GEOPHYSICAL REPORT

on the

CONSOLATION CREEK PLACER PROPERTY

Located 45 km Northeast of Atlin, B.C.
Map Sheet 104N084
Centred on 133°19'W, 59°48'N
UTM Co-ordinates: NAD 83, 594772E, 6633466N
Atlin Mining Division
British Columbia

Prepared for Claim Owners
Lee Long and David Javorsky

Work performed by
APEX GEOSCIENCE LTD.
Edmonton, Alberta

Submitted by

DAVID JAVORSKY
PROSPECTOR-OWNER
818 - 470 Granville Street
Vancouver, B.C.
V6C 1V5

November 15, 2010

TABLE OF CONTENTS

SUMMARY

Mr. Lee Long and Associates commissioned Apex Geoscience Ltd. of Edmonton, Alberta to conduct a Ground Geophysical Survey of the Consolation Creek Placer Property. The Apex crew worked on the property from October 15th through October 20th, 2009. During this time they performed both ground Total Field Magnetics and a Ground Penetrating Radar Surveys.

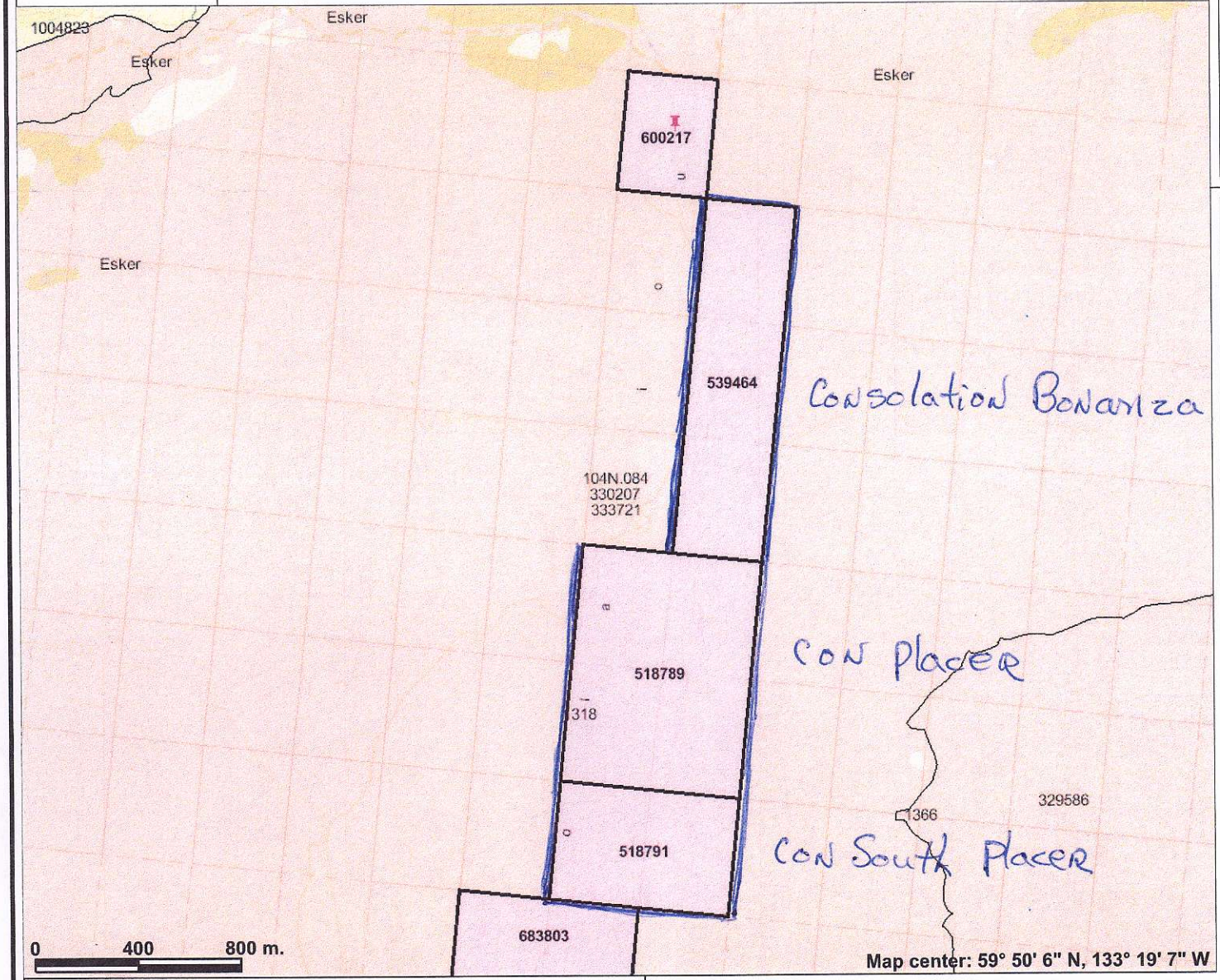
The total cost of this program was $17,097.25. The Geophysical Report of Apex Geoscience Ltd. is attached as Appendix A. It appears from the magnetics that an old buried stream channel lies below the current Consolation Creek stream bed.

PROPERTY

The Consolation Creek Placer Property is located on the north side of the Surprise Lake Batholith. Tenures #518789 - Con Placer, #518791 - Con South Placer, and #539464 - Consolation Bonanza, consist of nine placer units covering 146.45 hectares.

The claims are accessible by travelling north of Atlin, turning easterly on the 4th of July Creek Road, and then up the Consolation Creek Road to the south. It is best to use a 4-wheel drive vehicle since this road is not usually maintained.

Consolation Creek Placer



Legend

MINFILE Status
- Producer
- Past Producer
- Developed Prospect
- All others

Indian Reserves
National Parks
Conservancy Areas
Parks

Placer Tenure (current)
- Placer Claim
- Placer Lease

Placer Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others

MTO Grid (MTO)
- Blocked by MEM
- Other

Integrated Cadastral Fabric
Survey Parcels
BCGS Grid

Contours (1:250K)
- Contour - Index
- Contour - Intermediate
- Areaof Exclusion
- Areaof Indefinite Contours

N

Scale: 1:23,315

MapPlace.ca

Mineral Titles Online Report

Click on Tenure Numbers for more information.

Click column headings to sort results.

Download to Excel

Tenure Number	Type	Claim Name	Good Until	Area (ha)
518789	Placer	CON PLACER	20160806	65.097
518791	Placer	CON SOUTH PLACER	20160806	32.555
539464	Placer	CONSOLATION BONANZA	20160806	48.8064

Total Area: 146.4584 ha

LIBC Metadata

Mineral Title Online
BC Geological Survey
British Columbia Ministry of Energy, Mines and Petroleum Resources
Last updated in April 2007

HISTORY

Old workings on Consolidation Creek from the 1930 period of time indicate that previous operators had spent a lot of time and energy putting down shafts to find the old bedrock channel. Also, the B.C. Geological Survey's Regional Stream Sediment Survey shows a 600 ppb gold stream sediment sample taken close to the old workings. That was the highest gold sample from the Atlin Map Sheet.

In 2007, a trenching program by Jet Gold Corporation was unable to dig deeply enough to expose the bedrock channel with their small excavator.

Thus in 2009, Apex Geoscience Ltd. tried to locate the old bedrock channel using a Ground Penetrating Radar Survey and a Magnetic Survey. The Magnetic Survey appeared to work. The Apex Geophysical Survey is attached hereto as Appendix A.

Work was first recorded per Event #4784112. Then, after more information was obtained from the contraotor, a second amount of work was recorded per Event #4782722. See Appendix B.

MINFILE Record Summary
MINFILE No 104N 023

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 28-Nov-88 by Mike H. Gunning(MHG)

SUMMARY

Name	CONSOLATION CREEK	**NMI**	104N14 Au3
		Mining Division	Atlin
		BCGS Map	104N084
Status	Past Producer	**NTS Map**	104N14W
Latitude	59° 50' 53" N	**UTM**	08 (NAD 83)
Longitude	133° 19' 01" W	**Northing**	6635687
		Easting	594300
Commodities	Gold	**Deposit Types**	
Tectonic Belt	Intermontane	**Terrane**	Cache Creek

Capsule Geology

Consolation Creek flows north for about 20 kilometres into the west end of Gladys Lake north of Surprise Lake. The main workings are about 4 kilometres north of the east bend and about 37 kilo- metres northeast of Atlin.

The creek is located north of the northern edge of the Late Cretaceous, primarily granitic Surprise Lake Batholith. There are no outcrops in the creek itself but just west of the creek, there are exposures of cherts, argillites, and limestones of the Permian to Pennsylvanian Kedahda Formation of the Cache Creek Group.

The creek was prospected with preliminary evaluations from 1904 to 1910 and from 1913 to 1915. Some shafts were sunk and adits driven during 1932 and 1945 and in 1946, 469 metres of overburden drilling was done. Much of this development was incomplete and did not reach bedrock.

The upper levels of the creek are in a flat, glacial-planted, drift-filled valley and as suggested in Bulletin 1, 1933, may contain a large volume of low grade material concentrated by inter-or-post- glacial events retrievable by dredging. Around 995 grams of gold were recovered from the creek from 1936 to 1940.

Bulletin 28 records production from a period of 1936 to 1940 but it most likely is from 1931 to 1935.

Bibliography

EMPR BULL 1, (1933); 28
GSC SUM RPT XII, 1899, Pt. A, p. 60
GSC MEM 307
GSC P 74-47
EMPR AR 1904-57,96; 1905-78; 1906-55; 1907-52; 1908-49; 1909-52; 1910-54; 1913-70; 1914-78; 1915-62; 1917-79; 1927-110,115; 1928-122; 1932-73; 1945-124; 1946-195
EMPR ASS RPT 11495
EMPR MISC PUB (Stratigraphy of the Placers in Atlin, Placer Mining Camp, P.J. & W.M. Proudlock, 1976)
EMPR PF (Black, J.M., (1953): Atlin Placer Camp, Unpublished Report, 116 pages)
EMPR P 1984-2

EXPENSES

Apex Geoscience Ltd. charged $17,097.25 to complete the surveys. Mr. Lee Long performed work in expediting the survey to the amount of $3,241.29. D. Javorsky has $300.00 in preparing this Assessment Report.

