



# Ministry of Energy, Mines & Petroleum Resources

Mining & Minerals Division BC Geological Survey

# ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)] Geophysical Assessment Report on the Nahmint Property		TOTAL COST \$ 48,075.41	
AUTHOR(S) Trent Pezzot, B.Sc., P.Geo.	- Bruthezul		
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S)		YEAR OF WORK 2011	
STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(	S) 5028027 / Sept. 28, 2	2011; 5155134 / Dec. 16, 2011	
PROPERTY NAME Nahmint			
CLAIM NAME(S) (on which work was done)			
COMMODITIES SOUGHT Copper, Zinc, Gold, Silver, Iron, Molyl	odenum, Tellurium		
MINERAL INVENTORY MINFILE NUMBER(S) 092C007,-08,-09,-61,-67	,-95; 092F086,-118,-129,	-140,-142,-156,-157,-160,-166,-209,-210	
MINING DIVISION_Alberni	NTS 092C096, 092F0	006	
LATITUDE 49 0 02 . 30 " LONGITUDE	124_°53	<u>0</u> " (at centre of work)	
OWNER(S)			
1) Nahminto Resources Ltd.	_ 2)		
MAILING ADDRESS			
2802 - 1188 Howe Street			
Vancouver, B.C. V6Z 2S8	_		
OPERATOR(S) [who paid for the work]			
Nahminto Resources Ltd.	2)		
''			
MAILING ADDRESS			
	_		
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structur	re, alteration, mineralization.	size and attitude):	
Skarn, Porphyry, Copper, Zinc, Silver, Gold, Tellurium, Lime			
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	, ,	,	
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT 00777, 02856, 08286, 08898, 15199, 19484, 28868, 29252,		31248 31708	

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED
GEOLOGICAL (scale, area)			(incl. support)
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne Magnetic and VTEM (		525100, 525111, 525113, 525114, 529233	\$30,740.82
GEOCHEMICAL		329233	
(number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING			
(total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			¢47.004.50
Other Research, Meetings, Repo	rts, Map Printing		\$17,334.59
		TOTAL COST	\$ 48,075.41

# **GEOPHYSICAL ASSESSMENT REPORT**

ON AN

# AIRBORNE MAGNETOMETER SURVEY

# NAHMINT PROJECT

49° 02' 30"N, 124° 53' 00"W Alberni Mining Division, N.T.S. 92F/02 British Columbia, Canada

**FOR** 

BC Geological Survey Assessment Report 32603

Nahminto Resources Ltd.

Suite 2802 - 1188 Howe Street Vancouver, B.C. Canada V6Z 2S8

Survey by

Geotech Limited

Date September 4, 2011

Report by GEOSCI DATA ANALYSIS LTD.

E. Trent Pezzot, BSc. PGeo.

Date: December 19, 2011

# **Table of Contents**

1	SUMMARY	1
2	INTRODUCTION	2
3	LOCATION AND ACCESS	2
4	CLAIMS	3
5	CLIMATE AND PHYSIOGRAPHY	6
6	HISTORY AND PREVIOUS WORK	6
7	GEOLOGY	10
7.1	Regional Geology	10
7.2	Local Geology	12
8	GEOPHYSICAL TECHNIQUES	12
8.1	Magnetic Survey Method	12
8.2	VTEM Survey Method	12
9	FIELD WORK AND INSTRUMENTATION	13
10	DATA PROCESSING	13
10.1	Inversion Programs	14
11	DATA PRESENTATION	15
12	DISCUSSION OF RESULTS	15
12.1	Interpretation of Magnetic Data	15
12.2	Interpretation of VTEM Data	26
13	CONCLUSIONS & RECOMMENDATIONS	26
14	APPENDIX 1 – STATEMENT OF QUALIFICATIONS – E. TRENT PEZZOT	28
15	APPENDIX 2 – COST BREAKDOWN	29
16	APPENDIX 3 – SURVEY AND INSTRUMENT SPECIFICATIONS	30
17	APPENDIX 5 – MAPS	34

# **Table of Tables**

<b>Table 1 – 0</b>	Crown Granted Mineral Claims	5
Table 2 – C	Cell Mineral Claims	5
Table 3 – A	Assessment Work Summary	9
Table o	of Figures	
Figure 1.	Location map	3
Figure 2.	Claim map	4
Figure 3.	B. C. Geology Map	11
Figure 4.	Regional Survey - Residual Magnetic Intensity False Colour Contour Map	16
Figure 5.	Total Magnetic Field Intensity False Color Contour	17
Figure 6.	Total Magnetic Field Intensity False Color Contour	18
Figure 7.	Reduced to the Pole False Color Contour Map	19
Figure 8.	Topo draped Total Magnetic Field Intensity False Color Contour Map	20
Figure 9.	Stacked Magnetic Profile Map	21
Figure 10.	Calculated vertical gradient colour contour map	22
Figure 11.	Mag3d Inversion Model - Paraview 3D Isosurface Displays	23
Figure 12.	Mag3d Inversion Model - Paraview 3D Isosurface Displays	24
Figure 13.	Cross-section through Mag3D Inversion Model	24
Figure 14.	Stacked Profile Map – Ground Magnetic Surveys	25

# 1 SUMMARY

Nahminto Resources Ltd. (Nahminto) contracted Geotech Ltd. to conduct an airborne magnetometer and VTEM survey across a portion of their Nahmint project on Vancouver Island. The survey was completed on September 4, 2011. Thirty-seven (37) NW-SE oriented survey lines nominally spaced at 100m intervals and two perpendicular tie-lines totaling some 126 line kilometres were flown, covering an area of approximately 11.7 km<sup>2</sup>.

It was the intention of these surveys to help delineate any trends or responses associated with the Three Jays deposit.

It was determined by the client that the VTEM results did not reveal any conductive features of interest and no further interpretation of this data was required.

The magnetometer data mapped a large magnetic high anomaly to the north of the Three Jays deposit. It is interpreted as reflecting an east-west elongated, near vertical to steep southwesterly plunging intrusive plug, extending from near surface to over 500 m in depth. This body is cut by a northwesterly trending fault along its' southwestern edge and possibly controlled by near vertical east-west faulting along its' northern and southern flanks. Subtle magnetic high lobes mapped along the northern and southern flanks of this anomaly may be reflecting alteration zones. The Three Jays skarn deposit is located some 500 metres to the south of this body near one of these weak side lobes. A limited amount of ground magnetic surveying detected several high magnetic spikes in the Three Jays area. Geological mapping along the surface and through adits suggests these may be associated with narrow magnetite lenses. A large enough cluster of these bodies could explain the subtle lobes along the flank of the main airborne magnetic anomaly.

A second, large magnetic high is located to the west of the main anomaly but is only partially defined by this survey. This second feature exhibits lower amplitude and may be part of a much larger, NW trending magnetic unit evident on the regional magnetic mapping.

Two weaker magnetic highs are mapped down slope to the east from the Three Jays deposit. One, half way down the slope to Alberni Inlet is unexplained. The second, along the shore of Alberni Inlet is in the vicinity of the Pacific showing. Analysis suggests that these are small, near surface bodies with limited depth extent. The eastern

most anomaly, on the shore of Alberni Inlet has also been tested by a limited amount of ground magnetic surveying which detected narrow, high amplitude spikes similar to those mapped near the Three Jays deposit.

A broad, NW striking band of high magnetic amplitudes crossing the southwestern edge of the area of interest appears to be comprised of a sequence of narrow zones. Breaks and displacements of these trends suggest the area has been cut by small, N-S trending faults.

### 2 Introduction

This document is written as an assessment report and describes the geophysical interpretation of airborne magnetometer data acquired by Geotech Limited across a portion of the Nahmint project. The survey grid covered portions of 5 mineral claims (and the crown grants they encompass) in the northeastern corner of the property. The study area was centred on the Three Jays mineral showing.

Details concerning the claim ownership and costs of the survey and related work were provided by Naminto.

# 3 LOCATION AND ACCESS

The Nahmint Property is located along the western shoreline of Alberni Inlet, some 25 kilometres south of the city of Port Alberni.

The property is in part accessible by road from Port Alberni by two alternate routes. The northern route follows Highway 4 west across the Somass River Bridge, then south along a series of logging roads mainly along the Alberni Inlet for approximately 50 kilometres to the northern property boundary, which takes about 1.5 hours, and is open and accessible by four wheel drive vehicles. The western route follows Highway 4 to the same turnoff, then west, south and east for approximately 75 kilometres to the western property boundary, which takes about 2 hours, and is open and accessible by four wheel drive vehicles. The lower elevations of the eastern and southern portions of the property are locally accessible by water from Port Alberni 20 to 40 kilometres south and west along the Alberni and Uchucklesit Inlets, which takes about 1 hour.

