

NI 43-101 Technical Report on the Highfield Base Metal Property

Avondale, Nova Scotia



Submitted to: Spinco MLK (1167343 B.C. Ltd.)

Effective Date: June 23, 2020 Signing Date: June 24, 2020 Last Review Date: July 24, 2020

Submitted by: David R. Duncan. P. Geo.

Project No: 18-003





DRILLING ON HIGHFIELD PROPERTY - 2018

Drill equipment and setup with salt-brining tank at DDH: 18-GHR-005





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List of Abbreviations

ABBREVIATION	MEANING OF ABBREVIATION
0	degrees Celcius
°C	degrees Celcius
%	percent
\$	dollars
CAN\$	Canadian dollars
US\$	USA dollars
3D	three dimensional
AA	atomin absorption
Ag	silver
Au	gold equivalent at 50/1 Ag/Au ratio @ 100% metal recovery
AuEq ₅₀	gold equivalent at 50/1 Ag/Au ratio @ 100% metal recovery
cm	centimetres
g	gram(s)
g/t	gram(s) per tonne
ha	hectare(s)
ICP	inductively coupled plasma
ID ²	inverse distance squared
in	inch(es)
kg	kilogram(s)
km	kilometre(s)
L	litre(s)
m	metre(s)
m³	cubic metre(s)
mm	millimetre(s)
Mt	million tonnes
oz.	troy ounce(s)
QA/QC	Quality Assurance/Quality Control
ppb	parts per billion
ppm	parts per million
t	tonne(s)
t/m³	tonnes per cubic metre
Kozs.	kilo ounces
Mozs.	million ounces
g/l	grams per litre
_	80% passing
P ₈₀	
kg/t	kilograms per tonne Sodium Quanida
NaCN	Sodium Cyanide
NTS WGS84	National Topographic System
WGS84 UTM	World Geodetic System 1984
	Universal Transverse Mercator
Nad83	North American Datum 1983 North American Datum 1927
Nad27 Z	Zone
GPS	Global Positioning System
AMSL	Above Mean Sea Level
ATV	All Terrain Vehicle
ft.	feet
=	equals
	at
@	
lbs #	pounds
#	number

Table 1-1: List of abbreviations that applicable to this report



ABBREVIATION	MEANING OF ABBREVIATION
Ag	Silver
Au	Gold
Ba	Barium
Cu	Copper
Fe	Iron
Pb	Lead
Zn	Zinc
&	and
CEO	Chief Executive Officer
cont.	continued
CSE	Canadian Securities Exchange
DDH	Diamond Drill Hole
GHR	Gifthorse Resources
MEC	Minerals Engineering Centre
NSDEM	Nova Scotia Department of Energy and Mines
P. Geo.	Professional Geoscientist
NI 43-101	National Instrument 43-101, Standards of Disclosure for
1145-101	Mineral Deposits
NSR	Net Smelter Return
NMR	Non Mineral Registration
MVT	Mississippi Valley Type
VMS	Volcanogenic Massive Sulphide
AST	Atlantic Standard Time
NST	Newfoundland Standard Time
EST	Eastern Standard Time
CST	Central Standard Time
MST	Mountain Standard Time
PST	Pacific Standard Time
Ltd.	Limited
Pres.	President
max.	maximum
min.	minimum
ND	not determined
No.	number
Nos.	numbers

List of Abbreviations (cont.)



To Convert From	То	Multiply by
Feet	Metres	0.3048
Metres	Feet	3.281
Miles	Kilometres	1.609
Kilometres	Miles	0.621
Acres	Hectares	0.405
Hectares	Acres	2.471
Grams	Ounces (Troy)	0.032
Ounces (Troy) per ton	Grams	31.103
Tonnes	Short tons	1.102
Short tons	Tonnes	0.907
Grams per tonne	Ounces (Troy) per ton	0.029
Ounces (Troy) per ton	Grams per tonne	34.438

Table 1-2: List of Metric Conversions



CERTIFICATE OF QUALIFICATIONS (David R. Duncan, P. Geo.)

I, David R. Duncan, of 2 Kinley Close, Wolfville, NS, Canada, do hereby certify that:

- 1. I am an independent geological consultant and have worked as a geologist continuously since my graduation from university in 1979.
- 2. This certificate applies to the Technical Report titled "Technical Report on the Highfield Base Metal Property, Avondale, Nova Scotia", (The "Technical Report") with an effective date of December 15, 2018.
- I graduated with a Bachelor of Science degree in Geology from Acadia University in 1979. I am registered with the Professional Engineers and Geoscientists of Newfoundland and Labrador (registration number 02910) as a Professional Geoscientist and the Society of Economic Geologists as a Registered Member 221155.

I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

٠	D. R. Duncan & Associates Ltd., Consulting Geologist	1991-Present
•	Oceanus Resources Corporation, VP Exploration	2010-Present
•	Etruscan Resources Inc., Chief Geologist	1995-2015
•	MPH Consulting Ltd., Consulting Geologist	1988-1991
•	Western Mining Corporation, Senior Geologist	1986-1988
•	Kidd Creek Mines Ltd., Project Geologist	1979-1986

- I have visited the Property that is the subject of this Technical Report on August 25, 27, 29, 30 and 31; and September 10, 16, 18, 24, 2018, as well as on June 23, 2020, and examined the 2007 drill core on December 4, 2018 and a selection of the 2018 core on October 2, 2019.
- 5. I am responsible for all Sections of this Technical Report.
- I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am also independent of Mountain Lake-CSE, Pac Roots Cannabis Corp., 1151024 B.C. Ltd., Gifthorse Resources and Creo Resources Ltd.
- 7. I have had no prior involvement with the Property that is the subject of this Technical Report and warrant that I am independent of the Property.
- 8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
- As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: June 23, 2020 | Signing Date: June 24, 2020 Last Revised Date: July 24, 2020 {SIGNED AND SEALED} [David R. Duncan]

David R. Duncan, P. Geo.





1. EXECUTIVE SUMMARY

The Highfield Base Metal Property ("Property") is currently registered to Gifthorse Resources Inc. ("Gifthorse") but has been purchased under a Purchase Agreement by 1167343 B.C. Ltd. ("1167343 B.C."), subject to certain conditions, which have now been fulfilled. Title will be transferred to 1167343 B.C. Ltd. before the end of July 2020. The property consists of one (1) Mineral Exploration Licence (06922) containing twenty-four (24) mineral claims. This licence was issued to Gifthorse Resources by the Province of Nova Scotia on June 26, 2006. The property is located on the Avon Peninsula near Windsor, Nova Scotia and is adjacent to Fundy Gypsum's Miller Creek open pit mine, closed since 2009.

D. R. Duncan & Associates Ltd. ("Duncan") was retained by Mountain Lake to prepare an independent Qualified Person's Review and National Instrument 43-101 Technical Report ("NI 43-101") for the Property.

On June 6th, 2018, Mountain Lake Minerals Inc. ("Mountain Lake-CSE") signed a definitive share exchange agreement with 1151024 B.C. Ltd. for the acquisition of all the issued and outstanding shares of 1151024 B.C. Ltd. subject to the spin-off of its mining assets under a plan of arrangement to be finalized following the completion of the Transaction. On June 7th, 2018, the Mountain Lake-CSE announced it had executed an arrangement agreement with a newly formed company, 1167343 B.C. Ltd. ("Spinco MLK") for the purpose of completing the spin-off of existing mineral property assets by way of a plan of arrangement.

Spinco entered into a purchase agreement with Gifthorse (80%) and Creo Resources Ltd. ("Creo"), (20%) for a 100% interest in Mineral Exploration Licence 06922 which covers a total area of 388.5 hectares. Gifthorse and Creo are collectively referred to as either the "Sellers" or "Gifthorse/Creo". Completion of the Gifthorse/Creo purchase agreement was subject to finalization of the business arrangement between 115024 B.C. Ltd. and Mountain Lake Minerals as announced on March 15, 2018, and certain share and cash payments. Completion of the transaction took place on April 29th, 2020.

On April 30, 2020 Mountain Lake Minerals Inc. changed its name to Pac Roots Cannabis Corp. and Spinco changed its name from 1167343 B.C. Ltd. to Mountain Lake Minerals Inc. ("Spinco MLK" or the "Company"). Collectively this is referred to as the "Name Changes" in the amended agreement. The new Spinco MLK will hold all the mineral assets of the former company and will receive certain monies from Pac Roots. MKL has applied for a listing on the TSX-V

The property is underlain by Carboniferous Windsor Group carbonates, evaporites, sulphates, and intercalated clastic lithologies. The Cambro-Ordovician metasediments of the Meguma Group form the pre-Carboniferous basement and host numerous mesothermal saddle-reef style gold deposits. Meguma rocks were tightly folded during the Devonian Acadian Orogeny into long NE-SW trending anticlines and synclines which have been subsequently faulted and jointed (Patterson, 1993). Erosion of this basement into irregular knobs and ridges was in-part controlled by these structures prior to deposition of overlying Carboniferous clastic sediments and marine limestones and evaporites of the Horton and Windsor Groups. Unconformably overlying the Meguma metasediments are coarse to fine grained clastic sediments of the Horton Group which is followed conformably by the younger Windsor Group marine sequence. It is the basal Windsor Group limestone (Macumber Formation) which is the host for



Mississippi Valley Type ("MVT") carbonate-hosted base metal (Zn-Pb) deposits (e g., Gays River, Walton) in Nova Scotia.

This Technical Report describes the early stage geophysical and diamond drilling programs carried out in 2007, Mountain Lake's diamond drilling program in 2018 and the potential for Zn-Pb mineralization on the property.

In 2007, Gifthorse drilled three holes for a total of 964 metres on the property. Drill hole 07-GHR-003 penetrated 7.0 metres of the basal carbonate (Macumber Formation limestone) at a depth of 438 to 445 metres in the hole. Although the section was unmineralized, minor stringer sulphide mineralization was intersected in deeper sandstone of the Cheverie Formation. These sulphide veinlets were interpreted by Gifthorse Resources to represent a feeder system to MVT mineralization.

The local geology on the property is poorly understood due to extensive till cover, block faulting, and limited subsurface drill information.

Mountain Lake spent a total of \$225,680.44 on the property in 2018-2019 and completed a two- (2) hole diamond drilling program during August and September 2018. These expenditures were charged against Spinco MLK and deducted from the full \$1,000,000 payment outlined in the agreement (i.e., all expenditures were in effect charged against Spinco MLK. The first hole was lost when rods became stuck in salt and had to be abandoned with the loss of 304 metres of NQ and BQ gear in the hole. A second HQ hole was collared approximately thirty (30) metres west of the first hole and, using a salt brine drilling fluid, the hole was completed to 574 metres. Logan Drilling Group was the drill contractor on site.

Historical exploration of the basal Windsor Group has demonstrated that it hosts valuable Zn-Pb mineralization (e.g. Walton and Gays River deposits).

Although the author is of the opinion that potential for similar lead-zinc mineralization may exist at the Highfield property, he also cautions that there can be no guarantee at this point if an MVT deposit will be encountered. As discussed in this Report, further exploration and evaluation of the property is warranted.

A recommended exploration budget for the next phase of work is \$209,000. This program would allow for geochemistry, geophysics, and diamond drilling.



2. INTRODUCTION

2.1. Project Scope and Terms of Reference

This NI 43-101 Technical Report was prepared by David R. Duncan, P. Geo., 1167343 B.C. Ltd. ("Spinco MLK"). Mountain Lake Minerals Inc. ("Mountain Lake"), was renamed to Pac Roots Cannabis Corp. and is regarded as a related party, as is 1151024 B.C. Ltd. Spinco MLK has entered into asset purchase agreements to acquire a 100% interest in the Highfield Base Metal property (the "Property") located in Windsor, Nova Scotia.

Mountain Lake signed a definitive share exchange agreement (dated June 6th, 2018) with 1151024 B.C. Ltd. for the acquisition of all the issued and outstanding shares of 1151024 B.C. Ltd. and subject to the spin-off of its mining assets under a plan of arrangement to be concluded following the completion of the Transaction. On June 7th, 2018, Mountain Lake-CSE announced it had executed an arrangement agreement with its wholly owned subsidiary (Spinco MLK) for the purpose of completing the spin-off of existing mineral property assets by way of this plan of arrangement.

On April 30, 2020 Mountain Lake Minerals Inc. (CSE) changed its name to Pac Roots Cannabis Corp. and Spinco changed its name from 1167343 B.C. Ltd. to Mountain Lake Minerals Inc. ("Spinco MLK"). Collectively this is referred to as the "Name Changes" in the amended agreement. The new Spinco MLK will hold all the mineral assets of the former company and will receive certain monies from Pac Roots. Any future reference to the former CSE listed Mountain Lake Minerals company will be referred to "Mountain Lake-CSE" in this report while the new company will be referred to as Spinco MLK (or "Spinco" or "MLK") to help avoid any confusion.

The Highfield Property is currently registered to Gifthorse Resources Inc. ("Gifthorse") who holds an 80% interest in the property and is being acquired by Spinco MLK in consideration of the issuance of 3,500,000 common shares of Spinco and the grant of an aggregate 2.0% net smelter royalty, of which 0.5% may be purchased by Spinco at any time for \$50,000. The remaining of the undivided 20% interest in the Highfield Property is held by Creo Resources Ltd. and is also subject to the purchase agreement by 116743 B.C. Ltd. Gifthorse and Creo are selling a 100% interest in the Highfield property to Spinco MLK and are collectively known as either the "Sellers" or "Gifthorse/Creo".

A portion of the Property is currently subject to an existing 0.75% net smelter royalty in favor of the landowner (PID#: 45170396) of which 0.50% may be purchased at any time for \$250,000. Spinco MLK shall also pay a finder's fee of 6% of the shares issuable, being 210,000 common shares, to a finder in connection with the acquisition of the Property.

The purpose of this Report is to provide an independent and detailed assessment of the exploration potential on the Highfield property located in Hants County, Nova Scotia.

Terms of reference for this Report were established through discussions between executives from Mountain Lake-CSE and the author on August 20, 2018. Mountain Lake-CSE began a diamond drilling program in early August 2018 as an early stage project. The intent and purpose of this Technical Report



is to prepare a geological introduction to the Highfield Property and report on the 2018 exploration results in accordance with NI 43-101 and amended and adopted Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards (May 10, 2014). The effective date of this report is June 23, 2020 and the signing date is June 24, 2020. The report was edited and updated on July 11 and 24, 2020 based on comments from the TMX – TSX Venture.

The material in this Technical Report is a compilation of publicly available information, including internal information obtained from Mountain Lake-CSE and Gifthorse not yet entered into the public record, and new results obtained during the 2018 drilling program by Mountain Lake-CSE. References in this Technical Report are made to publicly available reports that in part were written prior to implementation of NI 43-101. These include government geological publications and Mineral Assessment Reports that were filed with and available through the Nova Scotia Department of Energy and Mines Geoscience and Mines Branch ("NSDEM") and the Geological Survey of Canada ("GSC"). All reports are cited in the References section and are familiar to the author.

The author visited the property on numerous occasions during August and September 2018, and on June 23rd, 2020, and has reviewed all pertinent data provided by Mountain Lake-CSE and Gifthorse Resources. During these visits, the author was able to examine the 2018 drill core from holes 18GHR-004 (304m) and 18GHR-005 (574m).

In addition, the remaining 2007 core that is saved and stored at the Nova Scotia Department of Energy and Mines ("NSDEM") facilities in Stellarton, Nova Scotia was also examined by both Mountain Lake-CSE personnel and the author on December 4, 2018.

The author further examined a portion of the 2018 drilling on October 2, 2019.

No material changes have occurred at the property since the author's last site visit following completion of drilling and examination of drill core as of the signing date of this report. On June 23, 2020, the author again visited the property to determine that no material work had taken place at the property since his previous visits. A phone conversation with the President of Mountain Lake-CSE on June 23, 2020 also confirmed that all work related to the project had taken place off-site and involved core logging and detailed examination of selected sections of the core by a third-party consultant. The author contacted the consultant and confirmed that no new material information was gathered by the consultant, only that company was informed that the entire core should be relogged in detail for right-way-up features.

David R. Duncan, P. Geo., the author of this Technical Report is an independent Qualified Person as defined under NI 43-101 and has carried out all work associated with report preparation on a fee for service basis. Furthermore, the author is independent of all companies mentioned in this report who are affiliated with Gifthorse Resources, Mountain Lake-CSE, Spinco MLK, 1151024 B.C. Ltd. and any of their associated company transactions. The author has specific knowledge of the geology and mineralization type detailed in this report.



3. RELIANCE ON OTHERS

Neither DRDAL nor the author of this Technical Report are qualified to provide or comment on legal issues associated with the Property, or the scope and intent of Sections 1 and 4 of this Report pertaining to both legal and title issues. Documents related to information in these sections were copied from publicly available downloads from the Nova Scotia government website ("NovaROC") and reviewed by the author. The associated agreements include, but are not limited to agreements between Mountain Lake-CSE, 1151024 B.C. Ltd., 1167343 B.C. Ltd., and Gifthorse Resources, and Creo Resources, and an agreement between a third party and 1167343 B.C. Ltd.

Although the author has reviewed all relevant information for these sections and has formulated all technical aspects of this report independent of outside input, neither DRDAL nor the author have sought a legal opinion on any of these agreements.

The author has however, reviewed mineral exploration title status records and assessment reports on Highfield License 06922 on the Department of Energy and Mines "NovaROC" website. This website was accessed on August 25, 2018 and again on January 10, 2020 and confirms comments referenced in this report are factual based on those reviews.

4. PROPERTY DESCRIPTION AND LOCATION

The Highfield Property is located on the Avon Peninsula in the northeastern quadrant of NTS Map Sheet 21H/01A "Wolfville" covering the area north of Windsor, Hants County, Nova Scotia. The property is bounded on the south by the Fundy Gypsum Non-Mineral Registration No. 002 and located about six (6) kilometres north of the town of Windsor, or seventy (70) kilometres north-northwest of Halifax, Nova Scotia (see Figure 4-1and Figure 4-2).



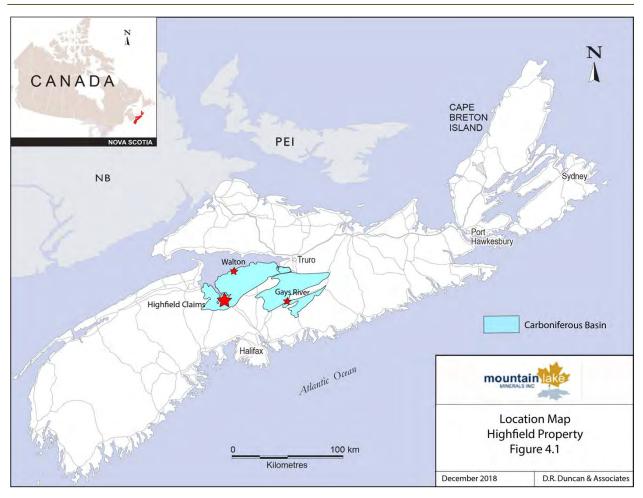


Figure 4-1: Location of Highfield property in Central Nova Scotia

4.1. Exploration Holdings

The mineral exploration claims that comprise the Highfield property, as defined in this report, are currently registered to Gifthorse Resources Inc. whom, together with Creo Resources, holds a 100% interest in the twenty-four (24) claims held under Mineral Exploration Licence 06922 and covering a total area of 388.5 hectares. Subsequent to the commencement of the 2018 diamond drill program the property has been purchased by Mountain Lake Minerals Inc. (1167343 B.C. Ltd.) and the title will be transferred to Mountain Lake around the end of July 2020.

A summary of the claims is given in Table 4-1. The anniversary date of Licence 06922 is June 27, 2021.



Licence #	Мар	Tract #	Claim #	Number of Claims
06922	21H/01A	27	E, M, N	3
06922	21H/01A	28	J, P, Q	3
06922	21H/01A	30	G, L, K, N, O, P	6
06922	21H/01A	43	A, B, C, D	4
06922	21H/01A	44	A, B, C, D	4
06922	06922 21H/01A 45		A, B, C, D	4
			Total	24

Table 4-1: List of Highfield Property claims

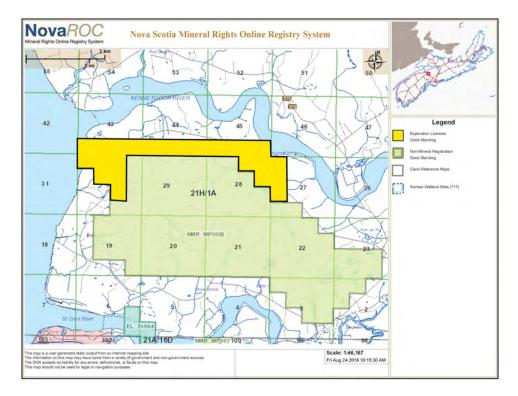


Figure 4-2: Location map for Exploration Licence 06922

4.2. Conditions of Exploration Title

Mineral exploration titles in Nova Scotia are defined and managed under the terms and conditions of the Mineral Resources Act 1990 and the associated Mineral Regulations as amended to date. An "exploration licence" gives the licensee the exclusive right to explore for minerals either in, on, or under the area of land described in the licence.