The total cost attached to this project is $20,638.54. Only half of this amount was applied for Assessment Work Credit. Event #4784112 and 4782722 are attached hereto.

CONCLUSION

From the Magnetic Survey, it appears that a paleochannel does exist.

APEX Geoscience Ltd
Profit & Loss Detail
January 2009 through December 2009

	Type	Date	Number	Name	Source Name	Memo	Amount	Balance
Ordinary Income/Expense								
Income								
4040 Consulting/Overhead								
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Operator's overhead and management fee (5%)	$ 407.48	$ 407.48
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	APEX rental - magnetometer & GPR	$ 1,500.00	$ 1,907.48
	Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Operator's overhead and management fee (5%)	$ 2.84	$ 1,910.32
Total 4040 · Consulting/Overhead							$ 1,910.32	$ 1,910.32
4070 Geologists Fieldwork								
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Field - Scot Dumont (Sept 22-Oct 21/09)	$ 2,400.00	$ 2,400.00
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Work Performed Field - Brenden Mock (Sept 22-Oct 21/09)	$ 2,975.00	$ 5,375.00
Total 4070 · Geologists Fieldwork							$ 5,375.00	$ 5,375.00
4080 Geologists								
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - Brenden Mock (Sept 22-Oct 21/09)	$ 219.00	$ 219.00
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - Tara Gunson (Sept 22-Oct 21/09)	$ 339.00	$ 558.00
	Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - Jane Taylor Nov 22-Dec 21/09)	$ 6.00	$ 564.00
Total 4080 · Geologists							$ 564.00	$ 564.00
4090 Principals Directly Involved								
	Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - M.B.Dufresne (Octb 22-Dec 21/09)	$ 502.50	$ 502.50
	Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - M.B.Dufresne (Dec 22/09-Feb 21/10)	$ 352.50	$ 855.00
	Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Geological Services Performed Office - M.B.Dufresne (Feb 22-March 21/10)	$ 186.52	$ 1,041.52
Total 4090 · Principals Directly Involved							$ 1,041.52	$ 1,041.52

APEX Geoscience Ltd
Profit & Loss Detail
January 2009 through December 2009

Type	Date	Number	Name	Source Name	Memo	Amount	Balance
4200 · Third Party Reimbursable Income							
4201 Reimbursed 5001-accommodation							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brewery Bay Chalet: hotel, Brenden Mock & Scot Dumont, Atlin, Oct 15-19/09	$ 470.88	$ 470.88
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brewery Bay Chalet: hotel, Brenden Mock & Scot Dumont, Atlin, Oct 19-20/09	$ 117.72	$ 588.60
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Accent Inns: hotel, Scot Dumont, Vancouver, Oct 20-21/09	$ 97.90	$ 686.50
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: hotel, Vancouver, Oct 14-15/09	$ 97.90	$ 784.40
Total 4201 · Reimbursed 5001-accommodation						$ 784.40	$ 784.40
4208 Reimbursed 5015-other fld supp.							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: supplies, Oct 13-19/09	$ 106.92	$ 106.92
Total 4208 · Reimbursed 5015-other fld supp.						$ 106.92	$ 106.92
4210 Reimbursed 5017-food; camp/fld							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: food, Oct 14-20/09	$ 425.14	$ 425.14
Total 4210 · Reimbursed 5017-food; camp/fld						$ 425.14	$ 425.14
4211 Reimbursed 5011-fuel; camp/fld							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: fuel, Oct 17-20/09	$ 241.12	$ 241.12
Total 4211 · Reimbursed 5011-fuel; camp/fld						$ 241.12	$ 241.12
4218 Reimbursed 5080-airfare							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare, Brenden Mock, Edmonton/Whitehorse, Oct 14/09, inv 27684	$ 654.67	$ 654.67
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare, Scot Dumont, Kamloops/Whitehorse, Oct 14/09, inv 27685	$ 1,032.67	$ 1,687.34
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare change fee, Brenden Mock, Edmonton/Whitehorse, Oct 15/09, inv 27686	$ 435.66	$ 2,123.00
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare change fee, Scot Dumont, Kamloops/Whitehorse, Oct 15/09, inv 27687	$ 85.00	$ 2,208.00
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare, Brenden Mock, Whitehorse/Edmonton, Oct 20/09, inv 27727	$ 760.67	$ 2,968.67
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Globetrotter Travel: airfare, Scot Dumont, Whitehorse/Vancouver/Kamloops, Oct 20, 21/09, inv 27723	$ 971.33	$ 3,940.00
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: excess baggage, Oct 14-20/09	$ 800.00	$ 4,740.00
Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Greyhound Freight Nov 30/09 Waybill 11369666092	$ 56.39	$ 4,796.39
Total 4218 · Reimbursed 5080-airfare						$ 4,796.39	$ 4,796.39

APEX Geoscience Ltd
Profit & Loss Detail
January 2009 through December 2009

Type	Date	Number	Name	Source Name	Memo	Amount	Balance
4219 Reimbursed 5090-taxis							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: taxi, Oct 14-21/09	$ 165.81	$ 165.81
Total 4219 · Reimbursed 5090-taxis						$ 165.81	$ 165.81
4237 Reimbursed 5321-communications							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brewery Bay Chalet: phone & internet, Brenden Mock & Scot Dumont, Atlin, Oct 15-19/09	$ 130.15	$ 130.15
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brewery Bay Chalet: internet, Brenden Mock & Scot Dumont, Atlin, Oct 19-20/09	$ 5.00	$ 135.15
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: phone card, Oct 18/09	$ 5.00	$ 140.15
Invoice	03/31/2010	2010-197	1480553 Alberta Ltd	99151 - Consolation Creek	Allstream Long Distance	$ 0.49	$ 140.64
Total 4237 · Reimbursed 5321-communications						$ 140.64	$ 140.64
4254 Reimbursed 5131-auto rental							
Invoice	10/30/2009	2009-423	1480553 Alberta Ltd	99151 - Consolation Creek	Brenden Mock: truck rental, Oct 15-20/09	$ 1,545.99	$ 1,545.99
Total 4254 · Reimbursed 5131-auto rental						$ 1,545.99	$ 1,545.99
Total 4200 · Third Party Reimbursable Income						$ 8,206.41	$ 8,206.41
					TOTAL INCOME	**$ 17,097.25**	**$ 17,097.25**

L. R. Long Enterprises Ltd.

P.O. Box 170, Swan Hills, Alberta T0G 2C0
Phone: (780) 333-2766 Fax: (780) 333-8293

STATEMENT

G.S.T. R884742750

W.C.B. 349217/0

December 31, 2009

Expenses to be applied to Consolation Creek Claims

Lee R. Long

Date	Description	Hours	Rate	Total
01-Jan-09 to 31-Dec-09	Preparation and research to set up ground mag. Follow up data analysis, geologist meetings, etc.	40	50.00	2,000.00
23-Sep-09 to 24-Sep-09	Trip to Cereal, Alberta to meet with partner in Consolation Creek claims.	12	50.00	600.00
23-Sep-09 to 24-Sep-09	Itemized expenses for trip to Cereal, Alberta.	(see attached)		487.68

Invoice Sub-Total: $ 3,087.68

G.S.T.: $ 153.61

Invoice Total: $ 3,241.29

November 15, 2010
Dave Jaworsky has spent $300. in time and cost to prepair this Assessment Report and to print and Submit it.
David Jaworsky

L. R. LONG ENTERPRISES LTD.

Report Date: September 30, 2009 **Start Date: September 23, 2009** **End Date: September 24, 2009**

Trip to Cereal, Alberta to meet with partner in Consolation Creek claims.

ITEMIZED EXPENSES

Date	Vendor	Description		Sub-Total	Gratuity	GST	Total
23-Sep-09	Nam's Gastown	Travel	Fuel	92.54	-	4.63	97.17
23-Sep-09	Chef's Bar & Grill	Travel	Meals	34.98	3.27	1.75	40.00
23-Sep-09	Ricky's	Travel	Meals	25.86	4.85	1.29	32.00
23-Sep-09	Holiday Inn	Travel	Rooms	166.57	-	8.33	174.90
24-Sep-09	ABC Restaurant	Travel	Meals	25.28	3.46	1.26	30.00
24-Sep-09	Husky - Drumheller	Travel	Fuel	53.12	-	2.66	55.78
24-Sep-09	Chef's Bar & Grill	Travel	Meals	15.24	4.00	0.76	20.00
24-Sep-09	Husky - Acheson	Travel	Fuel	58.51	-	2.93	61.44
			Total	**$ 472.10**	**$ 15.58**	**$ 23.61**	**$ 511.29**

STATEMENT OF DAVID JAVORSKY

I, DAVID JAVORSKY, prospector, state as follows:

That I have prepared this Prospecting Report on the Consolation Creek Placer Property based on information in the attached Appendix A, the Report by Apex Geoscience Ltd. of Edmonton, Alberta.

That this report is signed off by Mr. Michael Dufresne, a Professional Geologist, Alberta.

That I rely upon the accounting and the contents of this Geophysical Report as set out by Apex Geoscience Ltd., a company operated by Mr. Michael Dufresne, P.Geol.

That I graduated from the B.C. and Yukon Chamber of Mines Prospecting School.

That I graduated from B.C. Geological Survey, Advanced Prospecting School.

That I graduated from the B.C. Ministry of Energy, Mines and Petroleum Resources, Petrology for Prospector's Course.

That I have actively worked as a Prospector for most of the last 35 years.

That my mailing address is #818 - 470 Granville Street, Vancouver, B.C. V6C 1V5.