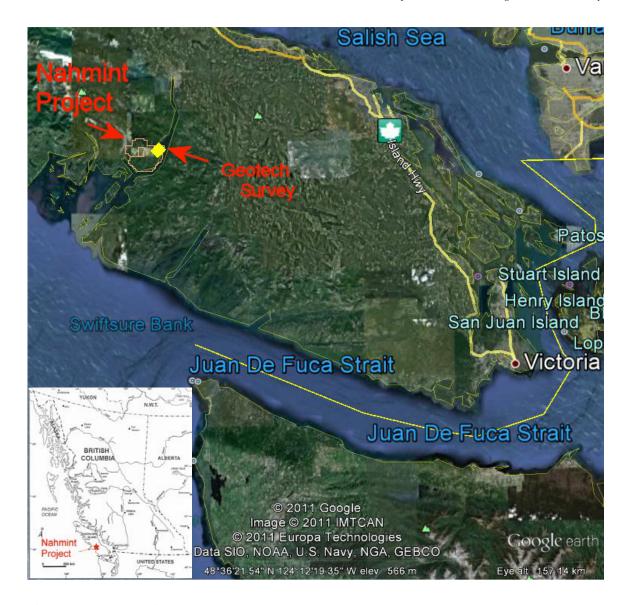


Figure 1. Location map

# 4 CLAIMS

The mineral rights to the cell mineral claims of the Nahmint Property are held 100% by private company Nahminto Resources Ltd. of Port Alberni, B.C. (FMC No. 209027), and consist of 18 contiguous cell mineral claims, acquired by Mr. Herbert W. McMaster in 2005 and 2006, and transferred to Nahminto in 2007. A 19th cell claim (550478) located near the centre of the property is held by Mr. Rolland Menard (FMC No.118167) under a partnership agreement with Mr. Timothy Henneberry. Nahminto has agreed to maintain this claim in good standing for the owners for future considerations towards a possible option/joint venture agreement for that claim. The western and south

western boundaries of the cell mineral claims overlap a series of no staking reserves and clusters of mainly forfeited crown granted mineral claims along the shores of Henderson Lake and Uchucklesit Inlet.

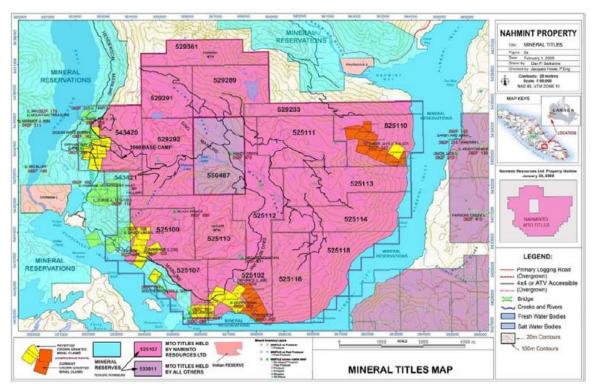


Figure 2. Claim map

The mineral rights to the Three Jays and Monitor groups of crown granted mineral claims were purchased outright by Nahminto from Pacific Coast Copper Ltd. in late 2007, and consist of two separate groups of 15 crown grants which cover the former Three Jays and Monitor past producers of copper, gold and silver, and are surrounded and overlapped by the 18 contiguous cell mineral claims of the Nahmint Property. Fourteen of the crown grants are registered to Karen Woo of Vancouver, B.C., and held beneficially for Nahminto. The 15th crown grant (Monitor #2) is registered to Dana McClure, who may be deceased, and cannot be located. This crown grant has been allowed to forfeit by failure to make the 2008 and subsequent tax payments to the crown, and the mineral rights have reverted to Nahminto's overlying cell mineral claim 525102).

Mineral tenure lists appear in Tables 1 and 2 below:

**Table 1 – Crown Granted Mineral Claims** 

S.I.D. #	District Lot #	Registered Owner	Claim Name	P.I.D. #	Area (ha.)
200280	519	Nahminto c/o K.Woo	Southern Cross	009-405-950	14.9
200310	520	Nahminto c/o K.Woo	Pacific	009-405-976	8.8
200440	521	Nahminto c/o K.Woo	Norway	009-405-992	18.2
200600	523	Nahminto c/o K.Woo	Ballarat	009-406-018	13.4
200730	524	Nahminto c/o K.Woo	Three Jays	009-406-026	14.2
200860	525	Nahminto c/o K.Woo	Three Jays No.2	009-406-042	13.6
200990	526	Nahminto c/o K.Woo	Three Jays No.3	009-406-069	20.4
201060	527	Nahminto c/o K.Woo	Blue Jay	009-406-077	9.5
201190	528	Nahminto c/o K.Woo	Uncle Sam	009-406-093	12.7
201220	529	Nahminto c/o K.Woo	John Bull	009-406-115	7.7
201350	530	Nahminto c/o K.Woo	Nahwitka	009-406-140	13.8
201480	531	Nahminto c/o K.Woo	Nahwitka No.1 Fraction	009-406-174	0.2
201510	532	Nahminto c/o K.Woo	Monitor No.1	009-406-123	18.7
201640	533	Nahminto c/o K.Woo	Monitor No.1 Fraction	009-406-131	6.0
201770	534	Dana McClure	Monitor No.2	009-406-182	16.2
Totals	15 crown grants				188.3

Table 2 – Cell Mineral Claims

Tenure Number	Tenure Type	Claim Name	Registered Owner (%)	Map Number	Good To Date	Status	Area (ha.)
525100	Mineral	TJM1	209027 (100%)	092F	June 7, 2012	GOOD	529.358
525102	Mineral	TJM2	209027 (100%)	092C	June 7, 2012	GOOD	529.885
525107	Mineral	TJM3	209027 (100%)	092C	June 7, 2012	GOOD	445.079
525109	Mineral	TJM4	209027 (100%)	092F	June 7, 2012	GOOD	529.681
525110	Mineral	TJM5	209027 (100%)	092F	June 7, 2012	GOOD	529.636
525111	Mineral	TJM6	209027 (100%)	092F	June 7, 2012	GOOD	529.367
525112	Mineral	TJM7	209027 (100%)	092F	June 7, 2012	GOOD	529.555
525113	Mineral	TJM8	209027 (100%)	092F	June 7, 2012	GOOD	529.497
525114	Mineral	TJM9	209027 (100%)	092F	June 7, 2012	GOOD	529.594
525116	Mineral	TJM10	209027 (100%)	092C	June 7, 2012	GOOD	445.058
525118	Mineral	TJM11	209027 (100%)	092C	June 7, 2012	GOOD	529.746
529233	Mineral	TJM12	209027 (100%)	092F	June 7, 2012	GOOD	296.387
529289	Mineral	TJM13	209027 (100%)	092F	June 7, 2012	GOOD	465.683
529291	Mineral	TJM14	209027 (100%)	092F	June 7, 2012	GOOD	338.679
529292	Mineral	TJM15	209027 (100%)	092F	June 7, 2012	GOOD	508.230
529361	Mineral	TJM16	209027 (100%)	092F	June 7, 2012	GOOD	338.600
543420	Mineral	TJM17	209027 (100%)	092F	June 7, 2012	GOOD	508.166
543421	Mineral	TJM18	209027 (100%)	092F	June 7, 2012	GOOD	105.899
Totals	18 claims						8218.100

All of the known mineralized zones and mine workings are located either on the 14 owned crown granted mineral claims, on the 19 overlying cell mineral claims, or on the adjacent no staking reserves as described in the History and Mineralization sections. The surface rights over most of the 15 crown granted mineral claims and the 18 cell mineral claims are held by the B.C. government as crown land, but there are some areas with timber licences held by logging companies, some small areas along the shore of Uchucklesit Inlet held as private property by individuals, and some foreshore leases.

Similar to elsewhere in British Columbia, no permit is required for non-mechanized exploration, but a valid permit is required to undertake any mechanized work on the Nahmint Property. Such permits are issued by the Inspector of Mines at the Victoria based Southwest Regional Office, Health and Safety Branch, Mining and

Minerals Division, B.C. Ministry of Energy Mines and Petroleum Resources. This requires the submission of a Notice of Work and Reclamation Program Application, which takes approximately one month to process, but commonly takes longer due to delays in receiving referral responses from local First Nations Bands. In addition, owners of the surface rights of the private land covering a minor portion of the Nahmint Property must be notified in advance of any mining activity on their land, and fairly compensated for any and all damages inflicted to the surface rights, by the mineral tenure owner.

