BRITISH		BC Geological S	urvey
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Ministry of Energy, Mines & Petroleum Resources			Assessment Report
BC Geological Survey			Title Page and Summary
TYPE OF REPORT [type of survey(s)]: Geophysical		TOTAL COST	: \$78,335.00
AUTHOR(S): Oliver Friesen		signature(s):	
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):			YEAR OF WORK: 2019
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S)	Event n	umbers 5735837, 5745829	
PROPERTY NAME: Peneece			
CLAIM NAME(S) (on which the work was done): 1059891, 1060543, 1	060544,	1060545, 1060590	
COMMODITIES SOUGHT: Vanadium, Iron, Titanium			
MINING DIVISION: Vancouver	N1	S/BCGS: <u>092M/02</u>	
LATITUDE: <u>51</u> 08 <u>45.6</u> LONGITUDE: <u>126</u>	<b>4</b> 4		'k)
OWNER(S):	0)		
1) Western Energy Metals Ltd.	_ 2)		
MAILING ADDRESS: 14520 Mann Park Crescent, White Rock, B.C., V4B3A8			
OPERATOR(S) [who paid for the work]:			
1) Delrey Metals Corp.	2)		
MAILING ADDRESS: 3707-1111 Alberni Street, Vancouver, B.C., V6E 0A8			
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure	e, alteratio	n, mineralization, size and attitude):	lordy
ouramanic intrusion, Pyroxenite, Hornblendite, PGE, Gabbro, T	namero	us-iviagrietite, variadium, Poπ H	aruy
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT F	REPORT N	UMBERS:	

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation		_	
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic		_	
Induced Polarization		_	
Radiometric		_	
Seismic			
Other			
Airborne 402.37		all claims	\$78,335
GEOCHEMICAL (number of samples analysed for)			
014		-	
Silt		-	
		-	
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
		-	
PREPARATORY / PHYSICAL			
Line/grid (kilometres)		-	
Topographic/Photogrammetric (scale, area)		_	
Legal surveys (scale, area)		_	
Road, local access (kilometres)/t	rail	_	
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	\$78,335

## **2019 AIRBORNE GEOPHYSICAL REPORT**

### ON THE

# **PENEECE PROPERTY**

#### LOCATED IN THE VANCOUVER MINING DIVISION BRITISH COLUMBIA NTS: 092M/02

CENTERED AT: 51°08'45.6" N Latitude 126°44'08.4" W Longitude UTM: 658,379 mE; 5,668,499 mN NAD 83, Zone 9

AUTHOR: Oliver Friesen, M.Sc. Geology Date: June 7<sup>th</sup>, 2019



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## 1. SUMMARY

The Peneece Property (the "Property) is located in the Vancouver Mining Division, approximately 70 kilometers northeast of the city of Port Hardy, BC (straight-line distance). The property is centered at approximately 51°08'45.6" N latitude and 126°44'08.4" W longitude on NTS map sheet 092M/02. The Property is comprised of 5 mineral claims covering 1500.39-hectares, which are 100% owned by WEM Western Energy Metals Ltd., a wholly-owned subsidiary of Delrey Metals Corp. The claims are in good standing till December 30<sup>th</sup>, 2025, following a statement of work filed for work documented in this report.

This report describes the logistics, data acquisition, processing and presentation of results of the airborne geophysical survey and prospecting carried out over the Peneece area (the "Property") in western British Columbia completed on behalf of Delrey Metals Corp. The aeromagnetic survey was conducted from May 8th -13<sup>th</sup>, 2019.

The purpose of the airborne survey was to map the magnetic properties of the survey area to aid in geological mapping as well as detect possible zones of bedrock mineralization and alteration. The survey was flown with a GEM Systems GSMP-35A(B) magnetometer (the "bird"), towed beneath an Astar 350 B2 helicopter and attached with a 60' long line cable. A Novatel GPS sensor mounted on the bird ensured accurate positioning of the geophysical data. A real time differential GPS system utilizing the DAQNAV system from Scott Hogg & Associates Ltd. was used to fly this survey. The DAQNAV system is a turnkey data acquisition and 3D navigation product for airborne geophysical operators. A radar altimeter on the bottom of the bird measured the distance to the ground or top of canopy in tree-covered areas. An attitude sensor measured the yaw, pitch and roll of the bird throughout the survey. Following the field survey, the data was corrected, processed and interpolated using Geosoft Oasis Montaj software. A total of 402.37 line-km were flown during the 2019 field program.

The survey results contain many structural features, some of which may be considered exploration targets. The dominant feature highlighted is a large (3.7km x 3.0km), roughly northwest-southeast oriented magnetic high located in the central part of the property (up to 8681nT gradient).