A single licence can contain a maximum of 80 claims, all of which must be contiguous. In Nova Scotia, NTS Nad83, 1:50,000 base maps must be used as the basis for establishing claim reference maps to determine the boundaries of individual claims, licences, leases, and non-mineral registrations. This is defined in the Nova Scotia Mineral Resources Act, and the Mineral Resources Regulations (both updated in 2018).

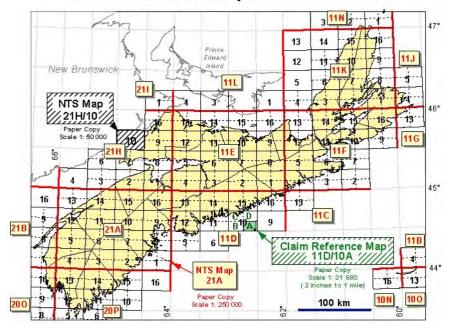
The area represented by each base map must be subdivided into four (4) claim reference maps, as shown in Figure 4-3, by median lines corresponding to the median longitude and latitude lines of the base map, and the four (4) claim reference maps produced must be lettered A for the southeast quarter, B for the southwest quarter, C for the northwest quarter and D for the northeast quarter. Each claim reference map must be identified by the numbering of the base map of origin and the appropriate quarter section letter. Claim reference maps maintained by the Registrar are conclusive as to the matters shown on them and are the sole official depiction of the relative location and extent of mineral rights and non-mineral registrations.

Each claim reference map must be subdivided into 108 tracts (Figure 4-4) by twelve (12) equal divisions on latitude and nine (9) equal divisions on longitude with the following specifications:

- (a) the east and west boundaries of each tract must be true meridians of longitude;
- (b) the north and south boundaries of each tract must be straight lines parallel to the chord of onehalf of the part of the parallel of latitude that represents the south boundary of each claim reference map; and
- (c) the angle of intersection of each chord on either side of the median meridian of longitude for each claim reference map must be 90° .

Each tract must contain 259 ha (more or less). The 108 tracts on a claim reference map must be numbered as shown in Figure 4-4. Each tract on a claim reference map must be subdivided into sixteen (16) claims by four (4) equal divisions on latitude and 4 equal divisions on longitude. The sixteen (16) claims in each tract of a claim reference map must be lettered as shown in Figure 4-4.





National Topographic System (NTS) and Claim Reference Maps for Nova Scotia

Figure 4-3: Scheme of topographic map subdivision for exploration in Nova Scotia

108	107	106	105	104	103	102	101	100	99	98	97
85	86	87	88	89	90	91	92	93	94	95	96
84	83	82	81	80	79	78	77	76	75	74	73
61	62	63	64	65	66	67	68	69	70	71	72
60	59	58	57	56	55	54	53	52	51	50	49
37	38	39	40	41	42	43	44	45	46	47	48
36	35	34	33	32	31	30	29	28	27	26	25
13	14	15	16	17	18	19	20	21	22	23	24
12	11	10	9	8	7	6	5	4 3		2	1
		6	2°01'	15"	Nort	ħ	2°00	00*	/		
	45	5°45'5			0	Ρ	Q	45°45	'50"	Ť	
	14	lest	I	N	L	к	J	E	ast	1 6 bm	
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	45	5°45'0	0"	D	c	в	A	45°45	'00"	+	
		62°01'15" South 62°00'00"									0m 0m
		1.6 km									
			1				1				

Figure 4-4: Nova Scotia numbering system for mineral claims on a tract



An application for a map staked licence in Nova Scotia is made through the online registry system NovaROC. Each claim staked in a licence requires payment of a CDN \$10 fee and requires registration on the NovaROC system.

A licence may be renewed at any time after the first day of the licence within a period of twelve (12) months and before the anniversary of the licence.

If an exploration licence is renewed more than thirty (30) days before the anniversary of the licence:

- (a) there is no refund of all or any portion of the paid application fees;
- (b) work credits that have been allocated must not be redistributed until the next renewal of the licence; and
- (c) if additional assessment work is submitted before the next renewal, the assessment work must, subject to Section 39, be added to existing work credits,
 - (i) at 100% of acceptable cost, if filed in the licence year during which the work was performed, or
 - (ii) at 50% of acceptable cost, if filed at a later date.

The minimum value of acceptable assessment work (Table 4-2) that must be submitted for the renewal of an exploration licence is shown below:

Year of Licence	Dollars per Year per Claim
1 st to 10 th	\$200
11 th to 15 th	\$400
16 th and after	\$800

 Table 4-2: Nova Scotia Licence exploration expenditure fee structure

Going forward risk factors are unknown but could include, (a) a change in land owner status, (b) cancellation of the mineral title, (c) inability to raise sufficient finances to carry out the exploration program, (d) a significant drop in commodity prices or (e) a dramatic shift in Government policies, etc.

4.3. Underlying Agreements/Acquisitions

Mountain Lake-CSE's former President & CEO has provided documents to the author verifying that Spinco MLK, as of the effective date of this Report, has purchased a 100% interest in the Highfield Property through an arrangement between 1167343 B.C. Ltd. and Gifthorse/Creo as part of an underlying share exchange agreement between Mountain Lake-CSE and 1151024 B.C. Ltd. This purchase agreement was also subject to a finder fee between 1167343 B.C. Ltd. and a third party. The author is not otherwise aware of any back-in rights, payments, agreements, or other encumbrances that apply to the project. At the effective date of this Report, the author had no reason to question the ownership and mineral title



asset status assertions based on those documents provided by Mountain Lake-CSE. The author has also verified this purchase agreement with both Gifthorse and Creo.

Spinco MLK has, of the last edit date of this report, purchased a 100% interest in the property from Gifthorse/Creo. That purchase was subject to the issuance of 3,500,000 common shares of Spinco MLK and the grant of an aggregate 2.0% net smelter royalty to the Sellers, of which 0.5% may be purchased by Spinco at any time for \$50,000, and completion of its share exchange agreement with 1151024 B.C. Ltd. (completed May 25, 2020). A portion of the Property is currently subject to an existing 0.75% net smelter royalty of which 0.50% may be purchased at any time for \$250,000.

Spinco MLK also paid a finder's fee of 6% of the shares issuable, being 210,000 common shares, to a finder in connection with the acquisition of the Property.

Mountain Lake-CSE entered into an arrangement agreement dated June 7, 2018 (the "Arrangement Agreement") with 1167343 B.C. Ltd. (Spinco) under which it proposes to complete a spin-off of all its mining assets under a plan of arrangement (the "Spin-Off"), which included the Highfield Property.

Pursuant to the Arrangement Agreement, Mountain Lake-CSE transferred to Spinco MLK its existing mineral property assets in exchange for the issuance of common shares of Spinco MLK to be distributed to Mountain Lake CSE's shareholders by way of a plan of arrangement. Pac Roots will contribute \$1,000,000 to Spinco MLK for working capital. The Spin-Off required the approval of the Mountain Lake-CSE shareholders, and that approval was received on April 29, 2020. The B.C. Supreme Court gave final approvals following the completion of these fundamental change transactions involving the acquisitions of two ACMPR applicants (see the Company's press release dated June 8, 2018 for additional details).

Mountain Lake-CSE completed its Arrangement Agreement with 1151024 B.C. Ltd. on April 29, 2020.

4.4. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

4.4.1.Environmental Studies

No environmental studies, permitting and social or community impact were conducted for the Project. The area has a modest agricultural industry, as well as a long lived mining history (e.g., Gypsum operation at Miller Creek and the former Walton Mine), and that drainage from the Highfield property is towards the east-to-west flowing Kennetcook River which is located approximately 700-800 metres north of the Property. The Avon River is located approximately 1.5 kilometres to the west of the property. There are no other brooks in the immediate area that would be negatively impacted by this exploration. Although housing is sparse in the rural community, noise pollution is a consideration during any unaccustomed activities such as mineral exploration (e.g., diamond drilling). The author knows of no other environmental liabilities associated with the property given the early-stage nature of the project.



4.4.2.Permitting

The 2018 drilling program was carried out under a drill program notification with the Nova Scotia Department of Energy and Mines under Drilling Program Notification, Permit Number: 52374 as Event ID: 1046596. Permit application was made on behalf of Gifthorse Resources as the registered licence holder.

Exploration Notification for Spinco MLK's 2020 exploration program has not yet been applied for with the Nova Scotia government pending ongoing concerns regarding the recent Covid-19 pandemic. The author is aware that the land access agreement is still in affect but Spinco MLK will need to receive government approval for a new Exploration Notification and a new Drilling Program Notification as these are specific to program implementation. However, firm dates on work activities must first be established and reported to the government.

4.4.3.Social or Community Impact

Assess to the project site for both the 2007 and 2018 drill programs was made through a surface rights, mineral exploration agreement with the landowner dated on July 5, 2007. This agreement was revisited for the 2018 drill program. Hours of drilling operation were adjusted to exclude over-night drill activities to minimize disruption to one local residence who lived near the drill site.

Additional community engagement is warranted prior to 2020 exploration activities so they are informed about the activities and to minimize any anxiety among residents. The author is aware that community and First Nations concerns exist across the province of Nova Scotia so no assurances that any project can get to opening day should be implied. No other significant factors or risks that jeopardize the project are known to the author.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1. Accessibility

The Highfield Property is located on the Avon Peninsula in the northeastern quadrant of NTS map sheet 21H/01A covering the area north of Windsor, Nova Scotia. The Highfield property is bounded on the south by the Fundy Gypsum Mining Lease and the Avon River on the north. The claim block is situated six (6) km north of the town of Windsor and about seventy (70) km NNW of Halifax. The paved highway #215 "Belmont Road" crosses the property from east to west and provides excellent access to the entire property.

The claims are accessible via the Belmont Road No. 215. The shortest route from Halifax would be to take Highway 101 leading to the Annapolis Valley, take Exit 5 off Highway 101 and proceed east along Highway 14 for 7.5 km to the junction in Brooklyn, NS. Then turn onto No. 215 northwest for 1.7 km to a fork in



the road and take the left fork going west to the Belmont Road. This road enters the eastern end of the property about 1.3 km northwest of the Belmont intersection and leaves the southwestern boundary near Avondale.

As noted above in Section 4.4.3, an exploration agreement between Gifthorse Resources and the landowners made on July 05, 2007 establishes land access for the purpose of geological investigations, including diamond drilling. This agreement was reaffirmed at the commencement of the 2018 exploration program.

Exploration drilling was carried out under Drilling Program Notification, Permit Number 52374 of the Nova Scotia Department of Natural Resources dated July 25, 2018.

The author believes that additional lands would need to be acquired to sustain a long-term Zn-Pb mining operation.

5.2. Climate

Climatic conditions are temperate in the Windsor area. Mean annual total precipitation for the region is 1,280 millimetres. Mean July daily temperature is 19.9°C (Table 5-1). In general, the field season lasts from mid-April/early-May to late-October/early-November. Geophysics, selected geochemistry, and diamond drilling and many other activities can all be conducted year-round.

		Climat	e data for Wine	dsor (Martock),	1981-2010 no	rmals, extren	nes 1871-2005						[hide
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	18.5 (65.3)	19.5 (67.1)	27.0 (80.6)	28.5 (83.3)	34.0 (93.2)	35.6 (96.1)	35.0 (95)	37.8 (100)	34.0 (93.2)	30.0 (86)	22.0 (71.6)	17.5 (63.5)	37.8 (100)
Average high °C (°F)	-1.0 (30.2)	0.2 (32.4)	4.0 (39.2)	10.1 (50.2)	17.1 (62.8)	22.1 (71.8)	25.5 (77.9)	25.1 (77.2)	20.6 (69.1)	14.2 (57.6)	8.0 (46.4)	2.4 (36.3)	12.4 (54.3)
Daily mean °C (°F)	-5.5 (22.1)	-4.4 (24.1)	-0.6 (30.9)	5.3 (41.5)	11.3 (52.3)	16.2 (61.2)	19.9 (67.8)	19.5 (67.1)	15.2 (59.4)	9.4 (48.9)	4.2 (39.6)	-1.6 (29.1)	7.4 (45.3)
Average low °C (°F)	-9.9 (14.2)	-9.1 (15.6)	-5.2 (22.6)	0.4 (32.7)	5.5 (41.9)	10.3 (50.5)	14.2 (57.6)	13.9 (57)	9.8 (49.6)	4.6 (40.3)	0.3 (32.5)	-5.6 (21.9)	2.4 (36.3)
Record low °C (°F)	-29.4 (-20.9)	-32.5 (-26.5)	-23.9 (-11)	-13.9 (7)	-5.0 (23)	-2.2 (28)	3.3 (37.9)	0.0 (32)	-2.5 (27.5)	-7.8 (18)	-16.7 (1.9)	-25.0 (-13)	-32.5 (-26.5)
Average precipitation mm (inches)	147.1 (5.791)	107.2 (4.22)	126 1 (4.965)	103.3 (4.067)	95.3 (3.752)	82.8 (3.26)	83.9 (3.303)	76.3 (3.004)	105.6 (4.157)	108.8 (4.283)	143.6 (5.654)	129.7 (5.106)	1,309.6 (51.559)
Average rainfall mm (inches)	71.9 (2.831)	54.6 (2.15)	83.2 (3.276)	88.6 (3.488)	93.7 (3.689)	82.8 (3.26)	83.9 (3.303)	76.3 (3.004)	105.9 (4.169)	108.8 (4.283)	127.0 (5)	84.0 (3.307)	1,060.2 (41 74)
Average snowfall cm (inches)	75.2 (29.61)	52.6 (20.71)	42.9 (16.89)	14.7 (5.79)	1.6 (0.63)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.6 (6.54)	45.7 (17.99)	249.4 (98.19)
And age showing on (menes)	(29.61)	(20.71)	(16.89)		(0.63) ironment Canad		(0)	(0)	(0)	(0)	(6.54)	(17.99)	(98.19)

Table 5-1: Annual Temperatures

5.3. Local Resources and Infrastructure

The Avon Peninsula is rural and has been farmed and logged. The largest local employers were an open pit gypsum mine and rail shipment facility operated by Fundy Gypsum at Miller Creek up to 2010. The Town of Windsor is located approximately ten (10) kilometres by road from the property and is the regional center of population, government, business, education, industry, and transportation services. The Robert Stanfield International Airport is located approximately seventy (70) km south east of the property and provides daily domestic and international airline service.



Water, power, and a trained work force are currently either available in the area or would welcome an opportunity to return home for work. The author believes the development of a future mine site including waste disposal area, tailings, and mill facility would require access to additional lands.

5.4. Physiography

The regional physiography of the western part of Hants County, surrounding the project area has been influenced by the variable hardness of four rock groups, soft sediments, and the changing sea level. The Avon River Valley, with the St. Croix River, Kennetcook River, Cogmagun River and many other smaller streams draining into it (Figure 5-1), is located mainly on the softer rocks of siltstone, sandstone, gypsum and anhydrite of the Windsor Group and on the unconsolidated clay, silt, sand and combinations thereof with enclosed pebbles and cobbles (glacial and recent deposits).

The Avon Peninsula is defined as being within the perimeter formed by the St. Croix, Avon and Kennetcook Rivers and the Lawrence Road. It consists of tidal marshland, dyke land, small drainage areas and many hills generally thirty (30) to sixty (60) metres high with a maximum height of 75.4 metres. The hill tops are 500 to 1000 metres apart. The area is underlain by the Windsor Group of rocks consisting of gypsum, anhydrite, limestone, and siltstone. The surficial material over areas where there is no bedrock outcropping consists of silts, clays, and muds with scattered cobbles and some sandy areas.



There are karst features throughout the area, but they are more abundant in the higher central area.

Figure 5-1: Highfield Property licence and claims location



6. HISTORY

6.1. Introduction

Although the gypsum deposits in Nova Scotia were recognized as early as the seventeenth century, there are no historical accounts of mining operations prior to 1779. The gypsum industry on the Avon Peninsula began soon after the arrival of the Planters who commonly used gypsum as fertilizer (Shand, 1979). In the 1830's, Avondale emerged as a scene of large-scale wooden shipbuilding enterprises resulting in increased mining and transportation/marketing along the eastern seaboard of the United States.

Small scale mining activities on the Avon Peninsula continued to 1956 when Fundy Gypsum Ltd. opened the Miller's Creek Quarry on the east side of the Ferry Road. Mapping and interpretation of the geology west of the Ferry Road by Dr. R. G. Moore of Acadia University began in 1973 for the Fundy Gypsum Ltd. Core drilling and interpretation of the area took place in 1996, 1998, 2000, 2005 and 2006. A large body of gypsum was defined west of the Ferry Road and Fundy Gypsum planned to extend the Miller Creek Quarry into this new area. Fundy submitted an Environmental Assessment Registration Document for a mine expansion in 2008 but the entire operation was put on care and maintenance in 2009 due to poor gypsum markets.

6.2. Government Surveys

The earliest mapping of the Avon Peninsula was carried out by E. R. Faribault and H. Fletcher in 1909. The most modern map compilation was prepared by Moore, et al., 2000 and releases as a Nova Scotia Department of Natural Resources, 1:50,000 scale Open File Map (OFM ME 2000-3) entitled Geological Map of Wolfville-Windsor Area, NTS sheet 21H/01 and part of 21A/16, Hants and Kings Counties, Nova Scotia.

6.3. History of Industry Surveys

Gifthorse Resources Inc. staked General Exploration Licence # 06922 on June 26, 2006 over the Highfield property. The licence initially consisted of fifty-two (52) claims covering 946.2 hectares and shares a common boundary along the northern border of Fundy Gypsum's Miller Creek property.

In the summer of 2007, Gifthorse contracted Matrix GeoTechnologies to carry out an Induced Polarization, Resistivity and ground Magnetic surveys on the property (Figure 6-1). The objectives of the program were to:

- 1. Document the physical properties of the major lithologic units and alteration patterns for compilation with the exploration database.
- 2. Generate a conceptual geological model using the Time Domain induced Polarization/Resistivity and Magnetic data, and
- 3. Increase the exploration program efficiency by better directing the future exploration works and to assist in mapping of general geology, location structural and alteration features that may favor the precious and base metals in the surveyed areas.



In July of 2007, Gifthorse completed three (3) diamond drill holes (NQ size) totaling 964 m on the property (Figure 6-1). The first two holes were abandoned above the proposed target depths due to drilling

complications. The third hole (07GHR-003) was drilled to a final depth of 700 m and bottomed in the Horton Bluff Formation Bluebeach Member. Gifthorse concluded that drilling targets lying further up topographic slope should be drilled where it was

speculated that the Meguma basement would be closer to surface and the projected onlap of the Macumber Formation. They suggest that drilling has established a fissure system providing the plumbing for metal-bearing brines and that faulting at Highfield resemble similar faulting at Gays River. Gifthorse recommended MMI geochemistry and drilling one or more holes to depths between 350-500 metres.

There has been no other exploration or development work on the property since 2007 (Riteman, 2008).



Figure 6-1: 2007 Geophysics grid and DDH locations

6.1. Gifthorse 2007 Geophysics

In the summer of 2007, Gifthorse contracted Matrix GeoTechnologies to carry out an Induced Polarization, Resistivity and ground Magnetic surveys on the property (Figure 6-2, Figure 6-3 and Figure 6-4). The objectives of the program were to:



- a) Document the physical properties of the major lithologic units and possible alteration patterns to include in a compilation with his existing exploration database;
- b) Generate a conceptual geological model using the Time Domain induced Polarization/ Resistivity and Magnetic data, and

c) Increase the exploration program efficiency by better directing the future exploration works and to assist in mapping of general subsurface geology and, location of structural and alteration features that might favor the precious and base metals in the program areas.

Based on these results Gifthorse Resources embarked on a diamond drill program to penetrate the basement onlap of the Macumber Formation with Meguma meta-sediments.



