

# West Gore NOVA SCOTIA, CANADA

NI 43-101 Technical Report for the West Gore Sb-Au Project, Nova Scotia, Canada

# **BATTERY ELEMENTS CORP.**

595 Burrard Street, Vancouver, BC V7X 1A1 *PREPARED FOR* 

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Submitted May 01, 2021 EFFECTIVE DATE

<mark>Revised</mark> June 07, 202</mark>2

#### **IMPORTANT NOTICE**

This report was prepared as a National Instrument ("**NI**") 43-101 Technical Report (the "**Report**") for Battery Elements Corp. (the "**Company**") by Independent Consultants Mark S King and Michael Corey (the "**Authors**"). The quality of information, observations and conclusions contained herein is consistent with the level of effort involved in the Authors' services, based on i) information made available to the Authors' at the time of preparation, ii) public data retrieved from third-party sources and iii) the assumptions, conditions, and qualifications set forth in this Report. There has been no legal review and description of underlying agreements and obligations is based solely on information provided to the Authors by the Company and or the Property Vendor.

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#### **CERTIFICATE OF QUALIFIED PERSON**

#### Mark S. King, P. Geo.

This certificate applies to the NI 43-101 Technical Report titled "<u>NI 43-101 Technical Report for the West</u> <u>Gore Sb-Au Project, Nova Scotia, Canada</u>" (the Technical Report), prepared for Battery Elements Corp. (the "**Company**") issued on May 25, 2021 and effective as of May 01, 2021.

#### I, Mark S. King, P. Geo., do hereby certify that:

- 1. I am an Independent Consultant located at 10 Queens Quay West, Toronto, Ontario.
- 2. I am a graduate of Memorial University of Newfoundland in St. John's, Newfoundland and Labrador, Canada with a Bachelor of Science Degree in Geophysics. I am a graduate of Acadia University in Wolfville, Nova Scotia, Canada with a Master of Science Degree in Geology.
- 3. I have been a member of an accredited professional organization for 25 years. I am a member in good standing of the Professional Engineers and Geoscientists of Newfoundland and Labrador (#03047). I am a member in good standing of the Professional Geoscientists of Ontario (#3235).
- 4. I have worked continuously in mineral exploration and development since 1992. In this time, I have worked on a variety of deposits and geological settings in North America, Asia and Africa. I have held titles of Principal Geophysicist, Senior Geologist, Vice President Technical Services and Vice President of Exploration. I have more than 15 years experience specifically relating to precious metal deposits and published more that 100 technical reports, maps and articles relating to geology and exploration in the Meguma Terrane in Nova Scotia, Canada.
- 5. I have read the definition of "qualified person" set out in the NI 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
- 6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
- 7. I am a co-author and responsible for the preparation of Chapters 1-6, 10-11 and 13-27.
- 8. I have previously visited this property.
- 9. I have had no prior involvement with the property that is the subject of the Technical Report.
- 10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.



#### **CERTIFICATE OF QUALIFIED PERSON**

Michael C. Corey, P. Geo.

This certificate applies to the NI 43-101 Technical Report titled "<u>NI 43-101 Technical Report for the West</u> <u>Gore Sb-Au Project, Nova Scotia, Canada</u>" (the Technical Report), prepared for Battery Elements Corp. (the "**Company**") issued on May 25, 2021 and effective as of May 01, 2021.

#### I, Michael C. Corey, P. Geo., do hereby certify that:

- 1. I am an Independent Consultant located at 1239 Barrington St., Halifax, Nova Scotia
- 2. I am a graduate of Lakehead University, Thunder Bay, Ontario.
- 3. I am a member in good standing of the Professional Geologists of Ontario (PGO) and have been a registered member (#260) since 2002.
- 4. I have worked continuously in mineral exploration and development since 1981 including more than 10 years with the Nova Scotia Department of Natural Resources as a Senior Geologist. In this role I completed extensive mapping, sampling and drilling programs throughout Nova Scotia with a focus on economic geology.
- 5. I have read the definition of "qualified person" set out in the NI 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
- 6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
- 7. I am a co-author and responsible for the preparation of Chapters 7,8,9 and 12.
- 8. I have visited this property on May 13, 2021.
- 9. I have had no prior involvement with the property that is the subject of the Technical Report.
- 10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

#### Signed this 25th day of May 2021.

"Signed and sealed original on Michael C. Corey, P. Geo. mill for **ECHNE** 

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# 1. SUMMARY

This Technical Report (the "**Report**") was prepared by Mark King P. Geo. and Michael C. Corey P. Geo. at the request of Mr. Christopher Ecclestone of Battery Elements Corp (the "**Company**"), a private company, for the purposes of listing on the Canadian Securities Exchange (the "**CSE**"). This report is specific to the standards dictated by the National Instrument 43-101 in respect to the West Gore Antimony-Gold (Sb-Au) Property (the "**Property**") that is subject to a 100% purchase option agreement.

On April 8, 2021 the Company signed an Option Agreement (the "**Agreement**") with Elk Exploration Ltd. (the "**Vendor**") to earn an undivided 100% interest in four (4) exploration licenses (the "**Property**"), subject to a 3% NSR, by making cash payments over a two-year period. Advanced royalty payments will commence in Year 3 of the agreement and continue until "commercial production". The Agreement includes a partial buyback of the NSR for a fixed cash consideration.

For most of the last century, the global antimony market has been dominated by China as that country holds almost 50% of the worlds antimony reserves and, in 2016, produced >75% of the global supply. Antimony is, therefore, considered a strategic metal in terms of supply, and new resources are being actively sought.

This Report summarizes the technical merit and exploration potential of the project area based on previous mining and exploration in the area and includes recommendations for a first phase of work comprised of historical data compilation and field work to support a reconnaissance drill program. The goal is to evaluate potentially economic concentration of structurally controlled high-grade antimony-gold mineralization.

The Property is in central Nova Scotia (Hants County) and is easily accessible year-round by paved roads. Mineral rights consist of 37 claims held 100% by the Vendor with no underlying agreements. The licenses have various anniversary dates and are in good standing as of May 01, 2021. One license (EL50954), with an anniversary of April 9, 2021 shows "renewal pending" for work filings not yet processed and approved. Annual work requirements for the Property are C\$14,800 plus nominal renewal fees.

West Gore is a distinct deposit in the Meguma Terrane of southern Nova Scotia because it was initially mined

exclusively for antimony (stibnite ore). Whereas, the Meguma Terrane is well known for "Saddle Reef" style mesothermal gold deposits, there are no other gold deposits with significant Sb mineralization. Globally however, other major operating high-grade mines such as Fosterville in the Victoria Gold Fields region of Australia, a well-defined geological analogue to the Meguma Terrane, do contain abundant stibnite in distinct areas of the underground operations.

West Gore mine production (ca. 1883-1917) came from numerous shafts sunk to extract the stibnite ore (est. >7,000 T concentrate). Over the course of the historical operations the ore was determined to contain significant amounts of gold ("Au") and silver ("Ag"). These were extracted in the later years of production and were a contributing factor in extending the mine life (est. 6,000 to 7,000 oz Au).

Virtually all traces of mine infrastructure have been removed or overgrown, apart from some concrete foundations and mine dumps.

Although there is a well-documented mining history in the area there has been very limited modern exploration. A 2-hole drill program was completed in 2013 to follow up on drilling campaigns in 1985 (19 holes) and 1987 (6 holes) that targeted historic workings. Additional work has been completed on other licenses in the area over the past 50 years including geochemistry and geophysics. However, these data were never compiled in appropriate georeferenced, three-dimensional digital formats.

Therefore, there is a good opportunity to generate viable drill targets from a detailed digital compilation of the property in conjunction with acquisition of modern geochemical and geophysical data supported with relogging core, field mapping and sampling.

A <u>Phase I</u> limited-scale diamond drill program should be undertaken to follow-up on priority targets as defined by compilation of historical data, geophysical interpretation, new geology maps, topographic lineaments, geochemistry data and prospecting results. Specifically 6-8 shallow drill holes designed and oriented to intersect favourable structures with positive geochemical response (e.g., "PCA" targets) and or field-based indicators.

# 2. INTRODUCTION

On April 08, 2021, the Company signed an option agreement with the property Vendor, Elk Exploration (Mr. Lindsay Allen) to acquire a 100% interest in the West Gore Sb-Au Property. The Property is comprised four exploration licences (37 claims) registered to the Vendor.

# **Terms of Reference**

Mark King, P. Geo. and Michael C. Corey, P. Geo. were retained by the Company to prepare a Technical Report on the West Gore Sb-Au Property located in central Nova Scotia. The authors are not aware of any previous NI 43-101 Technical reports on the Property. The authors' understand that this Technical Report will be used to fulfill the Company's obligations for scientific information on mineral properties pursuant to applicable securities laws and the policies of the Canadian Securities Exchange (the "**CSE**"). This Technical Report conforms to the National Instrument 43-101 Standards of Disclosure for Mineral Projects.

# Verification and Validation

The work undertaken to prepare this review and a technical report include:

- A GIS compilation of all publicly available geoscience base information from the Nova Scotia Department of Energy and Mines. Including provincial and local scale planimetric, elevation, geological, geochemical, geophysical, drilling, and mineral occurrence data. The reference system used herein is UTM NAD83 Zone 20.
- Additional GIS compilation of assessment report data included drillhole traces and collar locations along with a review of drill logs and assay data where available.
- A review of assessment reports, scientific publications and articles, information and data on the Property and in the region by various entities including prior owners (e.g., Durham Resources and Great Atlantic), government geoscientists and the Property Vendor.
- The 2020 Mobile Metal Ion (MMI) data and certificates were supplied by the Property Vendor.
- A list of reports, maps and articles from which information was drawn is presented in the

References section; Digital data can be accessed through the online NovaScan website (https://gesner.novascotia.ca/novascan/Document Query.faces), the publications section of the Mines and Energy Branch website (https://novascotia.ca/natr/meb/maps/) and NovaRoc (https://novascotia.ca/natr/meb/registryminerals-petroleum/novaroc.asp).