The results from the 2019 program are extremely encouraging. The sizeable strong magnetic high anomaly identified is coincident with Fe-Ti-V mineralization identified by historic operators. The mineralized samples in all cases are located near the margins of the anomaly identified indicating

that the strongest part of the anomaly has yet to be sampled. Overall, this gives indication that a potential variably mineralized Fe-Ti-V body has surface dimensions of at least 3.7km x 3.0km. High-resolution (25m line spacing) ground magnetic data is required over the mineralized target zones. This data will outline zones of increased magnetite quantities within the gabbro's as well as highlight any possible structural zones related to cumulate horizons emplacement. Further areas of interest may be assigned priorities on the basis of supporting geophysical, geochemical and geological information. A Phase II field program consisting of mapping and prospecting of the identified magnetic high feature is recommended. Considering historic Fe-Ti-V mineralization noted in rocks proximal to this anomaly it is believed to be caused by variable mineralized vanadium-rich titaniferous magnetite mineralization. If the phase II program is successfully, a phase III field program consisting of high-resolution ground magnetics and 1000m of diamond drilling is recommended which will target the zones of increased magnetite concentration within the magnetic bullseyes. The budgets for the Phase II, and III programs is estimated to be \$100,000, and \$500,000.

## 2. INTRODUCTION

The report documents the results of the magnetic survey flown over the Peneece Claim area in western British Columbia centered at 51°08'45.6" N Latitude, and 126°44'08.4" W Longitude. The airborne geophysical survey was conducted from May 8<sup>th</sup> to 12<sup>th</sup>, 2019.

Survey coverage consisted of approximately 402.37 line-km including 35.91 line-km of tie lines. Flight lines were flown in an east-west direction at 150m spacing. Tie lines were flown perpendicular to the flight lines, with a line spacing of 1500 meters. Survey details are given in Table 2.1 below.

Table 2.1 - Survey Coverage

Flight line direction	Tie line direction	Traverse Line (km)	Tie Line (km)	Total
090°/270°	000°/180°	366.47	35.91	402.37

The survey employed the GEM Systems GSMP-35A(B) magnetometer. Ancillary equipment consisted of a high-quality potassium "Fast Reading" (20 Hz) oscillatory sensor with a magnetometer PreAmp electronics box, radar altimeters, tilt sensors, radar antennas, digital data recorder and an electronic GPS system.

## 3. PHYSIOGRAPHY, SURVEY LOCATION AND SURVEY OPERATIONS

The climate is typical of coastal areas in British Columbia, relatively wet and windy, with moderate temperatures. Based on Port Hardy weather data, rainfall is in the order of 50 inches and snowfall about 15 cm annually. The mean monthly temperature ranges from a low of 3° in January to 18° in August. Winds are predominantly from the southeast and blow, on average, 20 km per hour. The windiest months are April and October and the least windy month is July.

The weather during the exploration program, from May 8<sup>th</sup> to 12<sup>th</sup>, was wet, with variable clouds and wind with intermittent visibility due to extensive cloud and fog cover.

The Peneece Claim group is located immediately north of Rainbow Creek which drains into Wigwam Bay on the west coast of the Seymour Inlet, a fjord on the mainland B.C. coast east of northern Vancouver Island. The property is located at a uninhabited site of an early logging camp located roughly 70km (straight-line distance) northwest of Port Hardy.

Table 3.1 – Survey	Data
--------------------	------

Parameter	Specifications
Sample interval	10 Hz, 3.3 m @ 130km/h
Aircraft mean terrain clearance Mag sensor mean terrain clearance	~95 m ~75 m
Navigation (guidance)	±3 m, Real-time GPS
Post-survey flight path	±3 m

## 4. CLAIMS

The Property consists of five (5) tenures covering 1500.39-hectares (Table 4.1, Figure 4.1). The claims are located in the Vancouver Mining Division of NTS map sheets 092M/02. The claims are 100% owned by Western Energy Metals Ltd., a wholly-owned subsidiary of Delrey Metals Corp.

Title Number	Claim Name	Issue Date	Good To Date	Status	Area (ha)
1059891	PENEECE2018A	2018/APR/07	2025/DEC/30	GOOD	668.94
1060543	PENEECE2018B	2018/MAY/12	2025/DEC/30	GOOD	182.50
1060544	PENEECE2018C	2018/MAY/12	2025/DEC/30	GOOD	81.12

1060545	PENEECE2018D	2018/MAY/12	2025/DEC/30	GOOD	243.28
1060590	PENEECE202018E	2018/MAY/15	2025/DEC/30	GOOD	324.55
				TOTAL	1500.39







Insert 4.1

Ltd. was used to fly this survey. The DAQNAV system is a turnkey data acquisition and 3D navigation product for airborne geophysical operators.

