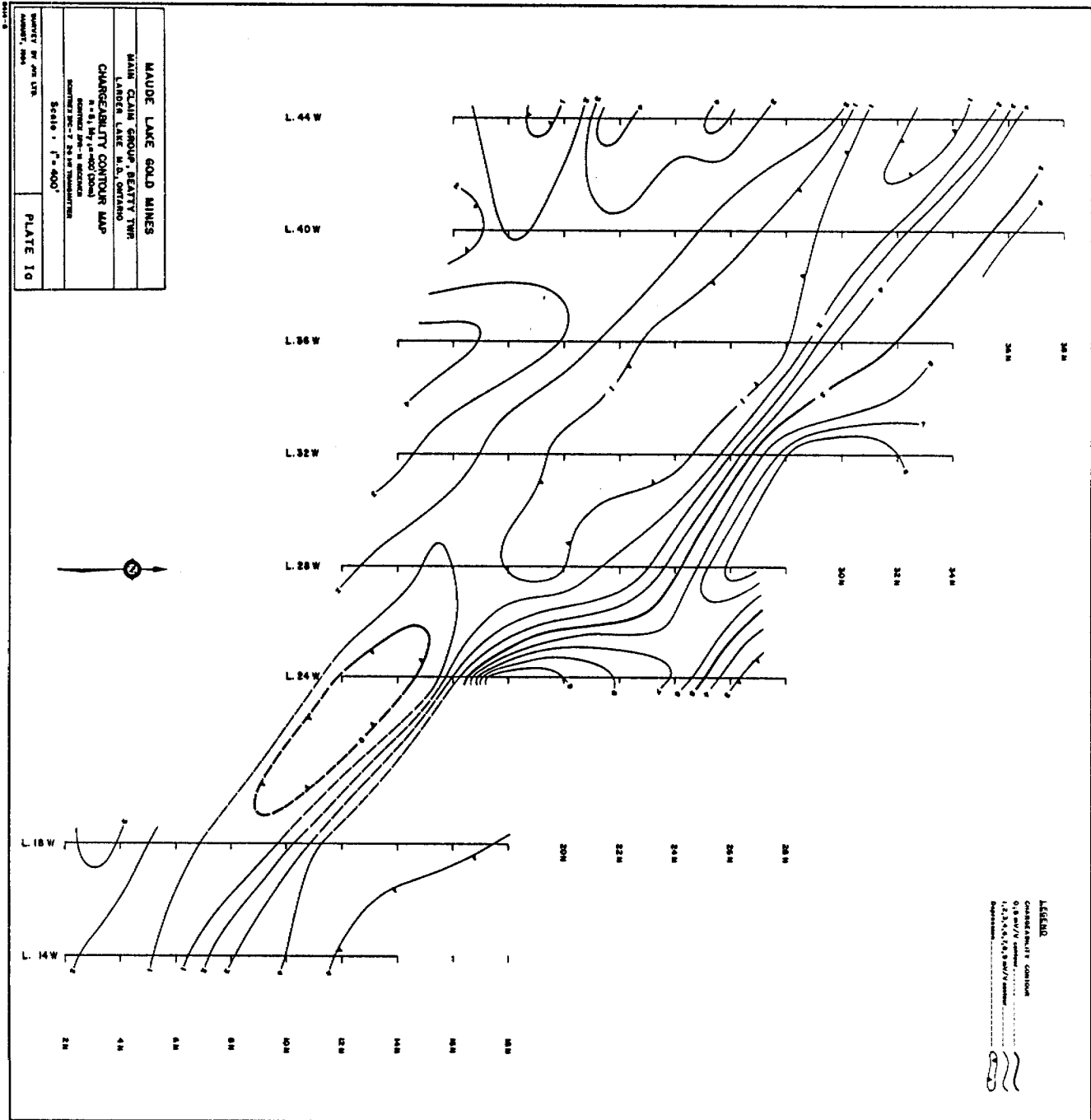
JVX LIMITED

*for Dave Marcotte*

Dave Marcotte, B.Sc.  
Consulting Geophysicist.

*Blaine Webster*

Blaine Webster, B.Sc.  
Consulting Geophysicist.

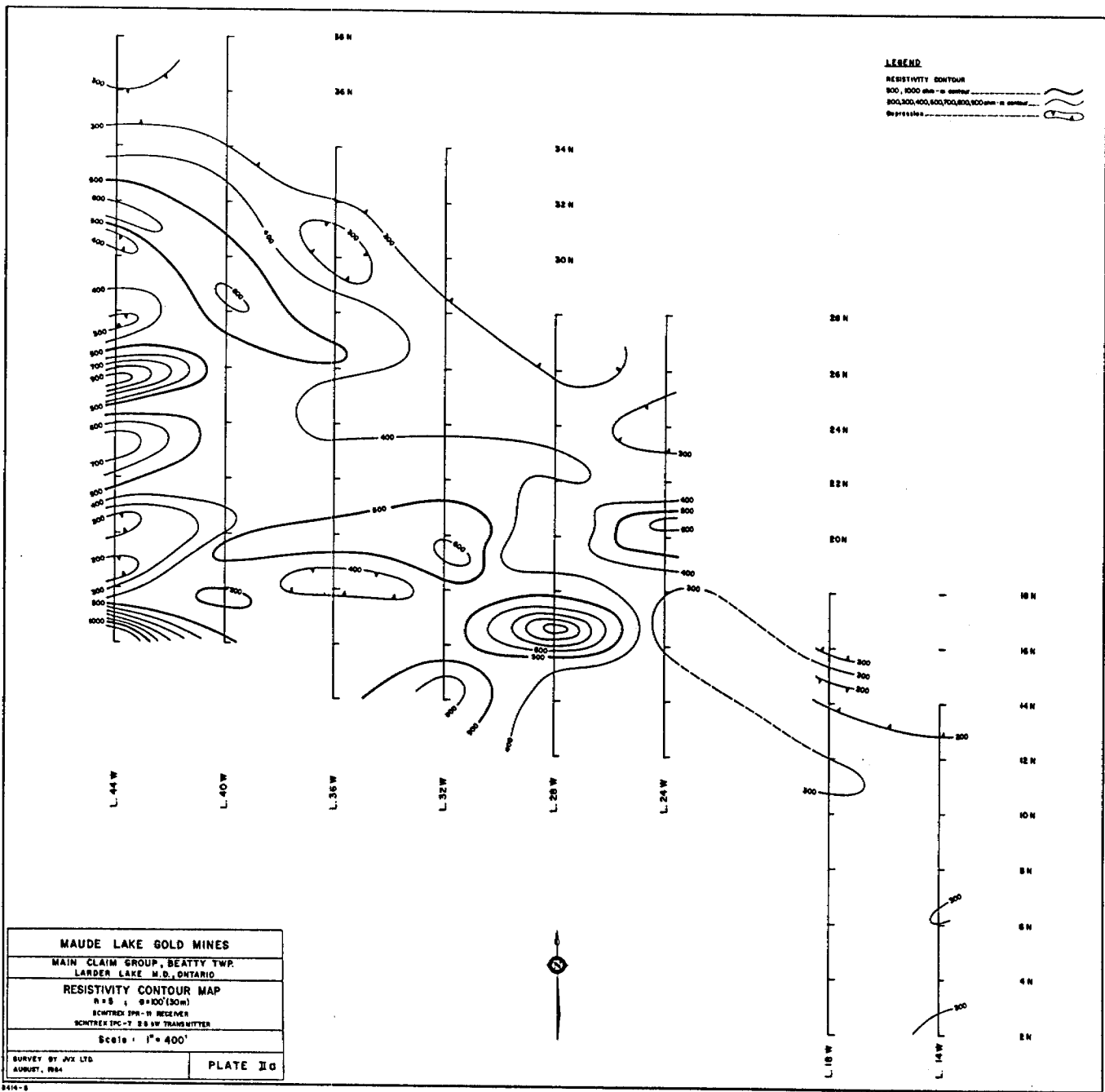


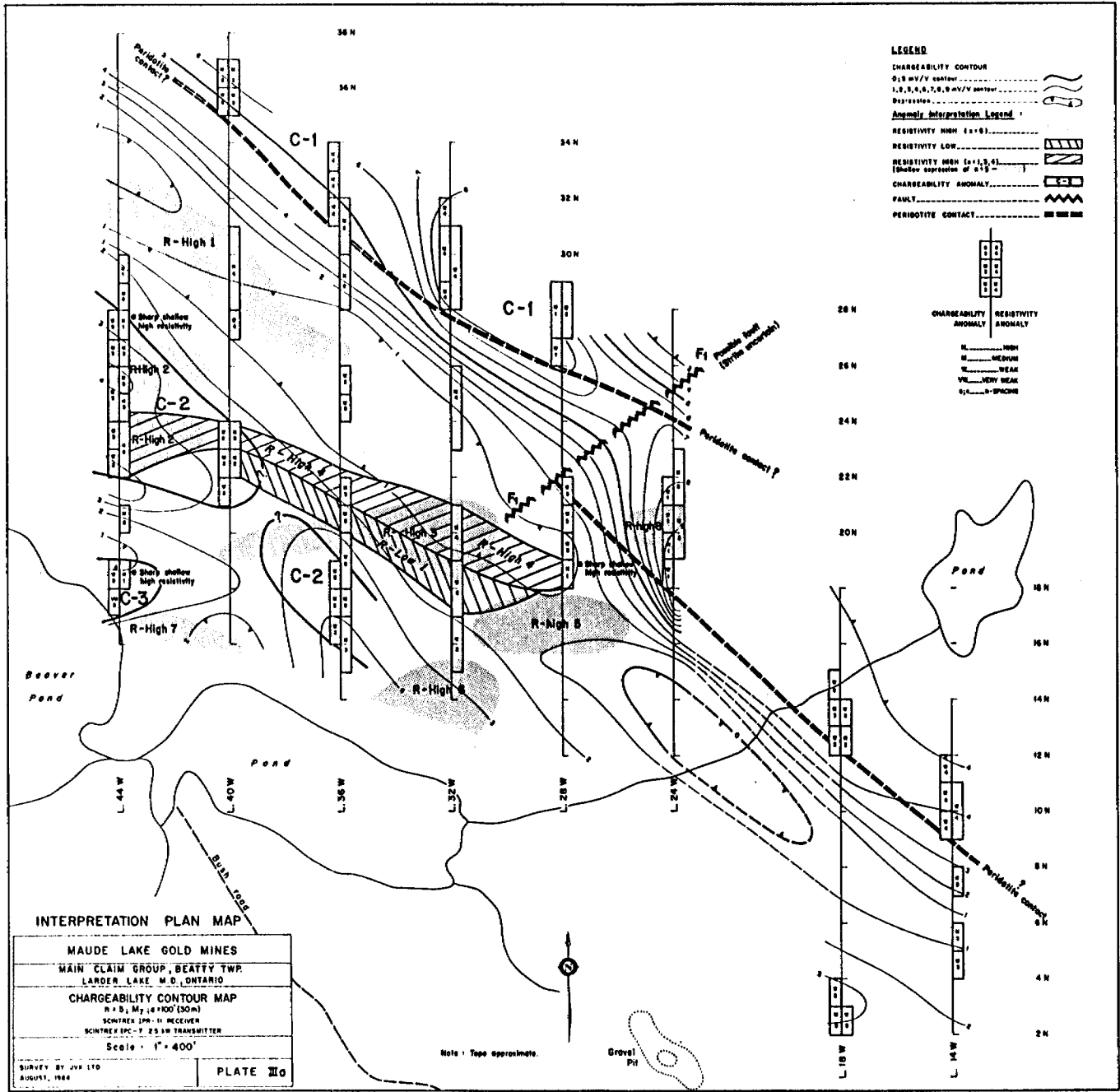
NAUDE LAKE GOLD MINES  
 MAIN CLAIM GROUP, BEATTY TWP,  
 LAMBER LAKE M.D., ONTARIO  
 CHARGEABILITY CONTOUR MAP  
 1:50,000  
 SCALE  
 PROJECT NO. 7-24-107  
 SHEET NO. 1  
 SCALE: 1" = 400'

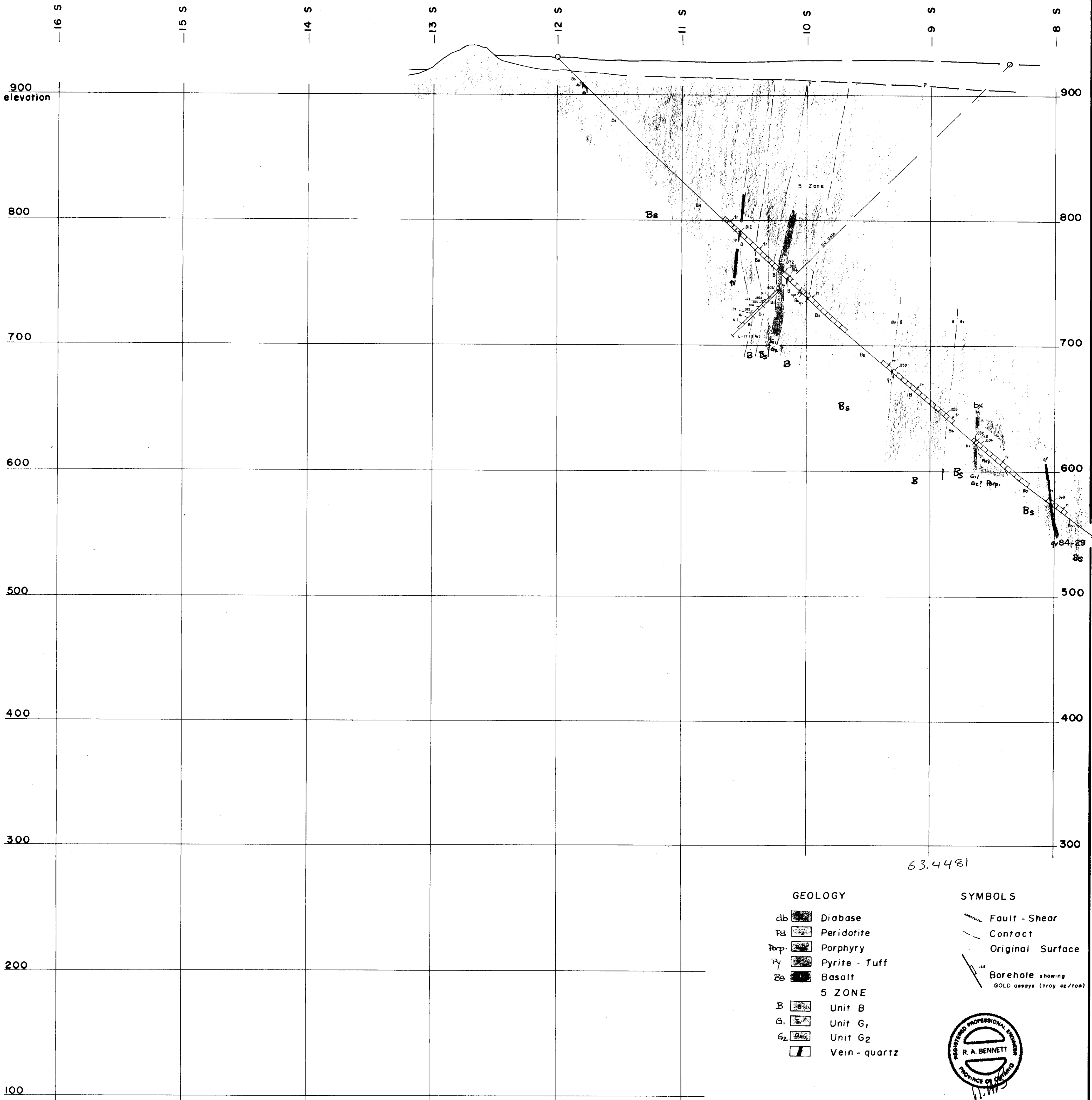
SHEET NO. 1  
 SCALE: 1" = 400'  
 PLATE 10

**LEGEND**  
 CHARGEABILITY CONTOUR  
 0.5 mV/V contour  
 1.0 mV/V contour  
 1.5 mV/V contour

0-10-8



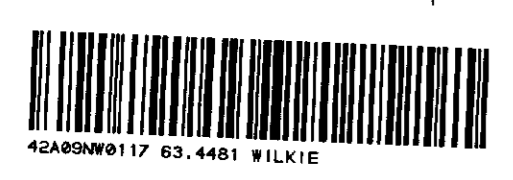




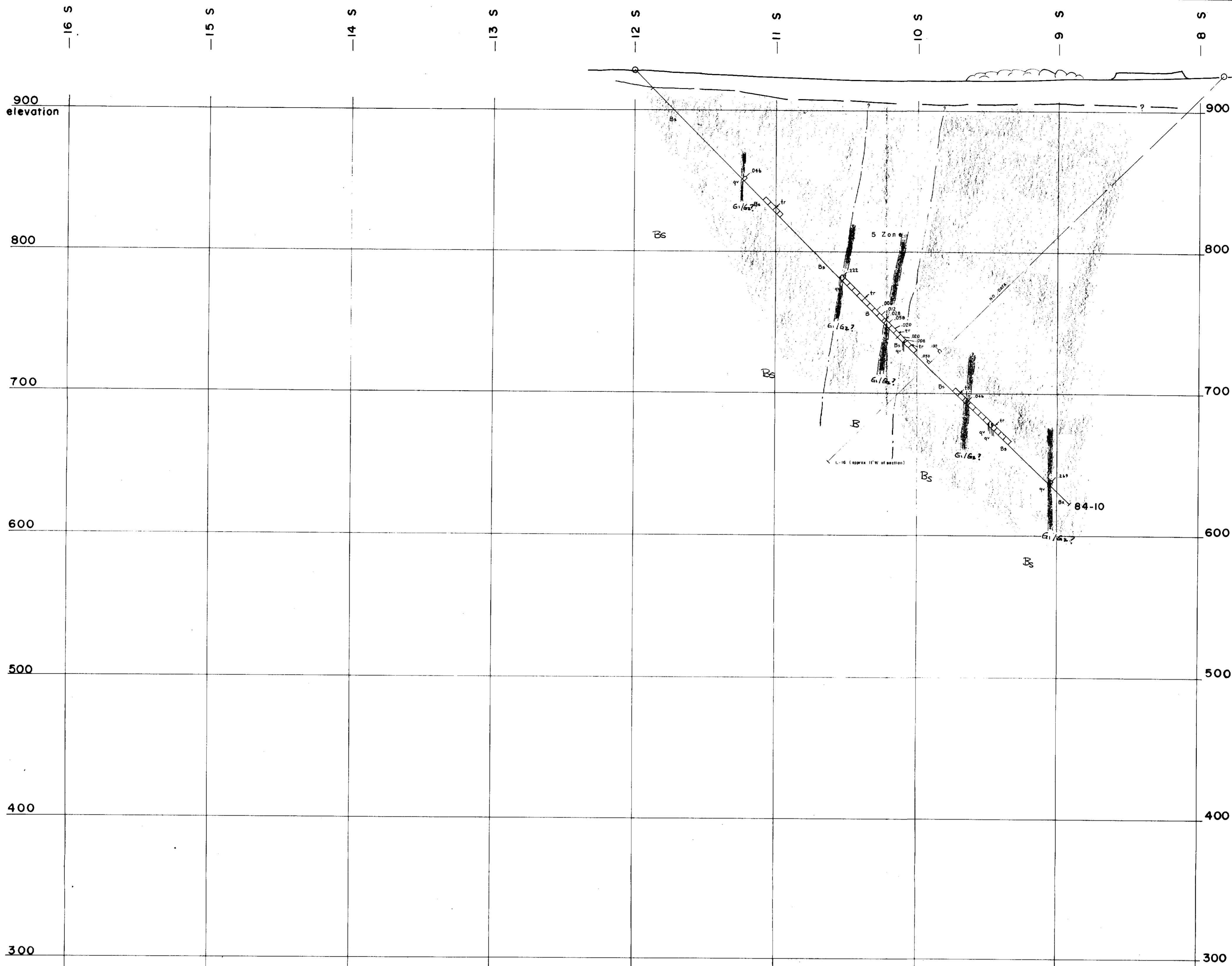
- | GEOLOGY        |                     | SYMBOLS |                           |
|----------------|---------------------|---------|---------------------------|
| db             | Diabase             |         | Fault - Shear             |
| Pd             | Peridotite          |         | Contact                   |
| Prp            | Porphyry            |         | Original Surface          |
| Py             | Pyrite - Tuff       |         | Borehole showing          |
| Bs             | Basalt              |         | GOLD assays (1roy oz/ton) |
| <b>5 ZONE</b>  |                     |         |                           |
| B              | Unit B              |         |                           |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |                           |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |                           |
| V              | Vein - quartz       |         |                           |



MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 1+00 E  
 Scale 1" = 40 ft. (1:480)



200



63.4481

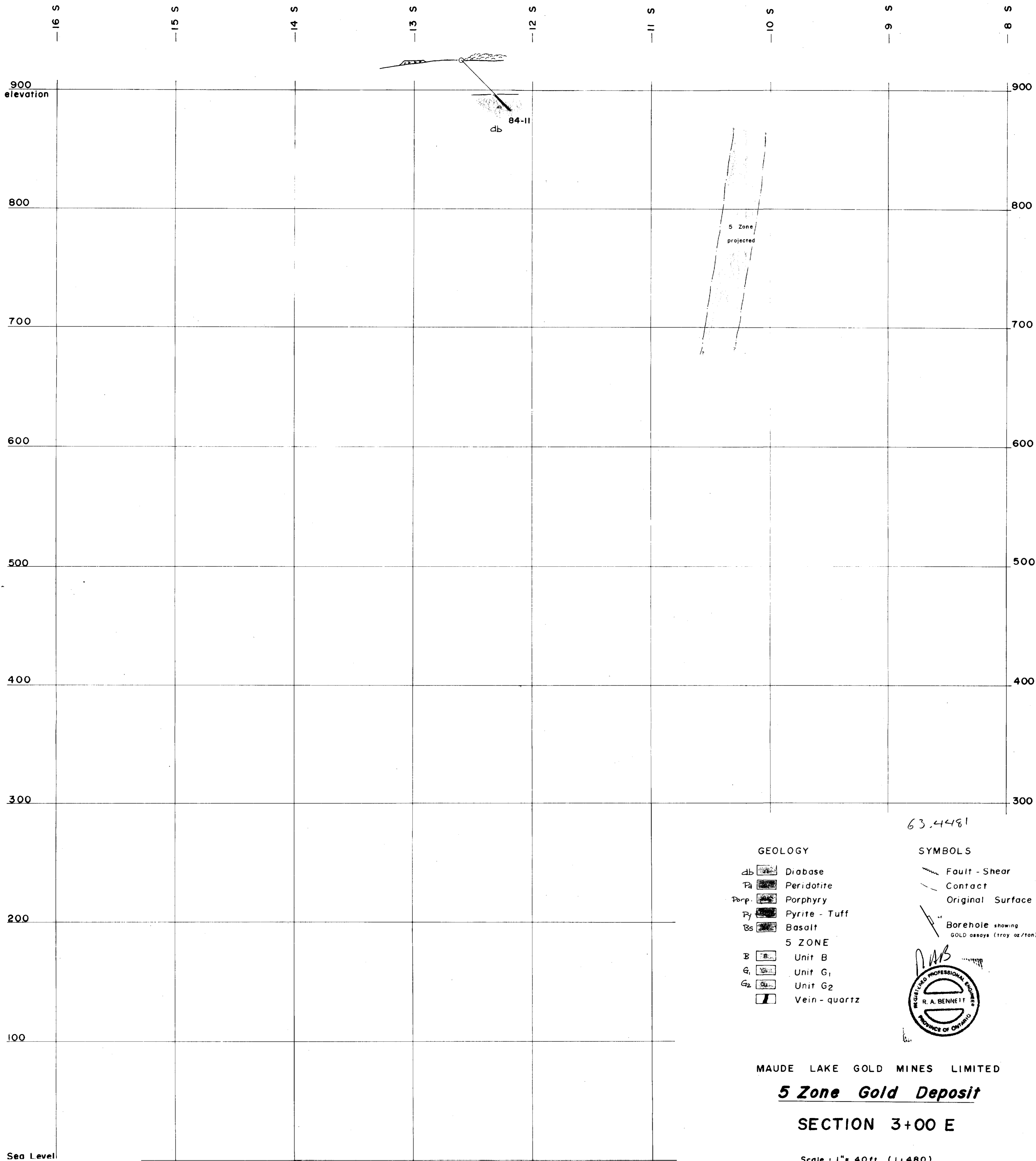
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|----------------|---------------------|---------|--|
| db             | Diabase             |         | Fault - Shear                              |
| Pa             | Peridotite          |         | Contact                                    |
| Porp.          | Porphyry            |         | Original Surface                           |
| Pt             | Pyrite - Tuff       |         | Borehole showing GOLD assays (troy oz/ton) |
| Bs             | Basalt              |         |  |
| <b>5 ZONE</b>  |                     |         |  |
| B              | Unit B              |         |  |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |  |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |  |
|                | Vein - quartz       |         |  |



MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 2+00 E

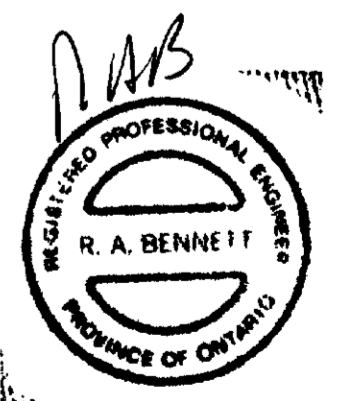
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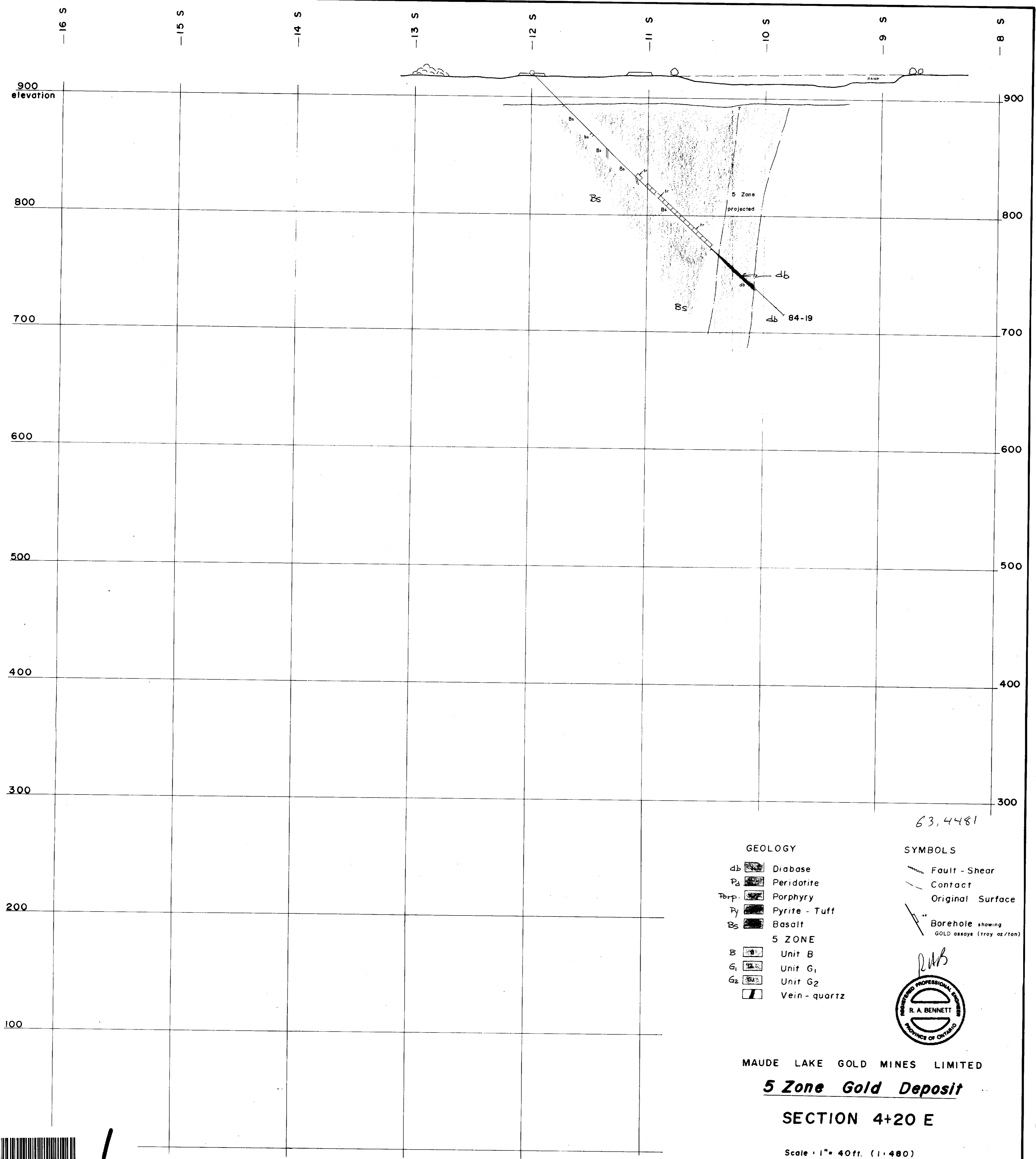
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- | GEOLOGY        |                     | SYMBOLS |                           |
|----------------|---------------------|---------|---------------------------|
| db             | Diabase             |         | Fault - Shear             |
| Pa             | Peridotite          |         | Contact                   |
| Porp.          | Porphyry            |         | Original Surface          |
| Py             | Pyrite - Tuff       |         | Borehole showing          |
| Bs             | Basalt              |         | GOLD assays (troy oz/ton) |
| <b>5 ZONE</b>  |                     |         |                           |
| B              | Unit B              |         |                           |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |                           |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |                           |
|                | Vein - quartz       |         |                           |



MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 3+00 E  
 Scale · 1" = 40ft. (1:480)





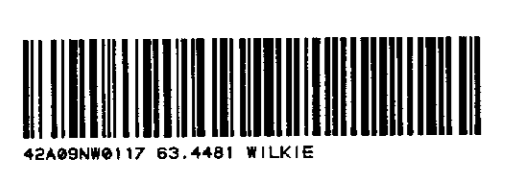
63,4481

GEOLOGY		SYMBOLS	
db	Diabase		Fault - Shear
Pa	Peridotite		Contact
Py	Pyrite - Tuff		Original Surface
Bs	Basalt		Borehole showing GOLD assays (troy oz/ton)
5 ZONE			
B	Unit B		
G1	Unit G1		
G2	Unit G2		
	Vein - quartz		

R. A. BENNETT  
 PROFESSIONAL ENGINEER  
 PROVINCE OF ONTARIO

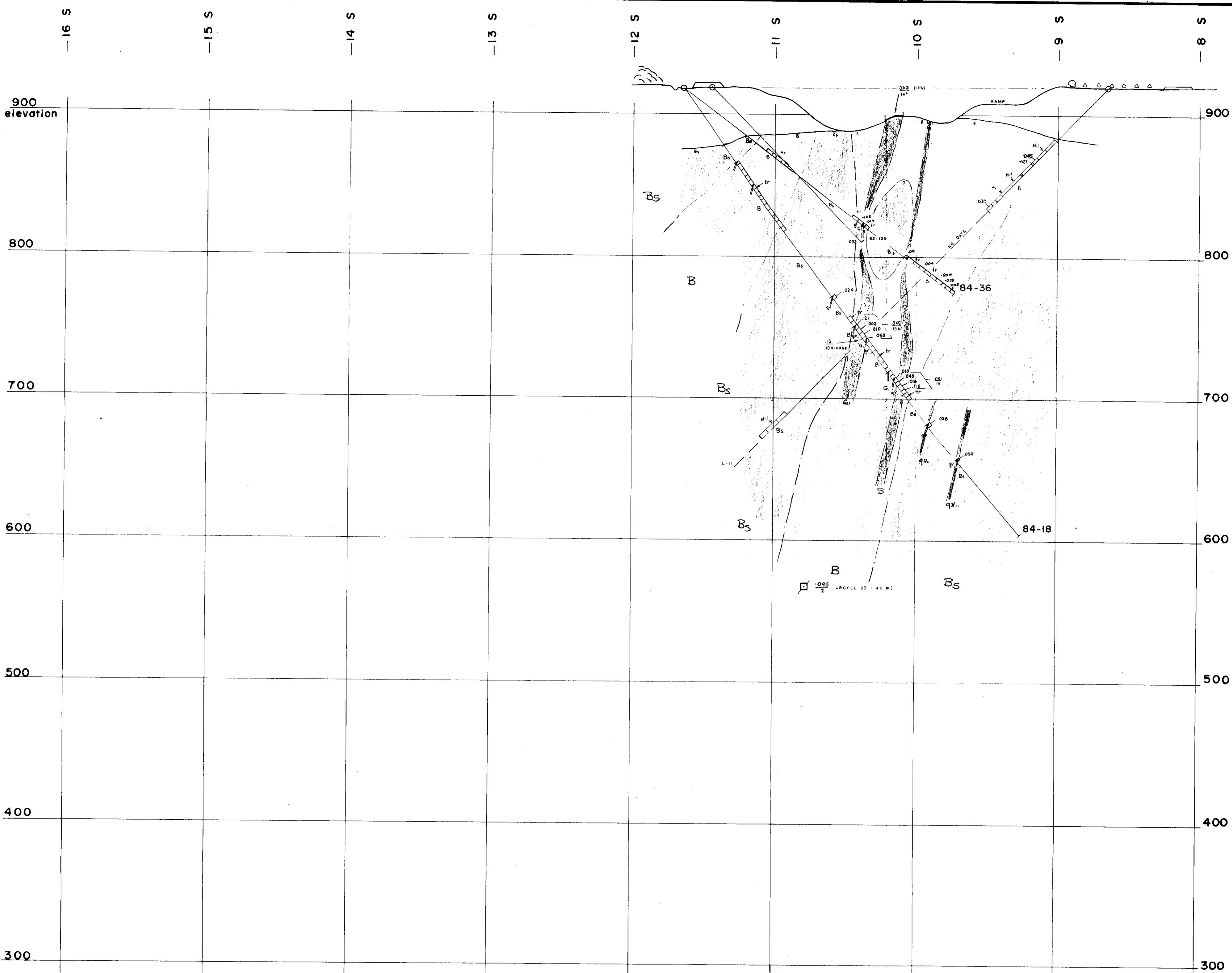
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
**SECTION 4+20 E**

Scale - 1" = 40ft. (1:480)



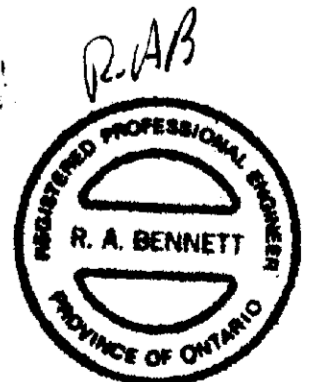
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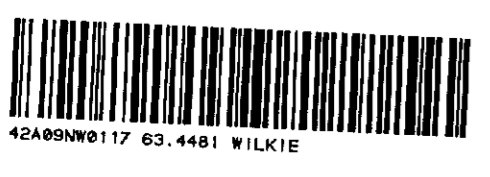
63.4481

- | GEOLOGY        |                     | SYMBOLS |  |
|----------------|---------------------|---------|--|
| db             | Diabase             |         | Fault - Shear                              |
| Pa             | Peridotite          |         | Contact                                    |
| Porp.          | Porphyry            |         | Original Surface                           |
| Py             | Pyrite - Tuff       |         | Borehole showing GOLD assays (tray oz/ton) |
| Bs             | Basalt              |         |  |
| <b>5 ZONE</b>  |                     |         |  |
| B              | Unit B              |         |  |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |  |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |  |
|                | Vein - quartz       |         |  |

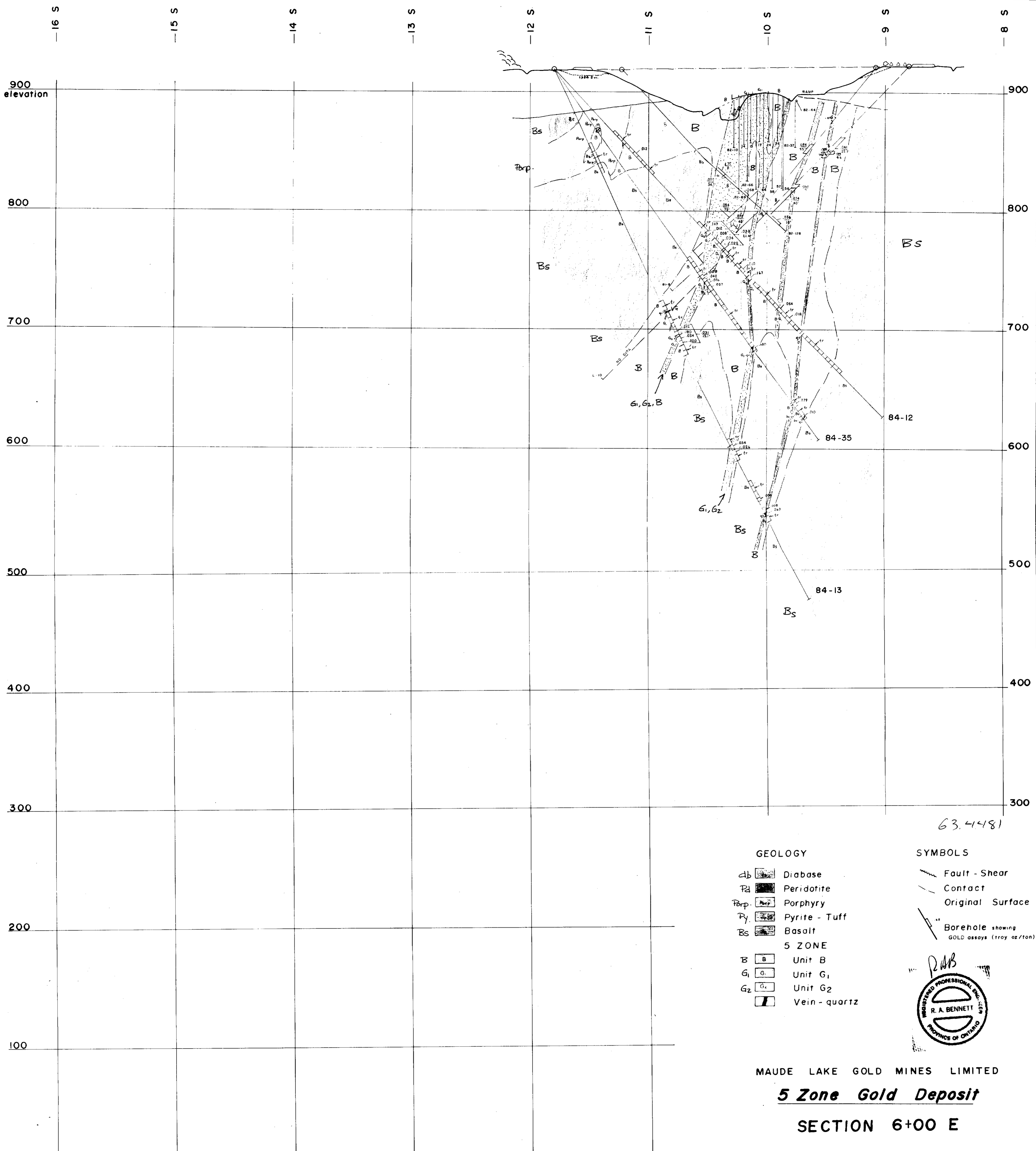


MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 5+00 E

Scale 1" = 40 ft. (1:480)



240



900  
elevation

800

700

600

500

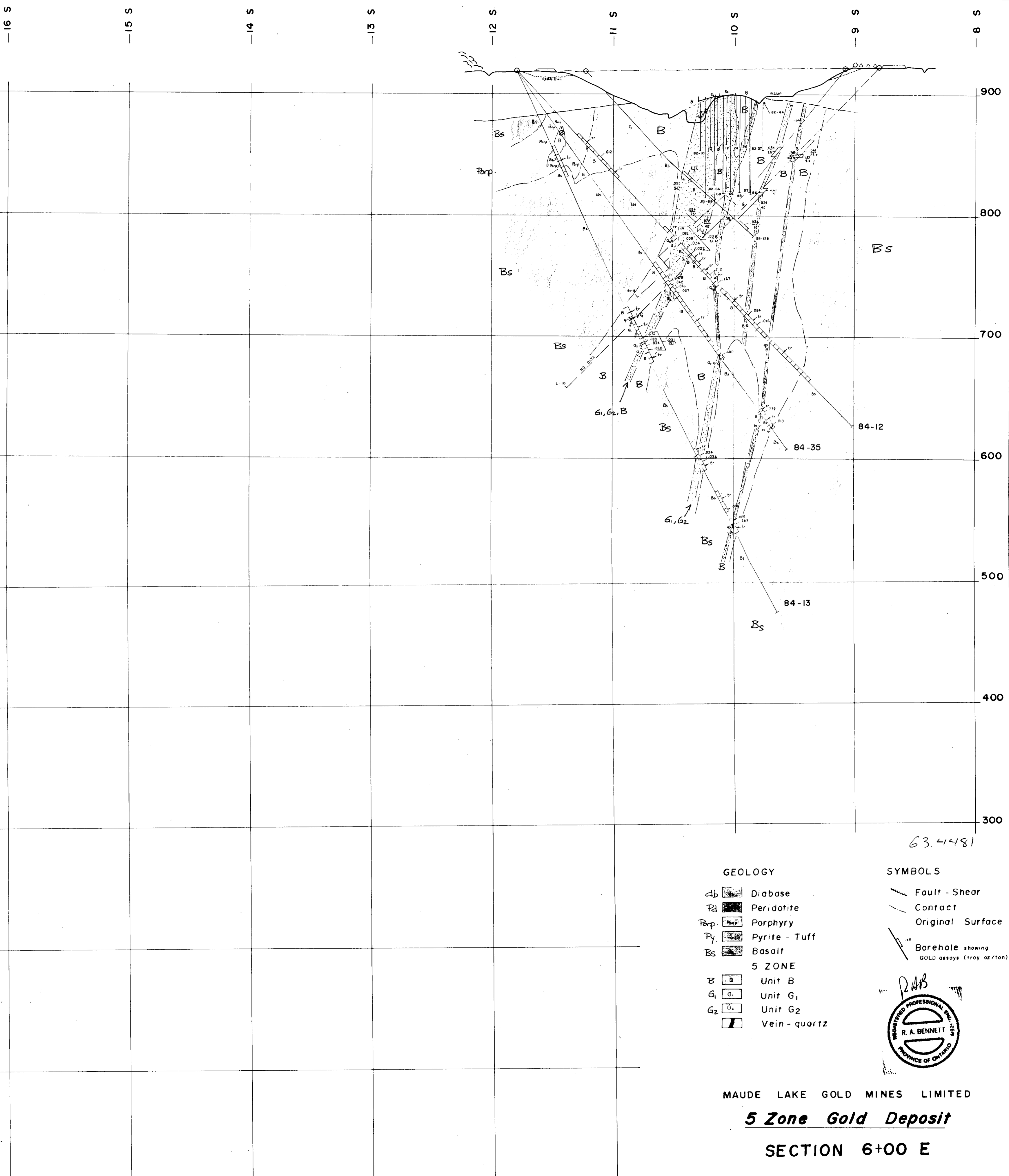
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300

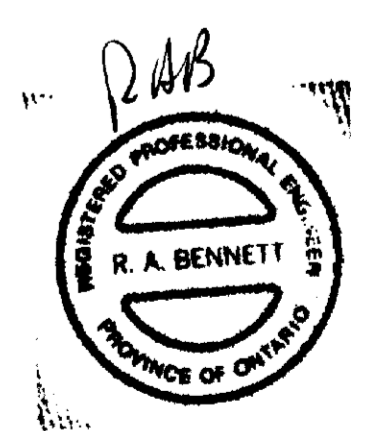
200

100

Sea L



- 63.4481
- | GEOLOGY       |               | SYMBOLS |                           |
|---------------|---------------|---------|---------------------------|
| ab            | Diabase       |         | Fault - Shear             |
| pd            | Peridotite    |         | Contact                   |
| Porp.         | Porphyry      |         | Original Surface          |
| Py.           | Pyrite - Tuff |         | Borehole showing          |
| Bs            | Basalt        |         | GOLD assays (troy oz/ton) |
| <b>5 ZONE</b> |               |         |                           |
| B             | Unit B        |         |                           |
| G1            | Unit G1       |         |                           |
| G2            | Unit G2       |         |                           |
|               | Vein - quartz |         |                           |



MAUDE LAKE GOLD MINES LIMITED

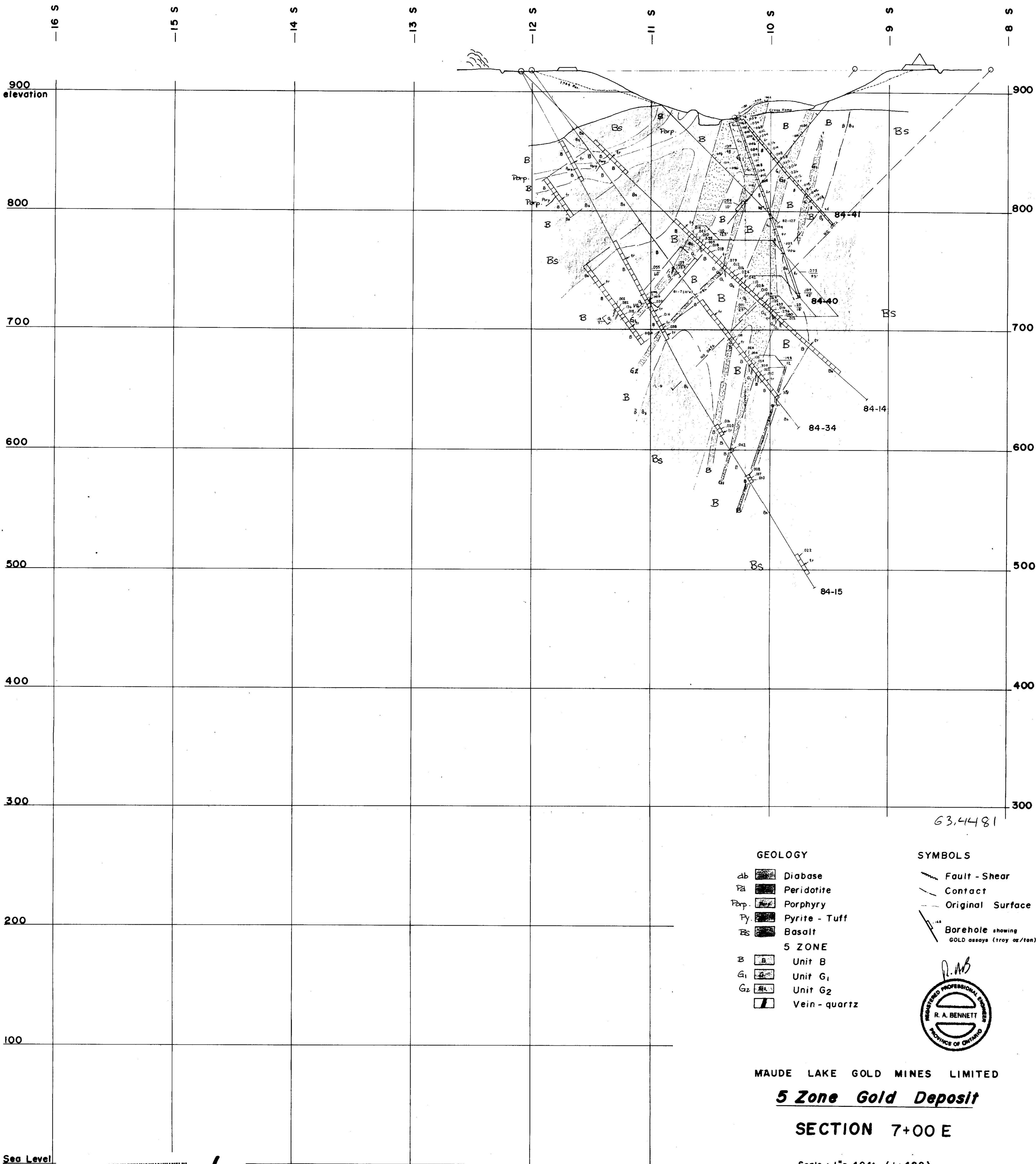
**5 Zone Gold Deposit**

**SECTION 6+00 E**

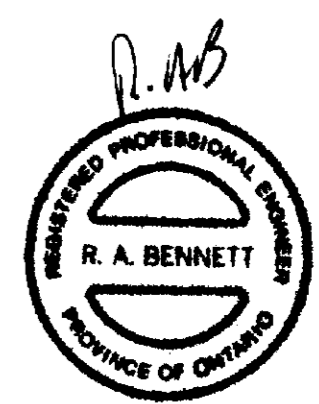
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250



- | GEOLOGY       |               | SYMBOLS |  |
|---------------|---------------|---------|--|
| db            | Diabase       |         | Fault - Shear                              |
| Pa            | Peridotite    |         | Contact                                    |
| Porp.         | Porphyry      |         | Original Surface                           |
| Py.           | Pyrite - Tuff |         | Borehole showing GOLD assays (troy oz/ton) |
| Bs            | Basalt        |         |  |
| <b>5 ZONE</b> |               |         |  |
| B             | Unit B        |         |  |
| G1            | Unit G1       |         |  |
| G2            | Unit G2       |         |  |
|               | Vein - quartz |         |  |

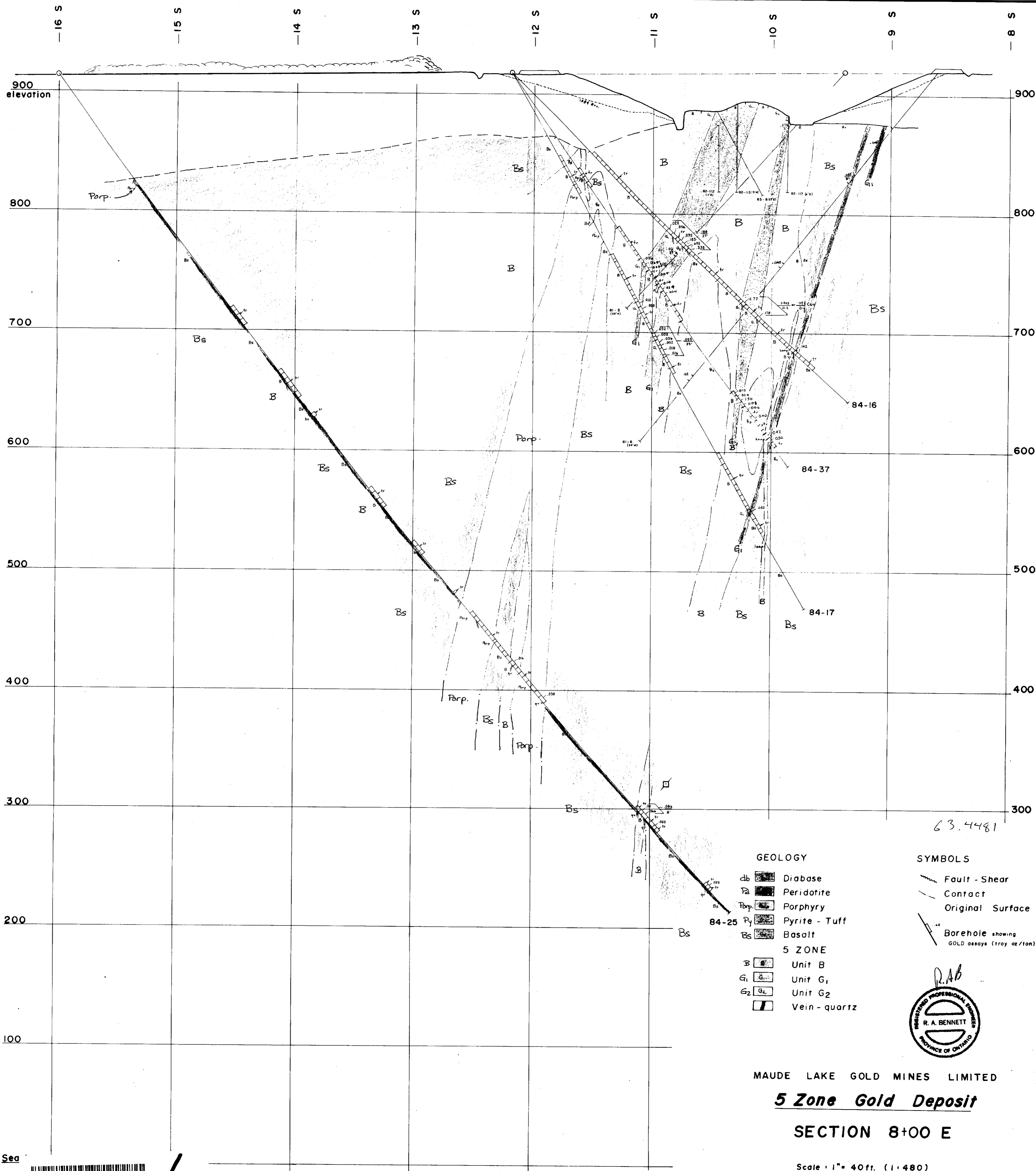


MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 7+00 E

Scale · 1" = 40ft. (1:480)

Sea Level





63.4481

**GEOLOGY**

- db Diabase
- Pa Peridotite
- Porp. Porphyry
- 84-25 Py Pyrite - Tuff
- Bs Basalt
- 5 ZONE**
- B Unit B
- G<sub>1</sub> Unit G<sub>1</sub>
- G<sub>2</sub> Unit G<sub>2</sub>
- Vein-quartz

**SYMBOLS**

- Fault - Shear
- Contact
- Original Surface
- Borehole showing GOLD assays (troy oz/ton)