- A site visit was completed by Mr. Michael C. Corey,
   P. Geo. on May 13, 2021 (Fig. 1). Mr. Mark S. King,
   P. Geo., had previously visited the site.
- The authors have not independently verified historical analytical results.
- The information, conclusions and opinions contained in this report are based on information available to the author at the time of report writing and preparation.

# **3. RELIANCE ON OTHER EXPERTS**

The data used in this report has been validated and verified to the extent possible as noted herein. This report is based upon a review of data from previous operators and current owners. It is the opinion of the Authors that the historic work was completed to acceptable standards for the respective time periods and the information which is referenced herein is valid for the purpose of this report. All information reviewed for the determination of the merit of this Property is believed to be accurate as of the Effective Date. The authors have also utilized Government and Company (e.g., Elk Explorations Ltd) sources of digital information, which included mineral tenure, geological, geophysical, planimetric and assay data. Land tenure information (re. exploration licenses) has been sourced from the Nova Scotia's Registry of Claims (NovaRoc) website accessed on May 01, 2021.

## 4. PROPERTY DESCRIPTION AND LOCATION

#### West Gore

The West Gore Property consists of four (4) Exploration Licenses (EL) comprising 585 ha located in Hants County Nova Scotia, Canada (Figs. 2 and 3). The surface rights for the Property are held by various private individuals and permission must be granted prior to commencing mineral exploration. The Mineral Resources Act of Nova Scotia (the "Act") also makes allowance to grant access for reasonable requests for the purposes of mineral exploration.

These exploration licenses cover the southern portion of the past-producing West Gore Sb-Au mine, which operated in the late 1920's primarily for the extraction of antimony (stibnite) ore. The northern portion of the mine area (collectively the "West Gore Gold District") is currently held under an exploration license by an unrelated third party and is not considered part of the "Property" as described herein but is considered part of the West Gore Sb-Au deposit *sensu stricto*.

All historical mining operations have long been reclaimed; however, there are numerous adits exposed on the property which have been documented by the Nova Scotia Department of Energy and Mines. There are accessible mining dumps from the original operations in the early 1900's that have been sampled by the current and previous property owners (Fig. 1).

There are no known environmental liabilities associated with the previous mining operations other than those described above and assigned to the Government of Nova Scotia.

#### **Mineral Tenure**

The four mineral exploration licenses comprising the 585 Ha Property are listed in Table 1 (Figs 2 and 3). The licenses are currently in good standing or pending approval with various anniversary dates and held by the property Vendor, Mr. Lindsay Allen under the name of Elk Explorations Ltd.

Once an exploration licence has been issued and the licensee has obtained the permission of the landowner (the Minister of Natural Resources in the case of Crown lands) then exploration may commence.



Figure 1. Southwest view of the property from the Main Shaft dump.

Table 1. West Gore Property exploration license list (G	Government database accessed 02-May-21)
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Tenure	Status	Issued	Anniversary	Area (ha)	Expiry	Tenure Type
08659	Good	2009-07-27	2021-07-27	189.53	2021-07-27	Mineral Exploration License
50954	Appl_Rnwl	2015-04-09	2021-04-09	31.65	2021-04-09	Mineral Exploration License
51851	Good	2017-09-12	2021-09-12	79.09	2021-09-12	Mineral Exploration License
53649	Good	2020-03-10	2022-03-10	284.97	2022-03-10	Mineral Exploration License



Figure 2. West Gore property location map showing exploration licenses with mineral claim tracts (Appendix I).

#### Non-disturbance activities of geological, geochemical and geophysical surveying may proceed without further authorization.

When exploration activities may cause significant ground disturbance some additional requirements must be met. In the case of any trenching, pitting or stripping by mechanical means (or by hand if exceeding one meter in depth) an Excavation Registration (Form No. 12) must be made at least 7 days before commencement of the activities with the Registrar. Whenever holes are to be drilled to obtain geological, geochemical or geophysical data (i.e. rotary, churn, auger, and diamond drill holes, possibly percussion holes if employed in soil sampling or seismic surveys, but not if only for rock breaking purposes) the Registrar must be notified prior to the commencement of drilling and some basic information provided (Drilling Notification Form). A tabulation of relevant data must be supplied within 30 days of the completion of the drilling program. Nova Scotia operates under a map staking regime wherein each exploration license consists of individual mineral claims that measure 400 m x 400 m (e.g., Fig. 3). Claims may be staked at a cost of C\$10 per claim and annual renewals escalate at a prescribed rate (Table 2). Exploration Licenses require annual expenditures of C\$400 per license for licenses aged 0 to 4 years. This rises to C\$600 for licenses aged 5 to 10 years, C\$800 for licenses aged 11 to 16 years and C\$1,600 for licenses aged 17 years and older.

Table 2. Claims staking and renewal fees.									
	Year	Cost (C\$/claim)							
	1	\$10							
	2-10	\$20							
	11-15	\$40							
	16-25	\$160							
	>25	\$320							

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	Area (Ha)	Claim ID		á	4°00'	-	_	P.I	orth	_		2°00' ] 45 <sup>4</sup>	'00"			Figures
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2	15.79978	11E4B70Q		BAT OVAL	West	-	_		-			-	ot.			
3	15.80038	11E4B71N		TOPCOWPER, SERIES MAP SHEET (LSO 000)		F	3		L	A		L				
4	15.81242	11E4B71O		SHOWING CLAM KASP R.g. LIEDGA	45°45				L 1	-			45			
5	15.81305	11E4B70K			62°30'		- 50	i	uth I			200		2		
6	15.80099	11E4B70J			42.1	R	-				Noth			-	••	11,0000
7	15.80098	11E4B71M			45'52'97	108	107	106	105	104 10	13 102	101	100	95	98	97 45'52'8
8	15.81302	11E4B71L				85	86	87	85	89 9	0 91	92	93	94	95	96
9	15.81366	11E4B70G				84	83	82	81	80 7	9 78	77	76	75	74	73
10	15.8028	11E4B70H				61	62	63	64	65 6	6 67	68	65	70	71	72
11	15.80158	11E4B71E		Figure 2	West	60	59	58	57	56 5	SA 54	53	52	51	50	49 Lan
12	15.81362	11E4B71F		CLAIM MAP SHOWING MINIFAL TRACTS 6.8.1101HA TRACTS		37	38	39	40	41 4	2 43	44	45	46	47	43
				age assessed a service.		36	35	34	33	32 3	1 30	29	28	27	25	25
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	Automation	10						45%	aron	r	<u>_</u>		North			
	Area (Ha)	Claim_ID						124		Ν		0		Ρ		a
13	15.79914	11E4B74A							H		+		+	_	+	
14	15.81058	11E4B73D		Elmun 3						М		L		К		1
15	15.79913	11E4B73C		Figure 3			1.000		west -		+		1		+	
16	15.82085	11E4B71Q		MENERAL TRACT-SHOWS MENERAL CLAINS						Ε		F		G		н
17	15.82194	11E4B72N		*& \$37354-IRACIT-CLAS	5153-					22	_	<u>ः</u>	1	073	-	
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19 20 21 22	15.81048 15.80152 15.81169	11E4B72L 11E4B72K 11E4B72F		- and a second sec					•				1.0 MK	.50	954	•
19 20 21 22 23	15.81048 15.80152 15.81169 15.81288	11E4B72L 11E4B72K 11E4B72F 11E4B72G		- and a second sec		<u>_</u>	D		•				E	.50 Ha)		۰ Claim_
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Figure 3. West Gore property detailed claims list.

# Underlying Agreements and Obligations

On April 8, 2021, the Company signed an option agreement (the "**Agreement**") with Elk Exploration Ltd. to earn an undivided 100% interest in four (4) exploration licenses (the "**Property**"), subject to a 3% NSR, by making cash payments over a two-year period. producer" for gold and silver. Additionally, the Act provides for collection of royalties on other minerals both specified, and in general by way of a net revenue royalty that is the greater of "2% of the net revenue from mining" or "15% of all net income from mining".

# 5. ACCESSIBILITY, CLIMATE,

# LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property is located approximately 50 km northnorthwest of Halifax, the capital and largest city in Nova Scotia (e.g., Fig.2). Access is via paved roads by 102 taking Highway northbound out of for approximately 40 km. The Halifax Halifax International Airport is located approximately 30 km north of Halifax on Highway 102. A further 30 km travel westbound on Highway 14 turning north at Rawdon Gold Mines and then approximately 1-2 km northbound on Valley Road. Highway 354 north from Lower Sackville may present more direct access depending on starting location.

Most of Nova Scotia lies in a mid-temperate zone climate. Although the weather is moderated by the surrounding Atlantic Ocean the climate resembles more continental than maritime. Spring to fall temperatures range from 5° to 20° C with maximums peaking around 30 to 32° C. Winter temperatures range from above freezing to about -12° C with occasional minimum values of -25° C. Rainfall is frequent through the spring and fall whereas summer is usually drier but overall there is an even distribution of precipitation.

The Property and surrounding area are for the most part, unpopulated with a mixed rural land use dominated by small forestry operations (Fig. 4). Some

The Property is moderately wooded with some forestry operations consisting of selective clear cutting and farming and maple sugar production operate seasonally. The relief is generally low (3-13 m) with a few small brooks and streams incising northwest trending topographic features. There is a good secondary road network providing access points to the Property and various gravel roads occur within the Property and they are generally well maintained.