During the survey flights, digital data output by the GEM35A towed bird is routed into the DAQNAV WireFree module and is transmitted wirelessly to a 10" DAQNAV tablet located in the cockpit of the aircraft. The DAQNAV system logs the data to a file and uses it to provide accurate 3D navigation to both pilot and operator to ensure precise survey flying. A Cross-Track bar indicates X,Y deviation from flight path, an Altimeter bar indicates ground clearance and a Terrain Display indicates Z deviation from a pre-planned drape surface.

Once a survey flight is complete, the DAQ2xyz application is used to convert the DAQNAV logfile into a Geosoft compatible XYZ database file for quality control and processing.

## 6. QUALITY CONTROL AND IN-FIELD PROCESSING

Flight lines and bird altitude were constantly monitored throughout the survey by the pilot and inflight operator using DAQNAV navigation software. Receive (Rx) data from the magnetometer was split which allowed the data to be presented on a Panasonic Toughbook laptop computer for the operator as well as on a 10" DAQNAV tablet mounted in the cockpit for the pilot to use for navigation. Transmit (Tx) data was restricted to the laptop computer allowing the digital data to be collected and viewed in real time as well as direct communication between the geophysical operator and the sensors. The data viewed on the operator's laptop, as well as flight tracing and real-time raw magnetic data, included signal strength, data locking, 4<sup>th</sup> difference and magnetic readings in nT.

#### Flight Path

The flight lines did not deviate from the intended flight path by more than ~30% of the planned flight path over a distance of roughly 400 metres.

#### Clearance

Survey altitude typically did not deviate by more than  $\pm 30\%$  over a distance of 800 metres from the mean contracted elevation. There were a few areas within the property boundary with vertical to sub-vertical glacially incised topographic features where the survey altitude would deviate by up to  $\pm 80\%$  over relatively short distances. Ultimately, survey altitudes in these difficult areas were determined by the pilot's judgement of safe flying conditions.

Survey elevation is defined as the measurement of the helicopter radar altimeter to the tallest obstacle in the helicopter path. An obstacle is any structure or object which will impede the path of the helicopter to the ground and is not limited to and includes tree canopy, towers and power lines.

#### **Flying Speed**

Nominal aircraft indicated airspeed was between 50 and 70 knots, the nominal aircraft ground speed was approximately 2 to 5 metres per sample at a 0.10s sampling rate.

#### **Magnetic Base Station**

The base station was placed within 5 kilometers of the center of the survey area in a region of low magnetic gradient (area with no interference by moving steel objects, vehicles or power transmission lines). The base station internal time was synced with the airborne GSMP-35A(B) magnetometer internal clock using UTC standard time formatting.

## 7. DATA PROCESSING

A GSM-19T magnetometer was operated at the survey base at the helicopter staging area in Pemberton Meadows to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to permit subsequent removal of diurnal drift. The data were corrected for diurnal variations by subtracting the observed magnetic base station deviations. A GPS lag correction was applied based on a 2.2-meter separation of the magnetic sensor from the GPS antenna. A heading correction was applied to correct for the difference in signal strength received by the magnetometer when flown in different heading directions. A fourth difference editing routine was then applied to the magnetic data to remove any spikes. The results were then levelled using tie and traverse line intercepts. Manual adjustments were applied to any lines that required levelling, as indicated by shadowed images of the gridded magnetic data. The manually levelled data were then subjected to a microlevelling filter within Geosoft Oasis Montaj software.

The corrected magnetic data were processed in Oasis Montaj to produce the various interpolated products listed below.

#### **Total Magnetic Intensity (TMI)**

The residual magnetic intensity (RMI) was calculated by subtracting the IGRF gradient from the corrected data. This product highlights the variance in magnetic intensity across the property after

being adjusted for regional-scale magnetic variations.

#### **Calculated Vertical Magnetic Gradient (First Vertical Derivative)**

The IGRF-corrected magnetic data were subjected to a processing algorithm that enhances the response of magnetic bodies in the upper 500 metres and attenuates the response of deeper bodies. The resulting vertical gradient grid provides better definition and resolution of near-surface magnetic units. It also identifies weak magnetic features that may not be quite as evident in the total field data. Regional magnetic variations and changes in lithology, however, may be better defined on the total magnetic field parameter.