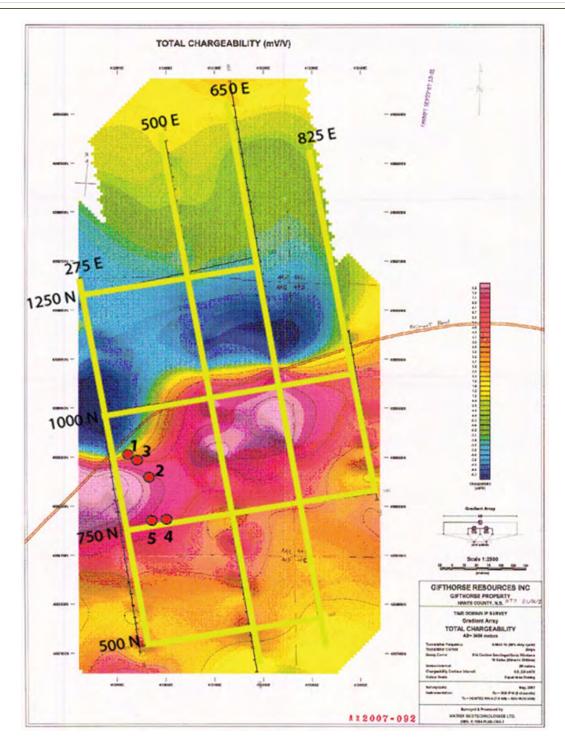


Figure 6-2: Plan Map of 2007 Gradient IP Survey showing DDH locations



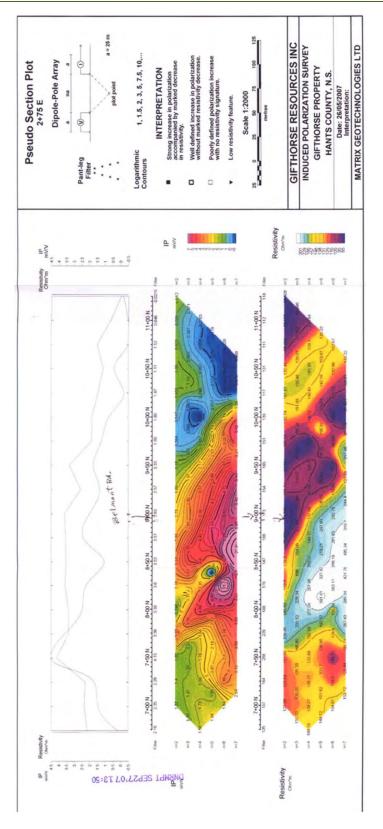


Figure 6-3: Induced Polarization pseudo section of L275E Dipole: Pole Array



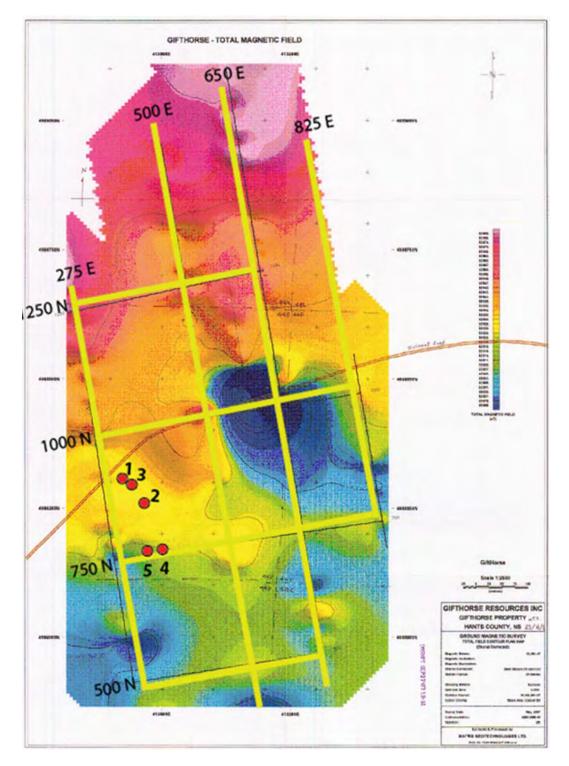


Figure 6-4: Plan Map of 2007 Total Field Magnetic Survey with DDH locations



7. GEOLOGICAL SETTING AND MINERALIZATION

7.1. Regional Geology

The Windsor map area includes most of the major rock units constituting southern mainland Nova Scotia (Boehner et al, 1999). These include the Cambrian to Devonian metasedimentary and metavolcanic rocks of the Meguma Terrane; late Devonian peraluminous granitoid rocks of the South Mountain Batholith; sedimentary rocks of the Carboniferous Windsor Basin; Mesozoic (Late Triassic to Early Jurassic) Fundy Basin sedimentary and volcanic rocks; and locally, rare Early Cretaceous unconsolidated sand and clay (Boehner, et al, 1999).

The area also contains type and reference sections for many rock units including; the lower to middle Paleozoic White Rock, Kentville and New Canaan formations (stratigraphically above the Goldenville and Halifax formations of the Meguma Group); the Carboniferous Horton and Windsor Groups (Bell, 1929, 1958) and the Wolfville, Blomidon, North Mountain and Scots Bay formations of the Mesozoic Fundy Group (Boehner, et al, 1999; Figure 7-1).

The Windsor (Kennetcook) Basin is a northeasterly elongated structural basin in central mainland Nova Scotia. The Windsor Basin together with the adjacent Shubenacadie and Musquodoboit basins comprise the Minas Sub-basin and are both depositional and structurally related and represent the present-day erosional remnants of the late Paleozoic overstep to the south onto the Meguma Platform (Figure 7-2).

The Windsor Basin has had a long history of mineral exploration and mining, as well as petroleum exploration for hydrocarbons and salt storage.



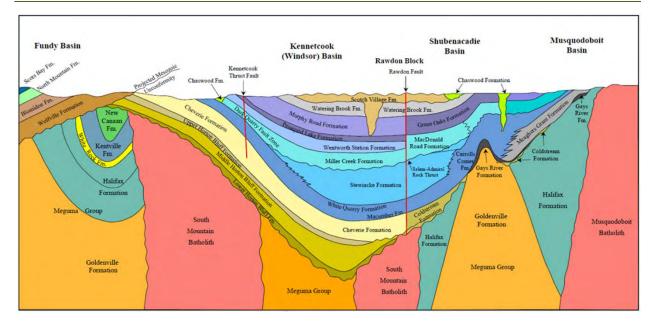
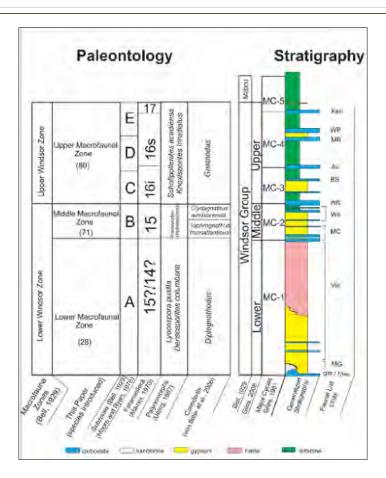


Figure 7-1: Geological cross section of the Windsor Basin







7.2. Local Geology

The Highfield property is underlain by early Carboniferous sediments of the Horton and Windsor Groups. The oldest of these rocks is the Horton Group which consists of approximately 1,200 metres of sandstones, conglomerates and shales deposited in a fluviatile environment. These are conformably overlain by marine sediments of the Windsor Group. These consist of limestone, limestone conglomerate, shale, gypsum, anhydrite, and salt (Figure 7-3).

The Horton Group is divided into two formations: the Horton Bluff Formation and the Cheverie Formation. The Cheverie Formation is present in the Avon Peninsula area and consists of red to brown shales, arkosic grit and grey sandstone.

The Windsor Group is divided into several limestone units and formations with intervening gypsum and anhydrite, salt, clastic rocks including shale, siltstone, shale, and fine conglomerate with the basal Macumber Formation limestone sometime resting unconformably on the Meguma Supergroup. The Windsor sequence lies conformably on the Cheverie Formation in the Windsor area and consists of one



(1) to ten (10) metres of well laminated fissile grey limestone. This marks the first marine transgression over the clastic terrigenous sediments of the Horton Group. The Macumber is overlain disconformably by a limestone conglomerate, massive limestone and limey siltstone called the Pembrooke Formation. This unit contains clasts of Macumber limestone in a silty matrix. Overlying the Pembrooke Formation is a sequence of anhydrite, gypsum with interbedded shale and local salt of the Vinland Formation. The Tennycape Formation overlies the Vinland Formation and consists of fine to medium grained, predominantly red/brown siltstone (Figure 7-2).

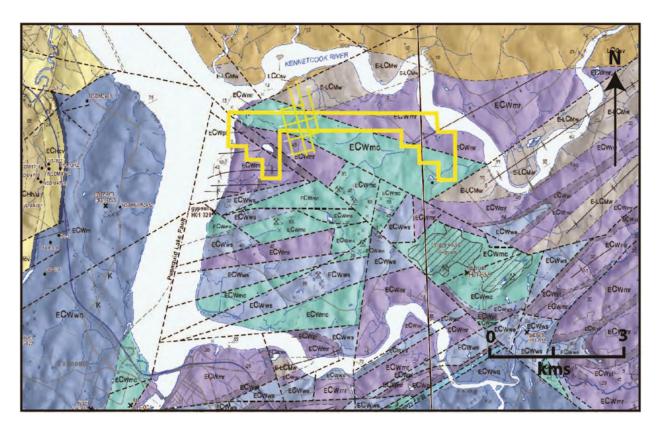


Figure 7-3: Geological map of the Avon Peninsula with the Highfield Licence

7.3. Mineralization

It is the Macumber Formation that is of specific interest in this report as it represents the host lithology for the Mississippi Valley Type Zn-Pb mineralization at Gays River. It must be notes that there is no current data to support similar mineralization at the Highfield Property other than for thin pyrite stringers in drill hole 07-GHR-003 completed by Gifthorse Resources in 2007. Notwithstanding, Spinco MLK is pursuing a geological model applicable to the Gays River Zn-Pb open-pit mine located about fifty-nine (59) kilometres to the east. The Scotia Mine is owned by ScoZinc Mining Ltd. ("ScoZinc") consists of the Scotia Mine open pit resource (and North-East deposit) and the undeveloped Getty Deposit, as well as the Gays River Mill. Further descriptions of relevant mineral properties are provided in Section 23 under Adjacent Properties.



8. DEPOSIT TYPES

Mining activity in the western part of the Windsor Basin has focused on the extensive industrial mineral resources (primarily gypsum) for more than 200 years. Gypsum production and export has been a mainstay industry in the area since the 1770's when farmer in Hants County first found gypsum on their lands and began exporting it to the United States. The modern-day Miller Creek gypsum processing facility is located approximately four (4) kilometres southeast of the Highfield property. Gypsum and anhydrite occur in extensive deposits throughout the area. Modern production occurred for more than fifty (50) years at the Miller Creek and Wentworth quarries operated by Fundy Gypsum Ltd. This operation was closed in 2012 as a result of diminished housing markets in the USA.

Mineral exploration for base and precious metals in the area has focused on base metal sulphides, manganese, iron oxide, and barite deposits associates with the basal Macumber Formation limestone of the Windsor Group. The most significate of these are shown on Figure 8-1 and include Walton (Ba, Zn, Cu, Ag, Pb), Tennycape (Mn), Brookfield (Ba, Zn), Smithfield (Zn, Pb) and Gays River (Zn, Pb).

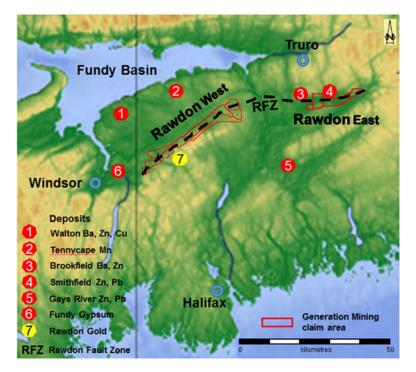


Figure 8-1: Location of base metal deposit (red) and selected gold deposit (yellow)

Petroleum exploration drilling was undertaken in the Cheverie, Falmouth and Kennetcook areas in the early 1900's, focusing on plays in the Horton Group and the lowermost part of the Windsor Group because



of potential reservoirs in the Horton and evaporate seals in the Windsor (Boehner, et al. 1999). A petroleum non-mineral registration (NMR. MP0 002) covering 111 claims lies juxtaposed to the southern boundary of the Highfield Property.

9. EXPLORATION

9.1. Introduction

Other than a few historical references in the literature to gypsum showings in the immediate area of the property, there has been little exploration work carried out on the Highfield property prior to the 2006 work by Gifthorse Resources.

In 2006, Gifthorse initiated an exploration program on the Highfield Property to search for base metal mineralization in the basal Windsor Group, Macumber Formation. The exploration model was to explore for the onlap of the basal limestone at the contact of the Meguma Supergroup, a geological setting demonstrated to host established deposits (i.e., Gays River, Walton). Riteman (2007, 2007b) performed extensive structural analysis of the settings for various deposits and concluded the deposits at Gays River and Smithfield occur on the northern flanks of anticlinal highs of the Meguma Supergroup.

Through analysis of aeromagnetic data, Riteman concluded that one of these Meguma anticlinal structures occurs at depth beneath the Highfield property on the Avon Peninsula. Riteman also concluded in his analysis of the basin that a north-northeast cross cutting fault system was present at the Gays River and Smithfield deposits and a similar fault system cut through the Highfield property. Riteman (2007, 2007b) recommended a program of four (4) geophysical lines of magnetic and deep penetrating IP to identify potential drill targets. A chargeability high zone was defined striking east-west, suggesting the possible setting for the presence of MVT mineralization.

Results of the 2007 geophysical work are summarized in Section 6 (HISTORY) of this report and provided the basis for undertaking exploration drilling in 2018 by Spinco MLK.

To the author's knowledge there have been no factors that may have introduced any bias in either the 2007 or 2018 exploration work.

9.2. Description and Implementation of 2018 Exploration

After review and compilation of existing geological, geophysical, and geochemical data from the property, Spinco MLK consulted with the technical team of Gifthorse Resources to help determine its exploration program, which consisted of one recommended diamond drill hole based on 2008 recommendations. This hole was collared as 18-GHR-004 and was located up the paleo-topographic slope approximately 180 metres southwards from hole 07-GHR-003. This hole collar location was based on 2007 geophysics, results of the 2007 drilling and local topographic relief and Gifthorse' calculation of where the Macumber Formation would be in contact with the Meguma Group basement rocks (i.e., like the deposit setting for the Gays River Zn-Pb mine). It was concluded that the 2007 drilling that targeted the intersect of the Macumber Formation and basement must be located some distance from its intended onlap target with



the Meguma Supergroup. As such, the Gifthorse technical team recommended that the next hole should be collared further south of the 2007 drilling. The collar location for the vertical hole (i.e., 18-GHR-004) was spotted and its UTM Nad83 Zone 20 coordinates (413002E 4988315N)using a handheld Garmin, Model GPSmap sc62 (Table 10-1).

A drilling contractor (Logan Drilling Group) was contracted to complete the hole due to their previous experience of drilling the three earlier 2007 holes on the property. However, the drillers rejected advise on using a salt brine drilling fluid and instead used a mud. The result was that the NQ became stuck and so the contractor switched to BQ core and again became stuck at 304 metres depth. After many days of trying to recover the rods from the hole, all the gear including NQ and BQ rods, bits, overshot, etc. were lost down the hole and it had to be abandoned.

Drill hole 18-GHR-005 was moved 30 metres west of hole 10-GHR-004 and the drilling fluid was switched to supersaturated salt brine. This HQ sized hole was completed to a depth of 574 metres at which point a decision was made to end the hole in brown mudstone of the Horton Group. Meguma Supergroup rock were not intersected and the suspected onlap of the Macumber Formation onto the Meguma appears to be some unknown distance further south from drill hole 18-GHR-005. Complex block faulting and potential thrust faulting in the area appears to have moved stratigraphy deeper than anticipated.

10.DRILLING

The 2018 reconnaissance drilling program (holes 18-GHR-004 & 005) was completed on the Highfield Property by Spinco MLK for a total of 878 metres. This 2018 drilling, combined with the 2007 drilling by Gifthorse (964 metres) represents a total of five (5) drill holes totalling 1,842 metres on the property (Table 10-1). UTM Nad27 (Zone 20) measurements of drill collars taken by Gifthorse Resources were converted to Nad83 coordinated by changing them inside of a handheld Garmin, Model GPSmap 62sc. Based on GPS coordinates of Gifthorse and locations plotted on various maps, the author has some concern regarding the accurate location of hole 07-GHR-002. Since the collars for all 2007 holes were removed the author has no way to conclusively verify this hole's location.

To help rationalize the positioning and stratigraphy of the 2018 drill holes it is important to briefly review the 2007 drill holes in order to give context to the holes 18-GHR-004 and 005.



Hole ID	Zone	Nad83E	Nad83N	Elev. (m)	Azimuth	Dip	Length (m)
07-GHR-001	20	412850	4988225	36	360	-90	117
07-GHR-002	20	412900	4988100	59	330	-78	147
07-GHR-003	20	412937	4988460	35	304	-87.3	700
18-GHR-004	20	413002	4988315	52	360	-90	304
18-GHR-005	20	412977	4988323	47	360	-90	574
						TOTAL	1842

Table 10-1: List of Diamond Drill Hole location on the Highfield Property

10.1. 2007 Diamond Drill Program

In July 2007, Gifthorse completed three (3) diamond drill holes (NQ size) totaling 994 metres on the property. The first hole was collared on Line 2+75E at 860N to test the prominent chargeability high anomaly defined by the IP survey. The first hole (07-GHR-001) was abandoned due to drilling complications at a depth of 117 metres, well above the intended target depth. A second drill was collared approximately seventy-five (75) metres to the east and about 150 metres grid south of the first hole (notwithstanding possible location accuracy). This hole (07-GHR-002) was also abandoned at a depth of 147 metres due to the same drilling complications encountered in the first hole.

The company requested the drilling contractor to make some technical changes with the drilling equipment / methodology and the third hole (07-GHR-003) was drilled to a final depth of 700 metres. The hole cut the expected lithological sequence with the Wentworth Station Formation at the top of the section and ending in Horton Group sediments. The hole passed through the Macumber Formation and bottomed in the Horton Bluff Formation, Bluebeach Member. A summary drill log of DDH: 07-GHR-003 is shown in Table 10-2 below as extracted from Riteman's assessment report filing (Riteman, 2008).

The author would like to state that the physical locations of holes 07-GHR-001 to 003 could not be conclusively verified as the collars had been removed and initial measurements were taken in UTM Nad27. Notwithstanding, the sump used for drilling purposes at hole 07-GHR-001 and 003 at that time is still readily visible. The author is aware that the UTM coordinated as measured in Nad27 and subsequently converted to Nad83 to not match the descriptive locations as documented in Riteman's 2008 assessment report (Riteman, 2008). The author believes that holes 07-GHR-001 and 003 are accurate to within an \pm error limit of 10 metres but is less certain for hole 07-GHR-002 as there is no obvious ground disturbance at these coordinates. Currently the author has no definitive resolution regarding the accuracy of these three (3) drill holes. However, the locations of holes 18-GHR-004 and 005 is well documented in Nad83 with a \pm 1.5 metres. These two collar locations are a result of six (6) averaged handheld Garmin GPSmap 62sc measurements for each hole, but only using measurements of the Garmin showing errors between 0-2 metres. Readings exceeding two (2) metres were discarded from the average.



From (m)	To (m)	Geological Units	Formation
0.0	12.0	Soil and Unconsolidated Glacial Drift	
12.0	116.0	Reddish sandstones, limestone, anhydrite	Wentworth Station
116.0	163.0	Halite, anhydrite	Stewiacke
163.0	300.0	Greyish gypsum, limestones	Miller Creek
300.0	438.0	Massive anhydrite	White Quarry
438.0	445.0	Arenaceous Limestone Rubble	Macumber Formation
448.0	663.0	Arkosic conglomerates, sandstones	Cheverie
663.0	685.0	Fine sandstones, siltstones	Upper Horton Bluff
685.0	700.0	Bluebeach siltstones and mudstones	Horton Bluff
	700.0	END of HOLE	

Table 10-2: Summary Log of DDH 07-GHR-003

10.2. 2018 Diamond Drill Program

In September 2018, under a pending purchase agreement with Gifthorse Resources, Spinco MLK completed two (2) diamond drill holes (NQ, BQ and HQ size) on the property totaling 878 metres. The first hole (18-GHR-004) was abandoned above the proposed target depth and 304 metres of NQ and BQ gear was unrecovered from the hole after remaining stuck in thick salt of the Stewiacke Formation. These were the same drilling issues encountered in the 2007 drill program. Following modifications to drilling fluids, a second HQ size hole (18-GHR-005) was completed to a final depth of 574 metres, passed through the Macumber Formation and terminating in the Cheverie Formation arkoses, siltstones, and mudstones. A summary log of DDH: 18-GHR-005 is shown below (Table 10-3) and a full log is provided in Table 10-4 below. A schematic geological cross section for holes 07-GHR-003 and 18-GHR-005 is shown in Figure 10-3. The Macumber Formation is shown as a red colored horizon in this diagram. No mineralization was encountered in either DDH: 18-GHR-004 or 18-GHR-005.