Advanced royalty payments will commence in Year 3 of the agreement and continue until "commercial production". The Agreement includes a partial buyback of the NSR for a fixed cash consideration.

Nova Scotia has a mineral royalty scheme in place wherein mineral producers are required to pay royalties of "1% of the net value received by the silviculture. The area is a rural based economy with emphasis on gypsum mining, forestry and agriculture. The area has a long mining history including gold production and industrial mineral production (e.g., barite and gypsum). Immediately to the north of the property there was a brief period of onshore natural gas exploration line the late 1990's and early 2000's.

The nearest commercial area is Windsor, located about 30 minutes drive to the west on Highway 14.

# 6. HISTORY

The following account of the West Gore Antimony mine was modified after O'Reilly (2012) with additional details from Messervey (1932) that describe the early mine production and development at West Gore.

Stibnite-rich quartz drift was found by John McDougall on his farm at West Gore in 1880. Prospectors searched for the source of this rich drift for three years until 1883 when a bedding-discordant fissure vein, heavily mineralized with stibnite, was found. Two shafts were sunk, each about 50 m in depth and mining began on what was to become known as the Main Zone Vein, a quartz-carbonate vein and breccia zone following a northwest-trending fault zone in Cambro-Ordovician Halifax Formation slate and metasiltstone. By 1892 the mine was closed but in 1887 a second vein, the Brook or Northup Vein, was found to the southwest of the Main Zone and in 1899 the Flowers Vein was found to the northeast. Another shaft was sunk on a new property about 900 ft north of the first. The veins were reported to be 10-45 cm (4-18 inches) thick. The original vein was

reopened in 1899 but production halted again in 1900.

Limited mining continued intermittently until 1904, with the Sb concentrates shipped to Swansea, Wales. In 1904 the Dominion Antimony Company extended the shafts, levels, and stopes as they realized that the ore showed high values of both gold and silver with the metallic antimony. In 1905, the shaft depths increased to 213 m. Some material was processed on site whereas high-grade ore was sent to England. The total production to this point was reported to be 390 tonnes of No. 1 ore (46% antimony) and 3,238 tonnes of No. 2 ore (8% antimony). 1905 is the first year with recorded gold production (1,232 oz).

In 1906 the mine was purchased by the American Metal Company of New York. In 1907, a mill was constructed about 60 m north of the main shaft. It operated for a short time, however, operations ceased at the mine in 1908.

No mining was conducted in 1909. The mine was taken over by St. Helen's Smelting Company, but by September, the mine was operated by the West Gore Antimony Company. In 1910 and 1911, over 8,800 tonnes of ore from the dumps were milled and nearly 360 tonnes of concentrate were shipped overseas for smelting.

The mine was idled from 1912 to 1914. Mining operations resumed October 1914 and milling operations re-commenced January 1915 and continued to 1917. Underground operations were expanded, and over 31,750 tonnes of ore were milled yielding 7,040 tonnes of concentrate at 46% antimony.



**Figure 4.** Airphoto compilation of "West Gore Gold District" after Smith and Goodwin (<u>2009</u>) showing historical workings (e.g., Adits) and Property exploration license boundaries (red).

No further production was reported but prospecting in 1927 identified "another parallel orebody".

The total amount of gold obtained from the deposit up to 1917 was estimated to be 6,861 oz.

Intermittent exploration programs have been carried out on the West Gore District over the past 80 years including several drill programs, extensive trenching, limited soil geochemistry and ground geophysics along with some metallurgical work. Talisman Mines Limited conducted geochemical and geophysical (IP) surveys over the West Gore district in the early 1960's as part of a regional exploration program looking for Mississippi Valley Type lead deposits on the periphery of Carboniferous basins (e.g., Walton Property).

More recent and relevant work was completed in the mid to late 1980's by Durham Resources and consisted of two drill campaigns targeting shallow historical workings on and to the north of the Property. Durham also completed detailed grid soil sampling and geophysical (VLF) surveys. Drilling programs were generally successful in intersecting mineralization and both geochemical and geophysical surveys identified anomalous trends on and to the north of the Property. The last drilling on the Property was a 2-hole program (277 m) to replicate some of the 1980's results. Some drill core from these programs remains available at the Nova Scotia Core library in Stellarton, Nova Scotia.

Work since then (ca. 2014-2020) has largely been prospecting and sampling of grabs and dump material by the property Vendor followed up with a more comprehensive soil geochemistry program completed in 2020. Multi-element Mobile Metal Ion (MMI) analyses defined several geochemical anomalies typically associated with Sb-Au mineralization.

#### 7. GEOLOGICAL SETTING AND MINERALIZATION

Antimony is widely used in flame-retardants, but is also used in alloys with other metals, lead-acid batteries, low-friction metals, and cable sheathing. The element imparts strength, hardness, and corrosion resistance to alloys. The U.S. Government has considered antimony to be a critical mineral mainly because of its use in military applications. China continues to be the leading global antimony producer in 2020 and accounted for more than 52% of global mine production. This caused a supply shortage of antimony ingots on the market and the antimony price increased to \$3.98 per pound in 2020 (e.g., Klochko, <u>2021</u>), continuing a positive three-year trend which has strengthened into 2021. Antimony is now considered a strategic risk metal in terms of supply as more than 60% of the known global reserves are found in China, Bolivia and Russia.

The most significant antimony mineral deposits occur in geologic environments with a thick sequence of siliciclastic sedimentary rocks in areas with significant fault and fracture systems. The most common antimony ore mineral is stibnite ( $Sb_2S_3$ ). Empirical data suggest that the acid-generating potential of antimony mine waste is low (Seal et al., 2017).

In many mineralizing systems, antimony may be closely associated with other ore metals such as tungsten, molybdenum and gold. Antimony and gold together, commonly occur with anomalous and variable enrichment of other characteristic trace elements e.g., As, Pb, W, Mo, Hg, Bi and Te (Sandeman et al. 2018). These metal associations are a characteristic of intrusion-related gold ("**IRG**") systems such as those of the Tintina Gold Belt of Alaska and Yukon. A notable characteristic of many "epithermal", structurecontrolled antimony deposits is the close spatial and temporal association with Py–Aspy  $\pm$  Au  $\pm$  W  $\pm$  Mo  $\pm$  Pb mineralization.

Two well-know examples of stibnite deposits in Canada are the Beaver Brook deposit in central Newfoundland and Labrador and the Lake George deposit in New Brunswick. These two deposits share many geologic similarities with each other and West Gore as they occur in fractures or fault systems hosted by Ordovician to Silurian siliciclastic sedimentary rocks, and they are located near Siluro-Devonian granitic intrusions.

For more recent commercial context, the Beaver Brook Mine operated from 2008 to 2012, producing 599,283 dry metric tonnes ("**DMT**") of ore with a head grade of 3.5% Sb. From this, 31,906 DMT of concentrate was extracted containing 19,902 DMT of Sb metal (Sandeman et al. <u>2018</u>).

# **Regional Setting**

The following summary of the regional geology is modified after Sangster and Smith (2007).

Nova Scotia is divided into two distinct geological domains, the Avalon Terrane to the north and the Meguma Terrane to the south (Fig. 5). The two terranes are separated by the east-west-trending "Minas Geofracture" (commonly referred to as the Cobequid-Chedabucto Fault System).

Docking of the two terranes was accompanied by major sinistral, transcurrent motion along this fault, followed by minor dextral movement. Overlying Devono-Carboniferous sediments, which are common on both sides of the Minas Geofracture, stitch these two terranes together. The exposed Meguma Terrane hosts most of the known gold deposits and is characterized by a 480 km long by 120 km wide wedge of Lower Paleozoic metasedimentary rocks (Meguma Group) that were folded into long east west trending, doubly plunging folds and regionally metamorphosed to greenschist and locally to amphibolite facies during the Devonian Acadian Orogeny (ca. 400 Ma). These metasediment units were then intruded by voluminous Devonian peraluminous granitoids (ca. 375 Ma) and were subsequently overlain by carbonate and clastic sedimentary (Horton Gp.) rocks and evaporates (Windsor Gp.).

The Meguma Group hosts abundant gold deposits including West Gore. It consists of the Cambrian Goldenville Formation metagreywacke, which is approximately 6.7 km thick. It is conformably overlain by black slate of the Halifax Formation (up to 11.8 km thick). Silurian volcanic and clastic rocks disconformably overlie these strata. The Goldenville Formation consists of massive, thick-bedded metagreywacke that is dark grey (carbonaceous) to light grey (calcareous) in colour. The thick coarser beds are commonly separated by thin slatey horizons that may either be chloritic or very carbonaceous. The Goldenville Formation grades upwards through manganese rich strata into a basal unit of very carbonaceous sulphidic black slate. This in turn is



Figure 5. General geology map of Nova Scotia showing only the Meguma Group, intrusives and gold occurrences on DEM.

overlain by typical Halifax Formation slate that consists of about 75% black carbonaceous sulphidic slate and 25% thinly bedded (~10 cm) to crosslaminated metasiltstone. The upper Halifax Formation most often consists of grey-green slates and siltstones. The proportion of the individual units is variable and much of the Halifax Formation seen in outcrop is carbonaceous and sulphidic. Disseminated gold mineralization is locally present (e.g., Touquoy Mine).

Auriferous veins occur either on or near the crests of regional scale doubly plunging antiforms. Most of the gold districts occur within greenschist-facies rocks. However, several significant are within amphibolitegrade metamorphic rocks that are spatially associated with numerous Devonian-Carboniferous granitic intrusions in the easternmost part of the province.

