

# SOIL AND GEOPHYSICS SURVEY REPORT



## MARSH LAKE PROJECT

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CARTER GULCH 1-2 YC25912-13

KIYOKO AU 1-2 YC26088-89

PEPPY 1-4 YC9933-36

AVIAN 1-6 YC29927-32

**095174**

NTS MAP SHEET 105 D/9

LATITUDE 60° 39' N LONGITUDE 133° 19' W

WHITEHORSE MINING DISTRICT

---

For work performed between:

June 20-23, 2009

Prepared by:

Ron S. Berdahl  
Box 11250  
Whitehorse, Yukon Y1A 6N4

January 6, 2009

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**Ron S. Berdahl**

**Box 11250**

**Whitehorse, Yukon Y1A 6N4**

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## **SUMMARY**

Work by the author and various other prospectors, especially in the last 10 years, has led to the discovery of several new gold showings in the area north of Marsh Lake, east of the McClintock River. The Carter Gulch showing was originally found by Brian Carter in 1994. It consists of visible gold in quartz subcrop. In 2003 a second gold showing, also in sub crop, was discovered 1.5 km southeast of Carter Gulch (CG).

Previous silt and prospecting surveys have determined that at least 50% of the drainages off Carter Ridge were found anomalous in Au.

Work in 2009 consisted of two separate grids over each gold showing. Soils were collected. A magnetometer survey and VLF survey were conducted over the grids as well.

There is an apparent correlation between anomalous metal values in soils and the magnetic highs.

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## INTRODUCTION

This report is prepared to satisfy the requirements for assessment work as set out under the *Yukon Quartz Mining Act*, to consolidate information collected during the 2009 field season.

Gold and base metal showings occur throughout the Marsh Lake Belt. This region is an extension of the Atlin ultramafic gold belt, a mother lode type gold camp. B.C.'s largest gold producer, Bralorne, was of this type.

Mineral exploration in this area has been hampered by glacial till cover and, until recently, unsettled land claims.

Access to and through the area is generally good by Yukon standards. Two showings at either end of the belt (Tog and Carter Gulch, a distance of 30 km) with visible gold, hint at the possibilities in this largely unexplored area. The Carter Gulch rocks assay over 4 opt. Placer gold and numerous anomalous RGS values in areas without known sources punctuate these possibilities. A 0.8 OPT showing (Peppy) was located in subcrop 1.3 km to the southeast of Carter Gulch in 2004. In 2009 two separate grids were established over the Carter Gulch and Peppy Showing. Soils Mag and VLF were run over the grids.

## HISTORY

Adits along ultramafic and quartz carbonate alteration zones predate the gold rush. No records of production exist.

Exploration for gold has taken place in recent years along a major northwest trending structure paralleling Marsh Lake; notably, the Rossbank (Inco) property 15 km northwest and the Bug claims 15 km southeast. An airborne EM, Mag survey was done over this trend in 1968 by Prado Explorations Ltd. This was followed up by ground IP and EM surveys. The results were inconclusive. (Rushant, 1995)

# Property Location

Marsh Lake Gold Properties

Ron Berdahl  
January 2010

Alaska

Yukon

NWT

 **Marsh Lake**

British Columbia

0 100 km

The Yukon Prospectors Association flew an airborne Mag survey over an extensive area adjacent to and to the south of the area of interest.

Prospector Brian Carter discovered visible gold in large quartz float boulders in 1994, during follow-up of anomalous RGS data sites. The author staked the Carter Gulch and Kiyoko claims in 2003 and discovered the Peppy showing (0.8 opt Au) in 2004. Stream sediments and contour soils were collected over a large area in 2003-4.

## ACCESS AND PHYSIOGRAPHY

Access to the prospecting area is good. Trails (ATV) and roads transect the eastern and southern periphery of the area.

The Carter Gulch showing is 3 km from a gravel road. Helicopters were used to access the ridge tops during the 2009 season. Flight time from Whitehorse is less than 30 minutes.

The area consists of rounded ridges with a few steep escarpments and talus slopes. Elevations range from about 5,700 feet down to 2,500 feet. Treeline is near 4,500 feet, with a spruce forest and assorted boreal shrubs below that level. Willow is thick in most creek beds. Glacial till fills most low areas. Till depth is unknown.

## PROPERTY

Claim Name/No.	Grant No.	Owner	Expiry Date
Carter Gulch 1-2	YC25912-13	R. Berdahl	March 28, 2014
Kiyoko Au 1-2	YC26088-89	R. Berdahl	October 21, 2014
Peppy 1-4	YC9933-36	R. Berdahl	July 16, 2014
Avian 1-6	YC29927-32	R. Berdahl	July 16, 2014

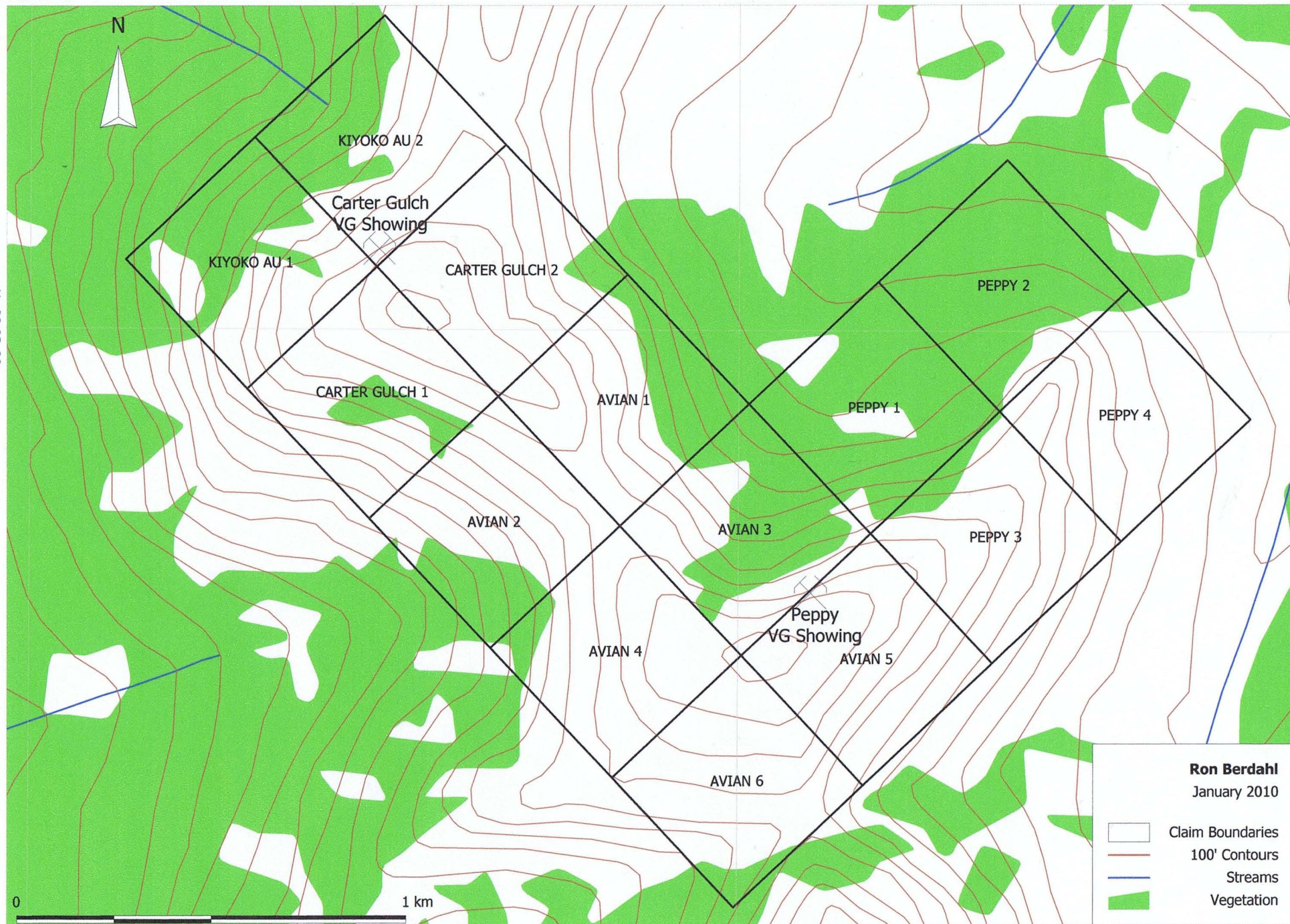


134°20'00" W

134°18'00" W

60°39'00" N

60°39'00" N



0

1 km

134°20'00" W

134°18'00" W

# MARSH LAKE PROPERTY - CLAIM LOCATIONS

Scale 1:13k

Mapsheet 105 D 09

fig 2

## **REGIONAL GEOLOGY**

The Marsh Lake area is underlain by stratified volcanic and sedimentary units of the Whitehorse Trough and Atlin Terranes. Coast Plutonic Complex granitic rocks intrude the region.

The Whitehorse Trough features Lower to Middle Jurassic Laberge Group (JL) clastic sediments flanked by Upper Triassic Lewes River Group (uTrAK) mafic volcanics. Atlin Terrane consists of Pennsylvanian (?)–Permian Taku Group serpentinites, metamorphosed volcanics and quartz carbonate rock.

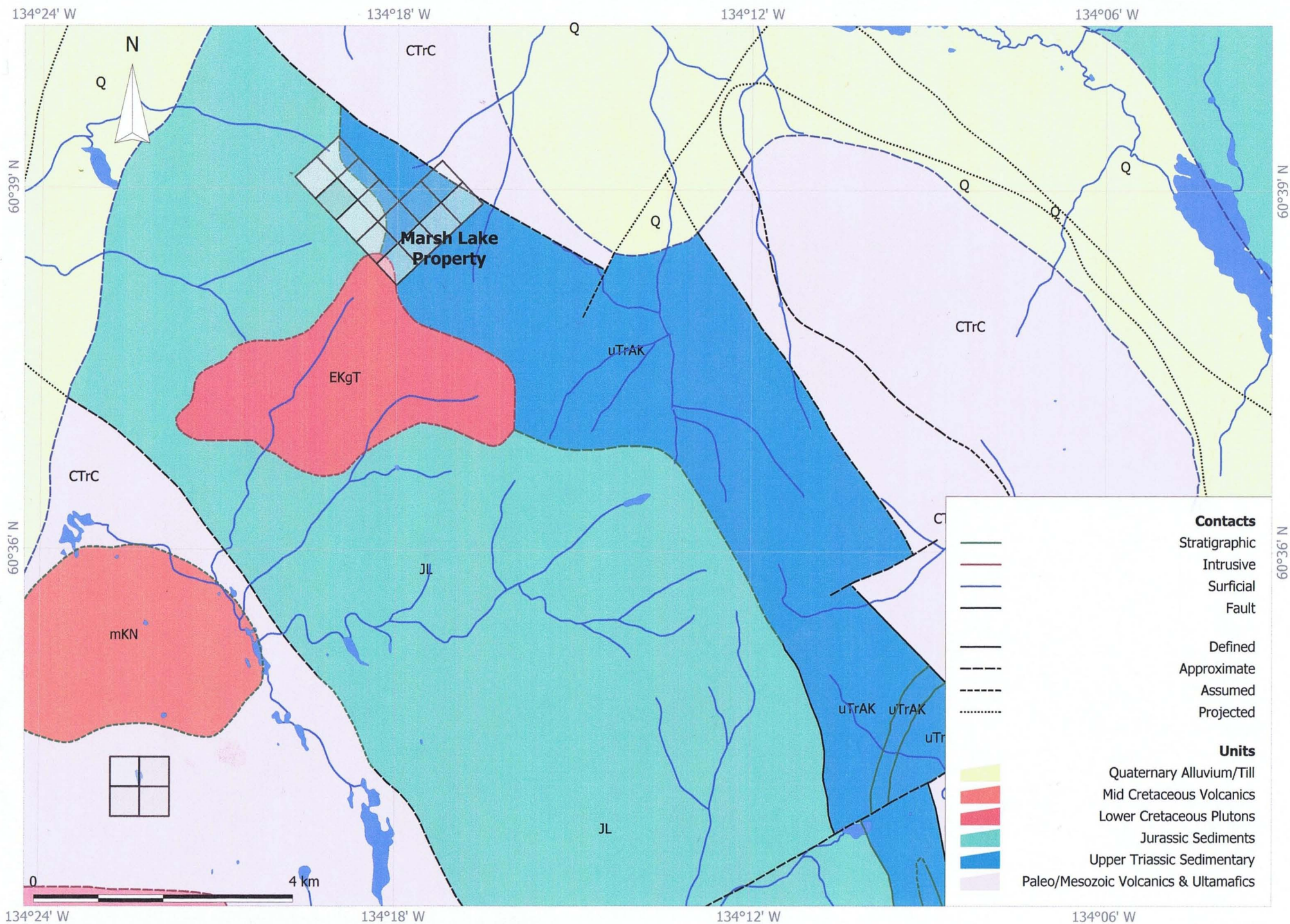
Structurally, the area features northwest-southeast oriented faults parallel to the axis of the Whitehorse Trough.

Gold mineralization in the Atlin Terrane generally occurs in quartz carbonate alteration zones in close association with ultramafic intrusives and strong normal faults. (Graham, 1995)

## **PROPERTY GEOLOGY**

The grid area overlies a contact between Jurassic Laberge Group (JL) sediments and Upper Triassic Lewes River Group (uTrAK) metamorphic sediments and volcanic (figure 3). A large early Cretaceous intrusive interrupts the contact just southwest of the Peppy grid. In a till-filled valley immediately to the west, there is an assumed contact with greenstones (Wheeler, 1951). Orange-weathering ultramafic rocks (CTrC) dominate the ridge to the east. Float from this unit, which is highly magnetic, is found south of Carter Gulch. In the northern portion of the area, Cretaceous leucocratic granites intrude the sediment/volcanic contact. This intrusion is near the Carter Gulch gold showing and two new, weak copper showings. The relationship between the intrusive and showings is unknown.





# REGIONAL GEOLOGY - MARSH LAKE

Ron Berdahl  
January 2010

A 700-m long Mo soils anomaly south of the Peppy grid may delineate the eastern edge of an intrusion.

Conglomerate, supposedly of both Lewes River and Laberge genesis, is a common rock. Glaciation has complicated the immediate geology. Ultramafic float suggests glacial movement from the east-southeast.

## **MINERALIZATION**

The Peppy showing is similar to the Carter Gulch showing in that it consists of grey quartz subcrop with visible gold (samples 139066 and 139067; 2003 Berdahl assessment rpt.). The best assay was 27.57 g Au (0.8 opt). As at Carter Gulch, the quartz has trace galena and limonite. The significance of the occurrence, other than the gold content, is that it seems to be structurally related to the Carter Gulch showing 1.5 km to the west-northwest, via a fault, which may, or may not be related to a geologic contact.

A third showing consists of 247 ppm Cu over 1 m occurs in a calcareous sediment (?) halfway between the Peppy and Carter Gulch showings. (Hamel showing, 2003.)

The Carter Gulch mineralization consists of visible gold, usually associated with vuggy limonite on a grey to white quartz.

As reported by Carter in a 1994 prospecting report, the "average" quartz boulder (float) was 20 cm thick, by 61 cm x 91 cm.