#### **Total Horizontal Derivative (THD)**

The total horizontal derivative is a tool for outlining the boundaries of magnetic sources. The filter is calculated from a pair of orthogonal horizontal derivatives, so that the resultant field consists of positive values only. The peaks of horizontal modulus (derivative or gradient) anomalies indicate the edges of a source body. The amplitude of the filtered anomaly retains information about the properties of the sources.

#### **Tilt Derivative (TDR)**

The tilt derivative enhances both strong and weak anomalies at their centres and also emphasizes the edges of broad anomalies. TDR produces similar shapes to the 1VD, although amplitudes are greatly condensed to a small range and anomalies appear sharper. For isolated sources, TDR is positive over the source, crosses through zero at or near the edge of a vertical sided source and is negative outside the source region. The TDR significantly enhances subtle anomalies in areas of relatively flat response, enabling the continuity of major structures to be interpreted.

#### **Analytical Signal (AS)**

The peaks of the analytic signal (AS) correlate directly with their respective magnetic causative bodies and are positioned symmetrically over them. The analytical signal calculation is immune to the IGRF field direction, that is, you do not need to precede this calculation with a reduction to the magnetic pole to properly shift the anomalies over top of the causative bodies. This avoids the difficulties that are often faced in the conventional process of reduction to pole for  $\Delta T$ , when the direction of magnetization of the causative bodies is not known. In addition, the AS has characteristics similar to derivative features of the magnetic field, so that it is very sensitive to edge effects of the causative magnetic bodies. Overall the analytical signal is very useful in locating the edges of magnetic source bodies, particularly where remanence and/or low magnetic latitudes complicate interpretation.

#### 8. EXPLORATION HISTORY

Late 1950's – Falconbridge Ltd. While conducting airborne iron exploration along coastal B.C. during the late 1950's and early 1960's, [McDougal] noted an unusually strong and extensive magnetic anomaly north of Wigwam Bay. Itt was and still remains the largest "flux gate" magnetic anomaly noted by the writer during many years of work on the West Coast. The size and overall magnetic intensity were only exceeded at the multi-billion ton "Klukwan pyroxenite-amphibolite" deposit in S.E. Alaska which the writer had geologically mapped for Ventures Ltd. in 1953 and 1954.

<u>1984 – Geddes Resources Ltd.</u> During the present study, the boundaries of included rock units were mapped (as allowable) in the field using data generated by an airborne magnetic survey as a guide to ground investigation, including 'fill-in' for numerous inaccessible, precipitous and/or snow-covered portions of the property. The prime purpose of the initial investigation was to obtain and treat select mineralogical samples utilizing special heavy-media separation prior to analysis. Access problems prevented sampling of the highly magnetic 'core' and only marginal material or float was obtained. As a result of this work it was concluded that the pyritic gabbro sampled contained an elevated silver content but only 'average' titanium, vanadium, and platinum group metals. A total of five samples were obtained during the program. Magnetic separation was completed, and samples were analyzed for Fe, Ti, V, Au, Ag, Pt, and Pd mineralization.

#### 2008 - Homegold Resources Ltd.

As the most highly magnetic (assumedly the highest grade) portion of the Wigwam deposit was not sampled due to inaccessible terrain (refer to Figure 6). Exposures of melanogabbro along the road up Rainbow Creek were examined. No "in place" grades were determined as experience has shown that many hundreds of samples would have to be processed before arriving at a meaningful average which would fall between 5% and 15% magnetite for most magnetically anomalous coastal gabbro's. The highest grade occurring in gabbro specimens larger than 5 pounds, which occurred as float at Wigwam, was 25% soluble iron or 35% magnetite (McDougall, 1984b). The titanium (generally expressed as Ti02) occurs as bladed ilmenite(FeTi02) within the silicates or, more commonly, as exsolved ilmenite within magnetite (ilmeno or titano-magnetite). The vanadium, generally expressed as vanadium pentoxide (V20 S), occurs similarly, Le. solid solution within titanomagnetite. The Kitchener showings; north of Haig Bay, Figure 7, are underlain by a 600m wide band of dark, fine-grained hornblende-mica-schists of sedimentary and/or volcanic origin, and which includes several narrow bands of recrystallized limestone (Geological Survey of Canada Economic Geology Report, 1926).

Contacts and foliations in the rocks strike northwest and have a subvertical to steep, northeasterly dip. Granodiorite and diorite border this band of rocks to the northeast and southwest of the claim group, respectively, and may occur locally within it and as migmatites zones. Magnetite is confined to the metasediments and metavolcanics and occurs in several localities (at least 4) over a width of about 450 metres. Individual showings are up to about 6 metres in width. The magnetite occurs in irregular, centimetre-scale aggregates, or in narrow veins, or it is disseminated in the host rocks over a few square metres; sulphides are lacking. The massive aggregates are quite pure, dense, bluish black magnetite, assaying up to 65.5% iron (Minister of Mines Annual Report 1917). These lenses or zones are generally concordant with the structures in the host rocks; one "vein" is at a limestone contact. Complex drag or flow folds were observed 200m north of the shoreline as evidenced by highly contorted narrow dykes and laminated white and dark grey limestone.