# 5 CLIMATE AND PHYSIOGRAPHY

Topographically, the property resembles a squat dome, and topography consists of terraced, flat-topped mountains incised by steep cliffs and valleys with fast-flowing, often seasonal creeks and rivers fed by small lakes. Elevations range across the property from sea level to about 1000 metres. Overburden on the property consists of thin, poorly developed soils with local pockets of thicker glacial till, and rock exposure averages about 10%. Vegetation is dense, second growth coniferous forest and fast growing alders along variably overgrown logging roads, with occasional patches of old growth hemlock, balsam, fir and cedar. Abundant fresh water sources occur across the property, available through appropriate permits for exploration or mining purposes.

The climate in the area is a temperate coastal rain forest, with warm dry summers, and very wet conditions the rest of the year. Winters are relatively mild with moderate snowfall accumulations at higher elevations that linger along north-facing slopes well into the spring. Exploration is possible year round over most of the Nahmint property.

# 6 HISTORY AND PREVIOUS WORK

Work in the area of the Nahmint property dates back to the late 1890's with the discovery of mineralization at many locations along the nearby portions of the Alberni Inlet, Uchucklesit Inlet and Henderson Lake. Considerable exploration and development work was carried out on the property in the early 1900s, particularly on the Three Jays area, including underground workings on twelve different occurrences, each representing a separate cluster of skarn deposits. Most of the work was suspended by the onset of World War 1, and only sporadic exploration has occurred on some of the locations since then. Documented assessment work consists of six reports of exploration work completed prior to 1990 on isolated portions of the Nahmint Property by different operators who staked claims over reverted crown granted mineral claims and/or acquired titles to crown

grants. Since 2005, five additional technical assessment reports submitted by Jacques Houle document both preliminary and systematic work programs.

There are 16 Minfile occurrences located on the Nahmint property plus one (Handy Creek) located on claim (550478) being maintained by Nahminto for future option considerations. The airborne survey covered only one of these occurrences, the Three Jays which is summarized below.

The Three Jays (MINFILE 092F140) was also called Hayes or Nahmint during its exploration and production history between 1898 and 1947, and is by far the most developed area on the Nahmint Property. Seven copper skarn deposits were discovered over a strike length of 1500 metres from the west shore of the Alberni Inlet along an east-west orientation, plus a disseminated copper zone, on the contiguous North Pole, Southern Cross, Pacific, Norway, Viking (forfeited), Ballarat, Three Jays No.2, Three Jays, Three Jays No.3 and Blue Jay (forfeited) crown granted mineral claims, which are held by Karen Woo beneficially for Nahminto. The deposits and the remaining crown grants are either on or surrounded by cell mineral claim 525100 on the northeast portion of the Nahmint Property. The deposits were explored by almost 1 km. of underground workings, including three tunnels, two shafts, and several trenches, plus an aerial tramway was installed to convey ore from the upper workings. From 1898 to 1902, 1,981 tonnes of direct shipping ore was sent to the Tacoma smelter, averaging 7.5% copper, 0.97 g/t gold and 38 g/t silver, with several stockpiles of mineralized material remaining on surface.

For Nahminto Resources Ltd.'s three 2007 preliminary work programs, funded in part by Discovery-Corp Enterprises Inc., Jacques Houle and Mr. Herb McMaster took 38 rock samples in the Three Jays, Monitor, Sunshine, Ocean Wave/Orphan Boy areas, and also 11 orientation stream moss mat samples across the south-central portion of the Nahmint Property. These efforts are documented in ARIS reports 29252, 29574 and 29660.

In 2008, Nahminto conducted two systematic work programs. The first, completed in the summer of 2008 was funded in part by Urastar Energy Inc. and in part by Nahminto and collected 45 rock samples and 44 stream moss mat samples across most of the Nahmint Property. The second was funded by Torch River Resources Ltd and completed during the fall of 2008. During this program Mr. Andris Kikauka, P.Geo., took 5 rock samples, 90 soil samples and 173 ground magnetic readings in the Three Jays area of the property. The two work programs are documented in ARIS report 30799.

For Torch River's spring-summer 2009 work program, Mr. Kikauka completed three phases of field work in March, May and August of 2009, targeting known skarn mineralization in four main areas on the Property. These areas consisted of Three Jays/Viking/Pacific, Monitor/Happy John, Ocean Wave/Orphan Boy, and Sunshine/Saucy Lass. Mr. Kikauka took 659 ground magnetic readings, 236 soil samples and 23 select outcrop and/or float rock chip samples. All data was documented in ARIS report 31248.

During the fall 2009 work program, a one week field work program targeted primarily the Three Jays area and the creek outflows along the eastern side of the Nahmint Property. During early October, 21 outcrop or float rock samples, 49 soil samples and 15 stream moss mat samples were taken. This work program is also documented in ARIS report 31248.

The 2010 work program completed by Nahminto included a 7 day work program in early July that targeted the Silver King, Happy John, Monitor Area in the south-central portion of the property for possible tellurium-bearing skarn mineralization. The program consisted of GPS-grid based geological mapping at a 1:2000 scale with detailed mapping at selected rock sample sites, gathered 137 soil samples and 43 rock samples, taken primarily from mineralized exposures in road-cuts, open-cuts, adits or stockpiles. The results from this program were documented in a 43-101 compliant technical report by Jacques Houle, dated October 15, 2010

A summary of the assessment work reports are listed below in Table 3.

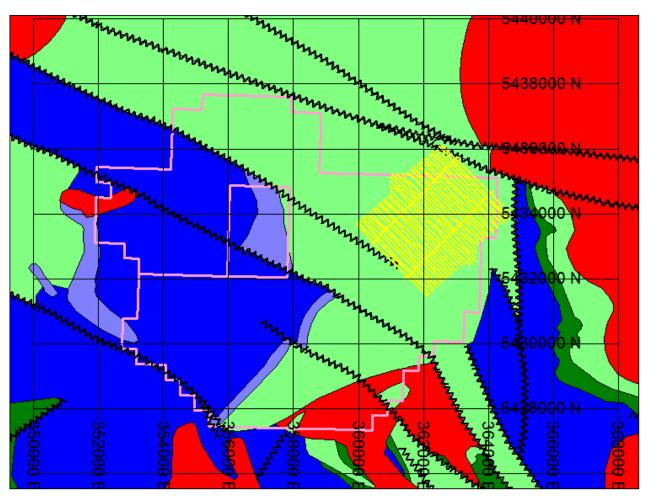
**Table 3 – Assessment Work Summary** 

Year	ARIS Report	Company	Work Program
1965	00777	Alberni Mines Ltd.	Geological and ground magnetic geophysical surveys on the Orphan Boy claim and occurrence
1969-70	02856	Nootka Explorations Ltd.	Geological and geochemical surveys on the Henderson Lake claims (covered the area of Torse, Ocean Wave, Ivanhoe, Rainy Day, Orphan Boy and J&S occurrences)
1980	08286	Island Mining and Exploration Co. Ltd.	Prospecting, geological and geochemical surveys on the IME claims (including crown grants and covering the Three Jays occurrence)
1980	08898	Allan Ingleson	Prospecting on the Rain Day claims (covering the Rainy Day and possibly J&S occurrences)
1986	15199	Chelan Resources Inc.	Geological, geochemical and ground geophysical (magnetics and electromagnetics) surveys on the Liquid Sunshine Property (covering Happy John, Silver King, Southern Cross occurrences)
1989	19484	Nitro Resources Ltd.	Geochemical sampling on the Liquid Sunshine Property (covering Happy John, Silver King and Southern Cross occurrences)
2007	29252	Discovery-Corp. Enterprises Inc.	Prospecting, geological mapping, rock sampling and geochemistry on portions of the Nahmint Property
2007	29574	Nahminto Resources Ltd.	Prospecting, geological mapping, rock and stream moss mat sampling on portions of the Nahmint Property
2008	29660	Nahminto Resources Ltd.	Prospecting, rock, soil, stream, moss mat sampling geochemistry on portions of the Nahmint Property
2008	30799	Torch River Resources Ltd. Others	Prospecting, rock, soil, stream moss mat sampling geochemistry and ground magnetics on portions of the Nahmint Property
2009	31248	Nahminto Resources Ltd.	Prospecting, rock, soil, stream moss mat sampling, geochemistry and ground magnetics on portions of the Nahmint Property