The mineralogy at the Carter Gulch showing is low sulfide. Little As, Pb, or Cu are associated with high Au values. e.g. A Noranda sample, 172062 (1995), had v.g. (40,500 ppb Au) with 5 As, 17 Ag, 1.2 Cd, 668 Cu, 1% Fe, 2,842 Pb. (Carter, 1995)

The old Silver King showing 5 km southwest of Carter Gulch is a quartz-rich showing in argillite (?). Pyrite and galena are common. Mineralization, exposed in a number of hand-dug



pits, strikes east-west. This mineralized trend is similar to what was found by Rushant on the Jan claims, to the south 5 km, and also of mineralized float at the Kiyoko Cu showing to the south of Peppy.

Mariposite float is not uncommon through the entire Marsh Lake Belt.

## **WORK PROGRAM**

Two separate grids were established. The first was over the Carter Gulch showing and consisted of five lines, six hundred meters long, at 100 m spacing. The second, over Peppy, consisted of eight, 300m lines at 25 m spacing.

For the soils program stations were at 25m. Soils were collected from the lower "B" horizon where possible. Sample depths ranged from near surface to 80 cm, and averaged around 40 cm.

### **Geophysics Survey Description:**

The surveys were conducted with two GSM-19T proton magnetometers manufactured by GEM Systems of Richmond, BC. One of the magnetometers was equipped with a GPS unit and was used as a mobile sensor to cover the survey areas. The other magnetometer was used simultaneously as a stationary base to monitor diurnal variations in the regional magnetic field.

Survey grid lines at Carter Gulch were spaced at 50 m intervals and oriented at 30 degrees. The grid lines were spaced at 25meters at Peppy. The mobile magnetometer unit took readings every 2 s during travel along these lines; at walking speeds this corresponded to roughly 1 reading for every 1.5 m of line. The base station magnetometer took 1 reading every 12 s.

In all, approximately 5.4 km of geomagnetic data were collected.

#### Data Processing and Presentation:

The magnetic data were corrected for diurnal variation after the survey by subtracting the field strength at the base station from the concurrent strength measured by the mobile magnetometer, and then adding a datum. For mobile magnetometer readings taken at times between readings of the base station, a base station magnetic field value was obtained by linearly interpolating the field strength between the two adjacent readings. The datum added was calculated separately for each survey by averaging the values of the readings taken by the base station for that survey.

Readings with inadequate signal quality were removed from the data.

## RESULTS

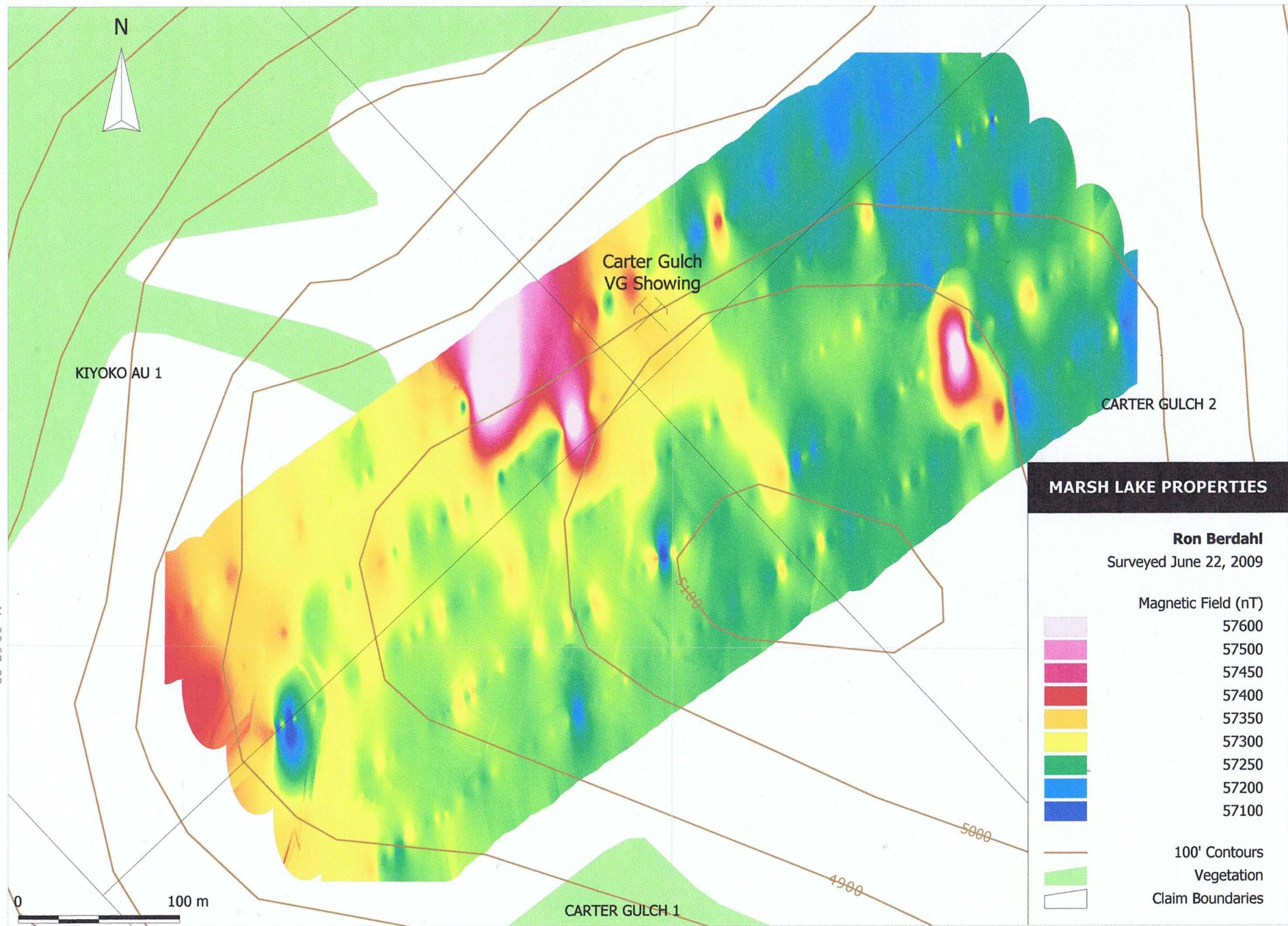
The magnetometer survey at Carter Gulch reveals three mag highs. They trend north/south. The largest and most intense is 35 m west of the CG showing (see figure 4). The anomaly is largest and most intense as it goes off grid to the north. On the grid it is approximately 100m x 75m. The second most intense mag high is on the eastern portion of the grid. It is 25m x 75m. The final mag high is less intense and straddles the western edge of the grid.

At the Peppy grid the Total Field magnetic highs trend east/west. There are more, but smaller mag highs than at CG. (figure 8). As at CG the gold showing is on the periphery of the mag high; In this case sandwiched with a barbell shaped mag low between two mag highs. Three small mag highs with some intensity and several other 'spot' highs are located on the western half of the grid.

The field intensity difference between the two grids, located 1.5 km apart, is of interest. At CG values range from a low of 57100 nT to a high of 57,600 nT. At Peppy this range is considerably higher with a low of 55,000nT and a high of 60,000nT.