MAUDE LAKE GOLD MINES LIMITED

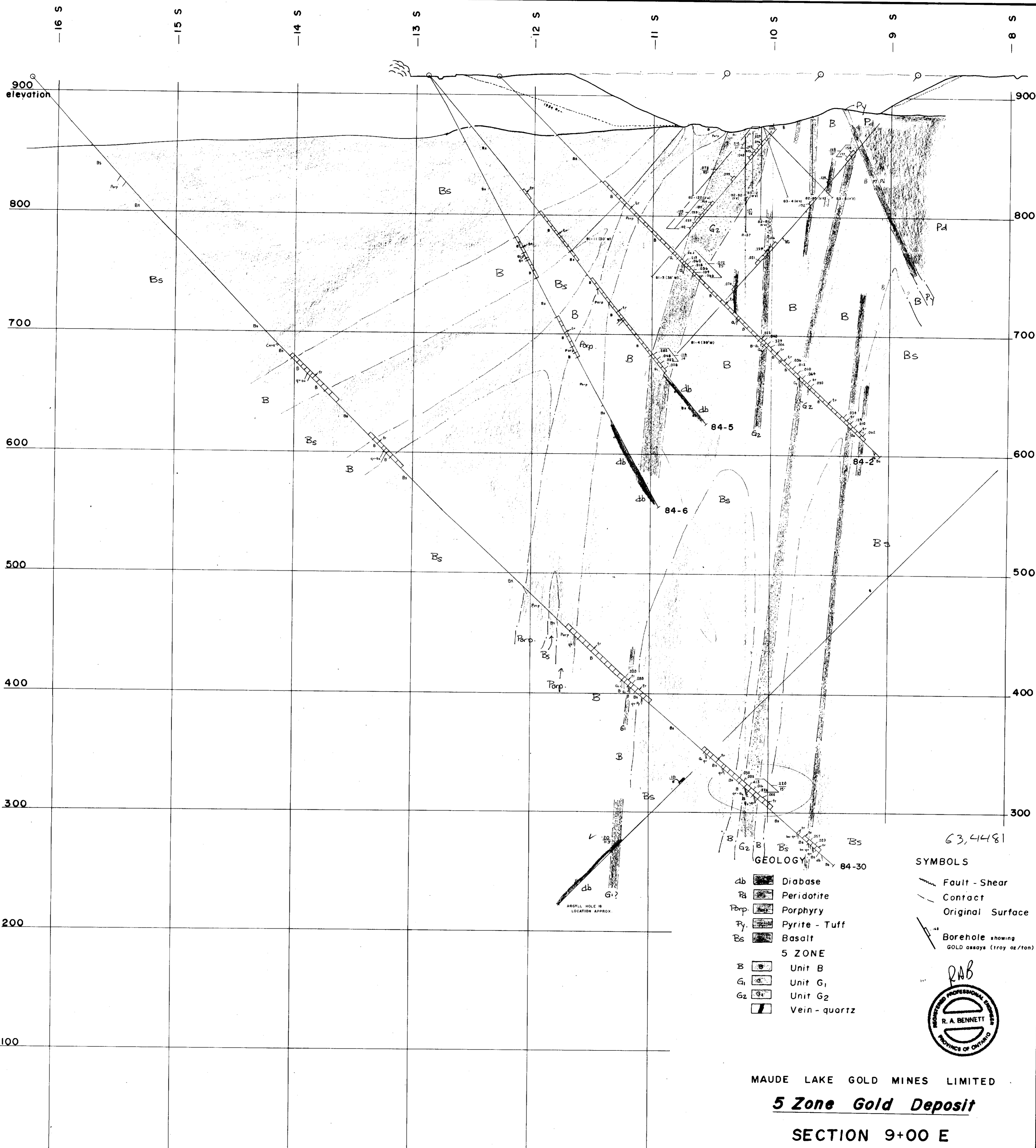
**5 Zone Gold Deposit**

**SECTION 8+00 E**

Scale: 1" = 40 ft. (1:480)

Sea





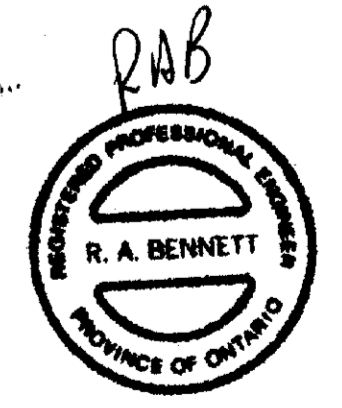
Sea Level

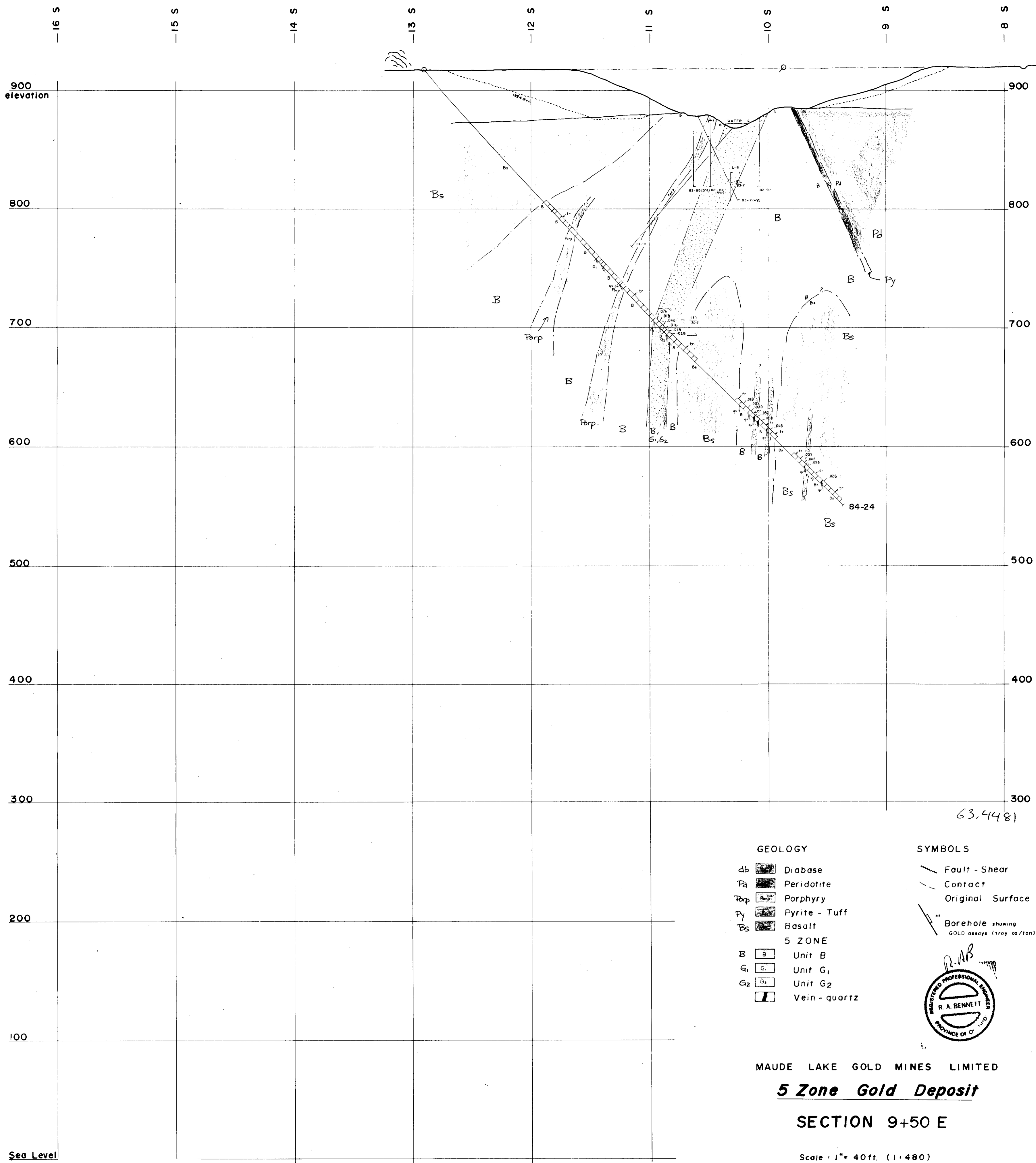


MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 9+00 E

Scale 1" = 40 ft. (1:480)

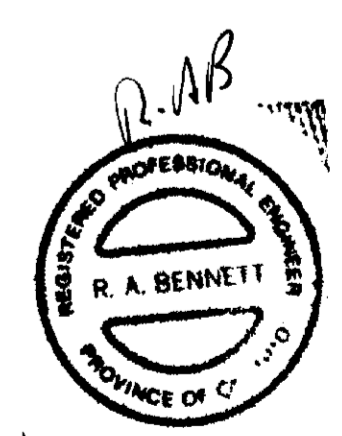
63,4481  
 SYMBOLS  
 Fault - Shear  
 Contact  
 Original Surface  
 Borehole showing  
 GOLD assays (tray oz/ton)





63.4481

- | GEOLOGY        |                     | SYMBOLS |                           |
|----------------|---------------------|---------|---------------------------|
| db             | Diabase             |         | Fault - Shear             |
| Pa             | Peridotite          |         | Contact                   |
| Pbrp           | Porphyry            |         | Original Surface          |
| Py             | Pyrite - Tuff       |         | Borehole showing          |
| Bs             | Basalt              |         | GOLD assays (troy oz/ton) |
| 5 ZONE         |                     |         |                           |
| B              | Unit B              |         |                           |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |                           |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |                           |
|                | Vein - quartz       |         |                           |



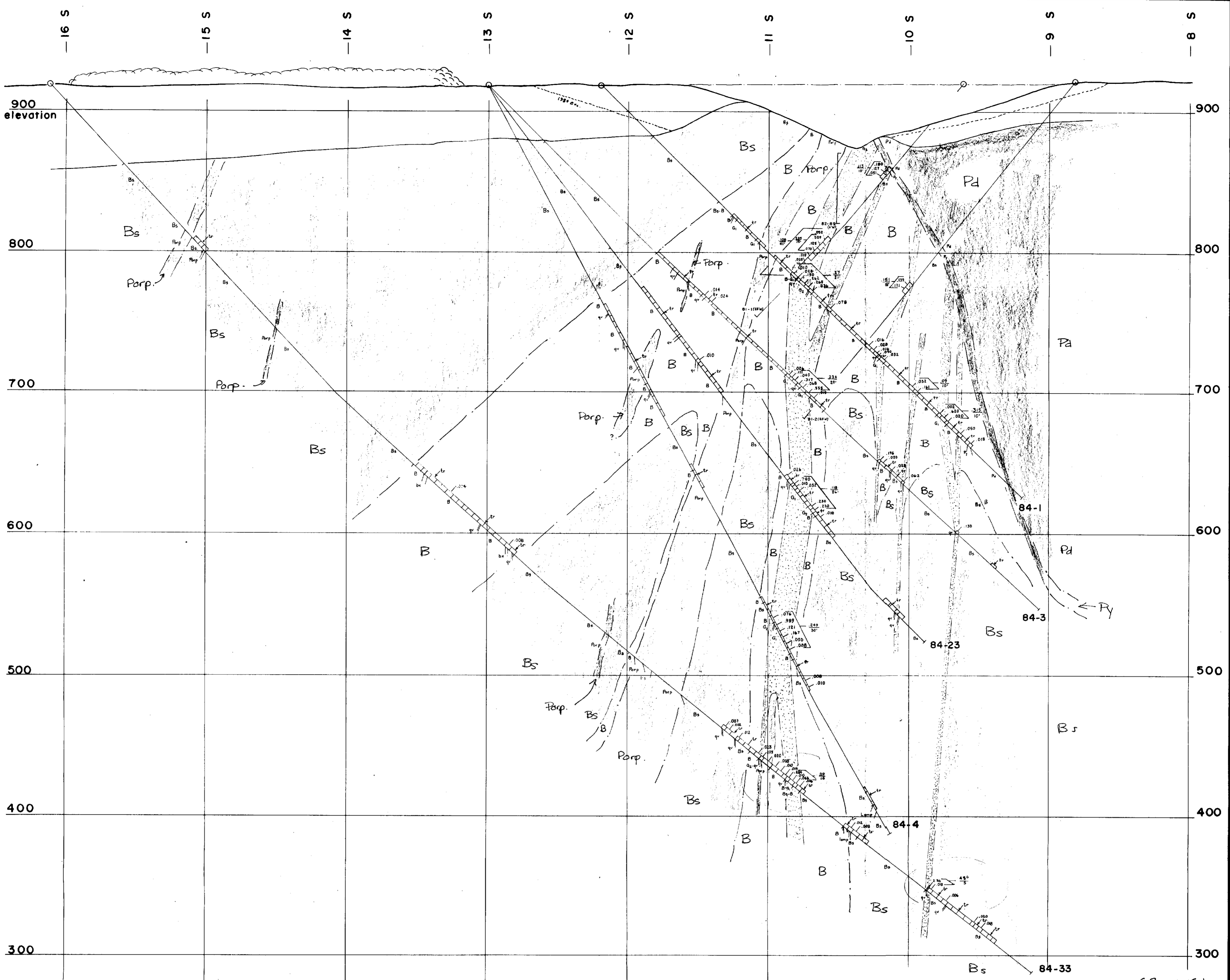
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 9+50 E

Scale: 1" = 40ft. (1:480)

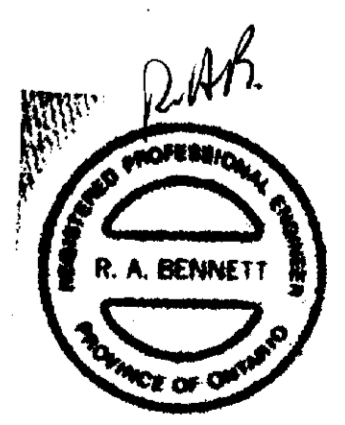
Sea Level







GEOLOGY		SYMBOLS	
db	Diabase	Fault - Shear	
Pd	Peridotite	Contact	
Porp	Porphyry	Original Surface	
Py	Pyrite - Tuff	Borehole showing	
Bs	Basalt		GOLD assays (troy oz/ton)
<b>5 ZONE</b>			
B	Unit B		
G <sub>1</sub>	Unit G <sub>1</sub>		
G <sub>2</sub>	Unit G <sub>2</sub>		
	Vein - quartz		



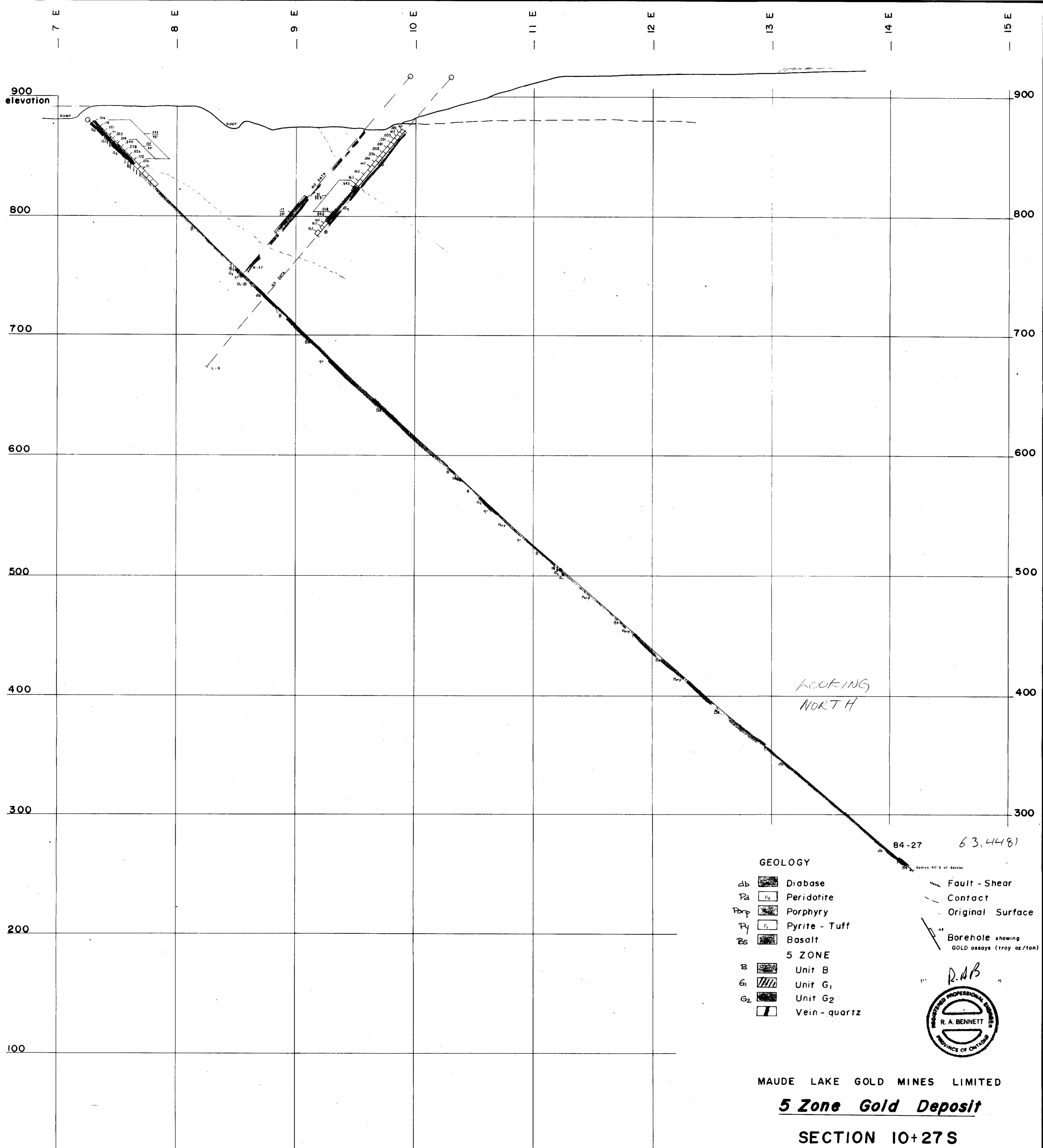
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 10+00 E

Scale 1" = 40ft. (1:480)

Sea Level

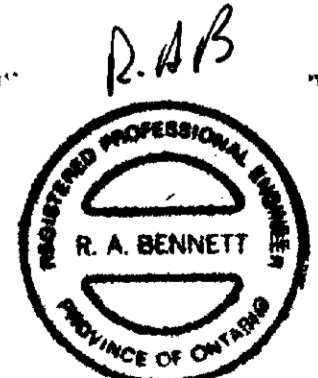


300



**GEOLOGY**

- db Diabase
- Pa Peridotite
- Porp Porphyry
- Py Pyrite - Tuff
- Bs Basalt
- 5 ZONE**
- B Unit B
- G1 Unit G1
- G2 Unit G2
- Vein-quartz
- Fault - Shear
- Contact
- Original Surface
- Borehole showing GOLD assays (tray oz/ton)



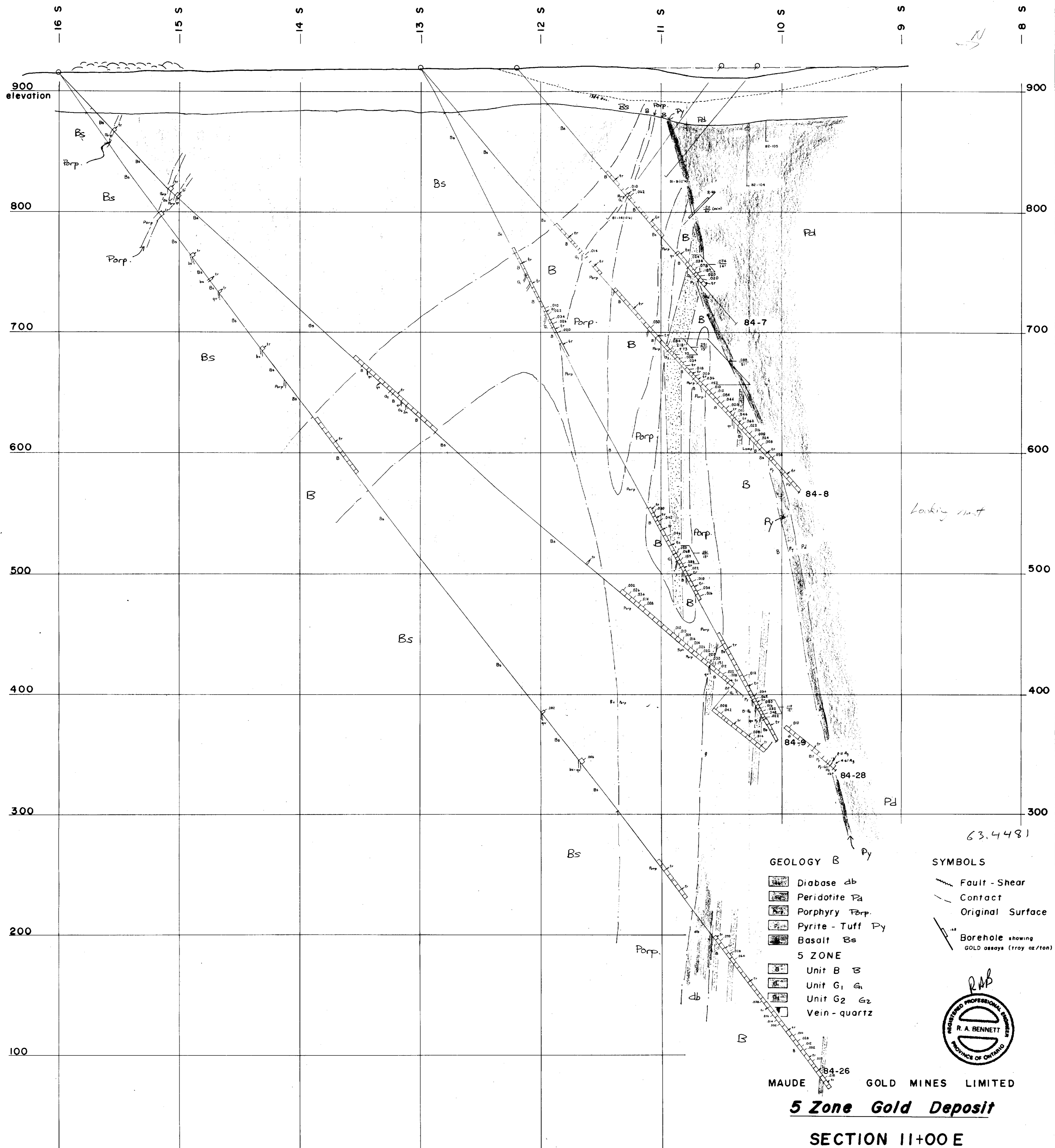
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
**SECTION 10+27S**

Scale: 1" = 40 ft. (1:480)



310

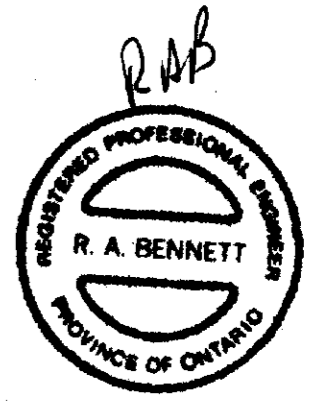




- GEOLOGY**
- Diabase db
  - Peridotite Pd
  - Porphyry Porp.
  - Pyrite - Tuff Py
  - Basalt Bs
- 5 ZONE**
- Unit B B
  - Unit G<sub>1</sub> G<sub>1</sub>
  - Unit G<sub>2</sub> G<sub>2</sub>
  - Vein - quartz

- SYMBOLS**
- Fault - Shear
  - Contact
  - Original Surface
  - Borehole showing GOLD assays (tray oz/ton)

63.4481



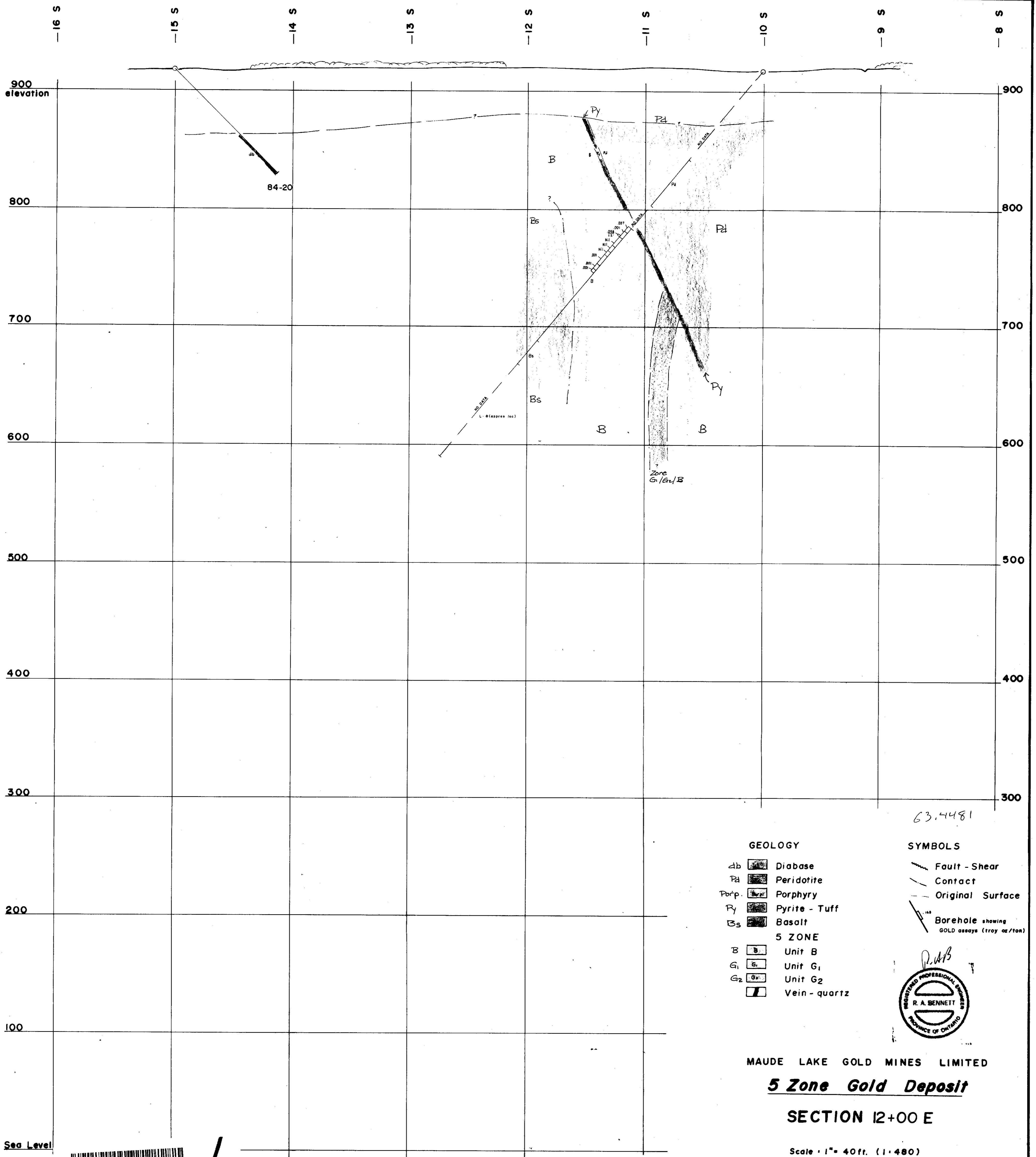
MAUDE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 11+00 E

Scale - 1" = 40ft. (1:480)