#### 2011 - Goldreach Resources Corp.

A total of 2.975 km of grid tie lines (using UTM grid east-west as orientation of line), covering the Wigwam Magnetite North Extension Zone, was surveyed using Garmin 60Cx GPS and Silva compass. Flagging, and aluminum tags were used to mark stations at 50 m intervals. Slope correction was maintained with the use of GPS UTM co-ordinates. A GEM GSM-19T v. 7 was used to carry out a total of 238 readings along UTM E-W trending tie lines. Magnetometer survey data was corrected by looping (to a common point on the baseline) and checked with diurnal variations with Canada wide magnetic observatories, source: National Resources Canada, magnetic data website. Magnetometer data was processed & plotted. A total of 3 rock chip sample were taken from the north portion of the grid area (limited outcrop in south portion of grid). The rock samples were taken at right angles to the strike azimuth of mineral zone with hammer and moil across true width of 0.35-0.8 meters (Fig 7). The rock chip sample consisted of acorn to walnut sized chips with total weight between 0.9-1.62 kg per sample. Samples were placed in marked poly bags and shipped to ALS Minerals, N Vancouver, BC for ME-ICP61 four acid 33 element ICP-AES. A total of 67 soil samples were taken in a 1.7 X 0.7 km area located at 850-1320 m elevation km area covering the north extension of the Wigwam Magnetite MINFILE occurrence (which is located at 75 m elevation asl, and about 1.5 km south of the 2011 survey area). Samples were taken with a grubhoe from a depth of 20-35 cm and consist of talus fines, the soil horizon is poor to moderately well developed in the grid area and the soil sample material is considered to be weathered 'C horizon and modified and leached 'B' horizon. Soil horizons are poorly developed, however clay-silt size fines are abundant. Soil samples were dug from a depth of  $25\neg 50$  cm with shovels, approximately 0.5 kilograms of 'B' and/or 'C horizon soil was placed in marked kraft envelopes and shipped to ALS Minerals, N Vancouver, BC for ME-ICP61 geochemical analysis. Select elements, i.e. Fe, Ti, V, Mn, & Cr were plotted on topographic maps to outline geochemically anomalous zones.

## 9. GEOLOGY SETTING

The following sections on regional and property geology are extracted from a 1984 assessment report by J.J. McDougall and K.H. Christensen from Geddes Resources Ltd.

#### 9.1 Regional Geological Setting

An updated regional geological map of Seymour Arm may soon be published within the G.S.C. 4 mile (1:250,000) "Rivers Inlet" map sheet. Current descriptions (Figure 3/84) result from early work by Dawson (1889) and Graham (1908), and later G.S.C. personal as well as from local examinations

by the B.C. Department of Mines (e.g. Clothier 1917. The writer had completed reconnaissance geological mapping (unpublished) of the north half of the sheet during mineral exploration activities in the mid 1960's, but work in the south half was limited to spot examinations and airborne surveys.

The best regional geological map available, (Figure 3/84) the 1:1,000,000 scale "Fraser River" compilation (Roddick, Muller & Okulitch – 1979), assigns the Seymour Inlet area to the Coast Plutonic Complex, composed largely of granitic rocks believed to be Jurassic to Cretaceous in age. Included are quartz diorites, granodiorites, and diorites present as numerous northwesterly trending bodies containing innumerable roof pendants or septae of older rocks. The complex is described in general as 'migmatitic'. Most of the pendants are generally too limited in size to be shown on regional geological maps. Some contain lenses of marble or metasediments, including skarn or calc-silicates developed from the more reactive members. Because of wide scale 'amphibolite grade' metamorphism, the current G.S.C. workers are unwilling (as yet) to assign geological ages to the rocks, including those designated as 'granitoids'. Such is the uncertainty of "batholith-strewn" Coast Range interpretation that the senior G.S.C. author (Roddick, pers. comm.) "has yet to map a truly intrusive rock of sizeable dimensions".

A skarn-calcsilicate-limestone unit has been mapped by Young and Uglow (1926) 1.5 km south of the Wigwam area because of interest in small magnetite lenses contained within it. The exposure is limited to a 2000-foot-wide band paralleling about 1 km of shoreline, but is of interest to the writer who has noticed a definite special relation between such relatively rare limestone occurrences on the inner B.C. Coast and the nearby presence of the unusually magnetic gabbro such as occurs on the Wigwam ground.

