Geological Survey Branch
Assessment Report Indexing System

[ARIS11A]

ARIS Summary Report

Regional Geologist, Prince George				**Date Approved:**	2005.04.05	**Off Confidential:**	2005.11.12		
ASSESSMENT REPORT: 27575				**Mining Division(s):**	Cariboo				
Property Name:	Captain								
Location:	**NAD 27**	**Latitude:**	54 57 00	**Longitude:**	123 50 00	**UTM:**	10	6089330	446625
	NAD 83	**Latitude:**	54 57 00	**Longitude:**	123 50 06	**UTM:**	10	6089547	446521
	NTS:	093J03W							
	BCGS:	093J091							

Camp:

Claim(s): Captain 3-9

Operator(s): Richards, Gordon G., Bowen, Brian K. (Barney)
Author(s): Richards, Gordon G.

Report Year: 2004

No. of Pages: 15 Pages

Commodities Searched For: Copper, Gold, Silver, Lead

General Work Categories: GEOC

Work Done: Geochemical
SOIL Soil (34 sample(s);MMI)
Elements Analyzed For : Gold, Silver, Nickel, Cobalt, Palladium

Keywords: Triassic, Takla Group, Alkalic porphyry, Massive sulphides

Statement Nos.: 3220034

MINFILE Nos.: 093J 024

Related Reports: 12393, 14449, 15996, 16597, 17873, 19220, 19853, 21430, 24751

Assessment Report
covering
MMI Geochemical Survey
on the
CAPTAIN CLAIMS

RECEIVED
DEC 20 2004
Gold Commissioner's Office
VANCOUVER, B.C.

Work performed on the
CAPTAIN 3 & 9
Tenure No's 406776 & 406816

NTS MAP 093J/13W
UTM (NAD 27 Zone 10) 447,000 east & 6,090,000 north
Latitude 54 57'N, Longitude 123 50'W

Owner – Gordon G Richards
Operator – G. G. Richards & B.K. Bowen
6410 Holly Park Drive
Delta, B.C. V4K 4W6

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
27,575

by

Gordon G Richards, PEng.
6410 Holly Park Drive
Delta, B.C. V4K 4W6

dated

December 6, 2004

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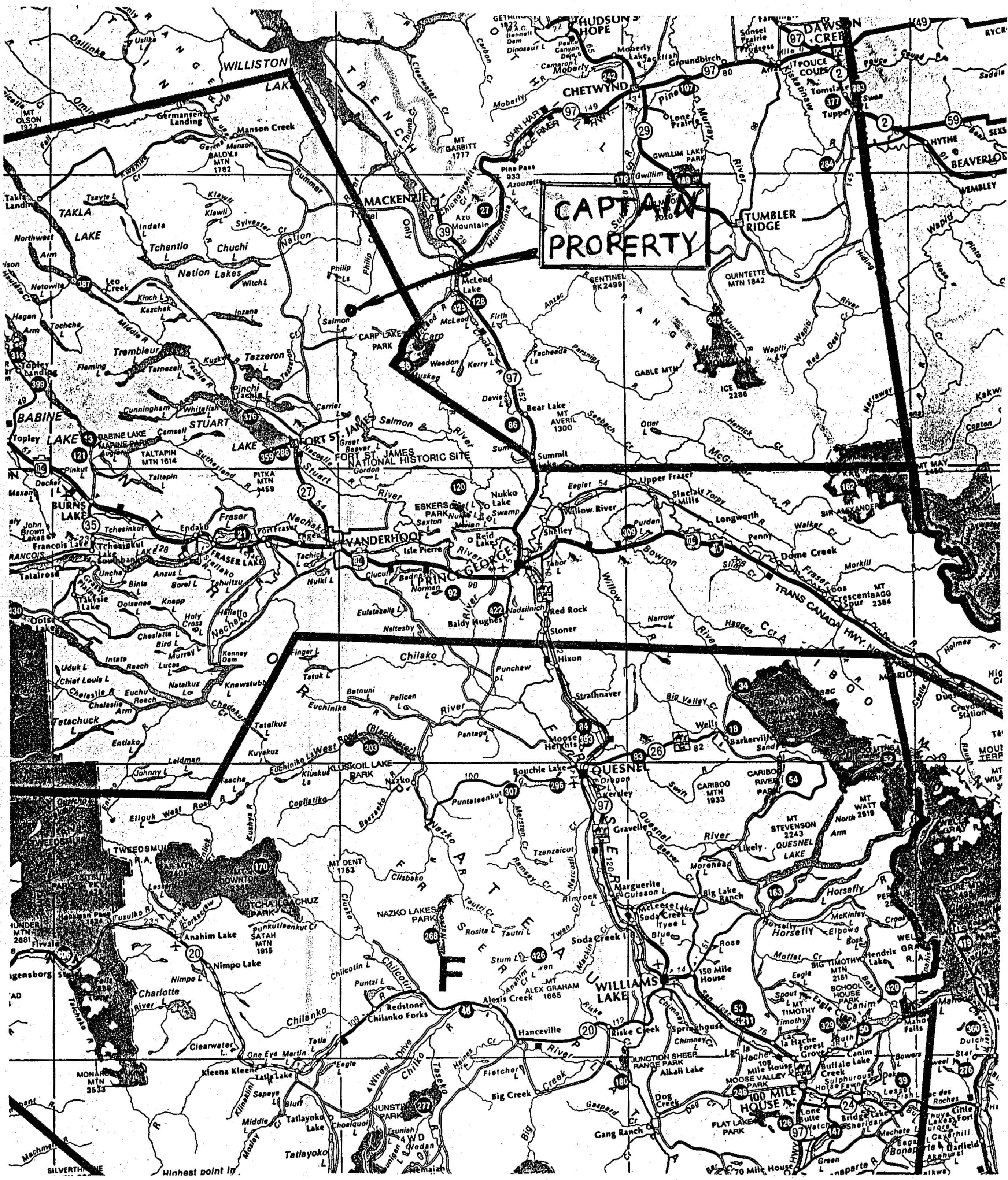


Figure 1. Location Map

Figure 2. Captain Claim Map

Mineral Titles Layers

☐ ··· ☐ **Mineral titles outline (<1M)**
☐ All Others

☐ ··· ☐ **Mineral titles Claim Names (<100K)**
☐ All Others

Topographic Layers

— ··· — **Roads 1:20K (<100K)**

— **Contours east 1:20K (<100K)**

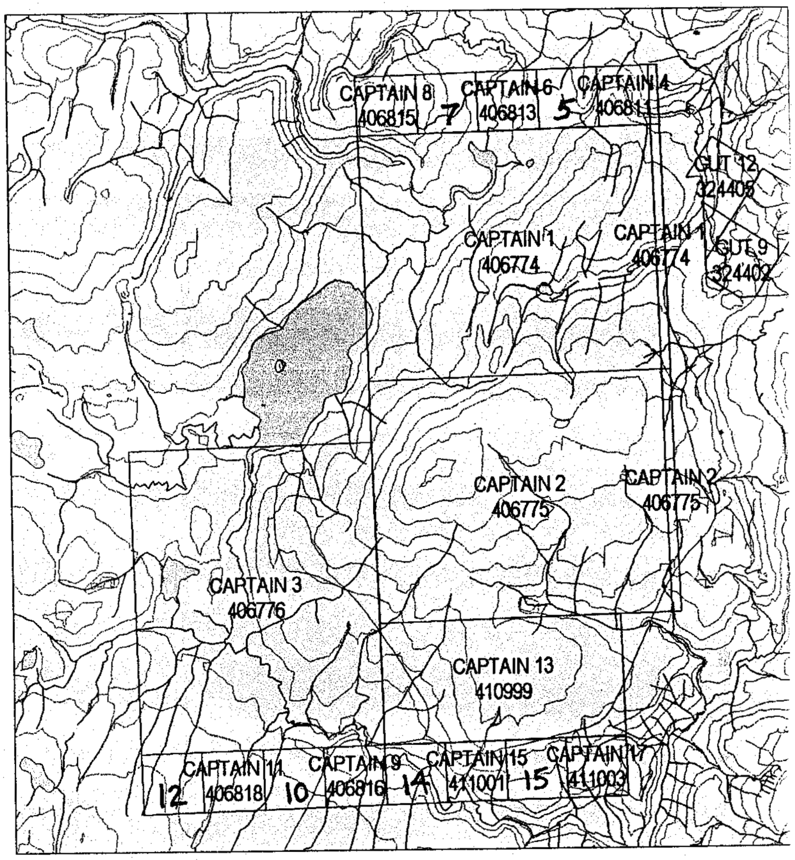
▨ **Lakes 1:50K (<300K)**

— **Rivers 1:20K (<100K)**

— **Border line 1:250K (<2M)**

BC Border Layers

▨ **BC Border 1:50K (<200K)**



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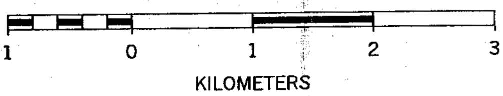


INTRODUCTION

Location and Access

The property is located in central British Columbia, 140 km northwest of Prince George and 60 km southwest of Mackenzie on NTS map sheet 093J/13W at 54 57' north latitude and 123 50'west longitude. Refer to Figure 1.

Access is by 1 ½ hour drive by truck over good two-wheel drive gravel roads from either Mackenzie or Fort St James. A logging camp operated by Canfor and where food and accommodation are available is a 35-minute drive from the property. Spur roads lead into the property, portions of which have been clear-cut logged.

Topography and Vegetation

Topography is gentle with some low rolling hills. Local relief ranges from about 900 to 1100 m. The property lies in the headwaters area of Salmon River which drains Windy Lake adjoining the property along the northwest claim boundaries.

Hills are heavily forested with spruce fir and pine, which have been logged in selective areas. Additional logging will probably take place in the future. Much tag alder occurs in areas of up to several hectares.

Claims

The property is made up of seventeen claims totaling 81 units lying within the Cariboo Mining Division as listed below. Gordon G Richards is the recorded owner of the claims who is holding title on behalf of himself and his prospecting partner, Mr. B.K. Bowen in equal amounts. Recent recording of a common anniversary date and approval of this report for assessment work credits will bring the expiry dates up to the dates indicated in Table 1. Refer to Figure 2 for claim map.

Table 1. Mineral Claims

Claim Name	Tenure No.	Units	Expiry Date
Captain 1	406774	20	November 11, 2007
Captain 2	406775	20	"
Captain 3	406776	20	"
Captain 4	406811	1	"
Captain 5	406812	1	"
Captain 6	406813	1	"

Captain 7	406814	1	“
Captain 8	406815	1	“
Captain 9	406816	1	“
Captain 10	406817	1	“
Captain 11	406818	1	“
Captain 12	406819	1	“
Captain 13	410999	8	“
Captain 14	411000	1	“
Captain 15	411001	1	“
Captain 16	411002	1	“
Captain 17	411003	1	“

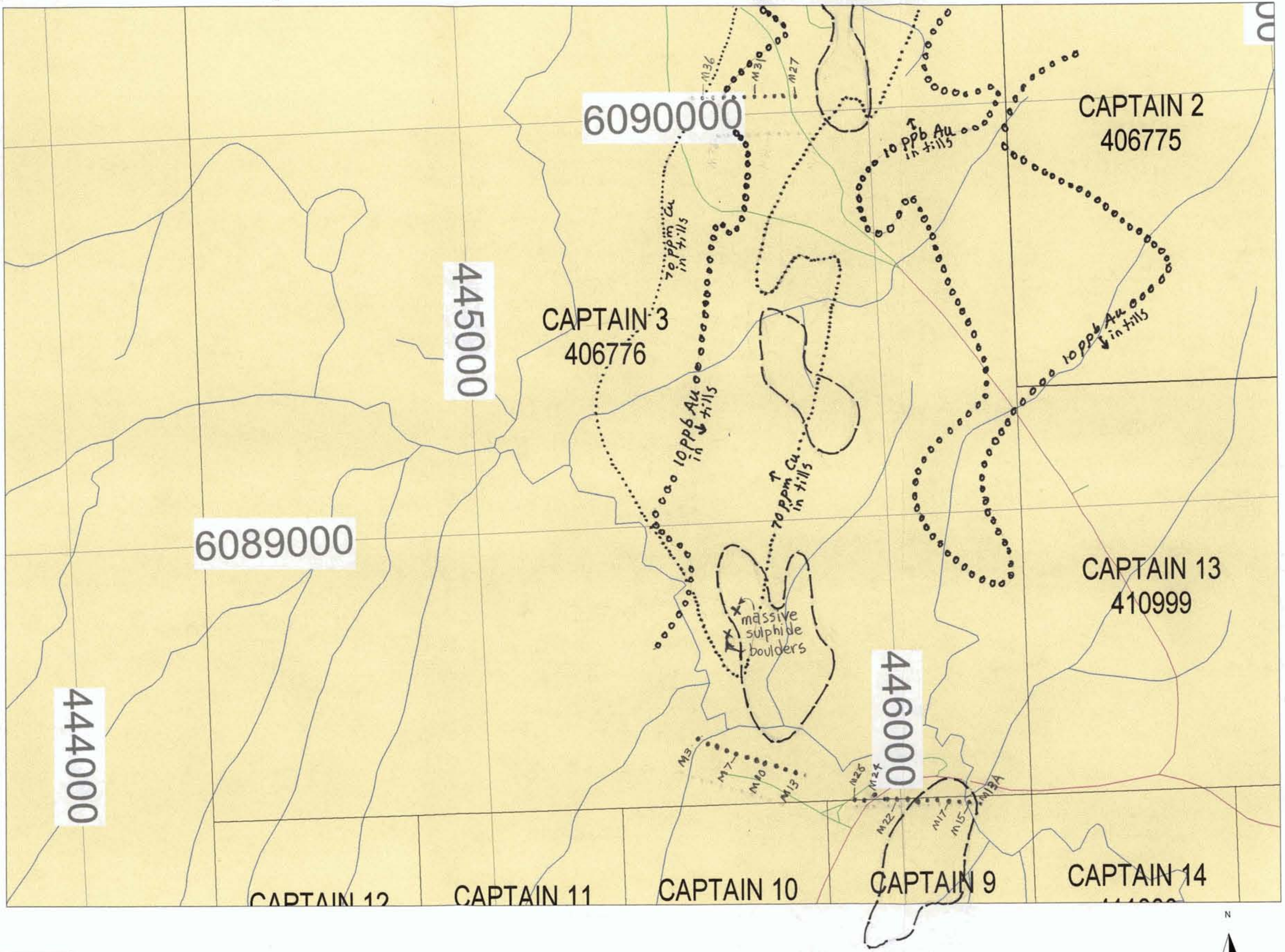
History and Geology

The property was discovered in the mid 1980’s by Mr Haslinger of Fort St James while prospecting in the area. The initial discovery was Cu mineralized float and outcrop along or near Salmon River. Placer Dome and Noranda worked on separate areas of the property in the late 1980’s and early 1990’s, spending approximately $1,000,000 on targeted areas. Their work included blanket till geochemical, induced polarization, VLF-EM and magnetic surveys followed by limited diamond and percussion drilling programs. This drilling intersected widespread anomalous copper-gold mineralization, including 30 m grading 0.2% Cu and 232 ppb Au in DDH 89-9. Mineralized holes are in Triassic-Jurassic Takla Group volcanics of Quesnellia Terrain, the host of numerous alkalic porhyries in B.C. such as Copper Mountain, Mount Polley and Mount Milligan. The later lies about 30km northwest of the Captain claims. Outcrops of one or more intrusions occur along the Salmon River but their composition is not known. Outcrops are rare on the property. A veneer of till transported from the south in a direction of 010 degrees covers most of the property. Glaciofluvial outwash is widespread along the floodplain of Salmon River and in other areas throughout the property.

Bowen and Richards, working in the area over the past 15 years, recognized the large untested potential described above and acquired the ground soon after the claims lapsed.

Large areas underlain by anomalous IP chargeability remain to be tested. Of particular interest is a large hole in information northeast of Windy Lake that is fringed by geochemically anomalous gold and copper in tills on three sides and by an IP chargeability anomaly on the east and south sides. Assessment reports refer to massive sulphide float south of Windy

Figure 3. Sample Location and Mag Highs



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☐ ··· ☐ **Mineral titles outline (<1M)**
☐ All Others

☐ ··· ☐ **Mineral titles Claim Names (<100K)**
☐ All Others

Topographic Layers

Roads 1:20K (<100K)
Lakes 1:20K (<100K)
Rivers 1:20K (<100K)
Border line 1:250K (<2M)

Grid Layers

Grid 1:250K maps - outline
UTM Grid Lines (<1M)
UTM Grid Labels (<100K)

BC Border Layers

🟨 **BC Border 1:50K (<200K)**

mag high outline taken from AR 24,751

MMI soil sample locations
M10 sample number

SCALE 1 : 10,000

200 0 200 400 600
METERS

http://webmap.em.gov.bc.ca/mapplace/maps/minpot/dep_find.MWF

December 5, 2004 7:41 PM

Figure 4.

Response Ratios (stacked) for Au, Ag, Pd
based on MMI soil geochemistry.
3 soil lines with
25m sample interval.

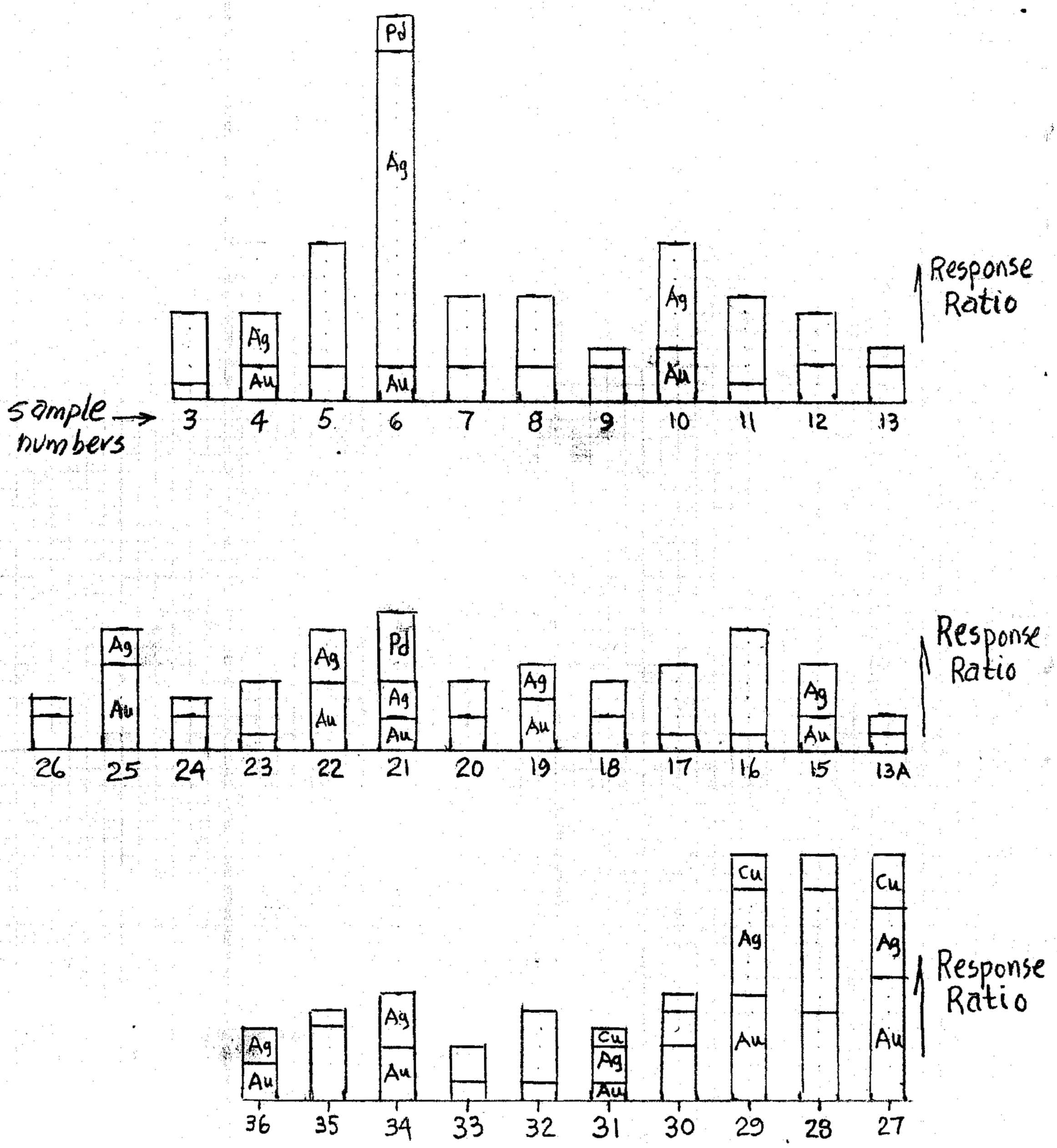

Figure 4. Response Ratio Histograms

Lake, as indicated on Figure 3, grading up to 1% Cu and 25 g/t Au, with anomalous Ag and Pd values providing a secondary target on the property.

Mr Bower located the massive sulphide boulders in June 2004 as indicated on Figure 3. The boulders are made of 90% or more pyrite with visible chalcopyrite and are noticeably magnetic. A linear array of magnetic high anomalies was outlined in previous surveys and apparently used to guide a drilling program in 1996 to explore for the source of the massive sulphide boulders. These holes were drilled as angle holes toward the east. Regional fabric as identified on GSC maps indicate a northerly trend with a steep (70 ±) dip. Future drill holes targeting the source of massive sulphide boulders should be drilled toward the west. A geochemical survey of tills by Placer Dome outlines anomalous Cu (>70 ppm) and Au (>10 ppb) roughly coincident with the linear array of magnetic anomalies as well as being much more widespread elsewhere across the property.

CURRENT WORK

Target

Lack of outcrop and till cover make prospecting difficult. The 2004 work program was done to evaluate the efficacy of Mobile Metal Ion (MMI) geochemistry in locating the source of the massive sulphide boulders described above. Since the boulders were known to be magnetic and transport direction by ice were known, three lines were attempted to be positioned up-ice from the location of the massive sulphide boulders and across known magnetic anomalies. Refer to Figure 3 for sample locations magnetic anomalies and Cu and Au till anomalous patterns.

Sampling Method and Collection

MMI analyses is used to "look through" deep overburden including such problematic materials as clay and silt layers and into bedrock over unspecified depths that is determined by extent of fracturing and presence of water. Transported anomalies are largely "ignored" by the method.

MMI Analysis uses a weak partial extraction scheme to improve the conventional geochemical response over buried ore deposits. The process measures the mobile metal ions from mineralization, which have moved toward the surface and are loosely attached to surface soil particles. Its effectiveness has been documented in over 1000 case histories on six continents and includes numerous commercial successes. The anomalies are sharply bounded and in most cases directly overlie and define the extent of the surface projection of buried primary mineralized zones. The MMI process is a proprietary method developed by Wamtech of Australia. SGS Minerals Services in Toronto provides analyses in Canada.

Lines were run by hip chain and compass with several GPS stations recorded along lines for control. Sample interval was 25 m. Watch and ring were removed prior to sampling. Pits were dug by shovel to a depth of 30 cm in order to expose the soil profile for sampling. The profile was scraped clean with a plastic scoop to remove any metal effect from the digging shovel. A continuous strip of soil was collected by plastic scoop from 15 to 20 cm depth below the top of true soil regardless of soil type, placed in a pre-numbered ziplock baggie and placed in an 11 inch by 20 inch 2 mil plastic bag. An appropriately numbered survey ribbon was hung on nearby vegetation. Samples were kept cool and shipped to SGS Minerals Services in Toronto for analyses.

In their lab, samples are not dried or prepared in any way. The MMI process includes analyses of a 50-g sample and an innovative interpretation step. Multi-component extractants are used and metals are determined by ICP/MS in the part per billion range. Several element packages are available for selecting. Method code MMI-A, the base metal suite, includes Cu, Pb, Zn, and Cd and was used on all samples. Method code MMI-B, the gold exploration suite, includes Co, Au, Ag, Pd, and Ni and was used on five samples that were selected based on results of MMI-A.

Response ratios are calculated for each element and values stacked in a histogram constructed along the soil sample line. The average value for results of the lower quartile is calculated for each element. One-half of background is used for those samples with only background value. Then each result is divided by the lower quartile average to obtain its response ratio, rounding to the nearest whole number.

Results

Results are provided in an Appendix. Response ratio interpretation is provided in Figure 4.

Line sampled by M3 to M13 was positioned 300-m up-ice of the known massive sulphide boulders just beyond the limit of the magnetic anomaly in the hopes of identifying the source of the boulders. A single high Ag-Pd anomaly occurs at M6 with a somewhat elevated Ag value in the adjacent M5. These samples were collected along the top of the glaciofluvial bench south of Salmon River. Additional samples will have to be collected to determine if this anomaly has merit.

Line sampled by M13A to M26 was positioned to cross the north end of the mag anomaly shown at the lowest elevation feasible. No anomalous pattern was found.

Line sampled by M27 to M36 was positioned to cross a magnetic anomaly in the north end of the magnetic linear array. However, a mistake in plotting the position of the magnetic anomaly resulted in placing the sample line too far to the west. The east end of the line was close to the anomaly and may explain the elevated values of the easterly three samples. Au, Ag and Cu values of these last three samples are two to three times the value for other samples on this line. Continuation of this line for another 150 to 200 m east may cross the magnetic anomaly shown. A small mag survey in this area would be useful in accurately locating the mag anomaly and relating it to MMI results as it occurs in slash and all previous survey lines and markers have been destroyed.

Only five samples were run with method MMI-A and only Cu of this group of elements appears to have usefulness for the property whereas Au, Ag and perhaps Pd appear to have usefulness from method MMI-B. Refer to results in Appendix.

CONCLUSIONS AND RECOMMENDATIONS

Massive sulphide boulders with anomalous Au, Ag, Pd and Cu were located in the field where they were indicated to be on previous assessment reports. The boulders were magnetic. A linear array of magnetic highs 1 ½ km long is roughly coincident with anomalous patterns of Cu and Au in tills previously collected on ground surveys by Placer Dome. Cu grades of the boulders are reported in the range of one percent and Au grades 25 ppb with variable but interesting Ag and Pd values providing a good exploration target.

Mobile metal ion geochemistry provided limited but encouraging results. In particular the most northerly line sampled by M27 to M36 had elevated values on its east end, which was located an estimated 50-m west of a mag anomaly. Also, the line sampled by M3 to M13 directly up-ice from the massive sulphide boulders had a single sample highly anomalous for Ag and Pd with minor Ag support from an adjacent sample.

The writer recommends locating mag anomalies described by Placer Dome in their assessment reports with a few mag lines followed by the collection of additional soil samples for analyses with method MMI-B (Au-Co-Ni-Pd-Ag). This should be done in three areas; east of M27, across the mag anomaly that includes the massive sulphide boulder occurrence and across the mag anomaly shown between the above two mag anomalies.

If the above program indicates that MMI analyses is an effective tool by providing discrete anomalies, then an extensive grid of MMI soil sampling should be undertaken. Any subsequent drilling should be angled towards the west in order to cross the known easterly dipping structural fabric that could reasonably be expected to contain the massive sulphide mineralization.

Respectfully submitted

Gordon G Richards PEng

STATEMENT OF COSTS

Mob – Demob	time, truck, food and accommodation	$800.00
Time – G Richards	June 1 & 2 - 2 days @ $600/day	1200.00
SGS Mineral Services		959.79
Motel	3 days @ $50/day	150.00
Truck rental	2 days @ $80/day	160.00
Expenses	string, flagging, etc., destroyed tire	200.00
Report	typing, drawing, photocopying, collating	1000.00
	Total	**$ 4469.79**

STATEMENT OF QUALIFICATIONS

I, Gordon G Richards, of Delta, British Columbia, do hereby certify that:

1. I am an independent consulting geologist and a Professional Engineer of the Province of British Columbia, residing at 6410 Holly Park Drive, Delta, B.C., V4K 4W6.

2. I am a graduate of The University of British Columbia, with the degrees of Bachelor of Applied Science in Geology (1968) and Master of Applied Science in Geology (1974).

3. I have practiced my profession continuously since 1968.

4. This report is based upon personal examination of all data as referenced and upon field data collected personally on the CAPTAIN 3 and CAPTAIN 9 claims on June 1 and 2, 2004.

APPENDIX

MMI GEOCHEMICAL RESULTS

Response Ratio Au.

Response ratio Ni

response ratio Ag

Sample Ident		Au		Co		Ni	Pd		Ag	
Scheme Code		MMI-B5		MMI-B5		MMI-B5	MMI-B5		MMI-B5	
Analysis Unit		ppb		ppb		ppb	ppb		ppb	
Detection Limit	2	0.1	.83	1		3	0.1		0.1	.02
M 3	8	0.14	1.17	14	2	31	<0.1		18.7	4.40
M 4		0.22	1.83	2	4	61	<0.1		11.1	2.61
M 5		0.23	1.91	8	1	12	<0.1		31.4	7.39
M 6		0.29	2.41	2	1	17	0.11	2	78.2	18.40
M 7		0.22	1.83	10	11	147	<0.1		17.7	4.16
M 8		0.29	2.41	2	1	16	<0.1		16.3	3.83
M 9		0.29	2.41	3	1	11	<0.1	7	6.01	1.41
M 10		0.34	2.83	2	1	9	<0.1		23.9	5.62
M 11	4	0.13	1.08	8	1	19	<0.1		21.8	5.13
M 12		0.22	1.83	1	1	11	<0.1		13.5	3.18
M 13	1	<0.1 .05	1.71	7	14	191	<0.1	4	3.94	.93
M 15		0.22	1.83	2	16	223	<0.1		13	3.06
M 16	5	0.13	1.08	3	2	28	<0.1		24.5	5.76
M 17		0.15	1.25	2	1	14	<0.1		16.1	3.79
M 18		0.23	1.91	6	1	19	<0.1		8.76	2.06
M 19		0.37	3.08	3	20	271	<0.1		7.92	1.86
M 20		0.25	2.08	5	6	82	<0.1	8	6.92	1.63
M 21		0.25	2.08	33	13	177	<0.1	4	8.99	2.12
M 22		0.43	3.58	2	41	556	0.18		11.3	2.65
M 23	6	0.13	1.08	5	6	84	<0.1		11.1	2.61
M 24		0.18	1.5	6	5	70	<0.1	2	2.04	.48
M 25		0.65	5.42	2	25	338	<0.1		7.4	1.74
M 26		0.2	1.67	4	5	68	<0.1	3	2.07	.49
M 27		0.86	7.17	2	5	72	<0.1		16.6	3.91
M 28		0.54	4.50	1	4	50	<0.1		28.8	6.78
M 29		0.67	5.58	9	9	121	<0.1		27.5	6.47
M 30		0.31	2.58	7	3	41	<0.1	9	6.94	1.63
M 31	7	0.13	1.08	4	2	33	<0.1		10.6	2.49
M 32		0.17	1.42	6	5	69	<0.1		17.5	4.11
M 33	9	0.14	1.17	7	3	44	<0.1		8.95	2.11
M 34		0.4	3.33	4	9	116	<0.1		11.2	2.63
M 35		0.5	4.17	9	2	30	<0.1	5	4.58	1.08
M 36		0.25	2.08	12	2	31	<0.1		7.41	1.74
M 13A	3	0.12	1.00	5	3	34	<0.1	6	5.64	1.33
DUP-M 3		0.14		12		26	<0.1		15.9	
DUP-M 16		0.1		3		22	<0.1		24.7	
DUP-M 28		0.51		1		50	<0.1		27.3	

Sample Ident	Cu		Zn	Cd	Pb
Scheme Code	MMI-A5		MMI-A5	MMI-A5	MMI-A5
Analysis Unit	ppb		ppb	ppb	ppb
Detection Limit	5		5	10	20
M 27	339	3	336	38	<20
M 28	197	2	341	80	<20
M 29	256	2	101	78	<20
M 30	155	1	319	67	<20
M 31	131	1	343	45	<20
DUP-M 27	346		340	39	<20