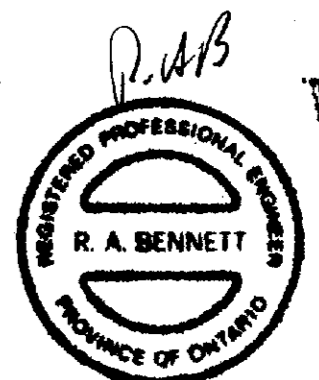
Sea Lt



320



- 63.4481
- | GEOLOGY        |                     | SYMBOLS |  |
|----------------|---------------------|---------|--|
| db             | Diabase             |         | Fault - Shear                              |
| Pd             | Peridotite          |         | Contact                                    |
| Porp           | Porphyry            |         | Original Surface                           |
| Py             | Pyrite - Tuff       |         | Borehole showing GOLD assays (tray oz/ton) |
| Bs             | Basalt              |         |  |
| <b>5 ZONE</b>  |                     |         |  |
| B              | Unit B              |         |  |
| G <sub>1</sub> | Unit G <sub>1</sub> |         |  |
| G <sub>2</sub> | Unit G <sub>2</sub> |         |  |
|                | Vein - quartz       |         |  |



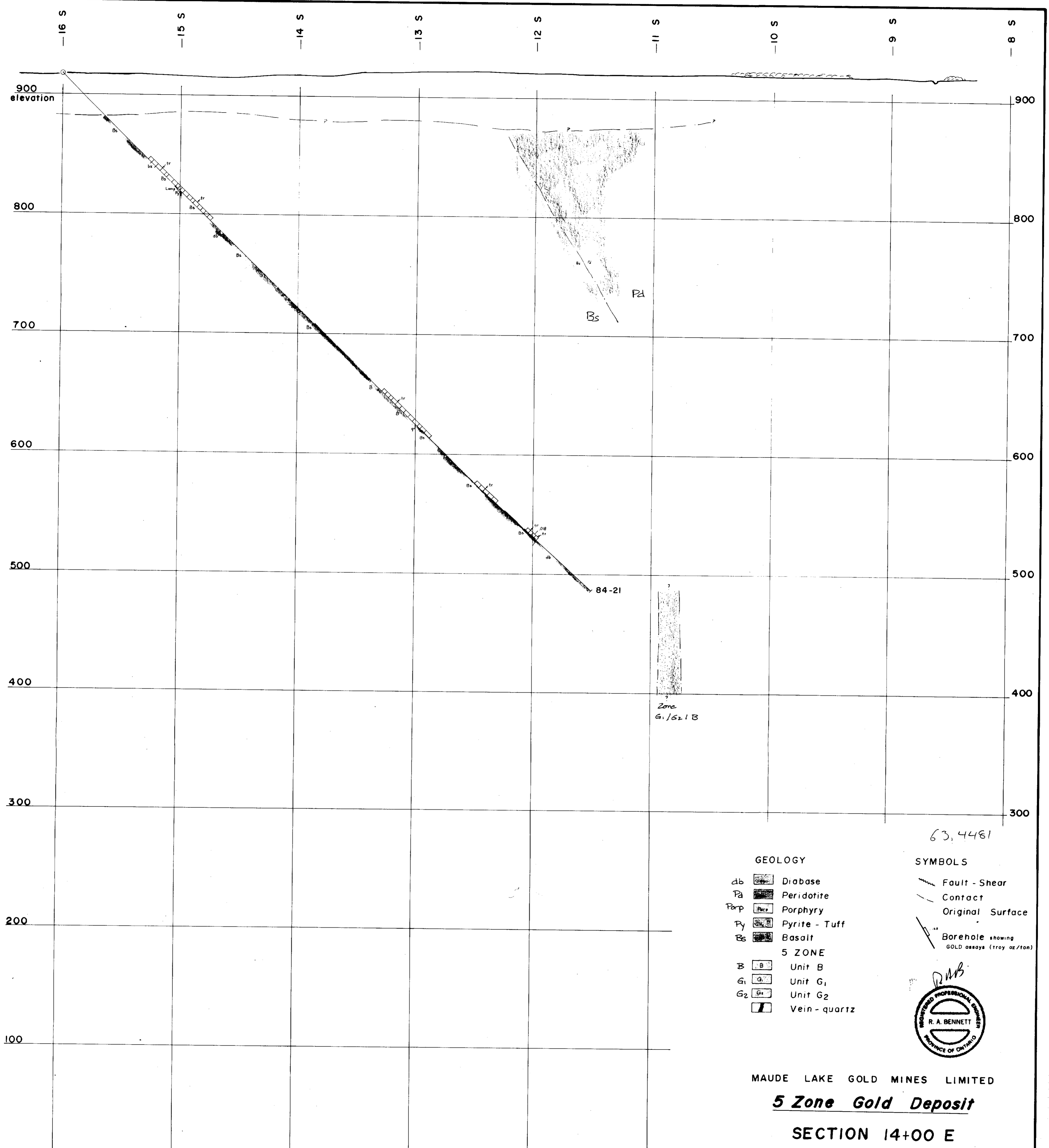
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 SECTION 12+00 E

Scale · 1" = 40ft. (1:480)

Sea Level



330



900 elevation

900

800

800

700

700

600

600

500

500

400

400

300

300

200

100

100

Sea Lev



340

- GEOLOGY**
- db Diabase
  - Pa Peridotite
  - Porp Porphyry
  - Py Pyrite - Tuff
  - Bs Basalt
- 5 ZONE**
- B Unit B
  - G<sub>1</sub> Unit G<sub>1</sub>
  - G<sub>2</sub> Unit G<sub>2</sub>
  - Vein-quartz

- SYMBOLS**
- Fault - Shear
  - - - Contact
  - Original Surface
  - Borehole showing GOLD assays (troy oz/ton)

63,4481



MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
**SECTION 14+00 E**

Scale : 1" = 40ft. (1:480)

10 S

8 S

6 S

SHAFT

Elevation: 933.3 ft.  
(304' SW of section)

5 ZONE

800  
Elevation

B, G<sub>1</sub>

Bs

700

600

500

400

300

GEOLOGY

- db Diabase
- Pa Peridotite
- Prp Porphyry
- Py Pyrite - Tuff
- Bs Basalt

SYMBOLS

- Fault - Shear
- Contact
- Original Surface
- Borehole showing GOLD assays (troy oz/ton)

5 ZONE

- B Unit B
- G<sub>1</sub> Unit G<sub>1</sub>
- G<sub>2</sub> Unit G<sub>2</sub>
- Vein - quartz

MAUDE LAKE GOLD MINES LIMITED

**5 Zone Gold Deposit**  
**Exploration Hole**

OFF - SECTION

Scale: 1" = 40ft. (1:480)

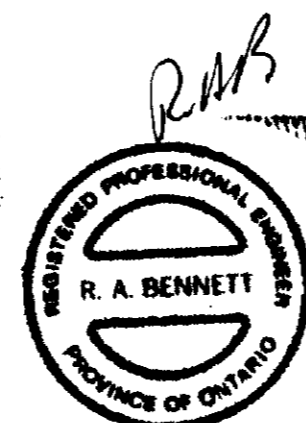
63.4481

LOOKING SOUTHWEST

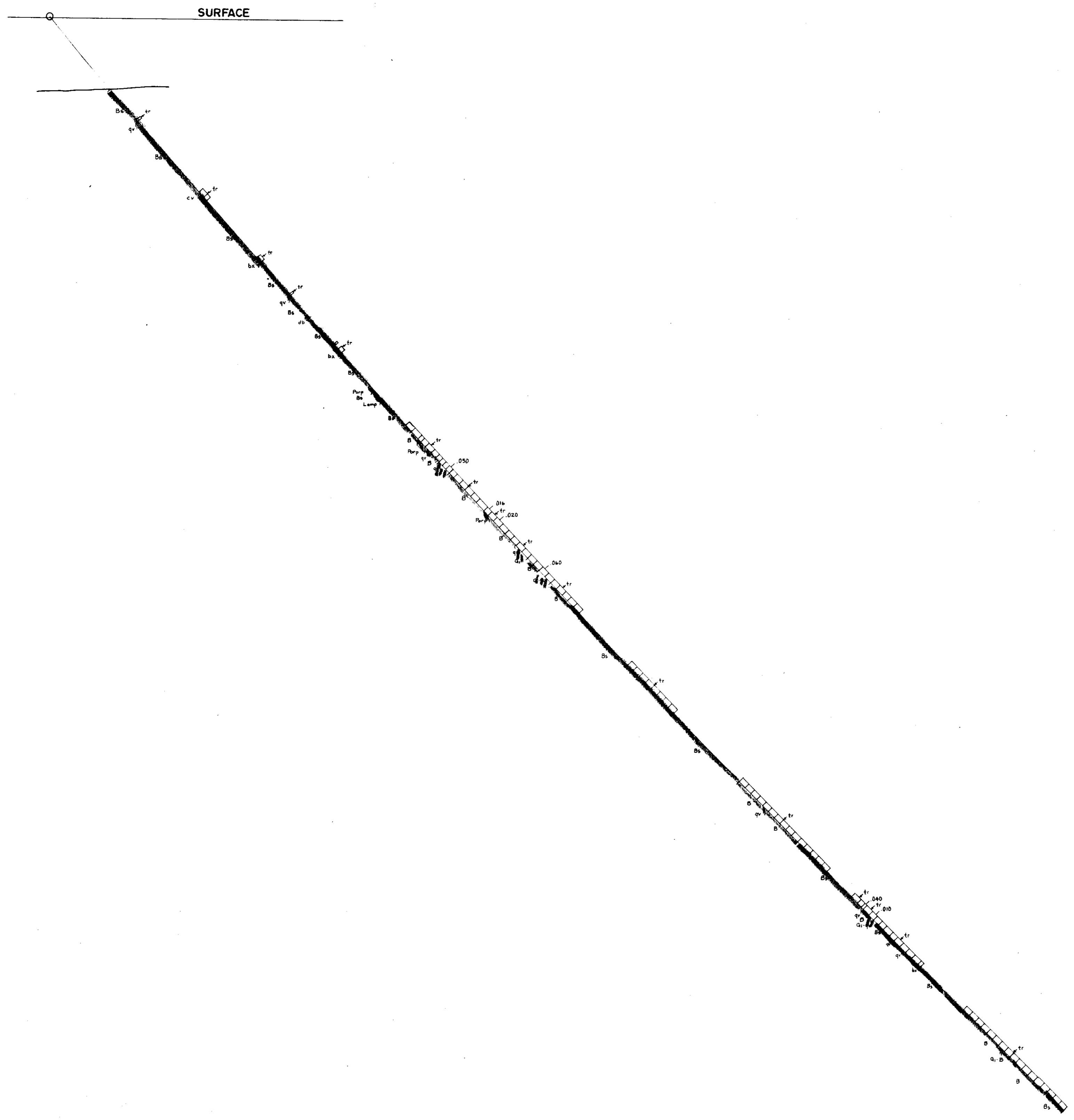
2 VEIN

SHAFT VEIN

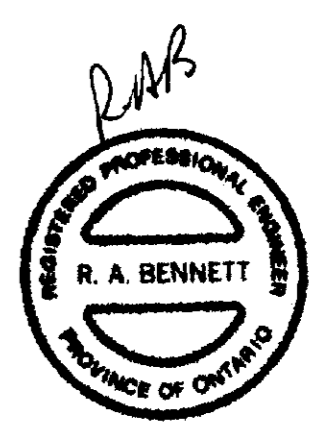
84-22



- 15 N  
- 16 N  
- 17 N  
- 18 N  
- 19 N  
- 20 N  
- 21 N  
- 22 N  
- 23 N



84-38



63,4481

MAUDE LAKE GOLD MINES LIMITED  
**Exploration Drilling - Field Zone**

SECTION 28+00 W

Scale: 1" = 40ft. (1: 480)



360

16N

17N

18N

19N

20N

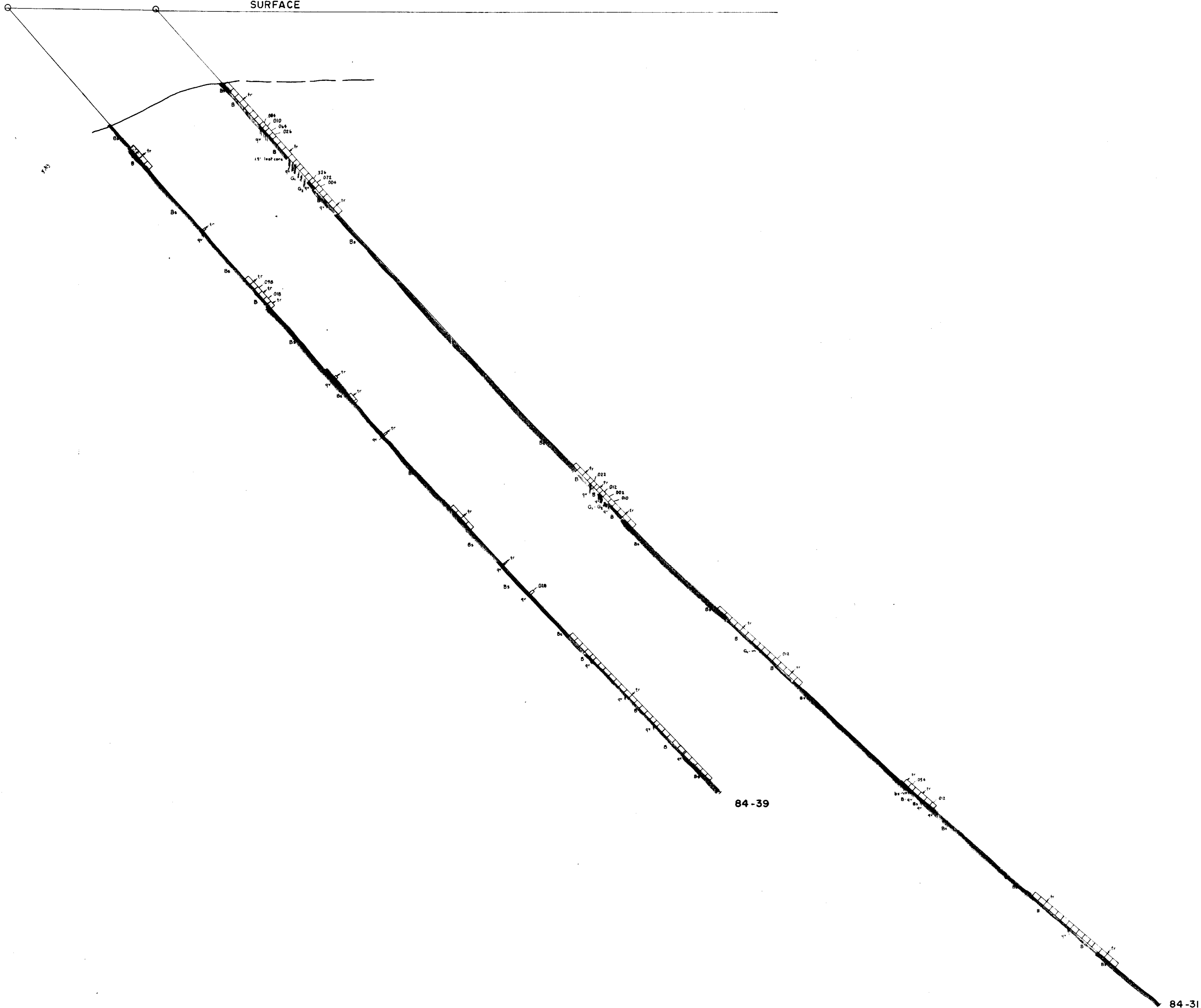
21N

22N

23N

24N

SURFACE



84-39

84-31



63.4481

MAUDE LAKE GOLD MINES LIMITED  
**Exploration Drilling - Field Zone**

SECTION 32+00 W

Scale: 1" = 40ft. (1:480)



0+00

2 E

4 E

6 E

8 E

10 E

12 E

14 E



### 0 FT LEVEL - SUBCROP

63.4481  
 MAUDE LAKE GOLD MINES LIMITED  
5 Zone Gold Deposit

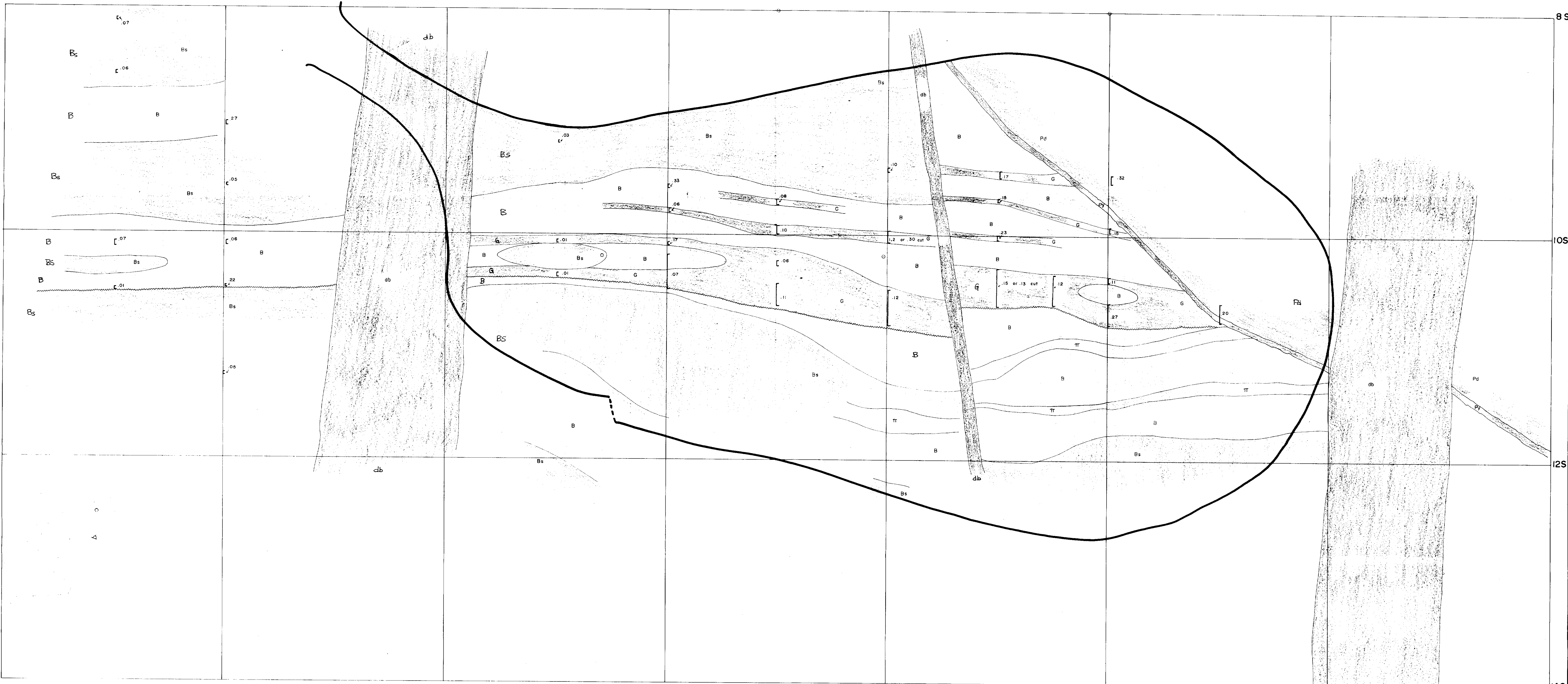
LEVEL PLAN - 900 Elevation

Scale: 1" = 40 ft. (1:480)





0+00 2 E 4 E 6 E 8 E 10 E 12 E 14 E



100 FT LEVEL



db (3,448)  
 MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**  
 LEVEL PLAN - 800 Elevation

Scale: 1" = 40 ft. (1:480)



390



0+00

2 E

4 E

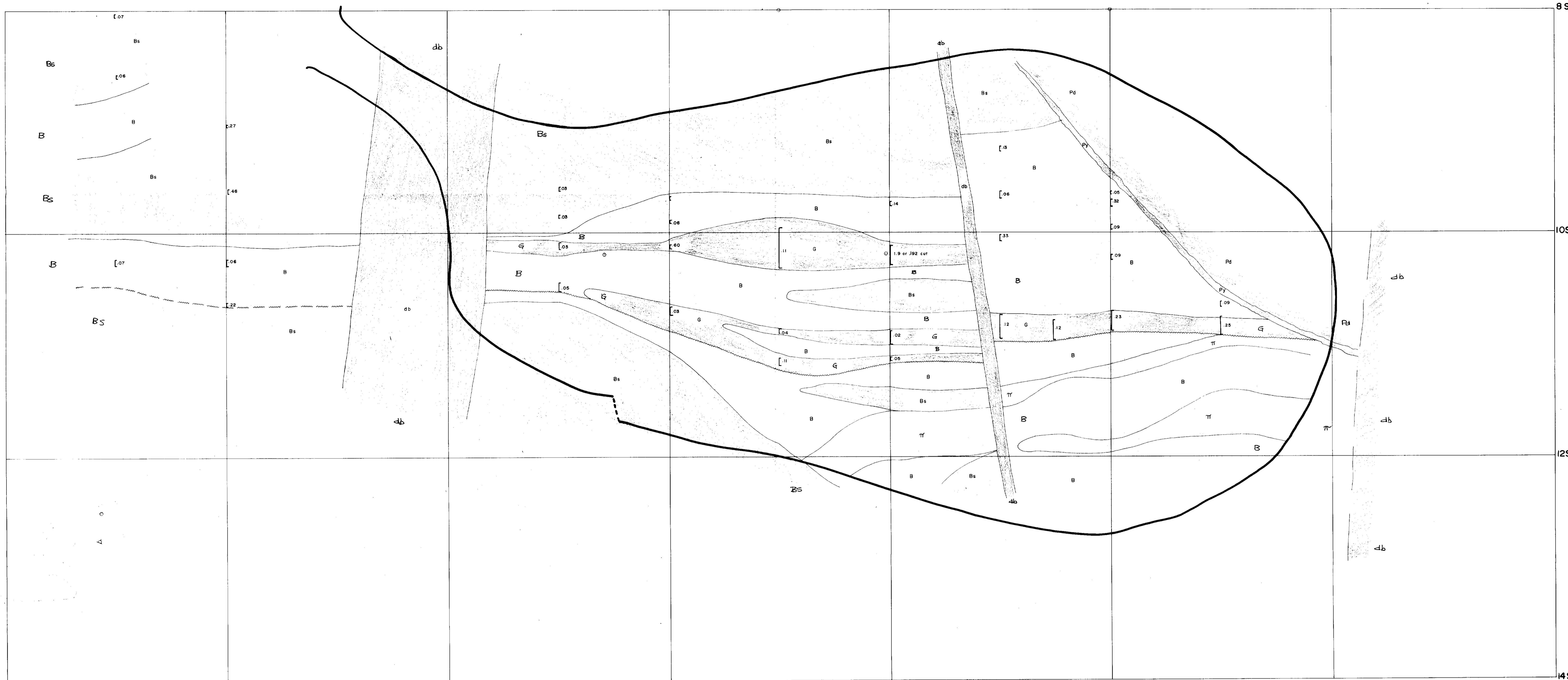
6 E

8 E

10 E

12 E

14 E

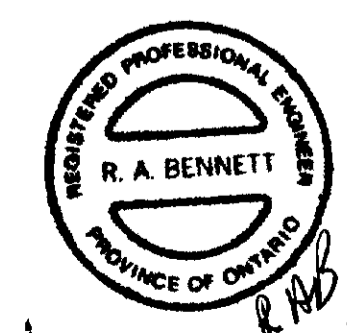


# 200 FT LEVEL

63-4481  
MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**

**LEVEL PLAN-700 Elevation**

Scale: 1" = 40 ft. (1:480)



1  
400

0+00

2 E

4 E

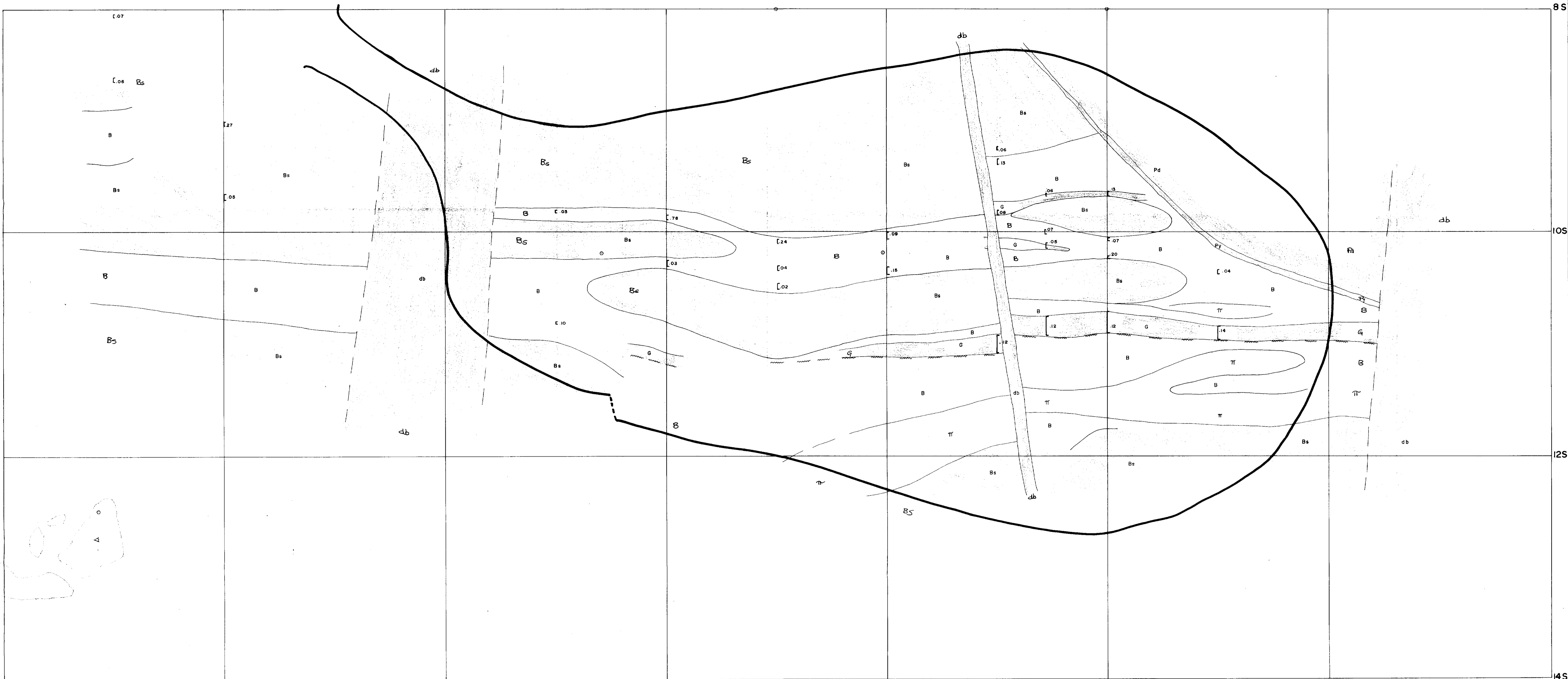
6 E

8 E

10 E

12 E

14 E



# 300 FT LEVEL

63-4481  
MAUDE LAKE GOLD MINES LIMITED

5 Zone Gold Deposit

LEVEL PLAN - 600 Elevation

Scale - 1" = 40 ft. (1:480)