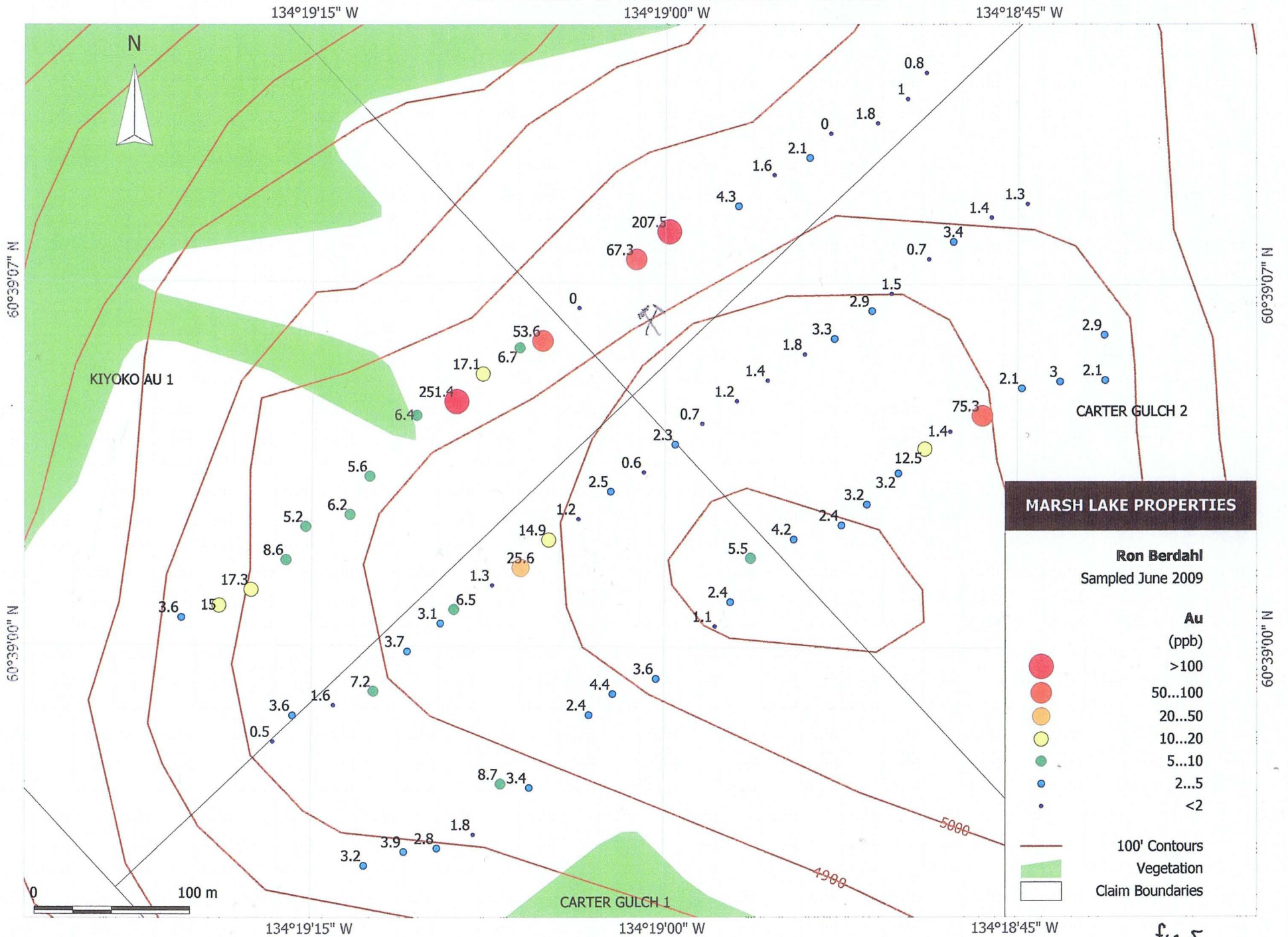
# Carter Gulch Total Magnetic Field Map

134°19'00" W

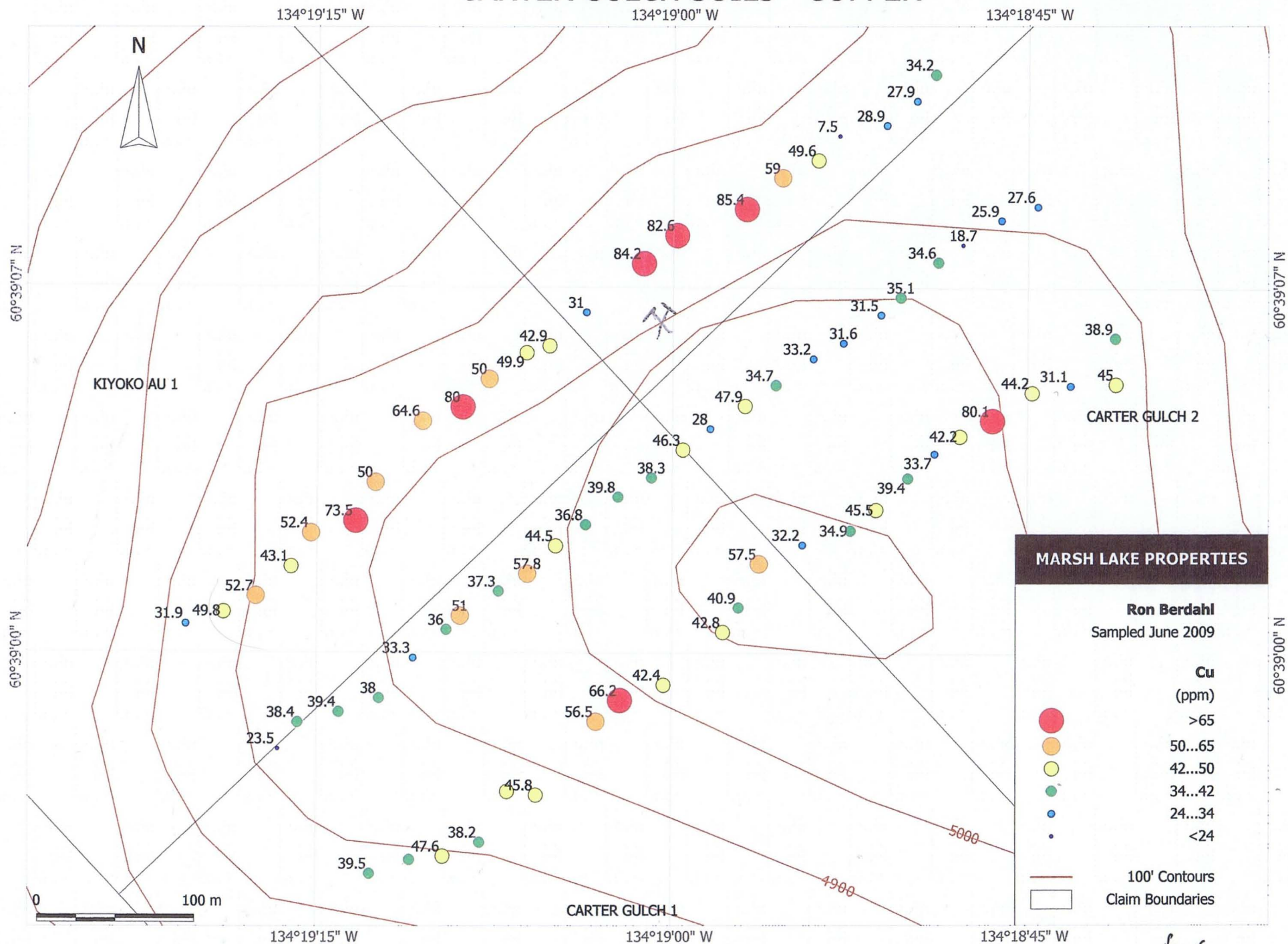




# CARTER GULCH SOILS - GOLD

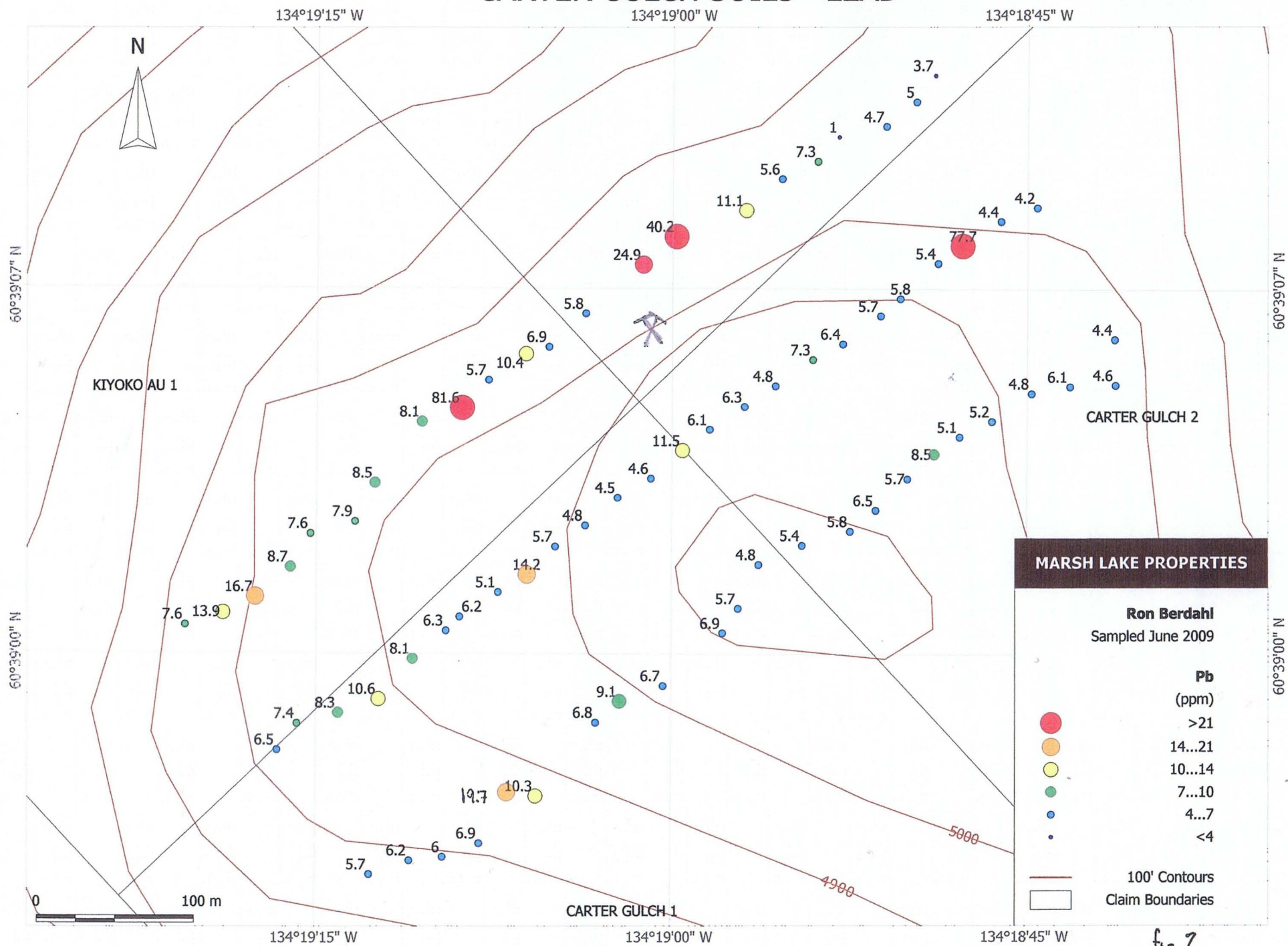


# CARTER GULCH SOILS - COPPER





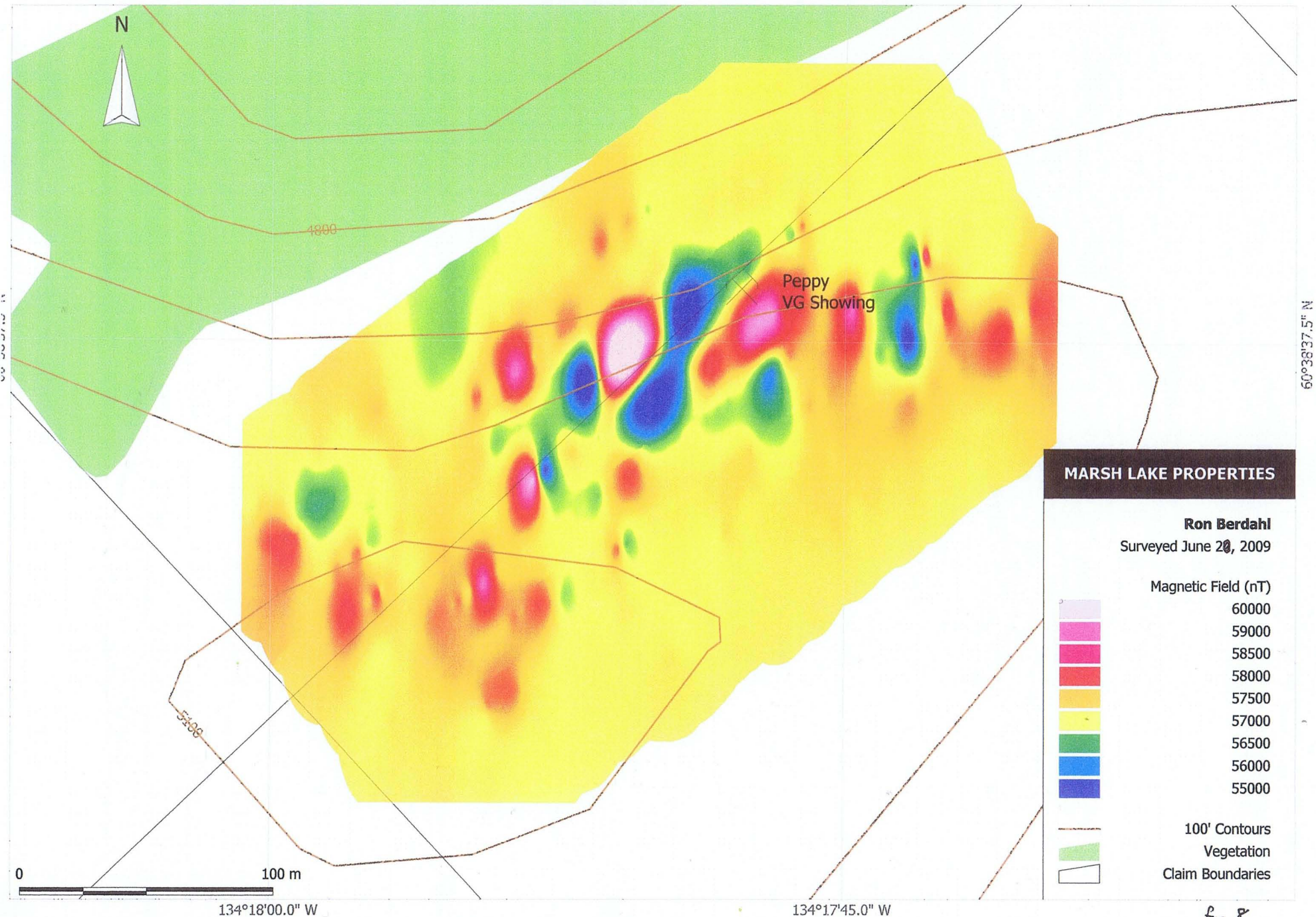
# CARTER GULCH SOILS - LEAD



# Peppy Total Magnetic Field Map

134°18'00.0" W

134°17'45.0" W



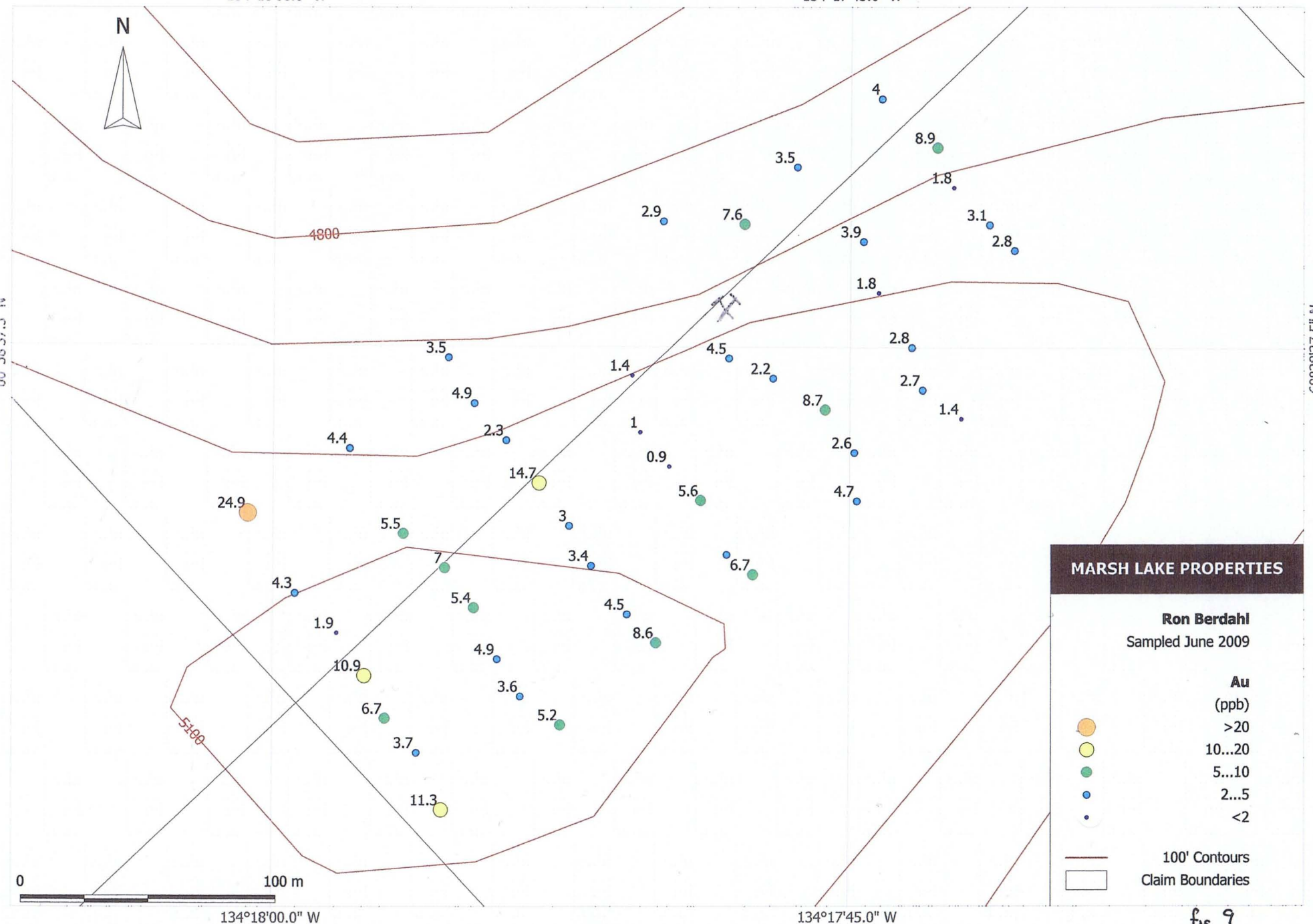
L. R. P.