10.2.1. Gas

While drilling hole 18-GHR-004 gas was encountered at approximately 150 metres depth and the hole was immediately shut down and allowed to depressurize. It was then cemented between 133 and 166 metres and re-drilled through the hardened cement. Two gas monitors were rented and brought to site to use for the duration of the 2018 drilling program. Gas was also encountered in DDH: 18-GHR-005 at 155 metres. The second hole was also allowed to de-pressurize and drilling resumed using the salt brine drilling fluid.



From			
(m)	To (m)	Geological Units	Formation
0.0	19.0	Soil and Unconsolidated Glacial Drift	
19.0	131.1	Reddish sandstones, limestone, gypsum	Wentworth Station
131.1	170.5	Halite, anhydrite	Stewiacke
170.5	300.0	Greyish gypsum, limestones	Miller Creek
300.0	539.3	Massive anhydrite, limestones	White Quarry
539.3	541.8	Arenaceous Limestone	Macumber Formation
541.8	574.0	Arkosic conglomerates, sandstones	Cheverie
	574.0	END of HOLE	

Table 10-3: Summary log of DDH 18-GHR-005

A transition from grey, to orange, to clear salt (halite) with minor interbedded anhydrite was encountered in both holes 10-GHR-004 and 005 (Figure 10-1). An abundance of deformational shearing (some intraformational) was observed throughout the section, but was particularly prevalent in gypsum, anhydrite and silty limestone (Figure 10-2).



Figure 10-1: Upper contact of the Stewiacke Formation salt





Figure 10-2: Shearing between limestone and anhydrite in DDH 18GHR-005



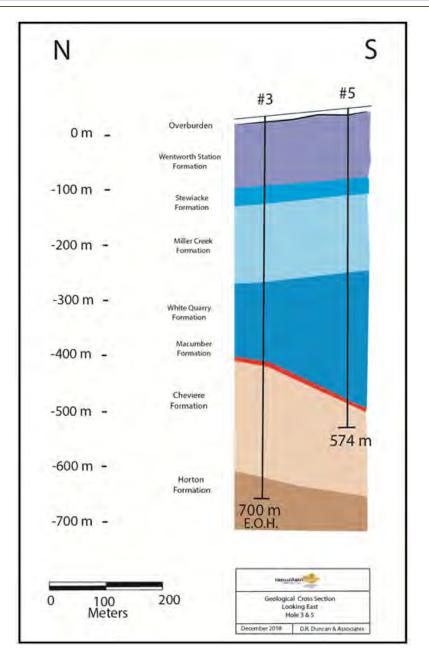


Figure 10-3: Geological cross section through DDH 07-GHR-003 and 18-GHR-005



	Mountain Lake Minerals Inc.	ke Mir	terals Ind	c. Geological Log: 18GHR-005				Down Hole Survey (m/")	ole Surv	ey (m/	۳)		
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Middle Orthomation Description 2010 2021 2015<								222	-89.6		1.9		
Gold GL Gold GL Mouton Statistics Transmission (14) Transmissio	Project: Highfield Zr	n-Pb (Bt	ellmont Road	d, Windsor)	Azimuth			272	-89.9		7.5		
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Eleve: 50 metres Scale : Total : <thtotal :<="" th=""> Total : <thtotal :<="" th=""></thtotal></thtotal>		Septemb	er 25, 2018		Plan No			472	-89.0		1.1		
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-	64.10	65.20	1.10		S	느	Siltstone - grey and laminated	
	65.20	65.50	0.30				Mudstone - red	
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	89.50	96.75	7.25		U	cwt	Gypsum - chicken-wire texture	
	96.75	98.90	2.15		U	g-br	Gypsum - grey-brown and massive	
	98.90	100.10			U	_	Gypsum - laminated	
-	100.10	102.30	2.20		S-M		Siltstone to Mudstone with a sheared lower contact @65° to CA	
-	102.30	102.90	0.60	20-32	s	-	Siltstone - red, lower bedding @ 60° CA	
-	102.90	105.80	2.90		U	ŝ	Gypsum - with minor sandstone	
		107.85			S	5	Siltstone - mixed red and grey; lower contact @ 40° to CA	
-	107.85	110.30	2.45		U		Gypsum - massive and folded with faults; hematite at the upper contact	
_		110.50			G		Gypsum - hematite at lower contact	
	110.50	113.85	3.35		s s	r-gr	Siltstone - mixed red and green	
	113.85	116.95	3.10	30.00	U		Gypsum - hematite at the upper contact	
	116.95	117.60	0.65		M-G	r-gr	Mudstone-Gypsum - mixed red and green with 50% gypsum	
	117.60	118.75	1.15		W	r-gr	Mudstone - red with minor green mudstone	
-00	118.75	121.85	3.10		U	_	Gypsum - laminated	
	121.85	121.90	0.05		U	_	Gypsum - laminated	
	121.90	123.35	1.45	I	W	5	Mudstone - grey, faulting at 30-50° downhole	
	123.35	124.00	0.65	I	W		Mudstone - red	
L	124.00	125.00	1.00	L	c		Gypsum	
	125.00	126.40	1.40		W	r-gr	Mudstone - red and green with bedding @25° to CA	
	126.40	129.20	2.80	37-40	c	٩	Gypsum - minor brecciation	
-	129.20	130.10	06.0	L		÷	Mudstone - grey-brown to grey-red	
1	130.10	131.10	1.00	I	U		Gypsum? Anhydrite?, dark brown with vuggy intervals (5sm) at bottom of interval	
-	131.10	133.44	2.34		SALT	o	Salt - clear to light tan color; salt starts to tum orance at 145.7m; tums white again at 150.5m; tums bright orange below 154.5m; salt becomes black below 157m and is very black between 161-165m	
· ·	122 11	160.00	24 56	11 50	CALT		Salt arranza anjarad sé Bav £0 st ±160m	
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-	168.00	176.80	8.80	53-56	SALT		Salt - a 10cm bed of gypsum at 168.75m; lower contact relatively sharp but not faulted	
	176.80	179.38	2.58		A		Anhydrite?	
-	179.38	190.85	11.47	57-60	A		Anhydrite?	
	190.85	202.45	11.60	61-64	A		Anhvdrite?	
٢	30.0 AE	000 000	6.00	+	<			
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7	200.03	4C.412	- A-C		×		Annyarte / - minor chaicopynte and malacinte grains at 212.49m	_
CN.	214.54	225.93	11.39	69-72	¥		Anhydrite? - bedding at 217.15m is 15° to CA and at 217.70m is 35° to CA	
Drill								
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Drill log for hole 18-GHR-005 (con't)

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Anhydrite?	Anhydrite?	A nhydrite?	Anhydrite?	Anhydrite? - slity between 274.90-275.18m; bedding @ 25° to CA; quartz flooding between 274.65-174.80m	Anhydtite	Anhydrite	Anhydrite	Anhydrite	Anhydrite	Anhydrite - Iaminated	Anhydrite - dirty and liminated from 365.8-358.4	Anhydrite	Anhydrite - at 373.8m bedding is 35° to CA; at 374.35-374.45m soft black coaly laminae; at 375.07-375.2 is massive soft black ?bituminous layer @ 20° to CA	Anhydrite - laminated and silty from 391.95 to 392.40m	Anhydrite	Anhydrite - laminations between 50-70° to CA	Anhydrite - massive with lamination at 50-80° to CA	Anhydrite - massive with laminattions at 50-70° to CA	Anhydrite - massive with lamination at 45-65° to CA	Anhydrite - massive with abundant 1cm eyes spheres below 460m; these are present higher in the anhydrite also; -taminations are at 50-60° to CA in the upper three (3) boxes; -taminations are at 30° to CA where eves are present:	Anhydrite - with spheres	Siltstone - with minor anhydrite	Anhydrite - massive with spheres	Siltstone - black with shell debris, probable shearing in unit at 70° to CA Anhydrite - massive with spheres
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73-76	77-80	81-84	85-88	89-92	93-96	97- 100	98- 104	105- 108	109- 112	113- 116	117- 120	121- 122	123- 126	127- 130	131- 134	135- 138		134- 146	147- 150	151- 154		1	155-	
11.48	11.35	11.78	11.54	11.60	11.32	11.57	11.43	11.66	11.52	11.82	11.58	5.74	11.42	11.63	11.59	11.41	11.63	11.56	11.19	11.69	1.31	_		0.45
237.41	248.76	260.54	272.08	283.68	295.00	306.57	318.00	329.66	341.18	353.00	364.58	370.32	381.74	393.37	404.96	416.37	428.00	439.56	450.75	462.44	463.75	463.90	468.50	468.95 473.82
225.93	237.41	248.76	260.54	272.08	283.68	295.00	306.57	318.00	329.66	341.18	353.00	364.58	370.32	381.74	393.37	404.96	416.37	428.00	439.56	450.75	462.44			468.50 468.95



h small spheres	Siltstone - black with minor anhydrite -banded texture with discontinuous anhydrite beds -minor light with ais at -15° to CA and bedding @ 80° to CA in opposite direction -miss like an open hold inge at 44.5m	h minor spheres and slity banding			Silitatone - dark grey with minor black layers; laminations @ 65° to CA -sheated lower contact @ 40° to CA	Anviourity contraction of the statement of	Anhydrite - massive and brecciated; sphere present but not common -banding @ 45-50° to CA	23.0° to CA	Sitistone - grey and black with minor interoclated anhydrite; minor shearing along laminations	d laminated	th minor spheres	laminated and with minor anhydrite	Anhydrite - massive with laminations and spheres; laminations @ 0-50° to CA	inated grey with minor thin black laminae	t (possible Macumber Lmst)	3 10-30° to CA; sheared lower contact	Sandstone - fissile granular medium grained: ~40% of the sandstone core is missing	the marken modules up to five (5) cm	a fine dark matire like above;	all for the state of constraints of the state of the stat	Sourcessing across the across of a constraining across measures and a contracts	Slitstone - black and massive with a gradational lower contact	Mudstone - red-brown with a faulted lower contact; the fault is five (5) cm into the underlying and stone - and stone - red-brown with a faulted lower contact.	adatinal lower contact		Sandstone - medium fine grained; gradational upper and lower contacts	with minor grit	with minor grit	le grained Abroun uith modorato lominotione and increacing with contrast in louve 20mm	kosis; medium grained; has gradational upper contact;	-sharp lower contact with a scm girt layer located -4cm below the red mudstone	Mudstone - red-brown; unit is 99% red-brown with minor green en echelon alteration veinlets 6. en eletenched zones - torn thick and 12cm long 6. en elettratione id ways soft and fritabile	
Anhydrite - massive with small spheres	Siltstone - black with minor anhydrite -banded texture with discontinuous anhy -minor folding with axis at ~15° to CA ar -looks like an open fold hinge at 484.5m	Anhydrite - massive with minor spheres and silty banding	Anhydrite - massive -lamination @ 20-90° to CA	-low angle rolding with rold axial plane @ ~15° to CA Anhvdrite - massive with spheres	Siltstone - dark grey with minor black I -sheared lower contact @ 40° to CA	Anhvdrite - massive with minor eyes a	Anhydrite - massive and brecciated; sp -banding @ 45-50° to CA	Anhydrite - laminated @ 30° to CA	Siltstone - grey and black with minor in laminations	Anhydrite - massive and laminated	Anhydrite - massive with minor spheres	Siltstone - grey-brown, laminated and with minor anhydrite	Anhydrite - massive with laminations a	Siltstone - laminated grey with minor thin black laminae -minor remobilized anhvdrite curting lamination	-gradation upper contact (possible Macumber Lmst)	Siltstone - lamination @ 10-30° to CA; sheared lower contact	Sandstone - fissile granular medium gr	Siltstone - dark grey with mauve nodules up to five (5) cm	Sandstone - medium grained arkose Siltstone - nodular with a fine grained black matire like above;	-gradational lower contact Sandstone - arkose with clasts of overlving dark siltstone	Sandstone - arkose with clasts of over	Siltstone - black and massive with a gr	Mudstone - red-brown with a faulted lo sandstone	Sandstone - arkose; gradatinal lower contact	Mudstone - red-brown	Sandstone - medium fine grained; grad	Mudstone - red-brown with minor grit	Mudstone - red-brown with minor grit	Sandstone - fine grained	Sandstone - arkosic; medium grained;	-sharp lower contact with a 5cm grit la	Mudstone - red-brown; unit is 98% red-brown v (i e. bleached zones ~1cm thick and >12cm lo -some of the mudstone id verv soft and triable	FND OF HOLE (574 00 METRES)
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1.98		4.83	11.49	0.43	-	7.69		5.50	0.80	4.65	-		6.30	0.71	-	-		-	3.85	-	+	-		0.80		0.25	0.93	1.77	0.28		-	6.83	
475.80	480.60	485.43	496.92	497.35	498.55	506.24	517.55	523.05	523.85	528.50	532.70	532.95	539.25	539.96		541.80	542.00	542.35 r 40.00	547.75	551 B.4	552.50	553.20	560.30	561.10	561.95	562.20	563.13	564.90	565.18 566.00	567.17		574.00	574.00
473.82	475.80	480.60	485.43	496.92	497.35	498.55	506.24	517.55	523.05	523.85	528.50	532.70	532.95	539.25		539.96	541.80	542.00 542.00	546.20	47 75	551.84	552.50	553.20	560.30	561.10	561.95	562.20	563.13	564.90 565 19	566.00		567.17	

Drill log for hole 18-GHR-005 (con't)

10.3. Sampling of 2007 Drill Core

Drill core from the 2007 program was logged and moved, in part, into storage at the NSDEM Core Storage Library in Stellarton, Nova Scotia. A total of ten (10) samples had been collected from drill hole 07-GHR-003 by Gifthorse. The core was cut in half using a diamond saw with one half bagged for analysis and the other half returned to the core tray as the witness sample. The author travelled to the core library to inspect and photograph the witness core from hole 07-GHR-003 and preserved salt from hole 07-GHR-001 on December 4th, 2018. All 2007 sample lengths are true stratigraphic widths.

Drill core from the 2018 program was moved away from the drill site using an ATV (Figure 10-4) and stacked (Figure 10-5) for subsequent trucking by a Spinco MLK senior executive to a secure storage facility south of Wolfville, Nova Scotia. As of the effective date of this report, no sampling of core had been undertaken by either Spinco MLK, or Gifthorse.



Figure 10-4: Core being moved from the drill site to a transfer pad



Figure 10-5: DDH 18GHR-004 (left) and 18GHR-004 ready for transportation



10.4. Core Recovery

Core recoveries in the 2018 drilling program were excellent. For hole 18-GHR-005, the company used HQ3 triple tube core barrels and drilled using a circulating supersaturated brine. Hole 18-GHR-005 was completed to a final depth of 574 metres with near 100% recovery. The Author is satisfied that the onsite drillers operated professionally throughout the entirety of the program, although the drilling company did dismiss the recommendation from both Gifthorse and Spinco MLK to use a saturated salt brine and opting instead to use a drilling mud that eventually lead to losing hole 18-GHR-004 and all the downhole gear with it. The consequence of this was that the 2018 drill program was well over budget.

10.5. Drilling Costs

As a result of losing DDH: 18-GHR-004 and all the gear the drilling company agreed to re-drill the top 304 metres at no cost to the client. Notwithstanding this, the overall cost of just the drilling contract was \$167,300.57, or an average price per metre of \$291.46 based on 574 metres of DDH: 18-GHR-005. If consideration for the lost 304 metres in hole 18-GHR-004 is zero dollars, then the cost for the total 878 metres of drilling can be calculated at \$190.55 per metre (drilling only). Including other associated costs of completing the program and reporting requirements, the total program was \$225,680.44

10.6. 2018 Drill Results

The drill results provide a stratigraphic sequence to enhance the overall geological interpretation of the property. In addition, the thick sequence of salt may hold future economic potential. A preliminary examination of the core by High Grade Geoscience suggest the possibility of overturning and repetition of at least part of the drilled stratigraphy. This will be verified later once the core is relocated to long-term storage in Stellarton at the provincial governments core facility.

The 2018 drilling did not intersect zinc-lead mineralization but do offer good geological data that can be interpreted more fully in Spinco MLK's subsequent 2020 exploration program.

11.SAMPLE PREPARATION, ANALYSES, AND SECURITY

No core samples were taken by Spinco MLK during the 2018 program. However, because there are so few analyses for the property a review of the 2007 program by Gifthorse is summarized below. This overview is for information purposes only to demonstrate the procedures utilized.

The 2007 core was washed and logged by Gifthorse personnel with ten (10) samples being taken from hole 07-GHR-003. These samples were sent by Larry Riteman (True Metallic Exploration Inc.) to The Minerals Engineering Centre ("MEC") at the Technical University of Nova Scotia located in Halifax for analyses of Ag, Ba, Cu, Fe, Pb and Zn (Table 11-1 and Table 11-2). Although the lab carried out complex and routine analyses on a regular basis for both the private sector and the Technical University, the lab is not certified based on ISO 17025 standards.



MEC stated for sample preparation and analyses, that the samples were dried, weighed, crushed, and pulverized to minus 200 mesh. One (1) gram samples were digested with hydrochloric-nitric-hydrofluoric-perchloric acids (4 Acid Digestion). Elements were determined by Flame Atomic Absorption or ICP OES with detection limit of 1 ppm. Reference standards from CANMET and NRC Canada were used to check the accuracy of the analysis.

The author contacted MEC and received written confirmation of analytical techniques and standards. The assay certificate provided to the author from MEC is shown in Table 11-1.

MEC is not a certified assay laboratory but has been carrying out high quality analyses and mineral beneficiation techniques using a variety of instrumentation as a primary educational function to both the Technical University of Nova Scotia and the mineral exploration industry in general.

There is no relationship between MEC and any of True Metallic Exploration, Gifthorse Resources, Spinco MLK, Mountain Lake-CSE, 1167343 B.C., 1151024 B.C. or the author, other than it serves as an analytical lab for hire.

The author is satisfied with the overall quality of the sampling protocols and laboratory controls resulted in satisfactory assay results.



B4A 3Z2

Table 11-1: Drill core assay certificate from the Mineral Engineering Centre 30-Jan-08 True Metallic Explorations Inc. P.O. Box 48007 106 Bluewater Rd. Bedford, Nova Scotia Attn: Larry Riteman Re: Results of analysis on submitted samples. Near total acid digestion, AAS or ICP OES finish. ٦ - /1-

	-	Ť	mg,	/kg		
Sample	Ag	Ba	Cu	Fe	Pb	Zn
31572	0.7	37	35	3156	11	23
31573	0.9	185	26	4662	14	10
31574	0.4	260	4	8810	17	18
31575	0.3	278	19	9861	13	23
31576	0.5	272	23	12658	18	27
31577	0.1	268	27	5737	115	5
31578	0.1	293	3	8900	71	8
31579	0.1	141	5	11854	34	5
31580	0.1	151	3	9000	20	6
31581	<0.1	110	3	8195	15	5

Daniel Chevalier Manager, Minerals Engineering Centre



These data are also presented in Table 11-2 with the top and bottom intervals in the hole.

Sample	From	То	Length	Ag	Ba	Cu	Fe	Pb	Zn	Comment
Number	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	
31572	438.00	438.40	0.40	0.7	37	35	3156	11	23	Top of MaCumber limeston
31573	439.00	439.55	0.55	0.9	185	26	4662	14	10	Bottom of MaCumber limstone
31574	442.42	442.85	0.43	0.4	260	4	8810	17	18	"Grit" under Macumber
31575	442.85	443.50	0.65	0.3	278	19	9861	13	23	Limestone boulder
31576	443.50	444.00	0.50	0.5	272	23	12658	18	27	base of Limeston boulder
31577	444.00	444.30	0.30	0.1	268	27	5737	115	5	Top of Cheverie grits
31578	639.30	639.50	0.20	0.1	293	3	8900	71	8	Coarse Cheverie conglomerate
31579	642.60	643.00	0.40	0.1	141	5	11854	34	5	Fissure in Cheverie
31580	643.00	643.60	0.60	0.1	151	3	9000	20	6	Fissure in Cheverie
31581	644.00	644.30	0.30	<0.1	110	3	8195	15	5	Fissure in Cheverie

Table 11-2: Assay results from DDH 07-GHR-003 (after Riteman, 2008)

12.DATA VERIFICATION

The author has examined all aspects of the 2018 drill program as well as the 2007 assay certificates, analytical procedures, and assay results. The author has also examined the remaining core from holes 07-GHR-001 and 003 (in storage at the NSDEM Core Storage Facility in Stellarton NS), as well as core from holes 18-GHR-004 and 18-GHR-005. The author has not taken any check samples from the 2018 drill core. The author verified the locations of the 2007 drill hole collars in the field as best as could be accomplished and visited the 2018 drill site while the holes 18-GHR-004 and 005 were being drilled.

The author verified 2007 analytical results by communicating directly with the Manager and Geochemist at the analytical lab. The author is knowledgeable about the MEC laboratory and is satisfied that the quality of the results is satisfactory in meeting minimum standards of both Quality Assurance and Quality Control.

13.MINERAL PROCESSING AND METALLURGICAL TESTING

No Mineral Processing and/or Metallurgical Testing have been carried out for this Technical Report as there is no established mineralization yet identified. This section is not applicable to the Technical Report.

14.MINERAL RESOURCE ESTIMATES

No Mineral Resources were estimated for this Technical Report and no mineral resources have been defined on this property. This section is not applicable to the Technical report.



Sections 15 to 22 are not required under provisions of technical reporting and all, but Section 22 have been excluded from this report.

23.ADJACENT PROPERTIES

23.1. Summary

This project is focused on exploration models analogous to the MVT Gays River and Walton deposits styles of mineralization. Although economic potential for gypsum, salt exists on the property, potential to accidentally intersect currently unknown gold mineralization also exist on the property. However, gypsum, salt and gold are not the being considered for exploration by Spinco-MLK at this time.

All information below is publicly available through the Nova Scotia Government and other private sources on the internet. A selection of references specific to MVT mineralization in Nova Scotia includes, Boyle (1963), Moore & Cormier, (1994), Patterson, (1993), Ravenhurst, et al., (1990), Sangster, et al., (1998), Stantec, (2018), and Wikipedia (2019).

Currently there is no information that would suggest this property will host mineralization like either Gays River or Walton, other then the presence of the Macumber Limestone Formation which is the host lithology for this style of mineralization in this part of the Windsor Basin. Furthermore, the author can provide no assurance that Spinco MLK will be successful in the discovery of other geological indicators that may lead to the discovery of Walton or Gays River style mineralization.

Brief descriptions for each of these deposits (Walton and Gays River) is provided below solely to better inform the reader about the style of mineralization Spinco MLK is exploring for at this property.

23.1.1. Walton

The Walton barite and Pb-Zn-Cu-Ag mine (Sangster, et al., 1998) is located about eighteen (18) kilometres north of the Highfield property. Barite production between 1941-1955 was carried out by Canadian Industrial Minerals, at which time the mine was leased to Magnet Cove Barium Corporation. In 1956 the Nova Scotia Department of Mines conducted a diamond drill program that revealed a lead-zinc-silver-copper orebody below the large barite deposit. A mill was constructed in 1961 and in 1967 Magnet Cove Barium Corporation became Dresser Minerals. In 1970 the mine accidently flooded. In 1978 operations were phased out and the mine closed. Over its thirty-eight (38) years of operation the mine produced 4.3 million tons of barite. From the discovered sulphide zone a total of 412,000 tons of ore graded 4.28% Pb, 1.29% Zn, 0.52% Cu and 350 g/t Ag.

23.1.2. Gays River

The Gays River Zn-Pb mine is located approximately fifty-nine (59) kilometres east of the Highfield property. The mineralization consists of 'high-grade' galena and yellow sphalerite in the Macumber Formation with a larger disseminated halo of mineralization. This deposit lies immediately on the eroded Meguma Supergroup and is covered with up to thirty (30) metres of clay-rich glacial overburden.



Zinc and Lead mineralization was discovered at the Scotia Mine in 1973 by the Esso and Cuvier joint venture. Esso initiated mine development in 1978, commissioned the mill in 1979, developed the underground mine, and began mining and milling.

Seabright acquired the Scotia Mine property and mill in 1984. Seabright converted the mill for gold processing and processed gold ore from several satellite properties.

The Scotia Mine property was acquired in 1988, by Westminer Canada Limited, the Canadian subsidiary of Australia based Western Mining Corp. Westminer dewatered the mine and continued mining and milling.

In 1997, Savage Resources Canada Limited acquired the Scotia Mine assets from Westminer. Savage concluded that an open pit operation was feasible and initiated environmental permitting.

Savage was subsequently taken over by Pasminco Resources Canada. Regal Mines Limited purchased Pasminco Resources in February 2002. Regal Mines was owned 50% by OntZinc Corporation and 50% by Regal Consolidated Ventures Limited. As part of the sale, Pasminco Canada Holdings Inc. retained a 2% net smelter return (NSR) royalty on future production. In December 2002, OntZinc acquired Regal Consolidated's 50% interest to own 100% of Pasminco Resources. Savage Resources Limited was the successor of Pasminco Holdings and held the 2% royalty.

OntZinc later changed its name to HudBay Minerals Inc. after purchasing, through a reverse takeover, Hudson's Bay Mining and Smelting in December 2004. Hudbay owned the Scotia Mine through its wholly owned subsidiary, ScoZinc Limited.

In 2006, Acadian Gold Corp. purchased 100% of ScoZinc and all its assets (consisting mainly of the Scotia Mine and its infrastructure) from OntZinc for \$7 million. Acadian Gold subsequently changed its name to Acadian Mining Limited. On 29 May 2007, ScoZinc exercised its option to buy-out the 2% NSR for \$1,450,000.

ScoZinc reactivated the mill and continued surface mining the deposit during 2007 and 2008. Depressed metal prices and high operating costs forced ScoZinc to place the mine on care-and maintenance status.

In May 2011, Selwyn Resources Limited (name changed to "ScoZinc Mining Ltd." in 2015) purchased ScoZinc and all its assets, including the Scotia Mine and ScoZinc's exploration claims, for \$10 million less a deduction relating to increased reclamation bonding requirements that were being determined at the time of the acquisition.

In August 2019, new management of ScoZinc Mining Ltd. was appointed to consolidate all previous work and develop a definitive plan for re-starting the Scotia Mine as quickly as practicable. ScoZinc plans to reopen the mine in the near foreseeable future pending financing and meeting all regulatory requirements.

Further descriptions are provided below due to their importance to geological modelling for mineralization at the Highfield Property.



23.2. Gays River Geology

The Scotia and Getty Deposits are underlain by basement rocks of the Cambro-Ordovician Meguma Group, which has significant local topographic relief due to rift faulting and erosion. A local veneer of Horton Group, red-brown conglomerate, and sandstone mark the base of the unconformably with overlying Lower Carboniferous host rocks. Carbonate rocks are the Gays River Formation is time equivalent with the Macumber Formation. Both the Macumber and Gays River Formations are overlain by evaporites (gypsum, anhydrite, salt) of the Carroll's Corner and Stewiacke Formations. An aerial photograph of the mine and mill (ca. 2012) is shown below in Figure 23-1.



Figure 23-1: Gays River open pit mine and mill (ca. 2012)

Mineralization is considered Mississippi-Valley-type Pb-Zn deposit that is generally classified as a typical open space filling type and hosted in a dolomitized limestone (Figure 23-2).



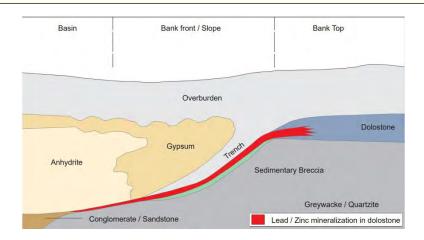


Figure 23-2: Schematic cross section through the Gays River deposit

The Zn/Pb-bearing host rocks trend in an east-northeast direction across the property and mineralization has an average 45° dip but is locally vertical. Mineralization occurs as sphalerite and galena and grades from massive Pb-Zn ore in the fore reef to finely disseminated, lower grade material in the back reef.

The aggregate mineral resources of the Scotia Mine (Main, North-East, Getty, and Getty South) are shown in Table 23-1 below (SRK Consulting(U.S.), Inc., 2020.



Classification	Zone	Mass (kt)	Zn (%)	Pb (%)	ZnEQ (%)
	Getty	60	1.38	1.25	2.58
	Main	4,130	2.57	1.30	3.81
Measured	North East	130	3.18	1.88	4.98
	Total	4,320	2.57	1.32	3.83
	Getty	8,090	1.24	0.81	2.02
	Getty South	840	1.58	0.25	1.82
Indicated	Main	9,870	1.92	1.01	2.89
	North East	2,330	2.88	1.15	3.98
	Total	21,130	1.75	0.92	2.64
	Getty	8,150	1.24	0.82	2.03
	Getty South	840	1.58	0.25	1.82
Measured and Indicated	Main	14,000	2.11	1.09	3.16
malculou	North East	2,460	2.89	1.19	4.04
	Total	25,450	1.89	0.99	2.84
	Getty	950	1.35	0.54	1.87
	Getty South	770	1.53	0.25	1.77
Inferred	Main	2,980	1.49	0.79	2.25
	North East	310	2.01	0.74	2.72
	Total	5,010	1.50	0.66	2.13

Table 23-1: Scotia Mine Resource Statement, Dec.14, 2019

Source: SRK, 2019

 Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any part of the Mineral Resources estimated will be converted into Mineral Reserves;

Open pit resources stated as contained within a potentially economically minable open pit; pit optimization was based on assumed prices for zinc of US\$1.35/lb, and for lead of US\$1.14/lb, a Zn recovery of 86% and a Pb recovery of 93%, mining and processing costs varying by zone, and pit slopes of 45 degrees in rock and 22 degrees in overburden;

 Open pit resources are reported based on a Zinc Equivalent (ZnEq) grade of 0.90%. The ZnEq grade incorporates Zn and Pb sales costs of US\$0.19/lb and US\$0.11/lb respectively, and a 2% royalty fee;

Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to

 Numbers in the table have been rounded to reliect the accuracy of the estimate and may not sum of rounding

23.3. Walton Cu-Pb-Zn-Ag-Ba Deposit

The Walton Ba-Cu-Pb-Zn-Ag deposit, Nova Scotia (production: 4.5 million tonnes >90% BaSO4 and 412,850 tons 0.52% Cu, 4.28% Pb, 1.29% Zn, and 350 g/t Ag), is hosted by Macumber Formation and its associated breccia (Sangster, et al., 1998) and was a major carbonate-hosted barite and base metal/silver deposit discovered in the 1940's and in production until the late 1970's. The Macumber Formation in the Walton area is divided into two units, the lower Macumber, a laminated carbonate unit nine (9) to twelve (12) metres thick, and the upper Macumber, a synsedimentary carbonate slump breccia that forms two mounds up to twenty-one (21) metres thick. Outside the immediate mine area, the carbonate the deposit has been altered to manganiferous siderite. Minerals were deposited in the sequence: barite, pyritemarcasite, sphalerite, galena, tennantite, chalcopyrite, and (para)rammelsbergite. Based on barite and metal content two main ore types are defined. Type I, with a bulk composition of 0.3 percent Cu, 2.5 percent Pb, 0.2 percent Zn, and 31.2 percent BaSO₄, comprises barite and variable sulfide contents. Type II, comprised of sulfides only, has a composition of 0.5 percent Cu, 0.5 percent Pb, 0.1 percent Zn, 51 g/t Ag, and no barite. Type I ore forms a roughly conformable sheet which straddles the upper Macumberlower Macumber contact and contains lenses of Pb- and Cu-rich ore. Type II ore is commonly associated with the upper Macumber mounds where it forms large pods which cut the type I ore zone. Type II ore also occurs within the underlying Horton Group sandstones (Figure 23-3). There is also a stratigraphic zonation in metal content inasmuch as all metals are higher, on average, in the lower Macumber relative to the upper Macumber. The host stratigraphy and mineralization are steeply dipping and faulted.



Karsting, which also postdates mineralization, has removed portions of the upper stratigraphy of the deposit. The cavities produced by this process are now partially filled with sand and limestone breccia.

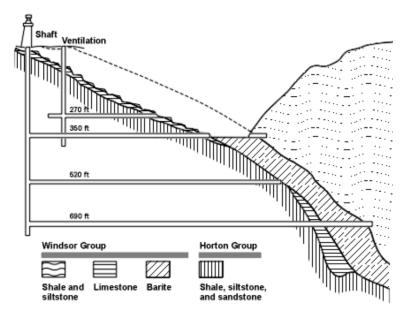


Figure 23-3: Schematic cross section through the Walton Mine

23.4. Gypsum

The Highfield Property is located on the Avon Peninsula near Windsor, Nova Scotia and is north of and adjacent to the Fundy Gypsum's Miller Creek operation. Gypsum mining in the Windsor area is though to date back to the 1700s when early French settlers used both gypsum and anhydrite for plaster. Mines in the Windsor area was halted in 2012 during a depressed market. Following an application to expand the quarry in 2006 (Figure 23-4), gypsum markets began to decline and Fundy Gypsum ceased its operations The current operation at Miller Creek is still on care and maintenance.

Drilling at the Highfield Property is located less than one (1) kilometre north of the gypsum expansion study area noted above. Thick gypsum and anhydrite encountered in drill hole 18-GHR-004 & 005 will be equivalent stratigraphically to that mined in the Miller Creek quarries to the south (Figure 23-4).



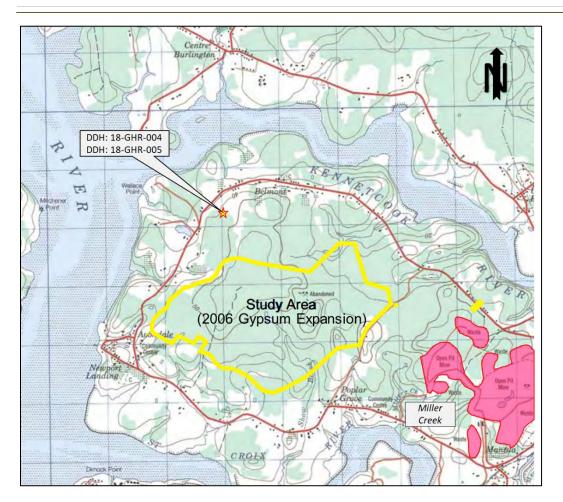


Figure 23-4: Location of Miller Creek gypsum quarry (red) and 2006 proposed expansion

23.5. Nova Scotia Gold Districts

There are sixty-five (65) declared gold districts in Nova Scotia, most of which occur in the Meguma Supergroup meta-arenite and meta-slate of the Goldenville and Halifax Groups, respectively. Several of these districts line close to the Highfield Property and are shown in Figure 23-5 below, despite there being no known genetic link between precious metal mineralization in the basement rocks and the MVT styles Zn-Pb mineralization in the Carboniferous Windsor Group. The most proximal gold districts to Highfield include the Rawson, Centre Rawson, McKay Settlement, West Gore, and Ardoise Hill Gold Districts.

There is no expectation of intersecting gold mineralization in any of the planned drill holes on the Highfield Property.



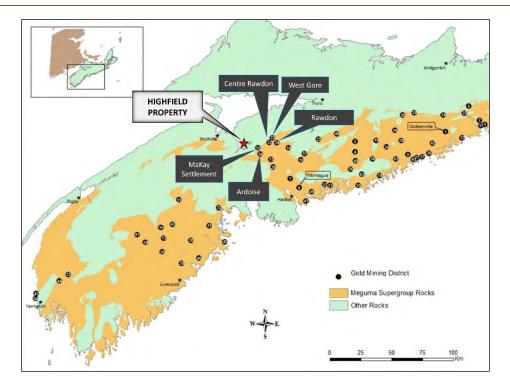


Figure 23-5: Gold Districts of Nova Scotia and proximity to the Highfield Property

24.OTHER RELEVANT DATA AND INFORMATION

As currently understood by diamond drilling on the property, development of any potential mineralization would necessarily take place at approximately 500 metres depth and would thereby require an underground operation.

No mineralization has been discovered and therefore any metal recovery is speculative at this early stage. In addition, any market conditions related to this project cannot be theorized at this stage of exploration.

No contracts related to mining are being considered by Spinco MLK at this time. As the nature of mineralization is not yet established it would be total conjecture to suggest parameters for bonding, remediation and reclamation, other than to note that bonding and a full environmental study will be required should the project establish an economic mineral resource and proceed towards development.

Likewise, no meaningful calculations related to taxes, capital and operational costs, payback or mine life can be established. As of the updated review date no economic analysis has been either undertaken or considered.

To the best of the authors' knowledge there is no other relevant data, additional information, or explanation necessary to make this Technical Report understandable and not misleading in respect of this section.



25.INTERPRETATION AND RESULTS

Drilling at the Highfield Property has not yet confirmed Mississippi Valley Type ("MVT") Zn-Pb mineralization, but it has established a geological environment that can support high-grade and disseminated and vein type mineralization like the Gays River deposit located approximately fifty-nine (59) km further east. The Macumber Formation which hosts Zn-Pb mineralization at Gays River shows variable thicknesses between three (3) and eight (8) metres in drill holes at Highfield. Associated stratigraphy at Highfield, both above and below the Macumber Formation, is consistent to that of the Gays River MVT deposit. However, block faulting and a possible overturned stratigraphic section suggest that deformation may play a significant role in locating the hidden base metal mineralization on the property. The presence of thick salt encountered in all five (5) drill holes suggests that further investigation of a high-quality salt resource should be examined.

As a cautionary note, the author has not verified all associated information pertaining to all other adjacent base and precious metal mineral deposits mentioned in this technical report. Neither can the author verify if economic mineralization might be discovered on the Highfield Property in the future; only that the geological setting is similar to other base metal deposits mentioned above (i.e., Gays River, Walton). The author is also aware that both style and depth to mineralization will play a significant role in determining potential economic viability of the project.

A re-interpretation of existing geological information based on 2018 drilling suggests the Carboniferous basin is downfaulted in the immediate area of this drilling. These data also require either further re-evaluation of geophysical data or new geophysical surveys to locate the onlap of the Macumber Formation with older Meguma basement stratigraphy.

26.RECOMMENDATIONS

Spinco MLK intends to undertake Phase II exploration at the property in 2020 (pending issues surrounding the Covid-19 pandemic) to identify both the location of Macumber onlap on the basement, and potential sources of mineralization. An additional sixteen (16) to twenty (20) claims should be staked along the northern and eastern borders of Exploration Licence 06922 to cover additional favorable ground.

The first recommendation is to re-evaluate existing geophysics data in the area and undertake a preliminary seismic geophysical survey line to target the contact of the Macumber unconformity with the Meguma basement stratigraphy. The cost of this work is estimated at \$25,000.

In addition, a detailed Mobile Metal Ion ("MMI") geochemical survey over the property to further refine areas of potential Zn-Pb mineralization along the unconformity is recommended. The cost of this work is estimated at \$55,000.

The next drill campaign will, in part, be based on the results of coincident geophysics and MMI targets. The recommendation is to complete two (2) additional drill holes of 600 metres each. The first hole is recommended at the top of the topographic ridge approximately 150 metres south of hole 18-GHR-005 near the southern limit of the property boundary. This hole should budget for a total of 600 metres of



HQ3 size core. The all-in cost estimate of this drill hole is \$120,000 based on an, "all-in-cost" of \$200/metre. Placement of a second 600-metre-deep drill hole should in part be based on the result of the geochemical and geophysical programs in addition to geological interpretation. The second hole of this recommended program in the Windsor basin believed to include a thick section of salt is budgeted at \$200 per metre for a total of \$120,000 like the first drill hole.

The total minimum proposed budget for the 2020 exploration, assuming only one (1) of the two (2) holes is completed is \$200,000 whereas if both drill holes are completed the maximum cost of the program is estimated at \$320,000. These exploration activities are not contingent on results of the 2018 results. Results of the seismic and geochemistry surveys will not have any bearing on the timely completion of the first diamond drill hole but may influence the location, depth, and timing of the second hole. Should the Phase II results prove unfavorable then additional exploration techniques will be implemented (e g., acoustic seismic, deeper seismic). No budget has currently been established for this exploration work.

It is the author's believe that based on drill results from the 2018 program, in combination with 2007 drilling, and the presence of nearby Zn-Pb mineralization that this area provided encouraging information that may lead to a potential discovery of new MVT mineralization on the property.



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28.APPENDIX

28.1. 2018-2019 EXPLORATION EXPENDITURES

The following expenditure table relates to the Company's 2018 exploration drilling program on the Highfield Property near Windsor, Nova Scotia. Expenditures in 2019 were incurred relating to logging and re-logging of drill core and report preparation. No other expenditures are applicable to the property location as of the date of filing of this report.

		Mountain Lake Mi	nerals Inc.						
		(HIGHFIELD Zn-Pb	PROJECT)						
Item	Vender	Service	Unit	U	nit Price		Cost	9	Sub-total
PROFESS	IONAL FEES								
	D.R. Duncan & Associates	consulting (report +	expenses)			\$	21,439.52		
	Larry Riteman	consulting/mileage				\$	2,815.00		
	Bill Fleming	consulting	16	\$	200.00	\$	3,200.00		
	Paul K. Smith	core logging	8	\$	650.00	\$	5,200.00		
								\$	32,654.52
TRANSPO	ORTATION								
	Bill Fleming	mileage	1500	\$	0.55	\$	825.00		
	Paul K. Smith	mileage	1789	\$	0.55	\$	983.95		
		Ŭ				-		\$	1,808.95
DRILLING	3	i i							
	Logan Drilling Group	Drilling	878	\$	190.55	\$1	67,300.57		
								\$	167,300.57
RENTAL									
	Quad	moving core	3	\$	100.00	\$	300.00		
	Truck	moving core	4	\$	150.00	\$	600.00		
								\$	900.00
REPORT									
	Paul K. Smith	preparation	5	\$	500.00	\$	2,500.00		
							-	\$	2,500.00
		Subtotal	s						
								\$	205,164.04
ADMINIS	STRATION							-	
	10% Management fee							\$	20,516.40
	0	· · · · · ·			GRA	ND	TOTAL =	Ś	225,680.44

Table 28-1: 2018-2019 exploration expenditures by Spinco MLK.



28.2. PHOTOGRAPHIC IMAGES OF DDH: 18-GHR-005

DRILL CORE PHOTOS FROM HOLE 18GHR-005 (HIGHFIELD PROPERTY)

UTM Nad83E: 412977 Nad83N: 4988322, Elevation: 47 metres, Zone 20, Map Sheet: 21H/01A Azimuth: 360°, Inclination: -90°, Depth: 574 metres, Core Size: HQ

Box 1-4



Box 5-8





Box 9-12



Box 13-16





Box 17-20



Box 21-24





Box 25-28



Box 29-32





Box 33-36



Box 37-40





Box 41-44



Box 45-48





Box 49-52 (156.44-167.90 m)



Box 53-56 (167.90-179.38 m)





Box 57-60 (179.38-190.81 m)



Box 61-64 (190.81-202.45 m)





Box 65-68 (202.45-212.54 m)



Box 69-72 (212.54-225.93 m)





Box 73-76 (225.93-237.41 m)



Box 77-80 (237.41-248.76 m)





Box 81-84 (248.76-260.54 m)



Box 85-88 (260.54-272.08 m)





Box 89-92 (272.08-283.68 m)



Box 93-96 (283.68-295.00 m)





Box 97-100 (295.00-306.57 m)



Box 101-104 (306.57-318.00 m)





Box 105-108 (318.00-329.66 m)



Box 109-112 (329.66-341.18 m)





Box 113-116 (341.18-353.00 m)



Box 117-120 (353.00-364.58 m)





Box 121-122 (364.58-370.32 m)



Box 123-126 (370.32-381.74 m)





Box 127-130 (381.74-393.37 m)



Box 131-134 (393.37-404.96 m)





Box 135-138 (404.96-416.37 m)



Box 139-142 (416.37-428.00 m)





Box 143-146 (428.00-439.56 m)



Box 147-150 (439.56-450.75 m)





Box 151-154 (450.75-462.44 m)



Box 155-158 (462.44-473.82 m)





Box 159-162 (473.82-485.43 m)



Box 163-166 (485.43-496.92 m)





Box 167-170 (496.92-506.24 m)



Box 171-174 (506.24-517.55 m)





Box 175-178 (517.55-528.50 m)



Box 179-182 (528.50-539.96 m)





Box 183-186 (539.96-551.84 m)



Box 187-190 (551.84-563.13 m)





Box 191-193 (563.13-574.00 EOH)



28.3. 2007 Geophysical Report

For the benefit of readers, the Interpretation Report prepared by Matrix GeoTechnologies Ltd. for Gifthorse Resources is duplicated in its entirety in Appendix 28.3 in the following pages below.



Matrix GeoTechnologies Ltd. Suite 400, 8 King Street East Toronto, ON M5C 185



MATRIX GEOTECHNOLOGIES LTD.

Interpretation Report

Regarding the INDUCED POLARIZATION, RESISTIVITY and MAGNETIC SURVEYS at the GIFTHORSE PROPERTY, Hants County, Nova Scotia on behalf of GIFTHORSE RESOURCES INC Bedford, Nova Scotia

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1. INTRODUCTION

٠	MGT Project #:	P-204
•	Project Name:	GiftHorse Property
٠	Survey Period:	May 15 TH to May 27 TH , 2007
•	Survey Type:	Induced Polarization \ Apparent Resistivity\Magnetic
٠	Client:	GiftHorse Resources Ltd.
٠	Representative:	Larry Riteman
•	Client Address:	106 Bluewater Road P.O. Box 48007 Bedford, N.S. B4A 3Z2

• Objectives:

- 1. Document the physical properties of the major lithologic units and alteration patterns for compilation with the exploration database.
- .
- 2. Generate a conceptual geological model using the Time Domain Induced Polarization\Resistivity and Magnetic data.
- 3. Increase the exploration program efficiency by better directing the future exploration works and to assist in mapping of general geology, locating structural and alteration features that may favor the precious and base metals presence in the surveyed areas.

The Gradient array was designed to investigate up to 650m depth range and was chosen for its high resolution and deep penetration capabilities. The Pole-Dipole arrays are used as detailing tool and were designed to investigate in the 30-150 meters depth range.

Report Type: Interpretation Report

2. GENERAL SURVEY DETAILS

LOCATION

- Province:
- Country:
- Nearest Settlement:

Nova Scotia

Canada

Windsor Twp.



Figure 1: General Property Location of the GiftHorse Property

1

Access

•	Base of Operations:	Hants County, Nova Scotia
•	Grid Location:	The GiftHorse Property is located approxima- tely 10 km NE of Windsor Township
•	Mode of Access:	The surveyed grid area is accessible by truck.

SURVEY GRID

٠	Coordinate Reference System:	NAD 27 (Zone 20)
•	Latitude and Longitude	45° 02'N, 64° 07'W
•	Established:	Prior the survey execution
٠	Liné Direction:	10 deg NW-SE
•	Line Separation:	Variable
•	Station Interval:	12.5 and 25 metres
٠	Method of Chaining:	Metric-chained

3. SURVEY WORK UNDERTAKEN

GENERALITIES

•	Surveyed By:	Matrix GeoTechnologies Ltd.
•	Survey Dates:	May 15 TH to May 27 TH , 2007
•	Mob/Demob Days:	3 days

Survey Coverage: approx. 3.5 km

PERSONNEL

•	Project Manager:	Ludvig Kapilani David Eastcott
•	Field Assistants:	Chris Charron Gregory Stevenson

IP\RESISTIVITY SURVEY SPECIFICATIONS

•	Arrays:	1) Gradient (see Fig. 2) 2) Pole-Dipole (dipole-pole configuration - see Fig. 3)
•	Transmitting dipole spacing:	Gradient: C_1 - C_2 = 3400 meters Pole-Dipole: C_1 - C_2 = 1.0 km min
•	Array Parameters:	Gradient: MN= 25 m Pole-Dipołe: n=2a, a=25m, dipole 1 to 6
•	Sampling Interval:	25 metres
•	Total Gradient AB Blocks:	1 block
•	Total Pole-Dipole Lines:	4 lines
•	Areal Coverage:	approx. 0.36 km ²

MAGNETIC SURVEY SPECIFICATIONS

•	Method:	Station Magnetics line profiling
•	Technique:	Profiling Earth's Total Magnetic Field
•	Sampling Interval:	12.5 and 25 metres
•	Data Output Units:	nanoTesla (Magnetic Intensity)

Diurnal Correction: Base station

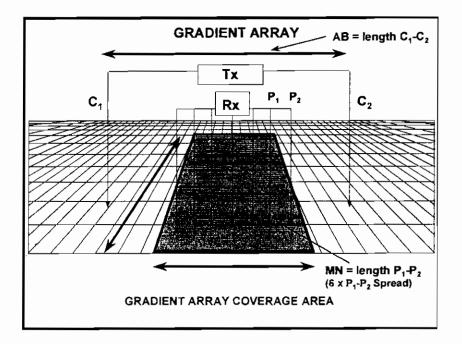


Figure 2: Gradient Schematic Array Layout.

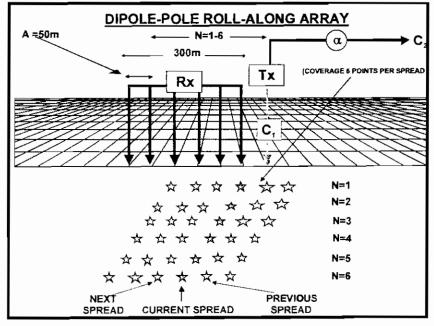


Figure 3: Pole-Dipole Schematic Array Layout.

L

SURVEY COVERAGE:

- 1. Reconnaissance Gradient: 3,450 m (see Table I)
- 2. Detailing Gradient: 2,025 m
- 3. Pole-Dipole Array: 550 m (see Table II)

LINE	START	END	TOTAL (m)
L275E	475N	1300N	825
L500E	400N	1525N	1125
L650E	500N	1625N	1125
L725E	700N	1075N	375
		TOTAL	3450

Table I: Gradient Survey Coverage

LINE	MIN EXTENT	MAX EXTENT	TOTAL (m)
L275E	600N	1150N	550
		TOTAL	550

Table II: Pole-Dipole Survey Coverage

LINE	START	END	TOTAL (m)
L275E	500N	1300N	800
L500E	425N	1550N	1125
L580E	1025N	1275N	250
L650E	500N	1650N	1125
L725E	700N	1075N	375
		TOTAL	3675

Table III: Magnetic Survey Coverage

INSTRUMENTATION

Receiver: IRIS IP-6 (time domain / 10 channels)

MG-12 Honda 12 KW Generator MG-1 Honda 6.5 KW Generator

- Transmitter: Walcer Tx 9000 Transmitter IPT1-B Transmitter
- Power Supply:

PARAMETERS

Input Waveform: 0.5 Hz square wave at 50% duty cycle (8 seconds On/Off)
 Receiver Sampling Parameters: Customized windows

Measured Parameters:

- 1) Chargeability in millivolts/Volt (10 time slices + total area under decay curve)
- Primary Voltage in millivolts and Input Current in amperes for Resistivity calculation according to the pole-dipole and gradient arrays geometry factor¹.

MEASUREMENT ACCURACY AND REPEATABILITY

- Chargeability: generally ≤ ±0.5 mV/V.
- Resistivity: less than 5% cumulative error from Primary voltage and Input current measurements.

DATA PRESENTATION

- Maps:
- <u>Reconnaissance Plan Maps:</u> Posted/contoured Total Chargeability and Apparent Resistivity, at 1:2500 scale.
 - Posted/contoured pseudo depth section maps of combined Total Chargeability and Apparent Resistivity (interpreted) at 1: 2500 scale (non-terrain corrected).

Outlining anomalies, interpreted zones of thickened-

mineralization, resistivity zones at 1:2500 scale (1 plan).

- Quantitative Sections: Interpreted IP\Resistivity results represented as conceptual geological model or geoelectric sections at 1:2500 scale.
- ✓ Interpretation Plan Map:

Pole-Dipole Pseudosections:

• Digital:

TDIP Raw data:

Iris IP-6 format (see Appendix B)

Gradient Processed data:

Geosoft .GDB files using the following format: Column 1 \Rightarrow Line - Northings, in meters Column 2 \Rightarrow Station - Eastings, in meters Column 3 \Rightarrow Total Chargeability, in mV/V Column 4 \Rightarrow Apparent Resistivity, in Ω -m

Pole-Dipole Processed data:

Geosoft .GDB files using the following format: Column 1 \Rightarrow Line - Northings, in meters Column 2 \Rightarrow Station - Eastings, in meters

¹ See BRGM/IRIS IP6 receiver operating manual and Appendix C.

- Column 3 \Rightarrow Estimated Depth in Pseudosection, in meters
- Column 4 to 10 \Rightarrow Time Windows of Total Chargeability, in mV/V

Column 11 \Rightarrow Total Chargeability, in mV/V

Column 12 \Rightarrow Reading Dipole Number

Column 13 \Rightarrow Transmitting Dipole Electrode Position, in meters

Column 14 and $15 \Rightarrow$ Receiving Dipole Electrode Position, in meters

Column 16 \Rightarrow Primary Voltage, in mV

Column 17 \Rightarrow Induced Current, in Amps

Column 18 \Rightarrow Self-Potential

Column 19 \Rightarrow Flag Channel using the Quality Control

Column 20 \Rightarrow Type of reading (0 – single reading; 1- average reading)

Column 21 \Rightarrow Contact Resistivity, in kohmm

Column 22 \Rightarrow Apparent Resistivity, in ohmm

Column 23 \Rightarrow Total Chargeability, in mV/V

Column 24 \Rightarrow Reading Error

Column 25 \Rightarrow Number of Reading Cycles

4. RESULTS AND SUMMARY INTERPRETATION

INTRODUCTION

The following discussion summarizes the results of the Gradient \ Pole-Dipole TDIP\Resistivity and Magnetic surveys over the **GIFTHORSE PROPERTY**, undertaken by Matrix GeoTechnologies Ltd during May 2007. The present geophysical interpretation makes use of TD Induced Polarization and Resistivity parameters using Gradient and Pole-Dipole surveys, with chargeability parameter able to detect and discem mineralization ranging from disseminate to massive concentrations and resistivity characterizing the structures. In addition, Total Field Magnetic data were collected, in order to help define structures and near surface faulting system. However, the authors would like to emphasize the fact that the survey is limited in only four lines, consequently sensibly decreasing the interpretation ability and the potential of used geophysical methods.

INTRODUCTION TO GRADIENT \ PDP SURVEYS

The gradient array survey results are relied upon as a bulk conductivity\chargeability mapping tool and large transmit dipoles employed provide significant depth of investigation in the central region of the grid and the relatively narrow receiver dipoles also offer significant lateral resolution, but are none the less subject to significant volume averaging.

Based on the array geometry chosen, gradient investigation depth approaching 1800 feet were obtained - with the deepest penetration in the middle third of the array and shallower depths of investigation progressively closer to the transmit electrodes. The gradient apparent resistivity and chargeability data therefore represent a bulk average, from surface to depth, when observed in plan view. Additionally, the gradient array anomaly patterns are essentially sub-vertical (i.e. without complex, asymmetric pant-leg shapes, as in pdp and dpdp), and can be visualized in plan in the same manner as magnetic or gravity data. However, in the presence of moderate to shallow dips, the gradient array anomalies tend to be shifted down-dip relative to shallower arrays, such as pole-dipole – greater discrepancies can also occur with dipole-dipole, owing to the asymmetric array geometry, which tends to bias anomalies towards the infinity pole.

The interpretation plan map presents the interpreted resistivity structures, overlaying the interpreted increased induced polarization zones, called zones of geophysical interest (**ZGI**). In addition, the direction and approximate length of most prominent IP is represented with arrowed lines.

Topographic <u>correction is required</u> due to excessive changes in grid elevation, especially on the **QUANTITATIVE SECTIONTM METHODOLOGY** and Pole-Dipole results. The topographic correction attempts to correct collected over a real earth with topography using a model with a flat surface (raw data). The correction will correct changes in the geometric factor caused by the topography, but will not correct for the changes in resistivity due to changes in transmitting electrodes' distance form subsurface bodies\layers. This difficulty was corrected by setting up the transmitting dipoles using topographic corrected distances (GPS points). The authors do not have at the present moment the KIT CARSON GRID topographic information; consequently the sections are presented in flat topography. Obviously, topographic factor must be considered before the DH program. Of note, that fact that the corrections the topographic influence at depth decreases as the investigation depth increases (gradient arrays).

Finally, fault structures have also been interpreted based on evidence from the TDIP results, generally represented by lower resistivity and lower chargeability.

INTRODUCTION TO QUANTITATIVE SECTIONTM METHODOLOGY

Structures or ore bodies are a product of their geological environment, and traditionally we make poor use of our exploration data in constructing interpretative geological models that will give exploration decisions. The connection between ground geophysics and a geological model is done through prior experience, physical/mathematical IP/Resistivity modeling and expensive DDH programs. To date geologic-geophysical models developed from Induced Polarization \ Apparent Resistivity obtained from geoelectric methods, are created by qualitative estimations and verified by physical and mathematical modeling. These models are always limited to final qualitative estimation of geoelectric and geometric parameters.

QUANTITATIVE SECTIONTM METHODOLOGY provides better understanding of the relationship between resistivity parameter and chargeability parameter, favoring the resistivity parameter as direct indicator of structures, which is undervalued in the interpretation of geoelectric data. The contrast in specific resistivity (the most representative resistivity of a layer \ unit or group layers \ units) and layers' boundaries are derived from interpretation of resistivity data regardless of geoelectric array used. This is the base of the <u>conceptual geologic-geoelectric model</u>. Geoelectric contacts, faulting system, layers and structures are presented, in geoelectric cross-section format. When enough geological information is available, lithologic statements are made. Geologic-lithologic concepts are related to geoelectric units and favorable geoelectric hosts² are identified based on the exploration objectives.

Furthermore, interpreted induced polarization data integrated into the geoelectric cross-section, indicating the occurrence of metallic/electronic/electrode IP. This phenomenon may be observed in electrically conductive bodies and/or non-metallic/electrolytic/membrane IP, which is also found in the absence of electrically conductive bodies. Consequently, an IP model is developed, representing the distribution of metallic and non-metallic responses.

The final step is to correlate favorable geoelectric hosts with the IP signatures generating the conceptual model. This will determine the best exploration targets based on the exploration objectives. The conceptual geological-geoelectric model can be visualized in a final geological section and can be refined and modified, integrating/overlying additional exploration data. The end product represents a final and unique integrated 2D geological model that can be shared with exploration managers and geoscientists.

Another important consideration is that QUANTITATIVE SECTION[™] METHODOLOGYⁱ can be considered as multi-channel coverage survey and our proprietary interpretation procedure can give very detailed interpretation mesh proportional to the survey spacing (e.g. every 25 meters \ 85 feet), analogous to multi-channel seismic coverage concept.

It is important to emphasize the fact that QUANTITATIVE SECTION[™] METHODOLOGY is not an inversion program or a simple data integration process, but is a complex methodology that requires different project design, data acquisition and interpretation procedures. It might be comprehensible by now that the conceptual geological model provided by QUANTITATIVE SECTION[™] METHODOLOGY can be used as root model for the other geoscientific data, which can be easily integrated or modeled based on it. This is particularly important in areas that the geological knowledge is scarce or incomplete.

² Favorable geoelectric host represent the interpreted resistivity signatures, which satisfy the exploration objectives in terms of resistivity association (e.g. quartz is associated with high resistivity, VMS are associated with low resistivity), the expected spatial characteristics and their relation with the other interpreted geological units.

GEOLOGY OF THE CLAIM BLOCK

On the south banks of the Kennetcook river is a sliver of the Westphalian aged Scotch Village Formation whose undeformed but tilted grey green sandstone extend north to predominate on the northern bank and extend to the heart of the Kennetcook valley.

Underlying and unconformable to the Scotch Village Formation and flanking its exposure on the south side are faulted blocks of the Lower Namurian aged Watering Brook Formation. Watering Brook Formation's deformed grey siltstone with minor gypsum grades conformably into the underlying Upper Visean aged Murphy Road Formation a deformed reddish siltstone with abundant gypsum and limestone.

Over by the Avon estuary there is a faulted block of the Middle Visean Wentworth Station Formation with deformed dolstone limestone and gypsum have structurally broken through the succession. Further east the Middle Visean aged Pesaquid Lake Formation with its deformed reddish sandstones and limestone conformably underlies the Murphy Road Formation.

Finally near the claims southern limits is the faulted and uplifted block of the Lower Visean aged Miller Creek Formation with its deformed greyish gypsum, limestones and dolstones. These are the compositions of the exposed bedrock in the **GiFTHORSE** claim block.

In the succession of the Windsor sub-basin underlying the Miller Creek Formation but nowhere exposed at surface on this property would be the Lower Visean aged White Quarry Formation's massive anhydrite. Under the White Quarry's anhydrite would be the Early Visean aged Macumber Formation's limestone. It is the Macumber Formation's limestones that would be the host rock for the mineralization sought in this program.

The Macumber's limestones should be underlain by the Tournasian aged Horton Bluffs Formation's shales siltstones and sandstones. The Horton Bluffs sediments are underlain by the basin's metasedimentary floor of the Meguma core platform.

GRADIENT TDIP\RESISTIVITY SURVEY RESULTS

The main objective of the gradient was to define the plan extension of IP\Resistivity responses potentially associated to mineralization. The grid was established prior to survey execution and positioned using handheld TRIMBLE PROX GPS systems, with the intention of accurately positioning the survey grid.

The gradient chargeability responses at GIFTHORSE GRID are characterized by broad range in strength, varying from questionable to strong but generally falling in the weak category – consistent with sedimentary environments, having very weak disseminated sulphide content; with peaks corresponding to higher mineralization content. In addition, the total chargeability plan map shows the presence of two distinct environments; the contact perfectly follows the road. The northern environment is associated with questionable values, most likely non-metallic type of responses e.g. increased argillitic material and the southern environment associated with stronger IP values, most likely metallic responses in more mafic like environment or block uplift.

The total chargeability plan map displays a polarizable zone, trending almost EW, suggesting the possible presence of mineralization. The IP lineament, located almost in the center of the survey grid is still open to the east and west. It is important to emphasize that the IP anomalies are stronger to the west, suggesting either higher sulphide\mineralization content and\or shallower presence of causative

body \ NE-SW plunging. As previously mentioned, the grid coverage is very limited, restraining the potential of the gradient technique. The authors strongly recommend the continuation of gradient survey in both directions, despite the fact that the IP anomalies are weaker to the east.

The main IP axis crosscuts the surveyed grid (>500 m), displaying variations in strength, ranging from weak (6.0 to 14.7 mV/V), either reflecting differences in concentration or depth of burial along the strike. Also, it is important to note that the total chargeability anomalies fall in the range of Zinc-Lead-Silver (with chalcopyrite) type of responses.

Close observation of chargeability profile gradients over strongest anomalies suggest that most likely the causative body dips to the south in the west and it is more vertical further to the east; however due to limited IP coverage we can not generalized this assumption. As previously mentioned, more IP\Resistivity survey is strongly recommended.

The apparent resistivities display a wide range, varying between 24 to 400 ohm-m (avg. 136 ohm-m), and indicative of high porosity rock at depth – with the average consistent with low conductivity sedimentary rocks. The apparent resistivity defines in plan north-south resistivity sequence (low-high-low-high) suggesting simple geological set. The high resistivity values possibly reflect occurrence of more brecciated units and lower resistivities most like representing shales, siltstone, etc. or faulting system when form thin and long lineament.

The resistivity plan map shows the presence of a fault type of resistivity responses (see INTERPRETATION PLAN MAP) that is closely associated with increased chargeability signature; however as QUANTITATIVE SECTIONTM over L2+75E shows, the anomalous low resistivity is depth limited.

MAGNETIC SURVEY RESULTS

The ground <u>Total Field Magnetics (TFM)</u> results on the **GIFTHORSE PROPERTY** display relatively narrow variation in TFM, suggesting sub-horizontal \ slightly dipping geology. The diurnally corrected map show the presence of increased magnetic responses to the north and magnetic responses decreasing towards the south, most likely suggesting horizontal units plunging to the south.

Evidences of fault-fracture structures, generally indicated by well-defined offsets and disruptions of the main bands and other lineaments, are not explicitly observed either in TFM plan map or in FFT processing, either suggesting the NS (line direction) of the major faults or the absence of near surface \ shallow faults.

The analysis of the power spectrum (radially averages energy spectrum) shows that the most important part of the anomalous magnetic values are from shallow sources, having a wavelength that ranges from 20 to 70 meters. The deeper sources are characterized from wavelengths ranging up to 20 meters, with the interpreted brecciated zone falling in this category.

As final note, it is important to emphasize that the Total Magnetic Field shows relatively weak anomalous values, suggesting the low content or absence of highly magnetic components such as magnetite.

QUANTITATIVE INTERPRETATION AND GEOLOGICAL MODEL

The Pole-Dipole (PDP) array (n=2a, a=25 meters) was used as follow-up detailing tool over the **GIFTHORSE GRID**. The PDP results are integrated with gradient results, and represented in one **QUANTITATIVE SECTION**TM, in order to educe a geological model.

QUANTITATIVE SECTION OVER L.2+75E: show the presence of two IP signatures, ranging from moderate to strong, and occurring near surface (centered at st.762.5N) and at greater depths (centered at st.862.5N). The shallow anomaly is located from St.725N to St.775N and it is associated with high resistivity, suggesting disseminated type of mineralization most likely along brecciated zone. The causative body seems to dip to the north and extends from 50 meters to 125 meters depths.

The deep anomaly, ranging from weak to strong, extends from st.725N to st.900N and most likely continues at greater depths. The anomaly pinches out at almost 350 meters depth and seems to dip to the south. The peak IP anomaly at depth is associated with low resistivity, indicator of conductive host and/or massive mineralization. On the other hand, the anomalous IP are associated with higher resistivity, suggesting either more brecciated host and/or more disseminated mineralization.

The **QUANTITATIVE SECTION[™]** shows the geology is predominated by sub-horizontal elements; however sub-vertical elements are observed, most likely representing changes in alteration along the unit.

Structurally, the section is characterized by presence of conductive units predominating near surface (up to 200 meters) and higher resistivity/lower conductivity units at mid and greater depths. Most importantly, the interpreted resistivity shows the presence of a higher resistivity unit, most likely representing brecciated units, that extend from greater depths to near surface.

FOLLOW-UP TARGETS ANALYSIS

Following an evaluation of the Gradient $\ PDP \ QUANTITATIVE SECTION^{TM}$ and magnetic survey results, at three (3) geophysical targets (Table IV) have been selected based on their chargeability strength, resistivity association and their characteristics, in terms of geometry, source depth and vertical $\$ horizontal extent. These are interpreted to represent zones of potential increased mineralization, in plan or section ; however due to limited survey coverage and the depth of the targets, the authors downgraded the priority of the targets.

LINE	STATION	STRENGTH	RES. ASSOC.	MAG. ASSOC.	PRIORITY	DEPTH	COMMENTS
L2+75E	862.5N	Strong	Low	Moderate	2	>600 m	IP target centered in low resistivity \ low magnetics . Extends at greater depths. Still open to the west.
	762.5N	Strong	High	Low	2	100 m	IP target centered in low resistivity \ low magnetics. Extends between 50 m and 125 m at depth.
L5+00E	862.5N	Strong	Contact	Moderate	3	17-41	IP target centered in moderate resistivity low magnetics Most likely continues at greater depths.
L6+50E	862.5N	Moderate	Low	Low	3		IP target centered in low resistivity \ low magnetics. Most likely continues at greater depths. Close to human contamination (farm)

Table IV : Recommended Targets for Follow up at GiftHorse Property

5. CONLUSION AND RECOMMENDATIONS

The Gradient/Pole-Dipole induced polarization, resistivity and magnetic surveys over the **GIFTHORSE PROPERTY** have identified geophysical signatures, potentially relating to lithologic contacts or geochemical alteration, fault-fracture structures and, most importantly, the presence of increased chargeability, potentially relating to sulphide mineralization.

In response to the survey objectives, three (3) geophysical targets have been identified in the surveyed grid, which are of significant strength and depth extension to warrant further exploration.

Unquestionably, the <u>complicated geological/geophysical model</u> and the <u>logistical complications</u>, make the property geophysically unfriendly. The authors have the opinion that the combination of gradient array with pole-dipole array aggregate a very efficient exploration tool, emphasizing the merit of <u>poledipole configuration</u> on the determination of a conceptual geological model derived from **QUANTITATIVE SECTION**.

The IP\Resistivity responses at GIFTHORSE PROPERTY, based on their resistivity association can be classified in <u>MS type signature and disseminated type signature</u> along brecciated zones.

Considering anomalous zone are still open to the east and west, <u>additional reconnaissance IP/Resistivity</u> program is strongly recommended to fully explain its spatial extension.

The **QUANTITATIVE SECTIONS** have provided a conceptual geological model, and most importantly, have also identified signatures of interest. To augment the efficient capabilities of **QUANTITATIVE SECTION**TM **METHODOLOGY** we recommend detail surveys over <u>at least two adjacent lines</u>, that will rectify the strike extension of interpreted model.

The QUANTITATIVE SECTIONTM shows that the mineralization is slightly dipping to the south. In addition to the massive mineralization, evidenced by increased chargeability hosted in conductive host, the QUANTITATIVE SECTIONTM also show the possible presence of more disseminated mineralization, evidenced by increased chargeability hosted in contact/high resistivity host.

The **QUANTITATIVE SECTION[™]** determines the contacts of major geologic units or transitions, the lower resistivity sediments with resistive brecciated units and was capable to define the prominent geological host associated with increased chargeability.

Magnetic survey suggests low content or absence of highly magnetic components such as magnetite in the surveyed area.

We recommend that these results and geophysical targets be combined with the existing geoscientific database and the results carefully evaluated prior to DDH-testing. Particular attention should be given to the probable type of mineralization and/or alteration indicated by the resistivity association in plan map (i.e. high ρ = disseminated, nil ρ = contact, low ρ = argillic or stringer-to-massive).

<u>Close comparisons against geochemistry or other geological information</u> can provide insight on the typemineralogy of many IP targets. Compiling these data on the IP/Resistivity maps can help discriminate mineralized targets from the geological IP signatures.

Finally, the authors would like to remind that the DH must be <u>collared along the detailed line</u>, for the reason that the geophysical data are collected along the lines consequently providing control only along the lines. Any attempt to drill differently may result in different exploration result from the model provided from IP \ Resistivity interpretation.

RESPECTFULLY SUBMITTED

LUDVIG KAPLLANI. PH.D., A.I.P.G. Senior Geophysicist

GENC KALLFA, B.Sc., P.GEO. Senior Geophysicist

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Toronto, June 7, 2007

APPENDIX A

STATEMENT OF QUALIFICATIONS:

.

I, Ludvig Kapllani, declare that:

- 1. I am a consulting geophysicist with residence in Toronto, Ontario and am presently working in this capacity with Matrix GeoTechnologies Ltd. of Toronto, Ontario.
- I obtained a Bachelor's of Science Degree, (B.Sc.), Geophysics, in spring 1976, a Masters of Science Degree, (M.Sc.), Geophysics, in June 1986, and a Ph.D in January 1995, Geophysics, from Polytechnic University of Tirana, Albania.
- 3. I have practiced my profession continuously since May 1976, in North America and Europe.
- 4. I am member of AMERICAN INSTITUTION OF PROFESSIONAL GEOLOGISTS (AIPG), membership number CPG-1138.
- 5. I have no interest, nor do I expect to receive any interest in the properties or securities of GIFTHORSE RESOURCES INC.
- 6. I am the author of this report and the statements contained represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Toronto, Ontario June, 2007

Ludvig Kapllani, Ph.D., P.Geo. (ON)

Senior Geophysicist Matrix GeoTechnologies Ltd.

APPENDIX A

STATEMENT OF QUALIFICATIONS:

,

I, Genc Kallfa, declare that:

- 1. I am a consulting geophysicist with residence in Toronto, Ontario and am presently working in this capacity with Matrix GeoTechnologies Ltd. of Toronto, Ontario.
- 2. I obtained a Bachelor's of Science Degree, (B.Sc.), Geophysics, from the Polytechnic University, in Tirana, Albania, in spring 1987.
- 3. I have practiced my profession continuously since May 1987, in North America and Europe.
- 4. J am member of Association of Professional Geoscientists of Ontario (APGO), membership number 0404.
- 5. I have no interest, nor do I expect to receive any interest in the properties or securities of GIFTHORSE RESOURCES INC.
- 6. I am the author of this report and the statements contained represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Toronto, Ontario June, 2007

Genc Kailfa, B.Sc., P.Geo. (ON)

Senior Geophysicist Matrix GeoTechnologies Ltd.

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PRODUCTION SUMMARY

APPENDIX C

THEORETICAL BASIS AND SURVEY PROCEDURES

GRADIENT TDIP SURVEYS

The Gradient Array measurements are unique in that they best represent a bulk average of the surrounding physical properties within a relatively focused sphere of influence, roughly equal to the width of the receiver dipole, penetrating vertically downward from surface to great depths.

The resistivity is among the most variable of all geophysical parameters, with a range exceeding 10⁶. Because most minerals are fundamentally insulators, with the exception of massive accumulations of metallic and submetallic ores (electronic conductors) which are rare occurrences, the resistivity of rocks depends primarily on their porosity, permeability and particularly the salinity of fluids contained (ionic conduction), according to Archie's Law. In contrast, the chargeability responds to the presence of polarizable minerals (metals, submetallic sulphides and oxides, and graphite), in amounts as minute as parts per hundred. Both the quantity of individual chargeable grains present, and their distribution with in subsurface current flow paths are significant in controlling the level of response. The relationship of chargeability to metallic content is straightforward, and the influence of mineral distribution can be understood in geologic terms by considering two similar, hypothetical volumes of rock in which fractures constitute the primary current flow paths. In one, sulphides occur predominantly along fracture surfaces. In the second , the same volume percent of sulphides are disseminated throughout the rock. The second example will, in general, have significantly lower intrinsic chargeability.

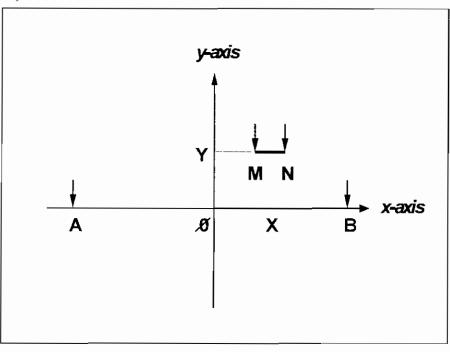


Figure C1: Gradient Array Configuration.

Using the diagram in Figure C1 for the gradient array electrode configuration and nomenclature:³, the gradient array apparent resistivity is calculated:

where: the origin 0 is selected at the center of AB

the geometric parameters are in addition to a = AB/2 and b = MN/2

X is the abscissa of the mid-point of MN (positive or negative)

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³ From Terraplus\BRGM, <u>IP-6 Operating Manual</u>, Toronto, 1987.

Y is the ordinate of the mid-point of MN (positive or negative)

Gradient Array Apparent Resistivity:

$$\rho a = K \frac{VP}{I} \quad ohm - metres$$
where:
$$K = \frac{2\pi}{(AM^{-1} - AN^{-1} - BM^{-1} + BN^{-1})}$$

$$AM = \sqrt{(a + x - b)^2 + y^2}$$

$$AN = \sqrt{(a + x + b)^2 + y^2}$$

$$BM = \sqrt{(x - b - a)^2 + y^2}$$

$$BN = \sqrt{(x + b - a)^2 + y^2}$$

Using the diagram in Figure C2 for the Total Chargeability:

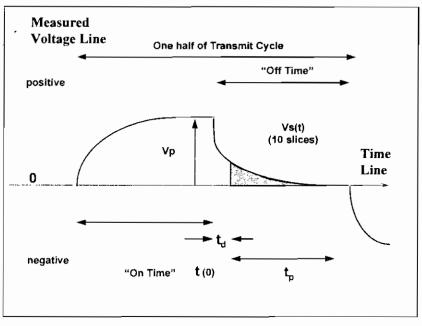


Figure C2 The measurement of the time-domain IP effect.

the total apparent chargeability is given by:

Total Apparent Chargeability:⁴

$$\mathbf{M}_{\mathrm{T}} = \frac{1}{t_{\mathrm{P}} \mathbf{V}_{\mathrm{P}}} \sum_{i=1 \text{ in } 10} \int_{t_{i}}^{t_{i+1}} \mathbf{V} \mathbf{s} \quad (t) \text{ d} t \qquad \text{millivolts per volt}$$

where t_i , t_{i+1} are the beginning and ending times for each of the chargeability slices,

More detailed descriptions on the theory and application of the IP/Resistivity method can be found in the following reference papers:

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⁴ From Telford, et al., <u>Applied Geophysics</u>, Cambridge U Press, New York, 1983.

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Cogan, H., 1973, Comparison of IP electrode arrays, Geophysics, 38, p 737 - 761.

THEORETICAL BASIS AND SURVEY PROCEDURES

POLE-DIPOLE TDIP SURVEY

The collected data sets are reduced, using IP6 receiver, to apparent resistivity, total chargeability and metal factor as explained in the following figures and equations:

Using the following diagram (Fig. C3) for the electrode configuration and nomenclature:⁵

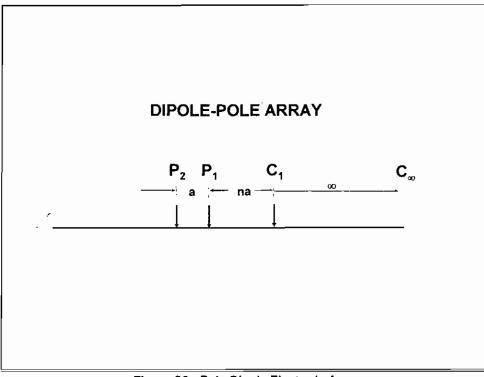


Figure C3: Pole-Dipole Electrode Array

the apparent resistivity is given by:

$$\rho a = 2\pi n(n+1)a \times \frac{VP}{I}$$
 ohm - metres

where:

"a" is the MN dipole spacing (metres) "n" is the separation parameter between C_1 and P_1P_2 " V_P " is the primary voltage measured between P_1P_2 (volts) "I" is the output current between C_1C_2 (amperes)

The Total Chargeability calculations are the same as the Gradient arrays as explained above:

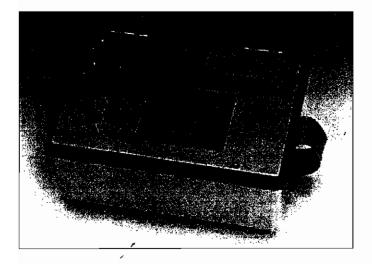
The sets are then ready for plotting, profiling using the Geosoft SushiTM program. The Apparent Resistivity, Total Chargeability and Metal Factor (IP/Resistivity*1000) results of the Pole-Dipole surveys are presented in pseudo section format. All resistivities are in $_$ -metres and chargeabilities in mV/V.

⁵ From Telford, et al., <u>Applied Geophysics</u>, Cambridge U Press, New York, 1983...

APPENDIX D

INSTRUMENT SPECIFICATIONS

IRIS ELREC 6 RECEIVER



Weather proof case

Dimensions: Weight:

Operating temperature:

Storage: Input channels: Input impedance: Input overvoltage protection: Input voltage range:

SP compensation:

Noise rejection:

Primary voltage resolution: accuracy:

Secondary voltage windows:

Sampling rate: Synchronization accuracy: Chargeability resolution: accuracy:

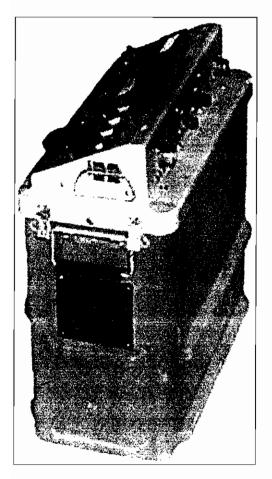
Grounding resistance: Memory capacity: Data transfer:

31 cm x 21 cm x 21 cm 6 kg with dry cells 7.8 kg with rechargeacle bat. -20°C to 70°C (-40°C to 70°C with or tional screen heater) (-40°C to 70°C) 6 10 Mohm up to 1000 volts 10 V maximum on eac dipole 15 V maximum sum o -r ch 2 to 6 automatic ± 10 V with near drift correction up to 1 mV/s 50 to 60 Hz powerline election 100 dB common mode ejection (for Rs=0) automatic stacking 1 µV after stacking 0.3% typically; maximen 1 over whole temperature range up to 10 windows; 3 pr set window specs. plus fully programmab sampling. 10 ms 10 ms, minimum 40 µ\ 0.1 mV/V typically 0.6%, maximu = 2% of reading ± 1 mV/V for $V_p > 10 \text{ mV}$ 0.1 to 467 kohm 2505 records, 1 dipole cord serial link @ 300 to 19 0 baud remote control capability through serial link @ 1 00 baud

APPENDIX D

INSTRUMENT SPECIFICATIONS

Walcer Tx 900 Transmitter



Input:	120V line to neutral
	400 Hz / 3 Phases
1	Powered by MG-12
Output:	100V – 3200V in 10 steps 5 mA – 20 A 9.0 KVA
Output Sw	itching: TD: Seconds on/off switching 1,2,4 and 8 seconds
Size:	63cm X 54cm X 25cm
Weight:	44 kg

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APPENDIX D

INSTRUMENT SPECIFICATIONS

Phoenix IPT-1 Transmitter



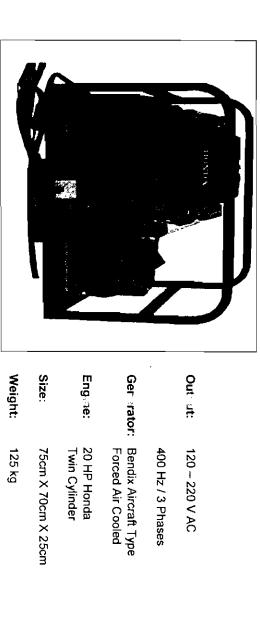
Input:	80 – 90 V AC
	400 Hz / 3 Phases
	Powered by MG1 / MG2 / MG3
2	
Output:	75V – 1200V in 5 steps 3 mA – 10 A 3 KVA
Output Sw	
	"A" Model Frequency Domain: DC – 4Hz TD: 2 sec.on/2 sec.off
	"B" Model Frequency Domain: DC – 4 Hz TD: Seconds on/off switching 1,2,4 and 8 seconds
Size:	20cm X 40cm X 55cm
Weight:	18 kg

APPENDIX D

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INSTRUMENT SPECIFICATIONS

MG-12 GENERATOR



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APPENDIX D

INSTRUMENT SPECIFICATIONS

MG-1 GENERATOR



Output:	60 – 100 V AC	
;	400 Hz / 3 Phases	
Generator:	Motorola 25 Amp. rated	
Engine:	4 HP Honda	
Size:	62cm X 42cm X 37cm	
Weight:	25 kg	

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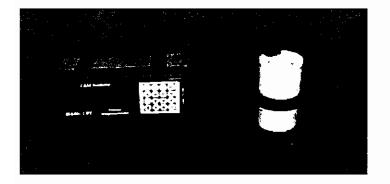
APPENDIX D

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INSTRUMENT SPECIFICATIONS

GSM-19T MAGNETOMETER



Weatherproof case /

Dimensions:

Weight: Operating temperature: Power supply: Power Consumption: Resolution: Relative Sensitivity: Absolute Accuracy: Range: Gradient Tolerance: Operating Modes:

Memory Capacity:

Console 233 mm x 69 mm x 240 mm Sensor 170 mm x71 mm diameter cylinder Console 2.1 kg; Sensor 2.0 kg (staff included) -40°C to 60°C 12V, 2.6 Ah sealed lead acid battery 2 Ws per reading 0.01 nT (gamma), magnetic field and gradient <0.1 nT 0.2 nT over operating range 20,000 to 120,000 nT Over 10,000 nT/m Base station- time, date, reading stored 3 to 60 sec Walking- time, date, reading stored at coordinates of fiducial with 0.5 to 2 sec. cycle time Base station- 5,500 readings standard Walking- 1,300 readings

APPENDIX E

LIST OF MAPS

• Posted/Contoured Plan Maps at scale of (1:2500)

PLAN	TOTAL CHARGEABILITY	APPARENT RESISTIVITY]
	DWG #: P204 PLAN-CHG-1	DWG #: P204 PLAN-RES-1	
TOTAL	1	1	NM2

• Stacked Posted/Contoured PDP PseudoSection Maps at 1:2500 scale:

LINE	TOTAL CHARGEABILITY + APPARENT RESISTIVITY	
L2+75E	Pseudosection Plot L2+75E 🗸	ma
TOTAL	1	

Interpretation Plan Map at scale of (1:2500): DWG: QS-204-PLAN-INT-1

• Quantitative Sections at 1:2500 scale:

LINE	QUANTITATIVE SECTION	
L2+75E	Quantitative Section L2+75E 🗸	
TOTAL	1	

• Ground Magnetometer Survey

PLAN	GROUND MAGNETOMETER	GROUND MAGNETOMETER	
	DWG NO: 204-MAGCONT-Gifthorse (Posted Values)	DWG NO: P204-MAGCONT-Gifthorse (Contour Plan Map)	NAS
TOTAL	1	1	

APPENDIX F

MAPS AND SECTIONS

"A conceptual geological-geoelectric or lithofacial model represents a section with depths and spatial locations of various geological units\structures, assigning geological significance to the structures or units."

^{if} The following definitions assist to relate some of the used terminology to the methodology.

[&]quot;QUANTITATIVE SECTIONTM represents a section, derived from the interpretation of Induced Polarization\Apparent Resistivity raw data obtained from conventional and non-conventional array configuration or array combination, represented in the form of conceptual geoelectric-facial model, if geological data are not available, or in the form of conceptual geological model, otherwise."

[&]quot;A conceptual geoelectric-facial model represents a section with depths and spatial locations of various geological units\structures, without assigning any geological significance to the interpreted structures or units."



Map <u>21119</u> Refs.___

Form 10 - Statement of Assessment Work Expenditure (pursuant to the *Mineral Resources Act*, S.N.S. 1990, c. 18, s. 43(1))

ree

(Complete as necessary to substantiate the total claimed.) Re: Licence No. <u>06922</u> Date of issue <u>560027</u>, 2006

	Type of Work			Amount Spent
	Prospecting		3	1550.00
	Geological mapping		days	· ·
	Trenching/stripping/refilling		m² /m³	
	Assaying & whole rock analysis			
	Other laboratory			
i.	Grid:		#	
	(a) Line cutting (b) Picket setting		km	
	(c) Flagging Geophysical surveys		km	
•	Airborne:			
	(b) Mag or Grad		km	
	(c) Radiometric (d) Combination		km	
	(e) Other		km km	
	Geophysical surveys Ground:			
	(a) EM/VLF		km	
	(b) Seismic soundings (c) Magnetic/telluric		#	1 12, 540-84
	(d) IP/resistivity		<u></u> km km	5
	(e) Gravity (f) Other		km	
,	Geochemical surveys		NU	
	(a) Lake, stream, spring (i) Water			
	(ii) Sediments		samples samples	·
	(b) (i) Rock (ii) Core.		samples	
	(iii) Chips			
	(c) (i) Soil (ii) Overburden		samples	UN26'07 14:37
	(d) Gas		samples	
	(e) Biogeochemistry (f) Sample collection		samples	
	(g) Other		days	
0.	Drilling:			
	(a) Diamond (# holes/m) (b) Percussion (# holes/m)		/m	
	(c) Rotary (# holes/m)		/m /m /m	
	(d) .Auger (# holes/m) (e) Reverse circulation (# holes/m)		/m	
	(f) Logging, supervision, etc.		days	
1. Ot	(g) Sealing (# holes)		#	
		Subtotal	~. L	35090-84
Overhe	ead costs			
12.	Secretarial services			
13.	Drafting services			136.00
14.	Office expenses (rent, heat, light, etc.)			900.00
15.	Field supplies	_		50.08
16.	Compensation paid to landowners			600.00
17.	Legal fees			150.00
18.	Other (describe) milage 9 trips X 220 km	ו3]		693.00
		Subtotal		2729.00
	Gr	and total		32819.84

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1 of 2

List the names of the persons who conducted the work reported in the previous table and the dates during which the work was performed.

Name .	Address	Dates Worked
Larry Riteman	E Eogle Place Bedford	June 12/06 00+8/02 Ac. 319
Chris Butt	SS GINWOIL AUL ST- Schar NL Duffur St	Sume Holot
fuul Mondell	Halifax NS.	0et8106
Bill Fleming	Fall River	Apr: 19 107
bow Legrew	40 Orlew Court bortmonth	April 9107.
Bill Stanlar	(Took Mutrix to Field Site)	may 12/07
Bill Fleming Matrix Geotechielogiest	the Switz 400	May12 - May 26/07,
	DNRM	PT JUN26'07 14:37
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I hereby certify that the information in this form is true and correct, that it has not before been submitted for assessment work credit and that it is the total of all work conducted on the licence during the past licensed year.

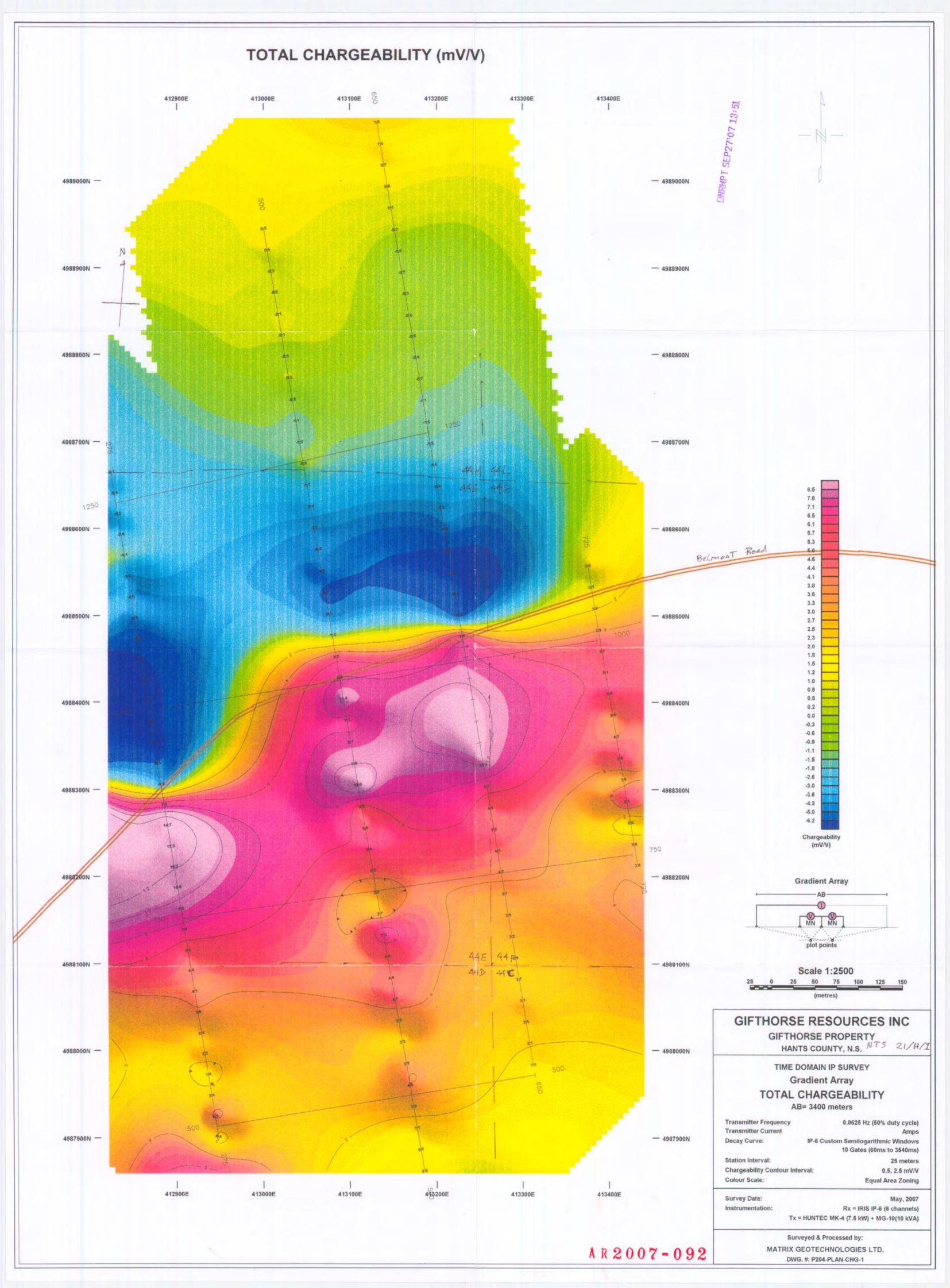
As <u>*President*</u> of <u>GiffHerse</u> <u>Resources</u> <u>Inc</u> I am duly authorized to make this certification. (position in company or licensee)

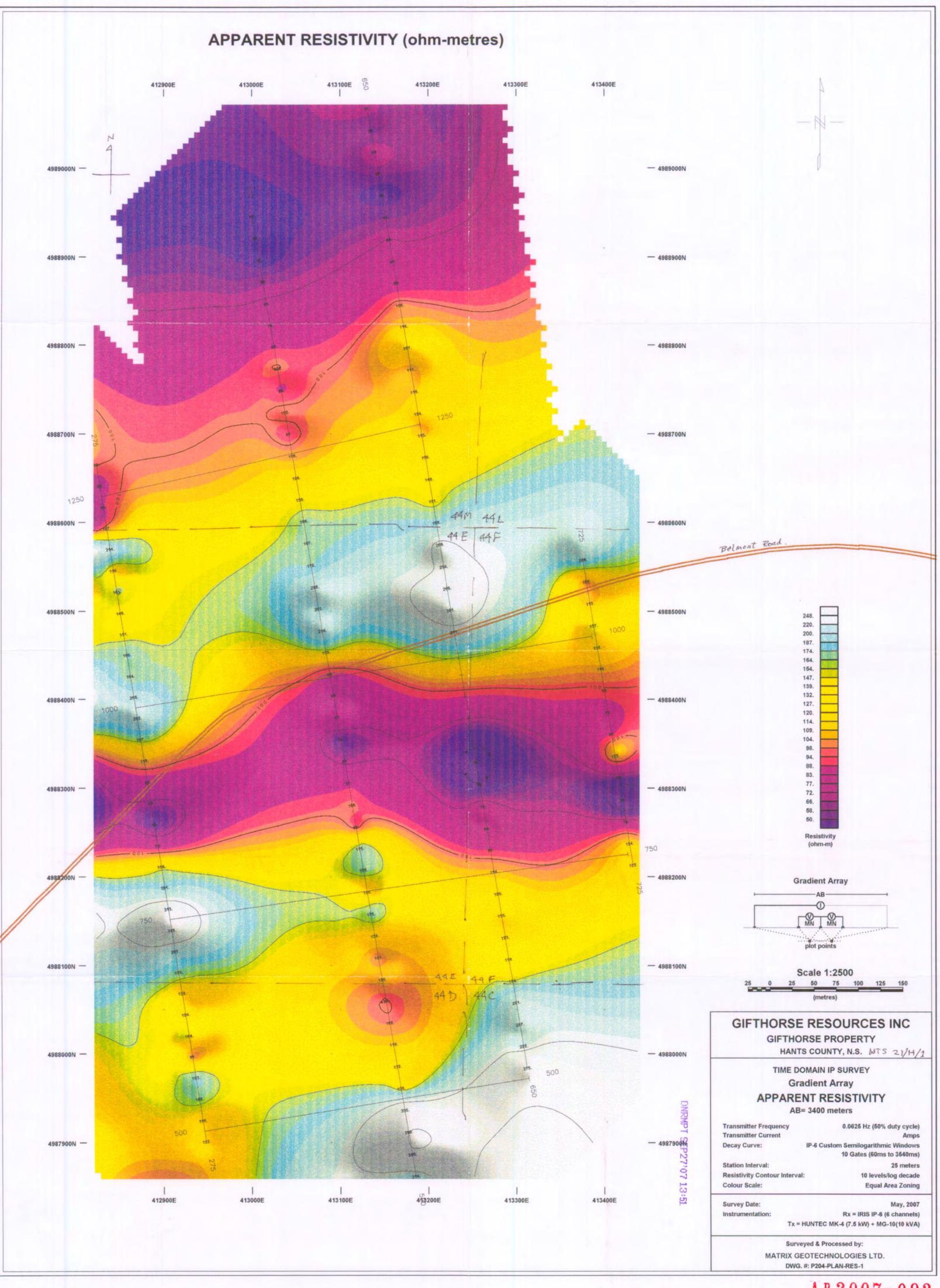
Halifax in the Province of ______ on June 26, 2007 Dated at _ Name and address of licensee: Gift Horse Resources INC. Halifax NS B3L 3J2 2729 Deacen St

Signature Ab Hawlor-

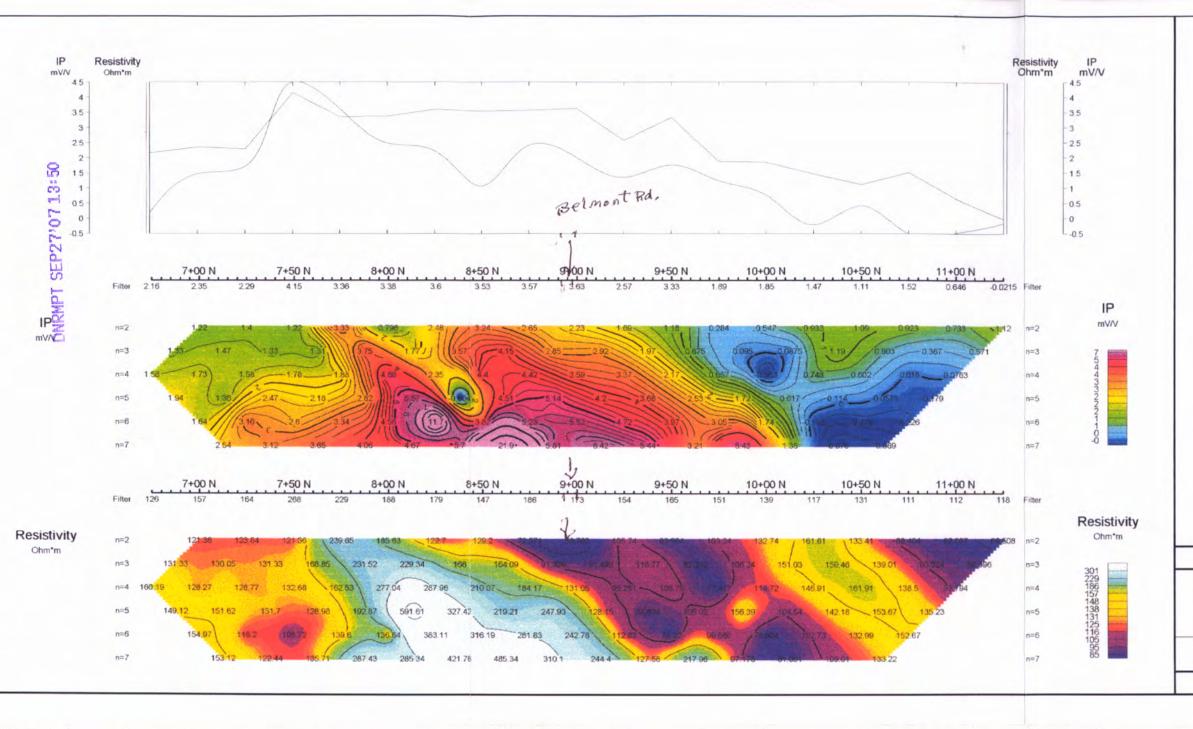
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For further information, contact the Registrar of Mineral and Petroleum Titles at 1-902-424-4068.

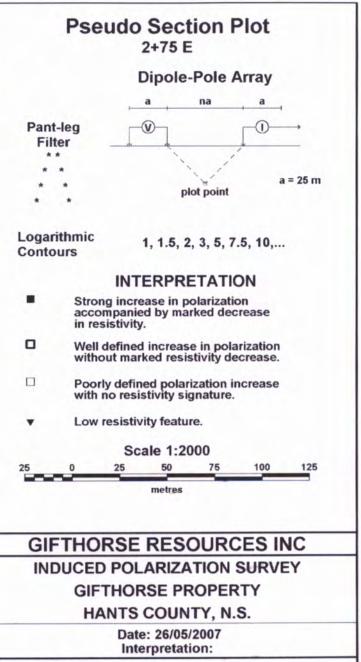




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