0+00

2 E

4 E

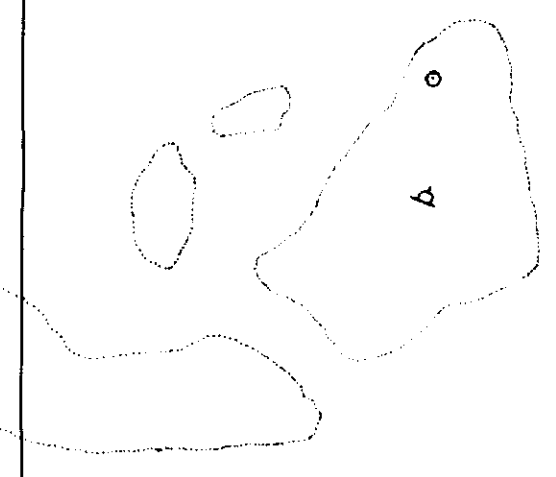
6 E

8 E

10 E

12 E

14 E



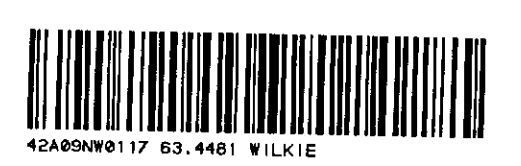
# 400 FT LEVEL

63.4481  
 MAUDE LAKE GOLD MINES LIMITED  
**5 Zone Gold Deposit**

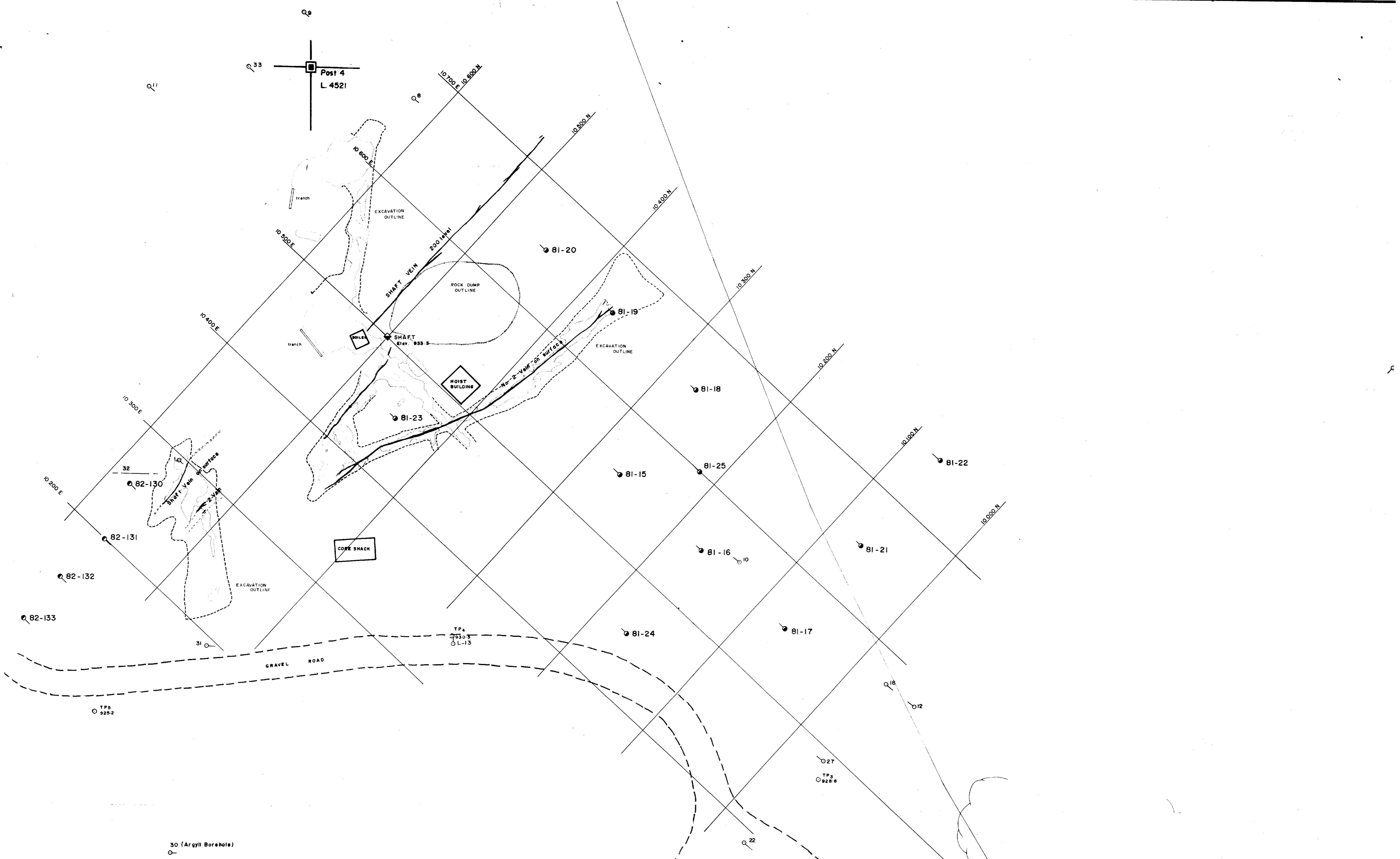


## LEVEL PLAN - 500 Elevation

Scale: 1" = 40 ft. (1:480)



1  
420



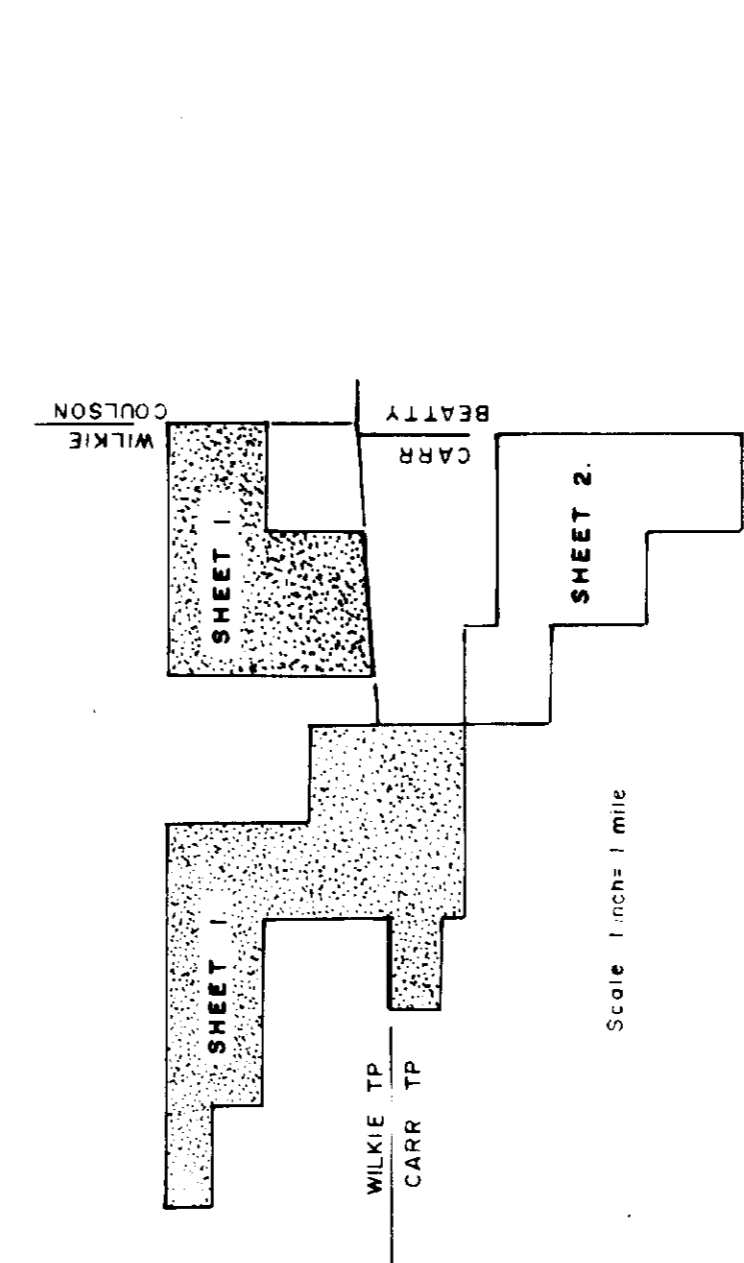
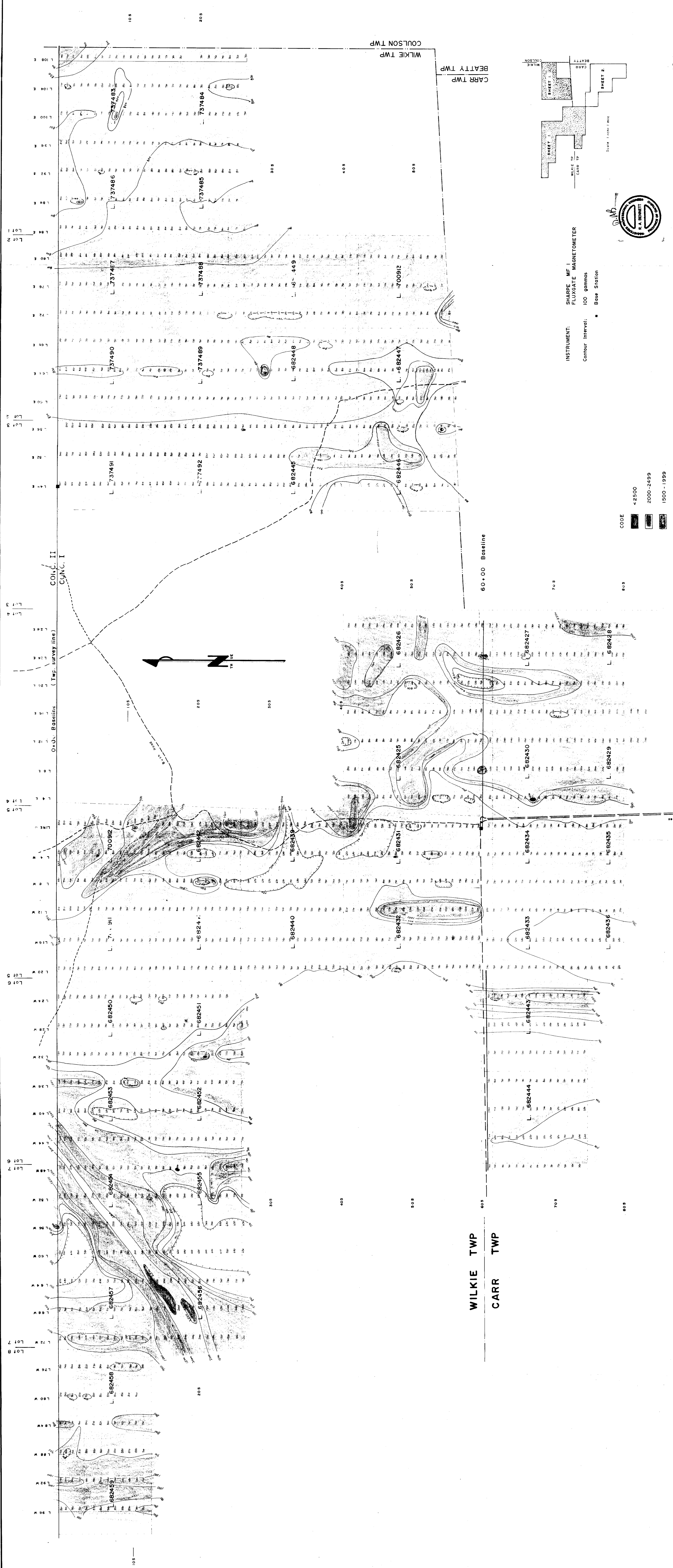
30 (Argyll Borehole)



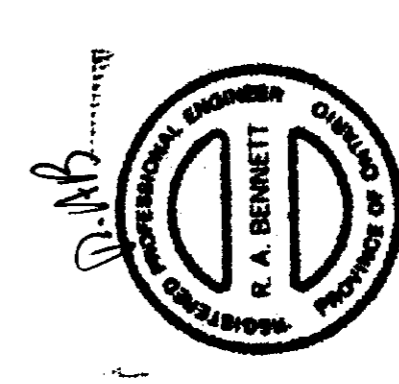








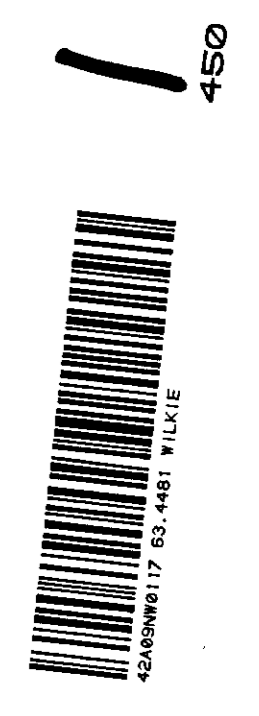
INSTRUMENT: SHARPE MF-1 FLUXGATE MAGNETOMETER  
 Contour Interval: 100 gammas  
 Base Station



CODE	Value
[Symbol]	< 2500
[Symbol]	2000-2499
[Symbol]	1500-1999
[Symbol]	1000-1499
[Symbol]	900-999
[Symbol]	800-899
[Symbol]	700-799
[Symbol]	< 700

63.4481

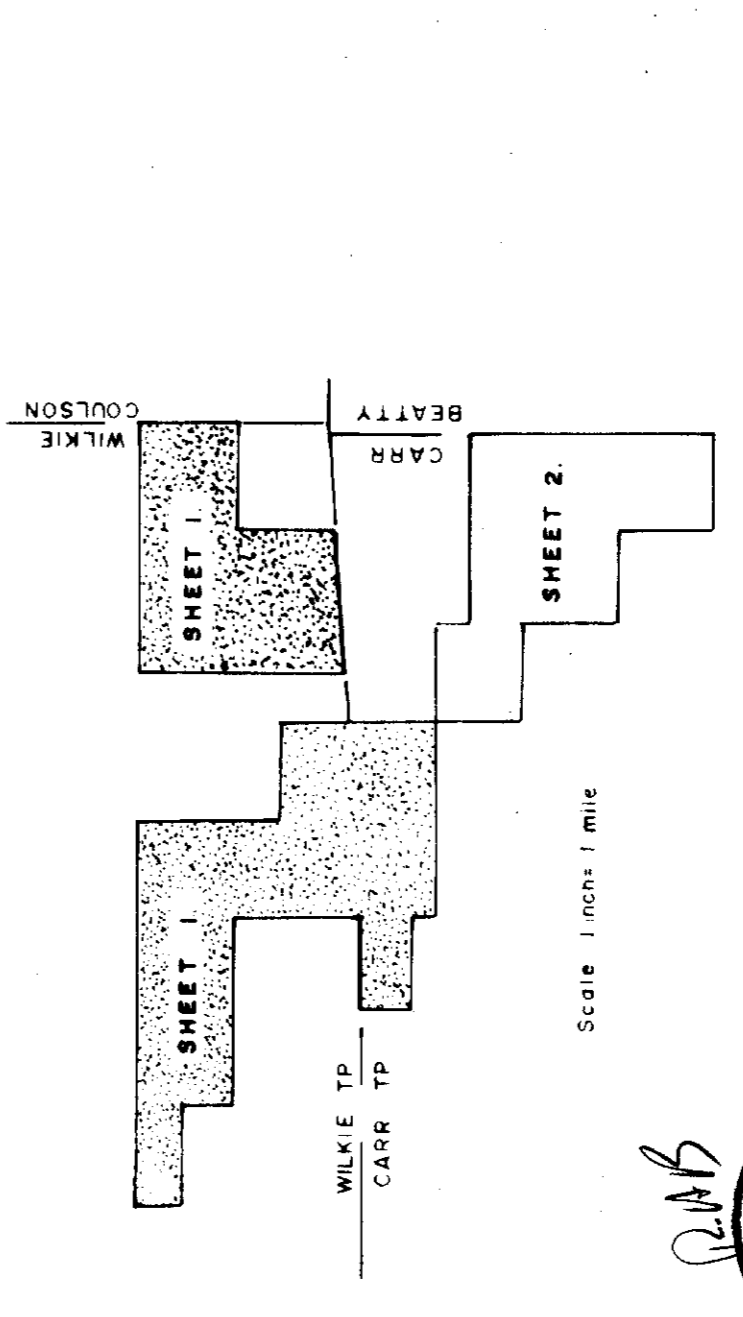
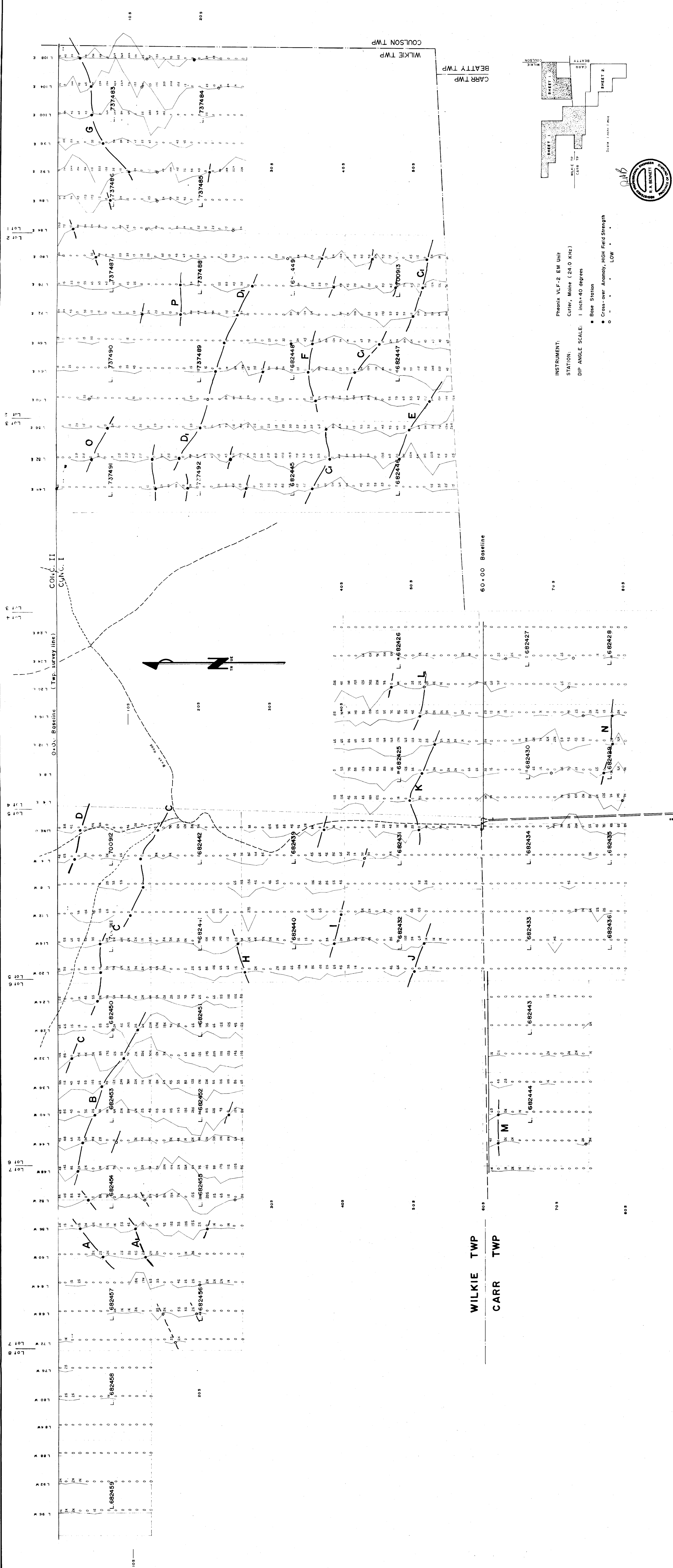
**MAUDE LAKE GOLD MINES LIMITED**  
**WILKIE-CARR GROUP**  
**MAGNETOMETER SURVEY**  
 Scale: 1 inch = 400 feet  
 Nov 1984  
 MAP No. WCM-012





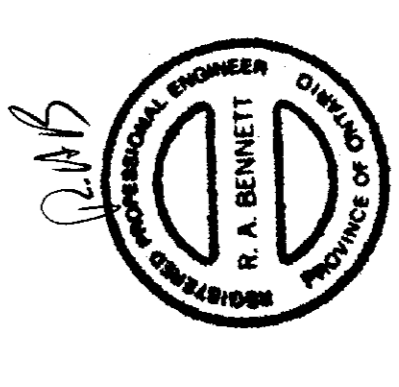
MAUDE LAKE GOLD MINES LIMITED  
 WILKIE-CARR GROUP  
 VLF-EM SURVEY

Scale: 1 inch = 400 feet  
 MAP No. WCV-013  
 NOV 1984

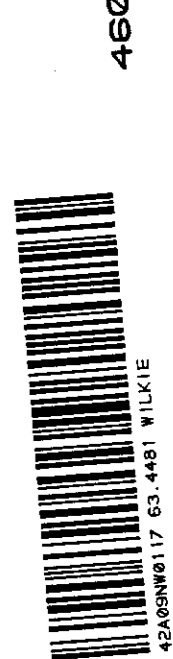


INSTRUMENT: Phoenix VLF-2 EM Unit  
 STATION: Cutler, Maine (24.0 KHz)  
 DIP ANGLE SCALE: 1 inch = 40 degrees

■ Base Station  
 ● Cross-over Anomaly, High Field Strength  
 ○ LOW

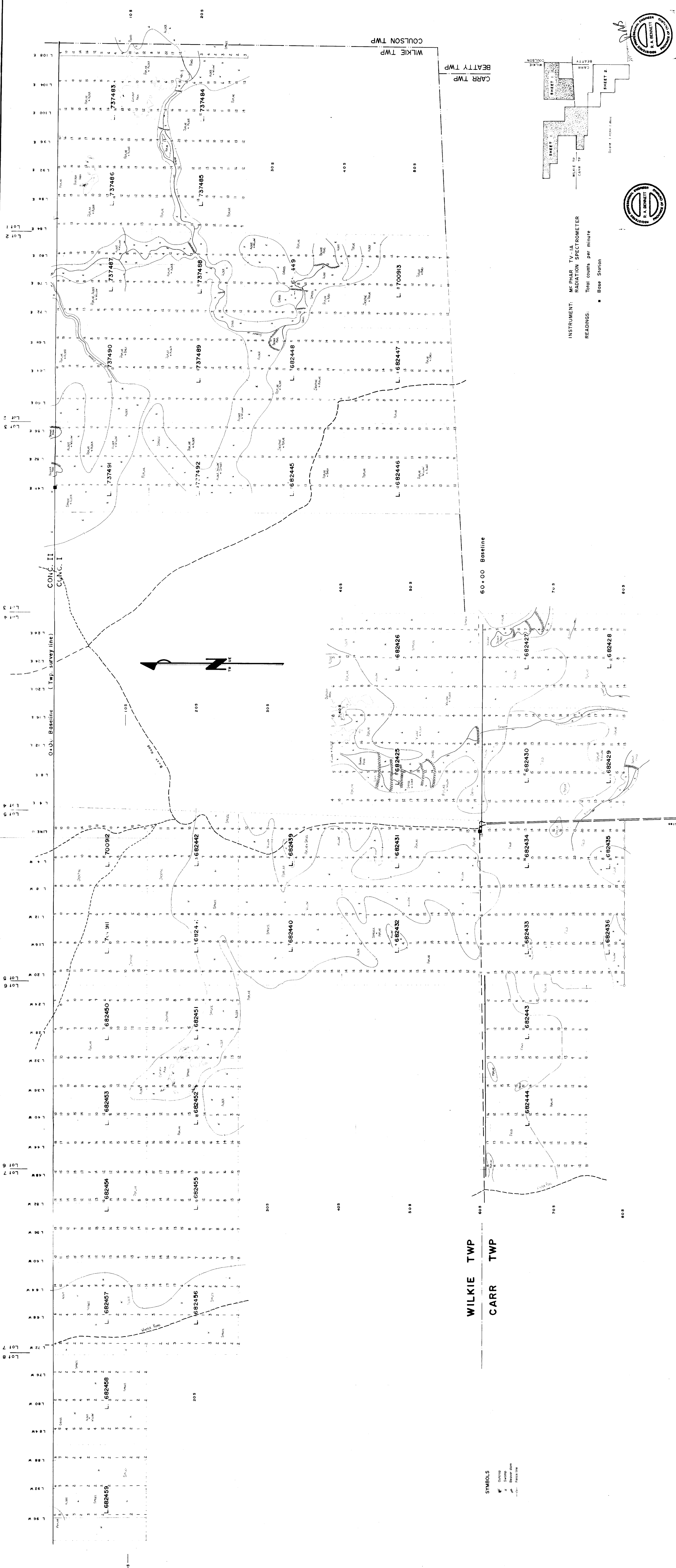


634451



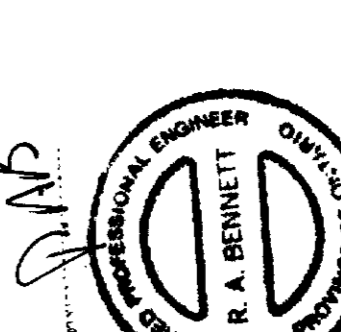






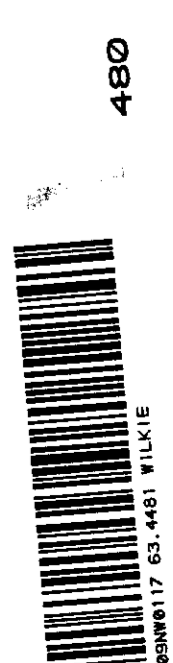
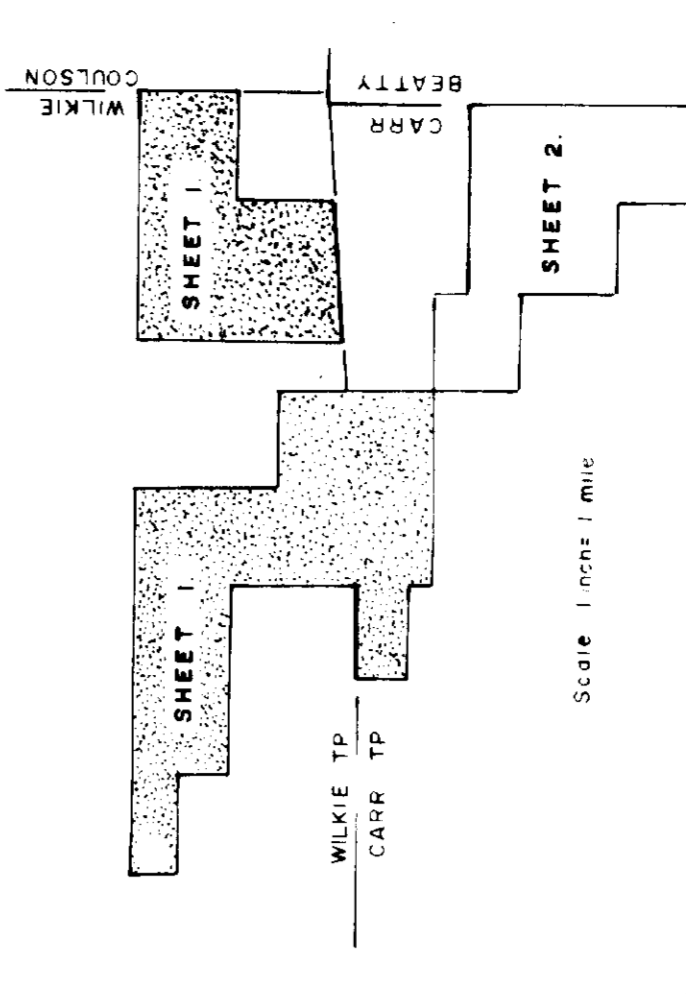
**SYMBOLS**  
 \* Change  
 + Change  
 - Change  
 - - - - - Fence line