Respectfully submitted,

David Javorsky

David Javorsky
Prospector

November 15, 2010

Vancouver, B.C.

APPENDIX A

Geophysical Report by Apex Geoscience Ltd.
on the Consolation Creek Placer property.
Dated February 28, 2010

Appendix A

APEX Geoscience Ltd.

Suite 200, 9797 – 45 Ave
Edmonton, AB · T6E 5V8
Bus. 780-439-5380 · Fax 780-433-1336

apexgeo@apexgeoscience.com
G.S.T. #: 13693 6119 RP0001

INTRODUCTION

APEX Geoscience Ltd. (APEX) was hired by Mr. Lee Long of Consolation Creek to conduct test ground geophysical surveys at the Consolation Creek Placer Property, Consolation Creek, Northwestern British Columbia (Figure 1). A two man APEX crew mobilized to Vancouver from Edmonton on October 14th, 2009 with a Ground Magnetometer System including a walking magnetometer and a base station magnetometer. The crew picked up and tested a Ground Penetrating Radar (GPR) instrument in Vancouver and spent the day testing the instrument and getting it operational. The crew mobilized to Whitehorse on October 15th, 2009, where they rented a 4-wheel drive truck a further mobilized to Atlin. The APEX crew were based out of Atlin for the duration of the field program. The road to the Consolation Creek placer property was in rough shape and although it was only approximately a 45 km drive it required an hour and half to two hour drive in and out each day. The APEX crew demobilized from Atlin Creek on October 20th, 2009. Ground geophysical surveys conducted at the Consolation Creek placer property by the APEX crew included GPR and Total Field Magnetics.

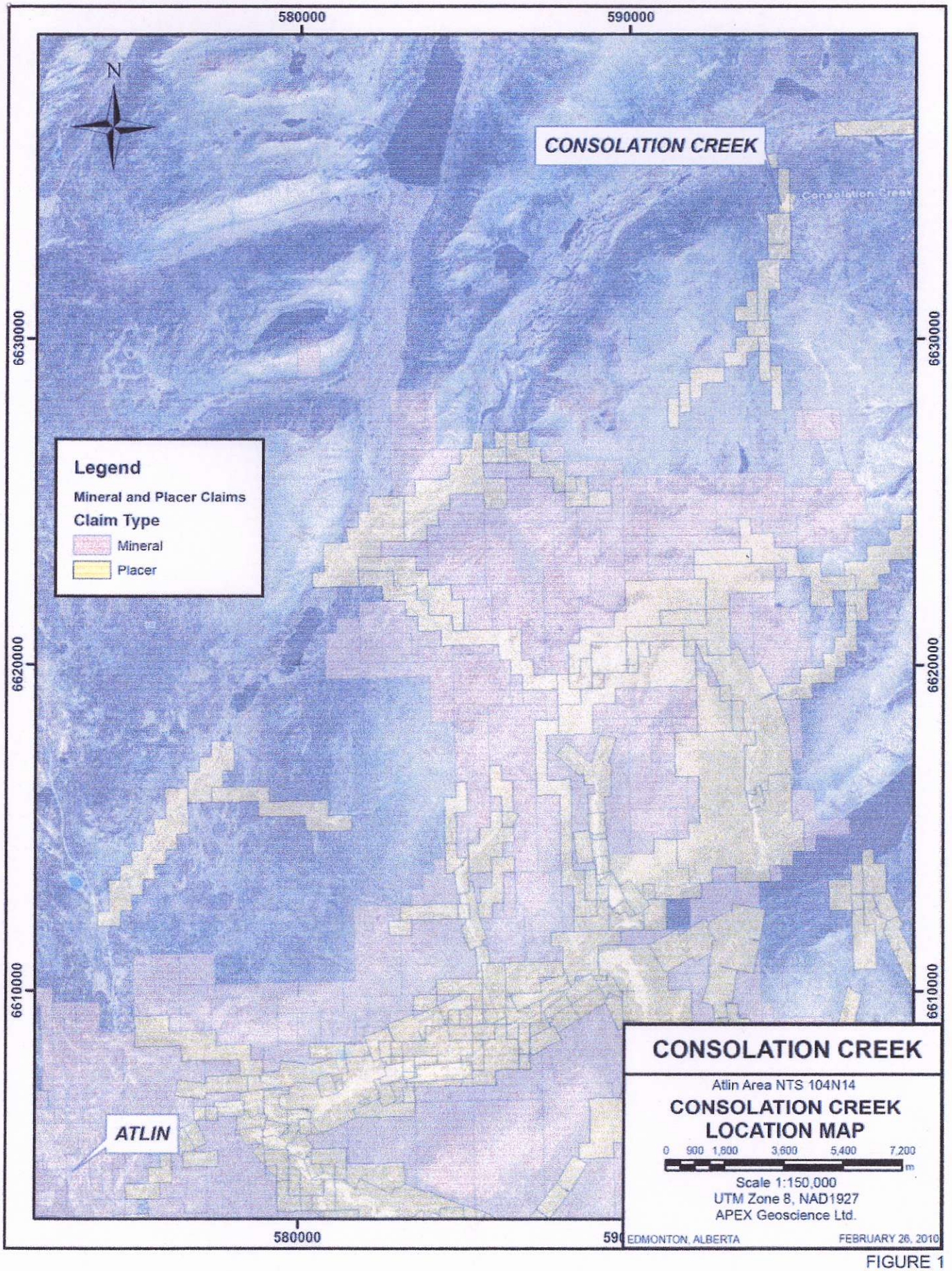
GROUND GEOPHYSICAL SURVEYS

Upon arrival at the property the APEX crew encountered more difficult ground conditions than expected including thick and extensive deadfall along with the creek in flood conditions. A good GPR survey requires clear contact between the antonna and the ground. Originally, the plan was for the property to be surveyed using ground magnetics and GPR along systematic east-west lines across the channel. The idea was to identify and map the channel with the ground magnetometer survey based on the presence of heavy minerals including magnetite and identify the depth to bedrock and presence of potentially coarse boulder gravel using the GPR. The magnetometer survey was completed as planned, however, due to the significant amount of deadfall and the creek in flood, the GPR survey had to be conducted down the valley from south to north beside the active creek.

The results of the magnetic survey are displayed in Figures 2 and 3. The results of the GPR survey are discussed and shown in a brief report that is included as Appendix 1. The GPR data were processed by Jan Francke of International Groundradar Consulting Inc. (Groundradar). The magnetic survey data were processed in house by Michael Dufresne, M.Sc., P.Geol. of APEX. The methodology for the ground magnetic survey and processing of the data are provided in Appendix 2.

Magnetometer Survey

Figures 2 and 3 show the total field magnetics and a calculated analytical signal of the total field, respectively. Both show a northwest trending magnetic feature that is likely indicative of accumulations of magnetite in a channel gravel. The total field map in Figure 2 shows a series of magnetic highs with closely associated magnetic lows, which likely represent a dipole effect and still represent the presence of magnetic minerals. The analytical signal removes the dipole effect and shows total local magnetism whether positive or negative in its orientation. It probably gives a better picture of the location of the presence of total magnetite in heavy mineral sands. Culture including the old prospector shack and the pile of old metal tools provides magnetic interference, however, even with them removed, there is a strong indication of the presence of a channel with anomalous concentrations of magnetite most likely.


580000
590000
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CONSOLATION CREEK
Consolation Creek
6630000
6620000
6610000
Legend
Mineral and Placer Claims
Claim Type
Mineral
Placer
ATLIN
CONSOLATION CREEK
Atlin Area NTS 104N14
CONSOLATION CREEK
LOCATION MAP
0 900 1,800 3,600 5,400 7,200
m
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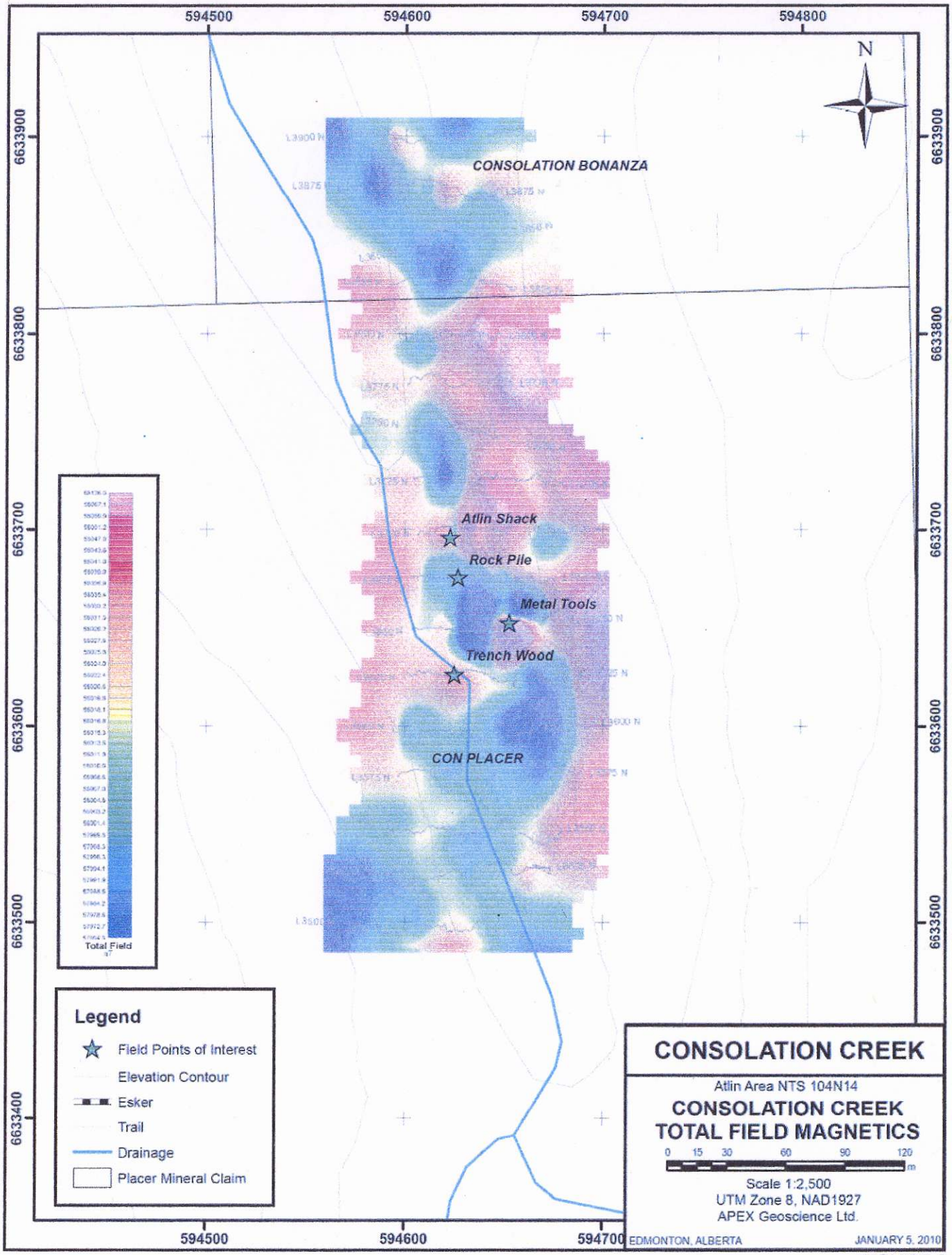
UTM Zone 8, NAD1927
APEX Geoscience Ltd.
EDMONTON, ALBERTA
FEBRUARY 26, 2010