Most of the gold deposits and occurrences are associated with thicker than normal, interstratified slate and metasiltstone within the Goldenville Formation. Within these gold districts, the finegrained lithologies are variably argillaceous, silty, carbon-rich and sulphidic with abundant pyrrhotite and arsenopyrite with pervasive carbonate alteration. Concordant, auriferous quartz veins, which include bedding-parallel, stratiform, and stratabound geometry, are located within or immediately below the upper margins of incompetent, impermeable argillite horizons in the Goldenville Formation. Many of the deposits are located on the steeper, sometimes overturned, limb of the antiform or in parasitic second order structures on the limbs of larger folds (Fig. 6).



Figure 6. Structural domain model for the project area (West Gore = red star) extracted from Horne et al. (2001).

#### Local Setting

This West Gore Deposit (e.g., Fig. 7) has been studied in detail and the following deposit description is taken from Kontak et al. (<u>1996</u>).

The West Gore Sb-Au deposit is anomalous in the Meguma terrane of Nova Scotia because of its enrichment in Sb, a metal that is essentially absent from other Meguma gold deposits. The deposit is hosted by graphitic and sulfide-bearing slates of the lower Paleozoic Halifax Formation that were deformed into a northeast-trending, upright, closed syncline and metamorphosed to the greenschist facies during the regional Acadian orogeny (ca. 400 Ma). Mineralized veins at the deposit define a single structure trending 110 degrees that probably formed the dextral component of a conjugate shear system as part of regional, northwest-directed compression.

The veins crosscut a penetrative regional schistosity (S1) in the host slates and vein formation is



Figure 7. Geological map (LIDAR) for the West Gore mine area showing historical workings, after Horne et al. (2001).

constrained by (1) the presence of cleaved wall-rock slates in the veins, (2) vein-related sulfides overgrowing the S<sub>1</sub> fabric in wall-rock fragments, and (3) a 370 Ma <sup>40</sup>Ar/<sup>39</sup>Ar plateau age for hydrothermal muscovite. Mineralization occurs as stibnite, native antimony, aurostibnite, Sb-Au alloys, and Sb-Au-O Textures of vein quartz include comb and plumose varieties with a bimodal grain size and a coarser, anhedral quartz. Fluid inclusion data studies are consistent with a metamorphic origin for the fluid with local inheritance of C and S isotope signatures from interaction of the ore fluid with graphite and sulfide wall-rock slates of the Halifax Formation.

The West Gore deposit originated from infiltration of metamorphic-derived fluids generated during the waning stages of the Acadian orogeny contemporaneous with generation and emplacement of felsic and mafic magmas. The mineralizing fluids phases in vein quartz with associated Fe, As, Pb, Zn, Cu sulfides and chlorite-carbonate gangue; wall-rock alteration is variably developed as narrow zones peripheral to veins enriched in sericite, calcite, sulfides, tourmaline, and chlorite.

were focused to higher crustal levels where brittleductile conditions prevailed and veins were localized to the dextral component of a conjugate shear system related to movement along a major dextral strike-slip fault or shear zone (Cobequid-Chedabucto fault system). Lithogeochemistry of the local stratigraphy does not indicate any regional enrichment in Sb, Au, or other metals. The occurrence of the stibnite may, therefore, reflect either telescoping of metals in an Au-W-Sb province or enrichment of Sb in the source area or fluid conduit relative to other Meguma gold deposits.

#### 8. DEPOSIT TYPES

Meguma gold deposits are orogenic deposits with strong structural controls associated with regional fold axes and related flexural slip mechanisms and lockingrelease structures (Figs. 8 and 9). Tertiary cross-cutting structures (e.g., brittle faults or "kink banks") are known to play an important role in the formation of high grade "ore-shoots" (e.g., Forest Hill Mine and Caribou Mine). Meguma deposits are analogous to a more well-known Australian gold deposit type referred to as Bendigo or "Saddle Reef" style.

The following description was modified after Morelli et al. (2005)

Over 60 past-producing gold deposits occur throughout the exposed Meguma terrane in southern Nova Scotia and are invariably hosted by Meguma Group metasedimentary rocks. Mineralized veins are structurally controlled and generally occur in proximity to anticlinal fold hinges.

Vein-associated deposits are dominated by quartz; vein thickness varies from centimeter to millimeter scale, and strike lengths are several meters to hundreds of meters. Several accessory vein minerals, including various carbonate minerals, chlorite, albite, muscovite, biotite, amphibole, tourmaline, garnet, and epidote are also present. Arsenopyrite is the predominant sulfide phase, with variable amounts of pyrrhotite, pyrite, chalcopyrite, galena, and rare sphalerite and molybdenite. Gold occurs primarily in native form within quartz veins, near ribbons of wallrock material, and along vein-wall contacts. It exhibits a close association with arsenopyrite, occurring as fine disseminations within or as coatings on grain boundaries or fracture surfaces of arsenopyrite crystals. In general, veins may be grouped into two broad types: strata bound, including beddingconcordant, saddle-reef, and en-echelon vein types, and bedding-discordant, including angular or crosscutting veins. Importantly, both vein types may be related kinematically to a flexural-slip folding mechanism and show mutually crosscutting relationships. Although bedding concordant and saddle-reef veins have been historically the principal gold producers, mineralization is also observed in bedding-discordant veins. Disseminated gold deposits (e.g., St. Barbara's Touquoy Mine), first discovered in the Meguma terrane in the late 1980's, are like disseminated gold deposits recognized in other turbidite sequences globally.

Some evidence supporting a late syntectonic origin for mineralization includes several <sup>40</sup>Ar/<sup>39</sup>Ar mica ages of ca. 370 Ma from various Meguma gold deposits throughout the terrane although age dates of ca. 400-410 Ma have also been generated.



*Figure 8.* Example of Saddle Reef style vein array from Dufferin gold deposit as it relates to Meguma lode gold deposits (after Sangster and Smith, <u>2007</u>).

**Figure 9.** Example of Saddle Reef style vein array showing discordant vein structures from Mount Uniacke Deposit as they relate to Meguma lode gold deposits (after Sangster and Smith, <u>2007</u>).

# 9. EXPLORATION

A detailed history of early production and exploration is found in a compilation of historical reports, memos and maps (Dawe et al.,  $\underline{1976}$ ).

Highlights include:

**<u>1880</u>**: The first sighting of antimony was made by John McDougall in glacial drift on his farm.

**1883:** J.T. Wallace found antimony in float and shortly after formed the Dominion Antimony Company with MacDougall and Bryson. The first shaft was started named, "Main Shaft". Trenching was carried out.

**1884:** The first stibnite shipment to England was made. Another shaft located 120 ft from the Main Shaft was started. B.M. Davison joined the Dominion Antimony Company.

**<u>1887</u>**: Gould Northup found a vein to the southwest of the original discovery and started the "Northup Shaft".

**1899:** Northeast vein (aka "Flowers") discovered by J. McDougall and 55 ft shaft sunk.

**<u>1884-1900</u>**: Mine operations ceased. Mine production (hand-cob direct ship ore) in this period was estimated to be 3,121 Tons at 45-50% Sb.

**1901-1903:** The mine was reopened and a 100 tonne per day ("**tpd**") mill was constructed along with three new shafts: No. 1 (East) was reported to be 430 ft deep. No. 2 (Middle), 160 ft west of No. 1 was reported to be 240 ft deep. No. 3 (West) shaft located 112 ft west of No. 2 was reported to be "about 180 ft" deep. Mine production in this period was estimated to be 1,236 Tons grading 50% Sb.

**<u>1904</u>** (Dominion Antimony Company): Extensive underground development continued around the No. 1 shaft as it was deepened to 525 ft (e.g., Figs 10 and 11). The No. 3 Level (at 406 ft) was developed and at 516 feet the 5-Level of the mine was established. Notably, "there was some talk of sinking a vertical shaft several hundred feet to the east of No. 1 Shaft to intersect the extension of the ore at 600 to 700 ft below surface".

**1905-1908** (Dominion Antimony Company): Mine production (hand-cob direct ship ore) of 3,036 Tons of "No. 1 Grade" ore grading 27.4% Sb and 1.09 ounce per ton ("**OPT**") plus an additional 10,360 Tons "No. 2

Grade" ore grading 6% Sb and "\$4 to \$10" per Ton Au (est. 0.1 to 0.25 OPT). An additional 133 Tons were mined in 1908 but no grades are reported. The estimated average recovered head grade for this period was 11% Sb and 0.5 OPT Au. During this time approximately 1,258 Tons of concentrate were shipped with an average grade of 45% Sb and 0.25 OPT Au.

**1909:** St. Helen's Smelting Company began operating and the "Crowe Shaft" was sunk.

**1910-1911:** Approximately 8,500 Tons of "dump" material (assumed "No. 2 Grade Ore") were processed in the mill on site to produce 442 Tons of concentrate grading 42% Sb and 1.69 OPT Au. The head grade of the dump feed was estimated at 2.2% Sb and 0.09 OPT Au.

**1915-1917** (West Gore Antimony Company): Mine production re-commenced and activities included diamond drilling and construction of new levels. Mine production was estimated at 36,536 Tons grading 2.3% Sb and 0.075 OPT. The lower head grade versus previous mining was attributed to larger scale operations (e.g., overhand stoping) versus earlier small-scale hand-cobbing efforts. 2,172 Tons of concentrate were produced grading 31% Sb and 1.25 OPT Au.

**<u>1923</u>** (Parsons): Tailings resource estimate of 15,500 Tons grading 1.3 to 2.3 % Sb and 0.06 to 0.12 OPT Au.

**1930:** W.M. Goodwin of Dalhousie University completed a mineralogy report on the property.

1933: Prospecting by N.M. Crowe.