# 7 GEOLOGY

### 7.1 Regional Geology

The Nahmint property is situated near the south end of the Wrangellian Terrane of the Insular Belt. The region is underlain by four, thick discrete volcano-sedimentary sequences ranging in age from Palaeozoic to Cretaceous, which have been variably intruded by up to four intrusive suites each associated with major tectonic events and related folding and faulting. The oldest sequence in the area belongs to the Devonian-Permian Sicker Group, which does not outcrop on the property. The middle two sequences consist of the Triassic-Jurassic Vancouver and Bonanza Groups, which are described in detail below and cover most of the property. The youngest sequence belongs to the Cretaceous Nanaimo Group, which is entirely clastic sediments and does not outcrop on the property. The only intrusive rocks known to outcrop on the property are batholiths, stocks and dikes of the Jurassic Island Intrusive Suite, but Triassic Mount Hall and Tertiary Mount Washington suite intrusives occur in the area. The Triassic-Jurassic Vancouver and Bonanza Groups were reclassified in 2007 by G. Nixon of the B.C. Geological Survey, based on his recent work on northern Vancouver Island. The Triassic Karmutsen Formation of the Vancouver Group consists of extensive, pillowed to brecciated volcanic flows with thin inter-flow limestones and porphyritic volcanics in the upper part of the unit. Overlying the Karmutsen is the massive to bedded Triassic Quatsino Formation limestone, also of the Vancouver Group. The base of the overlying Bonanza Group is the Triassic Parson Bay Formation, consisting of volcanic breccias and tuffs overlain by bedded limestone, siltstone, mudstone and shale. These are overlain by the Jurassic LeMare Lake subaerial volcanics, tuffs and minor sedimentary rocks, the top of the Bonanza Group. These volcano-sedimentary sequences are intruded by the Early Jurassic Island Intrusives, consisting of a batholith or sill of granodiorite and related subintrusive porphyritic stocks and dikes.



B. C. Geology Map Figure 3. Claim Outline (Pink border) – Airborne Survey Grid (yellow lines)

#### Legend for B.C. Geology Map

### Geology Unit EMJIgd - Mesozoic - Island Plutonic Suite granodioritic intrusive rocks EOIM - Cenozoic - Mount Washington Plutonic Suite quartz dioritic intrusive rock ■ IJBca - Mesozoic - Bonanza Group calc-alkaline volcanic rocks ■ IPBS - Paleozoic - Buttle Lake Group - St Mary's Lake Formation coarse clastic s ☐ LTrMH - Mesozoic - Mount Hall Gabbro gabbroic to dioritic intrusive rocks MPnBFch - Paleozoic - Buttle Lake Group - Fourth Lake Formation chert, siliceous muDSiD - Paleozoic - Sicker Group - Duck Lake Formation basaltic volcanic rocks muTrVs - Mesozoic - Vancouver Group undivided sedimentary rocks PnPBM - Paleozoic - Buttle Lake Group - Mount Mark Formation limestone bioherm/r PzJWg - Paleozoic to Mesozoic - Westcoast Crystalline Complex intrusive rocks, u uDSiM - Paleozoic - Sicker Group - McLaughlin Ridge Formation volcaniclastic roc uDSiN - Paleozoic - Sicker Group - Nitinat Formation calc-alkaline volcanic rock uKN - Mesozoic - Nanaimo Group undivided sedimentary rocks uTrVK - Mesozoic - Vancouver Group - Karmutsen Formation basaltic volcanic rocks uTrVQ - Mesozoic - Vancouver Group - Quatsino Formation limestone, marble, calca

### 7.2 <u>Local Geology</u>

The government geological mapping shows the area covered by the airborne survey as being underlain entirely by a NW trending band of upper Triassic Karmutsen Formation volcanics. The Three Jays deposit is reportedly a cluster of 7 skarn type deposits, located near the Karmutsen volcanics and Quatsino limestone contact. There are no geological mapped outcrops of the Quatsino in the area...

In a 1967 report D.C. Malcolm states the Three Jays area cover the crest of a major anticline and although the geology is complex, outcrop areas show relatively gentle attitudes with local folds and faults. He also reports that the layered rocks are intruded by granodiorite and feldspar porphyry dikes, sills and small plugs.

In a 1980 report H.J. Wahl states the rocks observed on the claims appear to be more dacitic or andesitic in composition. They show effects of faulting by way of variable fracture zones, silicification and swarms of narrow 1-5 mm wide milky quartz veins and occasional calcite veinlets.

# 8 GEOPHYSICAL TECHNIQUES

#### 8.1 Magnetic Survey Method

Total Magnetic Intensity measurements are taken along survey traverses (normally on a regular grid) and are used to identify metallic mineralization that is related to magnetic materials (normally magnetite and/or pyrrhotite). Magnetic data are also used as a mapping tool to distinguish rock types, identify faults, bedding, structure and alteration zones.

#### 8.2 <u>VTEM Survey Method</u>

The VTEM system developed by Geotech Ltd. is a helicopter borne Time Domain Electromagnetic system designed to detect and discriminate between moderate to excellent conductors using a low base frequency, long pulse width, and derived B-Field. The B-Field is derived from integrating data collected at 96 kHz over the entire

waveform. The in-loop transmitter – receiver geometry provides a symmetric response which allows for easy identification of the conductor location and interpretation of conductor dip.

Analysis of the EM decay provides a measure of the bulk conductivity/resistivity of the underlying half-space. Conductors are apparent as localized anomalies superimposed over the background response.

### 9 FIELD WORK AND INSTRUMENTATION

Details concerning the survey logistics and instrumentation provided by Geotech Ltd. are included in Appendix 3 of this report.

# 10 DATA PROCESSING

Basic data processing of both the magnetic and VTEM data was completed by Geotech Ltd.

The processing of the magnetic data involved the correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along traverse lines. A micro-levelling procedure was applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

The corrected magnetic data was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 25 metres at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

A three stage digital filtering process was used to reject major sferic events and to reduce system noise. Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 1 second or 15 metres. This filter is a symmetrical 1 sec linear filter.

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for the B-field Z component and dB/dt responses in the Z and X components.

The processed data was provided in a geosoft formatted database.

Additional filtering of the magnetic data included reduction to the pole and calculated vertical gradient. Magnetic data was examined in line profile and stacked profile formats. Several 3D image processing techniques, including shadow enhancement and draping over topography were utilized for analysis.

The magnetic data was also reformatted for input to a 3D inversion.

#### **10.1 Inversion Programs**

3D inversion programs are designed to produce voxel models showing one possible subsurface distribution of the relevant physical parameter that would produce observed field data. Inversion programs are available to analyze magnetic, gravitational, resistivity, electromagnetic and induced polarization data.

The inversion programs are generally applied iteratively to, 1) evaluate the output with regard to what is geologically known, 2) to estimate the depth of detection, and 3) to determine the viability of specific measurements.

The output voxel models are viewed in one of several 3D viewing programs that allow the user to overlay the results from several different inversions with topographic, geological, geophysical, drilling and other relevant data. The models can be viewed from infinite angles and perspectives and manipulated to display specific isosurfaces or ranges of thresholds. Models can be cut and sliced to provide cross-section and plan views.

The magnetic data for this survey was analyzed using the mag3d program, one of a suite of 3D inversion programs developed by a consortium of major mining companies under the auspices of the UBC-Geophysical Inversion Facility.

# 11 DATA PRESENTATION

The following 1:10000 scale plan maps were created by Geotech Ltd. to present the geophysical data. These maps are provided as digital files, in both pdf and Geosoft Oasis Montaj map formats. Copies of these files are included with the digital copy of this report.

- 11261\_10k\_bfield B-Field Stacked Profiles over TMI colour contour map.
- 11261\_10k\_dbdt dB/dt Stacked Profiles.
- 11261\_10k\_SFz26 dB/dt Z component (channel 26) colour contour map.
- 11261\_10k\_TauSFz dB/dt Calculated Time Constant (Tau) colour contour map with contours of Calculated Vertical Derivative of TMI.
- 11261\_10k\_TMI Total Magnetic Intensity colour contour map.

The results from additional processing and image enhancement techniques are included as figures with the text of this report. Digital copies of these products are provided as MapInfo formatted tables.

The mag3d voxel model is provided in two formats: the native UBC inversion format, suitable for viewing in the meshtools3D viewer and vtk format, suitable for viewing in the Paraview and Mayavi viewers. Formats for several other 3D viewing software packages are available.

# 12 <u>Discussion of Results</u>

#### 12.1 <u>Interpretation of Magnetic Data</u>

The magnetic data was analyzed in four different manners: as color and shadow enhanced contour images, stacked profiles, topography draped images and through an inversion process which produced a 3D voxel model showing the subsurface distribution of the interpreted magnetic susceptibility property. Each technique provides a different insight that assists in the interpretation.