#### 9.2 Property Geology

The bedrock geology of the Wigwam Group has not been mapped in detail due to the inhospitable topography of most of the claim area of interest and the extensive snow cover present during the period available for examination. Funds were efficiently used to outline major rock units by their anomalous magnetic characteristics, airborne reconnaissance mapping, and ground investigations of at least the indicated contact areas. Although practically inaccessible during the mapping period, several steep slide areas have exposed sufficient bedrock within the treed **or** snow-covered areas to allow major unit projection with a fair level of confidence. Magnetic characteristics were determined using a simple but unusually effective method employed extensively during airborne magnetic work by the writer in Western B.C. A hand-held M.F.I. fluxgate magnetometer was contour-flown in a

Cessna Centurian aircraft along several dozen paralleling northwest and northeast lines using ±150foot ground clearance. Readings were manually noted on an air photo base. Relative values obtained are corrected for mechanically and directionally induced variations by direct observations, resulting in subtractions **Or** additions, and values attributed to vertical **Or** horizontal acceleration are discarded. The results, which are relative only, are useable where a 100-gamma variance is of no consequence. About 50 miles of such flying was done by a Langley-based aircraft over the Wigwam area.

#### <u>Rock Descriptions</u>

Megascopic descriptions of the rock units occurring within the Wigwam group as mapped are as follows:

#### Gabbro

The crystalline gabbro present occurs largely in vein or pegmatite-like clusters within dioritic or metamorphic rocks in the area. It consists of approximately 60% black hornblende plus pyroxenite and 40% plagioclase. Grain size of the largely euhedral hornblende can approach 3/4 inch in long dimension. The rock could probably be better described as a "pyroxenite-amphibolite". The gabbro is younger than most(?) rocks it is directly associated with as numerous unaltered veinlets, ranging in grain size from fine to medium, cut the micaceous and somewhat schistose country-rock, generally penetrating along poorly developed planes of schistosity or paralleling lineal gneissic trends. Very fine-grained varieties are common as are masses of medium grained material, but if large expanses of coarse gabbro such as are common elsewhere on the West Coast (McDougall, 1984) are present, they are either snow covered or occupy inaccessible areas. Creek float suggests the nearby presence of some, however. The magnetite occurs either as fine disseminated grains within the hornblende or as very small veinlets cutting the rock. In rare instances, small masses about 1/2" in width occur. In the Wigwam area the maximum magnetite content noted was about 35% but the average is in the 5% to 10% range. The gabbro and the associated dioritic rocks are unusually pyritic with up to 3% fine grained disseminated pyrite evident. The gabbro boundaries are shown on the accompanying geological map (Figure 4/84) based largely on magnetic qualities although other rocks included within the map unit may constitute up to  $\sim 30\%$  of the total.

#### Diorite

The Wigwam diorite appears closely related to the gabbro but appears to be older and is often altered to a micaceous phyllite or schist lacking any obvious intrusive appearance. The mapped unit could

probably better be described as a diorite migmatite complex. The largely fine-grained rock has undergone metamorphism and often appears gneissic or schistose. Highly micaceous or otherwise altered sedimentary remnants or inclusions are present within it. In the Wigwam area, much of the complex appears to have been intruded by gabbro. As mapped, low and medium magnetic subdivisions have been made, based largely on the proportion of (magnetic) gabbro included.

#### Quartz and Granodiorite

The quartz and granodiorites which bound the gabbro-diorite-migmatite complex are typical Coast Range intrusive(?) rocks. Age relations are unknown. They are generally medium grained and often contain a weak, northwesterly trending foliation. Inclusions are common. They are generally nonmagnetic and only peripherally involved in the present study.

#### Volcanics

These rocks are probably the equivalent of the G.S.C. (1973) unit "iKVd (andesite, basalt, tuff)" mapped along strike several miles to the northwest of the Wigwam Group. The unit occurs only along and west of the extreme western edge of the Wig claim where its very low magnetics help distinguish it along an apparent fault contact with the magnetic diorites. Specimens representative of the unit, which appears as a dull gray, highly altered mass containing small carbonate segregations, have not been examined.

#### **Metasediments**

These rocks consist of brown or gray, fine grained, highly micaceous or schistose met sediments (or metavolanics) containing occasional calcareous (crystalline limestone) lenses. They occur to the south of the Wigwam Group where they contain small lenses of non-titaniferous magnetite as described by Young (1926). Small altered inclusions noted within the diorite-gabbro-migmatite complex may consist of this rock type.