**1936-1939** (St. Helens Smelting Company Ltd): C.H. Berggren conducted extensive exploration which entailed digging 40,000 cubic feet of trenches, deepening the Berggren—Northup Shaft, deepening the Flowers Shaft and sinking the Berggren Shaft to 47 ft. The Brook Shaft (90 ft) was dewatered. However, minor production for this period came from "working over" and "hand-cobbing" dump material. Approximately 236 Tons of concentrate were produced on site grading 20.8% Sb and 0.796 OPT Au.

1943: Flowers Shaft de-watered.

**1944** (Packard): Samples taken from waste dumps by mining engineer G. Packard. He estimated that the "re-sorted waste dump", "unsorted waste dump" and tailings dump include 56,200 Tons of material containing 1.25 million lb of Sb and 2,528 oz of Au.

**<u>1945</u>**: Main Shaft re-collared and trenching completed.

**<u>1950</u>**: Antimony-Gold Mining and Smelting Corp Ltd. conducted a concentration test. Two, 3 Ton samples of coarse waste dump material and one 200 lb sample of old mill tailing fines were shipped to the Nova Scotia Technical College.

**1951**: Antimony-Gold Mining and Smelting Corp Ltd. drilled 12 diamond drill holes (3500 ft or 1,066.8 m) targeting the Brook, Main and Flowers Veins. Numerous trenches were also completed.

**<u>1954</u>**: McDougall performed trenching on the Main Vein.

**<u>1957</u>**: Attempt to re-sink the Main Shaft halted because of unsafe conditions.

**<u>1958</u>**: Canadian Alumina Corp. drilled five diamond drill holes targeting the Flowers Vein.

**<u>1962</u>**: Trenching carried out west of the Flowers Shaft.

**1964:** Talisman Mines Ltd. drilled five diamond drill holes WG1 to WG5 (143 m). There are maps indicating another six holes were drilled (e.g., "13" series)

**<u>1974</u>**: Hants County Mining Ltd. acquired the property; 16 diamond drill holes were completed by the Nova Scotia Department of mines (386.5 m).

**<u>1975</u>**: Metallurgical investigation by Dawe.

**1985:** Durham Resources Inc drilled 19 diamond drill holes (2,109.27 m), targeting all the known leads (veins systems) at West Gore. Soil sampling, IP and Magnetics and VLF surveys were completed over the property. Nova Scotia Department of Mines drilled one vertical diamond drill hole (C-1) in the northwest portion of the property (646.48 m) to establish control on the sub-surface geology.

**<u>1987</u>**: Durham Resources Inc drilled six diamond drill holes (1,007.07 m) targeting the Berggren South Vein.

**<u>1990</u>'s**: Gold Bank Resources Inc. performed concentration tests on the tailings.

**2010**: D.D.V. Gold Limited (under option from Elk Exploration Ltd) re-sampled core from 11 of the 30 drill holes completed during the 1980's Durham Resource Program with the intent of establishing a bulk tonnage gold resource for the Deposit.

**2013:** Great Atlantic Resources completed a 2-hole drill program (277 m) on the Berggren South target area.

**<u>2014-2018</u>**: Prospecting and sampling by Elk Exploration Ltd.

**2020:** Soil geochemistry survey (Mobile Metal Ion analysis) by Elk Exploration Ltd.

# **Exploration Programs**

#### DURHAM (1985-86)

In addition to drilling, Durham conducted grid geochemical and geophysical surveys (Morrisey, <u>1985</u>, <u>1986</u>). The geophysics (VLF-EM) and soil geochemical data for Sb define two very distinct intersecting map patterns corresponding with stratigraphy (NE-SW) and structure (NW-SE), as inferred herein from LIDAR and breaks in magnetostratigraphy (i.e. linear map patterns). These patterns do locally coincide with known mineralization, but many other anomalies appear unexplained and a more detailed analysis of the original data is warranted.

#### D.D.V. GOLD (2010)

D.D.V. Gold ("DDV") conducted broad reconnaissance programs across the Meguma Terran in Nova Scotia to assess historical mines and Au prospects for the potential to host large open pit mineable deposits. As part of this program DDV re-sampled 11 holes from the 1985 and 1987 Durham Resources drill program.

Of the 79 core samples collected and analysed, 53 returned values below detection and the highest value returned was 0.42 g/t Au over 0.88 m in hole WG 85-16 (not on the Property). One sample from the property (WG 85-17) returned a value of 0.38 g/t Au over 0.51 m).

Samples were collected from areas with little or no quartz veining to specifically assess the potential for broader intervals of "disseminated mineralization" in support of a bulk open pit mining model (e.g., Touquoy Mine). This was not a re-check of historical results or a re-log exercise to locate high-grade Sb-Au intervals.



Figure 10. Main Mine area long section (Douglas, <u>1940</u>). See Fig. 4 for location map of Main Shaft.



*Figure 11.* Berggren shaft area long section (Douglas, <u>1940</u>). See Fig. 4 for location of Berggren Shaft.

The authors of the 2010 Assessment Report (Bourque and Utley, 2010) concluded that "there may be some potential near surface along the projected strike to the northwest and southeast of the currently defined veins, particularly the Berggren South Vein." They suggested angled reverse circulation (RC) drilling for potential follow-up.

#### **GREAT ATLANTIC (2013)**

Great Atlantic Resources ("Great Atlantic") completed a limited prospecting and drilling program in 2013. A high-grade float sample was found north of the property that returned a value of 9.25 g/t Au (Delong, 2014).

#### ELK EXPLORATION (2014-18)

In 2014, Geodex Minerals conducted a prospecting and sampling program at West Gore under an option agreement with Elk Exploration (e.g., Allen, <u>2014</u>).

From July to September samples were collected from waste dumps near the Main shaft and analysed for Au and Sb (Table 3). Some samples were also analysed for Ag.

The results, from selective sampling, do confirm the presence of high-grade Au and Sb mineralization and moreover that the high-grade mineralization appears to be specifically associated with quartz veins and metasedimentary rocks with quartz vein material.

MMI Theory and Practice (e.g., Mann, 2011 and Sylvester, 2016): Target elements are extracted using weak solutions of organic and inorganic compounds Other prospecting in the area also identified *"mineralized angular rubble"* in Sandford Brook. Notably sample WGR-14-15 returned grades of 24.4% Sb, 53.4 g/t Au and 13 g/t Ag.

The Elk assessment report submitted by Allen (2014) also made note of the Great Atlantic drilling (Delong, 2014). The author apparently viewed the Great Atlantic core and observed that a quartz-stibnite vein was present at 91.35 m in hole WG 13001 and commented that Great Atlantic did not assay for Sb.

The Great Atlantic assessment report contains the assay certificates but not all sample numbers match exactly. This may be related to a truncation of the full sample ID on the certificate since upon further review the values and base numbers do match. In general, the report lacks a great deal of information.

The authors of this report note that the dumps have been sampled many times over the past 20-30 years and high-grade Au and Sb values are relatively common.

#### ELK EXPLORATION (2020)

In 2020, Elk Exploration completed a soil geochemistry survey with Mobile Metal Ion analyses on the West Gore property. The MMI analytical process is a proprietary geochemical technique by SGS Canada Inc. related to the analysis of subtle concentrations of metals in soils and related materials.

based digests. MMI solutions contain strong ligands, which detach and hold metal ions that were loosely bound to soil particles by weak atomic forces in

Table 3. High-grade grab sample from Main Vein area dump piles (Allen, 2014).

Sample ID	Sb (%)	Au (g/t)	Description	Location	UTMX	UTMY
WG-R-14-1	1.72	153	Qtz-Sb vein	Main Area Dump	437829	4992429
WG-R-14-2	11.3	4.28	Qtz-Sb vein	Main Area Dump	437829	4992429
WG-R-14-3	21.0	5.97	Qtz-Sb vein	Main Area Dump	437724	4992548
WG-R-14-16	2.30	4.5	Qtz-Sb vein	Main Area Dump	437823	4992432
WG-R-14-21	27.1	53.9	Qtz-Sb vein	Main Area Dump	437829	4992429
WG-R-14-24	1.57	11.7	Qtz-Sb vein	Main Area Dump	437829	4992429
WG-R-14-25	8.08	72.5	Qtz-Sb vein	Main Area Dump	437829	4992429

rather than conventional aggressive acid or cyanide-

aqueous solution. This extraction does not dissolve

the bound forms of the metal ions. Thus, the metal ions in the MMI solutions are the chemically active or 'mobile' component of the sample. Because these mobile, loosely bound complexes are in very low concentrations, measurement is by conventional ICP-MS and ICP-MS Dynamic Reaction Cell<sup>™</sup> (DRC II<sup>™</sup>), thereby achieving very low detection limits.

"Mobile Metal lons" occur at very low concentrations and since the ions have recently arrived at the surface, theoretically they provide a more precise indicator of the location of sub-cropping mineralization. Adsorbed ions are found predominately in near-surface materials where evaporation or transpiration is highest. Their lifetime in the ionic state at surface is very limited because they are subject to degradation and molecular binding or fixation into molecular forms by weathering but if the flow of ions is maintained, they are detectable. Notably, the limited lifespan precludes exposure by lateral circulation; accordingly they do not move away from the source of mineralization. Hence by only measuring the mobile metal ions in the surface soils, the MMI geochemistry can produce a discrete response directly over the source of the mobile ions (Fig.12). The source would be interpreted as mineralization at depth which emit metal ions characteristic of that mineralization.

Two sets of data are commonly utilized for interpretation purposes. The first is determination of background followed by determination of a "Response Ratio". Once the background is known then each assay for that element can be normalized to determine a response ratio. Determination of an anomalous character is made by comparative analyses of the magnitude of Response Ratio.



Figure 12. Comparison of standard soil response profile to MMI response profile (SGS Canada Technical Bulletin MMI TB06).