There are three levels of magnetic data available for analysis in this area: high altitude government regional data, small areas of ground coverage and this latest airborne survey.

The regional government data covers the entire claims area. It was gathered on 800m spaced lines and flown at a nominal terrain clearance of 305m. This magnetic data reflects the NW-SE strike that dominates the regional geology.

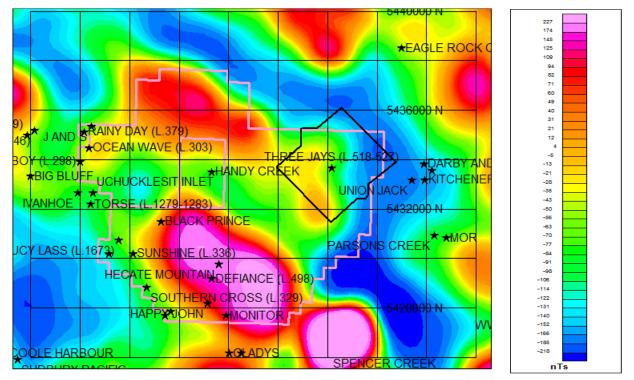


Figure 4. Regional Survey - Residual Magnetic Intensity False Colour Contour Map High Altitude Government Survey - Claim Outline (Pink border) – Geotech Airborne Survey Outline (black border) – Minfile Occurrences

The southwestern portion of the area covered by the Geotech survey is underlain by a relatively weak segment of one of the regional NW trending magnetic highs that cross the area. The northerly trending magnetic low along the eastern side of the claim block coincides with Alberni Inlet and is likely caused by the increase in distance to the underlying rocks associated with the water depth of the inlet. Of particular interest in this data is the small magnetic high in the western part of the Geotech survey area that forms an easterly elongated lobe on the side of the larger NW trend. This anomaly is more clearly defined in the Geotech data and appears to be proximal to the mineralization associated with the Three Jays deposit. A similar anomaly noted approximately 8 km to the west, in the NW corner of the claim group, is proximal to the Rainy Day, J and S, Ocean Wave and Orphan Boy Minfile occurrences and may represent a similar geological environment.

The Geotech airborne survey data maps the same general trends evident on the high altitude government survey but reveals significantly more detail. The most dominant

feature is a magnetic high that forms an east-west elongated body, some 1800m long and 500m across immediately north of the Three Jays deposit. This anomaly in interpreted as reflecting an intrusive plug, extending from near surface to depths of greater than 500 metres. This signature also has some of the characteristics of a porphyry system.

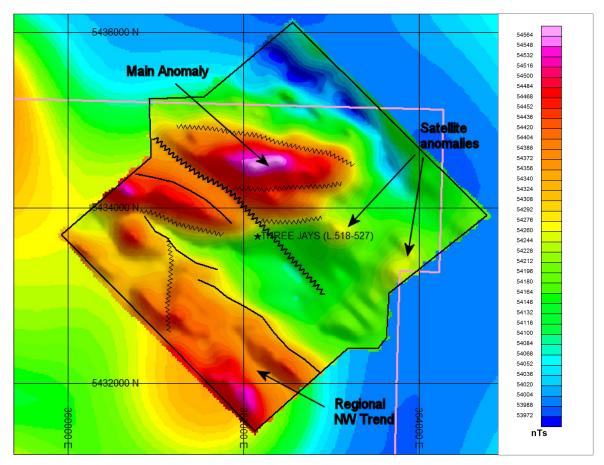


Figure 5. Total Magnetic Field Intensity False Color Contour
Geotech Survey - Shadow Enhanced from NE -background of Regional High Altitude Government Survey
- Claim Outline (Pink border) - Minfile Occurrences - Interpreted faults and contacts

Sharp gradients along both the northern and southern flanks of this main anomaly are indicative of steep, near vertical sides, possibly reflecting east-west faults. One of these interpreted faults trends directly through the underground workings of the Three Jays deposit.

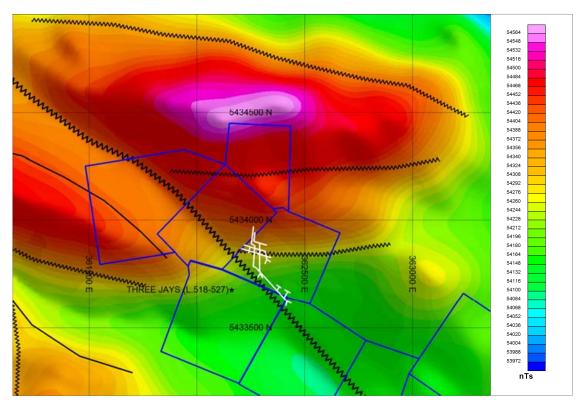


Figure 6. Total Magnetic Field Intensity False Color Contour
Geotech Survey - Shadow Enhanced from NE - Three Jays deposit area – Crown Grant outlines (Blue) – estimated location of underground workings (white).

The southwestern flank of the anomaly coincides with a NW striking topographic low (drainage) that likely reflects a fault.

A similar, but lower amplitude magnetic anomaly is mapped immediately southwest of the main anomaly and is considered open to the west.

A couple of weak magnetic highs are noted in the NE corner of the survey block. One is located 1 km east of and downslope from the Three Jays deposit and the other is located at the SE ends of the survey lines, along the shores of Alberni Inlet. These satellite anomalies are relatively low amplitude and broad features and likely reflect localized, near surface bodies. The anomaly along the shore of Alberni Inlet roughly coincides with the Pacific showing.

The regional magnetic high paralleling the SW edge of the survey block is seen to be comprised of several narrow, NW striking lineations in the Geotech data. Breaks and discontinuities along this trend could be reflecting northerly striking faults.

Application of a reduction to the pole (RTP) algorithm compensates for the asymmetry of the magnetic response due to the inclination of the earth's magnetic field.

A display of this RTP processed data highlights the weak lobes along both the northern and southern flanks of the main anomaly. These could be reflecting alteration effect along the edges of the main body.

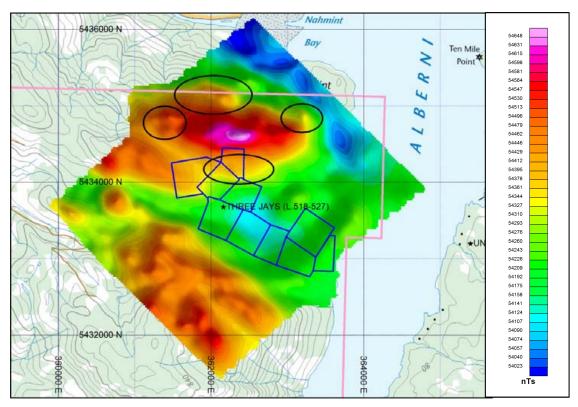


Figure 7. Reduced to the Pole False Color Contour Map
Geotech Survey - Shadow Enhanced from SE - Claim Outline (pink) - Crown Grants (blue) Minfile Occurrences - Interpreted side lobes to main anomaly (black ellipses)

When viewing the magnetic data as a color image draped over topography additional patterns become evident. This display clearly shows how the main magnetic high differs from others in the area. The bulk of the magnetic highs are seen as covering the south to southwest facing flanks along the topographic ridges. Analysis suggests these responses are tracing relatively thin and nearly horizontal layers while the major high to the north of the Three Jays reflects a near vertically oriented body.

This display also shows how the major NW striking lineament that controls the southwestern edge of the main anomaly is also reflected as a prominent topographic low. This supports the interpretation that this linear reflects a major fault. The NE striking linears formed at the edges of the main anomaly cross topographic features.

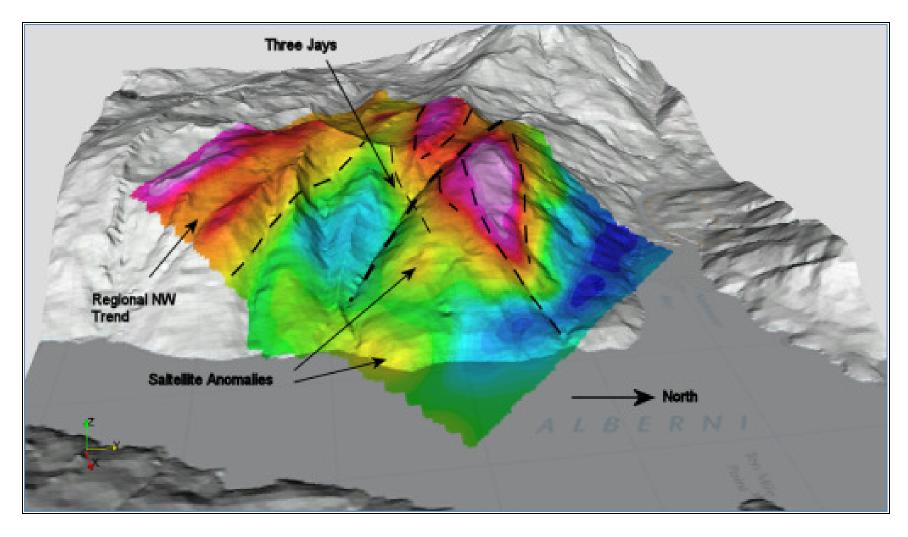


Figure 8. Topo draped Total Magnetic Field Intensity False Color Contour Map Geotech Survey – View from east – Interpreted faults and contacts

A profile analysis of the Geotech magnetic data does not reveal any significant features that are not evident in the plan contour maps of the data. This is attributed to the relatively high terrain clearance (~100m) of the sensor, which acts as a low pass filter on the data.