**INSTRUMENT:** MC PHAR, TV-1A  
**RADIATION SPECTROMETER**  
**READINGS:** Total counts per minute  
 ■ Base Station

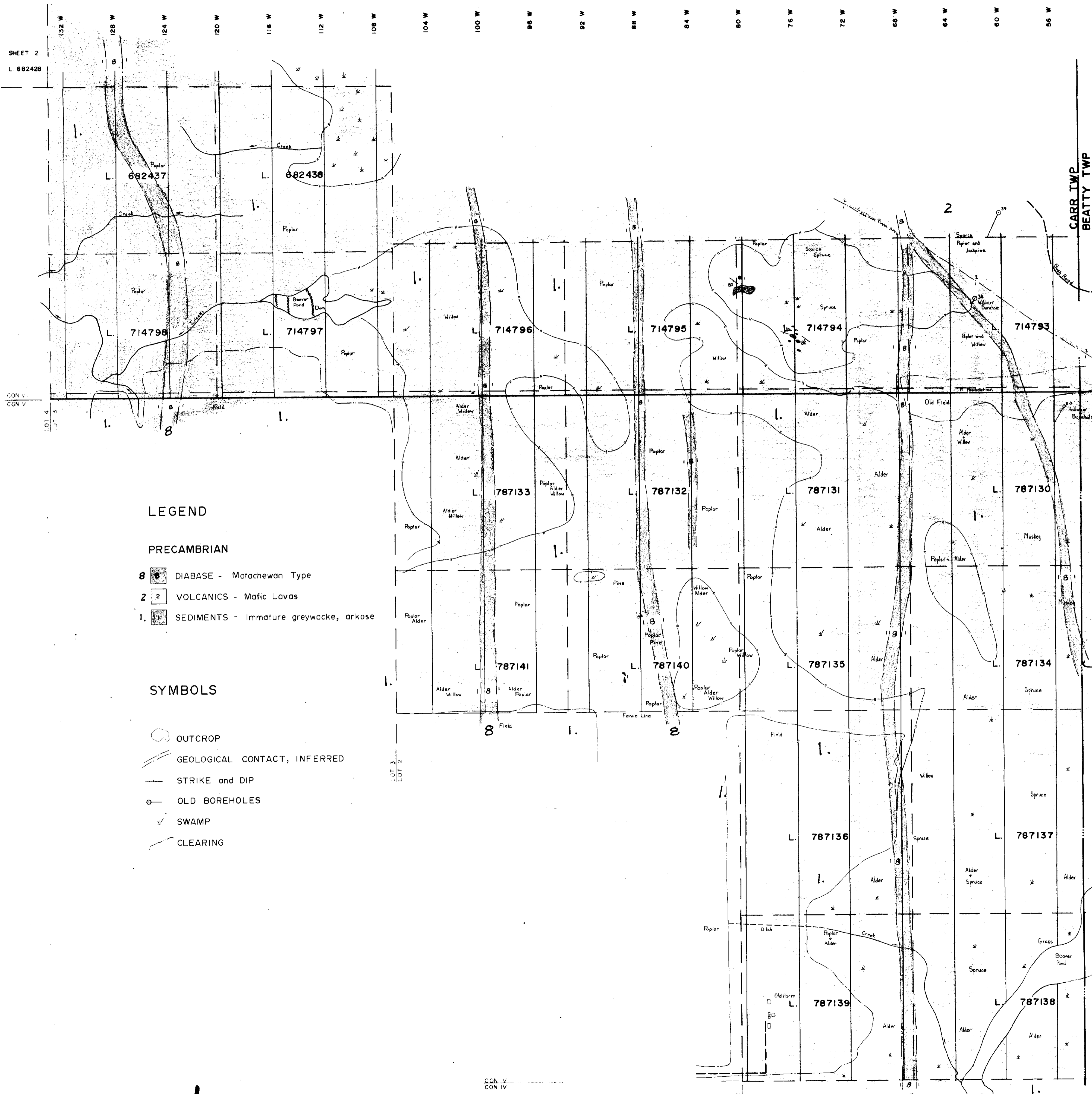


63,4481

**MAUDE LAKE GOLD MINES LIMITED**  
**WILKIE-CARR GROUP**  
**RADIOMETRIC SURVEY**  
 Scale: 1 inch = 400 feet  
 NOV 1984  
 MAP No. WCR-015



SHEET 2  
L. 682428



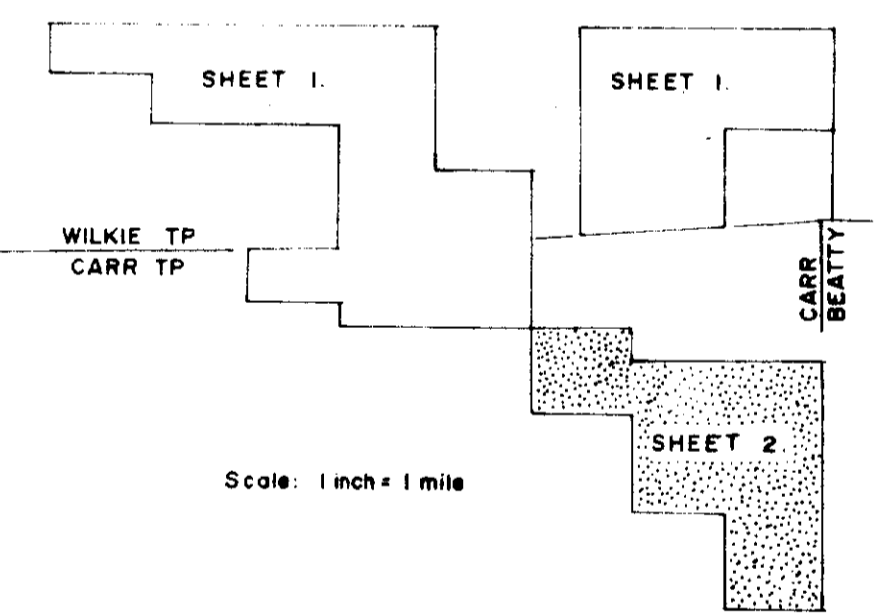
**LEGEND**

- PRECAMBRIAN**
- 8 DIABASE - Marachewan Type
  - 2 VOLCANICS - Mafic Lavas
  - 1 SEDIMENTS - Immature greywacke, arkose

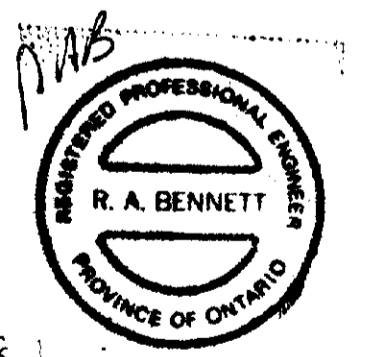
**SYMBOLS**

- OUTCROP
- GEOLOGICAL CONTACT, INFERRED
- STRIKE and DIP
- OLD BOREHOLES
- ≡ SWAMP
- CLEARING

0-0 BASELINE  
EXTENDED FROM "MAIN" GRID



Scale: 1 inch = 1 mile



63,4481

MAUDE LAKE GOLD MINES LIMITED  
WILKIE - CARR GROUP  
GEOLOGICAL PLAN  
CARR TWP CLAIMS  
Scale: 1 inch = 400 feet  
September 1984  
Map No. CG-001

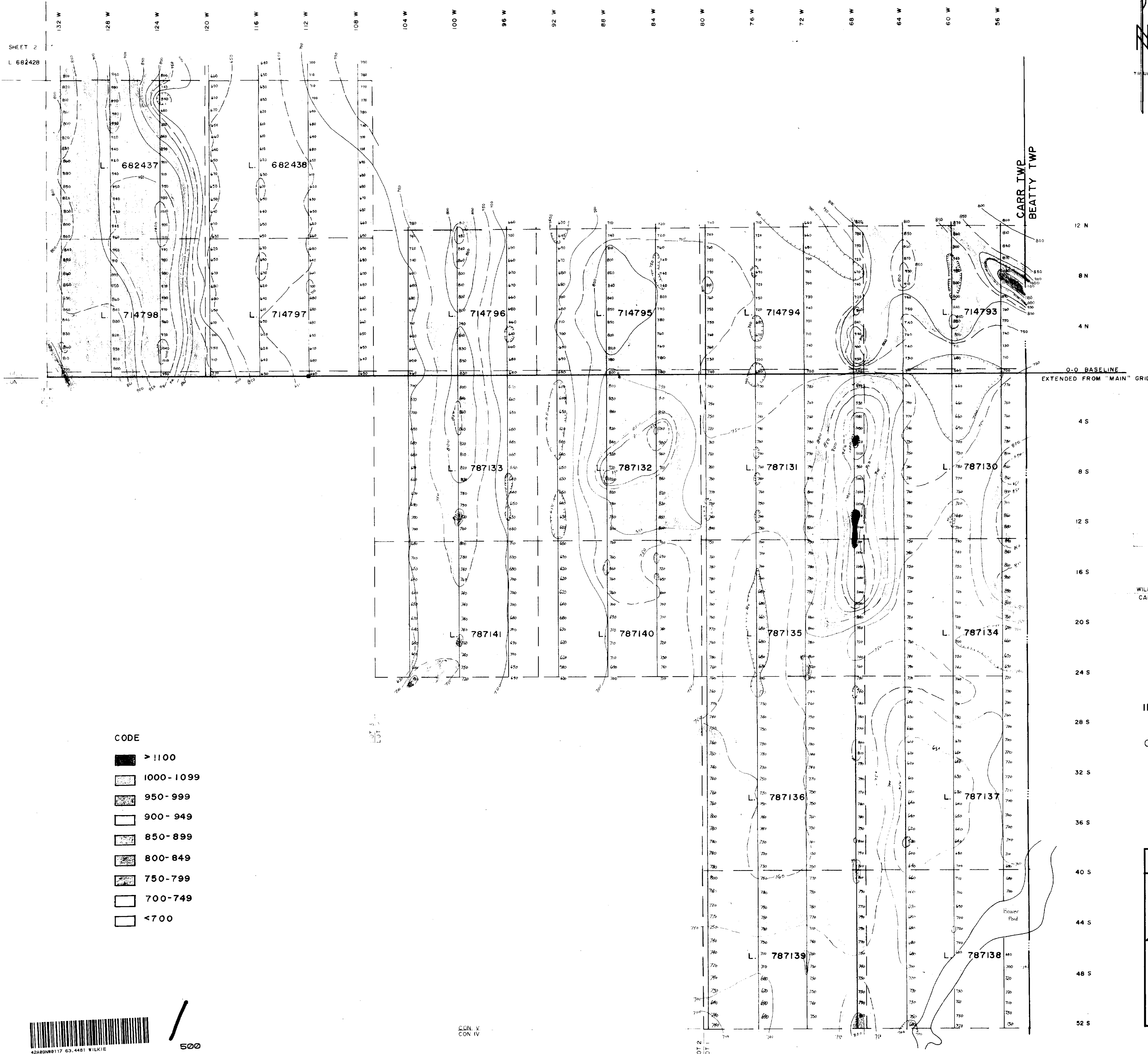


490

CON V  
CON IV

LOT 2  
LOT 1

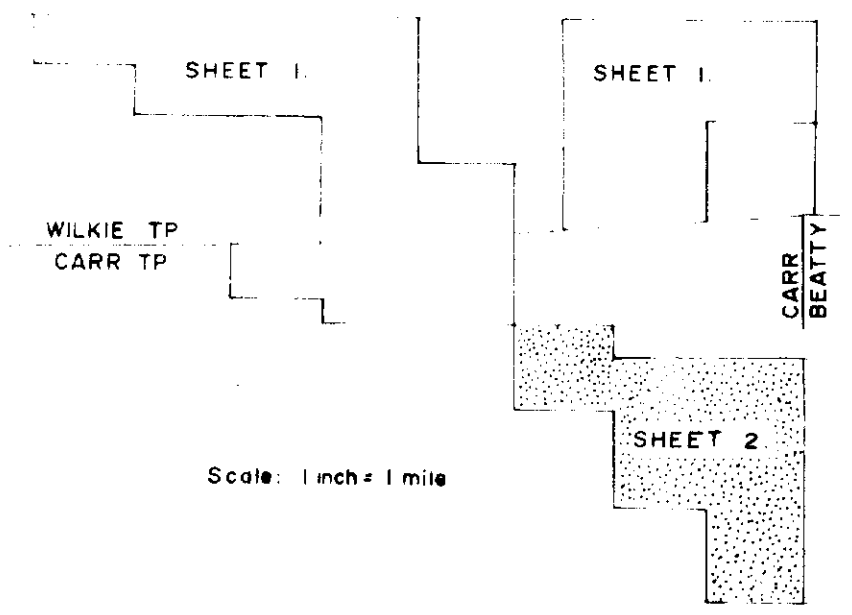
SHEET 2  
L 682428



CODE

■	> 1100
■	1000-1099
■	950-999
■	900-949
■	850-899
■	800-849
■	750-799
■	700-749
■	< 700

12 N  
8 N  
4 N  
0-0 BASELINE  
EXTENDED FROM "MAIN" GRID  
4 S  
8 S  
12 S  
16 S  
20 S  
24 S  
28 S  
32 S  
36 S  
40 S  
44 S  
48 S  
52 S



INSTRUMENT: SHARPE MF 1  
FLUXGATE MAGNETOMETER  
Contour Interval: 50 gammas  
Base Station



(3,4018)

MAUDE LAKE GOLD MINES LIMITED

WILKIE - CARR GROUP

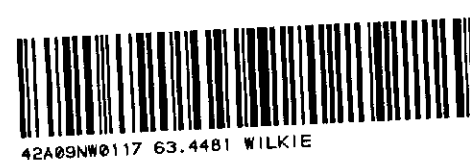
MAGNETOMETER SURVEY

CARR TWP CLAIMS

Scale: 1 inch = 400 feet

September 1984

Map No. CM-002



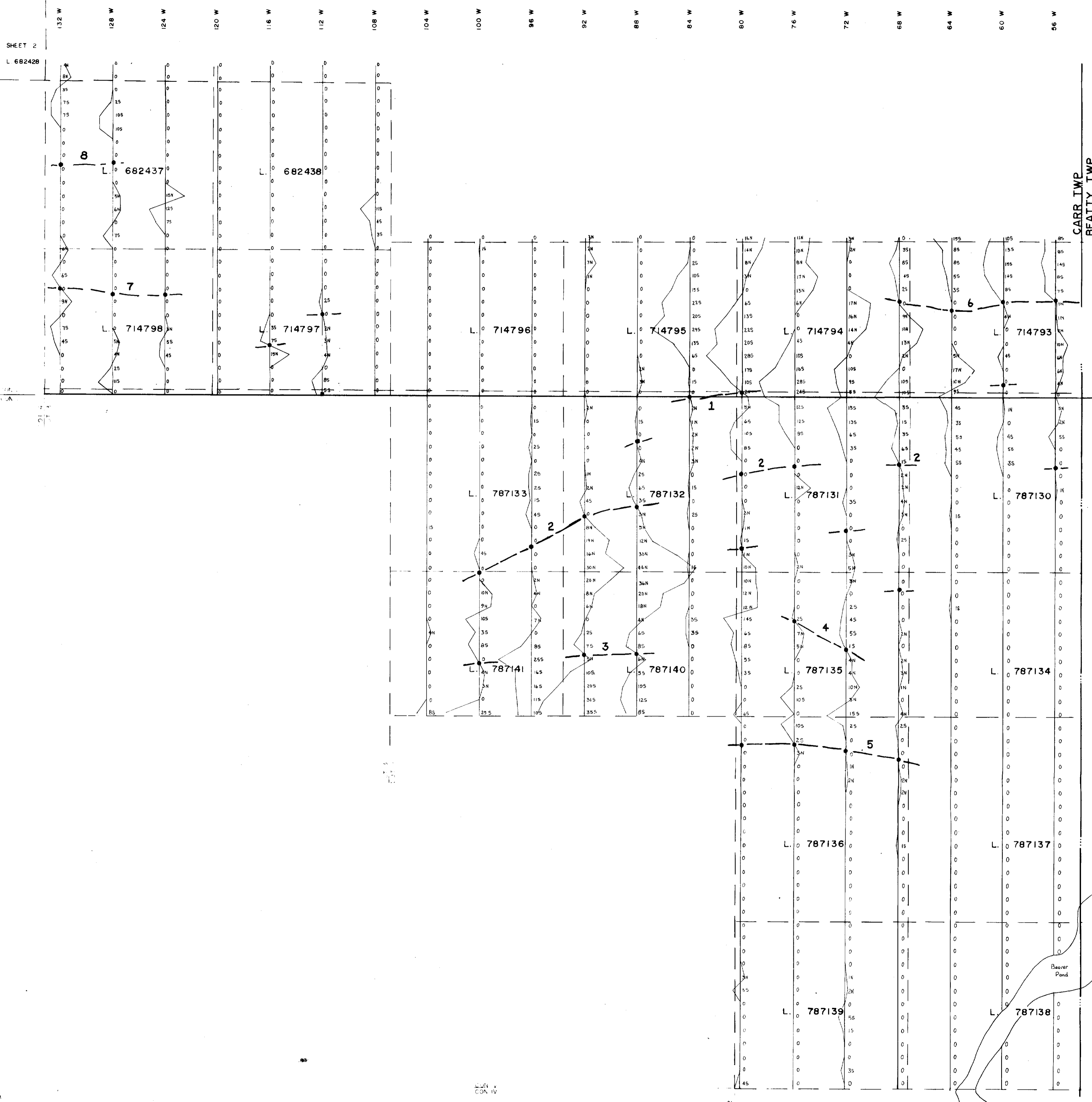
500

CON. V  
CON. IV

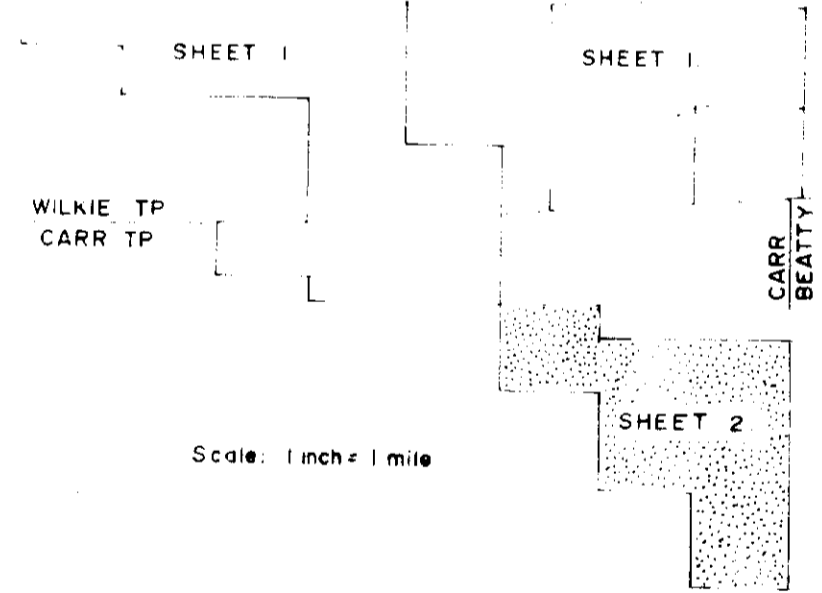
LOT 2  
LOT 1



SHEET 2  
L 682428

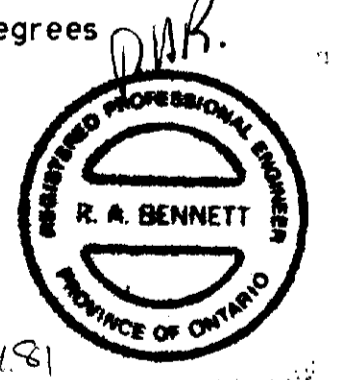


12 N  
8 N  
4 N  
0-0 BASELINE  
EXTENDED FROM "MAIN" GRID  
4 S  
8 S  
12 S  
16 S  
20 S  
24 S  
28 S  
32 S  
36 S  
40 S  
44 S  
48 S  
52 S



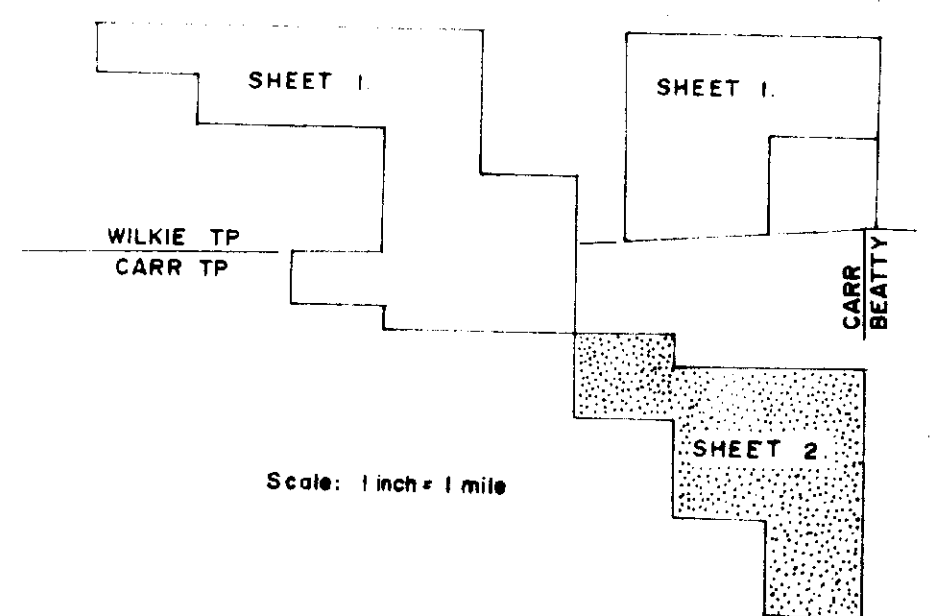
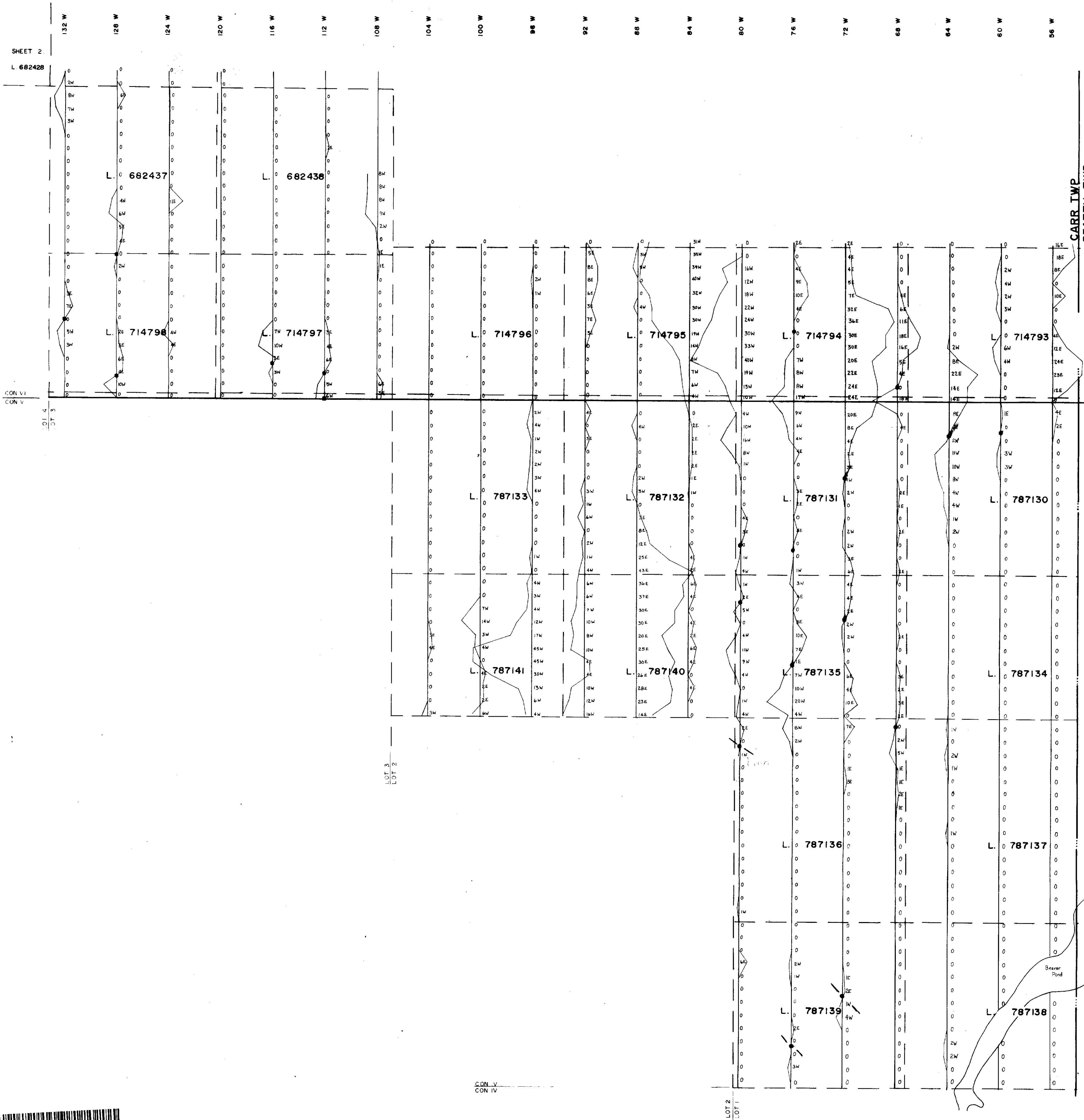
INSTRUMENT: Phoenix VLF-2 EM Unit  
STATION: Cutler, Maine (24.0 KHz)  
DIP ANGLE SCALE: 1 inch = 40 degrees

- Base Station
- Cross-over Anomaly 634481



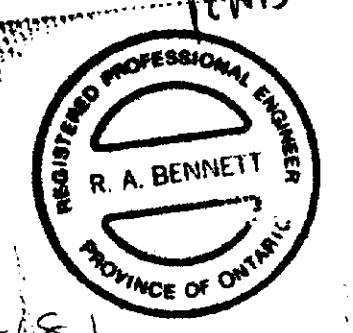
MAUDE LAKE GOLD MINES LIMITED  
WILKIE-CARR GROUP  
VLF-EM SURVEY  
CARR TWP CLAIMS  
Scale: 1 inch = 400 feet  
September 1984 Map No. CV-003





INSTRUMENT: Phoenix VLF-2 EM Unit  
 STATION: Annapolis, Maryland (21.4KHz)  
 DIP ANGLE SCALE: 1 inch = 40 degrees