# PEPPY SOILS - GOLD

134°18'00.0" W

134°17'45.0" W



## MARSH LAKE PROPERTIES

**Ron Berdahl**

Sampled June 2009

**Au**  
(ppb)



>20



10...20



5...10



2...5



<2



100' Contours

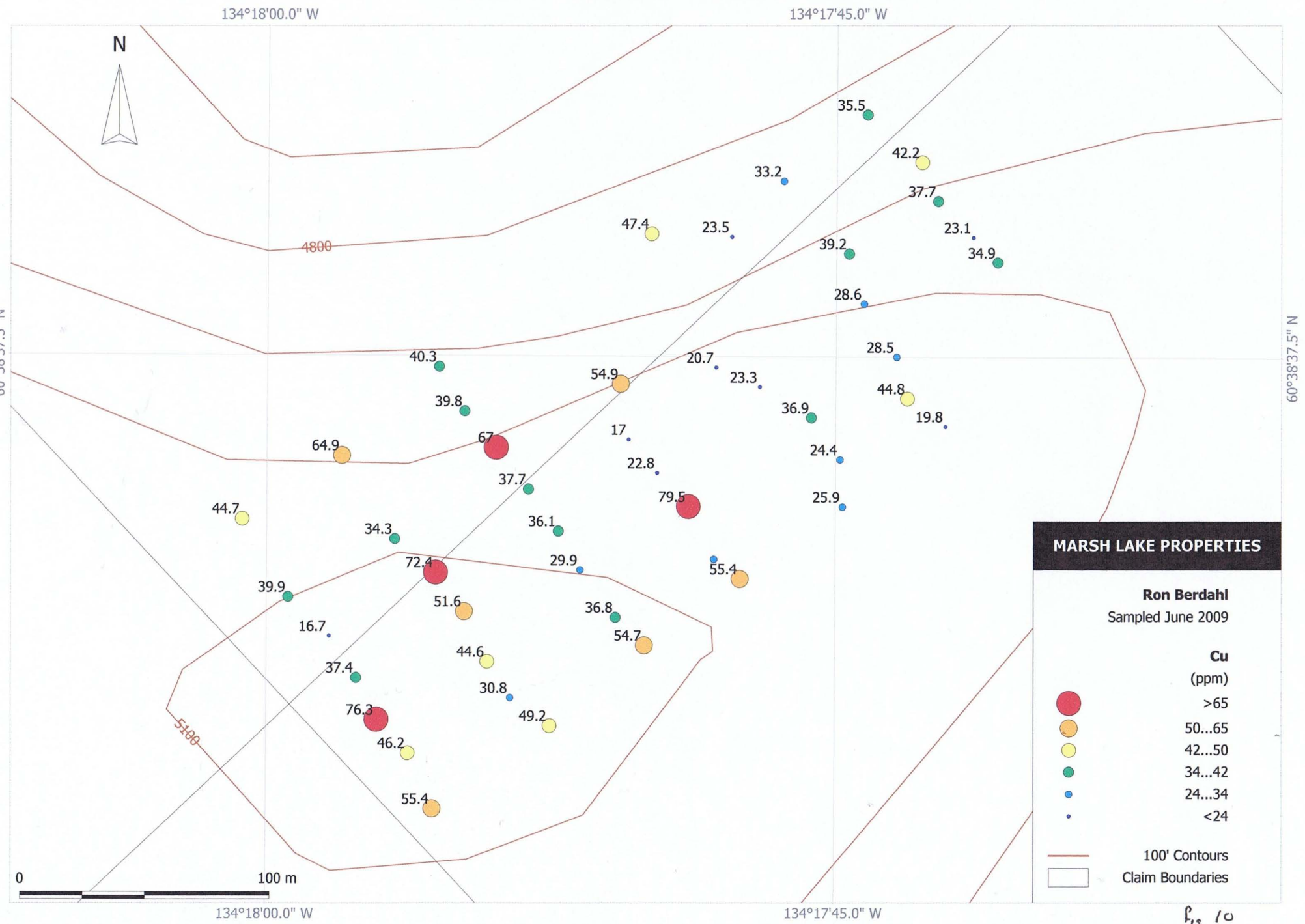


Claim Boundaries

f<sub>5</sub> 9



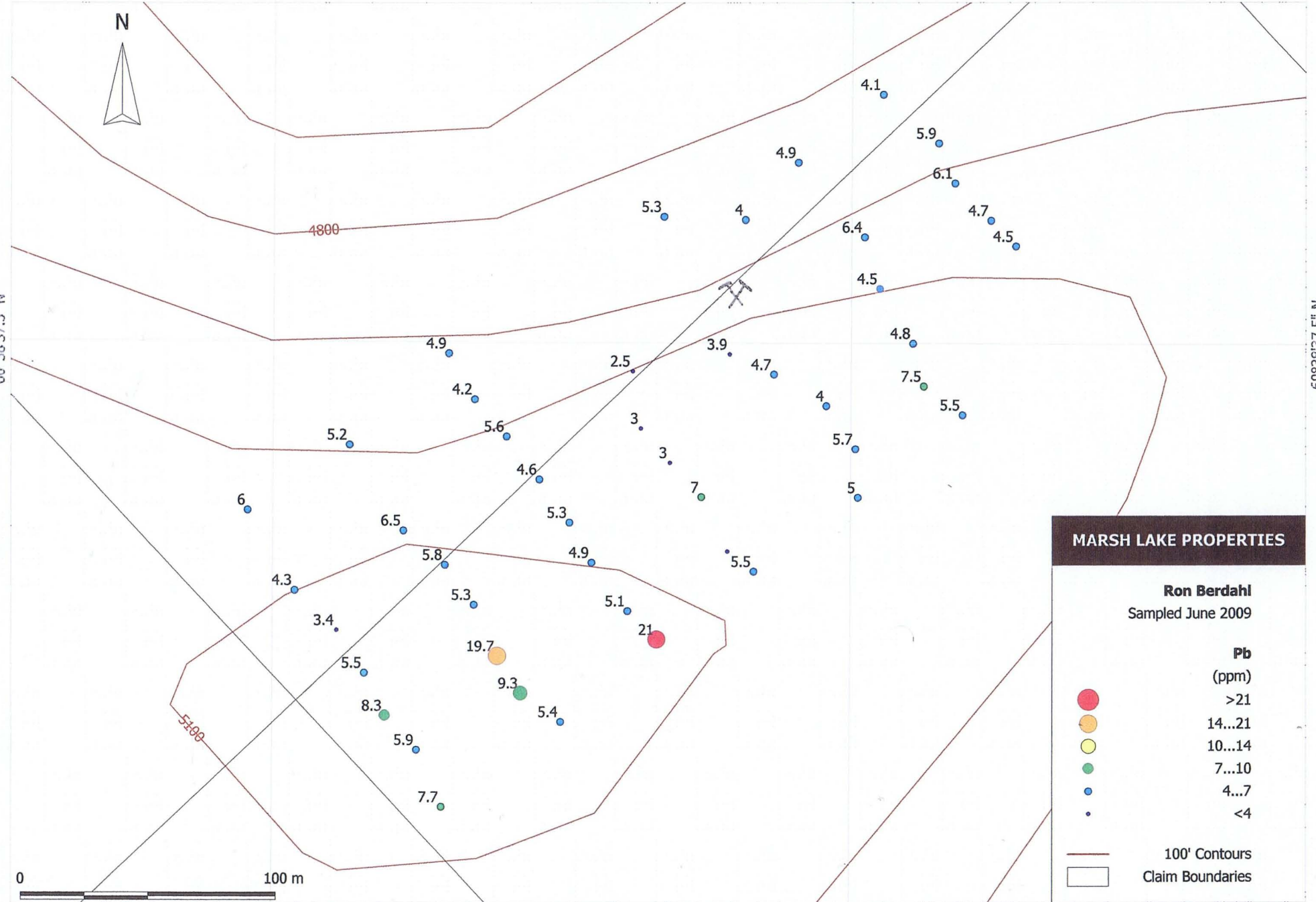
# PEPPY SOILS - COPPER



# PEPPY SOILS - LEAD

134°18'00.0" W

134°17'45.0" W



**MARSH LAKE PROPERTIES**

**Ron Berdahl**  
Sampled June 2009

**Pb**  
(ppm)

- >21
- 14...21
- 10...14
- 7...10
- 4...7
- <4

100' Contours

Claim Boundaries

0 100 m

134°18'00.0" W

134°17'45.0" W

60°38'37.5" N

The metals in soils at CG (plotted Au, Cu and Pb, see figures 5-7 ) generally correlate to the mag highs, this is especially true for gold. The values for gold below the showing range from "0" to 207.5; a higher value of 251.4 ppb is 175m to the east. During the 2003 field season it was determined that values above 10 ppb were anomalous. Values collected 200m topographically below the showing ran 12.9 and 16.5 ppb. There is one area, 200m up line two that is slightly anomalous in all metals but not associated with a mag high. This may represent some northwest striking trend. The westerly mag high has an anomalous but somewhat muted response in Cu and Au.

At Peppy, as at CG, anomalous Cu values are more widespread than Au or Pb. Unlike CG there is little correlation between the mag highs (or lows) and gold numbers. Except on the western extremity there are few anomalous gold values, and those found are low. Spot mag highs occur at the 14.7 ppb Au on line 3, station 100, and at 24.9 at line one station 175, but these are somewhat less than encouraging for obvious size potential. Pb values don't correlate with Au values at Peppy.

## **CONCLUSIONS**

There is a positive correlation between mag anomalies and gold values in soils at Carter Gulch. This is less so at Peppy, though in both places the known gold showings are peripheral to magnetic highs.

Given the grades at Carter Gulch (grab samples over 4 OPT) along with the potential size of the mag anomaly, there is good potential for a much larger showing than is found in sub crop. If the magnetic anomaly (when closed off) is 200m long and 100m wide, which it easily could be, and if gold is found on a both sides, as soils suggest, there could be an interesting volume of free milling, visible gold ore on the ridge.

At Peppy the potential is less obvious, though the .8 OPT float came from somewhere. The conditions at Peppy might play a role in less than stellar soil returns. There were snow patches, permafrost and much more loose talus that interfered with the survey.

The magnetic field strength difference between the two grids is probably attributable to the underlying geology, with the Lewes River Volcanics (a more mafic unit) under Peppy. The LaBerge Series is thought to underlie the CG, though rhyolites outcrop 200 yards below the showing. The difference in magnetic anomaly orientation remains unexplained.

The positive results overall should encourage further exploration.

## **RECOMMENDATIONS**

The area around and between the two showings should be put under one large grid, soil sampled and tested with a mag survey as well as a VLF survey.

The VLF survey that was conducted in 2009 (results not plotted) should be plotted and used in conjunction with all other information to plan a trenching program.

The area should be mapped at a small scale with special consideration of the contact between the Lewes River Group and Le Barge Series rocks, as well as the intrusive immediately to the southwest. Structure should be an important component of the mapping.

## REFERENCES

- Carter, Brian, 1995. Prospecting and Geochemical Assessment Report, CG Claims 1-14, 1518, Carter Gulch Claims 1-2.
- Davidson, G., 1995. Prospecting and Geochemical Survey, Mt. Michie Assessment Report for R. Hamel.
- Rushant, G., 1992. Prospecting in the Michie Creek Area, 105D/9. Yukon Mining Incentives Program, #92-048.
- Tindale, J. L., B.Sc., 1968. Airborne Electromagnetic and Magnetometer Survey in the Marsh Lake Area.
- Wheeler, J. O., 1961. Memoir 312: Whitehorse Map Area, Yukon Territory, 105D. Geological Survey of Canada.

## **APPENDIX A**

### **SAMPLE DESCRIPTIONS**

#### **CARTER RIDGE**

## **APPENDIX A**

### **SAMPLE DESCRIPTIONS**

#### **CARTER RIDGE**

Soil samples  
(no description filed)

## **APPENDIX B**

### **GEOCHEMICAL SHEETS**

#### **CARTER RIDGE**





Acme Analytical Laboratories (Vancouver) Ltd.  
1020 Cordova St. East Vancouver BC V6A 4A3 Canada  
Phone (604) 253-3158 Fax (604) 253-1716

[www.acmelab.com](http://www.acmelab.com)

**Client:** Berdahl, Ron  
Box 11250  
Whitehorse YT Y1A 6N4 Canada

Submitted By: Ron Berdahl  
Receiving Lab: Canada-Vancouver  
Received: July 27, 2009  
Report Date: August 05, 2009  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

VAN09003159.1

### CLIENT JOB INFORMATION

Project: MARSH LAKE  
Shipment ID: 09D10  
P.O. Number  
Number of Samples: 118

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Soil Pulverize	117	Soil Pulverize			VAN
1DX30	117	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN

### SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

### ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Berdahl, Ron  
Box 11250  
Whitehorse YT Y1A 6N4  
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.  
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: MARSH LAKE  
Report Date: August 05, 2009

Page: 2 of 5 Part 1

## CERTIFICATE OF ANALYSIS

VAN09003159.1

Method	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL	0	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
09D10A0	Soil	0.4	23.5	4.0	45	<0.1	515.3	41.9	653	4.31	18.2	0.3	7.6	1.4	17	<0.1	0.2	0.2	59	0.30
09D10A40	Soil	0.7	34.9	4.5	48	<0.1	478.8	35.3	756	4.35	14.8	0.6	2.8	1.5	30	0.2	0.5	0.1	54	0.30
09D10A60	Soil	0.5	23.1	4.7	38	<0.1	519.3	41.6	815	4.15	7.0	0.5	3.1	1.7	25	0.1	0.3	0.1	61	0.43
09D10A80	Soil	0.4	37.7	6.1	64	<0.1	413.3	33.3	912	4.96	25.0	0.9	1.8	4.0	43	<0.1	0.3	0.1	107	0.57
09D10A100	Soil	1.1	42.2	5.9	53	<0.1	604.5	39.4	731	4.11	29.5	1.2	8.9	2.1	28	0.2	0.4	0.1	61	0.57
09D10A120	Soil	0.5	35.5	4.1	42	<0.1	683.5	40.8	668	3.94	9.9	0.6	4.0	1.7	23	<0.1	0.3	<0.1	57	0.43
09D10B20	Soil	0.8	33.2	4.9	44	<0.1	491.7	35.9	726	3.60	11.4	0.8	3.5	1.9	38	0.2	0.4	0.1	55	0.75
09D10B60	Soil	0.8	39.2	6.4	46	<0.1	369.7	31.4	675	3.93	16.3	0.8	3.9	1.9	24	<0.1	0.5	0.1	69	0.49
09D10B80	Soil	0.6	28.6	4.5	95	<0.1	152.9	25.1	868	5.33	4.7	0.5	1.8	1.8	98	<0.1	0.3	<0.1	144	0.83
09D10B100	Soil	0.6	28.5	4.8	46	<0.1	391.6	34.1	860	4.20	11.8	0.4	2.8	1.3	28	0.1	0.3	0.1	79	0.63
09D10B120	Soil	1.7	44.8	7.5	78	0.1	278.5	24.1	633	4.81	17.0	0.7	2.7	1.2	93	0.2	0.4	0.3	116	0.68
09D10B140	Soil	0.5	19.8	5.5	42	<0.1	335.5	32.6	620	3.68	8.1	0.4	1.4	1.5	25	<0.1	0.3	0.1	60	0.40
09D10C0	Soil	0.9	25.9	5.0	43	<0.1	407.0	34.1	627	4.18	23.3	0.4	4.7	1.1	20	<0.1	0.3	0.1	64	0.40
09D10C20	Soil	0.6	24.4	5.7	49	<0.1	498.3	38.7	700	4.34	13.2	0.4	2.6	1.4	20	<0.1	0.3	0.2	65	0.36
09D10C40	Soil	2.5	36.9	4.0	63	0.2	227.7	17.6	4962	3.76	13.9	1.2	8.7	0.6	142	0.4	0.3	<0.1	110	14.52
09D10C60	Soil	0.4	23.3	4.7	36	<0.1	589.6	40.1	603	3.96	10.8	0.5	2.2	1.6	19	<0.1	0.3	<0.1	53	0.35
09D10C80	Soil	0.4	20.7	3.9	33	<0.1	582.6	42.2	591	3.97	7.4	0.4	4.5	1.4	16	<0.1	0.2	<0.1	52	0.34
09D10C140	Soil	0.8	47.4	5.3	45	0.1	487.2	35.2	832	3.82	20.2	0.7	2.9	0.9	43	0.2	0.4	<0.1	50	1.18
09D10D0	Soil	0.5	55.4	5.5	68	0.2	319.2	28.3	1493	4.77	21.6	0.7	6.7	1.2	68	<0.1	0.3	0.2	117	0.94
09D10D20	Soil	0.5	27.3	3.6	78	0.1	439.5	39.8	1324	5.38	36.9	0.5	3.3	1.0	41	<0.1	0.2	0.2	110	0.68
09D10D40	Soil	0.8	79.5	7.0	76	0.4	303.9	34.0	797	4.86	32.9	0.7	5.6	2.3	53	0.2	0.3	0.6	88	0.87
09D10D60	Soil	0.4	22.8	3.0	41	<0.1	529.2	42.0	662	4.32	6.1	0.3	0.9	0.8	17	<0.1	0.2	<0.1	63	0.38
09D10D80	Soil	0.3	17.0	3.0	27	<0.1	811.6	49.5	581	3.75	4.1	0.4	1.0	1.2	12	<0.1	0.2	<0.1	36	0.22
09D10D100	Soil	1.2	54.9	2.5	74	<0.1	106.8	20.7	2414	5.09	19.2	0.3	1.4	0.4	137	0.3	0.9	<0.1	84	8.12
09D10E0	Soil	0.5	40.3	4.9	53	<0.1	588.0	35.6	474	4.02	13.2	0.7	3.5	1.7	31	0.2	0.4	<0.1	62	0.82
09D10E20	Soil	0.6	39.8	4.2	70	<0.1	516.2	34.5	899	4.42	12.7	0.5	4.9	1.4	31	0.3	0.3	<0.1	65	0.70
09D10E40	Soil	1.8	67.0	5.6	180	0.2	429.2	33.4	1570	6.04	25.4	0.8	2.3	1.2	60	1.1	0.6	0.1	98	1.11
09D10E60	Soil	0.6	37.7	4.6	52	<0.1	555.0	36.2	690	4.29	15.3	0.6	14.7	1.7	32	<0.1	0.3	0.1	71	0.42
09D10E80	Soil	0.6	36.1	5.3	53	<0.1	439.1	33.9	757	4.22	18.6	0.5	3.0	1.7	24	<0.1	0.3	0.2	70	0.39
09D10E100	Soil	0.7	29.9	4.9	49	<0.1	427.6	34.0	682	4.22	22.0	0.4	3.4	1.4	23	0.1	0.3	0.1	72	0.36

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Project:

MARSH LAKE

Report Date:

August 05, 2009

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Part 2

## CERTIFICATE OF ANALYSIS

VAN09003159.1

	Method	Analyte	Unit	MDL	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30			
					P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
					%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
					0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
09D10A0	Soil				0.033	4	293	5.68	91	0.076	11	1.43	0.047	0.14	0.1	<0.01	7.3	<0.1	<0.05	4	<0.5
09D10A40	Soil				0.029	5	270	4.80	154	0.089	10	1.72	0.038	0.11	0.2	<0.01	5.2	<0.1	<0.05	5	<0.5
09D10A60	Soil				0.035	7	307	5.79	184	0.092	12	1.65	0.049	0.09	0.4	<0.01	6.0	<0.1	<0.05	4	<0.5
09D10A80	Soil				0.092	15	201	4.14	185	0.132	6	2.35	0.064	0.25	0.3	<0.01	8.6	0.2	<0.05	8	<0.5
09D10A100	Soil				0.060	9	317	5.40	132	0.091	10	1.51	0.043	0.13	0.3	0.01	6.4	0.1	<0.05	4	<0.5
09D10A120	Soil				0.049	6	316	5.77	120	0.086	13	1.32	0.063	0.10	0.2	<0.01	7.5	<0.1	<0.05	4	<0.5
09D10B20	Soil				0.056	7	296	5.06	139	0.090	10	1.45	0.032	0.09	0.2	0.02	5.5	<0.1	<0.05	4	<0.5
09D10B60	Soil				0.048	8	223	3.86	167	0.102	7	1.72	0.039	0.10	0.2	<0.01	6.0	<0.1	<0.05	5	<0.5
09D10B80	Soil				0.055	7	43	2.33	359	0.245	1	3.85	0.225	0.52	0.1	<0.01	10.2	0.4	<0.05	10	<0.5
09D10B100	Soil				0.027	5	254	4.41	134	0.128	7	1.91	0.042	0.07	0.1	0.01	6.4	<0.1	<0.05	6	<0.5
09D10B120	Soil				0.048	6	183	3.24	279	0.130	4	3.00	0.167	0.32	0.2	<0.01	9.8	0.2	<0.05	8	1.3
09D10B140	Soil				0.035	6	242	3.75	171	0.104	7	1.52	0.037	0.11	0.2	<0.01	4.7	<0.1	<0.05	5	<0.5
09D10C0	Soil				0.031	5	260	4.49	111	0.099	7	1.54	0.040	0.09	0.1	<0.01	4.8	<0.1	<0.05	5	<0.5
09D10C20	Soil				0.035	6	294	5.30	108	0.100	9	1.71	0.042	0.09	0.2	<0.01	5.6	<0.1	<0.05	5	<0.5
09D10C40	Soil				0.078	5	76	1.94	168	0.149	1	2.70	0.239	0.13	0.2	0.02	9.1	0.2	0.08	6	0.8
09D10C60	Soil				0.031	7	330	6.02	140	0.073	10	1.37	0.030	0.06	0.2	<0.01	5.4	<0.1	<0.05	4	<0.5
09D10C80	Soil				0.026	5	314	6.04	126	0.071	11	1.26	0.038	0.06	0.1	<0.01	5.7	<0.1	<0.05	3	<0.5
09D10C140	Soil				0.079	6	257	4.38	136	0.063	9	1.50	0.036	0.08	0.1	0.03	4.6	<0.1	<0.05	4	0.8
09D10D0	Soil				0.034	6	170	3.30	427	0.158	9	2.95	0.152	0.23	0.2	0.02	11.1	0.1	<0.05	9	0.9
09D10D20	Soil				0.051	4	258	4.12	315	0.171	4	3.35	0.115	0.21	0.2	<0.01	9.7	0.1	<0.05	8	<0.5
09D10D40	Soil				0.117	10	204	3.89	235	0.139	4	2.80	0.088	0.30	0.2	<0.01	7.4	0.2	<0.05	7	1.1
09D10D60	Soil				0.028	4	300	5.98	100	0.113	8	1.55	0.027	0.06	0.1	<0.01	4.5	<0.1	<0.05	4	<0.5
09D10D80	Soil				0.020	4	416	7.74	100	0.045	13	0.96	0.025	0.05	0.1	<0.01	5.3	<0.1	<0.05	3	<0.5
09D10D100	Soil				0.093	3	113	2.11	200	0.125	1	2.77	0.193	0.29	0.1	<0.01	9.5	0.3	0.06	6	1.3
09D10E0	Soil				0.051	6	282	5.15	138	0.088	10	1.45	0.041	0.10	0.2	<0.01	5.8	<0.1	<0.05	4	0.9
09D10E20	Soil				0.055	6	264	4.73	137	0.091	10	1.52	0.072	0.10	0.2	<0.01	5.6	<0.1	<0.05	4	0.7
09D10E40	Soil				0.106	5	199	4.42	202	0.127	7	2.50	0.195	0.26	0.2	<0.01	7.2	0.1	<0.05	6	1.9
09D10E60	Soil				0.032	6	271	5.75	133	0.111	11	1.76	0.082	0.13	0.2	<0.01	7.9	<0.1	<0.05	5	<0.5
09D10E80	Soil				0.047	6	233	4.90	150	0.096	8	1.70	0.051	0.11	0.1	<0.01	6.6	<0.1	<0.05	5	<0.5
09D10E100	Soil				0.025	5	251	4.82	130	0.106	8	1.80	0.058	0.12	0.2	<0.01	6.2	<0.1	<0.05	5	0.6

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Project: MARSH LAKE  
Report Date: August 05, 2009

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## CERTIFICATE OF ANALYSIS

VAN09003159.1

Method	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL	0	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
09D10E120	Soil	0.6	36.8	5.1	57	<0.1	351.6	28.8	724	4.40	14.8	0.4	4.5	1.2	28	<0.1	0.3	0.1	80	0.48
09D10E140	Soil	0.5	54.7	21.0	72	0.3	299.6	27.4	596	3.92	328.8	0.7	8.6	2.1	42	0.2	0.4	0.6	66	0.44
09D10F0	Soil	0.5	49.2	5.4	56	0.1	258.9	25.7	671	4.23	13.0	0.4	5.2	1.4	38	<0.1	0.3	0.2	95	0.43
09D10F20	Soil	0.7	30.8	9.3	47	0.1	306.5	27.9	638	4.17	11.4	0.5	3.6	1.0	28	<0.1	0.3	0.2	80	0.44
09D10F40	Soil	0.6	44.6	19.7	62	<0.1	299.8	32.1	680	4.22	22.1	0.4	4.9	1.6	19	0.2	0.4	0.2	79	0.29
09D10F60	Soil	0.5	51.6	5.3	52	<0.1	328.7	27.7	582	3.92	19.7	0.5	5.4	1.2	22	<0.1	0.3	0.2	82	0.31
09D10F80	Soil	1.3	72.4	5.8	64	0.2	327.2	41.8	904	4.94	12.7	0.4	7.0	0.9	53	<0.1	0.3	0.2	87	0.78
09D10F100	Soil	0.6	34.3	6.5	55	<0.1	308.5	27.7	614	3.44	11.7	0.5	5.5	1.3	55	0.1	0.3	0.2	58	0.38
09D10F140	Soil	0.9	64.9	5.2	71	0.2	370.7	33.8	1027	4.75	15.5	0.4	4.4	1.2	38	0.2	0.4	0.3	86	0.70
09D10G0	Soil	1.6	44.7	6.0	82	0.1	317.2	29.3	788	3.98	21.3	1.2	24.9	1.8	26	0.3	0.5	0.2	63	0.47
09D10G40	Soil	0.5	39.9	4.3	43	<0.1	640.4	37.1	618	3.68	7.9	0.6	4.3	1.9	28	<0.1	0.4	<0.1	52	0.47
09D10G60	Soil	0.3	16.7	3.4	38	<0.1	514.8	40.2	542	3.52	5.8	0.3	1.9	1.1	22	<0.1	0.3	<0.1	48	0.39
09D10G80	Soil	0.5	37.4	5.5	48	0.1	364.6	33.3	645	3.90	20.0	0.5	10.9	1.8	19	<0.1	0.4	0.1	70	0.30
09D10G100	Soil	2.0	76.3	8.3	65	0.2	205.1	24.5	1005	4.43	47.8	0.6	8.7	1.2	37	<0.1	0.6	0.2	104	0.43
09D10G120	Soil	0.8	46.2	5.9	59	<0.1	411.0	33.5	705	4.15	17.5	0.7	3.7	1.9	25	0.2	0.4	0.1	73	0.40
09D10G140	Soil	0.9	55.4	7.7	59	0.1	234.2	27.5	766	4.18	23.1	0.5	11.3	1.4	44	<0.1	0.4	0.2	90	0.43
09D10H0	Soil	0.4	38.9	4.4	47	<0.1	413.7	38.7	715	4.00	6.7	0.3	2.9	1.3	20	0.1	0.2	<0.1	64	0.40
09D10H25	Soil	0.3	45.0	4.6	47	<0.1	368.3	36.5	654	3.87	4.6	0.4	2.1	1.2	19	0.1	0.2	<0.1	64	0.38
09D10H50	Soil	0.4	31.1	6.1	48	<0.1	273.5	32.8	689	3.53	4.9	0.4	3.0	1.4	17	0.2	0.2	<0.1	60	0.36
09D10H75	Soil	1.0	44.2	4.8	51	<0.1	277.2	30.6	619	3.66	4.5	0.3	2.1	1.2	16	0.2	0.2	<0.1	67	0.37
09D10H100	Soil	0.3	80.1	5.2	67	<0.1	277.4	32.9	956	5.12	10.9	0.3	75.3	1.1	18	0.1	0.5	<0.1	100	0.40
09D10H125	Soil	0.4	42.2	5.1	61	<0.1	244.2	29.9	875	4.09	4.5	0.3	1.4	1.5	17	0.2	0.3	<0.1	73	0.36
09D10H150	Soil	0.4	33.7	8.5	58	<0.1	185.2	25.0	678	4.49	5.6	0.3	12.5	1.1	18	0.2	0.2	<0.1	80	0.31
09D10H175	Soil	0.3	39.4	5.7	42	<0.1	339.5	32.2	659	3.82	4.8	0.3	3.2	1.4	13	<0.1	0.3	<0.1	66	0.28
09D10H200	Soil	0.4	45.5	6.5	50	<0.1	354.0	32.5	730	4.02	6.7	0.5	3.2	1.4	19	0.1	0.3	<0.1	65	0.32
09D10H225	Soil	0.4	34.9	5.8	47	<0.1	240.8	26.0	566	3.81	5.0	0.3	2.4	1.1	19	<0.1	0.3	<0.1	69	0.35
09D10H250	Soil	0.5	32.2	5.4	45	<0.1	298.1	29.7	588	3.70	5.8	0.3	4.2	1.3	16	<0.1	0.4	<0.1	67	0.31
09D10H275	Soil	1.0	57.5	4.8	81	0.1	131.4	23.9	836	4.48	5.2	0.4	5.5	0.9	23	0.1	0.3	<0.1	63	0.41
09D10H300	Soil	0.5	40.9	5.7	57	<0.1	237.2	29.3	686	4.07	5.7	0.4	2.4	1.1	20	<0.1	0.3	<0.1	73	0.43
09D10H325	Soil	0.5	42.8	6.9	62	<0.1	255.0	32.6	840	4.54	5.2	0.3	1.1	1.3	16	0.1	0.3	<0.1	81	0.38

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Part 2

## CERTIFICATE OF ANALYSIS

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	Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Ti	S	Ga
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1
09D10E120	Soil	0.038	6	210	4.15	183	0.131	7	2.09	0.053	0.11	0.1	<0.01	6.0	<0.1	<0.05	6
09D10E140	Soil	0.043	8	173	3.31	142	0.078	6	1.77	0.042	0.13	0.2	<0.01	5.5	<0.1	<0.05	5
09D10F0	Soil	0.037	6	180	3.32	492	0.134	6	2.12	0.072	0.22	0.2	<0.01	7.0	<0.1	<0.05	7
09D10F20	Soil	0.047	6	205	3.94	189	0.110	7	2.06	0.077	0.12	0.2	<0.01	5.8	<0.1	<0.05	6
09D10F40	Soil	0.027	5	184	3.92	182	0.104	7	1.96	0.042	0.20	0.3	<0.01	5.6	<0.1	<0.05	6
09D10F60	Soil	0.025	4	165	3.56	202	0.117	6	1.99	0.046	0.20	0.1	<0.01	5.0	<0.1	<0.05	6
09D10F80	Soil	0.036	4	160	3.38	388	0.149	4	2.67	0.186	0.34	0.2	0.02	6.9	0.1	0.08	7
09D10F100	Soil	0.043	9	198	3.35	221	0.075	5	1.78	0.054	0.12	0.2	0.02	4.1	<0.1	<0.05	5
09D10F140	Soil	0.054	5	189	4.15	230	0.120	6	2.21	0.122	0.25	0.1	0.01	6.8	0.1	0.09	7
09D10G0	Soil	0.051	6	190	3.51	126	0.088	6	1.75	0.064	0.13	0.3	0.02	4.6	<0.1	0.06	5
09D10G40	Soil	0.022	8	283	5.71	143	0.089	12	1.37	0.047	0.10	0.1	0.02	5.5	<0.1	<0.05	4
09D10G60	Soil	0.025	4	354	5.49	133	0.074	10	1.24	0.028	0.06	<0.1	<0.01	4.4	<0.1	<0.05	4
09D10G80	Soil	0.020	5	203	4.20	122	0.110	6	1.71	0.036	0.12	0.2	<0.01	5.7	<0.1	<0.05	5
09D10G100	Soil	0.044	5	146	2.60	201	0.118	4	2.12	0.062	0.19	0.3	<0.01	6.2	0.1	0.13	6
09D10G120	Soil	0.050	6	231	4.62	149	0.109	7	1.77	0.048	0.09	0.2	<0.01	6.1	<0.1	<0.05	5
09D10G140	Soil	0.038	5	166	3.03	357	0.125	4	2.38	0.065	0.20	0.3	<0.01	6.0	0.1	<0.05	7
09D10H0	Soil	0.043	5	209	4.64	106	0.084	5	1.41	0.023	0.07	0.1	<0.01	4.5	<0.1	<0.05	4
09D10H25	Soil	0.050	6	222	4.22	107	0.089	5	1.40	0.023	0.05	0.1	<0.01	4.2	<0.1	<0.05	4
09D10H50	Soil	0.048	6	200	3.76	105	0.082	5	1.45	0.018	0.06	0.2	<0.01	3.9	<0.1	<0.05	4
09D10H75	Soil	0.040	5	188	3.71	90	0.102	5	1.43	0.016	0.07	0.1	<0.01	4.2	<0.1	<0.05	5
09D10H100	Soil	0.060	5	158	3.48	112	0.087	4	1.88	0.017	0.07	0.1	<0.01	8.2	<0.1	<0.05	6
09D10H125	Soil	0.054	6	163	3.10	92	0.096	5	1.55	0.017	0.07	0.1	<0.01	4.1	<0.1	<0.05	5
09D10H150	Soil	0.057	5	149	2.63	73	0.106	3	1.70	0.017	0.07	0.2	0.02	4.0	<0.1	<0.05	6
09D10H175	Soil	0.033	5	203	4.23	77	0.079	6	1.45	0.013	0.05	0.2	<0.01	4.3	<0.1	<0.05	4
09D10H200	Soil	0.056	7	200	3.74	124	0.063	5	1.54	0.018	0.05	0.2	0.01	4.7	<0.1	<0.05	4
09D10H225	Soil	0.052	5	170	3.15	121	0.073	5	1.58	0.017	0.05	0.2	<0.01	3.8	<0.1	<0.05	5
09D10H250	Soil	0.033	6	195	3.78	93	0.081	5	1.53	0.020	0.04	0.2	<0.01	3.7	<0.1	<0.05	5
09D10H275	Soil	0.059	4	100	2.24	80	0.135	3	2.01	0.017	0.06	0.2	<0.01	3.6	<0.1	<0.05	5
09D10H300	Soil	0.057	6	163	3.33	111	0.089	4	1.78	0.021	0.05	0.1	<0.01	4.1	<0.1	<0.05	5
09D10H325	Soil	0.054	6	168	3.48	90	0.090	3	1.91	0.014	0.05	0.2	<0.01	4.5	<0.1	<0.05	6

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Report Date:

August 05, 2009

Page:

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Part 1

## CERTIFICATE OF ANALYSIS

VAN09003159.1

	Method	Analyte	Unit	MDL	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30			
					Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
					kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
					0	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
09D10H375	Soil		0.5	42.4	6.7	50	<0.1	224.7	25.7	673	3.81	5.5	0.5	3.6	1.2	19	<0.1	0.3	<0.1	64	0.39			
09D10H400	Soil		0.6	66.2	9.1	65	0.1	222.2	26.8	764	3.81	7.6	0.6	4.4	1.1	20	0.2	0.3	<0.1	62	0.48			
09D10H425	Soil		0.6	56.5	6.8	53	<0.1	232.6	26.5	677	3.85	5.5	0.6	2.4	0.9	22	<0.1	0.3	<0.1	63	0.57			
09D10H450	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.			
09D10H475	Soil		0.4	45.8	10.3	53	<0.1	211.2	27.3	723	3.72	6.4	0.5	3.4	0.9	22	0.1	0.3	<0.1	63	0.51			
09D10H500	Soil		0.6	42.7	19.7	69	0.2	300.4	29.6	745	3.98	6.7	0.3	8.7	0.8	20	0.2	0.3	0.1	64	0.44			
09D10H525	Soil		0.5	38.2	6.9	52	<0.1	188.3	24.9	646	3.64	6.4	0.4	1.8	1.3	20	<0.1	0.3	<0.1	65	0.43			
09D10H550	Soil		0.5	47.6	6.0	61	<0.1	215.9	27.1	739	3.78	8.2	0.5	2.8	0.9	22	0.1	0.3	<0.1	64	0.51			
09D10H575	Soil		0.6	39.5	6.2	55	<0.1	217.0	27.5	847	4.08	7.9	0.4	3.9	0.8	22	0.1	0.3	<0.1	63	0.50			
09D10H600	Soil		0.4	39.5	5.7	55	<0.1	240.7	26.8	711	4.06	5.3	0.4	3.2	1.2	24	0.1	0.3	<0.1	63	0.50			
09D10I0	Soil		0.3	27.6	4.2	41	<0.1	392.3	33.3	577	3.80	5.5	0.4	1.3	1.6	18	<0.1	0.2	<0.1	63	0.40			
09D10I25	Soil		0.4	25.9	4.4	39	<0.1	488.6	42.0	637	3.98	5.1	0.4	1.4	1.4	14	0.2	0.2	<0.1	62	0.35			
09D10I50	Soil		0.2	18.7	77.7	61	<0.1	197.1	18.0	866	2.78	5.7	0.5	3.4	2.0	13	0.3	0.3	<0.1	27	0.39			
09D10I75	Soil		0.3	34.6	5.4	46	<0.1	285.4	31.6	656	4.33	5.1	0.3	0.7	1.1	18	0.1	0.2	<0.1	82	0.40			
09D10I100	Soil		0.5	35.1	5.8	52	<0.1	255.3	31.9	759	4.31	5.1	0.4	1.5	1.3	21	0.2	0.2	<0.1	84	0.48			
09D10I125	Soil		0.4	31.5	5.7	48	<0.1	225.6	27.4	677	4.13	6.7	0.4	2.9	1.1	20	0.1	0.2	<0.1	79	0.40			
09D10I150	Soil		0.4	31.6	6.4	51	<0.1	217.2	27.7	670	4.46	5.1	0.3	3.3	1.4	20	0.1	0.2	<0.1	91	0.44			
09D10I175	Soil		0.4	33.2	7.3	46	<0.1	232.6	27.5	523	4.05	6.8	0.4	1.8	1.6	14	0.1	0.2	<0.1	74	0.37			
09D10I200	Soil		0.4	34.7	4.8	48	<0.1	325.9	37.0	717	4.25	5.3	0.3	1.4	1.3	18	<0.1	0.2	<0.1	78	0.53			
09D10I225	Soil		0.7	47.9	6.3	48	<0.1	139.8	20.3	479	3.96	5.1	0.6	1.2	1.5	21	0.2	0.2	<0.1	81	0.67			
09D10I250	Soil		0.4	28.0	6.1	58	<0.1	252.7	28.7	694	4.23	4.6	0.3	0.7	1.0	17	0.2	0.3	<0.1	80	0.38			
09D10I275	Soil		1.0	46.3	11.5	74	<0.1	163.1	31.3	1345	5.94	14.0	0.7	2.3	2.6	65	0.1	0.6	<0.1	119	0.98			
09D10I300	Soil		0.4	38.3	4.6	47	<0.1	321.9	32.6	703	4.33	4.5	0.3	0.6	1.2	17	0.1	0.2	<0.1	79	0.46			
09D10I325	Soil		0.3	39.8	4.5	43	<0.1	377.1	33.2	698	4.03	4.4	0.4	2.5	1.4	18	<0.1	0.2	<0.1	73	0.43			
09D10I350	Soil		0.4	36.8	4.8	48	<0.1	440.8	36.9	754	4.21	5.2	0.5	1.2	1.2	17	0.1	0.2	<0.1	66	0.45			
09D10I375	Soil		0.5	44.5	5.7	63	<0.1	204.8	26.3	885	4.34	5.9	0.4	14.9	1.3	17	<0.1	0.2	<0.1	77	0.46			
09D10I400	Soil		0.6	57.8	14.2	65	0.1	231.6	30.2	917	4.78	25.5	0.4	25.6	1.4	16	0.2	0.2	<0.1	84	0.43			
09D10I425	Soil		0.5	37.3	5.1	55	<0.1	170.2	24.9	846	4.19	5.4	0.4	1.3	1.0	23	<0.1	0.2	<0.1	71	0.54			
09D10I450	Soil		0.5	51.0	6.2	58	<0.1	213.6	26.6	768	4.40	8.1	0.4	6.5	0.9	17	<0.1	0.2	<0.1	77	0.50			
09D10I475	Soil		0.4	36.0	6.3	47	<0.1	188.6	27.0	711	3.92	5.1	0.4	3.1	1.3	19	<0.1	0.2	<0.1	70	0.47			

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Report Date: August 05, 2009

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## CERTIFICATE OF ANALYSIS

VAN09003159.1

	Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
09D10H375	Soil	0.049	7	160	2.83	459	0.076	4	1.72	0.020	0.05	<0.1	0.01	3.7	<0.1	<0.05	5	<0.5
09D10H400	Soil	0.051	7	162	2.67	121	0.070	4	1.69	0.015	0.06	0.1	<0.01	3.7	<0.1	<0.05	5	0.7
09D10H425	Soil	0.057	6	147	2.88	99	0.075	4	1.65	0.017	0.06	0.1	<0.01	3.5	<0.1	<0.05	5	<0.5
09D10H450	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
09D10H475	Soil	0.058	6	160	2.77	72	0.076	4	1.69	0.014	0.06	0.1	<0.01	3.7	<0.1	<0.05	5	<0.5
09D10H500	Soil	0.067	5	127	3.92	74	0.083	3	1.62	0.021	0.10	0.5	<0.01	4.1	<0.1	<0.05	5	0.5
09D10H525	Soil	0.043	5	172	2.27	78	0.100	4	1.66	0.021	0.07	0.2	<0.01	4.2	<0.1	<0.05	5	<0.5
09D10H550	Soil	0.057	6	145	2.59	67	0.074	5	1.59	0.018	0.08	0.1	0.01	4.0	<0.1	<0.05	5	0.6
09D10H575	Soil	0.065	5	175	2.82	89	0.088	5	1.73	0.017	0.09	0.2	<0.01	4.2	<0.1	<0.05	5	<0.5
09D10H600	Soil	0.057	5	160	3.08	82	0.103	5	1.75	0.023	0.09	0.2	<0.01	4.1	<0.1	<0.05	5	<0.5
09D10I0	Soil	0.040	6	265	4.83	117	0.074	7	1.43	0.027	0.06	0.4	<0.01	5.1	<0.1	<0.05	4	<0.5
09D10I25	Soil	0.039	5	271	5.36	128	0.070	7	1.33	0.019	0.05	0.2	<0.01	4.5	<0.1	<0.05	4	<0.5
09D10I50	Soil	0.056	14	97	1.93	192	0.014	3	1.20	0.018	0.10	0.3	<0.01	3.5	<0.1	<0.05	2	<0.5
09D10I75	Soil	0.057	6	192	3.81	92	0.091	5	1.72	0.017	0.05	0.1	<0.01	4.6	<0.1	<0.05	6	<0.5
09D10I100	Soil	0.060	6	192	3.41	119	0.089	5	1.80	0.025	0.06	0.2	<0.01	5.3	<0.1	<0.05	6	<0.5
09D10I125	Soil	0.052	6	162	3.31	122	0.090	4	1.79	0.022	0.07	0.2	<0.01	4.7	<0.1	<0.05	6	<0.5
09D10I150	Soil	0.057	6	190	3.14	108	0.120	5	1.84	0.024	0.07	0.3	<0.01	5.3	<0.1	<0.05	6	<0.5
09D10I175	Soil	0.037	5	193	3.12	106	0.099	4	1.62	0.016	0.07	0.2	<0.01	4.3	<0.1	<0.05	6	<0.5
09D10I200	Soil	0.043	5	298	4.04	107	0.100	6	1.65	0.024	0.06	0.1	<0.01	5.3	<0.1	<0.05	5	<0.5
09D10I225	Soil	0.076	7	125	1.94	118	0.066	4	1.77	0.018	0.06	0.2	0.04	5.2	<0.1	<0.05	6	0.5
09D10I250	Soil	0.062	5	244	2.99	138	0.075	5	1.69	0.019	0.06	0.2	0.03	4.5	<0.1	<0.05	6	<0.5
09D10I275	Soil	0.220	14	103	2.66	115	0.069	4	2.39	0.020	0.09	0.2	<0.01	6.4	<0.1	<0.05	9	<0.5
09D10I300	Soil	0.043	4	214	4.28	95	0.113	6	1.83	0.018	0.05	0.2	<0.01	5.1	<0.1	<0.05	5	<0.5
09D10I325	Soil	0.031	5	216	4.23	122	0.110	6	1.77	0.032	0.05	0.2	<0.01	4.8	<0.1	<0.05	5	<0.5
09D10I350	Soil	0.037	5	239	5.39	102	0.093	7	1.53	0.020	0.06	0.2	<0.01	4.8	<0.1	<0.05	5	<0.5
09D10I375	Soil	0.032	5	140	3.00	74	0.133	3	1.97	0.018	0.07	0.2	<0.01	4.9	<0.1	<0.05	5	0.8
09D10I400	Soil	0.026	5	158	3.04	76	0.124	4	2.06	0.016	0.06	0.2	<0.01	5.7	<0.1	<0.05	6	<0.5
09D10I425	Soil	0.053	4	135	2.69	100	0.123	5	1.89	0.016	0.06	0.1	<0.01	3.9	<0.1	<0.05	5	0.7
09D10I450	Soil	0.043	4	153	3.04	80	0.102	4	1.97	0.017	0.06	0.2	<0.01	4.4	<0.1	<0.05	6	<0.5
09D10I475	Soil	0.048	6	160	2.62	123	0.107	5	1.64	0.020	0.06	0.1	0.01	3.9	<0.1	<0.05	5	<0.5



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Page:

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Part 1

# CERTIFICATE OF ANALYSIS

VAN09003159.1

Method	Analyte	Unit	MDL	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
				Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi
				kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
				0	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1
09D10I500	Soil				0.4	33.3	8.1	51	<0.1	228.9	27.0	691	3.70	8.2	0.4	3.7	1.2	22	<0.1	0.3	<0.1
09D10I525	Soil				0.4	38.0	10.6	55	<0.1	277.4	30.7	733	4.02	6.9	0.5	7.2	1.5	18	0.1	0.2	<0.1
09D10I550	Soil				0.5	39.4	8.3	51	<0.1	215.4	25.4	741	3.93	6.3	0.4	1.6	1.2	19	<0.1	0.2	<0.1
09D10I575	Soil				0.5	38.4	7.4	50	<0.1	296.8	29.3	710	4.04	6.9	0.5	3.6	1.5	18	0.1	0.3	<0.1
09D10I600	Soil				0.5	23.5	6.5	41	<0.1	259.6	27.1	606	3.69	5.3	0.4	0.5	1.3	16	0.1	0.2	<0.1
09D10J0	Soil				0.3	34.2	3.7	38	<0.1	372.3	32.4	609	3.74	4.4	0.4	0.8	1.4	14	<0.1	0.2	<0.1
09D10J25	Soil				0.4	27.9	5.0	40	<0.1	336.7	32.5	628	3.58	5.1	0.3	1.0	1.7	14	0.1	0.2	<0.1
09D10J50	Soil				0.3	28.9	4.7	39	<0.1	334.7	30.7	561	3.59	4.3	0.3	1.8	1.4	12	0.2	0.2	<0.1
09D10J75	Soil				0.1	7.5	1.0	10	<0.1	4.9	2.0	41	0.49	<0.5	0.1	<0.5	0.1	19	<0.1	<0.1	<0.1
09D10J100	Soil				0.3	49.6	7.3	41	<0.1	155.7	17.1	490	2.85	4.4	0.4	2.1	0.4	17	0.1	0.1	<0.1
09D10J125	Soil				0.4	59.0	5.6	56	<0.1	191.1	28.7	870	4.24	5.1	0.6	1.6	1.0	20	0.2	0.2	<0.1
09D10J150	Soil				0.5	85.4	11.1	38	<0.1	110.9	16.4	398	2.70	10.7	0.4	4.3	0.2	27	0.1	0.2	<0.1
09D10J200	Soil				0.3	82.6	40.2	80	0.1	174.8	28.9	889	4.74	6.5	0.3	207.5	1.1	16	0.3	0.2	<0.1
09D10J225	Soil				0.4	84.2	24.9	71	0.1	150.5	25.5	866	4.41	7.0	0.4	67.3	1.2	19	0.4	0.2	<0.1
09D10J275	Soil				0.4	31.0	5.8	25	<0.1	27.1	4.8	248	1.26	2.3	0.6	<0.5	<0.1	14	<0.1	0.1	<0.1
09D10J300	Soil				0.2	42.9	6.9	50	<0.1	15.2	11.0	546	3.24	3.2	0.3	53.6	0.4	13	0.2	<0.1	<0.1
09D10J325	Soil				0.4	49.9	10.4	56	<0.1	127.2	21.3	667	4.08	6.8	0.4	6.7	0.8	19	0.1	0.2	<0.1
09D10J350	Soil				0.4	50.0	5.7	63	<0.1	187.6	27.6	782	4.15	6.8	0.4	17.1	0.9	23	0.1	0.3	0.1
09D10J375	Soil				0.5	80.0	81.6	117	0.2	139.3	26.4	944	5.10	23.9	0.3	251.4	0.9	21	0.5	0.3	<0.1
09D10J400	Soil				0.4	64.6	8.1	60	<0.1	286.1	29.8	783	4.46	7.1	0.5	6.4	1.3	17	0.2	0.3	<0.1
09D10J450	Soil				0.7	50.0	8.5	59	<0.1	150.6	26.6	797	4.32	7.1	0.5	5.6	1.3	29	0.1	0.2	<0.1
09D10J475	Soil				0.6	73.5	7.9	82	0.1	177.1	27.4	874	4.85	17.2	0.4	6.2	0.9	20	0.1	0.3	<0.1
09D10J500	Soil				0.3	52.4	7.6	55	<0.1	313.8	28.2	716	4.21	6.8	0.4	5.2	1.3	21	<0.1	0.3	<0.1
09D10J525	Soil				0.4	43.1	8.7	59	<0.1	185.9	24.4	701	4.34	7.2	0.3	8.6	1.2	21	0.1	0.3	<0.1
09D10J550	Soil				0.4	52.7	16.7	68	0.1	276.1	27.2	795	4.48	8.0	0.4	17.3	1.4	21	0.1	0.3	<0.1
09D10J575	Soil				0.5	49.8	13.9	62	<0.1	236.1	29.0	783	4.43	9.3	0.4	15.0	1.2	22	0.2	0.3	<0.1
09D10J600	Soil				0.4	31.9	7.6	60	0.1	136.6	19.6	649	3.86	6.2	0.3	3.6	1.2	20	0.2	0.3	<0.1
09D10XX	Soil				1.0	14.9	7.2	20	<0.1	90.5	5.4	187	1.43	9.9	0.9	3.0	8.3	7	<0.1	0.5	<0.1





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Project:

MARSH LAKE

Report Date:

August 05, 2009

Page:

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## CERTIFICATE OF ANALYSIS

VAN09003159.1

	Method	Analyte	Unit	MDL	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30			
					P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
					%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
					0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
09D10I500	Soil				0.039	6	159	2.90	86	0.073	4	1.66	0.014	0.06	0.1	<0.01	3.5	<0.1	<0.05	5	<0.5
09D10I525	Soil				0.038	6	191	3.47	98	0.094	6	1.65	0.020	0.06	0.1	0.01	4.3	<0.1	<0.05	5	<0.5
09D10I550	Soil				0.049	6	155	2.82	97	0.086	4	1.66	0.016	0.08	0.2	<0.01	4.3	<0.1	<0.05	5	0.5
09D10I575	Soil				0.034	6	187	3.46	92	0.097	5	1.70	0.019	0.05	0.1	<0.01	4.9	<0.1	<0.05	5	<0.5
09D10I600	Soil				0.046	6	185	3.54	99	0.074	6	1.51	0.016	0.05	0.1	<0.01	3.9	<0.1	<0.05	4	<0.5
09D10J0	Soil				0.029	5	199	4.48	95	0.094	7	1.39	0.021	0.05	0.2	<0.01	4.6	<0.1	<0.05	5	<0.5
09D10J25	Soil				0.024	5	216	4.32	137	0.087	5	1.51	0.018	0.05	0.2	<0.01	4.3	<0.1	<0.05	5	<0.5
09D10J50	Soil				0.023	5	179	3.91	96	0.081	5	1.46	0.015	0.04	0.2	<0.01	4.2	<0.1	<0.05	5	<0.5
09D10J75	Soil				0.041	2	12	0.12	29	0.037	<1	0.29	0.085	0.04	<0.1	<0.01	0.4	<0.1	<0.05	2	<0.5
09D10J100	Soil				0.063	5	133	1.87	107	0.044	4	1.39	0.021	0.05	0.2	0.03	2.8	<0.1	<0.05	5	<0.5
09D10J125	Soil				0.133	6	165	2.88	98	0.082	4	1.96	0.030	0.06	0.3	<0.01	4.8	<0.1	<0.05	6	<0.5
09D10J150	Soil				0.131	10	79	1.35	131	0.020	4	1.51	0.034	0.07	0.2	0.06	2.5	<0.1	0.08	4	<0.5
09D10J200	Soil				0.072	6	136	2.70	90	0.078	4	2.10	0.014	0.07	0.2	<0.01	5.8	<0.1	<0.05	7	<0.5
09D10J225	Soil				0.065	6	110	2.28	97	0.098	3	1.94	0.017	0.07	0.2	<0.01	5.3	<0.1	<0.05	6	<0.5
09D10J275	Soil				0.074	4	47	0.42	64	0.015	2	0.99	0.069	0.06	<0.1	0.02	0.6	<0.1	<0.05	3	<0.5
09D10J300	Soil				0.087	4	43	1.10	50	0.062	2	1.58	0.047	0.09	0.1	0.01	3.8	<0.1	<0.05	6	<0.5
09D10J325	Soil				0.070	5	134	1.86	92	0.109	3	1.75	0.014	0.04	0.2	0.02	4.0	<0.1	<0.05	6	<0.5
09D10J350	Soil				0.074	5	140	2.87	79	0.090	4	1.82	0.015	0.03	0.1	<0.01	3.7	<0.1	<0.05	5	0.6
09D10J375	Soil				0.082	5	95	2.34	71	0.062	3	2.21	0.011	0.07	0.1	<0.01	4.2	<0.1	<0.05	6	<0.5
09D10J400	Soil				0.062	6	166	3.41	79	0.067	4	1.84	0.013	0.04	<0.1	0.01	5.7	<0.1	<0.05	6	0.6
09D10J450	Soil				0.054	6	133	2.42	129	0.102	3	1.90	0.020	0.07	0.2	0.02	4.9	<0.1	<0.05	7	0.7
09D10J475	Soil				0.069	5	132	2.67	76	0.083	3	2.02	0.015	0.05	0.2	0.02	7.4	<0.1	<0.05	7	0.6
09D10J500	Soil				0.050	5	182	3.84	90	0.098	6	1.75	0.025	0.06	0.2	0.01	5.1	<0.1	<0.05	5	<0.5
09D10J525	Soil				0.050	4	143	2.89	79	0.116	5	1.88	0.022	0.07	0.2	0.02	4.7	<0.1	<0.05	6	0.5
09D10J550	Soil				0.067	6	151	3.62	87	0.121	5	1.92	0.025	0.06	0.1	<0.01	5.2	<0.1	<0.05	6	<0.5
09D10J575	Soil				0.060	5	177	3.33	88	0.105	5	1.84	0.023	0.07	0.1	<0.01	4.7	<0.1	<0.05	6	<0.5
09D10J600	Soil				0.053	6	103	2.37	90	0.116	2	1.74	0.019	0.08	0.2	0.01	4.1	<0.1	<0.05	6	<0.5
09D10XX	Soil				0.025	20	57	0.75	77	0.010	<1	0.72	0.046	0.11	<0.1	<0.01	1.8	<0.1	<0.05	2	<0.5



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Project: **MARSH LAKE**  
Report Date: **August 05, 2009**

Page: 1 of 1 Part 1

## QUALITY CONTROL REPORT

VAN09003159.1

	Method	Analyte	Unit	MDL	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30			
					Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
					kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
					0	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																									
09D10C0	Soil				0.9	25.9	5.0	43	<0.1	407.0	34.1	627	4.18	23.3	0.4	4.7	1.1	20	<0.1	0.3	0.1	64	0.40		
REP 09D10C0	QC				0.8	27.1	5.4	44	<0.1	406.7	33.5	634	4.15	24.3	0.4	2.9	1.2	22	<0.1	0.3	0.2	65	0.43		
09D10D60	Soil				0.4	22.8	3.0	41	<0.1	529.2	42.0	662	4.32	6.1	0.3	0.9	0.8	17	<0.1	0.2	<0.1	63	0.38		
REP 09D10D60	QC				0.3	23.2	3.2	42	<0.1	553.9	43.4	658	4.38	6.3	0.3	0.9	0.8	18	<0.1	0.2	<0.1	63	0.36		
09D10G80	Soil				0.5	37.4	5.5	48	0.1	364.6	33.3	645	3.90	20.0	0.5	10.9	1.8	19	<0.1	0.4	0.1	70	0.30		
REP 09D10G80	QC				0.5	37.2	5.4	45	0.1	372.0	33.8	670	4.01	19.7	0.5	3.7	1.7	20	<0.1	0.4	0.1	69	0.29		
09D10H400	Soil				0.6	66.2	9.1	65	0.1	222.2	26.8	764	3.81	7.6	0.6	4.4	1.1	20	0.2	0.3	<0.1	62	0.48		
REP 09D10H400	QC				0.5	65.3	9.1	63	0.1	217.0	26.5	763	3.75	7.4	0.6	4.0	1.0	19	0.2	0.3	<0.1	61	0.47		
09D10I75	Soil				0.3	34.6	5.4	46	<0.1	285.4	31.6	656	4.33	5.1	0.3	0.7	1.1	18	0.1	0.2	<0.1	82	0.40		
REP 09D10I75	QC				0.4	32.6	5.6	48	<0.1	294.5	30.5	681	4.39	5.3	0.3	1.1	1.2	18	0.2	0.2	<0.1	86	0.40		
09D10I600	Soil				0.5	23.5	6.5	41	<0.1	259.6	27.1	606	3.69	5.3	0.4	0.5	1.3	16	0.1	0.2	<0.1	65	0.41		
REP 09D10I600	QC				0.4	24.4	6.3	42	<0.1	252.3	28.0	618	3.67	5.0	0.4	1.1	1.2	16	<0.1	0.2	<0.1	64	0.41		
09D10J375	Soil				0.5	80.0	81.6	117	0.2	139.3	26.4	944	5.10	23.9	0.3	251.4	0.9	21	0.5	0.3	<0.1	80	0.47		
REP 09D10J375	QC				0.6	82.1	82.9	116	0.2	138.2	26.3	950	5.12	24.0	0.3	193.0	0.9	20	0.5	0.3	<0.1	79	0.45		
Reference Materials																									
STD DS7	Standard				20.9	96.8	75.0	380	0.8	58.2	9.3	618	2.49	53.7	5.1	71.8	4.9	68	6.5	4.7	3.5	86	0.96		
STD DS7	Standard				20.4	114.0	68.1	411	0.8	56.1	9.7	630	2.40	52.1	5.0	61.3	4.5	72	6.5	5.8	4.8	82	0.94		
STD DS7	Standard				21.7	120.5	66.0	433	0.8	59.9	10.0	668	2.58	56.3	4.9	78.4	4.5	88	6.5	5.7	4.7	88	1.03		
STD DS7	Standard				19.3	104.1	70.5	377	0.8	53.9	9.0	608	2.36	48.3	4.9	68.5	4.5	74	6.0	5.7	4.4	78	0.96		
STD DS7 Expected					20.5	109	70.6	411	0.9	56	9.7	627	2.39	48.2	4.9	70	4.4	69	6.4	4.6	4.5	84	0.93		
BLK	Blank				<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01		
BLK	Blank				<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01		
BLK	Blank				<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01		
BLK	Blank				<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01		
Prep Wash																									
G1	Prep Blank				0.2	3.2	2.4	49	<0.1	4.2	4.7	558	2.02	<0.5	2.4	<0.5	3.5	57	<0.1	<0.1	<0.1	41	0.49		
G1	Prep Blank				<0.1	2.4	2.5	51	<0.1	4.0	5.0	591	2.22	<0.5	2.3	<0.5	4.1	62	<0.1	<0.1	<0.1	44	0.53		



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Project: **MARSH LAKE**

Report Date: **August 05, 2009**

Page: 1 of 1 Part 2

## QUALITY CONTROL REPORT

VAN09003159.1

Method		1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
Pulp Duplicates																		
09D10C0	Soil	0.031	5	260	4.49	111	0.099	7	1.54	0.040	0.09	0.1	<0.01	4.8	<0.1	<0.05	5	<0.5
REP 09D10C0	QC	0.033	6	263	4.64	119	0.108	6	1.59	0.034	0.09	0.2	<0.01	5.1	<0.1	<0.05	5	<0.5
09D10D60	Soil	0.028	4	300	5.98	100	0.113	8	1.55	0.027	0.06	0.1	<0.01	4.5	<0.1	<0.05	4	<0.5
REP 09D10D60	QC	0.030	4	299	6.20	101	0.108	10	1.60	0.023	0.05	<0.1	<0.01	4.2	<0.1	<0.05	4	0.6
09D10G80	Soil	0.020	5	203	4.20	122	0.110	6	1.71	0.036	0.12	0.2	<0.01	5.7	<0.1	<0.05	5	<0.5
REP 09D10G80	QC	0.019	5	206	4.25	128	0.110	7	1.76	0.035	0.10	0.2	<0.01	5.5	<0.1	<0.05	5	<0.5
09D10H400	Soil	0.051	7	162	2.67	121	0.070	4	1.69	0.015	0.06	0.1	<0.01	3.7	<0.1	<0.05	5	0.7
REP 09D10H400	QC	0.051	7	154	2.49	120	0.068	3	1.66	0.015	0.05	0.1	0.01	3.6	<0.1	<0.05	5	0.6
09D10I75	Soil	0.057	6	192	3.81	92	0.091	5	1.72	0.017	0.05	0.1	<0.01	4.6	<0.1	<0.05	6	<0.5
REP 09D10I75	QC	0.057	6	193	3.93	89	0.093	6	1.69	0.017	0.05	0.2	0.01	4.5	<0.1	<0.05	5	<0.5
09D10I600	Soil	0.046	6	185	3.54	99	0.074	6	1.51	0.016	0.05	0.1	<0.01	3.9	<0.1	<0.05	4	<0.5
REP 09D10I600	QC	0.043	6	189	3.44	97	0.077	5	1.52	0.016	0.05	0.2	<0.01	3.9	<0.1	<0.05	4	<0.5
09D10J375	Soil	0.082	5	95	2.34	71	0.062	3	2.21	0.011	0.07	0.1	<0.01	4.2	<0.1	<0.05	6	<0.5
REP 09D10J375	QC	0.082	5	91	2.33	72	0.056	3	2.19	0.011	0.07	0.2	<0.01	4.1	<0.1	<0.05	6	0.6
Reference Materials																		
STD DS7	Standard	0.079	14	205	1.06	406	0.105	44	1.02	0.101	0.48	3.8	0.23	2.6	4.4	0.19	5	3.3
STD DS7	Standard	0.075	13	201	1.00	385	0.126	42	0.96	0.093	0.45	3.6	0.19	2.5	4.2	0.19	5	3.6
STD DS7	Standard	0.085	14	219	1.11	436	0.144	46	1.14	0.118	0.50	3.8	0.19	3.3	4.2	0.13	5	3.8
STD DS7	Standard	0.076	13	208	1.04	383	0.112	39	1.01	0.103	0.46	3.6	0.18	2.4	4.1	0.18	5	4.1
STD DS7 Expected		0.08	12	179	1.05	370	0.124	39	0.959	0.089	0.44	3.4	0.2	2.5	4.2	0.19	5	3.5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
Prep Wash																		
G1	Prep Blank	0.085	7	54	0.61	275	0.140	<1	1.01	0.100	0.63	<0.1	<0.01	3.0	0.4	<0.05	5	<0.5
G1	Prep Blank	0.091	9	7	0.65	294	0.150	<1	1.11	0.119	0.66	<0.1	<0.01	4.4	0.4	<0.05	6	<0.5

## **APPENDIX C**

### **PROJECT PERSONNEL**

#### **CARTER RIDGE**

## **APPENDIX C**

### **PROJECT PERSONNEL**

<b>Personnel</b>	<b>Address</b>	<b>Task</b>
Scott Berdahl	Whitehorse, Yukon	Geophysics/Supervisor
Milada Pardovicova	Whitehorse Yukon	Soil Survey
Ron Berdahl	Whitehorse	Manager

## **APPENDIX D**

### **STATEMENT OF COSTS**

#### **CARTER RIDGE**

## APPENDIX D

### STATEMENT OF COSTS

**Dates of Field Work:**

**Crew:** Scott Berdahl, Milada Pardovicova

**Wages:**

Prep time (includes hiring, administration, program set up, etc. )		
	2 man days @ \$450/day	\$ 900.00
Field Days:	4 field days @ \$450/man day x 4 men	1,800.00
	4 field day @ \$350/man day x 2 men	1,400.00

<b>Analysis:</b> ACME 1DX pkg.	Soils @ \$18/sample w/shipping	3,083.22
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<b>Helicopter:</b> Heli Dynamics		2,051.28
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<b>Vehicle:</b> 75 km/leg x 2 legs x 1 vehicles x \$0.59/km (gov't. rate)		88.50
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<b>Per Diem:</b> 2 men x 4 days @ \$50/man/day		400.00
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<b>Rental</b> of sat phone, 2 GPSs, consumables, flags, notebooks, Workers' Compensation, staking, 2 Gem System Magnetometers, gen set.		660.00
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<b>Report Preparation</b>		2,500.00
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<b>TOTAL:</b>		<u><u>\$12,883.00</u></u>
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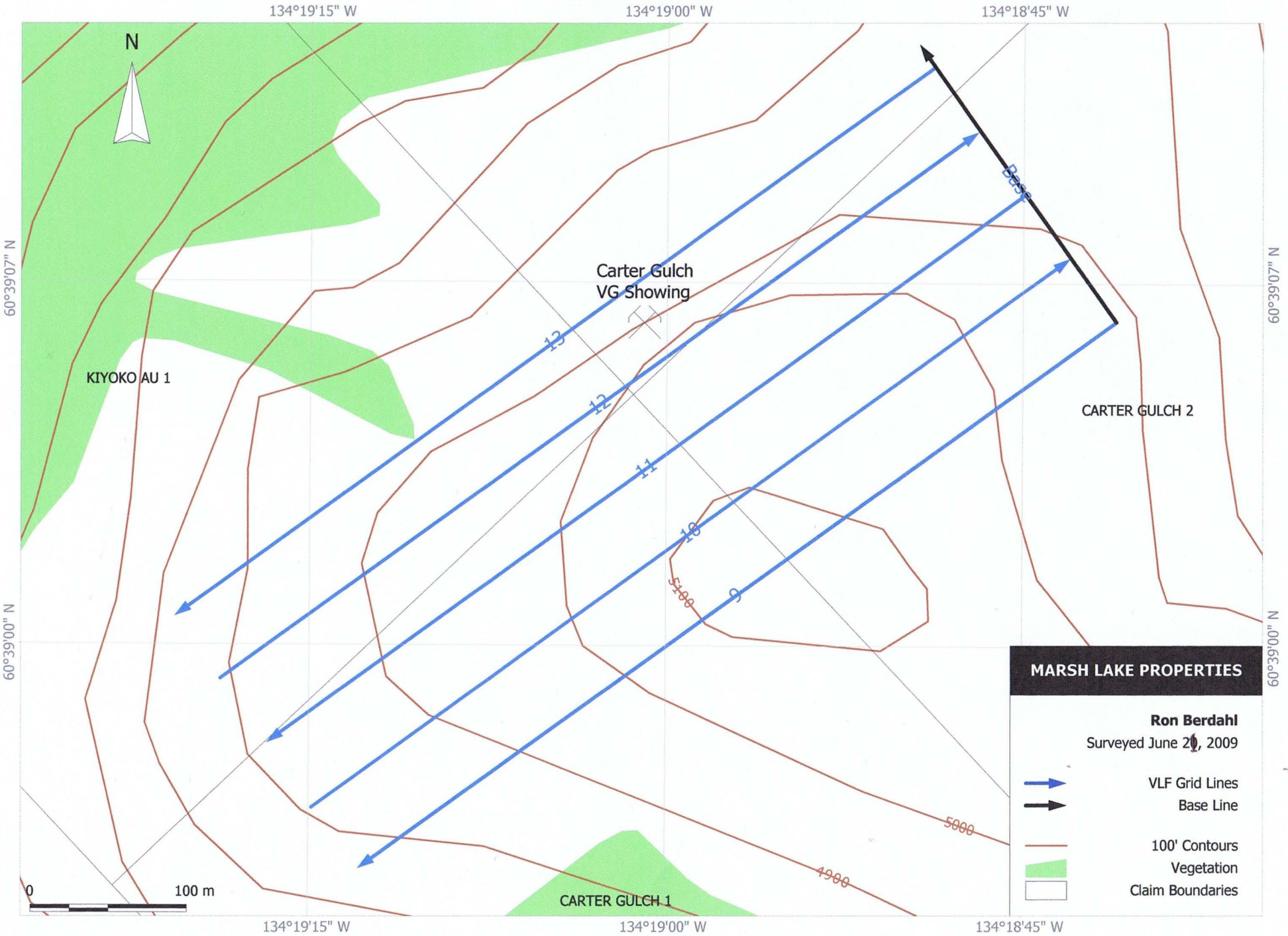


## **APPENDIX E**

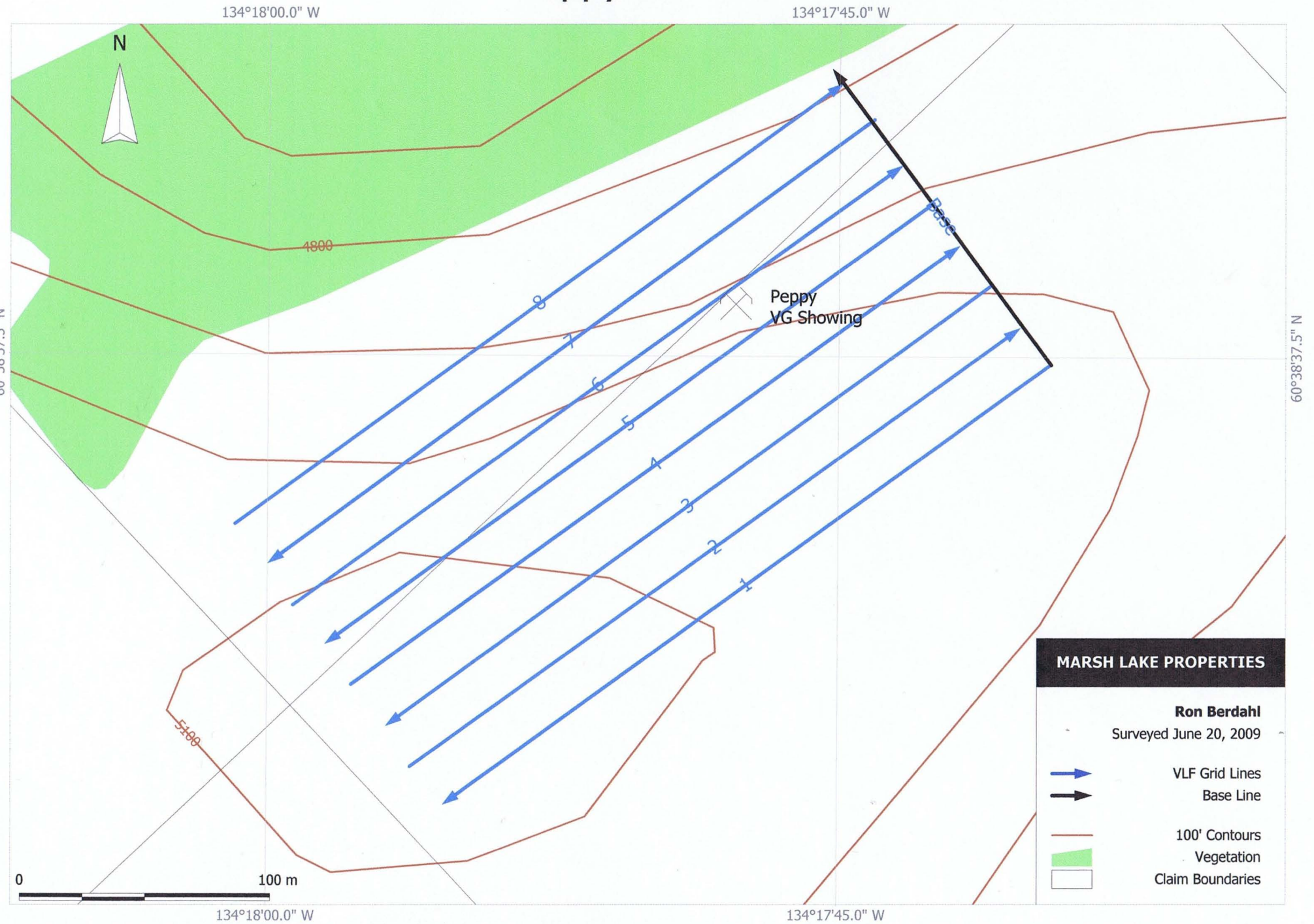
### **SAMPLE LOCATION MAP**

#### **CARTER RIDGE**

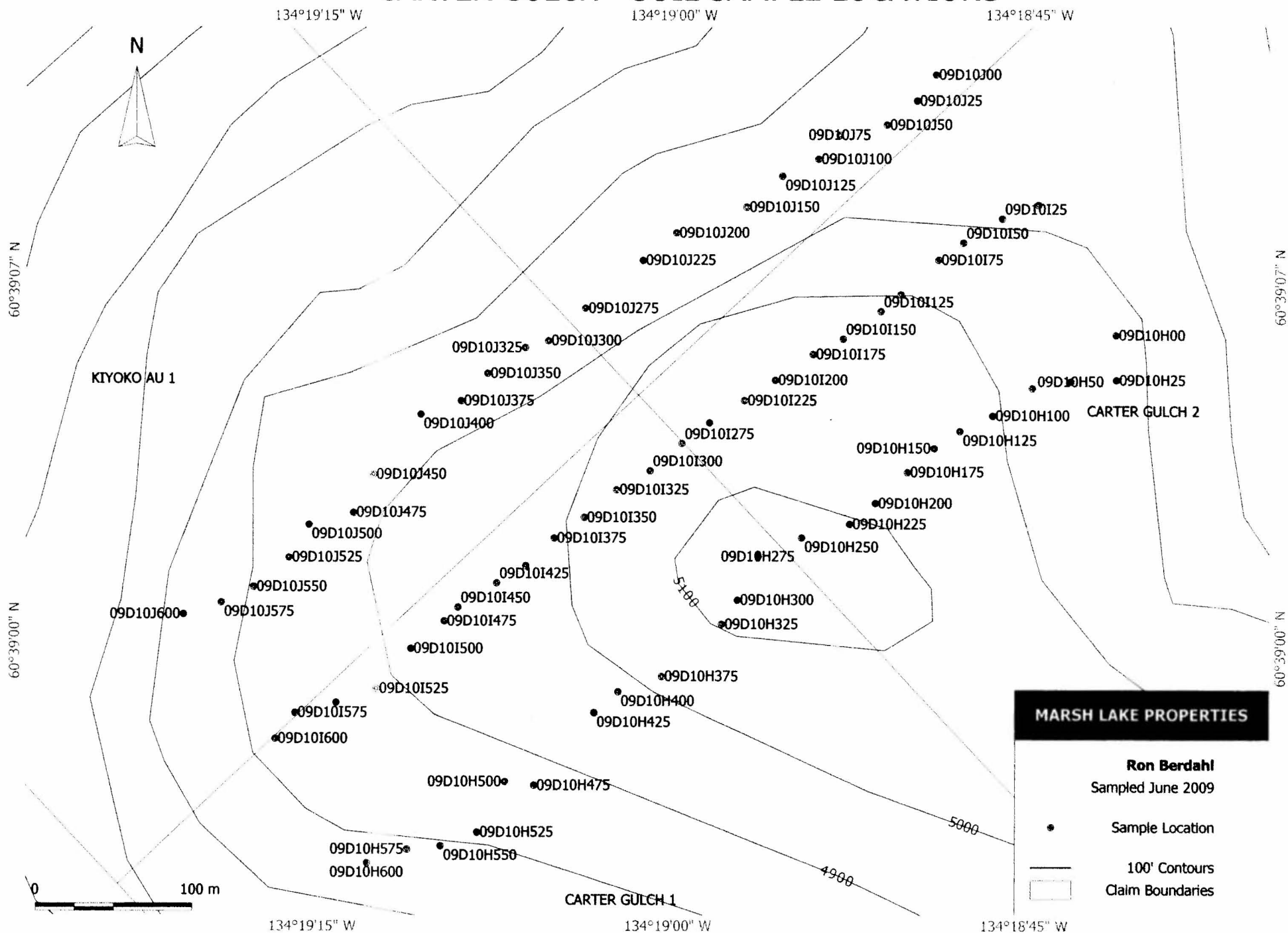
# Carter Gulch VLF Lines



# Peppy VLF Grid



# CARTER GULCH - SOIL SAMPLE LOCATIONS





# PEPPY - SOIL SAMPLE LOCATIONS

134°18'00.0" W

134°17'45.0" W

N



4800

●09D10A120

●09D10A100

●09D10A80

●09D10A60

●09D10A40

●09D10B20

●09D10B60

●09D10B80

●09D10B100

●09D10B120

●09D10B140

Peppy  
VG Showing

●09D10C80

●09D10C60

●09D10C40

●09D10C20

●09D10C00

●09D10C140 ●09D10A00

●09D10D100

●09D10C60

●09D10D80

●09D10D60

●09D10D40

●09D10D20

●09D10D00

●09D10E00

●09D10E20

●09D10E40

●09D10E60

●09D10E80

●09D10E100

●09D10E120

●09D10E140

●09D10F140

●09D10F100

●09D10F80

●09D10F60

●09D10F40

●09D10F20

●09D10F00

●09D10G80

●09D10G100

●09D10G120

●09D10G140

●09D10G00

●09D10G40

●09D10G60

5100

60°38'37.5" N

MARSH LAKE PROPERTIES

**Ron Berdahl**  
Sampled June 2009

● Sample Location

— 100' Contours  
□ Claim Boundaries

100 m

134°18'00.0" W

134°17'45.0" W

## **APPENDIX F**

### **STATEMENT OF QUALIFICATIONS**

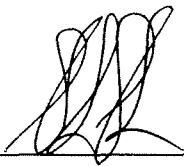
#### **CARTER RIDGE**

## STATEMENT OF QUALIFICATIONS

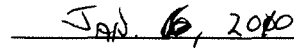
I, Ron Berdahl, declare I am an independent prospector who has worked on the Carter Ridge area for the past decade.

I have taken several courses related to prospecting and make the bulk of my living directly from prospecting.

The data contained herein is true and correct to the best of my knowledge.



Ron S. Berdahl



Date