This display does support the interpretation of weak lobes along the sides of the main anomaly. These lobes could be indicative of alteration effects at the edges of the main body.

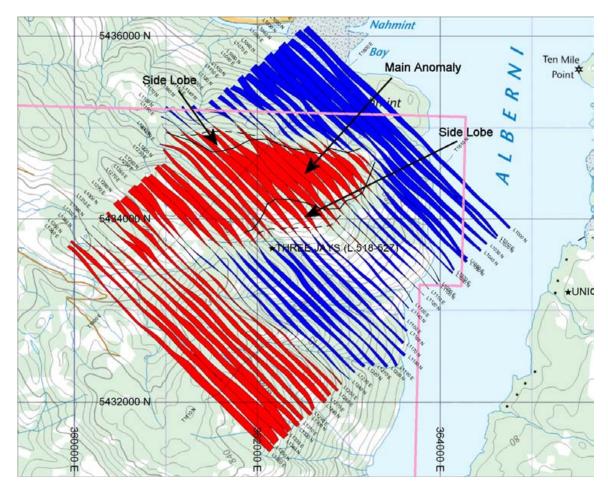


Figure 9. Stacked Magnetic Profile Map
Geotech Survey – Survey line = 54,250 nTs – Vertical Profile Scale = 2 nTs/ground metre (200 nTs between survey lines) – red fill indicates positive response.

First vertical derivative (1VD) and calculated vertical gradient (CVG) techniques serve to enhance the high gradient areas of the magnetic response, which typically reflect contacts and structural trends. Analysis of the CVG data reveals the same NW orientation of the main magnetic trends but also highlights a large number of short strike length lineations predominantly oriented east-west. These trends likely reflect internal structures within the NW oriented lithological units. This display suggests the main magnetic anomaly may contain three NE oriented structural axes. These could be interpreted as reflections of faulting.

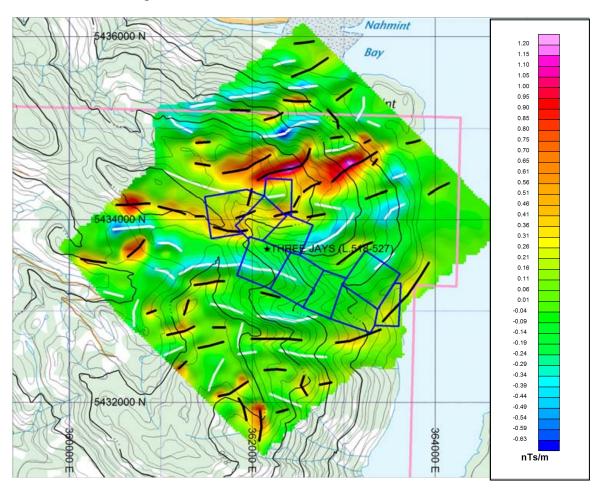


Figure 10. Calculated vertical gradient colour contour map
Geotech Survey – Interpreted positive (black) and negative (white) gradient trends - Claim Outline (pink)
– Crown Grants (blue)

This interpretation is supported by the 3D inversion completed on the magnetic data. The resulting model suggests the main magnetic anomaly sits above a steep, southerly dipping intrusive type body that extends to at least 500m depth below surface. This body is outlined by the 0.01 to 0.02 SI isosurfaces. It contains higher susceptibility pods (0.025 SI) in the near surface, suggesting the body is inhomogeneous. It is likely that similar pods are present at depth but cannot be resolved as the sensitivity of the inversion decreases with depth.

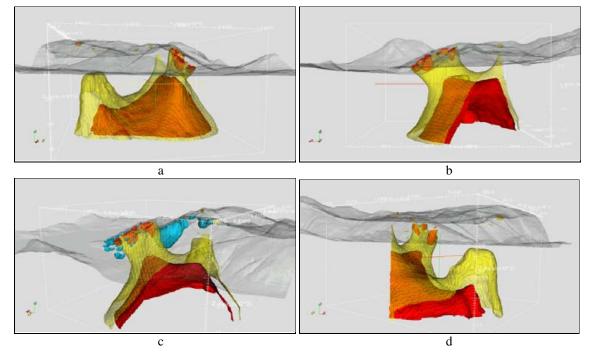


Figure 11. Mag3d Inversion Model - Paraview 3D Isosurface Displays Red = 0.025 SI, (looks orange through yellow surface), Yellow = 0.02 SI, Blue = -0.01 SI – Side views from east (a), north (b), northwest (c), west-southwest (d). Shows near vertical to steep southerly dipping and westerly plunging pipe-like body.

A slightly lower susceptibility isosurface (0.005 SI) reflects weaker high magnetic responses including the lobe along the southeastern edge of the main body and the two satellite highs downslope to the east. This display shows these bodies to be near surface features with limited depth extent.

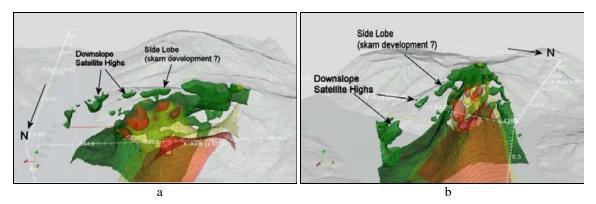


Figure 12. Mag3d Inversion Model - Paraview 3D Isosurface Displays – (clipped to remove south portion) Red = 0.025 SI, (looks orange through yellow surface), Yellow = 0.02 SI, Green= 0.005 SI – Elevated views from north (a), northeast (b). Shows weak magnetic high responses along southern edge of main body and downslope to the east.

The weak magnetic high along the southern edge of the main anomaly could be reflecting a zone of skarn development. While the high frequency responses on the ground surveys show the magnetite development is likely confined to very narrow veins, a large enough cluster of these features could produce the weak side lobe evident in the airborne data. A cross-section running N-S through the inversion model reveels a weak magnetic anomaly immediately north of the Three Jays deposit and several similar responses on the north side of the main anomaly.

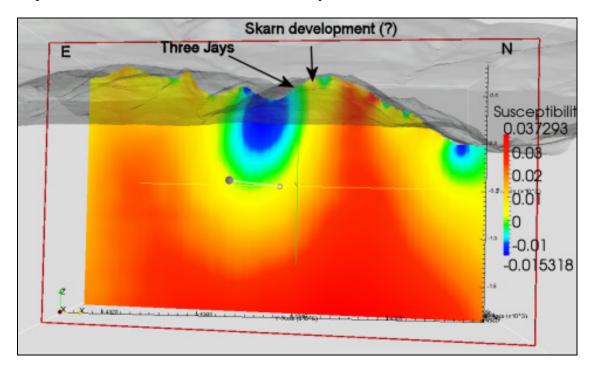


Figure 13. Cross-section through Mag3D Inversion Model Shows weak magnetic anomaly between the Three Jays deposit and the main magnetic anomaly.

The magnetic high anomaly along the western edge of the survey grid, which may be reflecting an extension of the interpreted intrusion, another skarn or part of the NW trending regional lithology, is not fully delineated and the inversion model is not considered reliable. Additional surveying to the west will be required to properly delineate and interpret this response.

The inversion model shows the northwesterly trending magnetic high along the southwestern lines reflects surface layers, similar to the interpretation based on the topo draped plan maps.

Three small ground magnetic surveys, identified as the Three Jays, Viking and Pacific grids have been conducted in the area. These surveys were conducted on north-south oriented survey lines, spaced 50m apart and total field magnetic intensity readings were taken at 12.5 metre intervals. The data from these surveys is presented below as stacked profile maps. All three surveys map high frequency magnetic variations that are not apparent on either the regional or Geotech airborne surveys. These responses are indicative of very narrow, near surface high susceptibility bodies and closely match the expected signature from magnetite lenses as described in the historical literature.