FIGURE 1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N
CONSOLATION BONANZA
Atlin Shack
Rock Pile
Metal Tools
Trench Wood
CON PLACER
Total Field
Legend
Field Points of Interest
Elevation Contour
Esker
Trail
Drainage
Placer Mineral Claim
CONSOLATION CREEK
Atlin Area NTS 104N14
CONSOLATION CREEK
TOTAL FIELD MAGNETICS
0 15 30 60 90 120
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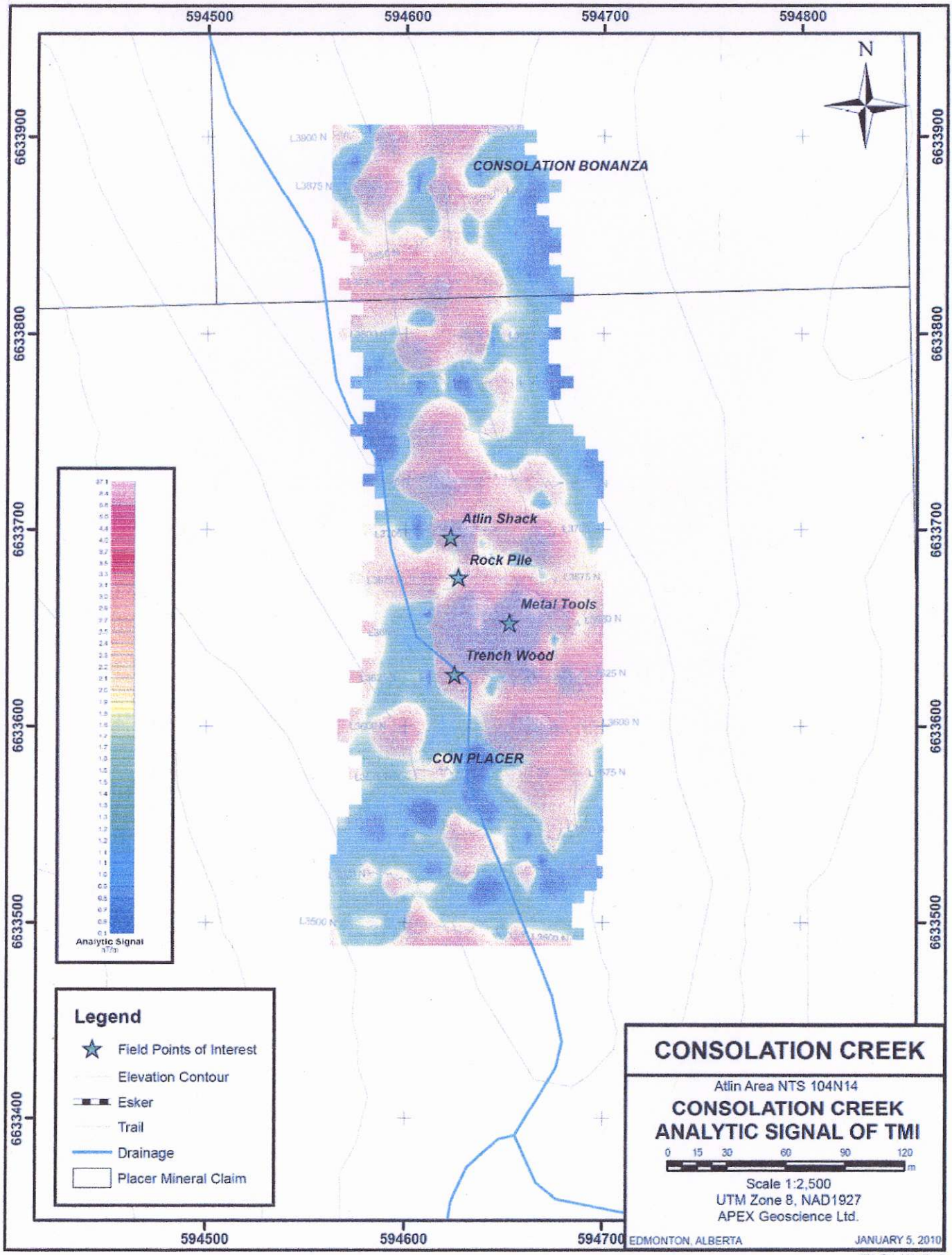
Scale 1:2,500
UTM Zone 8, NAD1927
APEX Geoscience Ltd.
EDMONTON, ALBERTA
JANUARY 5, 2010

FIGURE 2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594600
594700
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6633700
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CONSOLATION BONANZA
Atlin Shack
Rock Pile
Metal Tools
Trench Wood
CON PLACER
Analytic Signal
Legend
Field Points of Interest
Elevation Contour
Esker
Trail
Drainage
Placer Mineral Claim
CONSOLATION CREEK
Atlin Area NTS 104N14
CONSOLATION CREEK
ANALYTIC SIGNAL OF TMI
0 15 30 60 90 120
m
Scale 1:2,500
UTM Zone 8, NAD1927
APEX Geoscience Ltd.
EDMONTON, ALBERTA
JANUARY 5, 2010

FIGURE 3

GPR Survey

Originally, the plan was for the entire length of the property to be surveyed using ground magnetics and GPR along systematic east-west lines across the valley. Due to the presence of extensive deadfall and a creek in flood, the test survey was restricted to a single profile, extending from south to north, approximately 115 m in length and beside the axis of the creek (Appendix 1). Although the volume of data obtained was minimal, it is likely to be indicative of that which could be achieved at the site should cut lines be established in the future.

Once processed to highlight the distribution of gravels, the location of the paleochannel becomes more evident (Appendix 1). As this profile was acquired approximately parallel to the existing active channel, it appears that the GPR was able to image a paleochannel with thicker gravels to the north. An examination of the processed data suggests that, as would be expected, larger gravels and cobbles are located along the base of the paleochannel at a thickness of several metres with thickness increasing to the north. This could indicate simply that the north-south line got a little closer to the main channel.

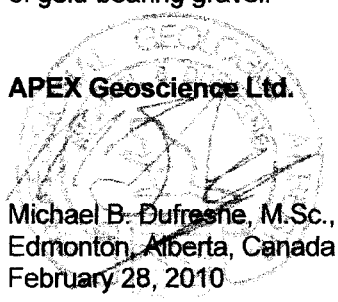
Although a cursory test of GPR technology was performed at the site, the survey demonstrated that it mapped a variety of units, including areas with apparent thick and coarse grained gravel. This type of mapping if conducted across strike of the valley stands an excellent chance of mapping in detail areas of paleochannel gravel, which would be high priority for placer mining.

CONCLUSIONS AND RECOMMENDATIONS

Test ground magnetic and GPR surveys have identified areas of paelochannel gravel with accumulations of heavy minerals and demonstrated that relatively simple and cost effective ground geophysical methods can identify high priority areas for future place gold mining.

It is strongly recommended that ground geophysical surveys including magnetics and GPR be conducted systematically across the valley and creek bottom over the entire length of the property. For the GPR to be effective either proper cut lines with the deadfall bucked up and moved will be required in non-winter conditions. Alternatively, the surveys could be conducted in winter conditions which would allow for cheaper blazing of lines and would allow survey over the active creek. If the GPR part of the survey is to be conducted in non-winter conditions with cut lines it will also be important to use Groundradar's proprietary UltraGPR system, which includes an antenna that can be dragged through the active stream.

The capture of high quality magnetic and GPR data looks like it could easily highlight the course of the paleochannel, the distributions of sands and gravels within the paleochannel, the thickness of units and depth to berock as well as any other features of geological significance, to a depth of at least 15 to 20 m. Volumes of gravels and sands may then be calculated, and 3D models of the distribution of depositional features may be created in order to come up with a potential bulk resource of gold-bearing gravel.



APEX Geoscience Ltd.

Michael B. Dufresne, M.Sc., P.Geol.
Edmonton, Alberta, Canada
February 28, 2010

APPENDIX 1

Groundradar
Measured resources

Preliminary Report to

Apex Geoscience Ltd

on the

Trial Ground Penetrating Radar Survey
Atlin, British Columbia

Date: October 27, 2009

Groundradar
Measured resources

Apex Geoscience Ltd

Date: October 27, 2009

Attention: Brenden Mock

Dear Brenden;

International Groundradar Consulting Inc. (Groundradar), has prepared a brief report on the trial geophysical surveys conducted at a placer gold project near Atlin, BC, conducted by Apex Geoscience Ltd (Apex) of Edmonton, AB. The purpose of this report is to provide representative data samples as well as recommendations for a future larger-scale project on the property.