- Base Station
- Cross-over Anomaly



63.41181

**MAUDE LAKE GOLD MINES LIMITED**

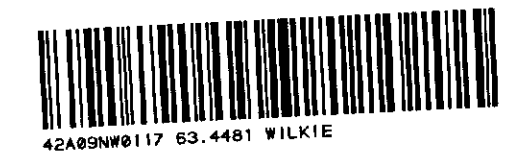
WILKIE - CARR GROUP

**VLF-EM SURVEY**

CARR TWP CLAIMS

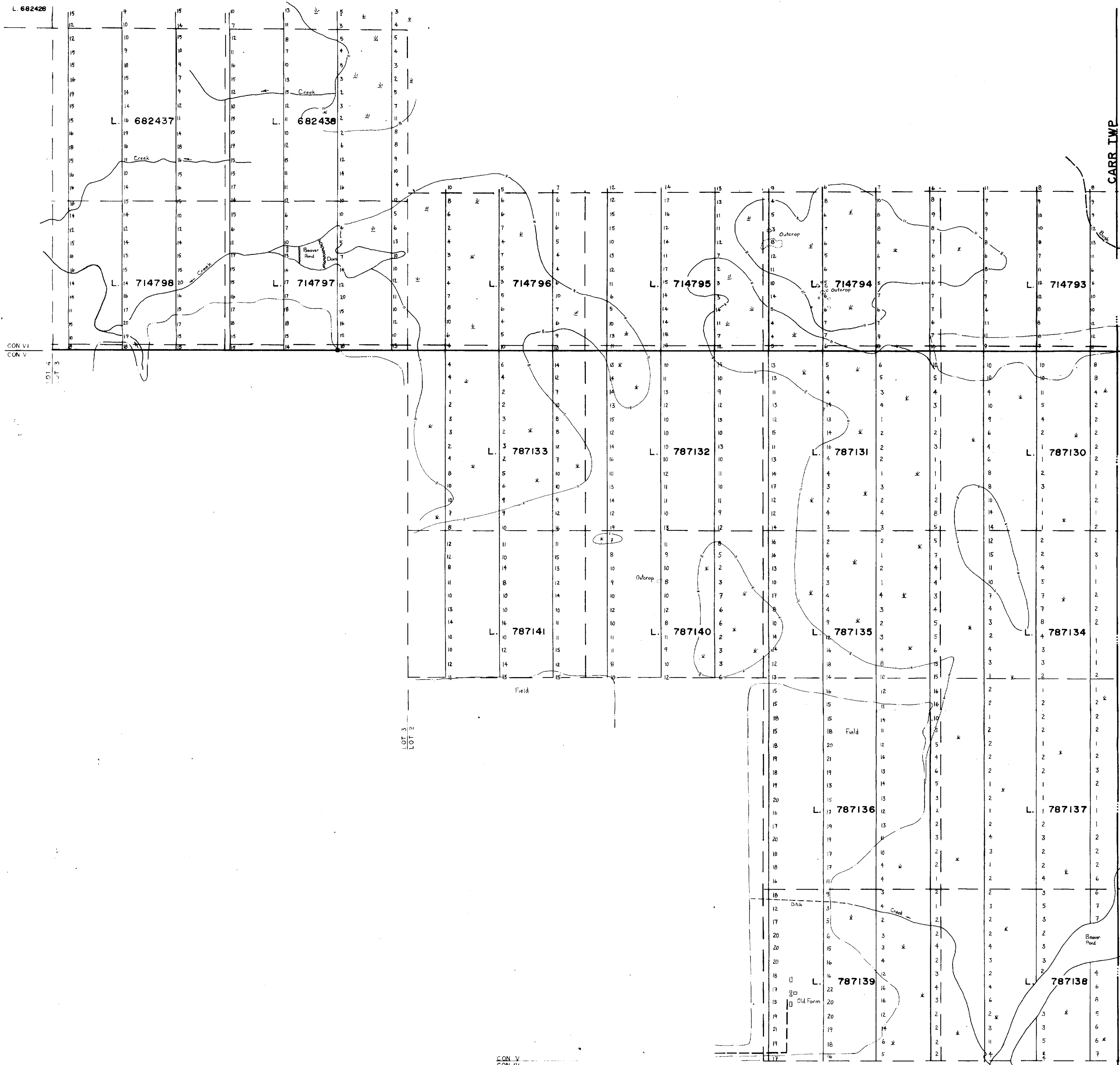
Scale: 1 inch = 400 feet

September 1984
Map No. CV-004

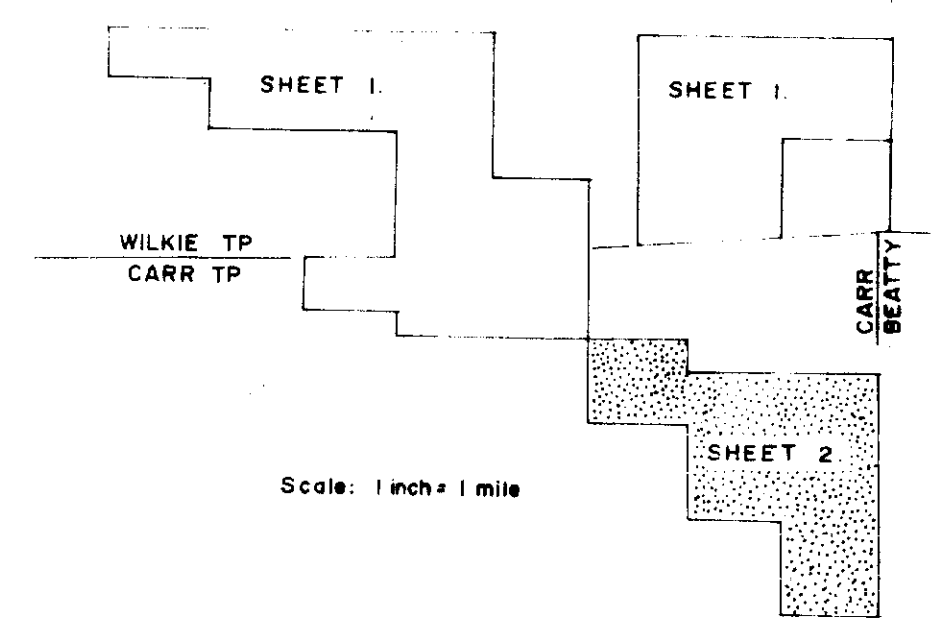


SHEET 2  
L. 682428

132 W 128 W 124 W 120 W 116 W 112 W 108 W 104 W 100 W 96 W 92 W 88 W 84 W 80 W 76 W 72 W 68 W 64 W 60 W 56 W



12 N  
8 N  
4 N  
4 S  
8 S  
12 S  
16 S  
20 S  
24 S  
28 S  
32 S  
36 S  
40 S  
44 S  
48 S  
52 S

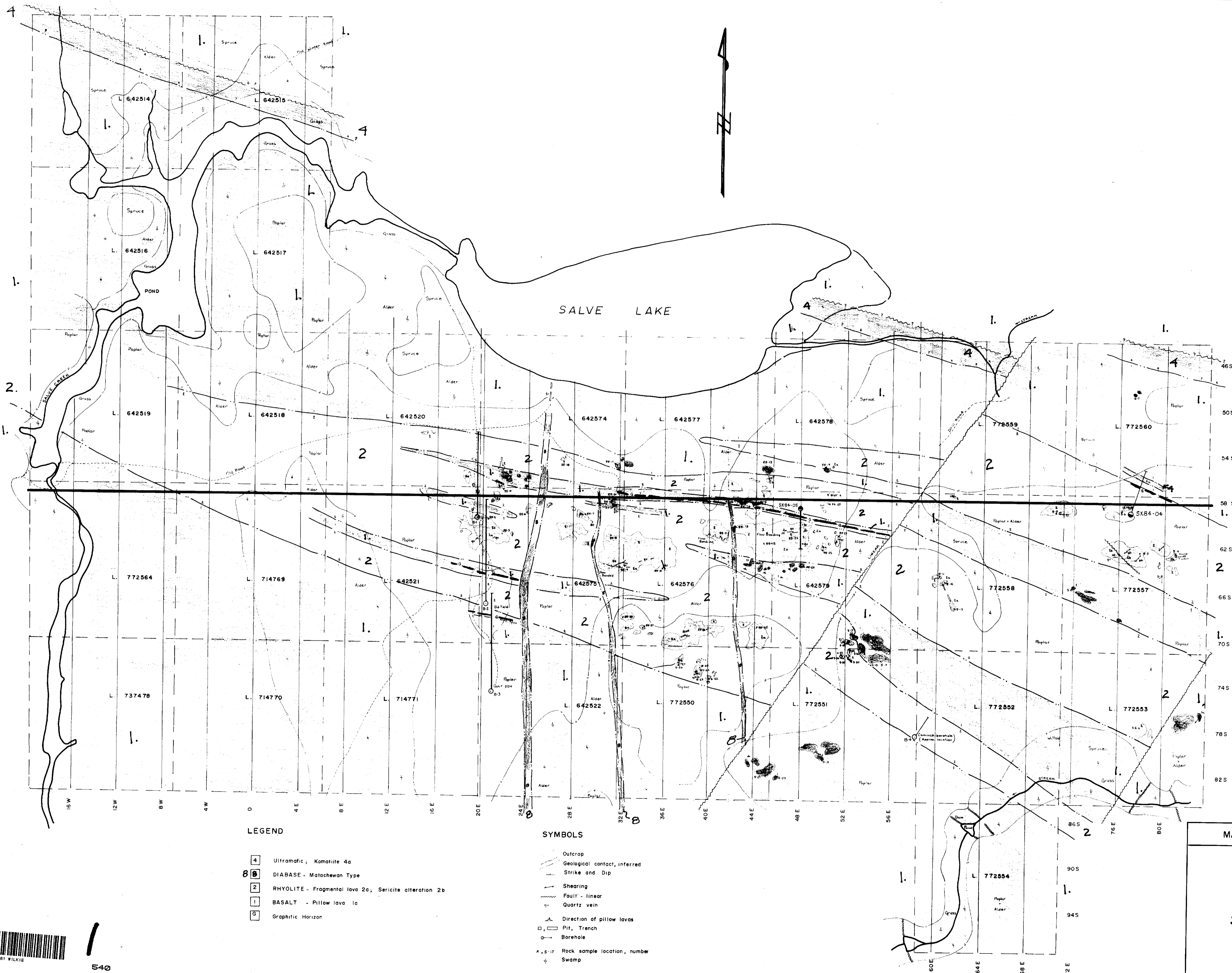


INSTRUMENT: MOPHAR TV-1A  
RADIATION SPECTROMETER  
READINGS: Total counts per minute  
■ Base Station



634461  
MAUDE LAKE GOLD MINES LIMITED  
WILKIE-CARR GROUP  
RADIOMETRIC SURVEY  
CARR TWP CLAIMS  
Scale: 1 inch = 400 feet  
September 1984 Map No. C.R-005



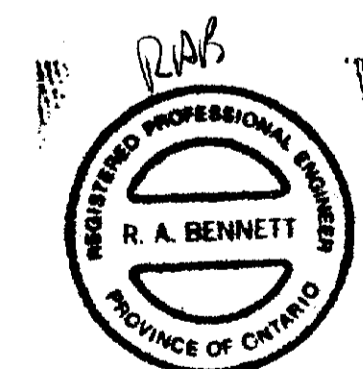


**LEGEND**

- 4 Ultramafic; Komatiite 4a
- 8 DIABASE - Matachewan Type
- 2 RHYOLITE - Fragmental lava 2a, Sericite alteration 2b
- 1 BASALT - Pillow lava la
- 6 Graphitic Horizon

**SYMBOLS**

- Outcrop
- Geological contact, inferred
- Strike and Dip
- Shearing
- Fault - linear
- Quartz vein
- Direction of pillow lavas
- Pit, Trench
- Borehole
- x, s-17 Rock sample location, number
- + Swamp



63.4481

MAUDE LAKE GOLD MINES LIMITED

**GEOLOGICAL PLAN**  
SOUTHERN PART OF  
**SALVE LAKE GROUP**

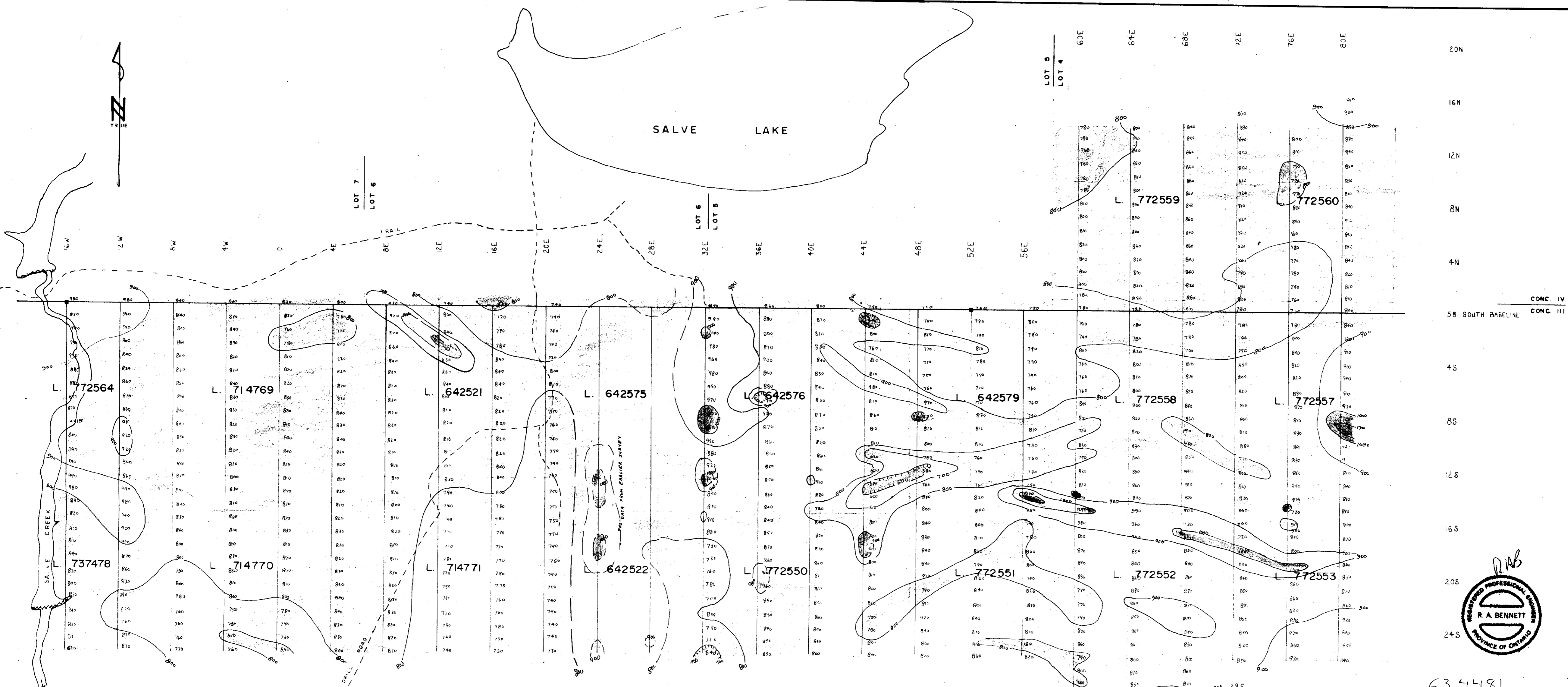
Scale: 1 inch = 400 feet

January 1985

Map No. SLG-011

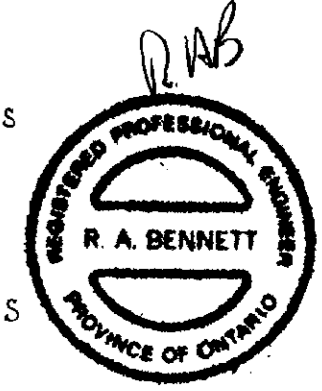






■ Base Station

INSTRUMENT - SHARPE MF I  
FLUXGATE MAGNETOMETER  
CONTOUR INTERVAL: 100 gammas



63.4481

MAUDE LAKE GOLD MINES LIMITED

**MAGNETOMETER SURVEY**

SALVE CLAIM GROUP - BEATTY TWP.

Scale: 1 inch = 400 feet

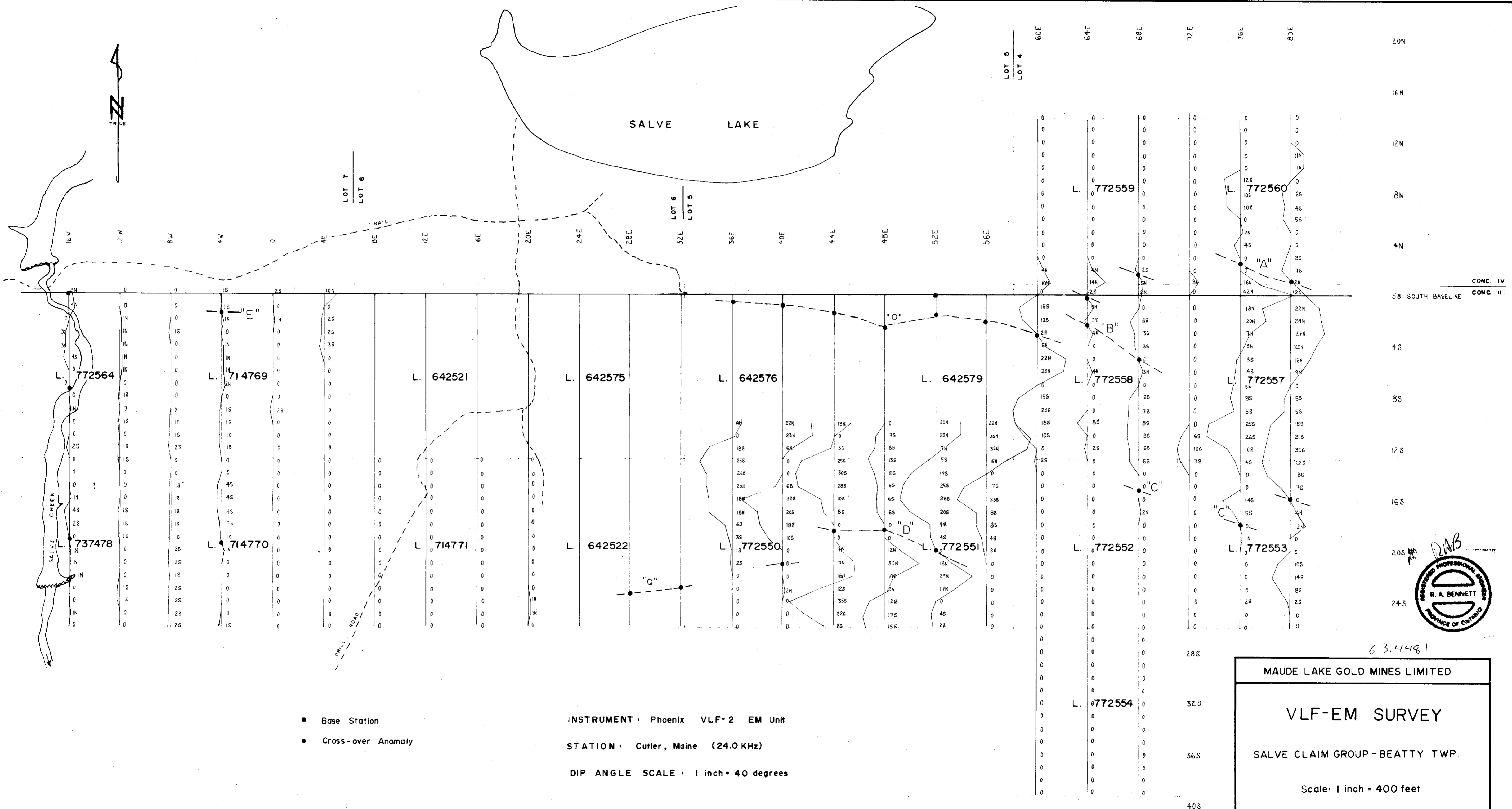
JUNE 1984

Map No. SM-002



550

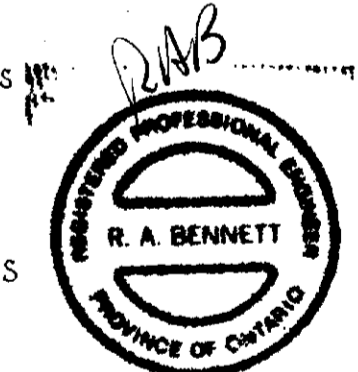




- Base Station
- Cross-over Anomaly

INSTRUMENT: Phoenix VLF-2 EM Unit  
 STATION: Cutler, Maine (24.0 KHz)  
 DIP ANGLE SCALE: 1 inch = 40 degrees

CONC. IV  
 58 SOUTH BASELINE  
 CONC. III



63,4481

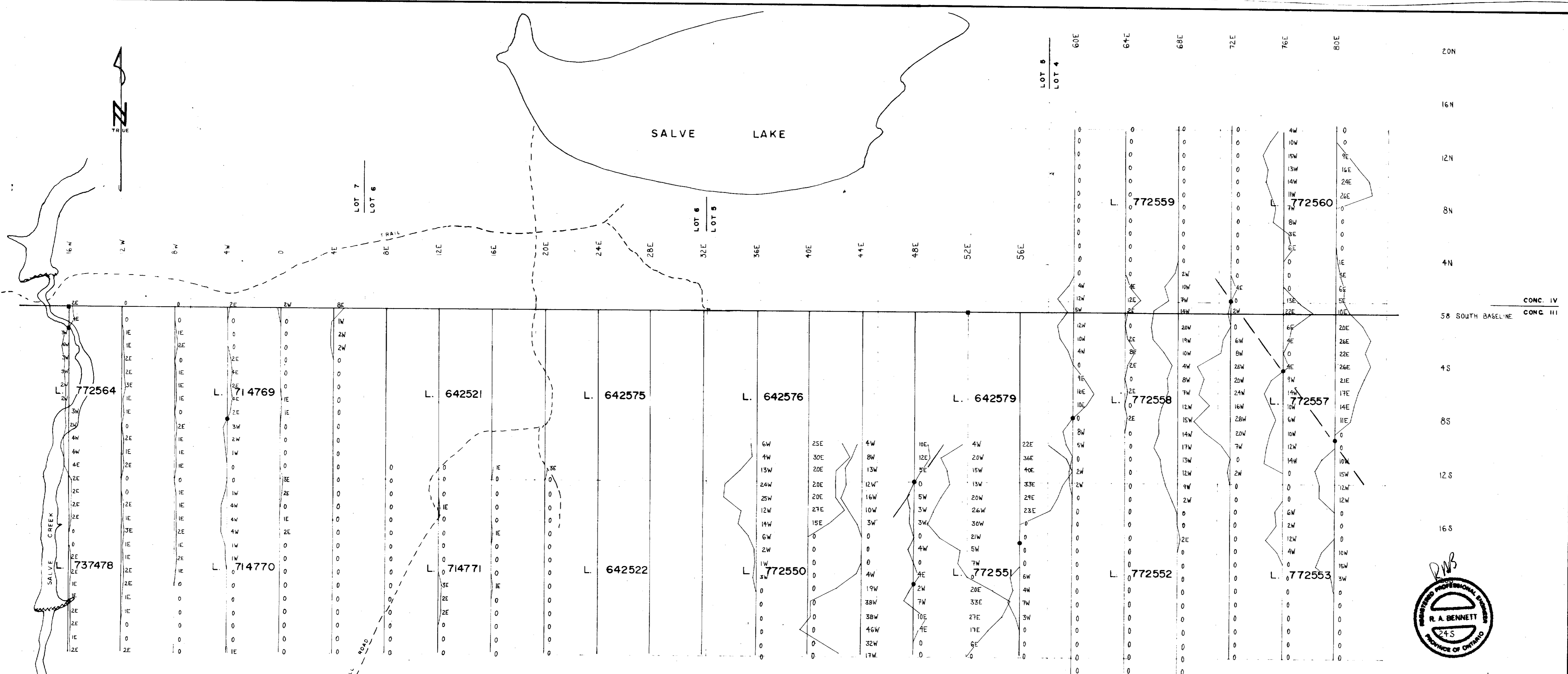
MAUDE LAKE GOLD MINES LIMITED

VLF-EM SURVEY

SALVE CLAIM GROUP - BEATTY TWP.

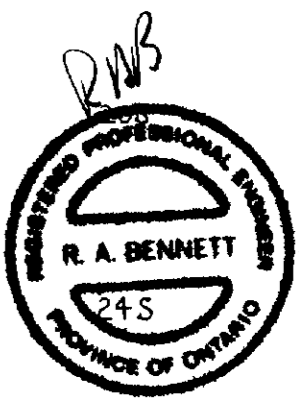
Scale: 1 inch = 400 feet

JUNE 1984
Map No. SV-003



- Base Station
- Cross-over Anomaly

INSTRUMENT: Phoenix VLF-2 EM Unit  
 STATION: Annapolis, Maryland (21.4 KHz)  
 DIP ANGLE SCALE: 1 inch = 40 degrees



67.4481

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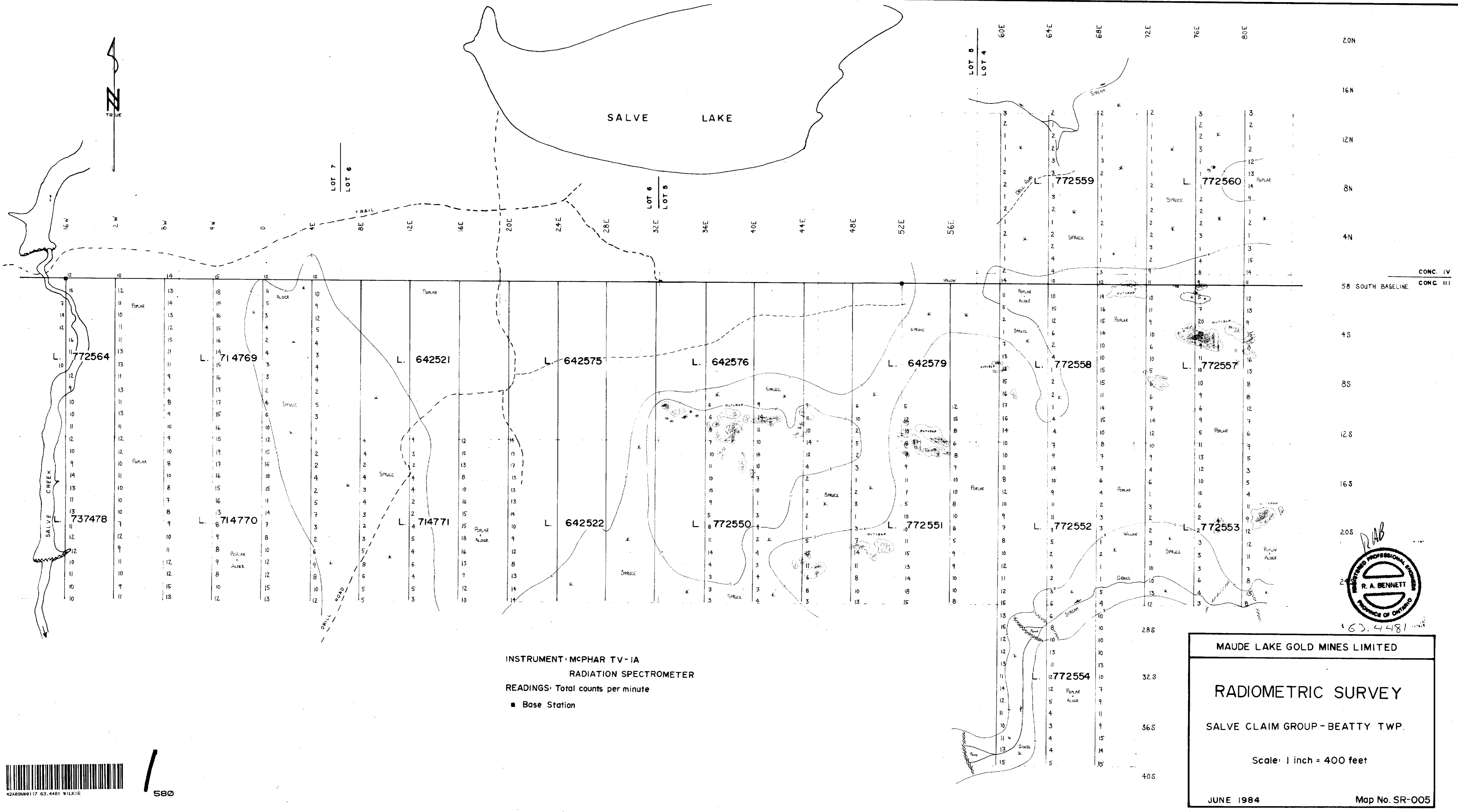
**VLF-EM SURVEY**

SALVE CLAIM GROUP - BEATTY TWP.