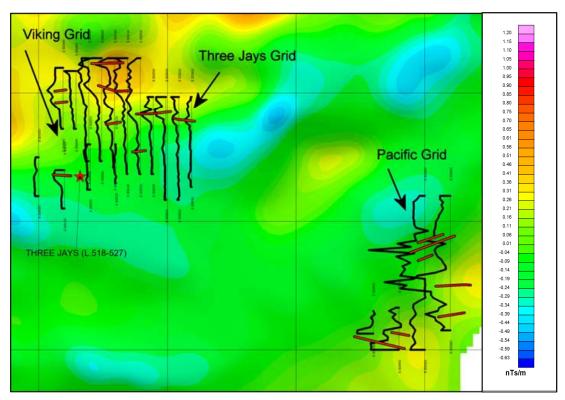


Figure 14. Stacked Profile Map – Ground Magnetic Surveys
Background CVG color contour map – interpreted magnetic spikes (localized magnetite skarn)

#### 12.2 <u>Interpretation of VTEM Data</u>

The VTEM survey data was reviewed by Nahminto and it was determined that no significant conductive responses, other than the effects of the salt water in Alberni Inlet were mapped. No further study of this data was requested.

### 13 CONCLUSIONS & RECOMMENDATIONS

The Three Jays area of the Nahmint property was surveyed with a low level airborne magnetometer and VTEM survey in September, 2011. The VTEM data was analyzed by Nahminto and no significant conductors were interpreted. The magnetometer data has revealed complexity and structures in the Three Jays deposit area that was not apparent on the high altitude airborne magnetic and regional geological mapping. A limited amount of ground magnetic surveying has shown even greater detail is available through that technique.

This survey mapped a strong magnetic high anomaly immediately north of the Three Jays deposit that likely originates from an east-west elongated, near vertically oriented intrusive body. One of several weak magnetic lobes mapped along the flanks of this body coincides with the magnetite skarn hosting the Three Jays deposit.

These results should be reviewed by geologists familiar with the area and correlated with historical exploration data. Geological prospecting and mapping is recommended to identify the source of the strong magnetic high which is expected to be at or close to the ground surface. This process will benefit from the logging operations that have recently opened up several new roads across this area. It has been reported that rock sampling has found quartz eye porphyry intrusion in the area. These efforts should be aimed towards determining whether the magnetic body itself represents a potential mineral target.

Ground magnetic surveying should be run, initially across the subtle side lobes to the main magnetic anomaly, in order to determine whether they are related to narrow magnetite rich lenses similar to those associated with the Three Jays deposit. Contingent on favorable results, this surveying should be extended to cover the entire perimeter of the main anomaly.

The magnetic high to the west of the main anomaly is only partially defined and requires additional surveying. This anomaly may represent a faulted off segment of the

interpreted intrusion, another skarn occurrence or be part of a regional, NW striking lithological unit.

Two weak magnetic anomalies located downslope to the east of the Three Jays deposit are likely reflecting near surface bodies with limited depth extent. The easternmost of these anomalies is located along the shores of Alberni Inlet and coincides with the Pacific showing. Geological prospecting and mapping is recommended to determine the source of these anomalies. Contingent upon these results, more detailed ground magnetic surveying may be warranted.

Low-level airborne magnetometer surveying is recommended to map other prospects in claim group. Based on the lack of an EM response from this latest survey, future surveys should be completed without the VTEM component. This should result in a less expensive survey and allow for a lower terrain clearance (50 metres maximum) and produce more detailed mapping. Target areas that have had extensive clear cut logging should be surveyed with radiometrics as well.

IP is likely to be the most effective geophysical tool to directly map sulphide mineralization (either skarn or porphyry). As this prospect matures, 3D IP surveying should be considered as a viable exploration option.

Respectfully submitted,

Per Geosci Data Analysis Ltd.



E. Trent Pezzot, B.Sc., P.Geo, Geophysics, Geology

# 14 APPENDIX 1 – STATEMENT OF QUALIFICATIONS – E. TRENT PEZZOT

- I, E. Trent Pezzot, of the city of Surrey, Province of British Columbia, hereby certify that:
  - 1) I graduated from the University of British Columbia in 1974 with a B.Sc. degree in the combined Honours Geology and Geophysics program.
  - 2) I have practised my profession continuously from that date.
  - 3) I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia.
  - 4) I have no interest in Nahminto Resources Ltd. or any of their subsidiaries or related companies, nor do I expect to receive any.



Signed by:

E. Trent Pezzot, B.Sc., P.Geo.

Geophysics/Geology

# 15 APPENDIX 2 – COST BREAKDOWN

The following cost breakdown was provided by Nahmint Resources Ltd.

2011 Cost Statement for Nahmint Property					
Exploration Work type	exploration Work type Comment Days				Totals
Personnel (Name)* /					
Position	Field Days (list actual days)	Days	Rate	Subtotal*	
Ian Serbu / Crew Chief	04-Sep-11		\$0.00	\$0.00	
Rick Gotuzzo / System					
Operator	04-Sep-11		\$0.00	\$0.00	
Brook Pennington / Pilot	04-Sep-11		\$0.00	\$0.00	
Darren Tuck / Project			40.00	40.00	
Manager	office		\$0.00	\$0.00	
Neil Fiset / Data QA / QC	office		\$0.00	\$0.00	
			ı	\$0.00	0.00
	List Personnel (note -				
Office Studies	Office only, do not include field days				
Literature search	neid days		\$0.00	\$0.00	
			\$0.00	\$0.00	
Database compilation			\$0.00	\$0.00	
Computer modelling	<b>A</b> 1 0 ii 1		400.70	<b>*</b>	
Reprocessing of data	Auracle Geospatial	2	\$90.72	\$181.44	
General research	Jacques Houle, P.Eng.	1.3	\$887.04	\$1,156.15	
Report preparation	Trent Pezzot, P.Geo.	10	\$1,120.00	\$11,200.00	
Other (airborne survey		40	<b>*</b> 400 00	<b>*</b> 4 * 0 * 0 * 0 * 0 * 0 * 0 * 0 * 0 * 0 *	
consulting)	James Simpson	12	\$400.00	\$4,800.00	<b></b>
				\$17,334.59	\$17,334.59
Airborne Exploration	Line Kilometres / Enter		<u> </u>	T	T
Surveys	total invoiced amount				
Aeromagnetics	121.1		\$0.00	\$10,732.40	
Radiometrics	12111		\$0.00	\$0.00	
Electromagnetics	121.1		\$0.00	\$10,732.40	
Gravity	121.1	<u> </u>	\$0.00	\$0.00	
Digital terrain modelling			\$0.00	\$0.00	
Other (specify)	mob/demob, fuel	<del>                                     </del>	\$0.00	\$9,276.02	
Other (Specify)	mob/demob, luel		φυ.υυ	\$30,740.82	\$30,740.82
				φ30,740.02	μου, / 40.62
TOTAL Expenditures					\$48,075.41

# 16 APPENDIX 3 – SURVEY AND INSTRUMENT SPECIFICATIONS

Survey name: 3J's Block

Location: Port Alberni, British Columbia

Job No.: 11261

Client: Nahminto Resources Ltd Survey date: September 4th, 2011

Survey company name: Geotech Ltd.

Total line-km: 121

Archive creation date: September, 2011

Aircraft type: Astar 350 B3 helicopter registration C-GABH

Base of operation: Port Alberni, British Columbia

Airborne Magnetometer

Model: Geometrics
Type: Cesium-vapour

Sample Interval: 10 Hz (0.1 seconds); 2-3 metres

Sensitivity: 0.02 nT

Mount: Towed bird, 13 metres below helicopter

Height above ground: 126 metres

Airborne EM

Model: Geotech Ltd. Type: VTEM

Number of channels: 32 (0.220 - 7.036ms)

Sample Interval: 10 Hz (0.1 seconds); 2-3 metres

Mount: Towed ring, 42 metres below helicopter

Transmitter Loop diameter: 17.6 m
Transmitter Number of turns: 4
Current: 237 Amp
Peak Dipole moment: 230,634 nIA

Peak Dipole moment: 230,634 nL
Pulse width: 3.40 ms
Receiver Loop diameter: 1.2 m
Receiver number of turns: 100
Receiver effective area: 113.04 m2
Height above ground: 104 metres
Mean terrain clearance: 139 m

Navigation type: NovAtel's CDGPS enable Propak V3-RT20 GPS receiver

(on the tail of the helicopter)

Radar altimeter: Terra TRA3000/TRI-40

Survey block

Traverse Line spacing (m) Area (km2) Planned

Line-km Actual Line-km Flight direction Line numbers
Traverse: 100 11.7 113.9 118.6 N 135° E / N 315° E L1000-L1360
Tie: 1500 7.2 7.6 N 45° E / N 225° E T1800-T1810

TOTAL 11.7 121.1 126.2

#### AIRBORNE GEOPHYSICAL DIGITAL ARCHIVES

Two copies of the data and maps on DVD were prepared to accompany the report. Each DVD contains a digital file of the line data in GDB Geosoft Montaj format as well as the maps in Geosoft Montaj Map and PDF format.