#### **Dykes**

A 300-meter-long dyke-like body, ranging in size from 1 to 10 metres, is evident near the western limits of the Wig claim where it is well exposed in a recent landslide area. It has not been examined in detail due to the terrain, but appears to represent a highly altered (siliceous, micaceous and hornfelsic) and site dyke. It is accompanied by varying amounts of rusty weathering quartz, which has not been examined.

#### Structure

The dominant structure appears to consist of a number of highly altered intrusive complexes separated by east-west or northwesterly striking faults (Figure 4/84). The magnetic response of various rock units across these structural features, which are well depicted by local topographic depressions, is distinctly sharp. Attitudes appear steep. A weak northwesterly-trending foliation with steep dips is common within all rock units. Contact attitudes also appear steep. No fracture or joint attitude appears dominant although within the quartz-diorite a system with a northwesterly strike appears slightly better developed than others.



## **10. CURRENT WORK PROGRAM**

Ridgeline Exploration Services Inc. conducted an airborne magnetometer survey on the Peneece property from May 8<sup>th</sup> to 13<sup>th</sup> for Delrey Metals Corp. located in northwestern British Columbia. The objectives of the program were as follows:

1. Map the magnetic properties over the Peneece property area to aid in geological and structural mapping as well as to detect possible zones of bedrock mineralization and alteration.

A total of 402.37 line-km were flown during the 2019 field program.

## **11. PROGRAM RESULTS**

## **Residual Magnetic Intensity (RMI)**

This product highlights the variance in magnetic intensity across the property after being adjusted for regional-scale magnetic variations.

The residual magnetic intensity map highlights one large northwest-southeast elongate high magnetic anomaly in the central portion of the survey area with 3.6km by 2.6km dimensions. The residual magnetic intensities range from -1716nT at the margins to ~6965nT at the center representing a total magnetic gradient of 8,681nT.

## **Calculated Vertical Magnetic Gradient (First Vertical Derivative)**

The IGRF-corrected magnetic data were subjected to a processing algorithm that enhances the response of magnetic bodies in the upper 500 metres and attenuates the response of deeper bodies. The resulting vertical gradient grid provides better definition and resolution of near-surface magnetic units.

The 1<sup>st</sup> vertical derivative map is consistent with the TMI results in highlighting one roughly concentric, northwest-southeast trending magnetic high anomaly located in the central parts of the survey area. The dimensions outlined by this derivative product are larger than that of the residual magnetic intensity map being 3km by 8km (open to northwest). This is indication that the geological body causing the magnetic anomaly is near surface with sharp contacts. 1<sup>st</sup> vertical derivative intensities range from -10.03nT/m to 12.59nT/m across the survey area.

## Tilt Derivative (TDR)

The tilt derivative enhances both strong and weak anomalies at their centers and also emphasizes the edges of broad anomalies.

Tilt derivative (TDR) intensities range from 77 radians to -80 radians across the survey area. Comparable to the TMI and 1VD datasets, the TDR dataset roughly outlines the same roughly concentric magnetic high anomaly in the central parts of the survey area. Many similar magnitude features are found across the dataset including the three strongly pronounced east-west oriented structures in the eastern part of the survey, and several northwest/southeast trending narrow magnetic features across the property.

#### **Total Horizontal Derivative (THD)**

#### The total horizontal derivative is a tool for outlining the boundaries of magnetic sources.

The Total Horizontal Derivative results are somewhat consistent with the TMI results, in that they define one roughly concentric, northwest-southeast trending magnetic high features in the central part of the survey areas. THD results range from 14.27nT/m within the highs of these features, to 0.035nT/m at the margins. The result of this product well defines the exact margins of the magnetic anomaly found within the survey boundaries.

#### **Analytical Signal (AS)**

# The peaks of the analytic signal (AS) correlate directly with their respective magnetic causative bodies and are positioned symmetrically over them.

The analytical signal results are somewhat consistent with the TMI results, in that they well define one concentric magnetic high features in the central part of the survey areas. AS results range from 18.55nT/m within the highs of these features, to 0.85nT/m in the far eastern, and western corners of the survey. The dataset highlights very broad, shallow shoulders to the magnetic features with a steady gradual gradient from high to low. The east-west oriented features in the southern part of the survey are not evident in this dataset.







- EXPLORATION SERVICES





## **12. CONCLUSIONS AND RECOMMENDATIONS**

Overall, this report provides a brief description of the survey results and describes the equipment, data processing procedures and logistics of the survey. It is recommended that a complete assessment and detailed evaluation of the survey results be carried out in conjunction with all available geophysical, geological and geochemical information. The interpreted structural intersections defined by the survey should be subjected to further field investigation.