The geophysical survey involved the use of a custom ground penetrating radar (GPR) system manufactured by Malå Geoscience of Sweden for Groundradar. Due to the timing of the project, Groundradar's UltraGPR technology was not available for the present trial survey. Although excellent results were obtained by the Malå system, UltraGPR would have enabled a much higher resolution image of the distribution of grain sizes within the subsurface.

GPR is the highest resolution method available in geophysics, which resolution often on the scale of tens of centimetres to depths of up to 120 m. Although the last 20 years has seen a dramatic growth in the use of GPR for mineral resource exploration, all radar systems are limited by the laws of physics, and in specific the laws of electromagnetic wave propagation. GPR generally achieves the best penetration and resolution in electrically resistive environments, such as those characterized by sands, gravels and boulders. Conversely, electrically conductive media, such as plastic clays, may limit radar penetration to less than a few metres. In the case of paleochannel mapping, GPR is ideally suited to achieve maximum penetration though the in-filled sands and gravels within the channel. Some of the first applications of early radar technology for paleochannel mapping was conducted near Atlin, BC in the late 1980's, approximately 2 km from the present test survey location.

All ground penetrating radar systems rely on the radar antennas being as close as possible to the dielectric (in this case the ground) in order to impart as much energy as possible into the subsurface. If the antennas are elevated above the dielectric, the proportion of energy which is imparted into the ground is dramatically reduced. For most projects, cut lines are cleared along prescribed paths in advance of the arrival of the geophysical crew. The equipment is then dragged along the cut lines to produce a high resolution image of the subsurface.

It is understood that Apex staff encountered significant amounts of deadfall throughout the property as well as the presence of an active steam which each of the prescribed geophysical profiles crossed. Converse to UltraGPR, the Malå system employed during these tests is not waterproof, and can not be used across rivers.

Due to the presence of deadfall, the test survey was restricted to a single profile, extending from SSW to NNE, approximately 115 m in length (Figure 1). Although the volume of data recorded during the present test was minimal, the data is expected to be representative of that which could be achieved at the site should cut lines be established in the future.

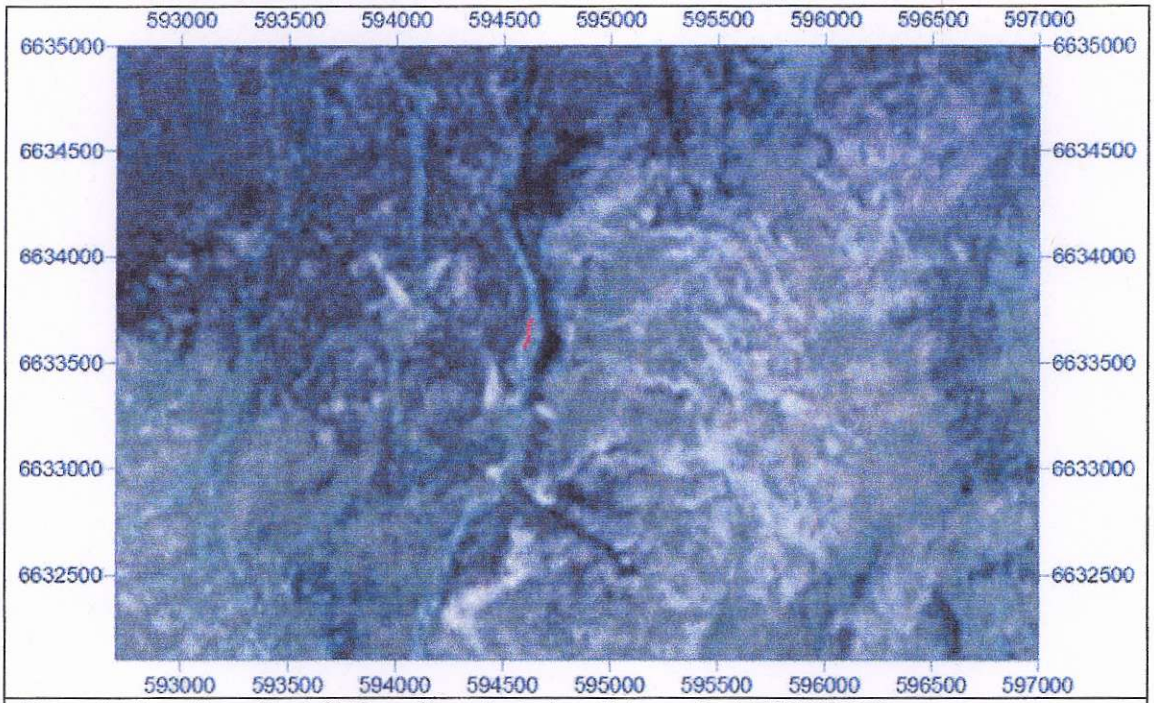


Figure 1 – Location of test GPR profile, oriented south to north. UTM WGS86.

Figure 2 shows the test profile as the original recorded data. The data provides significant information without processing, including the maximum effective depth of penetration (15 m), the presence of various sizes of gravel (evidenced by characteristic hyperbolic reflections of varying amplitude and frequency), as well as the presence of a paleochannel.

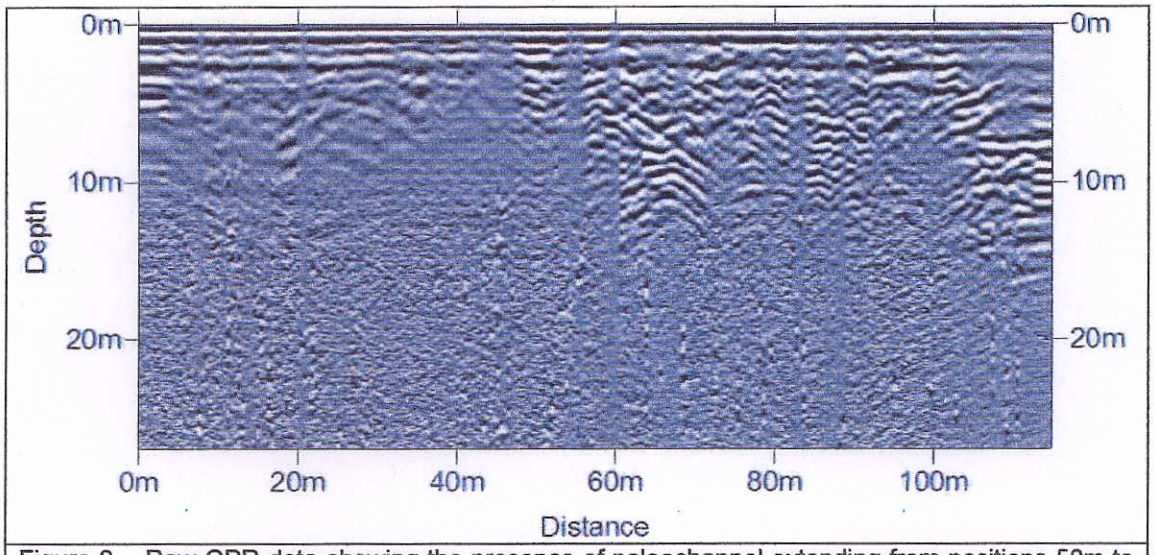


Figure 2 – Raw GPR data showing the presence of paleochannel extending from positions 50m to 115m.

Once processed (Figure 3) to highlight the distribution of gravels, the location of the paleochannel becomes more evident. As this profile was acquired approximately parallel to the existing active channel, it appears that the GPR was able to image a paleochannel with thicker gravels to the north. An examination of the processed data suggests that, as would be expected, larger gravels and cobbles are located along the base of the paleochannel at a thickness of several metres.

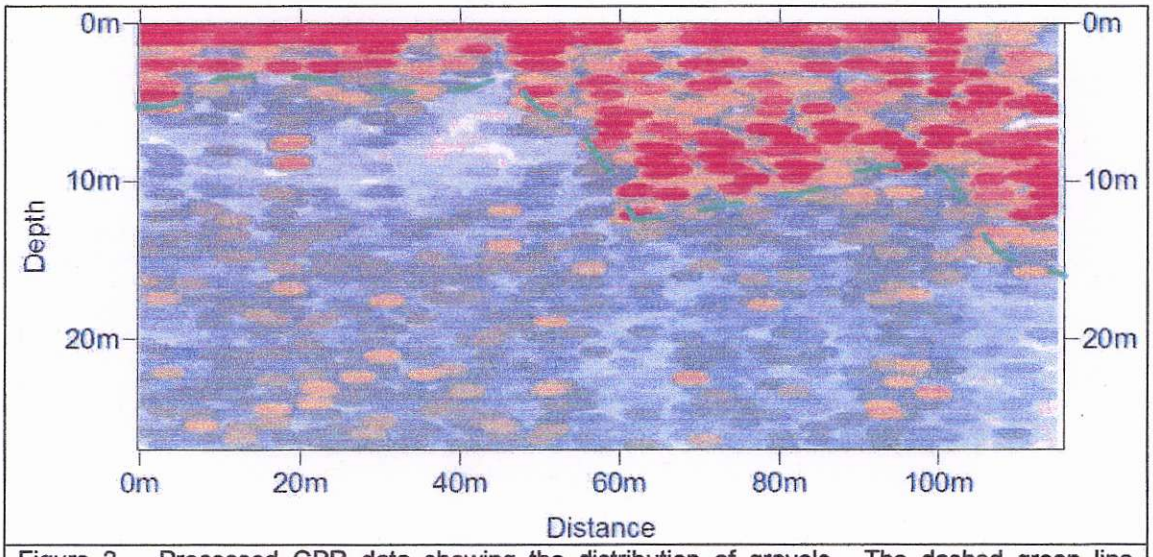


Figure 2 – Processed GPR data showing the distribution of gravels. The dashed green line demarks the approximate depth of the paleochannel.