An isopleth plot of response ratios can be utilized to construct areas of anomalous interest. Response Ratio bar histograms can also be plotted for groups of elements that are suspected as sharing a common genetic relationship, e.g., Au, Ag, As, and Sb for each sample point along each line surveyed.

In the fall of 2020, the Elk Exploration collected three hundred soil samples for MMI analysis from select areas of the property.

The sampling was completed using a spoon type, hand driven soil auger. A hole was dug 3-5 cm below the humus layer. Then another auger spoonful was removed and discarded. Finally, a clean sample spoonful was augured and collected from a depth of 30 to 40 cm weighing approximately 300 - 400 g and placed in a "Ziploc" plastic bag. This was labelled and recorded in a field notebook. Notes were taken on till colour, composition (e.g., sandy or clayey), moisture content, forest type and re-growth if the area was previously logged.

Each sample was removed from the auger with a fresh piece of stick broken from the surrounding brush. Any larger pebbles and roots were carefully removed without touching the sample directly. The auger spoon was wiped clean with kitchen paper towel between samples.

Samples were taken at end of day to Elk Exploration lab where they were securely stored in numerical order until the survey was completed (approximately 2 weeks) and shipped to SGS in Vancouver with previously authorized SGS Submittal Documentation.

Analytical data included a full suite of multi-element (53) ICP-MS analyses as well as sample weights, blanks, CRM and lab duplicate analyses. All raw data match original certificates and sample numbers correspond to previously recorded data and sample site locations (e.g., scanned hard-copy maps). Quality management, apart from field sampling, packaging and security was completed by the lab (e.g., Appendix II) and found to be in order with only 1 blank registering a value for Sb but well within 5xDL. One sample was recorded as L.N.R (Listed, Not Received) and upon review, this corresponded to a sample site in the middle of a logging road wherein no physical sample was collected.

Survey and analytical data including original certificates and CSV files were reviewed. There were some errors in station location information that were corrected using the original field maps with sample locations. The sample data were compiled and various ratios and transformations (e.g., standard score) have been completed as appropriate for this type of soil survey and analytical methodology. Results are presented for select elements known to be related to Sb-Au mineralization in the area (Figs. 13, 14, 15 and 16).

The MMI analytical data were transformed to normalize individual elemental signatures to respective backgrounds. Selected data define several coincident Sb-Au-Ag-As anomalies in the core part of the property (e.g., EL08659). These areas are generally related to subtle WNW- to NW-trending linear features as manifested in the LIDAR digital elevation model (DEM). Additionally, these linear features are generally coincident with breaks in the magnetostratigraphy and therefore are interpreted to be representative of potentially mineralized faults and or kink-bands.

Two areas, in the central portion of EL08659 and the northeast corner of the licence have distinct Sb-Au anomalies in the transformed MMI data (e.g., Fig. 13 and Fig. 15), however further investigation of a pathfinder suite of elements is suggested.



Figure 13. Soil survey MMI results with geology map (Legend Fig. 7) and LIDAR base; Z-score for antimony (Sb).



Figure 14. Soil survey MMI results with geology map (Legend Fig. 7) and LIDAR base; Z-score values for arsenic (As).



Figure 15. Soil survey MMI results with geology map (Legend Fig. 7) and LIDAR base; Z-score values for gold (Au).



Figure 16. Soil survey MMI results with geology map (Legend Fig. 7) and LIDAR base; Z-score values for silver (Ag).

# **10. DRILLING**

#### Previous Owners (1930-1980)

There have been many drill programs in the West Gore Gold District since production ceased in the 1930's. Several of these campaigns tested targets on the Property, but no systematic drilling was completed until 1985 and 1987. These programs and others of relevance are discussed below.

# Talisman Mines Limited (1964)

Drilling by the Nova Scotia Department of Mines on behalf of Talisman Mines Limited was completed in August and September 1964 on the West Gore district, collared <u>approximately 200 m north of the Property</u>. Five shallow holes (143 m) were drilled west of the Flowers Lead. No assays were recorded in the assessment report (<u>Shea, 1964</u>) although samples (sludge?) were taken and apparently analysed for Au and Sb. Drill logs did note quartz veins with stibnite in hole WG-1 which was drilled next to an old unnamed adit. This may be the Dr. Mosher shaft located approximately 700 m west of the Flowers adit. There were no reports of mineralization or quartz veins in the other 4 holes.

# Durham (1985)

Durham Resources Inc. completed a 19-hole drill program (6,941 ft of BQ) in 1985 along with a detailed soil geochemistry survey (Sb) and magnetic / VLF-EM surveys over the West Gore District. Thirteen holes were drilled on the Property (Fig. 17) with holes 85-1, 85-3, 85-5, 85-7, 85-9, and 85-10 targeting the extension of the Berggren (Main) Lead. Holes 85-12, 85-13, 85-15, 85-17, 85-18 and 85-19 targeted the southeast extension of the Berggren South Lead. Drill results were reported in AR ME-1986-012 (Morrissy and Edison, <u>1986</u>).

Results from the Berggren (Main) extension drill program include:

- <u>Hole 85-1</u>: returned nil values of Sb and low Au values with the highest gold assays up to 680 ppb in *"country shale"*.
- <u>Hole 85-3</u>: returned minor values of Sb with locally higher gold grades (up to 1,750 ppb over 2 ft.) in *"sheared slate"*.
- Hole 85-5: recorded an occurrence of visible gold in a small quartz-carbonate vein at 268 ft. but the assay value was 650 ppb. Locally, other samples of "sheared slate" returned Au values of 400-600 ppb. Sb values were generally low to below detection.
- <u>Hole 85-7</u>: returned a single value of 990 ppb Au for a 1 ft. sample and no Sb assays above detection limits.
- <u>Hole 85-9</u>: no Au assays and did not return any significant Sb values.
- <u>Hole 85-10</u>: no samples collected and logging noted only minor sulphide and quartz veins.

Drill results from the Berggren South Extension program included:

- Hole 85-12: had only two samples. Sample WGD 077 returned 0.23% Sb and 1,900 ppb Au over 2 ft. of "mineralized slate". Sample WGD 078 returned 2.42% Sb and 380 ppb Au over 7 inches in a "quartz-stibnite vein".
- Hole 85-13: no samples were collected but the logging noted wide intervals of "very poor core return" and multiple intervals of "lost core".
- Hole 85-15: returned 2.88% Sb and 6,506 ppb Au over 1 ft. of "sheared slate w stibnite". This was the only sample collected from the hole, which included many intervals of "lost core".
- <u>Hole 85-17</u>: included reports of stibnite in several intervals returned a value of 3.49% Sb and 405 ppb Au over 1 ft. from the only sample collected.
- <u>Hole 85-18 and 85-19</u>: had no samples collected. Trace stibnite was noted in a thin quartz vein in 85-19.



Figure 17. Map of the West Gore Mine District showing the location of Durham 1985 drilling on LIDAR base. Property boundary with exploration license EL 08659 is labelled.

# Durham (1987)

Durham Resources Inc. completed a 6-hole follow-up drill program (3,273 ft of NQ) in 1987 testing the Berggren South zone "at the 400 ft level". All the holes were drilled on the Property (Fig. 18).

Drill results were reported in AR ME-1987-050 (Albert and Morrissy, <u>1987</u>). Results from the Berggren South drill program include:

 <u>Hole 87-1</u> drilled to a depth of 155 m; intersected several mineralized quartz veins albeit at low core angles including a "7.5 ft." interval grading 10.25% Sb and 1.04 oz/T Au (weighted average of 3 samples).

- <u>Hole 87-2</u> drilled to a depth of 153 m; intersected several mineralized quartz veins including a "7.0 ft." interval grading 1.54% Sb and 0.26 oz/T Au.
- <u>Hole 87-3</u> drilled to a depth of 156 m; intersected several mineralized quartz veins including a "1.0 ft." interval grading 2.87% Sb and 0.031 oz/T Au.
- <u>Hole 87-4</u> drilled to a depth of 187 m; intersected several mineralized quartz veins including a "10.0 ft." interval grading 0.08% Sb and up to 184 ppb Au.
- <u>Hole 87-5</u> drilled to a depth of 171 m; intersected several mineralized quartz veins including a "2.2 ft." interval grading 2.98% Sb and 0.31 oz/T Au.
- <u>Hole 87-06</u> drilled to a depth of 185 m: intersected small, mineralized quartz veins including a "1.0 ft." interval grading 0.09% Sb and up to 255 ppb Au.



Figure 18. LIDAR with geology map of the West Gore Mine District showing the location of Durham 1987 drilling.

# Great Atlantic (2013)

A 2-hole drill program was designed to follow up the first two holes of the 1987 Durham program on the Berggren South vein (Fig. 19). Five core samples were collected for multi-analysis from the 2-hole drill program and returned low Au values but anomalous Sb (up to 28 ppm). This core is still available at the Nova Scotia core library in Stellarton, Nova Scotia.

DDH WG-13001 (152 m) was spotted on the same collar location as 87-1. WG-13-001 was drilled at a dip of 45° while 87-1 was drilled at 60°. The hole was designed to test the vein above the intercept in 87-1 and below the mineralization found in the old Berggren South shaft.

 WG-13001 intersected Halifax Formation, comprised of slate units and siltstone interbeds. Between 87 m and 94 m "*abundant gouge*" was observed and up to 4 m of core was lost.

DDH WG-13002 (125 m) was located 50 m due north of Durham hole 87-2, *"closer to the assumed position of the vein"*. The hole intersected predominately, medium grey to dark grey to greyish slates with minor silty to sandy laminae and thin sandstone interbeds. Minor irregular, slightly rusty zones were observed but no sulphides were noted.