The survey results contain one main geophysical target, which can be considered a strong exploration targets. The dominant features highlighted is a roughly concentric, northwest-southeast oriented, magnetic high located in the central part of the survey area. Historic sampling near the margin of this anomaly highlighted variably mineralized Fe-Ti-V mafic to ultramafic rocks (with appreciable silver values.

The results from the 2019 program are extremely encouraging. The magnetic high identified by the Phase I geophysical survey are very likely caused by variably mineralized vanadium rich titaniferous magnetite in potentially economic quantities. High-resolution (25m line spacing) ground magnetic data is required over the mineralized target zones. This data will outline zones of increased magnetite quantities within the gabbros as well as highlight any possible structural zones related to cumulate horizon emplacement. Further areas of interest may be assigned priorities on the basis of supporting geophysical, geochemical and geological information. A Phase II field program consisting of high-resolution ground magnetics and 1000m of diamond drilling is recommended which will target the zones of increased magnetite concentration within the magnetic bullseyes. The budget for this Phase II is estimated to be \$500,000. Additionally, 3D inversion modelling of the 2019 data should be considered in order to model the magnetics in 3D, leveraging advanced voxel modeling software in order to better determine extents, continuity and probable depth to source of magnetic features.

## **13. REFERENCES**

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## **14. STATEMENT OF QUALIFICATIONS**

I, Oliver Friesen of the City of White Rock, Province of British Columbia, Canada, do hereby certify as follows:

- 1. I graduated with a Bachelor of Science degree in Geology (hons.) from the University of British Columbia in June 2013.
- 2. I graduated with a M.Sc in sedimentology from Simon Fraser University in August 2015.
- 3. I am a GIT member in good standing with the Association of Professional Engineers and Geoscientist of British Columbia (APEGBC).
- 4. I have worked in mineral exploration since 2011, in the Yukon Territory, Newfoundland and Labrador, Nevada, and British Columbia.
- 5. I am the author and am responsible for the preparation of the report titled "2019 Airborne Geophysical Report on the Penecee Property."
- 6. To the best of my knowledge, information and belief, this report contains all the scientific and technical information necessary to make this report not misleading.

Dated this 7<sup>th</sup> day of June 2019

Oliver Friesen

## **15. STATEMENT OF COSTS**

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	Dates	Quantity	Rate	Amount	RUGGEDNESS	LINE KM RATE
Survey Planning/Preparation				\$3,000	Flat	\$71.00
Mobilization/De-Mobilization (crew/equipment)	May 8th-9th, May 12th-13th			\$5,000	Moderate	\$85.00
Mobilization/De-Mobilization (helicopter)	May 9th, May 12th			\$13,000	Extreme	\$99.00
Airborne Magnetic Survey Flight Line-Kilometers	May 9th - 12th	402.37	99.00	\$39,835		
Daily Ferry Charges	Included in line-km rate			\$0		
uel and Fuel Positioning Included in line-km rate		m rate		\$0		
Meals and Accomodation	Included in line-km rate		\$0			
Daily Standby Charges <sup>1</sup>	May 10th	1	\$7,500	\$7,500		
Data Post-Processing (includes all deliverables, maps)				\$5,000		
Prepare Assessment Report for BC MTO				\$5,000		
TOTAL SURVEY COST				\$78,335		
<sup>1</sup> Standby day is defined by any day on site where any of the following t	akes place:					
<ul> <li>survey production is less than 100 km after the equipment is inst</li> </ul>	alled (standby is not in force if the equi	oment is inope	erable for an	y reason);		
<ul> <li>weather conditions prevent the crew from completing the installation;</li> </ul>						
weather conditions prevent the crew from completing the equip	ment (or fuel drums) retrieval from fiel	d locations, de	e-installatior	and packing;		
• weather conditions prevent the crew from arriving at the survey base or leaving the base site, after all lines are						
<ul> <li>any delays due to forest fires in the area.</li> </ul>						

# **APPENDIX** A

## LIST OF PERSONNEL

The following personnel were involved in the acquisition, processing, interpretation and presentation of data, relating to the airborne magnetic survey carried out for Delrey Metals Corp. over the Penece Claim Group in southwestern, B.C.

Dev Rishy-Maharaj	Operator / Geophysical Data Processor – Field
Christopher Paul	Operator / Geophysical Data Processor - Field
Jacob Fort	Pilot (Silverking Helicopters)
Kit Campbell	Geophysical Data Processor
Kit Campbell	Geophysical Interpolation

The survey consisted of 402.37 line-km flown from May 8<sup>th</sup> to 13<sup>th</sup>, 2019.