Scale: 1 inch = 400 feet

JUNE 1984 Map No. SV-004





INSTRUMENT: MCPHAR TV-1A  
 RADIATION SPECTROMETER  
 READINGS: Total counts per minute  
 ■ Base Station

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**RADIOMETRIC SURVEY**

SALVE CLAIM GROUP - BEATTY TWP.

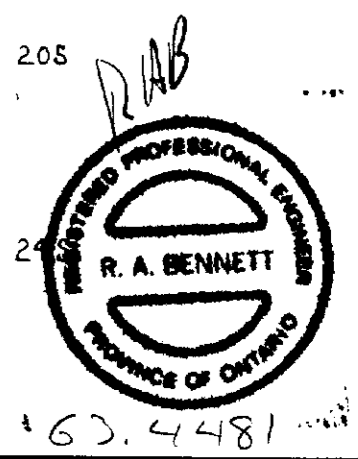
Scale: 1 inch = 400 feet

JUNE 1984

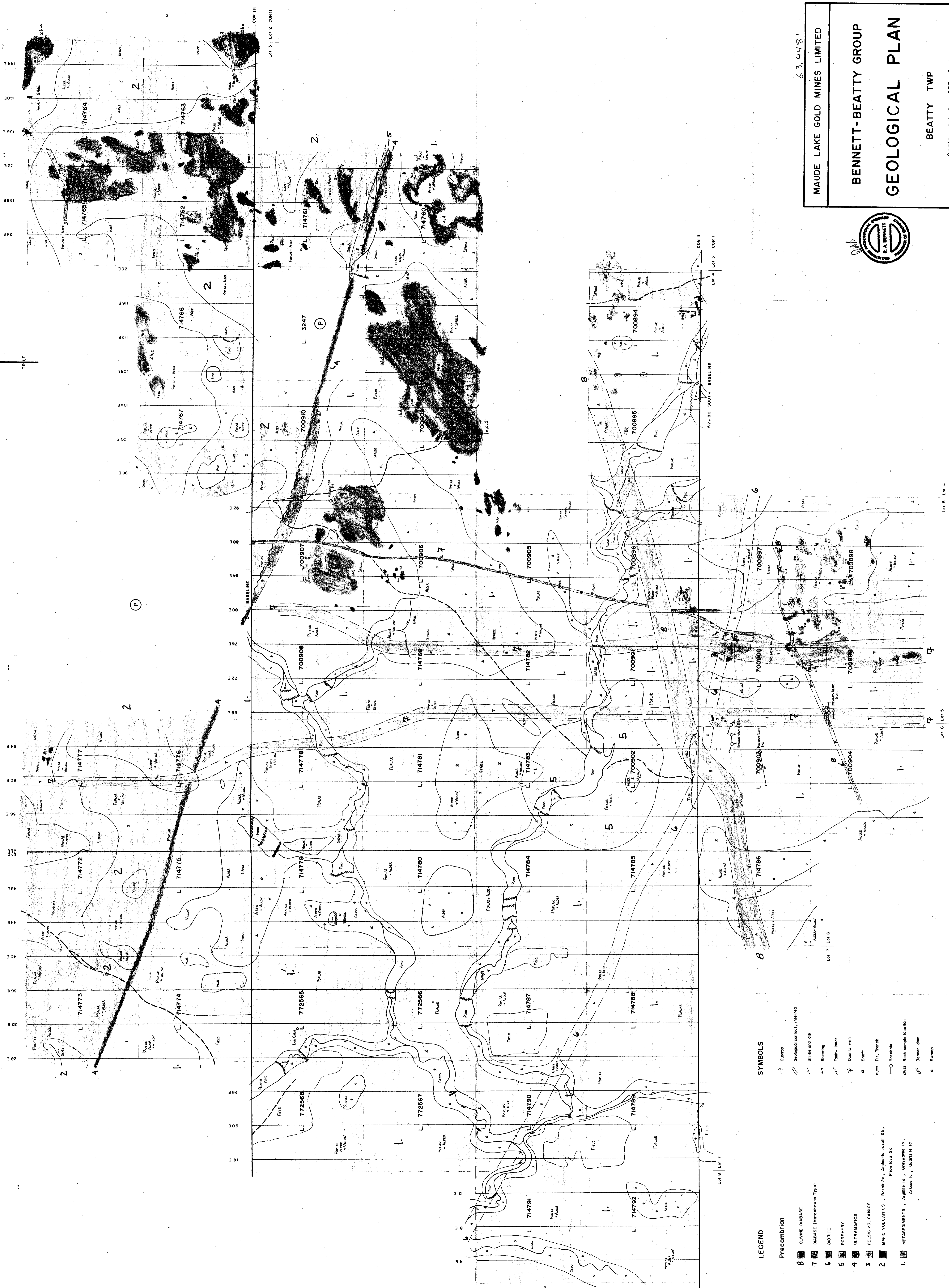
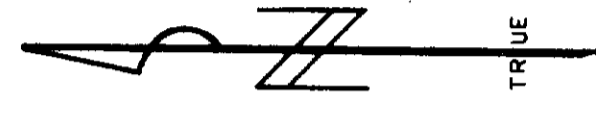
Map No. SR-005



580







- LEGEND**
- Precambrian**
- 8 OLIVINE DIABASE
  - 7 DIABASE (Mischewon Type)
  - 6 DORITE
  - 5 PORPHYRY
  - 4 ULTRAMAFICS
  - 3 FELSIC VOLCANICS
  - 2 MPFC VOLCANICS, Basalt 2a, Andesitic basalt 2b, rhyolite 2c
  - 1 METASEDIMENTS, Argente ls., Graywacke ls., Arkose ls., Quartzite ls.
- SYMBOLS**
- Outcrop
  - Geological contact, inferred
  - Strike and dip
  - Shading
  - Point-line
  - Quartz vein
  - Shaft
  - Rh. Trench
  - ORC
  - Rock sample location
  - Beater dam
  - Swamp

63,4481

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**BENNETT-BEATTY GROUP**

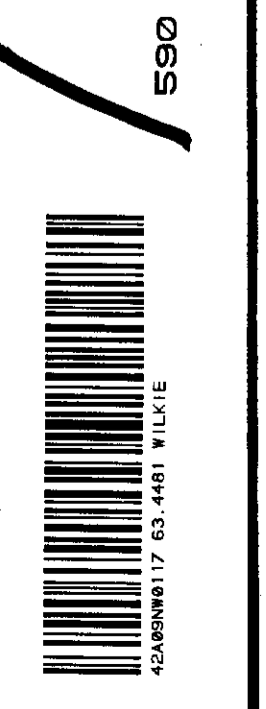
**GEOLOGICAL PLAN**

BEATTY TWP

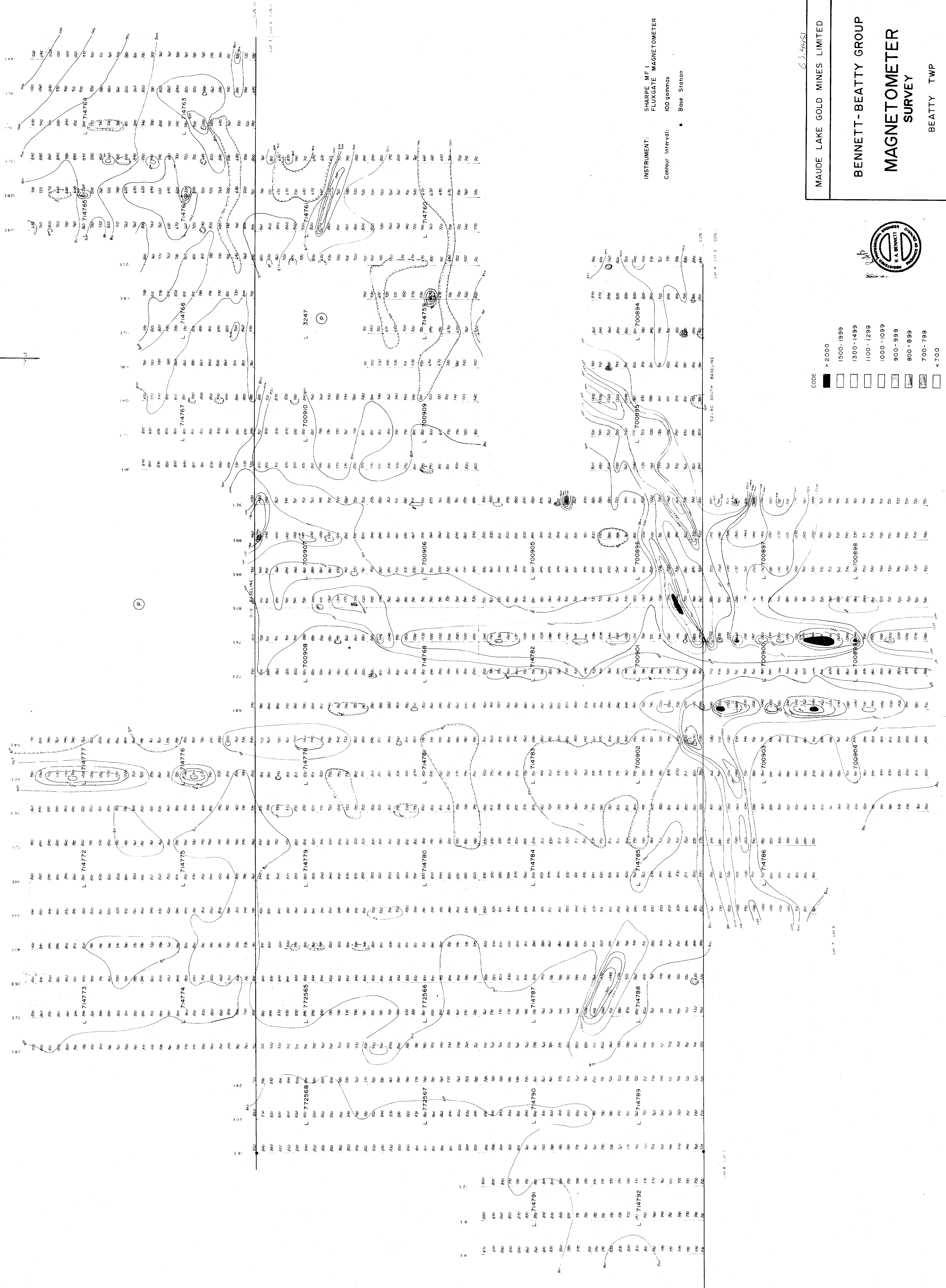
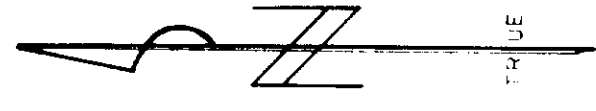
Scale: 1 inch = 400 feet

September 1984

Map No. BB-001







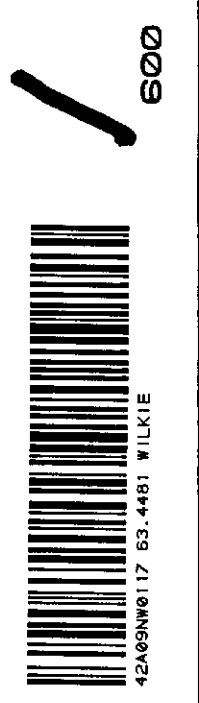
INSTRUMENT: SHARPE MF I  
FLUXGATE MAGNETOMETER  
Contour Interval: 100 gammas  
Base Station

CODE

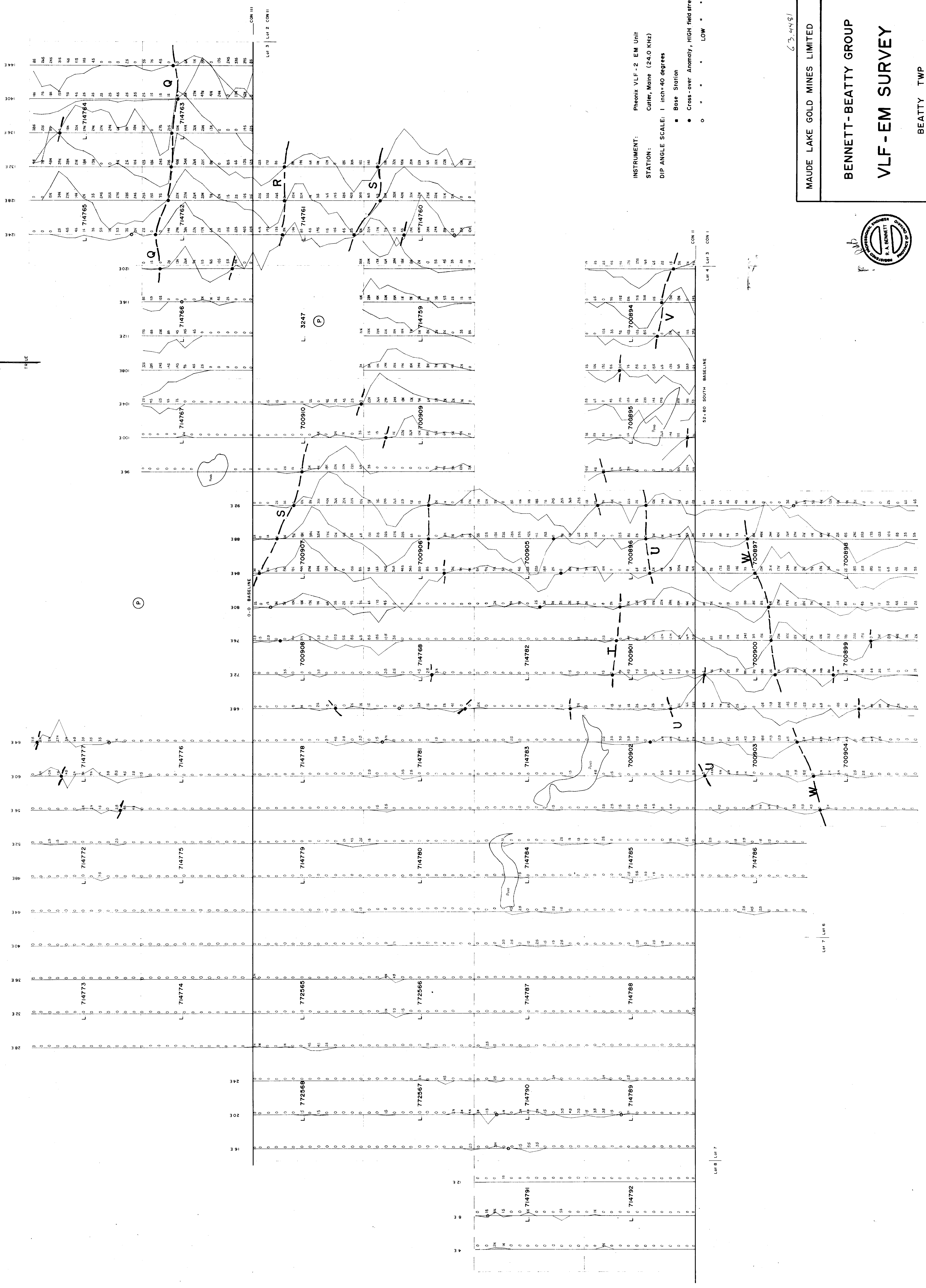
> 2000
1500-1999
1300-1499
1100-1299
1000-1099
900-999
800-899
700-799
< 700



MAUDE LAKE GOLD MINES LIMITED  
BETT-BEATTY GROUP  
MAGNETOMETER SURVEY  
BETT TWP  
Scale: 1 inch = 400 feet  
December 1984  
Map No. BB-002



600



INSTRUMENT: Phoenix VLF-2 EM Unit  
STATION: Cutler, Maine (24.0 KHz)  
DIP ANGLE SCALE: 1 inch=40 degrees

● Base Station  
● Cross-over Anomaly, HIGH field strength  
○ LOW

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**BENNETT-BEATTY GROUP**

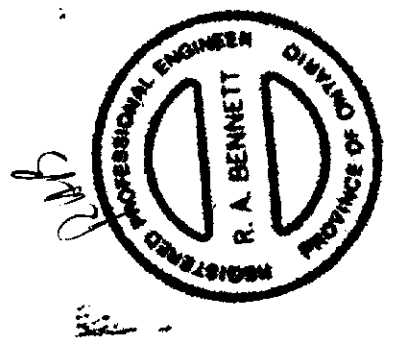
**VLF-EM SURVEY**

BEATTY TWP

Scale: 1 inch = 400 feet

December 1984

Map No. BB-003

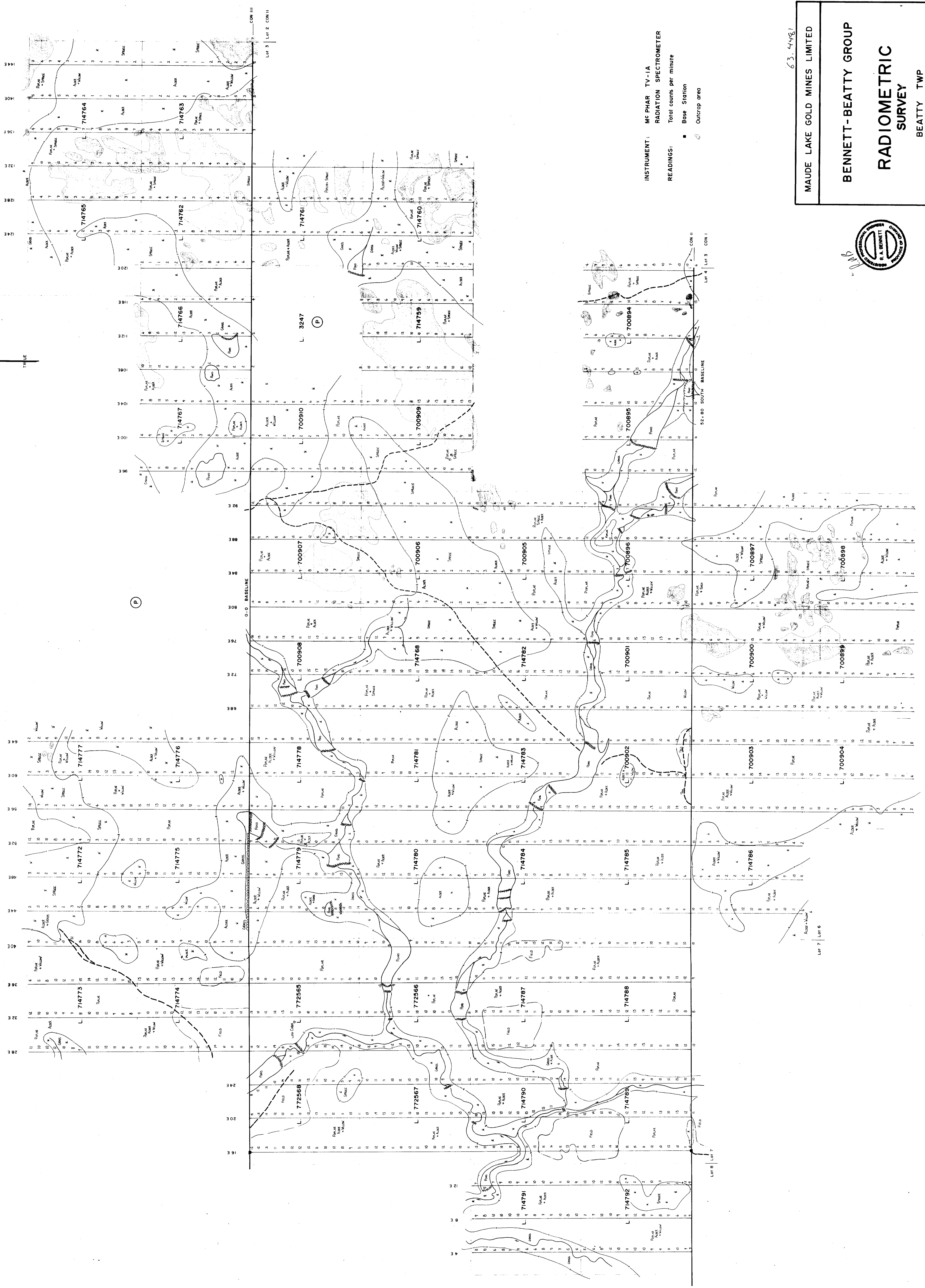


Lot 1  
Lot 2  
Lot 3  
Lot 4  
Lot 5  
Lot 6  
Lot 7









INSTRUMENT: MC PHAR TV-1A  
RADIATION SPECTROMETER  
Total counts per minute

READINGS: ■ Base Station  
○ Outcrop area

63-44961  
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**BENNETT-BEATTY GROUP**  
**RADIOMETRIC SURVEY**  
BEATTY TWP

Scale: 1 inch = 400 feet

September 1984  
Map No. BB-005

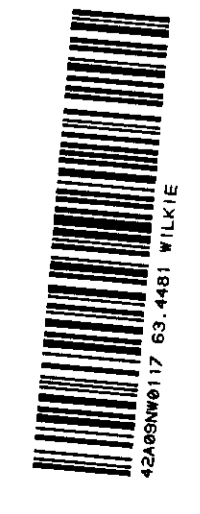


Lot 5

Lot 6

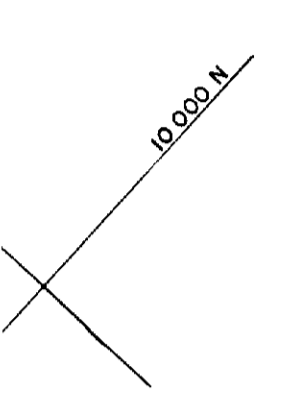
Lot 7

Lot 8



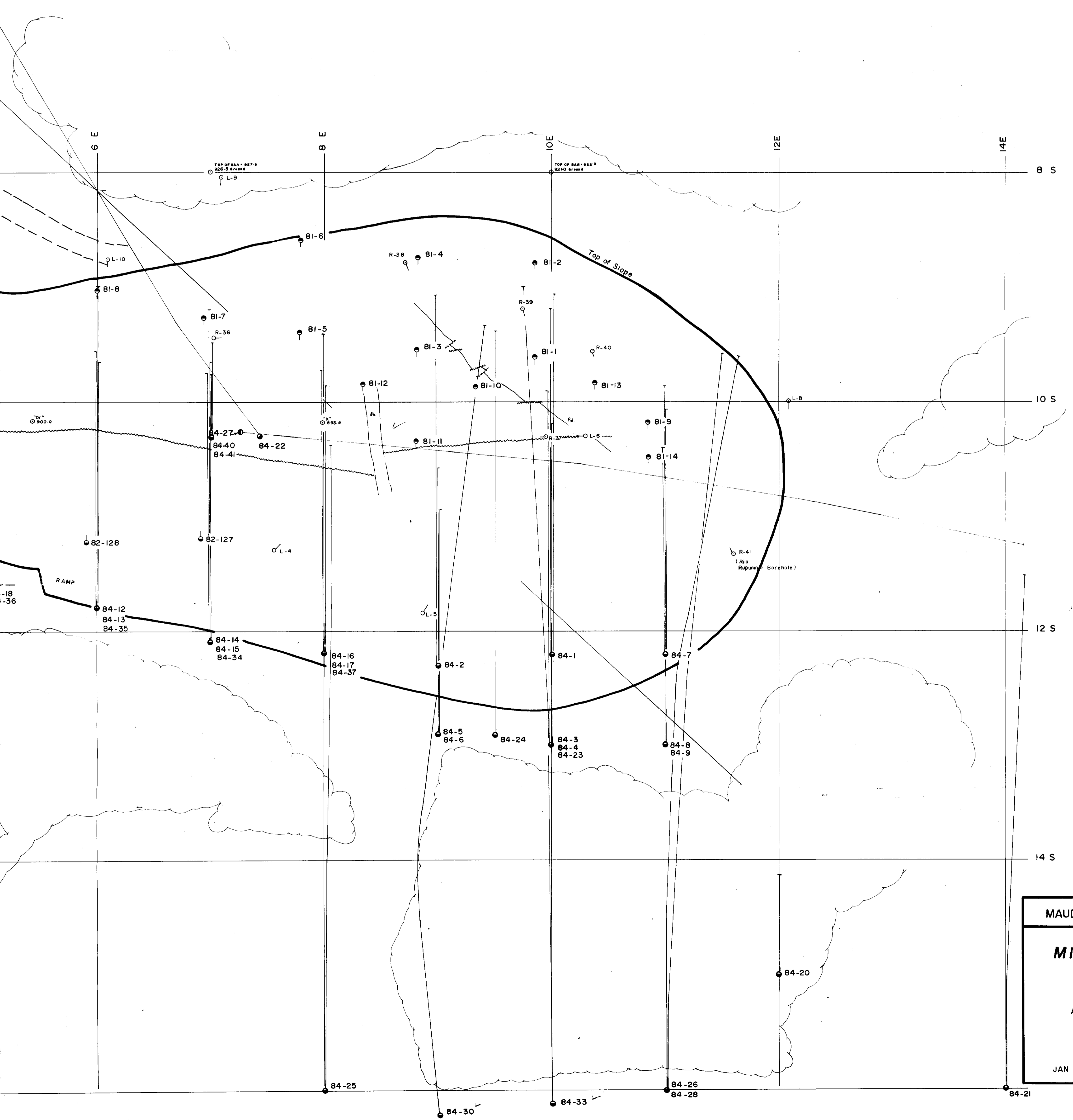


81-22



OL-3 (Lake Osa Borehole)

BM 252.2



8 S AZ of BL = 90° 30'

10 S

12 S

14 S



63.4481

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**MINE AREA - SITE PLAN**

SHOWING  
ALL BOREHOLE COLLAR LOCATIONS

Scale: 1" = 40ft.

JAN 1985 MAP NO: MP-84