Although a cursory test of radar technology at the site, the survey demonstrated that with proper cut lines established, excellent radar data may be acquired. Such data would easily highlight the course of the paleochannel, the distributions of sands and gravels within the paleochannel, as well as any other features of geological significance, do a depth of at least 18 m. Volumes of gravels and sands may then be calculated, and 3D models of the distribution of depositional features may be created.

It is critical that cut lines be established in a suitable fashion for GPR surveying. Both the Malå system employed for the present tests as well as the UltraGPR system which would be used for future surveying, require only a shoulder-wide cut line, sufficient to allow a surveyor to walk. However, the line should be clear of deadfall, allowing the radar antennas, which are dragged in a 11 m long line behind the surveyor, to remain on the ground as often as possible.

Although it is possible to survey short lines on either side of the active stream, it appears that the thickest gravels exist beneath this stream. As such, data from within the stream may be of importance in determining resource volumes. UltraGPR may be dragged through the river, or, either system may be used during winter to cross the active channel when it is frozen.

In summary, based on the success of the short test survey, it is highly recommended that cut lines be established at the desired line spacing, and a larger-scale survey be conducted using radar technology.

This report has been prepared by Jan Francke, who was over 18 years of experience with GPR applications to mineral resource evaluations in 63 countries. Should you have any questions, please contact our office.

Respectfully submitted,

Jan Francke, P.Geoph.

APPENDIX 2

Overhauser

Magnetometer / Gradiometer / VLF (GSM-19 v6.0)

GEM's unique Overhauser system combines data quality, survey efficiency and options into an instrument that matches costlier optically pumped cesium capabilities.

And the latest v6.0 technology upgrades provide even more value, including:

Integrated GPS option (the only system with fully built-in GPS)

25% increase in sensitivity over GEM's v5.0 system

Enhanced memory (increased by 8 times to 4 Mbytes standard and expandable to 32 Mbytes)

Programmable base station (for scheduling base stations in one of three modes)

Rapid data transfer (using the advanced GEMLinkW software)

Internet-based upgrades (from the office or field)

And all of these technologies come complete with the most attractive prices and warranty in the business!

Overhauser (GSM-19) console with sensor and cable. Can also be configured with additional sensor for gradiometer(simultaneous) readings.

The GSM-19 v6.0 Overhauser instrument is the total field magnetometer / gradiometer of choice in today's earth science environment -- representing a unique blend of physics, data quality, operational efficiency, system design and options that clearly differentiate it from other quantum magnetometers.

With data quality exceeding standard proton precession and comparable to costlier optically pumped cesium units, the GSM-19 is a standard (or emerging standard) in many fields, including:

- o Mineral exploration (ground and airborne base station)
- o Environmental and engineering
- o Pipeline mapping
- o Unexploded Ordnance Detection
- o Archeology
- o Magnetic observatory measurements
- o Volcanology and earthquake prediction

Taking Advantage of the Overhauser Effect

Overhauser effect magnetometers are essentially proton precession devices -- except that they produce an order-of-magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field.

The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal -- that is ideal for very high-sensitivity total field measurements.

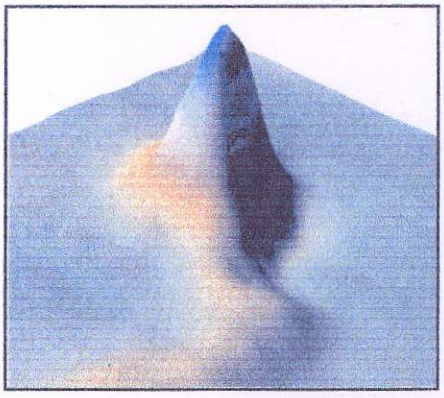
In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and eliminates noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously -- which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

Other advantages are described in the section called, "GEM's Commercial Overhauser System" that appears later in this brochure.

Maximizing Your Data Quality with the GSM-19

Data quality is a function of five key parameters that GEM has taken into consideration carefully in the design of the GSM-19. These include sensitivity, resolution, absolute accuracy, sampling rates and gradient tolerance.



Data from Kalahari Desert kimberlites. Courtesy of MPH Consulting (project managers), IGS c. c. (geophysical contractor) and Aegis Instruments (Pty) Ltd., Botswana.

Sensitivity is a measure of the signal-to-noise ratio of the measuring device and reflects both the underlying physics and electronic design. The physics of the Overhauser effect improves sensitivity by an order of magnitude over conventional proton precession devices. Electronic enhancements, such as high-precision precession frequency counters (see the v6.0 -- New Milestones section) enhance sensitivity by 25% over previous versions.

The result is high quality data with sensitivities of 0.015 nT / √Hz or better. This sensitivity is virtually the same as the sensitivity of costlier optically-pumped cesium systems.

Resolution is the minimum step of the counter used to measure precession frequency and its conversion into magnetic field. It is generally higher (an order of magnitude) than the sensitivity to avoid a contribution of the counter to overall system noise. The GSM-19 has unmatched resolution (0.01 nT).

This level of resolution translates into well-defined, characteristic anomalies; improved visual display; and enhanced numerical data for processing and modeling.

Absolute accuracy defines maximum deviation from the true value of the measured magnetic field. Since nobody really knows the true value of the field, absolute accuracy is determined by considering factors involved in determining the field value and their accuracy, including the gyromagnetic constant, maximum offset of the time base frequency, etc .

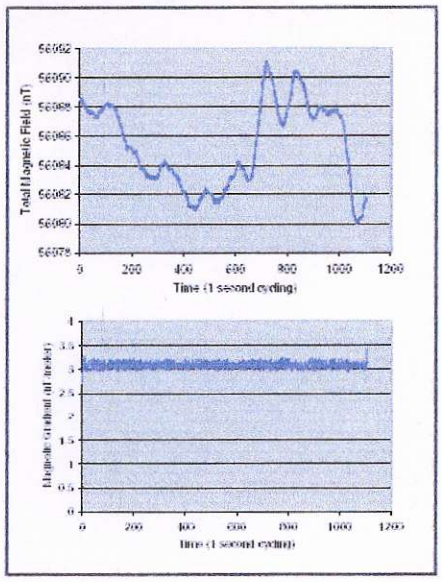
With an absolute accuracy of +/- 0.1 nT, the GSM-19 is ideal for total field work and gradient measurements maintain the same high standard of quality. Both configurations are also specially designed to minimize overall system noise so that you can be sure that your results truly reflect the geologic signal that is of most interest to you.

Sampling rates are defined as the fastest speed at which the system can acquire data. This is a particularly important parameter because high sampling rates ensure accurate spatial resolution of anomalies and increase survey efficiency.

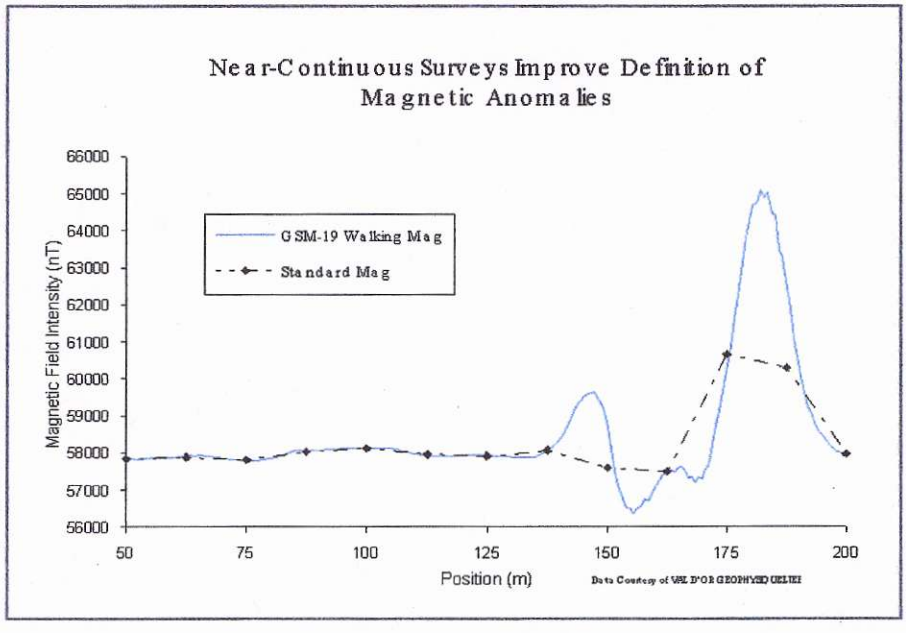
GEM's Overhauser system has three "measurement modes" or maximum sampling rates -- "Standard" (3 seconds / reading), "Walking" (0.5 seconds / reading) and "Fast" (0.2 seconds / reading). These rates make the GSM-19 a versatile system for all ground uses (including vehicle-borne applications).

Gradient tolerance is the ability to obtain reliable measurements in the presence of extreme field variations. GSM-19 tolerance is maintained through internal signal counting algorithms, sensor design and Overhauser physics. For example, the Overhauser effect produces high amplitude, long-duration signals that facilitate measurement in high gradients.

The system's tolerance (10,000 nT / meter) makes it ideal for many challenging environments -- such as highly magnetic rocks in mineral exploration applications, or near cultural objects in environmental, UXO or archeological applications.



Total Field and Stationary Vertical Gradient showing the gradient largely unaffected by diurnal variation. Absolute accuracy is also shown to be very high (0.2 nT/meter).



Much like an airborne acquisition system, the GSM-19 "Walking" magnetometer option delivers very highly-sampled, high sensitivity results that enable very accurate target location and / or earth science decision-making.