From 119 to 125 m (EOH) a "pale reddish quartzcarbonate groundmass alteration was observed" consisting of a very fine-grained destructive texture in places. A bedding parallel quartz vein was noted at 120 m. Sampling of this interval returned only low Au and Ag values and samples were not analysed for Sb.



Figure 19. Map of the showing the location of Great Atlantic 2013 drill holes and Durham drill collars over LIDAR base.

## 11. SAMPLE PREPARATION, ANALYSIS AND SECURITY

There was no drilling and or sampling completed as part of this property review.

# **12. DATA VERIFICATION**

#### Data and Information

Previous mining records are well documented in Messervey (<u>1932</u>). There are numerous references therein that were also reviewed for consistency (e.g., historical production grades and tonnes) and found to be accurate.

The Durham Resources reports are comprehensive with detailed maps and logs along with sample assay tables for Au and Sb. Certificates are presented for Au only and assays samples correspond with logging samples and values are correlative with mineralization noted in detailed logs.

There is core for many holes from these programs available at the Nova Scotia Core Library in Stellarton. Accordingly, a check program on all available holes is recommended as part of a Phase I work program.

The DDV Gold program accessed some of the Durham Resource drill core in storage at the Government storage facility. In their review for bulk mining potential, they noted that they did not find any issues with past logging and sampling while they were conducting their own re-sampling program (e.g., Bourque, 2010). The DDV program was intended to check for mineralization in previously unsampled intervals. The DDV report contains very detailed logging and descriptive sample information along with multielement assay certificates. The authors reviewed and compared the simple logs and the assay certificate for the 2013 Great Atlantic program to validate the limited sample program.

The 2020 soil survey and MMI analyses represent the most recent exploration work on the property and all data for this survey was provided to the authors including field maps, analytical data and original laboratory certificate. A detailed review of the data noted some inconsistences in sample site coordinates and these were marked and corrected prior to GIS compilation for use in this review.

The Authors reviewed the historical exploration data and determined the information presented herein to be adequate for the purposes of this technical report.

#### Site Visit

A site visit was completed on May 13, 2021, by Mr. Michael Corey and the Property Vendor Mr. Lindsay Allen. Mr. Allen showed areas of previous exploration and discussed aspects of the historical work and also recent work completed by himself including the MMI soil sampling program. The author confirmed the locations of historical mine shafts including the Main, Berggren South and Crow shafts and also several historical trench locations (Figs 20-23). Access to the Main and South shafts was made along trails whereas the Crow shaft required an approximate 1 km hike from the main access road. With the exception of the South Mine shaft site no safety signage or access barriers were observed (Figure 22).

The author was able to confirm the type and style of mineralization as reported by previous workers as noted by samples of stibnite-bearing quartz vein and breccia contained within muck piles adjacent to the shaft sites (Figure 20).



Figure 20. Photo of mineralized stibnite quartz breccia from the Main Shaft waste dump; hammer head for scale (May 2021).



Figure 23. Main Shaft waste dump (May 2021).



Figure 21. Berggren South mine shaft (May 2021).



Figure 22. May 13, 2021 site visit and GPS verification.

# 13. MINERAL PROCESSING AND METALLURGICAL TESTING

There are no current processing or metallurgical testing studies, data or reports that have been validated or verified for the purpose of this Technical Report.

# 14. MINERAL RESOURCE ESTIMATE(S)

There are no current mineral resource estimates for the West Gore Sb-Au Property.

# 15. MINERAL RESERVE ESTIMATE(S)

There are no current mineral reserve estimates for the West Gore Sb-Au Property.

# **16. MINING METHODS**

There are no mining plans as of the Effective Date, for the West Gore Sb-Au Property.

# 17. RECOVERY METHODS

There are no processing plans as of the Effective Date, for the West Gore Sb-Au Property.

# **18. PROJECT INFRASTRUCTURE**

There is no infrastructure planned or in place as of the Effective Date, which would relate to the mining and processing of material from the West Gore Sb-Au Property.

#### 19. MARKET STUDIES AND CONTRACTS

There are no market studies or contracts in place for the West Gore Sb-Au Property that relate to mineral extraction, processing and or sales.

# 20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

There are no known environmental issues related to historical mining activities and it has been over 80 years since the last commercial mining ceased.

Previous mining and processing of Sb-ore from the West Gore area is described in Sections 6 and 9. Any future mineral extraction and processing would require full metallurgical and process flowsheet testing and analysis.

There are remnants of the original mining activities including mineral dumps, concrete footings and concrete shaft collars etc. scattered throughout the area both on and off the Property. The Nova Scotia Department of Energy and Mines has conducted an inventory of the surface infrastructure.

There does not appear to be any obvious ARD from historical mining operations and the site has largely stabilized and been naturally reclaimed.

No special permits are current in place and lowdisturbance activities are currently permitted by the Minerals Act. Additional notification to the Government is required for more substantial disturbances including drilling and trenching.

The Property Vendor appears to maintain positive relations with the local surface rights owners and as a matter of best practice active communication has been and should continue to be maintained.

# 21. CAPITAL AND OPERATING COSTS

There are no capital or operating costs at this time.

#### 22. ECONOMIC ANALYSIS

There are no financial or economic studies for the West Gore Sb-Au Property that relate to mineral extraction, processing and or sales.

# 23. ADJACENT PROPERTIES

# West Gore "Extension"

Historical exploration and mining activities related to the West Gore Sb-Au Property extend beyond the current claim boundaries to the north and northwest. Mineral occurrences occur on several contiguous exploration licences (e.g., 51443-MacKinnon and 08921-Grant) and historical workings (e.g., adits) extend from the West Gore Property along strike onto the adjacent "Grant" Property (Fig. 24). Historical workings include the Dr. Mosher, Main (e.g., the West Extension) and Flower adits.

Previous operators (e.g., Durham Resources) have completed drilling campaigns on the collective "West

Gore Gold District" property and encountered narrow zones of both gold and antimony mineralization. Mapping by Horne et al. (2001) also noted Sb-Au mineral occurrences on and to the north of the Property.



Figure 24. Property geology map showing location of the West Gore "Extension" and related workings and showings.

#### **Other**

Numerous other gold prospects occur nearby including the <u>Gore</u> Prospect and the past producing <u>Centre</u> <u>Rawdon District and Rawdon Gold Mines (Fig. 25)</u>. Gore is located approximately 8 km northeast; Central Rawdon is approximately 4 km south-southwest and Rawdon Gold Mines is located 5 km south-southeast of the West Gore Project. Rawdon Gold Mines was first worked in the late 1800's with more than a dozen shafts being driven to a depth of up to 155 m (Nova Scotia Mineral Occurrence E04-005). Mineralization was hosted in bedding parallel quartz veins. The history of the Gore Prospect (Nova Scotia Mineral Occurrence E04-008) is less well documented but site visits by Government staff had confirmed the presence of pits and quartz vein material. The Central Rawdon "Gold District" (Nova Scotia Mineral Occurrence E04-006) includes production from the late 1800's from numerous shafts and underground tunnels. Interestingly, most of the high-grade gold mineralization (i.e. >1 opt) was reportedly extracted from northwest-trending "fissures" as opposed to more conventional bedding-parallel veins. Actual mine output is difficult to glean from historical records but Bates (1987) lists production from Central Rawdon (1888-1939) at 6,920 oz and "East" Rawdon (1884-1932) at 13,501 oz.

All these properties are in the same northeast trending belt of folded Halifax Formation metasedimentary rocks (i.e. Rawdon Syncline). Mineralization is classified as Meguma "Saddle Reef" style hosted in bedding parallel quartz (+/- discordant veins), which contain variable amounts of pyrite and arsenopyrite as the dominant sulphide minerals with lesser galena and chalcopyrite.



Figure 25. West Gore property map showing adjacent properties.

#### 24. OTHER RELEVANT DATA AND INFORMATION

There are no other relevant data or information available for the West Gore Sb-Au Project that have been validated or verified for the purpose of technical reporting and or public disclosure

# 25. INTERPRETATION AND CONCLUSIONS

#### Discussion

Voisey et al. (2020) made a detailed study of the Fosterville Deposit located in the Bendigo zone of the

"western Lachlan orogen". As noted herein, the Bendigo or "saddle-reef" deposit model is a classic analogue to the Meguma-type Au-only deposits.

Fosterville, however, is unique in the Bendigo (n.b. West Gore Sb-Au association is unique in the Meguma) that several distinct styles of mineralization are well documented in the active underground mine workings. The authors note that Au mineralization is found throughout the deposit, whereas visible Au ± stibnite occurs deeper in the system. Therefore presenting them with an opportunity to study a "telescoped orogenic Au system" with distinct, spatially constrained, styles of mineralization. Voisey et al. postulate two theories to explain the styles of mineralization and in particular, the Sb-Au mineralization related to some of the higher-grade Au occurrences in the mine that are characterized by coarse free-gold in quartz veins associated with massive stibnite mineralization (e.g., Figs. 26 and 27).

Of the two potential explanations, Voisey et al. prefer a scenario wherein "two or three deposits formed in the same location, with each different style of mineralization representing a separate period of fluid

infiltration, each potentially tens of millions of years apart."

The authors go on to suggest that suggest that Fosterville is a "telescoped orogenic Au system, where relatively high temperature mineralization and alteration assemblages were overprinted vertically by later, lower-temperature assemblages."



*Figure 26.* Core photo of coarse free gold in the high-grade Swann Zone (Fosterville Deposit, 2017, M.S. King site visit).



*Figure 27.* Core photo of massive stibnite veins in the high-grade Swann Zone (Fosterville Deposit, M.S. King site visit).