#### DVD structure.

There are two (2) main directories;

Data contains databases, grids and maps, as described below.

Report contains a copy of the report and appendices in PDF format.

#### Databases in Geosoft GDB format;

Channel name Units Description

X: metres
 Y: metres
 UTM Easting NAD83 Zone 10 North
 Y: metres
 UTM Northing NAD83 Zone 10 North
 Z: metres
 GPS antenna elevation (above Geoid)
 Longitude: Decimal Degrees WGS 84 Longitude data
 Latitude: Decimal Degrees WGS 84 Latitude data

Radar: metres helicopter terrain clearance from radar altimeter

Radarb: metres Calculated EM bird terrain clearance from radar altimeter

DEM: metres Digital Elevation Model
Gtime: Seconds of the day GPS time
Mag1: nT Raw Total Magnetic field data
Basemag: nT Magnetic diurnal variation data

Mag2: nT Diurnal corrected Total Magnetic field data

Mag3: Levelled Total Magnetic field data nT SFz[14]:pV/(A\*m4)Z dB/dt 96 microsecond time channel SFz[15]:pV/(A\*m4)Z dB/dt 110 microsecond time channel SFz[16]:pV/(A\*m4)Z dB/dt 126 microsecond time channel SFz[17]:pV/(A\*m4)Z dB/dt 145 microsecond time channel SFz[18]:pV/(A\*m4)Z dB/dt 167 microsecond time channel Z dB/dt 192 microsecond time channel SFz[19]:pV/(A\*m4)SFz[20]: pV/(A\*m4)Z dB/dt 220 microsecond time channel SFz[21]:pV/(A\*m4)Z dB/dt 253 microsecond time channel SFz[22]:pV/(A\*m4)Z dB/dt 290 microsecond time channel SFz[23]:pV/(A\*m4)Z dB/dt 333 microsecond time channel Z dB/dt 383 microsecond time channel SFz[24]:pV/(A\*m4)SFz[25]: pV/(A\*m4)Z dB/dt 440 microsecond time channel SFz[26]:pV/(A\*m4) Z dB/dt 505 microsecond time channel SFz[27]:pV/(A\*m4)Z dB/dt 580 microsecond time channel SFz[28]: pV/(A\*m4)Z dB/dt 667 microsecond time channel SFz[29]: pV/(A\*m4)Z dB/dt 766 microsecond time channel Z dB/dt 880 microsecond time channel SFz[30]: pV/(A\*m4)SFz[31]: pV/(A\*m4)Z dB/dt 1010 microsecond time channel SFz[32]:pV/(A\*m4)Z dB/dt 1161 microsecond time channel SFz[33]:pV/(A\*m4)Z dB/dt 1333 microsecond time channel SFz[34]:pV/(A\*m4)Z dB/dt 1531 microsecond time channel SFz[35]:pV/(A\*m4) Z dB/dt 1760 microsecond time channel Z dB/dt 2021 microsecond time channel SFz[36]:pV/(A\*m4)SFz[37]:pV/(A\*m4)Z dB/dt 2323 microsecond time channel SFz[38]:pV/(A\*m4)Z dB/dt 2667 microsecond time channel SFz[39]:pV/(A\*m4)Z dB/dt 3063 microsecond time channel

SFz[42]:pV/(A\*m4) Z dB/dt 4641 microsecond time channel SFz[43]:pV/(A\*m4) Z dB/dt 5333 microsecond time channel

SFz[44]:pV/(A\*m4) Z dB/dt 6125 microsecond time channel SFz[45]:pV/(A\*m4) Z dB/dt 7036 microsecond time channel

BFz (pV\*ms)/(A\*m4) Z B-Field data for time channels 14 to 45 PLM: 60 Hz power line monitor

SFz[40]:pV/(A\*m4)

SFz[41]: pV/(A\*m4)

CVG nT/m Calculated Magnetic Vertical Gradient

Z dB/dt 3521 microsecond time channel

Z dB/dt 4042 microsecond time channel

TauSF milliseconds Time Constant (Tau) calculated from dB/dt data
Nchan\_SF Last channel where the Tau algorithm stops calculation, dB/dt data

### Decay Sampling Scheme

VTEM Decay Sampling scheme							
Index	Middle Start End			Window			
	Microseconds						
14	96	90	103	13			
15	110	103	118	15			
16	126	118	136	18			
17	145	136	156	20			
18	167	156	179	23			
19	192	179	206	27			
20	220	206	236	30			
21	253	236	271	35			
22	290	271	312	40			
23	333	312	358	46			
24	383	358	411	53			
25	440	411	472	61			
26	505	472	543	70			
27	580	543	623	81			
28	667	623	716	93			
29	766	716	823	107			
30	880	823	945	122			
31	1,010	945	1,086	141			
32	1,161	1,086	1,247	161			
33	1,333	1,247	1,432	185			
34	1,531	1,432	1,646	214			
35	1,760	1,646	1,891	245			
36	2,021	1,891	2,172	281			
37	2,323	2,172	2,495	323			
38	2,667	2,495	2,865	370			
39	3,063	2,865	3,292	427			
40	3,521	3,292	3,781	490			
41	4,042	3,781	4,341	560			
42	4,641	4,341	4,987	646			
43	5,333	4,987	5,729	742			
44	6,125	5,729	6,581	852			
45	7,036	6,581	7,560	979			

• Database of the VTEM Waveform "11261\_Waveform\_Final.gdb" in Geosoft GDB format, containing the following channels:

Time: Sampling rate interval, 5.2083 microseconds Rx\_Volt: Output voltage of the receiver coil (Volt) Tx\_Curr: Output current of the transmitter (Amp)

Grids in Geosoft GRD format, as follows:

TMI: Total magnetic intensity (nT)

SFz26: dB/dt Z Component Channel 26 (Time Gate 0.505 ms)
TAUSFz: dB/dt Calculated Time Constant (TAU)
CVG: Calculated Vertical Derivative of TMI (CVG)

DEM: Digital Elevation Model

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 25 metres was used.

• Maps at 1:10,000 scale in Geosoft MAP format, as follows:

11261\_10K\_dBdt: dB/dt profiles Z Component, Time Gates 0.220 – 7.036 ms in linear –

logarithmic scale.

11261\_10K\_bfield: B-field profiles Z Component, Time Gates 0.220 – 7.036 ms in linear –

logarithmic scale.

11261\_10K\_SFz26: dB/dt late time Z Component Channel 26, Time Gate 0.505 ms color image.

11261\_10K\_TMI: Total magnetic intensity (TMI) color image and contours.

11261 10K TAUSFz: dB/dt Calculated Time Constant (TAU) with contours of anomaly areas of the

Calculated Vertical Derivative of TMI

Maps are also presented in PDF format.

The topographic data base was derived from 1:50,000 the NRCAN Geogratis database at; HUhttp://geogratis.gc.ca/geogratis/en/index.html.

• A Google Earth file "11261\_Nahminto.kml" is included, showing the flight path of each block. Free versions of Google Earth software from: HUhttp://earth.google.com/download-earth.html

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# 17 APPENDIX 5 - MAPS

The following maps, generated at a scale of 1:10,000 using a topographic base map were generated by Geotech Ltd. and are provided as pdf documents with the digital copy of this report.

- 11261\_10k\_bfield B-Field Stacked Profiles over TMI colour contour map.
- 11261\_10k\_dbdt dB/dt Stacked Profiles.
- 11261\_10k\_SFz26 dB/dt Z component (channel 26) colour contour map.
- 11261\_10k\_TauSFz dB/dt Calculated Time Constant (Tau) colour contour map with contours of Calculated Vertical Derivative of TMI.
- 11261\_10k\_TMI Total Magnetic Intensity colour contour map.

The various layers used to generate the maps included as figures with the text of this report are provided to Nahminto Resources Ltd. as MapInfo formatted table files (\*.tab).

The Mag3D inversion models are provided in both the native UBC inversion file format and the vtk file format.