Increasing Your Operational Efficiency

Many organizations have standardized their magnetic geophysical acquisition on the GSM-19 based on high performance and operator preference. This reflects enhancements such as memory capacity; light weight; GPS and navigation; no warm-up time; no dead zones or heading errors; and dumping and processing.

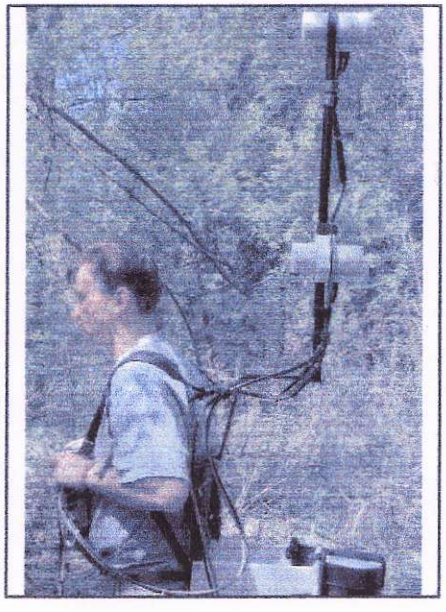
Memory capacity controls the efficient daily acquisition of data, acquisition of positioning results from GPS, and the ability to acquire high volumes of data to meet daily survey objectives.

V6.0 upgrades have established the GSM-19 as the commercial standard for memory with over 262,000 readings (based on a basic configuration of 4 Mbytes of memory and a survey with time, coordinate, and field values).

Optional increments up to 32 Mbytes increase memory to over 2 million readings -- making the GSM-19 an ideal system for acquisition of data with integrated GPS readings (when required).

Portability characteristics (ruggedness, light weight and power consumption) are essential for operator productivity in both normal and extreme field conditions.

GEM's Overhauser magnetometer is established globally as a robust scientific instrument capable of withstanding temperature, humidity and terrain extremes. It also has the reputation as the lightest and lowest power system available -- reflecting Overhauser effect and RF polarization advantages.



In comparison with proton precession and optically pumped cesium systems, the GSM-19 system is the choice of operators as an easy-to-use and robust system.

GPS and navigation options are increasingly critical considerations for earth science professionals.

GPS technologies are revolutionizing data acquisition -- enhancing productivity, increasing spatial resolution, and providing a new level of data quality for informed decision-making.

As an innovative technology developer, GEM has made GPS a cornerstone of its magnetic R&D program. Real time GPS and DGPS options are now available in different survey resolutions. For more details, see the GPS and DGPS section.

GEM has also developed a GPS Navigation feature with real-time coordinate transformation to UTM, local X-Y coordinate rotations, automatic end-of-line flag, guidance to the next line, and survey "lane" guidance with cross-track display and audio indicator.

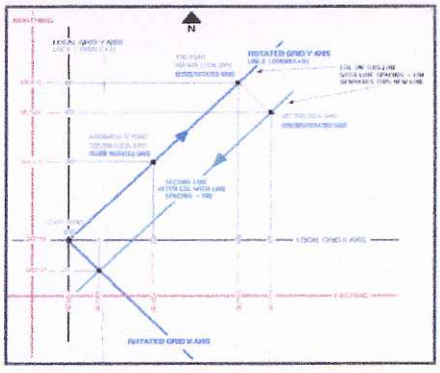
Other enhancements include way point pre-programming of up to 1000 points. Professionals can now define a complete survey on their PC and download points to the magnetometer via RS-232 connection -- before leaving for the field.

The operator then simply performs the survey using the way points as their survey guide. This capability decreases survey errors, improves efficiency, and ensures more rapid survey completion.

Dumping and processing effectiveness is also a critical consideration today. Historically, up to 60% of an operator's "free" time can be spent on low-return tasks, such as data dumping.

Data dumping times are now significantly reduced through GEM's implementation of high-speed, digital data links (up to 115 kBaud).

This functionality is facilitated through a new RISC processor as well as GEM's proprietary GEMLinkW acquisition / display software. This software serves as a bi-directional RS-232 terminal. It also has integrated processing functionality to streamline key processing steps, including diurnal data reduction. GEMLinkW is provided free to all GSM-19 customers and regular updates are available.



Navigation and Lane Guidance

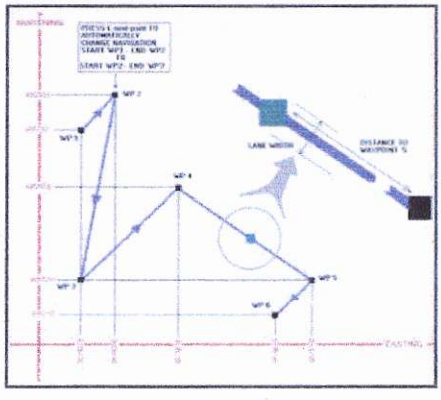
The figure above shows the Automatic Grid (UTM, Local Grid, and Rotated Grid). With the Rotated Grid, you can apply an arbitrary origin of your own definition. Then, the coordinates are always in reference to axes parallel to the grid. In short, your grid determines the map, and not the NS direction.

The Local Grid is a scaled down, local version of the UTM system, and is based on your own defined origin. It allows you to use smaller numbers or ones that are most relevant to your survey.

The figure below shows how programmable-waypoints can be used to plan surveys on a point-by-point basis.

Initially, you define waypoints and enter them via PC or the keyboard. In the field, the unit guides you to each point.

While walking between waypoints, lane guidance keeps you within a lane of pre-defined width using arrows (<- or ->) to indicate left or right. Within the lane, the display uses horizontal bars (_) to show your relative position in the lane. The display also shows the distance (in



Adding Value through Options

When evaluating the GSM-19 as a solution for your geophysical application, we recommend considering the complete range of options offered by GEM. These options can be added at time of original purchase or later to expand capabilities as your needs change or grow.

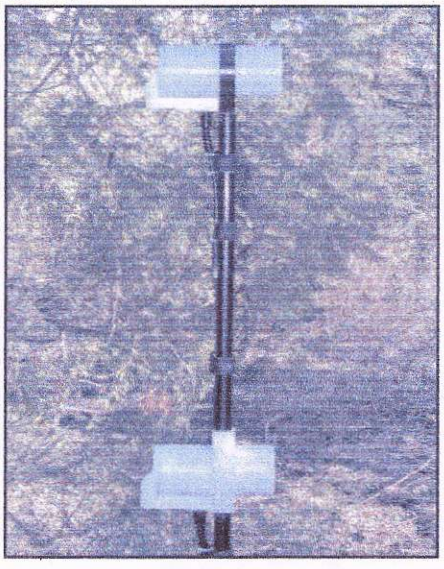
GEM's approach with options is to provide you with an expandable set of building blocks:

- o Gradiometer
- o Walking Magnetometer / Gradiometer
- o Fast Magnetometer / Gradiometer
- o VLF (3 channel)
- o GPS (built-in or external)

GSM-19G Gradiometer Option

The GSM-19 gradiometer is a versatile, entry level system that can be upgraded to a full-featured "Walking" unit (model GSM-19WG) in future.

The GSM-19G configuration comprises two sensors and a "Standard" console that reads data to a maximum of 1 reading every three seconds.



An important GEM design feature is that its gradiometer sensors *measure the two magnetic fields concurrently* to avoid any temporal variations that could distort gradiometer readings. Other features, such as single-button data recording, are included for operator ease-of-use.

GSM-19W / WG "Walking" Magnetometer / Gradiometer Option

GEM Systems pioneered the innovative "Walking" option that enables the acquisition of nearly continuous data on survey lines. Since its introduction, the GSM-19W / GSM-19WG have become one of the most popular magnetic instruments in the world.

Similar to an airborne survey in principle, the system records data at discrete time intervals (up to 2 readings per second) as the instrument is carried along the line.

At each survey picket (fiducial), the operator touches a designated key. The system automatically assigns a picket coordinate to the reading and linearly interpolates the coordinates of all intervening readings (following survey completion during post-processing).

A main benefit is that the high sample density improves definition of geologic structures and other targets (UXO, archeological relics, drums, etc.).

It also increases survey efficiency because the operator can record data almost continuously. Another productivity feature is the instantaneous recording of data at pickets. This is a basic difference between the "Walking" version and the GSM-19 / GSM-19G (the "Standard" mode version which requires 3 seconds to obtain a reading each time the measurement key is pressed).

GSM-19F / FG "Fast" Magnetometer / Gradiometer Option

The "Fast" version reads up to 5 readings per second. (Sensors and console are the same as other models.) This system is ideal for vehicle-borne surveys, such as UXO, archeological or some mineral exploration applications, where very high productivity is required.

GSM-19 "Hands-Free" Backpack Option

The "Walking" Magnetometer and Gradiometer can be configured with an optional backpack-supported sensor. The backpack is uniquely constructed -- permitting measurement of total field or gradient with both hands free.

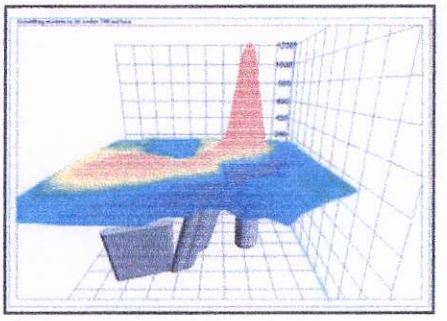
This option provides greater versatility and flexibility, which is particularly valuable for high-productivity surveys or in rough terrain.

GSM-19M / GV "VLF" Option

With GEM's omnidirectional VLF option, up to 3 stations of VLF data can be acquired without orienting. Moreover, the operator is able to record both magnetic and VLF data with a single stroke on the keypad.

3rd Party Software - A One-Stop Solution for Your Potential Field Needs

Now it's even easier to take data from the field and quality control stage through to final map preparation and modeling.