#### Interpretation

Thomas (<u>1980</u>) noted several of many genetic models could be possible for the mineralization at West Gore but proposed a simple paragenetic sequence (Fig. 28) with deposition of antimony minerals in a fault zone,



Figure 28. Paragenetic sequence for West Gore mineralization (Thomas, 1980).

syn- or pre-granitic intrusion. *Hydrothermal waters (sic)* from the granite mobilized antimony contained in the sediments and deposited them in the fault zone.

Kontak et al. (<u>1996</u>), also suggested the West Gore deposit represents a telescoped mineral system developed during the waning stages of the Acadian Orogeny and contemporaneous with generation emplacement of intrusions. The authors describe a more complex paragenesis comprising five stages

(Table 4) but note that this does not imply a discrete temporal sequence.

 Table 4. Paragenesis at West Gore (Kontak et al. <u>1996</u>).



The similarity of West Gore to Fosterville is striking in several aspects, most notably the distinct mineral styles of a telescoped mineral system and multiple mineralization events. Observations and exploration guidelines from the latter may prove useful to determine the distribution and characteristics of both the Au-only system and Sb-Au system present at West Gore.

#### Conclusions

Historical mining and exploration demonstrate that the West Gore Sb-Au Property hosts Sb-Au mineralization. Historical workings (e.g., Berggren Shaft, Fig. 11) intersected high-grade Sb-Au mineralization at shallow depths. Long sections (e.g., Figs. 10, 11) and mine schematics (Fig. 30) clearly indicate "ore shoots" with a plunge up to 40°-50° (to southeast). These shoots define zones where mineralization (e.g., leads) appear to be thicker, increasing from "inches" to "feet". Critically, this does not seem to have been incorporated into previous drilling campaigns, which focused on a fence of single holes along interpretated (planar) strike.

The geological setting (e.g., Figs 24, 29 and 30) correlates with a Meguma mesothermal orogenic Au model with some bedding-parallel, Au-bearing veins hosted in folded slate packages (e.g., Fig. 6; Horne et

al., <u>2001</u>). This includes important "ore shoots" developed as "intersection lineations" related to crosscutting faults / kink-bands and limb geometry.



**Figure 30.** Schematic diagram of historical mining demonstrating "ore-shoot" geometry (modified after Kontak et al. <u>1996</u>).



Figure 29. Property geology map with regional magnetic data (aeromagnetic second vertical derivative) over topographic data (LIDAR) (Geology Legend Fig. 23).

Regional geophysical data, detailed topographic imagery (LIDAR), occurrences of historical workings and comments from past workers clearly demonstrate that the most significant Sb-dominant mineralization is largely controlled by WNW to NW-trending faults or kink-bands that clearly disrupt the magnetostratigraphy (e.g., NE-trending Po-bearing slate beds). Whereas some previous exploration programs, including the Durham Resources campaigns, recognized that the Sb-Au veins were related to faults cutting the Halifax Formation. It is not clear that the specific orientation within these planar features (e.g., plunge) or distribution of these faults were completely understood in three dimensions and with enough spatial resolution to mount a systematic exploration strategy. The 2020 MMI data provide a modern geochemistry dataset, albeit in limited areas, from which to identify preliminary follow-up targets. The MMI survey results have been compiled and presented herein using a Principal Component Analysis (PCA) of the transformed analytical data for a select group of signature elements (Fig. 31). The PCA of the transformed data more clearly identify several discrete Sb-Au target areas when combined with geophysics and lineament analysis of the LIDAR DEM.



**Figure 31.** Compilation of geophysical (aeromagnetic second vertical derivative; see Fig. 27 for legend), geochemistry (MMI PCA), geology (see Fig 23 for legend), prospecting and historical workings and digital elevation model (LIDAR).

# 26. **RECOMMENDATIONS**

The authors conclude that the West Gore Sb-Au Property in Hants County, Nova Scotia had a successful history of mining over a period of approximately 30 years, ending in 1917. While intermittent efforts to restart the mine continued for about 20-30 years there have been no modern, systematic exploration efforts over the last 30-40 years.

Production history confirms the potential of the property to host Sb-Au mineralization. A review of historic ore controls, more recent exploration work and new remote sensing data (e.g., geophysics and LIDAR) indicate that the potential exists to i) extend known mineralization intersected in drilling along strike and at depth, ii) identify new shallow Sb-rich zones related to discordant structural features (i.e. WNW to NWtrending kink bands) and iii) identify new shallow, highgrade Au zones related to the intersection of bedding parallel Au-bearing zones and discordant structural features (e.g., Fig. 31).

As much of the data has not been compiled in a digital geo-referenced format, a full 2D-3D compilation of data, including geology, geochemistry, geophysics, drilling and underground workings, should be completed.

A systematic mapping and sampling program should be undertaken to assess i) local fold geometry, ii) vein characterization and orientation, iii) new zones of mineralization and iv) potential cross-cutting faults or kink bands. Various sampling and analytical techniques should be undertaken to determine Sb-Au deportment and systematic relationships or variations throughout the Property or "mineral system".

There may be significant amounts of drill core (e.g., Durham and Great Atlantic) available at the Nova Scotia Core Library in Stellarton, Nova Scotia. It is recommended that this core be re-logged in detail and resampled for analysis and petrographic examination. In particular, the two holes from the 2013 Great Atlantic program that were very sparsely sampled despite anecdotal evident of stibnite mineralization in several sections.

The magnetic map patterns will provide a valuable basis for structural interpretations in 2- and 3D. Existing data confirm the presence of distinct and mixed amplitude magnetic units (i.e. magnetostratigraphy). Therefore, it is highly recommended that a detailed (25 m to 50 m line spacing) drone magnetic survey be completed across the property (e.g., Fig. 32). It is critical that the data be collected and levelled carefully, and to assist in levelling the number of tie-lines should be doubled from standard surveys. The drone should be flow in a NW-SE orientation (approximately 135°) and at the lowest altitude and slowest speed possible to increase spatial resolution. It has been demonstrated elsewhere in the Meguma terrane (e.g., Touquoy and Caribou mines) the ultra high-resolution surveys (ground and air) can map very subtle stratigraphic features and even distinguish kink bands related to "ore-shoots" from discrete planar features that offset bedding-parallel mineralization.

A systematic soil-sampling program (MMI?) should be completed across the property with a particular focus on WNW to NW-trending features (cf. Mag/DEM). The ideal survey geometry would be two to four 1,000+ m lines oriented parallel to the magnetostratigraphy but orthogonal to significant WNW to NW-trending structures identified in the magnetic/LIDAR data sets.

A limited phase I diamond drill program should be undertaken to follow-up on priority targets as defined by compilation of historical data, geophysical interpretation, new geology maps, topographic lineaments, geochemistry data and prospecting results. Specifically 6-8 shallow drill holes designed and oriented to intersect favourable structures with positive geochemical signatures (e.g., "PCA" targets) and or field indicators.

A budget of C\$300,000 to C\$350,000 is estimated for this work (Table 5).

Description	Units	Count	Unit Cost	Total
Data Compilation (2D + 3D)	Day	21	\$600	\$12,600
Digitizing Historical Data (Geology/Geochemistry/Geophysics)	Day	14	\$600	\$8,400
Prospecting and Detailed Mapping (2x Geo)	Day	14	\$1,200	\$16,800
Core Re-Log (Sr. Geo)	Day	14	\$750	\$10,500
Core Re-Sample (Tech)	Day	7	\$250	\$1,750
Analytical	Sample	200	\$40	\$8,000
Analytical (special methods)	Sample	25	\$100	\$2,500
Geology and Structural Analysis + Target Report	Day	7	\$1,000	\$7,000
Geochemistry Survey (MMI)	Sample	400	\$100	\$40,000
Detailed Drone Magnetic Survey (Mobilization + Report + Flight)	Line km	180	\$175	\$31,500
Drilling (Mobilization + metres + Consumable)	Metres	1,000	\$125	\$125,000
Transport, supplies and consumables	Day	35	\$125	\$4,375
Project Management	Day	35	\$800	\$28,000
Contingency	Flat	1	10%	\$35,893
	Rounded		TOTAL	C\$325,000

#### **Table 5.** Proposed Phase I exploration budget for the West Gore Sb-Au Project.



Figure 32. Map of proposed drone survey lines and exploration licenses for the West Gore Property.

A Phase II exploration budget, based on positive results from Phase I, would include additional drilling, sampling and 3D structural and stratigraphic modelling in support of an initial resource estimate. An approximate budget of C\$1.4 to C\$1.5 million is estimated for this work.

#### **Table 6.** Proposed Phase II exploration budget for the West Gore Sb-Au Project.

Description	Units	Count	Unit Cost	Total
Data Compilation and Modelling (2D + 3D)	Day	30	\$600	\$18,000
Digitizing Historical Data	Day	14	\$600	\$8,400
Prospecting and Detailed Mapping (2x Geo)	Day	30	\$1,200	\$36,000
Core Logging (Sr. Geo)	Day	60	\$750	\$45,000
Core Sampling (Tech)	Day	60	\$250	\$15,000
Analytical	Sample	1200	\$40	\$48,000
Analytical (special methods)	Sample	100	\$100	\$10,000
Borehole Surveys (e.g., televiewer)	Day	14	\$3,500	\$49,000
Geochemistry Survey (MMI)	Sample	400	\$100	\$40,000
Technical Reporting (Mineral Resource Estimate)	Day	30	\$1,500	\$45,000
Drilling (Mobilization + metres + Consumable)	Metres	7,500	\$125	\$937,500
Transport, supplies and consumables	Day	60	\$125	\$7,500
Project Management	Day	60	\$800	\$48,000
Contingency	Flat	1	10%	\$130,740
	Rounde	2d	TOTAL	C\$1,400,000

End

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