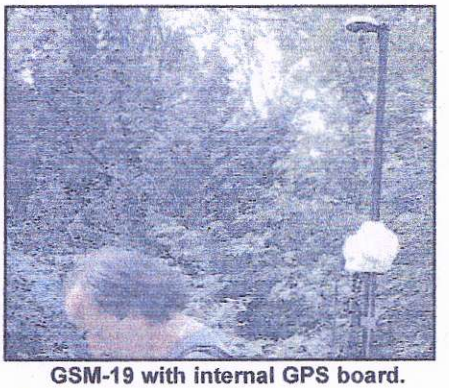
GEM-VIS provides links to fast 3D modeling via Encom's professional QuickPro software.

GEM provides the most comprehensive solution available for working with magnetometer data:

- o Free **GEMLinkW** *Transfer and Internet Upgrade* software
- o Optional, low-cost **GEM-*VIS*** *Quality Control, Visualization and Analysis*
- o Optional *Data Processing*
- o Optional **QuickMag Pro** *Automated Modeling and Inversion*

Internal / External GPS Options

To learn more about GEM's leading GPS options, see the GPS and DGPS section.



GSM-19 with internal GPS board. Small antenna attaches above sensor.

Version 6 -- Technology Developments

One of the main differences between GEM and other manufacturers is GEM's 20+ year, consistent focus on developing leading-edge magnetic technologies.

This commitment has led to many innovations in sensor technology; signal counting; firmware and software; and hardware and console design.

The recent release of v6.0 of the GSM-19 system provides many examples of the ways in which GEM continues to advance magnetics technologies for its customers.

Enhanced data quality:

o 25% improvement in sensitivity (new frequency counting algorithm)

o new intelligent spike-free algorithms (in comparison with other manufacturers, GEM does not apply smoothing or filtering to achieve high data quality)

Improved operational efficiency:

o Enhanced positioning (GPS engine with optional integrated / external GPS and real-time navigation)

o 16 times increase in memory to 32 Mbytes (optional). 4 Mbytes standard

o 1000 times improvement in processing and display speed (RISC microprocessor with 32-bit data bus)

2 times faster digital data link (115 kBaud through RS-232)

Innovative technologies:

o Battery conservation and survey flexibility (base station scheduling option with 3 modes - daily, flexible and immediate start)

o Survey pre-planning (up to 1000 programmable waypoints that can be entered directly or downloaded from PC for greater efficiency)

o Efficient GPS synchronization of field and base units to Universal Time (UTC)

o Cost saving with firmware upgrades

GEM's Proven Overhauser System

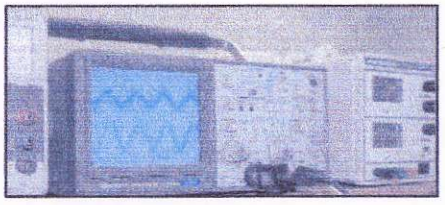
In a *standard Proton magnetometer*, current is passed through a coil wound around a sensor containing a hydrogen-rich fluid. The auxiliary field created by the coil (>100 Gauss) polarizes the protons in the liquid to a higher thermal equilibrium.

When the current, and hence the field, is terminated, polarized protons precess in the Earth's field and decay exponentially until they return to steady state. This process generates precession signals that can be measured as described below.

Overhauser magnetometers use a more efficient method that combines electron-proton coupling and an electron-rich liquid (containing unbound electrons in a solvent containing a free radical). An RF magnetic field -- that corresponds to a specific energy level transition -- stimulates the unbound electrons.

Instead of releasing this energy as emitted radiation, the unbound electrons transfer it to the protons in the solvent. The resulting polarization is much larger, leading to stronger precession signals.

Both Overhauser and proton precession, measure the scalar value of the magnetic field based on the proportionality of precession frequency and magnetic flux density (which is linear and known to a high degree of accuracy). Measurement quality is also calculated using signal amplitude and its decay characteristics. Values are averaged over the sampling period and recorded.



As the world's first and most experienced manufacturer of commercial Overhauser systems, GEM's technical focus on the GSM-19 has resulted in a superior magnetic measuring device with high sensitivity, high cycling speed, low noise, and very low power consumption over a wide temperature range.

With minor software modifications (i.e. addition of a small auxiliary magnetic flux density while polarizing), it can also be easily configured for high sensitivity readings in low magnetic fields (i.e. for equatorial work).

GPS -- Positioning You for Effective Decision Making

The use of Global Positioning Satellite (GPS) technology is increasing in earth science disciplines due to the ability to make better decisions in locating and following up on anomalies, and in improving survey cost effectiveness and time management.

Examples of applications include:

o Surveying in remote locations with no grid system (for example, in the high Arctic for diamond exploration)

o High resolution exploration mapping

o High productivity ferrous ordnance (UXO) detection

o Ground portable magnetic and gradient surveying for environmental and engineering applications

o Base station monitoring for observing diurnal magnetic activity and disturbances with integrated GPS time

GEM addresses customer requests for GPS and high-resolution Differential GPS (DGPS) through both the industry's only built-in GPS as well as external GPS.

Built-in GPS offers many advantages such as minimizing weight. The following table marizes GPS options. The 3.0m option is replaced by a 1.5m option.

Description	Range	Services	Output	Nav Option
Standalone	5m	GPS	Time, Lat / Long, UTM	Y
Corrected automatically by GPS without radio modems	3m	WAAS / EGNOS, OmniSTAR	Time, Lat / Long, UTM	Y
Corrected automatically by GPS without radio modems	1m	WAAS / EGNOS, OmniSTAR	Time, Lat / Long, UTM	Y
Corrected automatically by GPS with radio modems	0.1m	RTCM, RTK	Time, Lat / Long, UTM	Y

Key System Components

Key components that differentiate the GSM-19 from other systems on the market include the sensor and data acquisition console. Specifications for components are provided on the right side of this page.

Sensor Technology

GEM's sensors represent a proprietary innovation that combines advances in electronics design and quantum magnetometer chemistry.

Electronically, the detection assembly includes dual pick-up coils connected in series opposition to suppress far-source electrical interference, such as atmospheric noise. Chemically, the sensor head houses a proprietary hydrogen-rich liquid solvent with free electrons (free radicals) added to increase the signal intensity under RF polarization.

From a physical perspective, the sensor is a small size, light-weight assembly that houses the Overhauser detection system and fluid. A rugged plastic housing protects the internal components during operation and transport.

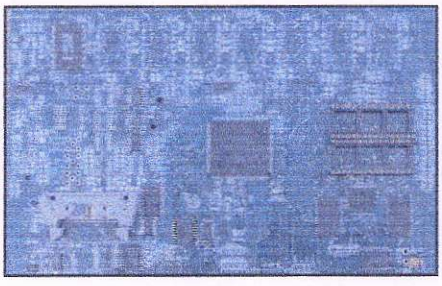
All sensor components are designed from carefully screened non-magnetic materials to assist in maximization of signal-to-noise. Heading errors are also minimized by ensuring that there are no magnetic inclusions or other defects that could result in variable readings for different orientations of the sensor.

Optional omni-directional sensors are available for operating in regions where the magnetic field is near-horizontal (i.e. equatorial regions). These sensors maximize signal strength regardless of field direction.

Data Acquisition Console Technology

Console technology comprises an external keypad / display interface with internal firmware for frequency counting, system control and data storage / retrieval. For operator convenience, the display provides both monochrome text as well as real-time profile data with an easy-to-use interactive menu for performing all survey functions.

The firmware provides the convenience of upgrades over the Internet via the GEMLinkW software. The benefit is that instrumentation can be enhanced with the latest technology without returning the system to GEM -- resulting in both timely implementation of updates and reduced shipping / servicing costs.



About GEM Advanced Magnetometers

GEM Systems, Inc. delivers the world's only magnetometers and gradiometers with built-in GPS for accurately-positioned ground, airborne and stationary data acquisition. The company serves customers in many fields including mineral exploration, hydrocarbon exploration, environmental and engineering, Unexploded Ordnance Detection, archeology, earthquake hazard prediction and observatory research.

Key products include the QuickTracker™ Proton Precession, Overhauser and SuperSenser™ Optically-Pumped Potassium instruments. Each system offers unique benefits in terms of sensitivity, sampling, and acquisition of high-quality data. These core benefits are complemented by GPS technologies that provide metre to sub-metre positioning.

With customers in more than 50 countries globally and more than 20 years of continuous technology R&D, GEM is known as the only geophysical instrument manufacturer that focuses exclusively on magnetic technology advancement.

"Our World is Magnetic"

Specifications

Performance

Sensitivity	< 0.015 nT / √Hz
Resolution	0.01 nT
Absolute Accuracy	+/- 0.1 nT
Range	10,000 to 120,000 nT
Gradient Tolerance	> 10,000 nT/m
Samples at	60+, 5, 3, 2, 1, 0.5, 0.2 sec
Operating Temperature	-40C to +55C

Operating Modes

Manual: Coordinates, time, date and reading stored automatically at minimum 3 second interval

Base Station: Time, date and reading stored at 3 to 60 second intervals

Remote Control: Optional remote control using RS-232 interface

Input / Output: RS-232 or analog (optional) output using 6-pin weatherproof connector

Storage - 4Mbytes (# of Readings)

Mobile	209,715
Base Station	699,050
Gradiometer	174,762
Walking Mag	299,593

Dimensions

Console	223 x 69 x 240 mm
Sensor	175 x 75mm diameter cylinder

Weights

Console with Belt	2.1 kg
Sensor and Staff Assembly	1.0 kg

Standard Components

GSM-19 console, GEMLinkW software, batteries, harness, charger, sensor with cable, RS-232 cable, staff, instruction manual and shipping case

Optional VLF

Frequency Range: Up to 3 stations between 15 to 30.0 kHz

Parameters: Vertical in phase and out-of-phase components as % of total field, 2 components of horizontal field amplitude and total field strength in pT

Resolution: 0.1% of total field

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Represented By: