



## **NEW CRAIGMONT MINE, MERRITT, BRITISH COLUMBIA, CANADA (Lat. 50°12' N; Long. 120°55' W)**

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NI 43-101 Technical Report on the Preliminary Copper Resource for the Southern Dump and 3060 Portal Dumps



### **Prepared for**

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### **Effective Date**

May 21, 2020

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## **1.0 SUMMARY**

This Technical Report provides a preliminary copper mineral resource estimate for the New Craigmont Mine Project (Craigmont Project) of Nicola Mining Inc. (Nicola) in British Columbia, Canada. The report was prepared by Kevin Wells, P.Geo., and James N. Gray, P.Geo. Both are independent “qualified persons” (QPs) as defined by Canadian Securities Administrators *National Instrument 43-101 Standards of Disclosure for Mineral Projects* (NI 43-101) and as described in Section 28 (Date and Signature Pages) of this report. This initial Mineral Resource represents the first stage in the on-going exploration and potential development of the New Craigmont Project.

### ***Property Description and Location***

The Craigmont Project is in southern British Columbia (Figure 4.1), 18 km northwest of the city of Merritt. The UTM coordinates for the Craigmont Project are 5563500 North and 648500 East (geographic projection: NAD 83, Zone 10N). Access to the property is provided by paved and gravel roads. Additional mineral claims totaling 828 hectares were staked in December 2019, as a result the Craigmont Project now consists of 22 mineral tenures and 10 mineral leases with a total area of 10,913 hectares.

### ***Ownership***

The Craigmont Property is currently 100% owned by Nicola Mining Inc.

On March 3, 2011, Nicola Mining Inc. agreed to buy all the outstanding shares of Craigmont Holdings Ltd. in consideration for certain cash and share payments. On November 19, 2015, Nicola acquired the remaining shares of Craigmont Holdings Ltd. for a 2.0% net smelter royalty.

### ***History***

The property covers a large area along the southern extends of the Guichon Batholith which is host to many copper prospects that have been intermittently explored since the early 1930's. The most important discovery to date has been the past producing Craigmont Copper-iron mine located in the central portion of the property.

The Craigmont Mine was operated by Craigmont Mines Ltd. from 1961 to 1967 as an open pit mine before moving to an underground sub-level cave operation from 1967 to 1982. The mine produced in excess of 36,750,000 tons at an average grade of 1.30% Cu, containing approximately 900 000 000 lbs. of copper (Craigmont Mines Ltd., 1982). The mine was shut down in 1982 due to low copper prices.

Following the mine shutdown in 1982 Craigmont shipped up to 60,000 tonnes of clean metallurgical magnetite per year until 1992 from its stockpile to coal producers throughout North America for use in the coal flotation process. After 1992, Craigmont continued to produce a limited amount of magnetite product for the coal industry from re-worked iron fines in the tailings pond. This operation was shutdown in 2014 due to economic grades of magnetite being exhausted.



### ***Status of Exploration***

Nicola Mining Inc. has been actively exploring the property since the project ownership was consolidated in 2015. This work has consisted of 10,498m of diamond drilling over 5 main showing areas, 1869m of RC drilling at the historic mine dump and the higher grade 3060 portal and induced polarization ground surveys over favourable showing areas. Additionally, property scale reconnaissance mapping by F. Devine was completed during the summer of 2017, additional mapping is planned for 2020 and 2021.

### ***Geology and Mineralization***

The geology of the property is underlain by an east-northeast trending, steeply dipping volcanic pile of Upper Triassic Nicola Group rocks that are bound to the north by the multistage Early Jurassic-Late Triassic Guichon Creek Batholith and unconformably overlain by the Middle and Upper Cretaceous Spences Bridge Group. Most of the area is covered by thick gravel overburden (Kirkham, 2006).

Near the project area, the Border phase of the Guichon Creek Batholith varies in composition from quartz diorite to granodiorite and intrude the Nicola Group, a thick volcanic and sedimentary series of agglomerate, breccia, andesitic flows, limestone, argillite and greywacke. Nicola Group sediments immediately adjacent to the batholith are hornfelsed quartzofeldspathic greywackes. Spences Bridge Group agglomerates and flows dip approximately 15 degrees to the south and outcrop in the areas south and west of the Craigmont mine area (Kirkham, 2006).

The property holds at least two types of mineralization described as copper-iron skarn and copper porphyry. Carbonate-rich, silicate-rich or intrusive rocks along the southern flank of the Guichon Batholith host the two types of mineralization. Within the property, mineralization is commonly associated with copper and iron skarn assemblages. Chalcopyrite, magnetite, specularite and minor bornite are principle minerals. Accessory assemblages at the Craigmont Mine include supergene minerals such as chalcocite and native copper have developed above the mineralized body. Gold, molybdenum and silver contents are generally low. (Kirkham, 2006).

Several major faults cut through the property. Faults around the Craigmont mine include the northwest trending east and West Embayment Fault, the Mine East Fault and the East-West Fault.

### ***Sample Database and Validation***

A review of the sample collection and analysis practices used during the various drilling campaigns indicates that this work was conducted using generally accepted industry procedures.

Sampling programs conducted by Nicola were monitored using a QA/QC program that is typically accepted in the industry. It is the QPs' opinion that the database is sufficiently accurate and precise to generate a mineral resource estimate.

## Mineral Resource Estimate

Two areas of Inferred Mineral Resource have been outlined, both consisting of historically sub-economic material remaining from past mining at Craigmont. A portion of the southern mine dumps, covering an area of 82.5 hectares, has been tested at a drill spacing of approximately 100 m. A smaller area (1.4 ha) of stockpiled material, adjacent to the 3060 portal, is of much smaller tonnage but of higher grade and is generally drilled at a 10-20 m spacing.

Resource tonnage is based on the volume between a LiDAR survey of current topography and a recent contractor generated pre-mine surface based on historic contour maps tied into current survey control. Density was assigned based on historic and current assumptions; no bulk density measurements are currently available. Future work must include density measurement work. The southern dump material was assigned a density of 1.8 tonnes/m<sup>3</sup>; portal area material was assigned a density of 2.15 t/m<sup>3</sup>.

Inverse distance weighting was chosen as the most appropriate grade estimation approach due in part to the fact that the material being evaluated is not, in its present form, a naturally occurring mineral deposit. The southern dump material was estimated using 15x15x8 m blocks with 4 m composites from 60 RC holes. The 3060 portal area material was estimated using 5x5x4 m blocks and 4 m composites from 39 RC holes.

Material was classified as Inferred Mineral Resource where it was within the area of reasonably consistent drill spacing. In the southern dump area, blocks classified as Inferred are generally within 100 m of the closest sample and the drill spacing is approximately 100 m. In the portal area, drill spacing is typically less than 25 m and the resource extends a maximum of 40 m beyond drilling to the edge of the pile.

In order to establish reasonable prospects of eventual economic extraction a three-year trailing average copper price of US\$2.8/lb and an anticipated annual production scenario was considered and a cut-off grade of 0.06% copper is deemed appropriate. The resource is included in Table 1.1.

**Table 1.1: Craigmont Surface Material Resource**

Southern Dump		Portal Area		Inferred Mineral Resource	
Tonnes	Cu	Tonnes	Cu	Tonnes	Cu
(1,000s)	(%)	(1,000s)	(%)	(1,000s)	(%)
18,465	0.13	204	0.23	18,669	0.13



## ***Recommendations***

The following work is recommended for this project:

- Bulk density measurements are recommended to help boost the Resource confidence.
- Additional testing on the cost benefit of Tomra sorting of resource material.
- Trench sampling to determine the grade and volume of the fine material within the piles.
- Additional RC drilling at a spacing of 50 m on the Northern historic waste dump to determine if there is additional material to add to the resource.
- On a property scale, complete additional geological mapping followed by diamond drilling to explore untested exploration targets.

A budget of **\$199,500** Cdn. is proposed to further advance this initial resource for the waste dumps on the Craigmont property. An exploration budget of **\$1,501,500** Cdn. is proposed to further advance untested anomalies that have been identified elsewhere within the project area. Please note, the exploration budget is not contingent upon results from the proposed budget to further advance the initial resource for the waste dumps on the Craigmont property. Therefore, a total budget of **\$1,701,000** Cdn. is proposed to advance the project.

## ***Cautionary Note Regarding Forward-looking Information and Statements***

This Technical Report contains "forward-looking information" within the meaning of Canadian securities legislation. All information contained herein that is not clearly historical in nature may constitute forward-looking information. Forward-looking information includes, without limitation, statements regarding the results of the Technical Report, including statements about the estimation of mineral reserve and resources statements, future exploration on the project, the market and future commodity prices, permitting, and the ability to finance the project.

Generally, such forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved".

Forward-looking information is based on assumptions believed to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, metal and commodity prices, the estimation of initial and sustaining capital requirements, the estimation of labor and operating costs, the estimation of mineral reserves and resources, the assumption with respect to currency fluctuations, the timing

and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, the completion of the permitting process, and such other assumptions and factors as set out herein.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Nicola to be materially different from those expressed or implied by such forward-looking information, including but not limited to: volatile stock price; risks related to changes in commodity prices; sources and cost of power facilities; the estimation of initial and sustaining capital requirements; the estimation of labor and operating costs; the general global markets and economic conditions; the risk associated with exploration, development and operations of mineral deposits; the estimation of mineral reserves and resources; the risks associated with uninsurable risks arising during the course of exploration, development and production; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support mining, processing, development and exploration activities; the risks associated with changes in the mining regulatory regime; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalization and liquidity risks including the risk that the financing necessary to fund development and any necessary construction in connection with the Craigmont Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issue of common shares; the risk of litigation; and other customary risks involved with projects of this nature.

Although Nicola has attempted to identify important factors in this Technical Report that could cause actual results to differ materially from those contained in the forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such forward-looking information. Accordingly, readers should not place undue reliance on forward-looking information. Forward-looking information is made as of the date of this technical report, and Nicola does not undertake to update such forward-looking information except in accordance with applicable securities laws.

## **2.0 INTRODUCTION**

### **2.1 Nicola Mining Inc.**

Nicola Mining Inc. (NIM)'s flagship asset, the New Craigmont Copper Mine, is located 14 kilometres (km) northwest of Merritt, British Columbia, Canada. The New Craigmont Copper Mine produced copper and magnetite from both open pit and underground, sub-level cave from 196 level. Large waste piles ("Mining Terraces") are located north and south of the open pit.

In addition, the Company also owns the Treasure Mountain Property, which is located 29km northeast of Hope, British Columbia. The Company owns the Merritt Mill and Tailings facility which is located on the New Craigmont Property. The mill has a 200 tonne per day crushing, grinding and flotation circuit and is permitted to conduct custom milling of mineralized material. The mill was constructed in the fall of 2012 together with the lined tailings facility.

### **2.2 Terms of Reference and Purpose**

This report is prepared as a Canadian National Instrument 43-101 (NI 43-101) Technical Report for NIM to document the Mineral Resources of the historic waste piles, located adjacent to the historic open pit. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort based on:

- Information available at the time of preparation.
- Data supplied by outside sources.
- The assumptions, conditions, and qualifications set forth in this Technical Report.

### **2.3 NI 43-101 Section Responsibilities**

The following individuals, by virtue of education, experience, and professional association are QPs as defined in NI 43-101, and are members of good standing with appropriate professional institutions or associations:

- KW – Kevin Wells, P. Geo., KWW Geoscience & Exploration Corporation.
- JG – James N. Gray, Advantage Geoservices Limited.

Table 2.1 lists all the sections that are included in this NI 43-101 Technical Report along with Qualified Person(s) responsible for that section.

**Table 2.1: Scope of Responsibility**

Item	Content	Qualified Person
1	Summary	KW
2	Introduction	KW
3	Reliance on Other Experts	KW
4	Property Description and Location	KW
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography	KW
6	History	KW
7	Geological Setting and Mineralization	KW
8	Deposit Types	KW
9	Exploration	KW
10	Drilling	KW
11	Sample Preparation, Analyses and Security	KW
12	Data Verification	KW
13	Mineral Processing and Metallurgical Testing	KW
14	Mineral Resource Estimates	JG
15	Mineral Reserve Estimates	KW
16	Mining Methods	KW
17	Recovery Methods	KW
18	Project Infrastructure	KW
19	Market Studies and Contracts	KW
20	Environmental Studies, Permitting and Social or Community Impact	KW
21	Capital and Operating Costs	KW
22	Economic Analysis	KW
23	Adjacent Properties	KW
24	Other Relevant Data and Information	KW
25	Interpretation and Conclusions	KW, JG
26	Recommendations	KW
27	References	KW, JG

## 2.4 Personal Inspection

In accordance with NI 43-101 QP's Kevin Wells and James Gray visited the New Craigmont Project. Mr. Wells' last visit to the New Craigmont Project was May 13, 2020 and led by Jacob Longridge, Senior Geologist for NIM. During the site visit Mr. Wells inspected drill core, core storage, RC chips, the open pit, waste dumps and office facilities at the Craigmont site. While inspecting the waste dumps, Mr. Wells noted that no additional RC drilling was completed since 2018, verified RC drill hole locations and noted that the dump piles have remained un-disturbed since his previous visit in November 2018. Mr. Gray toured the project on October 29<sup>th</sup>, 2018 and inspected the RC rig, witnessed the sampling and logging procedures of the chip samples. This tour was led by Daana Maji, Exploration Geologist for NIM. No relevant field work for this initial resource was completed in 2019 or 2020 that would lead to an update on this resource.

All information pertaining to Mineral Resources, mineral composition, test work, and operating costs were provided to the Qualified Persons from a combination of inputs from NIM and its consultants. The pre-mining surface definition was provided by Andrew McIntosh from McElhanney Ltd. Geological interpretations and conclusions were provided by qualified professionals with Placer Development and Craigmont Mines during mine operation. Mineral claim data for the property were obtained from the Mineral Titles On-line website, an internet website managed and maintained by the British Columbia Government.

## 2.5 Effective Date

The effective date of the Mineral Resource statements in this report is May 21, 2020 for the Historic Craigmont Waste Piles. There have been no material changes to the Mineral Resources since that date.

## 2.6 Abbreviations and Units of Measure

Units of measurement used in this report conform to the metric system. All currency is expressed in United States dollars (US\$) unless otherwise noted. Abbreviations and acronyms used throughout this report are shown in Table 2.2.

**Table 2.2:** Abbreviations and Acronyms

Description	Abbreviation or Acronym
New Craigmont Mine Project	New Craigmont Project
copper	Cu
degrees centigrade	°C
digital elevation model	DEM
drill core size (diameter 47.6 mm)	NQ
east	E
Environmental Impact Assessment	EIA
Environmental Management Plan	PMA
exploratory data analysis	EDA
general and administrative	G&A
Global Positioning System	GPS
gold	Au
gold equivalent	AuEq
gram	G
grams per litre	g/L
grams per tonne	g/t
hectare	Ha
Canadian Institute of Mining	CIM
Coefficient of Variation	CV
inverse distance weighted	IDW
inverse distance cubed	ID3
kilogram	Kg
kilometre	Km

<b>Description</b>	<b>Abbreviation or Acronym</b>
kilowatt hours per metric tonne	kWh/mt
length x width x height	L x W x H
litre	L
management discussion and analysis	MD&A
metre	M
millimetre	Mm
million ounces	Moz
million pounds	MLbs
million tonnes	Mt
million years	Ma
National Instrument 43-101	NI 43-101
Nicola Mining Inc.	NIM
nearest neighbour	NN
north	N
ordinary kriging	OK
ounce	Oz
parts per million	Ppm
percent	%
potassium-argon	K-Ar
pound	Lb
preliminary economic assessment	PEA
primary environmental licence	PEL
Professional Geoscientist	P.Geo
qualified person	QP
quality assurance/quality control	QA/QC
recoverable gold equivalent	AuEqR
reduced to pole	RTP
rock quality designation	RQD
selective mining unit	SMU
silver	Ag
sodium cyanide	NaCN
south	S
specific gravity	SG
three-dimensional	3D
tonne	T
tonnes per cubic metre	t/m <sup>3</sup>
United States dollar	\$US
Universal Transverse Mercator	UTM
west	W
zone composite	ZC
80% of material passes 132 micro sieve	132 <sub>um</sub> K <sub>80</sub>



### **3.0 RELIANCE ON OTHER EXPERTS**

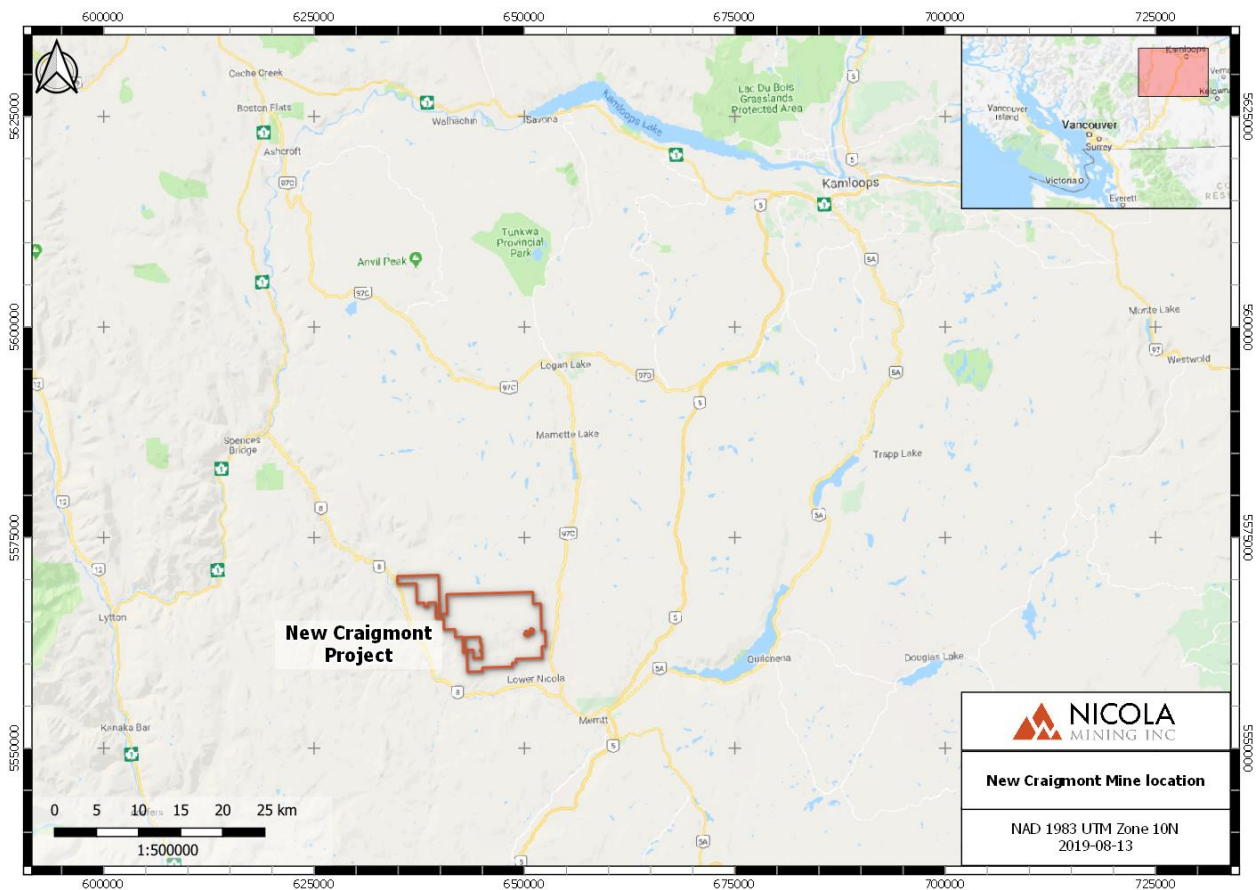
The report was prepared by Kevin Wells, P.Geo., and James Gray, P.Geo. They are qualified persons for the purposes of NI 43-101 and fulfill the requirements of an “Independent Qualified Person” (QP).

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Location

The New Craigmont Project is situated 14 km northwest of Merritt (Figure 4.1) and 190 km northeast of Vancouver, British Columbia, Canada (Lat. 50°12' N; Long. 120°55' W). The NTS map sheets of the claims are 92I06E and 92I03E and BCGS sheets are 92I025 and 92I026. The property consists of 22 mineral tenures, 10 mineral leases with a total area of 10,913 hectares.

**Figure 4.1: New Craigmont Project Location Map**



Source: Nicola Mining, August 13, 2019

## **4.2 Land Use and Mining Tenure**

The Craigmont Mine has legal access to the property, via paved road. It has a BC Mining Permit (M-68) and is operated in accordance with provincial government environmental and mining regulations. All permits for the Mine are in good standing at the time of writing this report. A \$700,000 CDN environmental reclamation security bond is attached to the mine property and is posted with the BC Government as a requirement to cover current reclamation liabilities. NIM has all the necessary permits required to operate and explore the property. There are no legal issues or obligations that must be met in order to retain the property in good standing. The Craigmont Property is currently 100% owned by Nicola Mining Inc.

On March 3, 2011, Nicola Mining Inc. agreed to buy all the outstanding shares of Craigmont Holdings Ltd. in consideration for certain cash and share payments. On November 19, 2015, Nicola acquired the remaining shares of Craigmont Holdings Ltd. for a 2.0% net smelter royalty.

At the time of writing this report, there are no other factors and risks that may affect access, title, or the right or ability to perform work on the property.

**Table 4.1: Mining Tenures New Craigmont Project**

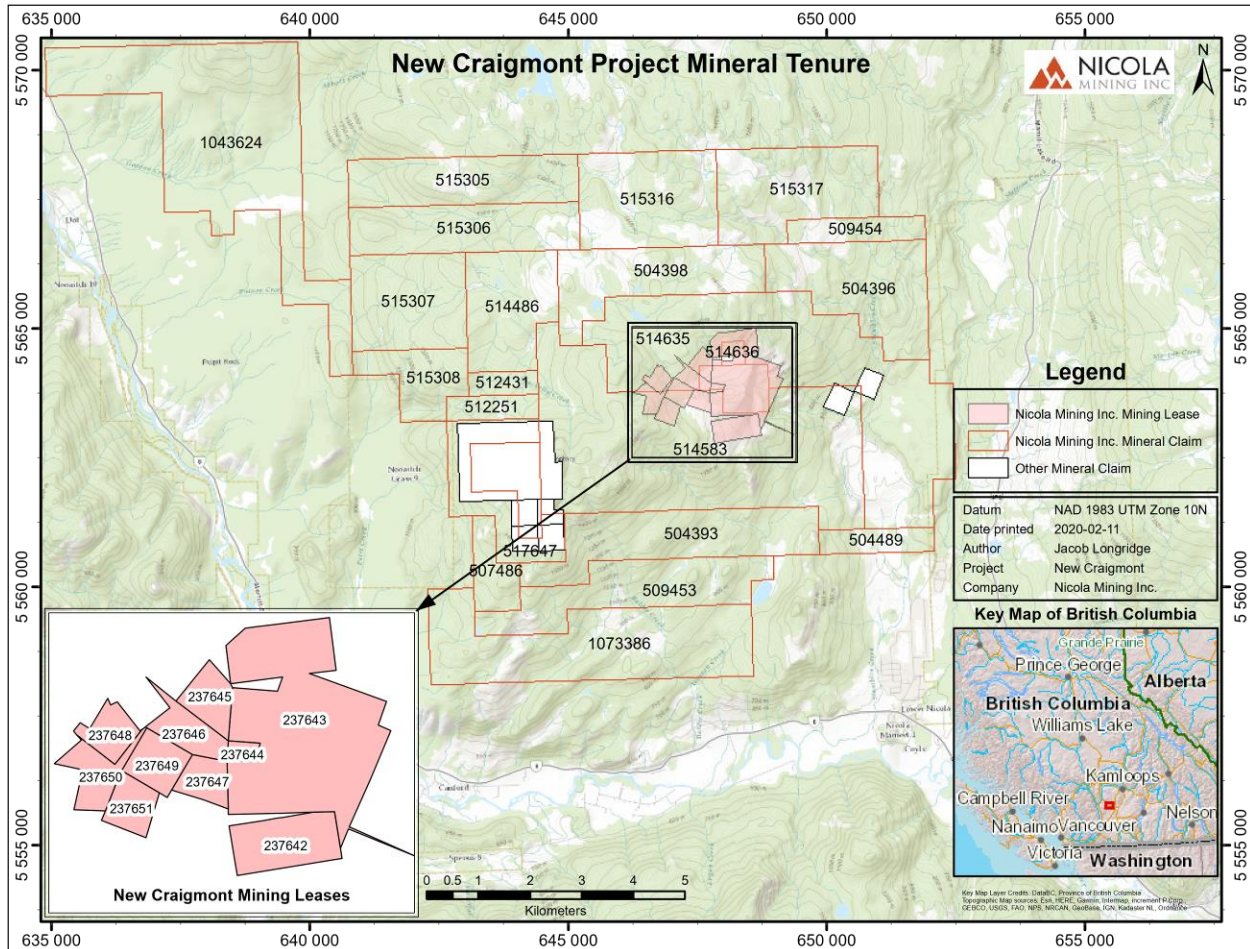
Tenure Number	Name	Tenure Type	Map Number	Issue Date	Good to Date	Area (ha)	Owner 100%
237642		Lease	092I016	1958/JUN/12	2020/JUN/12	39	Nicola Mining Inc.
237643		Lease	092I026	1958/NOV/12	2020/NOV/12	179	Nicola Mining Inc.
237644		Lease	092I026	1960/AUG/19	2020/AUG/19	4	Nicola Mining Inc.
237645		Lease	092I026	1960/OCT/05	2020/OCT/05	18	Nicola Mining Inc.
237646		Lease	092I026	1960/OCT/05	2020/OCT/05	19	Nicola Mining Inc.
237647		Lease	092I026	1960/OCT/05	2020/OCT/05	15	Nicola Mining Inc.
237648		Lease	092I026	1962/JAN/22	2021/JAN/22	16	Nicola Mining Inc.
237649		Lease	092I026	1962/JAN/22	2021/JAN/22	20	Nicola Mining Inc.
237650		Lease	092I026	1962/JAN/22	2021/JAN/22	20	Nicola Mining Inc.
237651		Lease	092I026	1962/JAN/22	2021/JAN/22	17	Nicola Mining Inc.
504393	MONT 1	Claim	092I	2005/JAN/20	2023/MAY/30	517	Nicola Mining Inc.
504396		Claim	092I	2005/JAN/20	2023/JUN/01	496	Nicola Mining Inc.
504398	MONT 3	Claim	092I	2005/JAN/20	2023/JUN/01	434	Nicola Mining Inc.
504489	MONT 4	Claim	092I	2005/JAN/21	2023/MAY/30	103	Nicola Mining Inc.
507486	MONT 5	Claim	092I	2005/FEB/18	2023/MAY/30	124	Nicola Mining Inc.
509453	MONT 6	Claim	092I	2005/MAR/22	2023/MAY/30	455	Nicola Mining Inc.
509454	MONT 7	Claim	092I	2005/MAR/22	2023/MAY/30	124	Nicola Mining Inc.
512251	MONT 8	Claim	092I	2005/MAY/09	2023/MAY/30	83	Nicola Mining Inc.
512431	MONT 9	Claim	092I	2005/MAY/11	2023/JUN/01	62	Nicola Mining Inc.
514486	MONT	Claim	092I	2005/JUN/14	2023/JUN/01	372	Nicola Mining Inc.
514583		Claim	092I	2005/JUN/16	2023/JUN/01	1593	Nicola Mining Inc.
514635		Claim	092I	2005/JUN/17	2023/JUN/01	1344	Nicola Mining Inc.
514636		Claim	092I	2005/JUN/17	2023/JUN/01	21	Nicola Mining Inc.
515305	MONT 100	Claim	092I	2005/JUN/26	2023/MAY/30	413	Nicola Mining Inc.
515306	MONT 101	Claim	092I	2005/JUN/26	2023/JUN/01	413	Nicola Mining Inc.
515307	MONT 102	Claim	092I	2005/JUN/26	2023/JUN/01	413	Nicola Mining Inc.
515308	MONT 103	Claim	092I	2005/JUN/26	2023/JUN/01	207	Nicola Mining Inc.
515316	MONT 104	Claim	092I	2005/JUN/27	2023/MAY/30	496	Nicola Mining Inc.
515317	MONT 105	Claim	092I	2005/JUN/27	2023/MAY/30	496	Nicola Mining Inc.
517647		Claim	092I	2005/JUL/13	2023/MAY/30	290	Nicola Mining Inc.
1043624	MONTWEST	Claim	092I	2016/APR/19	2023/APR/19	1281	Nicola Mining Inc.
1073386	MONT	Claim	092I	2019/DEC/19	2020/DEC/19	828	Nicola Mining Inc.

Source: BC Mineral Titles Online, 2020

### 4.3 Mining Leases

Figure 4.2 illustrates the New Craigmont property while Table 4.1 contains the list of mineral claims and leases.

**Figure 4.2: Claim Map for the New Craigmont Property**



Source: Nicola Mining, Feb 11, 2020

### 4.4 Royalties

The New Craigmont Property is subject to a 2.0% net smelter royalty. On November 19, 2015, Nicola acquired the remaining shares of Craigmont Holdings Ltd. for a 2.0% net smelter royalty.

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Accessibility**

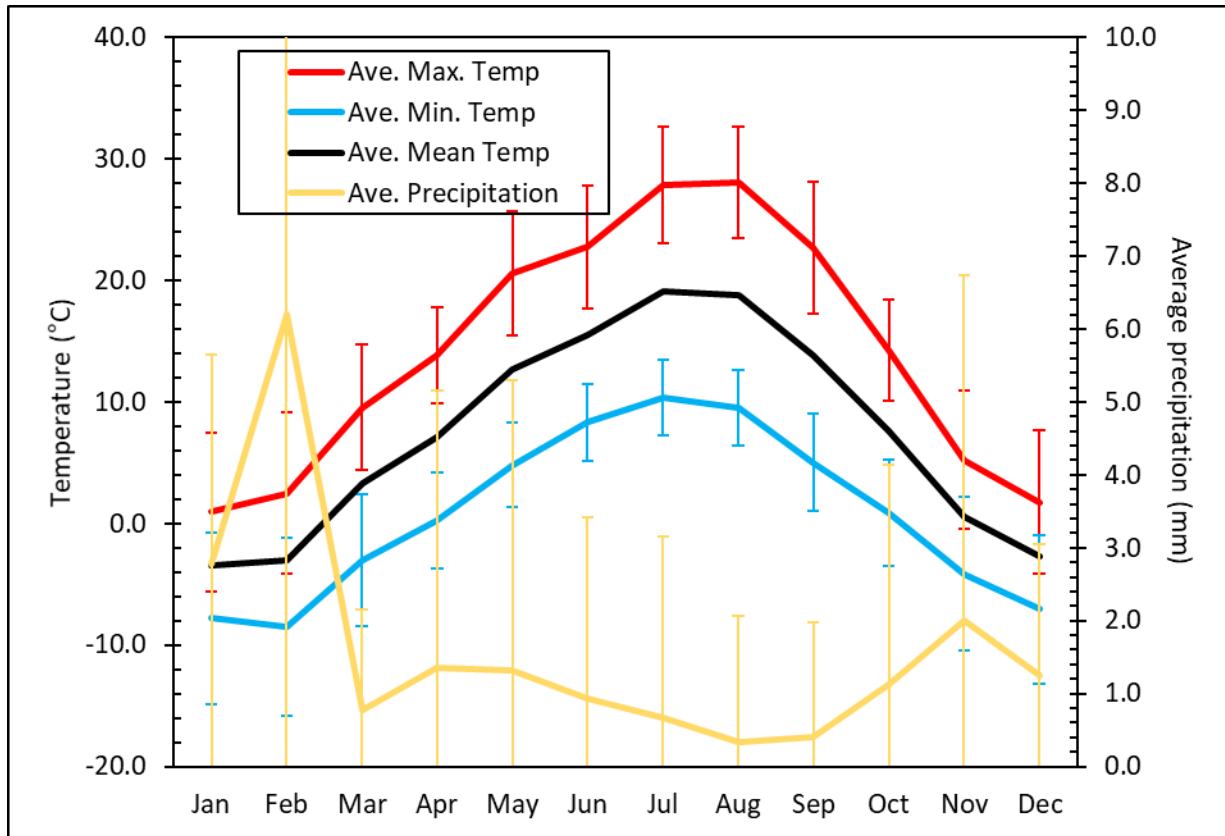
The property area is accessible by provincial highways 97C and 8 from Merritt to Aberdeen Road approximately 10 km from Merritt. Heading north on Aberdeen road for 10 km the project area is then accessed to the west via a series of local gravel roads remaining from previous mining or logging activity.

### **5.2 Climate**

The New Craigmont Property has a relatively dry climate, typical of the southern interior of British Columbia. The area is moderately dry, semi-continental with less than one metre of annual precipitation. Weather data from the mine-site has been collected from 1962 through to 1976. Meteorological records from Merritt from 2011 to 2019 show that temperature ranges from an average annual high of 28.1°C to an average annual low of -8.5°C, with the annual mean temperature being 8°C (Meteorological Service of Canada, 2019). The climate at the site allows for a year-round operation. Historically, the Craigmont Mine operated year-round with climate not having significant impact on mining operations.



**Figure 5.1:** Average temperatures and precipitation for Merritt, BC (Meteorological Service of Canada, 2019).



### 5.3 Local Resources and Infrastructure

The city of Merritt is located only 14 km southeast of the property, with a population of 5,321 (Statistics Canada, 2019). The town's economy is primarily driven by ranching, forestry, mining and tourism. The town has services typical of its size; however, the general proximity of Vancouver to the southwest, Kamloops to the north and Kelowna to the northeast, allow many additional services to be readily obtained. Lack of access to trained mining personnel is not considered a risk.

Grid power connected to the mill site can deliver 3.5 MW, with the transformer accepting up to 2.5 MW. The current mill has an operating usage of 0.8 MW. Most of the water necessary for mill operations is from a still well, sourced from the historic 2400 portal in accordance with regulations and permits. Although there is a mill on site that processes custom feed, major upgrades to the tailings ponds, waste disposal sites and source of water would be required to process copper feed from this estimated mineral resource.

A core-logging and storage facility are located on the property. Power at the camp is supplied from the provincial grid. Internet and phone service to the mine site is via the local grid.

## **5.4 Physiography**

Topography is gentle to moderate over most of the area with rolling hills separated by lakes, rivers, creeks and swamps. Elevations range from 860 m above sea level at the lowest point on the property up to 1633 m above sea level at the highest. The bio-geoclimatic zones for the area are Ponderosa Pine – Bunch grass at the lower elevations, transitioning into Lodgepole Pine and Spruce forests at the higher elevations.

## **6.0 HISTORY**

### **6.1 Project History**

The Craigmont area has a long history of exploration and production, beginning with initial exploration in the late 1950's. Regionally, from 1957 onwards, various companies and individual title owners completed grassroots exploration through geophysical, geochemical and geological surveys with lesser trenching and drilling. These efforts were unsuccessful in delineating economic mineralization outside of the areas owned by Craigmont Mines Ltd. Production from the Craigmont Mine was attained in 1961 and continued through to 1982. Open Pit mining occurred from 1961 through to 1967, with underground mining commencing prior to completion of the Open Pit and continuing through to end of mine, February 1982. The primary metal produced was copper, with increasing iron contribution throughout the years of operation. Rare, minor production of silver and gold were reported from the mill.

On-site exploration was conducted by Craigmont Mines Ltd. near the end of mine life (1977 and 1979). This exploration was driven by the conceptual model that copper and iron were derived from the country rock, mobilized by heat from the Guichon batholith and concentrated in skarns formed in reef-margin facies (Morrison, 1979). This exploration did not significantly add to the reserves of the Craigmont Mine. Despite internal reports suggesting significant amount of economic material remained in-situ, the Craigmont Mine was shut down and dismantled in 1982, due primarily to the low copper prices at that time.

All past operations occurred prior to the implementation of NI 43-101, and as such these historical reserve estimates are considered historical estimates under section 2.4 of NI 43-101. A qualified person has not done sufficient work to classify this historical estimate as current mineral resources or mineral reserves. Nicola Mining is not treating the historical estimate as current mineral resources or mineral reserves.

Internal reports to Craigmont Mines Ltd. documented the remaining reserves in the underground workings. A report dated October 30, 1985 by J. F. Bristow, P. Eng. details the estimated reserves at the time of mine shutdown. This historical estimate is summarized in Table 6.1. This historical estimate is considered relevant as this mineralised material was left in-situ at the time of mine shutdown and thus the full potential of the Craigmont Mine was not completely exploited. This indicates that the mine closure was attributed to poor copper prices at the time and not due to lack of minable material and thus additional exploration on the property is

warranted. Bristow describes completing the reserve estimate using a sectional polygonal methodology. This estimate is based on three main assumptions: 1) a tonnage factor of 12 ft<sup>3</sup>/ton, 2) a minimum mineralized zone width of 20 feet and 3) a cut-off grade of 0.7% copper. The reserve was completed in compliance with guidance from the Department of Energy, Mines and Resources, Ottawa, Canada 1975. Within this guidance document, the three reserve categories are:

- **Proven:** Ore for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, or drill holes, and for which grade is computed from adequate sampling. The sites for inspection, sampling and measurements, are so closely spaced, on the basis of defined geologic character that the size, shape, and mineral content are well established.
- **Probable:** Ore for which tonnage and grade are computed partly from specific measurement, samples, or production data, and partly from projection for a reasonable distance on geologic evidence. The openings or exposures available for inspection, measurement, and sampling, are too widely or inappropriately spaced to outline the ore completely or to establish its grade throughput.
- **Possible:** Ore for which quantitative estimates are based largely on broader knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements. Estimates are based on assumed continuity or repetition for which there is geologic evidence; this evidence may include comparison with deposits of similar types. Bodies that are completely concealed but for which there is some geologic evidence may be included.

No more recent resource estimates on this mineralized body have been found. Since mine closure, the economics that may have been used in this historical estimate are no longer valid. The drill core that was used in the resource would require re-surveying and sampling to verify the grades and intercept widths used in Bristow's estimation. This would require underground mine re-habilitation and additional underground drilling to verify the in-situ location of this mineralization in order to bring this reserve to the status of a current mineral resource.

These reports, outside of the public domain, identify the estimated reserves at the time of mine shutdown. These reports were utilised, not for project valuation, but rather to emphasise the need for further exploration.

**Table 6.1:** Craigmont remaining Historic Copper Resources (Bristow J. F., 1985).

Location	Tons	Grade
<b>No. 3 Zone</b>		
<b>Probable</b>	401,000	1.71% Cu
<b>Possible</b>	889,000	1.45% Cu
<b>Total (Probable &amp; possible)</b>	1,290,000	1.53% Cu
<b>Sub-level cave material (hanging wall)</b>		
<b>Estimated total</b>	>60,000,000	> 0.4% Cu

Approximately 60,000 tonnes per year of clean metallurgical magnetite was shipped to coal producers in western Canada and the United States from 1982 to 1992. The re-working of the tailings pond to produce additional iron fines, continued from 1992 to 2014. This operation was shutdown in 2014 due to economic grades of magnetite being exhausted. Huldra Silver consolidated all shares of Craigmont Holdings Ltd in 2011. On May 2015, Huldra Silver changed its name to Nicola Mining following the consolidation of shares, through litigation. With increased demand for global copper production and increased copper prices, Nicola Mining has been actively exploring and re-evaluating the New Craigmont Project for its copper potential.

## 6.2 Project Area and Mining History

Prior to 1957, most of the geological and geophysical work was concentrated in the vicinity of Jackson Lake on the Titan Queen showing (known originally as Payston/Paystin) approximately 1.5 km northwest of the Open Pit. Although the Eric showing, situated approximately 2.5 km to the east of the Open Pit, was diamond drilled and trenched during or before 1935.

By the fall of 1957, diamond drilling on the magnetic anomaly in the drift covered area immediately above the No. 1 mineralized body indicated that an extensive zone of copper mineralization existed. By mid 1958 the results of core drilling suggested that a mineralized body of substantial proportions was being delineated.

Between November 1957 to July 1958, underground development was undertaken by Birkett Creek Mine Operations Limited which was directed and financed by Canadian Exploration Limited.

All past operations occurred prior to the implementation of NI 43-101, and as such resource estimates are considered historical. However, the reserve/resource estimates were carried out by significant mining companies and for comparison purposes are deemed relevant.

From the commencement of operations in March 1961, to March 1967, the bulk of the material handled in the concentrator was obtained from the Open Pit. Milling commenced in September 1961 with a 5000 tons per day capacity (Pillar, Petrina, & Cokayne, 1970), (Bristow, 1968). Upon completion of the pit in March 1967, just over 87,000,000 tons of mineralized material, waste and overburden had been removed (Pillar, Petrina, & Cokayne, 1970), (Bristow, 1968). Open Pit mining produced 8,191,000 tons at 1.66% Cu and 5,650,000 tons at 0.67% Cu (Pillar, Petrina, & Cokayne, 1970), resulting in a waste: mineralization ratio of 6.26: 1. From the open pit production, 5,700,000 tons of low-grade and 834,000 tons of high-grade mineralization was stockpiled. The low-grade material was blended with the underground mined material as required by the concentrator.

Underground mine development work commenced prior to completion of the open pit. Two variations of blasthole stoping were attempted:

- Benching from sublevels with vertical rings, and.
- Horizontal ring drilling from corner raises.

In both instances, the stopes were backfilled with pit waste. Transverse cut-and-fill method was adopted with varying degrees of success. Approximately 730,000 tons were mined underground using the blasthole and cut-and-fill methods. These mining methods had low efficiency and high costs. Thus, in fall 1965, the decision was made to adopt sublevel caving as soon as possible after the cessation of open pit mining (Pillar, Petrina, & Cokayne, 1970).

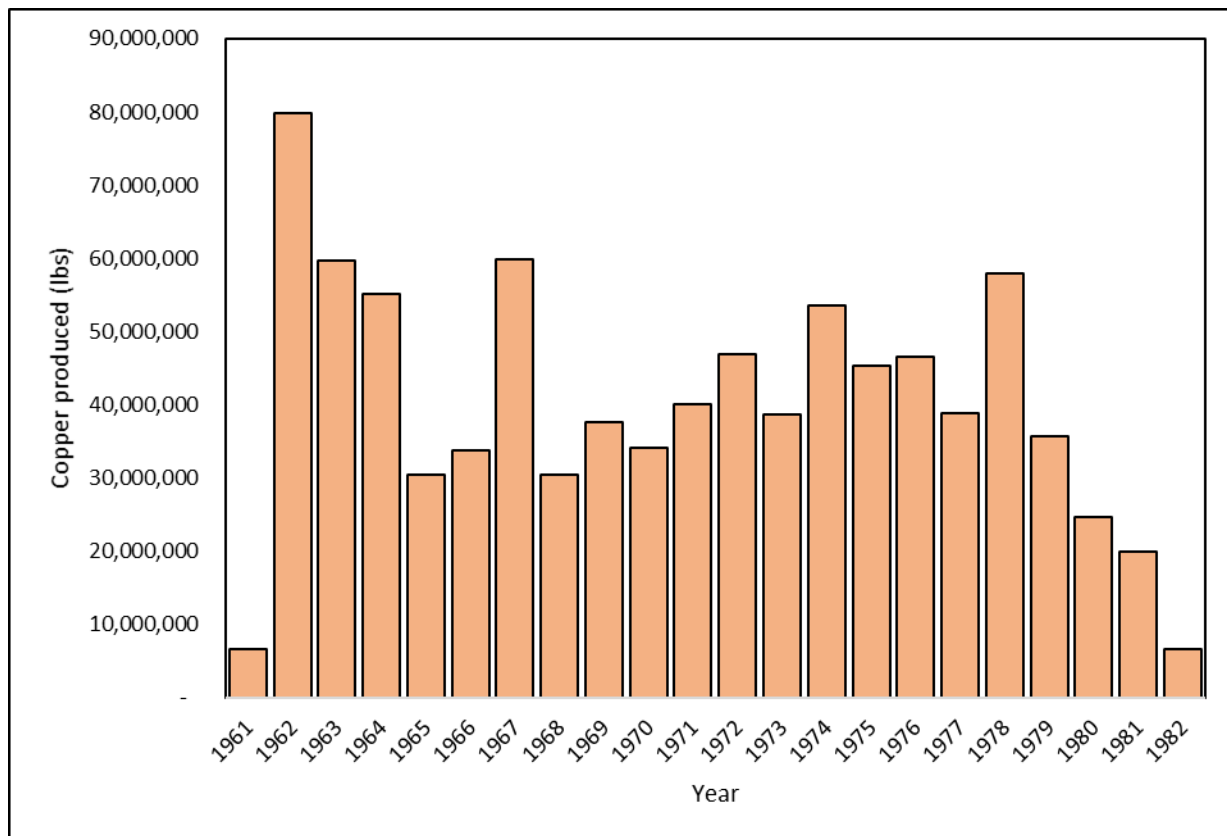
By 1970, 60% of the mill feed was derived from underground operations and 40% from low grade surface stockpiles. The low-grade stockpiles were used to keep the mill running at maximum capacity. The mineralized material recovery, from sublevel caving from longitudinal

mining was 82% with a 22% dilution, with transverse sublevel cave mining achieved a 92% recovery with 34% dilution (Pillar, Petrina, & Cokayne, 1970).

Copper and Iron mining continued through 15 February 1982, when the last copper rich material was mined. Craigmont Mines Ltd. reported an estimated mineral reserve of 22,575,000 tons at 2.08% Cu in 1961. However, the mine ended up producing in excess of 36,750,000 tons at an average grade of 1.30% Cu, containing approximately 900,000,000 lbs. of copper (Craigmont Mines Ltd., 1982) (Figure 6.1).

No mining has since been performed from the Craigmont Property.

**Figure 6.1:** Craigmont Mines Ltd. Copper production.



Source : Nicola Mining Digital Archives : 2020

### 6.3 Exploration and Mineral Resource Estimates History

The exploration of the Craigmont area is suggested to have begun in approximately 1935 with drilling and trenching of the Eric Showing located east of the present Open Pit. In 1954 the fourteen claims that now form the core of the property were acquired. Prior to 1957, exploration was concentrated around the Titan Queen showing (historically known as the Payston/Paystin); this initial work consisted of investigating low intensity magnetic anomalies. When the Craigmont ore body was eventually discovered it turned out to be associated with an anomalous magnetic high.



Diamond drilling of magnetic and geochemical anomalies during late 1957 and 1958 delineated an area of up to 195 m averaging over 4.4% copper. Between 1957 and 1961 exploration activities included an airborne magnetic survey, various ground magnetic surveys, geological mapping and prospecting to delineate the Craigmont deposit and surrounding area. By 1961, 85 surface diamond drill holes had been drilled on a variety of targets. Open Pit mining commenced in 1961, shifting toward underground production by 1967.

Until 1972 various geophysical techniques, including SP, SLINGRAM, Ronka MK4 horizontal loop and IP, were used in the exploration of the area surrounding the mine. Between 1972 and 1977 the completed proton magnetometer survey over the east part of the property defined targets and 10 additional surface diamond drill holes totalling 4,919 ft were drilled to test various magnetic highs identified by the survey. While substantial amounts of skarn were discovered, none of it contained significant copper mineralization. There was also several thousand feet of drilling completed to define the No. 3 mineralized body located below the main No. 1 and No. 2 bodies that were currently being mined.

The mineral reserve base was becoming depleted by 1977 and exploration for further mineral resources was considered a priority. The property-wide exploration completed between 1977 and 1979 included:

- Diamond Drilling:
  - Surface: 24 holes / 1,166 m.
  - Underground: 11 holes / 3,862 m.
- Core Relogging program:
  - Approximately 200 existing surface and underground production holes, and 50 surface exploration holes.
- Surface Geological Mapping: property scale 1" to 200'.
- Ground Geophysics:
  - Magnetics: 11.3 km total field, 17.5 km vertical gradient.
  - 5.6 km induced polarization (IP).
  - 48.9 km of pulse EM (PEM).
  - 20.6 km very low frequency (VLF).

The property remained relatively dormant from 1985-1991, with minor grassroots exploration on the Betty Lou claims by Better Resources. In 1991, Craigmont Mines Limited completed a detailed magnetic survey and a 30-hole drill program (765 m) on the magnetite stockpiles, which led to the construction of a recovery facility for magnetite (Rice, 1992).

Following the mine shutdown in 1982 Craigmont shipped up to 60,000 tonnes of clean metallurgical magnetite per year until 1992 from its stockpile, to coal producers throughout North America for use in the coal flotation process. After 1992, Craigmont continued to produce a limited amount of magnetite product for the coal industry from re-worked iron fines in the

tailings pond. This operation was shutdown in 2014 due to the depletion of economic magnetite grades.

In 2004 Christopher James Gold Corp. (CJGP), through an option agreement with Craigmont Mines Ltd., began compiling historical geophysical and geological data. Follow-up magnetic and IP geophysical surveys identified several targets and an 8-hole drill program in 2005 focused on the Embayment block, with marginal success. In 2010 CJGP completed rock and silt geochemical surveys before relinquishing their options back to Craigmont Holdings Limited.

Huldra Silver Inc. (a predecessor of Nicola Mining Inc.) acquired the mineral tenures in 2011. Active exploration on the property has since concentrated on the following locations:

- re-evaluating the historic Craigmont Mine waste piles (2017 & 2018).
- Exploration of porphyry potential near Promontory Hills.
- Craigmont West-Embayment area of interest (2017).

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology

The Craigmont property is geologically located within the western margin of the Nicola Group. The Nicola Group is an intermontane belt of the Canadian Cordillera of Upper Triassic age. Broadly, the Group consists of mafic to felsic calc-alkaline volcanics and their derived sediments along with marine reef carbonates (Morrison, 1979). The western margin is dominated by mafic to felsic pyroclastics, argillite, sandstone and local carbonate rocks (Monger, Lear, & McMillan, 1989).

The Western margin of the Nicola Group is inferred to be the youngest portion of the Group. It is the portion of the Group inferred to host the Craigmont Mine, consisting primarily of flow and pyroclastic rocks ranging in composition from andesite to rhyolite and interbedded with limestone, volcanic conglomerate, and sandstone. Most of the dating on this portion of the Western Belt is done biostratigraphically. Marine fossils of Lower and Middle Norian age (~227 - ~208.5 Ma) are found suggesting submarine environment (Preto, 1979). 206Pb/238U dating of two fractions of zircon from a dacitic tuff belonging to the Nicola Group east of the Mamit Lake Fault yields a date of  $222.5 \pm 1.4$  Ma (Moore, Gabites, & Friedman, 2000), little other geochronology exists within the belt.

The Nicola Group are deposited on a tectonically active margin, which is temporally and spatially associated with major plutonic episodes which host several of British Columbia's Cu-Au porphyry deposits (Ajax, Afton, Mount Polley and Copper Mountain) (Lang, et al., 1995). The most significant for the New Craigmont Project is the Guichon Creek batholith. This batholith hosts the largest porphyry camp in Canada, the Highland Valley District, which as of 2013 had produced ~1,615 Mt of Ore grading ~0.4% Cu and 0.01% Mo (Bryne, et al., 2013) and currently contains a combined reserve of 535.5 Mt @ 0.3% Cu and 0.007% Mo (Teck, 2019).

The Guichon Creek batholith consists of five concentrically zoned intrusive facies that generally young toward the centre of the batholith (Figure 7.1). These zones, from margin to core are: 1) Border facies, 2) Highland Valley facies (subdivided into the Guichon and Chataway subfacies) 3) Bethlehem facies, 4) Skeena facies and 5) Bethsaida facies. These zones are generally more felsic in towards the core (granites to granodiorites), with a more mafic margin (gabbros to granodiorites). Porphyry stocks and dikes are common near the mineralized portions of the batholith.

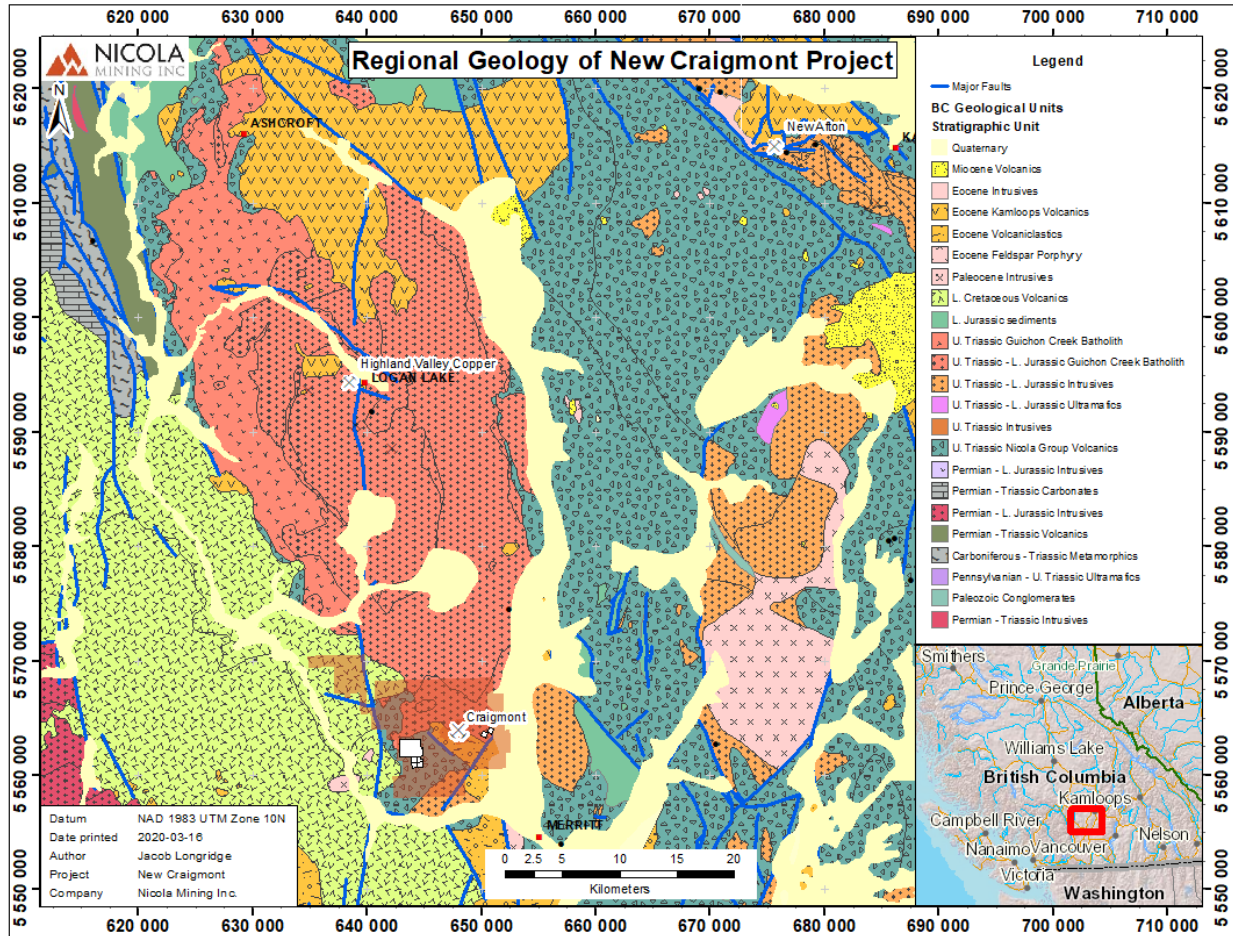
The northern margin of the Craigmont Mine and most of the northern portion of the NIM mineral claims are granodiorite - quartz diorites belonging to the Border facies of the Guichon Creek batholith. The Border Phase is the earliest batholith-related magmatism dated at  $211.02 \pm 0.17$  Ma (206Pb/238U dates for six concordant zircon fractions, (D'Angelo, et al., 2017)). The intrusive on the NIM property is a medium-grained equigranular hornblende quartz diorite inferred to have been emplaced at approximately 5 km depth at temperatures around 750°C, based on amphibole thermobarometry (D'Angelo, 2016).

The Nicola Group sediments immediately adjacent to the batholith are hornfelsed quartzofeldspathic greywackes (Kirkham and Fleming, 2006). The alteration mineralogy is indicative of thermal zoning with three main zones of thermal alteration present including a zone of potassic alteration near the batholith, hornfelsing more distal to the intrusions and high temperature skarn alteration that overprints the potassic alteration and some of the hornfels.

Unconformably overlying the Nicola Group and Guichon Creek batholith is a unit of polymict volcanic conglomerate with angular-sub-rounded clasts of various volcanic rock comprising the “Kingsvale Group”. Since mine closure, the “Kingsvale Group” was reclassified as belonging to Spences Bridge Group (Thorkelson & Rouse, 1989). However, this mapped unit of “Kingsvale” has been reclassified as Eocene Princeton Group (Monger, Lear, & McMillan, 1989), despite K-Ar biotite dating suggesting an Upper Cretaceous age,  $82.2 \pm 8$  Ma (Lowdon, Stockwell, Tipper, & Wanless, 1963). The term “Kingsvale Group” is used to refer to this mapped unit, until such time as a consensus on the stratigraphic relationship is confidently determined.

Intermediate, locally felsic and mafic flows and pyroclastics of the Spences Bridge Group overly the western margins of the NIM claims. These volcanoclastics are of Late Cretaceous age (Monger, Lear, & McMillan, 1989). Covering much of the region are locally thick accumulations of Pliocene to Pleistocene glacial drift and related outwash.

**Figure 7.1: Regional Geology**



## 7.2 Local and Property Geology

Regionally, the Craigmont Mine is adjacent to the southern margin of the Late Triassic Guichon Creek Batholith within the western belt of the Late Triassic Nicola Group. The Western Belt of the Nicola Group includes the oldest rocks on the Craigmont property. Within the mine area a clear stratigraphic succession has not fully defined due to extensive faulting, folding, alteration, lack of sedimentary structures and probable rapid facies changes within the volcanic rocks and sediments.

### 7.2.1 Stratigraphy

The general opinion is that a large overturned, sub-isoclinal anticline with a northeast trend and shallow northeast plunge passes through the centre of the thick basalt-andesite unit. This inference suggests that the Nicola rocks within the Craigmont Mine are part of the northern limb of this anticline. Assuming the basalt-andesite unit, to the south, as the oldest in the sequence:

- 1) Basaltic-andesitic volcanic rocks: red-purple massive, weakly-bedded agglomerate; tuff and lapilli tuff with intercalated volcanic conglomerate and sandstone; augite-plagioclase porphyritic basalt flows and hematized flow breccia.
- 2) Rhyolitic volcanic rocks: light gray-green-buff, massive to thickly bedded crystal tuff, tuff, lapilli tuff, lithic tuff, breccia and minor spherulitic flows. The basal contact with the basaltic unit is sharp. This unit is interbedded with the overlying carbonate unit near the top of the sequence.
- 3) Carbonate-rich rocks: white, massive, crystalline limestone that locally includes small reefoid bodies containing solitary corals, brachiopods, algae and spongiomorphs. The massive limestone forms isolated lenses within light to dark gray, variably impure lime sandstone, siltstone and grit (lime sandstone, siltstone and grit are rocks composed of more than 50 per cent carbonate grains of sand, silt and granule size respectively) commonly mixed or interbedded with rhyolite tuffs or quartzo-feldspathic sandstone, siltstone and argillite. It has a gradational contact with the rhyolite unit below and clastic sedimentary units above.
- 4) The Clastic Sedimentary Unit is subdivided into:
  - a. Biotite rich volcano-sedimentary rocks: an inhomogeneous mixture of siltstone, sandstone, conglomerate, grit and mudstone composed of angular fragments of rhyolitic volcanic rocks and quartz and feldspar crystals in a biotite-rich matrix, commonly interbedded with carbonate-rich rocks and locally including rhyolitic pyroclastic rocks.
  - b. Magnetite-bearing volcano-sedimentary rocks: an inhomogeneous mixture of conglomerate, sandstone, grit and siltstone composed of angular fragments of rhyolitic and basaltic-andesitic volcanic rocks and feldspar and quartz crystals in a biotitic, locally magnetite-rich matrix and locally including basaltic-andesitic volcanic rocks.
  - c. Quartzo-feldspathic sedimentary rocks: massive dark gray-brown sandstone and siltstone composed of quartz and feldspar crystals and volcanic rock fragments in a quartz-feldspar-biotite matrix. This unit is gradational into the biotite-rich volcano-sedimentary rocks.

This sequence is intruded by:

- a) Coyle stock: two plugs, one granodiorite the other a quartz feldspar porphyry. These are considered to be related to the Coyle Stock which occurs on the southern part of Promontory Hills. The granodiorite is adjacent to and cut by the west embayment fault and is composed of medium to coarse grained hornblende biotite granodiorite locally with a porphyritic biotite diorite margin. The quartz feldspar porphyry plug underlies a large part of the Betty Lou block near the western claim boundary. It is composed of rounded clear quartz and euhedral plagioclase crystals in an aphanitic rhyolite matrix. It shows complete textural gradation into the adjacent rhyolitic volcanic rocks and is thought to be the subvolcanic equivalent of the rhyolite.



- b) Guichon Creek Batholith: the border phase of the Guichon Creek Batholith intrudes and hornfelses the Nicola Group north of the mine area. Small homogeneous fine-grained biotite hornblende diorite plugs, thought to be related to the batholith, occur locally within the Nicola Group. In the mine area, the border phase is a fine-medium grained biotite hornblende diorite-quartz diorite that is weakly foliated and carries partly digested blocks of Nicola Group rocks. One plug in the Betty Lou area appears to cut the Coyle quartz-feldspar porphyry plug.
- c) Kingsvale(?) Dykes: a variety of dykes thought to be related to the “Kingsvale” cut the Nicola Group. These include hornblende quartz plagioclase porphyry, hornblende needle andesite and basalt.

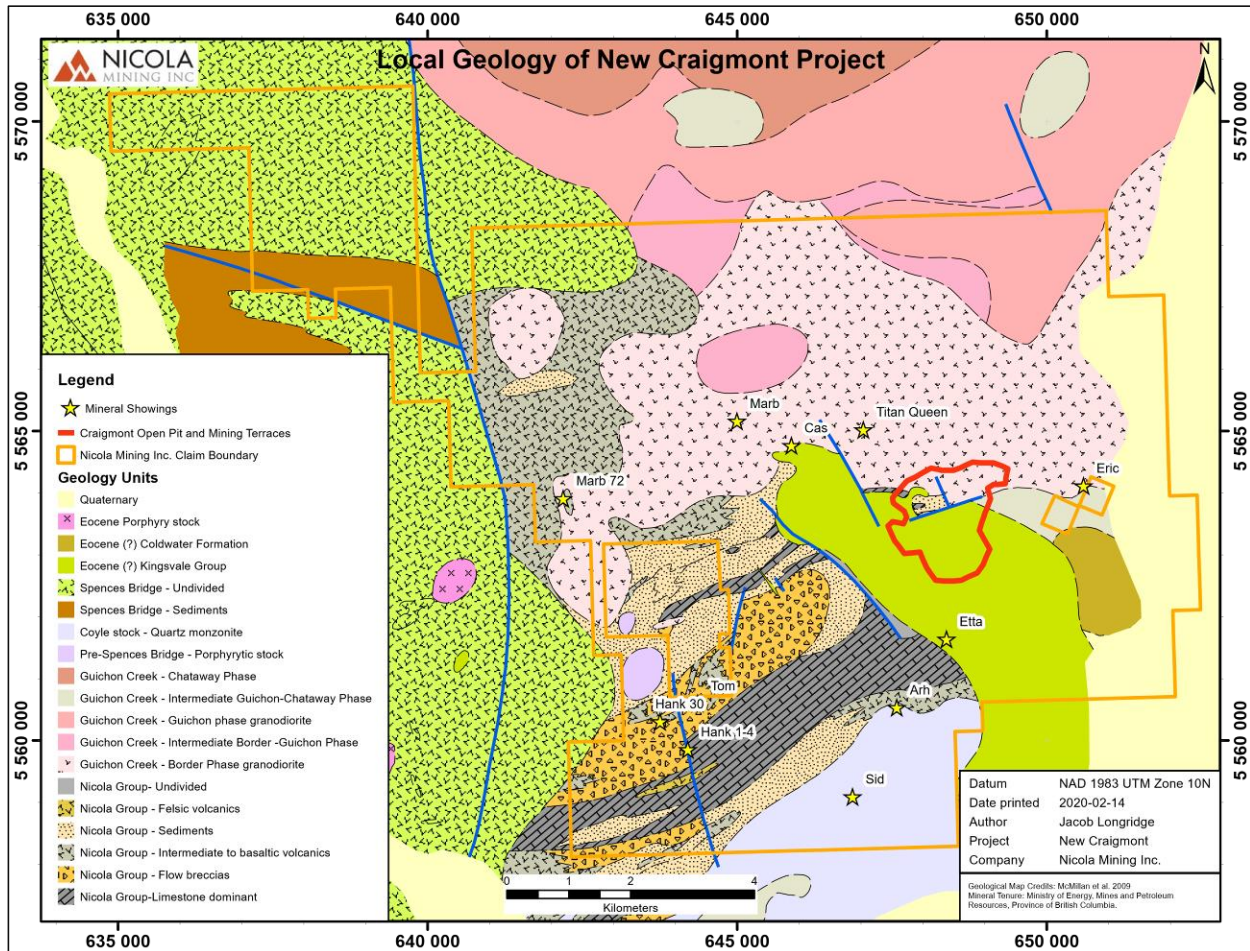
### 7.2.2 Structure

Complex facies relationships and a dearth of sedimentary structures suitable for top determinations make resolution of the structure challenging to determine. The overall structural trend is ENE, parallel to the margin of the Guichon Creek batholith, rather than NNW, which is the regional structural trend. (McMillan, 1978) defined a large overturned, sub-isoclinal anticline with a northeast trend and shallow northeast plunge passing through the centre of the thick basaltic unit south of the Promontory Hill Lookout

There is a general similarity between the sequence of units north and south of the anticline axis and sedimentary structures indicating facing directions in both areas. The varied plunge of minor folds and their apparent restriction to limy horizons suggest there may have been some local syn-depositional deformation. Two main fault sets have been recognized in the mine area:

- a. Two faults with a northwesterly trend bound the area known as the Embayment zone, which separates the Mine block from Promontory Hills. A thick section of Kingsvale volcanic rocks occurs within the embayment, however is thinner or absent in adjacent areas. A dacite porphyry dyke occupies a northwest trending fault northeast of Promontory Hill Lookout, suggesting that the northwest-trending fault set is of “Kingsvale” age. The east embayment fault has right-lateral displacement approximately 450 m and no known vertical displacement.
- b. A single NE-trending fault east of the Promontory Hill Lookout terminates at its southern end in the Basalt unit and at its northern end in the Carbonate unit. The intervening units are of different thickness on either side of the fault. This suggests that the fault is syn-depositional with the enclosing rocks and hence of Upper Triassic age (McMillan, 1978).

**Figure 7.2: Local Geology Craigmont Project**



Source: Nicola Mining: Feb 14, 2020

### 7.3 Mineralization

The skarn mineralization at Craigmont Mine can be summarised into three general assemblages, based on mineral associations with iron oxides, (Drummond, 1966)):

1. Garnet-epidote-(actinolite)-calcite-quartz-specularite-(pyrite).
2. Actinolite-epidote-(chlorite)-calcite-quartz-magnetite-specularite-chalcopryrite.
3. Actinolite-epidote-(chlorite)-calcite-quartz-magnetite-chalcopryrite.

**Figure 7.3:** Skarn Mineralogy: Mineral paragenesis with associated iron oxide phases (Drummond, 1966)

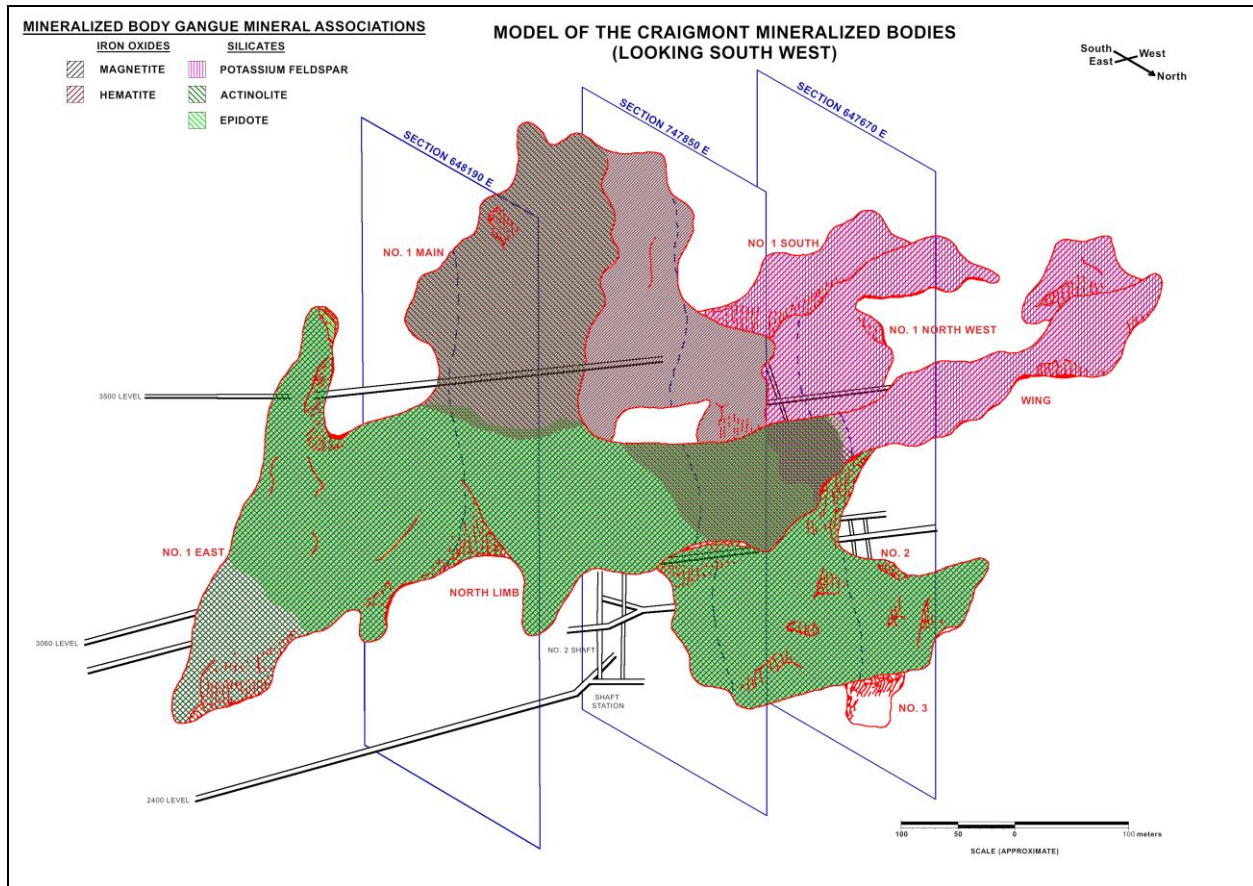
	Specularite	Specularite - Magnetite	Magnetite
Garnet	—	— — —	—
Epidote	—	—	—
Actinolite	—	—	—
Diopside	—	—	—
Chlorite	—	—	—
Quartz	—	—	—
Calcite	—	—	—
Chalcopryrite	—	—	—
Pyrite	—	—	—

The major sulphide, chalcopryrite, is more abundant in the reduced actinolite-magnetite assemblage relative to the oxidized garnet-specularite assemblage. This direct association of magnetite and chalcopryrite allows for magnetics to be a very successful tool in exploring for magnetite-chalcopryrite mineralization.

### 7.4 Distribution of skarn rocks

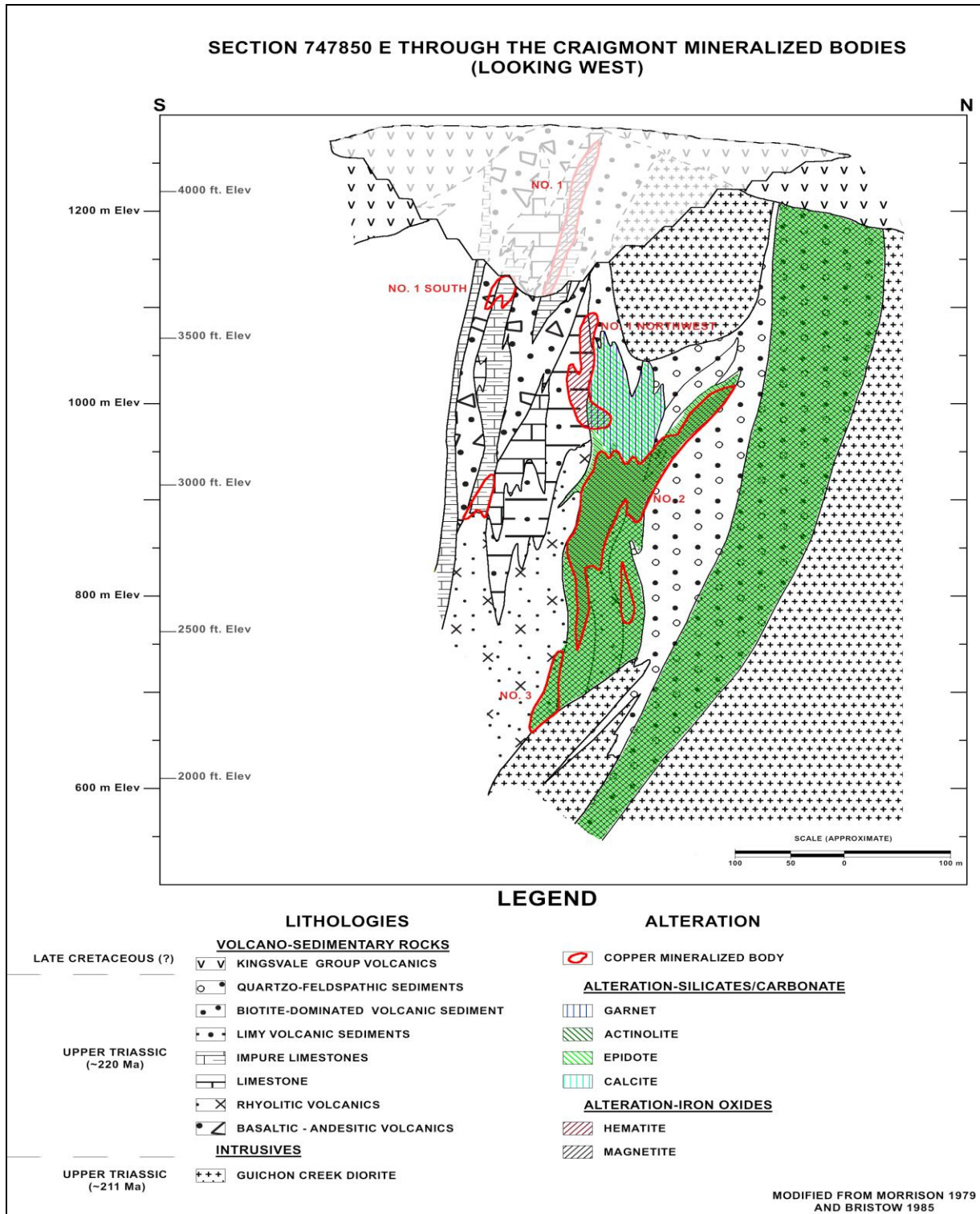
The general distribution of copper ore defines a rough fold with a W-E trend, with skarn mineralization restricted to narrow steeply south dipping zone (Figure 7.4, Figure 7.5) which has been inferred to parallel the geological contact of the Guichon diorite. A zone of hornfels separates the skarn rocks from the main diorite intrusion, with smaller diorites plugs, inferred to be related to the Guichon Creek batholith, intruding the skarn rocks (Figure 7.5). The general distribution of alteration minerals related to the skarns suggest a garnet-actinolite-marble zonation outward from the diorite (Figure 7.5), however this relationship is not consistently observed to surround all diorite plugs (Drummond, 1966).

**Figure 7.4:** Schematic model of the major mineralized bodies at Craigmont Mine (modified from Morrison, 1979).





**Figure 7.5: Schematic Cross Section: Along 747850 E: Craigmont Mine.** Section highlights the distribution of copper mineralization and alteration.



Source: Nicola Mining, 2020

Two distinct stages of skarn development are recognized. Stage I skarns contain only relics of the host rocks; Stage II skarns contain relics of both Stage I skarns and of host rocks.

## **7.5 Stage I skarns**

Stage I skarns are characterized by abundant bleached and unaltered relics of the host rocks as well as by the following associations: magnetite with chalcopyrite in ore-bearing magnetite-rich and actinolite-epidote-magnetite skarns; epidote with garnet in barren banded epidote-garnet skarn; and barren massive garnet-epidote-calcite-pyrite skarn.

### **Magnetite-Rich Skarn**

Fine- to medium-grained skarn containing 10 to 90% fine grained euhedral magnetite in a matrix of granular epidote and felted actinolite with interstitial quartz, calcite and chalcopyrite has developed in basaltic tuffs and flows that are intercalated with the Interbedded facies of the Carbonate Unit in the central and eastern part of the mine.

### **Massive to Banded Actinolite-Epidote-Magnetite Skarn**

Fine-grained, dark grey-green, massive to banded actinolite-epidote-magnetite skarn occurs in the interbedded facies adjacent to the Massive Limestone facies of the Carbonate Unit in the western part of the mine. The skarn consists of euhedral or granular magnetite, felted actinolite and crystalline epidote with interstitial calcite, quartz, chalcopyrite and chlorite. The massive skarn occurs closest to the Limestone Unit replacing argillite, siltstone or lime sandstone, of which only a few relicts remain. The banded skarn occurs further away from the Massive Limestone facies than the massive skarn. It commonly contains remnants of bleached and partly skarnified siltstone and may grade into weakly mineralized rock containing alternating bands of actinolite-epidote-magnetite skarn, bleached siltstone and dark-coloured siltstone rich in biotite and pyrite. Magnetite-poor actinolite-epidote skarn occurs in the interbedded facies in the central and eastern part of the mine and locally in limy portions of the Clastic Sediment unit.

### **Barren, Banded Epidote-Garnet Skarn**

Fine-to coarse-grained, banded epidote-garnet skarn with minor pyrite, actinolite and magnetite and abundant relics of rhyolite tuff or limestone occurs sporadically within the interbedded facies of the Carbonate unit where it grades into the Rhyolite unit. A similar assemblage has developed in the carbonate-rich matrix of some rhyolite lapilli tuff. Thin argillite or siltstone beds associated with thick beds of lime sandstone in the interbedded facies or in the Massive Limestone facies have been partly converted to garnet-epidote or actinolite skarn.

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**Barren Massive Garnet-Epidote-Calcite-Pyrite Skarn**

Massive, coarse to very coarse-grained skarn consisting of garnet and epidote with interstitial calcite, pyrite and locally diopside has developed in massive limestone adjacent to diorite plugs and where the Massive Limestone facies tapers out in the central part of the mine.

**7.6 Stage II Skarn**

Mineralized Stage II skarn is characterized by the presence of specular hematite that either co-exists with or replaces magnetite in Stage I skarn. Barren Stage II skarn is composed of massive garnet which replaces Stage I skarn in the vicinity of diorite plugs.

**Specular hematite-Rich Skarn**

Coarse to very coarse-grained platy specular hematite co-exists with and in part veins and replaces magnetite in actinolite-epidote-magnetite skarn. The skarn locally contains angular fragments of actinolite-epidote-magnetite skarn and bleached siltstone. There is a complete gradation between massive actinolite-epidote-magnetite skarn and brecciated specularite-rich skarn in the No. 2 orebody, and between specularite-rich skarn and brecciated hornfels ore in the western half of the No.1 orebody.

**Massive Garnet Replacement Skarn**

Massive, very coarse-grained garnet skarn veins and replaces actinolite epidote-magnetite skarn in the lower and eastern part of the mine, particularly near the diorite plug which intrudes the Carbonate unit. The garnet is commonly co-associated with coarse-grained epidote and vug-filling calcite quartz, specularite, pyrite, magnetite and chalcopyrite. Relics of fine-grained epidote-actinolite and actinolite-epidote-magnetite skarn are common. Skarn and hornfels up dip from massive garnet replacement skarn invariably contain breccia and/or veins composed of specularite, quartz and calcite, locally with chalcopyrite, K-feldspar, chlorite, tourmaline and platy magnetite.



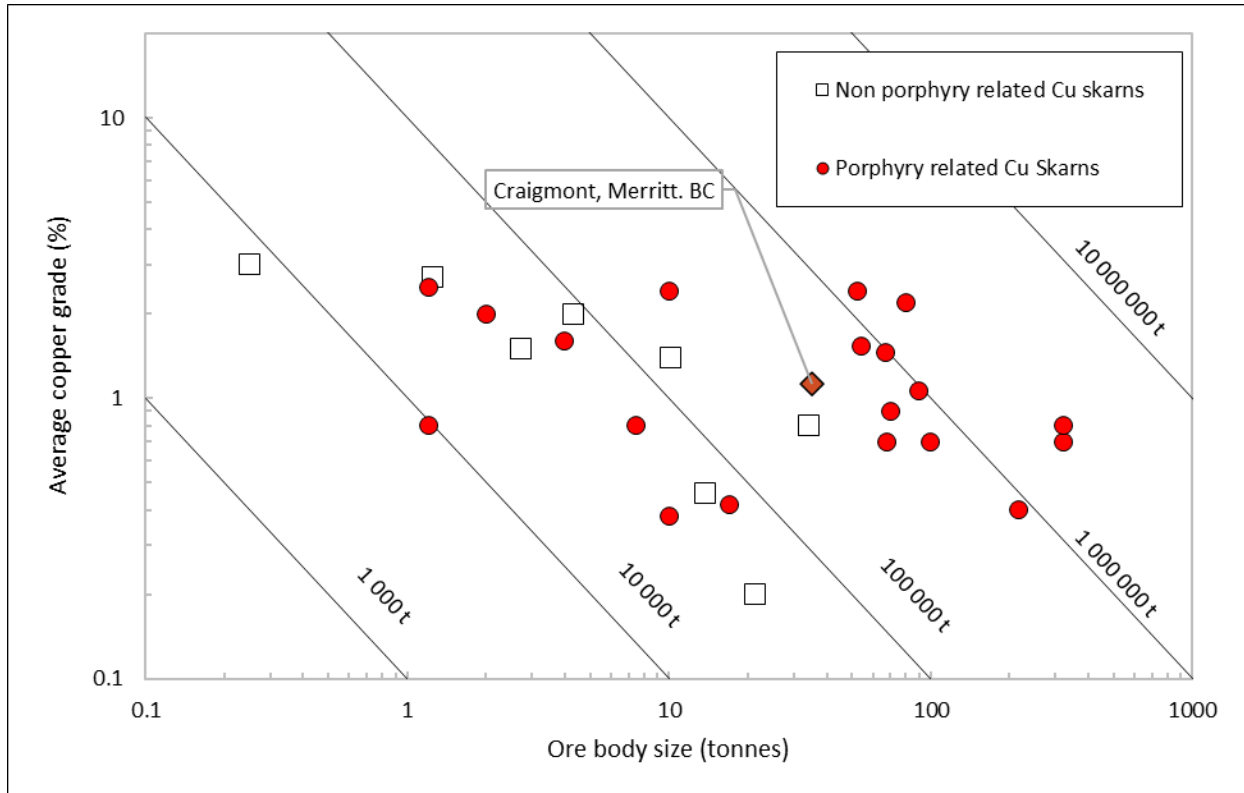
## 8.0 DEPOSIT TYPES

The precise origin of the Craigmont Cu skarn is uncertain. The proximity of the Craigmont Mine skarn to the Guichon Creek Batholith suggests a spatial and genetic relationship. However, the deposit model used during the operation of the Craigmont Mine was that the ore metals were derived from local Nicola Group rocks rather than the intrusion (Morrison G. W., 1980).

Mass balance calculations used to model an ore body of equivalent size as the Craigmont skarn, derived from the redistribution of metals from local siltstones requires approximately 90 million tons of siltstone, grading 10% Fe. Approximately 3.2 billion tons of siltstone grading 220 ppm Cu would be required to explain a locally sourced copper ore (Morrison G. W., 1980). This mass balance model brings into question the validity of this locally sourced model as it would require an exceptional mechanism for copper concentration (a concentration ratio of approximately 8000). Alternatively, an anomalous pre-existing concentration of Cu at the site of the orebody or input of Cu from an external source. Neither of these models have been proven. The apparent size and tonnage of Craigmont appears to be similar to those of porphyry-related skarns, than non-porphyry related copper skarns, and thus has been grouped with porphyry-related (Dawson & Kirkham 1996).

Despite the uncertain origin of ore metals, the deposit type is characteristic of a skarn deposit. The skarn assemblage is controlled primarily by the facies variations within the carbonate-rich horizons. The Carbonate Unit, particularly the interbedded facies within this unit is replaced by chalcopyrite-iron oxide ore with zonation of garnet-actinolite-chlorite-epidote within the unit. An intriguing observation is that the alteration zonation appears to occur along strike within the Carbonate Unit, parallel to the contact with the Guichon Creek Batholith with little to no zonation away from the contact. The question of whether Craigmont is porphyry-related, has consistently been debated, despite the abundant diorite plugs.

**Figure 8.1:** Ore-tonnage plot of porphyry and non-porphyry related skarns (Dawson & Kirkham, 1996).

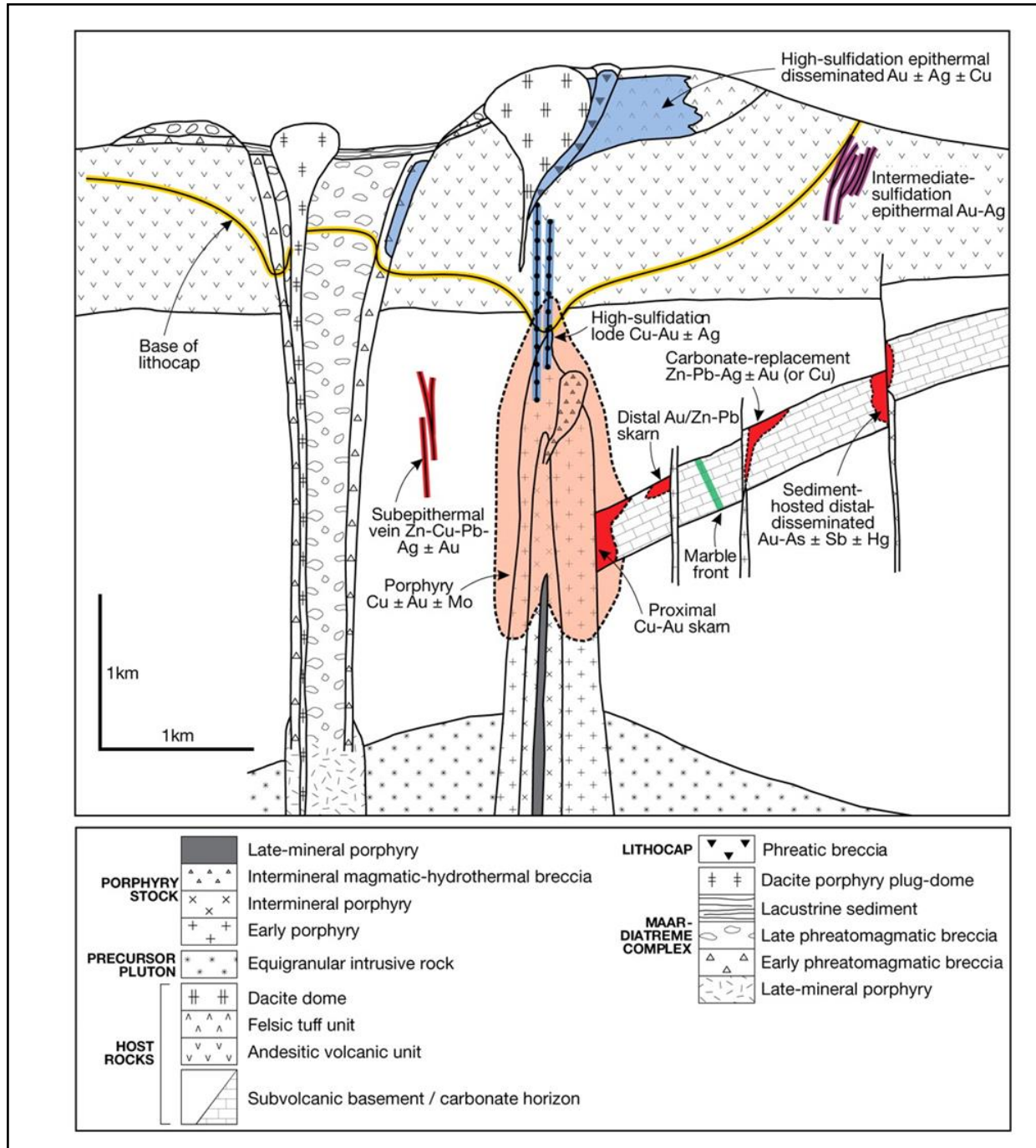


The copper showings on the Craigmont claims display both porphyry and skarn-styles of mineralisation. Occasional showings of galena and sphalerite have been reported, but little compilation work has been done to consolidate these into a regional geological framework.

Substantial research into the genetic relationships between porphyry, skarns and epithermal deposits, since the Craigmont Mine shut down has been completed however this research demonstrates the spatio-temporal relationships between these deposit types (Figure 8.2, Sillitoe, 2010).

In the Canadian Cordillera, copper skarns have a variable morphology, due to the mineralisation being controlled by pre-skarn structure and host rock permeabilities. Most copper skarns are controlled by intrusive margins, sedimentary lithologies and fault structures (Ray, 2013).

**Figure 8.2:** Anatomy of a telescoped porphyry Cu system: Showing spatial interrelationships of a centrally located porphyry Cu  $\pm$  Au  $\pm$  Mo deposit and its immediate host rocks; peripheral proximal and distal skarn, carbonate-replacement (chimney-manto), and sediment-hosted (distal-disseminated) deposits in a carbonate unit and subepithermal veins in non-carbonate rocks (Sillitoe, 2010).



## 9.0 EXPLORATION

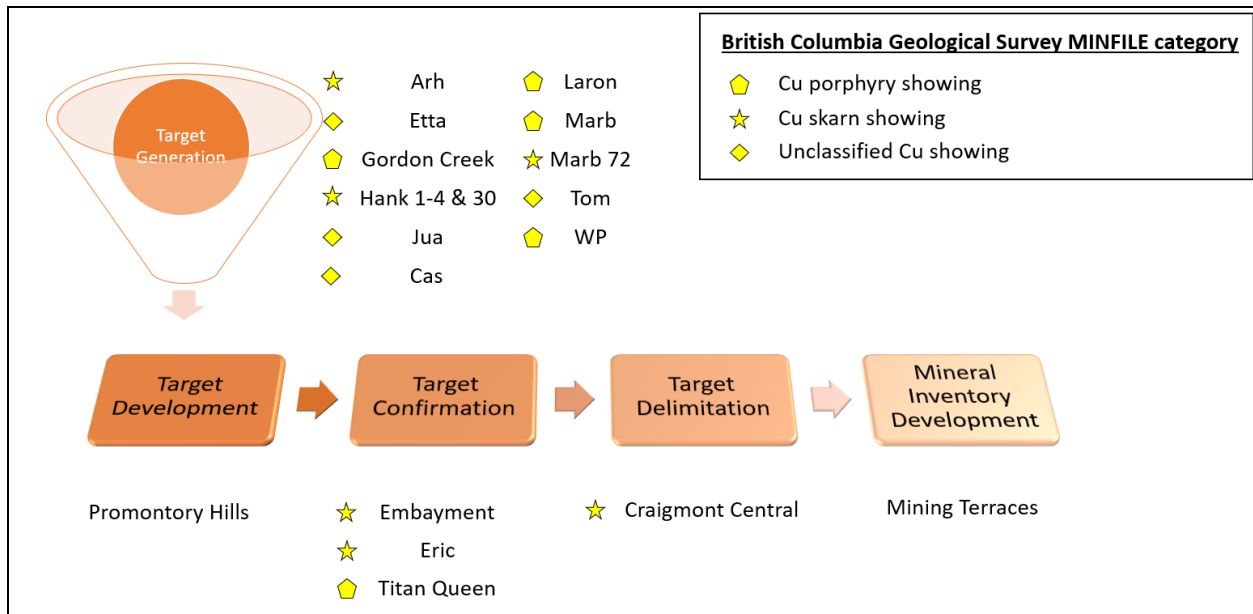
The project area has a long history of exploration. Records of the early work are sparse but greatly improved in the later years of Craigmont Mine's Limited operation post 1960's. Available and known exploration data is partially compiled, periodically, over the last few years. Of the known prospects, only two have had testing by drilling (the Titan Queen and Eric). Since the formation of Nicola Mining in 2015, most exploration work completed has been through drilling, IP surveys and grab rock samples. Airborne and ground geophysical surveys combined with property scale and more localized mapping were carried out and have provided an insight into the characteristics and controls of mineralization.

The primary objective of exploration of the New Craigmont Project is to advance the project to discovery by utilising an exploration pipeline approach (Figure 9.1). This approach allows NIM to prioritise targets in terms of the level of confidence and geological understanding of each target. This integrated approach is utilized to minimize the risks associated with discovery. The highest priority exploration targets are those which require verification of historic work.

Target development and target confirmation drilling aims to test copper targets deemed to have sufficient evidence for hosting significant mineralisation on the project land package (Figure 9.1).

Target generative work is considered the lowest priority in the exploration pipeline. Exploration activities on these targets is centered around identifying the mineralization potential in the context of the broader geological framework. Those targets which show the highest potential are developed further.

**Figure 9.1:** Exploration pipeline at the New Craigmont Project.



Source: Nicola Mining, 2020

## 9.1 Target Delimitation

Craigmont Central is considered the highest priority target area on the project. The Craigmont Central is an area that encompasses the Craigmont Mine and the surrounding footprint of the historic waste piles (Figure 7.2).

The Craigmont Central area (Figure 9.1) has multiple exploration targets that require delimitation drilling. These targets require:

1. Definition drilling of the low-grade material located in sub-level caves (Bristow J. F., 1985);
2. Delineation of the extent of the no. 3 mineralized body;
3. Definition of the areas north and south of the Open Pit to test for copper mineralization beyond the Carbonate-rich units, and;
4. Extending the Craigmont skarn west of the current open pit towards the Embayment Fault.

Targets 1 and 2 are discussed in more detail in section 6.1 of this report. These targets summarize J. F., Bristow's (1985) work. This report is utilized to demonstrate the near-mine exploration potential.

To this extent the targets are followed up with:

1. Underground mine evaluation.

## 2. Testing the inferred limits of the no. 3 mineralized body.

Historically, the precise location and displacement along the embayment fault has been considered suspect, owing to conflicting information (Morrison G., 1979). In order to explain variations in the geology between sections it is necessary to have a fault trending 350 (N10 W), near vertical with a dextral displacement with essentially no vertical displacement. Little work has been done on understanding the geology west of the mine workings and out to the east of the embayment fault.

Recent geological mapping has inferred the contact between the Guichon Creek Border phase and Nicola Group sediments to have an approximate W-E trend, with strong biotite-magnetite alteration occurring at this margin. Previous drilling in this area, from the 3060 exploration drift and from surface (on section 6815, 6465 and 6000), defined the stratigraphy of the area and located a massive limestone, clastic carbonate boundary. A recent aeromagnetic survey (discussed in section 9.6) conducted over the property indicates a strong NW-SE trending magnetic low which corresponds with the location of the embayment fault. Processing of this magnetic survey identified two W-E trending Craigmont-type geophysical anomalies.

Drill testing of this area during 2018 focused primarily to the north of the open pit and drilled across stratigraphy from the north towards the open pit. This drilling was designed to test a previously untested corridor between the mine and the contact with the Guichon batholith. Of the eight holes drilled, three intersected copper mineralization considered to be of significance. These results are summarized in Table 9.1. Holes CC-18-01, CC-18-05 and CC-18-08 had no significant copper mineralization while hole CC-18-06 was unsampled and hole CC-18-07 was abandoned due to drilling issues.

The higher-grade mineralization intersected during the 2018 program appears to represent the extension of the Craigmont Skarn. Additional mineralization intersected within a hornfelsed wacke unit was formerly not considered to have any economic value. This observation creates an exploration target beyond the limestone and “limey” sediments located along strike and proximal to the historic Craigmont pit.

Drilling during the 2019 program consisted of three holes targeting the extent of the No. 3 mineralized body located along the southern portion of the Craigmont open pit. These three holes (CC-19-71, 72 and 73) were successful in intersecting the unexploited and incompletely delineated No. 3 mineralized body. The 2019 drill results are summarized in Table 9.1.

Geologically the No. 3 mineralized zone is comprised of silicified wacke with moderate potassium feldspar (k-spar) alteration. Chalcopyrite mineralization is fine-grained and occurs as thin irregular veinlets associated with k-spar alteration and disseminated along preferential foliation fabric. A second mineralized zone was intersected at a shallower depth in hole CC-19-72 (“Upper Zone”), south of the open pit. This Upper Zone is identified by the strong chlorite-carbonate alteration with minor brecciation. The chalcopyrite occurs as thin irregular veinlets associated with the alteration and minor dissemination in the host wacke.

Results from the drilling in this area indicate further exploration is warranted to evaluate the potential of the No. 3 mineralized zone to host mineralization of economic value.

**Table 9.1: Craigmont Central Drill Results**

Hole ID	Azimuth	Dip	From (m)	To (m)	Interval (m)	Cu (%)
<b>Craigmont Central</b>						
<b>CC-18-02</b>	180	-75	249.50	326.10	76.60	1.04
incl.			267.50	301.15	33.65	2.13
<b>CC-18-03</b>	180	-80	102.50	191.50	89.00	0.24
<b>CC-18-04</b>	180	-80	145.00	151.60	6.00	0.55
			174.00	237.40	63.40	0.35
<b># 3 Mineralized Body</b>						
<b>CC-19-71</b>	357	-68	607.50	622.50	15.00	1.01
<b>CC-19-72</b>	358	-57.5	389.00	423.00	34.00	0.28
incl.			397.00	400.10	3.10	1.11
<b>CC-19-72</b>	358	-57.5	647.00	691.00	44.00	0.45
incl.			653.00	659.00	7.00	1.63
<b>CC-19-73</b>	356	-64	642.00	656.00	14.00	0.37

Source: Nicola Mining Press Release, July 24, 2019

## 9.2 Target Confirmation

Craigmont West is an area located to the west of the Craigmont open pit and includes the Embayment, Marb and Titan Queen showing areas. The Embayment zone is defined as the area west of the embayment fault. This area is largely covered by a thick sequence of Kingsvale clastics.

Exploration at Craigmont West, in particular the Titan Queen (Paystin) has seen renewed interest commencing in 2015 with the sampling of trenches. Reconnaissance geological mapping showed that the alteration and coincident azurite and malachite mineralization at surface appears to have an ENE-WSW trend. A series of trenches reveal granodiorite/diorite. Additional chip sampling is required at this showing.

Historic drilling at Titan Queen includes holes S-80 to S-84 inclusive. These holes have minimal overburden (4 to 6 m) and have been drilled to a maximum depth of 132 m. Results from this drilling are summarized as follows:

- S-80 – not assayed. Tourmaline breccia from 18-23 m. Drilled south at -34° away from mineralization.
- S-81 – copper intersected from 10-22 m at 0.4% copper. Drilled approximately south at -45°.
- S-82 – tourmaline vein 25-27 m = 0.3% copper. Vertical hole.
- S-83 – drilled south at -35 degrees. 23-26 m = 0.86% copper. Drilled south -45°. Quartz-tourmaline vein.
- S-84 – No samples or mineralization. Drilled northeast at -65°.



Drilling at Titan Queen in 2016 consisted of two holes, THU-003 and THU-004. Results from this drilling are summarized in Table 9.3. This drilling encountered alteration and mineralization features commonly observed in association with porphyry style copper deposit, including the Highland Valley porphyry complex located 50 km north of Craigmont.

Drilling at Embayment Zone by Nicola in 2017 and 2018 totalled eight diamond drill holes for a total of 4436 m. This drilling was designed to follow up on copper mineralization (85.92 m of 1.11% Cu) intersected in hole DDH-THU-002 that was drilled in 2016 by Nicola, test the continuity of the zone to the west and at depth as well as gain further understanding of the lithologic sequence and its control on mineralization.

Out of the eight holes drilled, six successfully intersected skarn mineralization within an approximately 200 m long segment of the Craigmont West zone (Table 9.2), and the final hole NC-2018-03 intersected the entire width of the zone from 292.7 to 393.3 m downhole.

The Embayment Fault cuts mineralization where it was exposed in the underground development and displaced the mineralized zone on the west side of the fault to the north by approximately 300 m. Underground development extends to within 150 m of the Craigmont West Zone before low copper prices forced the mine to close in 1982 and exploration ceased. Exploration of the Craigmont West Zone, which remains open along strike (west) and at depth has been the focus of the drilling programs executed by the Company in 2016 and 2017-2018.

Integration of the drilling results with historical data is on-going by Nicola's geological team. Once complete, a follow-up drill program will be designed to expand the mineralization zone encountered in the current drill program and test other targets identified within the Craigmont West Zone.

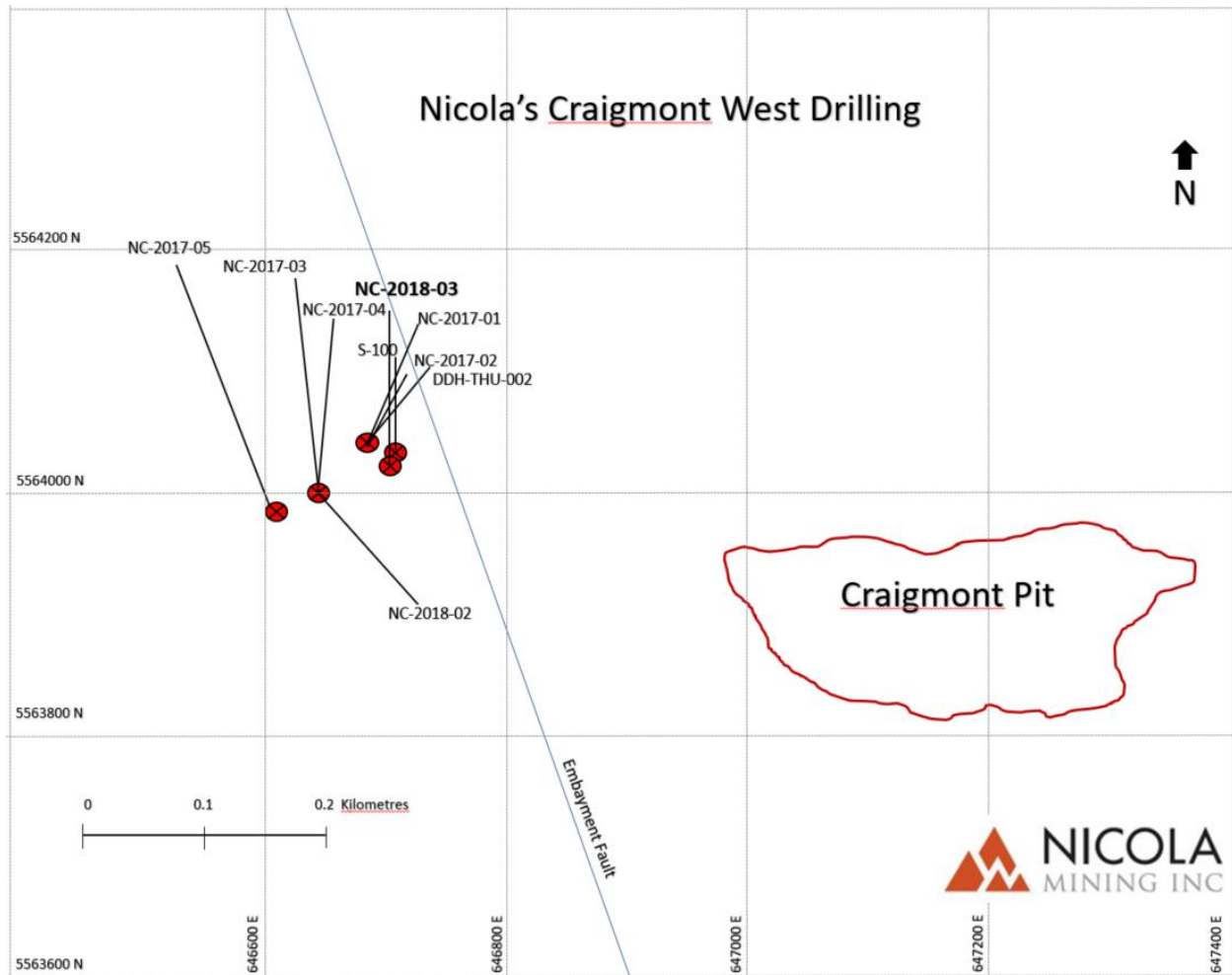
**Table 9.2:** Craigmont West Drill Results

Hole ID	Azimuth	Dip	From (m)	To (m)	Interval (m)	**Estimated True Width (m)	Cu (%)
THU-002	40	-60	300.65	331.08	30.43		0.11
		<i>and</i>	331.08	417.00	85.92		1.11
		<i>incl.</i>	331.08	343.50	12.42		1.77
		<i>incl.</i>	372.65	386.50	13.85		2.71
		<i>incl.</i>	378.80	380.00	1.20		4.08
		<i>incl.</i>	415.00	417.00	2.00		3.85
NC-2017-01	30	-70	252.0	261.0	9.0	3.1	0.3
			464.0	468.0	4.0	1.4	1.1
NC-2017-02	50	-55	300.5	301.9	1.5	0.8	0.7
NC-2017-03	10	-55	444.0	463.0	19.0	10.8	0.3
		<i>incl.</i>	460.0	463.0	3.0	1.7	0.8
			508.0	526.0	18.0	10.3	0.4
			550.0	554.0	4.0	2.3	0.8
			568.0	574.0	6.0	3.4	0.8
NC-2017-04	0	-55	438.0	470.0	32.0	18.2	0.3
		<i>incl.</i>		452.0	10.0	5.7	0.6
			540.0	550.0	10.0	5.7	0.6
NC-2017-05	<i>No Significant Intercept</i>						
NC-2018-01	30	-57	316.3	387.6	71.4	38.7	0.6
		<i>incl.</i>	341.0	357.0	16.0	8.6	1.3
NC-2018-02	<i>No Significant Intercept</i>						
NC-2018-03	357	-59	292.7	393.3	100.6	50.3	1.33
		<i>incl.</i>	294.8	335.0	40.2	20.1	2.52
		<i>incl.</i>	294.8	309.8	15.0	7.5	5.18

\*\* Assumes the Craigmont West Zone is dipping Vertical

Source: Nicola Mining Press Release, April 8, 2019 & April 2, 2018

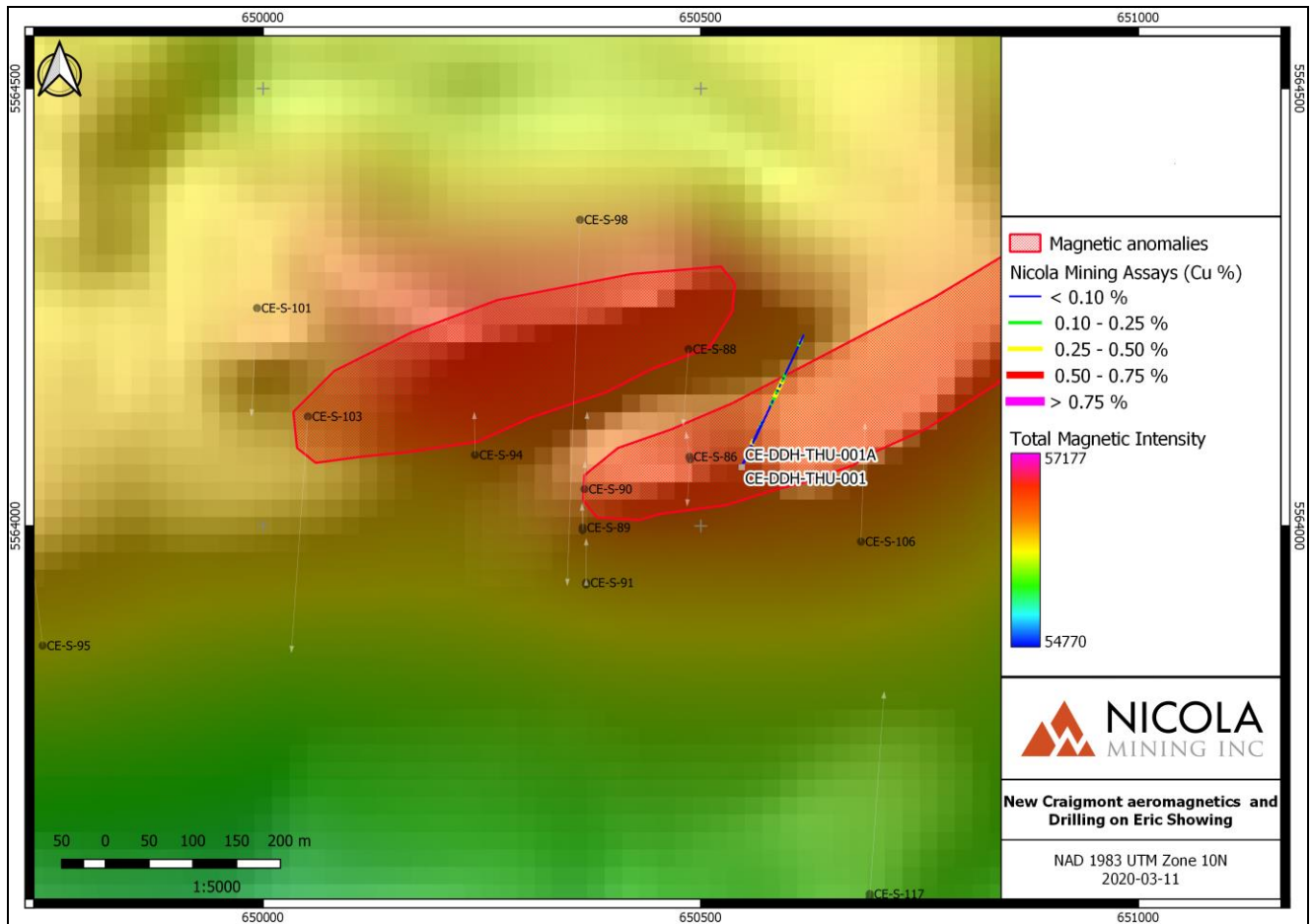
**Figure 9.2: Craigmont West Drilling: Nicola Mining**



Source: Nicola Mining Press Release, April 2, 2018

The Eric Zone consists of mineralized diorite intrusions and breccia exposed in a 2.1-metre-deep shaft excavated in the 1930's. Prominent north and northwest striking faults cut mineralization. The shaft is located 2.5 km east and along strike of the Craigmont open pit. Previous drilling completed during the 1970's focused on testing magnetic anomalies aligned with the strike of the Craigmont skarn. THU-001 and THU-001A are positioned underneath the shaft where there had been no previous drilling (Figure 9.3). THU-001 was drilled to a depth of 80.47 m and intersected a diorite breccia with short intervals of chalcopyrite mineralization. The hole was abandoned before the planned depth due to difficult ground conditions. THU-001A reached its planned depth of 235 m and encountered chalcopyrite associated with tourmaline, quartz, and brecciated diorite. The results from the 2016 drilling at the Eric showing are summarized in Table 9.3.

**Figure 9.3: Eric Showing Drilling; Nicola Mining**



Source: Nicola Mining, March 11, 2020

**Table 9.3: Drill Results: Titan Queen and Eric Showings**

Hole ID	Azimuth	Dip	From (m)	To (m)	Interval (m)	<b>**Estimated True Width (m)</b>	Cu (%)
<b><u>Titan Queen</u></b>							
<b>THU-003</b>	60	-55	2.40	5.30	2.90		0.55
		<i>and</i>	52.00	54.00	2.00		0.34
<b>THU-004</b>	25	-45	2.44	4.22	1.78		1.3
<b><u>Eric</u></b>							
<b>THU-001</b>	25	-45	43.70	45.72	2.02		0.32
		<i>and</i>	77.60	79.00	1.40		0.24
<b>THU-001A</b>	25	-45	112.85	115.00	2.15		0.13
		<i>and</i>	122.00	135.88	13.88		0.17
		<i>and</i>	141.78	143.70	1.92		0.37
		<i>and</i>	152.28	166.35	14.07		0.15
		<i>and</i>	228.20	229.67	1.47		0.11

Source: Nicola Mining Press Release, Sept 7, 2016

### 9.3 Target Development

Promontory Hills exploration area includes both North and East Promontory, both areas having seen limited exploration over the years. Limited IP surveys in 2017 and 2018 identified drill targets at East Promontory that resulted in the testing of two targets. Two holes EP-18-01 and EP18-02 totaling 781.5 m were drilled on East Promontory in 2018. No significant Cu mineralization was intersected. The IP chargeability anomaly targeted by these holes were interpreted to have been explained by the high amount of pyrite intersected in the holes. This conclusion needs additional interpretation to ensure that the chargeability correlates with the pyrite mineralization.

Additional compilation followed by detailed mapping in 2020 is recommended to advance this target area.

### 9.4 Target Generation

Numerous base metal occurrences have been identified on the property throughout the years of previous exploration and represent the target generation stage within the pipeline of potential exploration targets on the property. These showings fall into 3 main categories of mineralization, porphyry type (Laron, Marb, WP and Gordon Creek), skarn type (Marb 72, Hank 1-4 & 3 and Arh) and un-classified showing types (Tom, Jua, Cas and Etta). Additional investigation of these base metal occurrences is required by NIM geologists in-order to advance these showings to the target development stage within the exploration pipeline.

## 9.5 Geophysical Surveys

In 2005 detailed surface magnetics and IP survey that included a downhole IP component and surface GPS surveying was conducted by JD Semi from Kelowna, BC and Frontier Geosciences based in North Vancouver, BC. The work is summarized in a report by Garth Kirkman P. Geophy of Kirkman Geosystems Ltd. and John Fleming, P. Geo of JDSemi Ltd. dated March 15, 2012. A total of 28 survey lines, each line ranging from 800 m to 1700 m in length were surveyed in a north-south orientation on a local cut grid. Time domain resistivity IP using a pole to pole array as well as dipole arrays of 100 to 200 m in length were completed. Current injection points in boreholes were also utilized. Voltage measures were made on 100 m intervals using a 2 full wave form 8 channel receiver together with a multi-conductor potential cable with 100 m take outs connected to ground porous pots. The 8 dipoles were tested for contact resistance before each reading was taken. A magnetometer survey was carried out in conjunction with this IP survey using a GEM System, GSM-19, portable high sensitivity, Overhauser-effect magnetometer. The unit has a 0.01 nT (nanoTesla) resolution and a 0.2 nT absolute accuracy over its full temperature range. The data collected with this type of magnetometer is a measurement of the earth's magnetic field plus any affect on the secondary magnetic field generated by ferrous objects and/or high concentrations of ferromagnetic minerals.

The 2005 geophysical surveys helped develop exploration targets for further investigation and drill targeting. Areas being the most prospective would have a least one of the following characteristics:

- Magnetic trends + anomalies.
- IP chargeability highs + trends.
- Resistive lows.
- Favorable lithological conditions and skarn occurrences.
- Zones of mineralization evidenced by Copper and Iron assay confirmation.

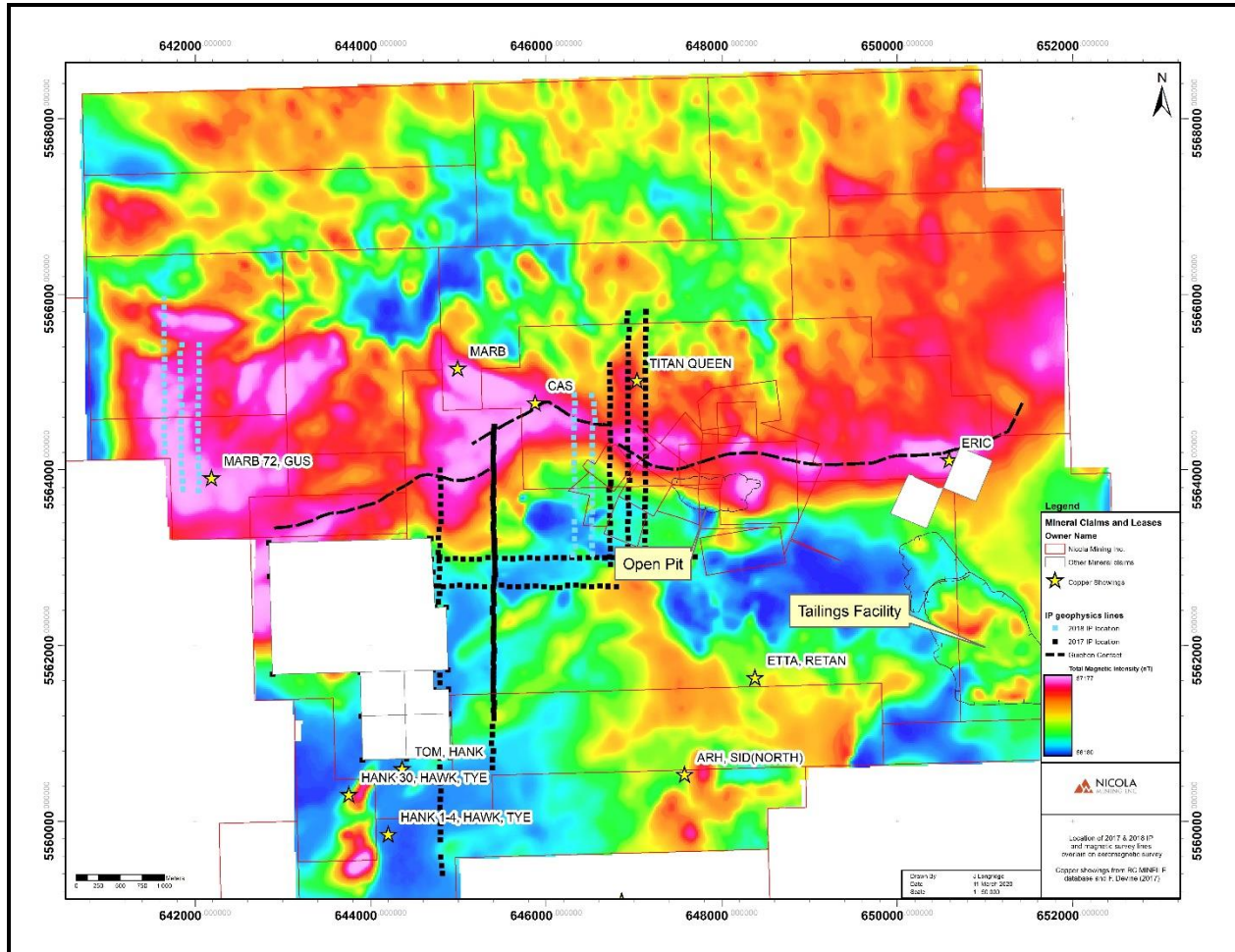
Results from these geophysical surveys in combination with the exploration model produced 5 drill target areas that were tested in 2005.

In November 2016, a review of historic geophysics around Craigmont Central was initiated by Nicola and conducted by Dr. Jules Lajoie, Ph.D. Geophysics of Comtek Enterprises Ltd. The review resulted in a request for digital data, which was subsequently provided by Frontier Geosciences Inc. (Frontier) on its 2005 3-Dimensional (3D) IP survey it had conducted over Promontory Hill (Craigmont Central) in 2005. Given Craigmont Central's potential of mineralization and the significant variance in conductivity and chargeability between host and intrusive rocks the variance utilized in the original 2005 3D model was expanded. The re-interpreted IP data confirmed the presence of an elevated chargeability high that was inferred to be something that could be representative of a porphyry.

To build on the re-interpreted (2005) IP and magnetic data, Scott Geophysics Ltd. conducted pole-dipole IP and total field magnetometer surveys over three areas in 2017 (Table 9.4). A GDD GRx8, 32 channel receiver and a GDD Tx II transmitter (5,000 watts) were utilized to complete the IP survey. Readings were taken in the time domain using a 2 second on/ 2 second off alternating square wave (B. Scott, 2018). An interpretation of this survey was completed and combined with the re-interpreted 2005 data by Dr. Jules Lajoie (Lajoie, 2017). Additional IP surveying was conducted in 2018 over the western portion of the claims, near Marb 72 and west of the WP showing (Figure 9.4). Preliminary review of these surveys suggest stratigraphy in this area may be dipping to the north, which is contradictory to the majority of stratigraphy near the mine, which is typically steeply south dipping. Further work is required to synthesize these geophysical surveys within a geological framework.



**Figure 9.4:** Location of 2017 & 2018 IP survey lines



Source: Nicola Mining, 2020

**Table 9.4:** Total IP survey lines conducted by Scott geophysics in 2017

Grid	IP			Mag
	100/1-8	100/9-12	All	
<b>Promontory Hill</b>	12.5 km	3.2 km	15.7 km	12.8375 km
<b>Titan Queen</b>	8.2 km	0 km	8.2 km	8.2 km
<b>Combined</b>	20.8 km	3.2 km	23.9 km	21.0375 km

Source: Nicola Mining, 2017

In June 2012, Scott Hogg & Associates Ltd conducted a total of 903 km of magnetic gradiometer and spectrometer data by Heli-GT, 3 Axis Magnetic Gradient and Spectrometer Survey. The survey was completed on north-south lines spaced 100m apart with the “bird” being towed 60m below the helicopter. This survey utilized an orthogonal array of 3 cesium magnetic sensors, spaced 3m apart, which allows for the measurement of magnetic gradients, instead of requiring the gradients to be calculated.

SJ Geophysics Ltd. was contracted to provide a geophysical interpretation of this airborne data. The Craigmont deposit coincides with a localized strong magnetic high anomaly immediately south of interpreted contact of the Guichon Creek batholith. The inversion suggests this is a circular, pipe-like body extending from the surface to greater than 300m depth however it is likely that the magnetic signature has been altered from its’ “natural” form by the mining activities. This work identified a number of magnetic anomalies (labeled A through D) which have the potential for magnetite skarn development, similar to that of Craigmont (Figure 9.5) (E. Trent Pezzot, 2012).

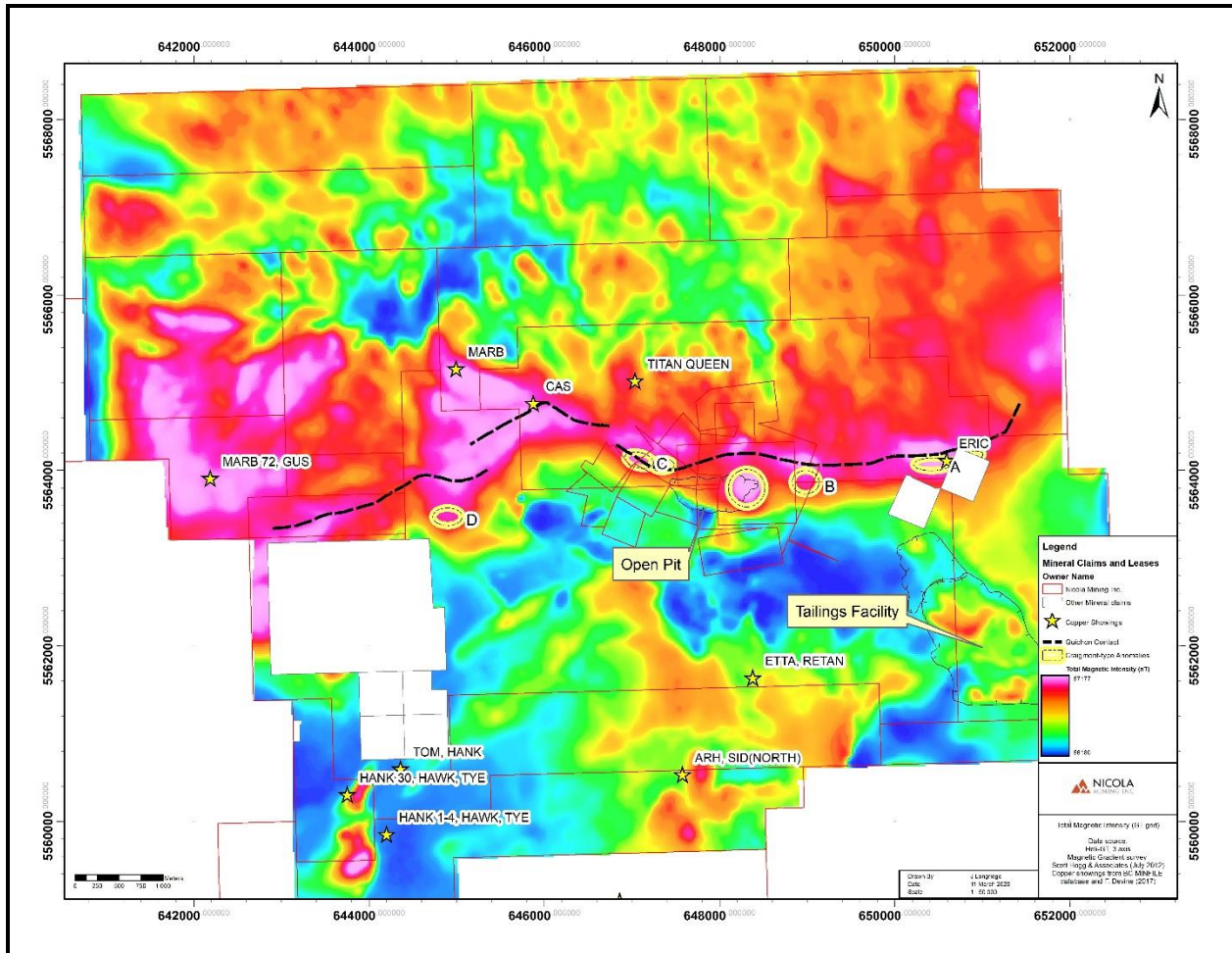
- Anomaly “A” – Located 2000m east of the Craigmont deposit. This anomaly coincides with a geologically mapped lens of magnetite skarn. The airborne signature suggests this zone extends another 350m further east than shown on the geology map. This anomaly is close to the Guichon batholith and the magnetic responses likely interfere with each other. This anomaly appears to be co-incident with the Eric showing.
- Anomaly “B” – Located 650m east of the Craigmont deposit. This subtle response appears as a bulge on southern edge of Border phase response.
- Anomaly “C” – Located 1200m west-northwest of the Craigmont deposit. This anomaly is very close to the “inferred” border phase contact and may be in the Nicola rocks. It is probably comprised of two lobes totaling some 500m strike length.

Located immediately west of anomaly “C” an interpreted northwesterly striking fault coincides with a change in the strike of the border phase unit. At this location there is a slight rotation of the magnetic trend from east west to a more southwesterly strike. This is accompanied by the development of a second magnetic high trend that gradually separates from the mapped border phase and contains Anomaly “D”.

- Anomaly “D” – Located 3500m west-southwest of the Craigmont deposit and 450m south of the batholith.

These four anomalies and other magnetic features along the interpreted contact with the Guichon batholith represent favourable exploration targets that represent Craigmont-style skarn mineralization.

**Figure 9.5:** Airborne Total Magnetic Field Intensity colour contour map – linear distribution. The dashed line indicates the inferred mapped contact between the Nicola Group and Guichon Creek Batholith. Yellow ellipses highlight “Craigmont type” magnetic anomalies.



Source: Nicola Mining, 2020

To date, anomalies B, C and D remain untested. Anomaly A remains open with only 1 complete drill hole near the Eric copper showing which does not explain this magnetic anomaly (THU-001 (hole abandoned) and THU-001A). THU-001A intersected chalcopyrite associated with tourmaline, quartz, and brecciated diorite which does not fully explain this magnetic anomaly.

## 9.6 Geochemical Surveys

Limited geochemical sampling has been completed since the consolidation of the property in 2015. Nicola collected a total of 48 rock grabs from 14 known mineral showings located on the property.

The rock samples consisted of grab samples from road-cut, outcrop and historic trench and shaft dumps. Copper values ranged from trace to 9080 ppm copper. The highest value, 9080 ppm copper sample (0.9% copper), was collected from trench dump material located at the Titan Queen (092ISE034) historic showing. Surface copper mineralization above 2000 ppm was also verified at the Marb (092ISE033), Eric (092ISE036) and the Marb 72 (092ISW037) mineral showings (MINFILES).

Mineralization is primarily hosted: 1) as malachite-mineralization along fracture zones within quartz diorite and potassically altered volcanics, 2) in quartz veins with finely disseminated chalcopyrite within quartz diorite, and 3) within magnetite + epidote skarn-altered limy tuffs with malachite +/- azurite +/- chalcopyrite mineralization.

The WP trenches and Marb 72 zone was last actively explored by Torwest Resources in Limited the 1960's. Previous work consisted of detailed mapping, soil sampling, magnetometer surveys and trenching. The zone was picked out by the 2012 spectrometer survey as a high potassic anomaly. The 2015 Exploration Program consisted of the collection of rock grab samples within the 500 metre long trenching corridor. Mineralized structures in the zone trend north to northwest and consist of fracture-controlled malachite and chalcopyrite with epidote, biotite, orthoclase feldspar, and carbonate alteration. Five grab samples collected in 2015 from the trenches returned elevated copper values with the following highlights:

- 130515-THU-004 returning 5290 ppm Cu and 5.6 ppm Ag.
- 130515-THU-005 returning 6830 ppm Cu.
- 130515-THU-006 returning 5760 ppm Cu.
- 240515-THU-002 returning 3600 ppm Cu.
- 240515-THU-003 returning 1340 ppm Cu.

An additional 53 trench samples were collected from several showings on the property in 2016. Assay results range from 71 ppm Cu to 1.68% Cu. This current program was designed to follow up on the detailed chip channel sampling results from the Eric, WP, and Titan Queen mineral showings 0.52% Cu over 9 m at the Eric Shaft, including 1.3% Cu from 5-6 m from previous programs.

Although several sample geochemical sampling programs were completed on the project a detailed compilation of the results and additional sampling is warranted to test additional targets within the project area.



## 9.7 Geological Mapping

A four-day mapping program in late October 2016 was completed by F. Devine and concentrated the area around the Titan Queen prospect. The area is underlain entirely by strongly magnetic biotite-magnetite bearing diorite to quartz diorite rocks associated with the border phase of the Guichon Creek batholith. Mineralization at the prospect consists of massive magnetite – quartz- chalcopyrite – bornite – chlorite replacement including veined and brecciated sections with intimately associated chlorite alteration. This magnetite +/- chalcopyrite zone can be traced over a 500 m by 150 m area as a series of 1 to 10 m wide near vertical dipping near parallel ribbons through the host diorite. Chlorite +/- epidote alteration decreases in intensity outwards from the core of the magnetite mineralization.

The Titan Queen trend is cut off to the southwest by the Embayment fault, and it is interpreted that the trend is offset to the north on the western side of the fault, similar to the model for the northward displacement of the Craigmont skarn system in the Embayment area.

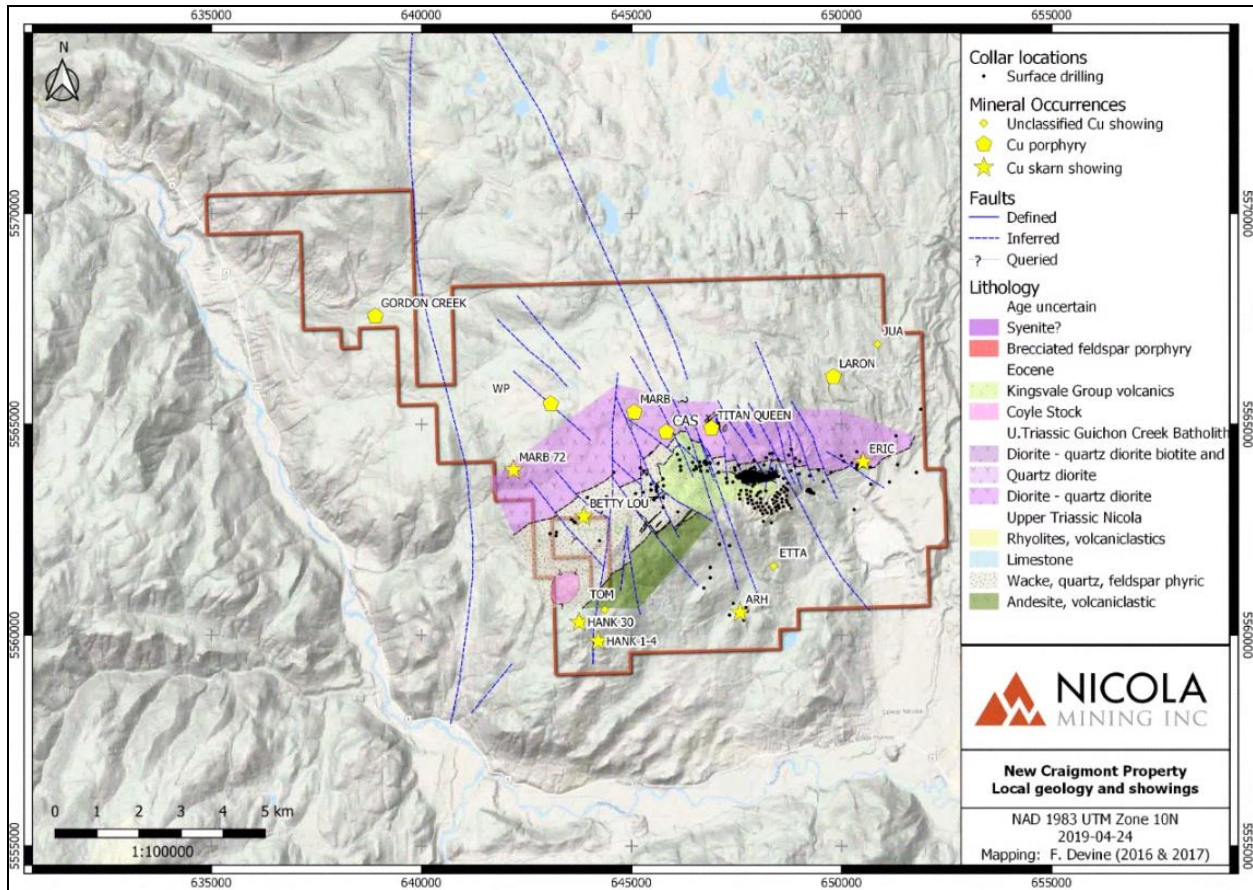
The mapping program was continued in July 2017 by F. Devine and achieved several objectives:

- 1) Mapping was successful in refining the geological knowledge of the calc-silicate Fe-Cu mineralization (the type historically mined at Craigmont).
- 2) A new showing was discovered along recent logging roads, the CAS showing.
- 3) Identification of a new silica-pyrite alteration zone that has been previously unrecognized on the property.

The discovery of the new CAS showing located approximately 1 km to the southwest of the Titan Queen was accomplished during this mapping campaign. The CAS showing is characterized by magnetite breccia, magnetite-chalcopyrite mineralization and calc-silicate alteration within the diorite.

The identification of the new style of silica-pyrite alteration has not been identified on any historic maps and was previously mapped as rhyolite. Pervasive silica-pyrite alteration occurs within the Nicola Group sedimentary rocks along a northeast trending domain in the southwestern portion of the property. The most intense alteration of this type completely replaces the medium to coarse grained wackes and conglomerates with clasts completely pyritized. This alteration occurs near Promontory Hill and trends to the southwest for approximately 2 km and up to 500 m wide. This alteration zone is open to the southwest.

**Figure 9.6:** Recent geological mapping on the New Craigmont Property (F. Devine, 2016 & 2017)



## **10.0 DRILLING**

This report is based on the RC drilling of the historic waste terraces located at the 3060 Portal and Southern historic waste piles. A total of 39 RC drill holes were drilled at the 3060 Portal and 60 RC holes were drilled at the Southern historic waste piles.

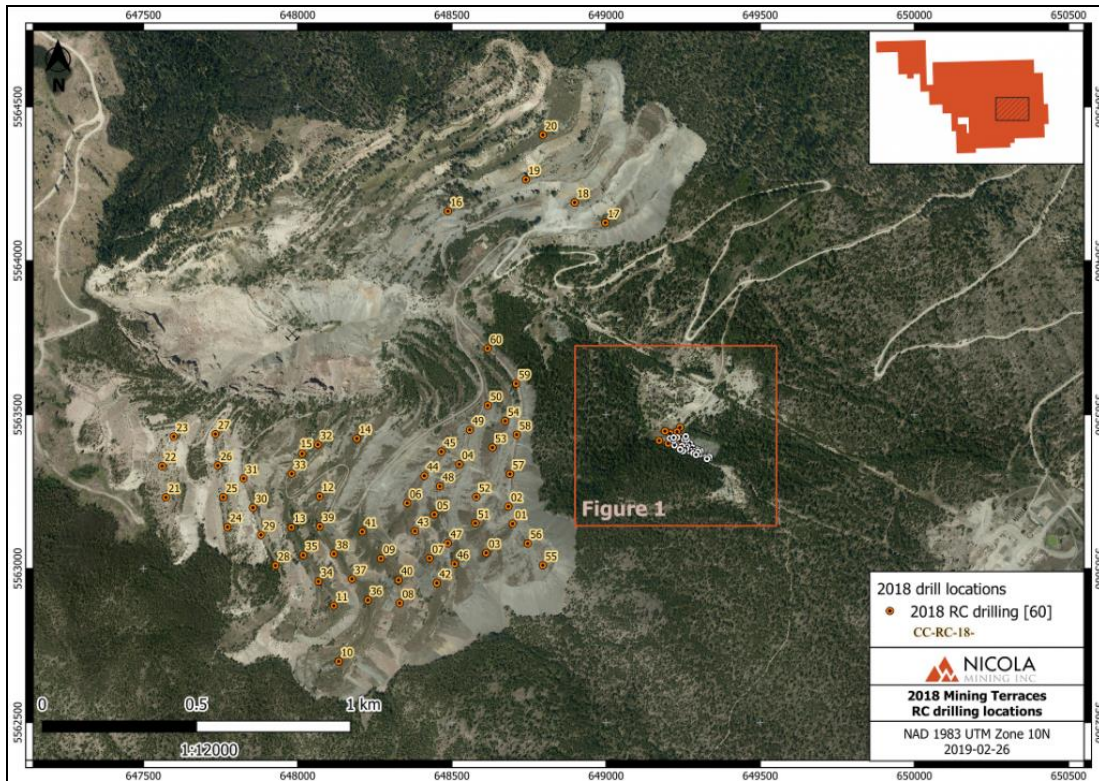
Two phases of RC drilling were completed on the property, Phase 1 commenced on July 24, 2017 and concluded on August 1, 2017 following a temporary suspension due to poor air quality resulting from the forest fires in the British Columbia interior that summer. The 39 holes drilled at the 3060 Portal were completed in 2017 and early 2018. The 2017 program consisted of 29 holes with the remaining 10 holes being completed in early 2018. The depth of the RC holes to the historic surface varies from 3 m to 19.5 m with an average depth of 11.08 m. The variation in hole depth is a result of the blasted material being deposited in a nature ravine. Results from this initial RC drill program confirmed the presence of significant copper mineralization in the material sampled by the drilling and indicate a Phase 2 program is warranted.

This initial program was successful in demonstrating the viability of using RC drilling to obtain reliable samples of the unconsolidated dump material for tonnage and grade estimations. Additionally, the underground mining techniques used allow for a more controlled excavation and precise grade control than large scale open pit mining. Therefore, the material sampled by this initial RC program at the 3060 portal is low grade mineralization that at the time of mining was considered sub-economic low grade. This suggests that some of the strip material in the larger dump terraces from the open pit could be representative of a similar low-grade mineralization halo.

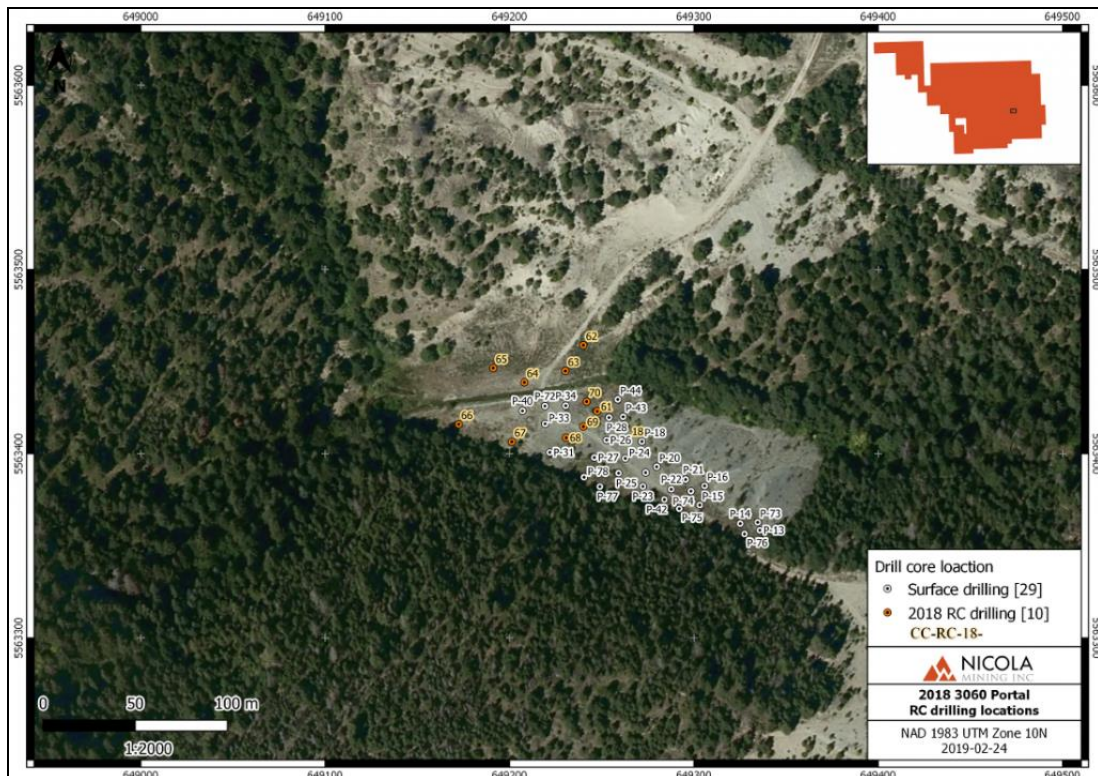
In response to the favorable results from the initial RC program the company completed a Phase 2 program in the 4<sup>th</sup> quarter of 2018. This second phase program was concentrated on the Southern Terraces and tested the blasted material that at the time of mining (c.1963 onwards), was considered sub-economic (<0.4% Cu). The depth of the RC holes to the historic surface varies from 6 m to 48 m with an average depth of 23.95 m.



**Figure 10.1:** Completed RC Drill Program (Phase 1 and 2) on historic terraces. (Nicola Mining, Mar 1, 2017)



**Figure 10.2:** RC Drilling 3060 Portal: Hole Locations (Nicola Mining, Mar 1, 2017)



All RC drill holes from Phase 1 and 2 were drilled vertical with a dip of -90. Tables 10.1 and 10.2 detail the UTM co-ordinates for each drill site along with final depth in metres. All co-ordinates are projected in NAD 83, UTM Zone 10N.

**Table 10.1: 3060 Portal RC hole Location Table**

HOLE ID	North (m)	East (m)	Elevation (m asl)	Length (m)	Program	DH_Size	Hole type
CC-RC-18-61	649247	5563423	923	18.00	2018	4"	RC
CC-RC-18-62	649240	5563459	928	6.00	2018	4"	RC
CC-RC-18-63	649230	5563445	928	6.00	2018	4"	RC
CC-RC-18-64	649208	5563439	928	6.00	2018	4"	RC
CC-RC-18-65	649191	5563447	928	4.50	2018	4"	RC
CC-RC-18-66	649172	5563416	928	3.00	2018	4"	RC
CC-RC-18-67	649201	5563407	928	12.00	2018	4"	RC
CC-RC-18-68	649231	5563409	926	15.00	2018	4"	RC
CC-RC-18-69	649240	5563415	924	13.00	2018	4"	RC
CC-RC-18-70	649242	5563428	924	19.50	2018	4"	RC
P-13	649336	5563358	919	10.00	2017	4"	RC
P-14	649325	5563362	920	8.00	2017	4"	RC
P-15	649303	5563372	920	11.00	2017	4"	RC
P-16	649306	5563383	920	15.00	2017	4"	RC
P-17	649274	5563390	922	11.00	2017	4"	RC
P-18	649272	5563407	922	19.00	2017	4"	RC
P-20	649280	5563393	921	15.00	2017	4"	RC
P-21	649296	5563386	921	16.00	2017	4"	RC
P-22	649288	5563381	921	12.00	2017	4"	RC
P-23	649272	5563382	922	8.00	2017	4"	RC
P-24	649263	5563397	922	13.00	2017	4"	RC
P-25	649259	5563389	923	11.00	2017	4"	RC
P-26	649253	5563407	922	15.00	2017	4"	RC
P-27	649246	5563398	923	10.00	2017	4"	RC
P-28	649254	5563420	922	18.00	2017	4"	RC
P-31	649222	5563401	927	6.00	2017	4"	RC
P-33	649219	5563416	928	12.00	2017	4"	RC
P-34	649230	5563426	926	5.00	2017	4"	RC
P-40	649207	5563423	928	16.00	2017	4"	RC
P-42	649284	5563375	921	6.00	2017	4"	RC
P-43	649262	5563420	922	18.00	2017	4"	RC
P-44	649259	5563429	922	15.00	2017	4"	RC
P-72	649219	5563426	928	9.00	2017	4"	RC
P-73	649335	5563363	919	12.00	2017	4"	RC

P-74	649298	5563380	921	13.00	2017	4"	RC
P-75	649292	5563370	920	5.00	2017	4"	RC
P-76	649327	5563356	920	6.00	2017	4"	RC
P-77	649249	5563382	924	7.00	2017	4"	RC
P-78	649240	5563387	925	7.00	2017	4"	RC

Source: Nicola Mining, 2020

**Table 10.2: Southern / Northern RC hole Location Table**

HOLE ID	North (m)	East (m)	Elevation (m asl)	Length (m)	Program	Drill Site	DH_Size	Hole type
CC-RC-18-01	648697	5563146	1127	33.00	2018	Southern	6"	RC
CC-RC-18-02	648683	5563202	1128	45.00	2018	Southern	6"	RC
CC-RC-18-03	648611	5563051	1139	30.00	2018	Southern	6"	RC
CC-RC-18-04	648524	5563339	1153	30.00	2018	Southern	6"	RC
CC-RC-18-05	648443	5563176	1156	41.00	2018	Southern	6"	RC
CC-RC-18-06	648355	5563213	1168	42.00	2018	Southern	6"	RC
CC-RC-18-07	648428	5563034	1170	24.00	2018	Southern	6"	RC
CC-RC-18-08	648331	5562888	1202	17.00	2018	Southern	6"	RC
CC-RC-18-09	648270	5563033	1197	24.00	2018	Southern	6"	RC
CC-RC-18-10	648133	5562699	1224	24.00	2018	Southern	6"	RC
CC-RC-18-11	648117	5562879	1248	17.00	2018	Southern	6"	RC
CC-RC-18-12	648071	5563235	1217	48.00	2018	Southern	6"	RC
CC-RC-18-13	647980	5563134	1240	25.00	2018	Southern	6"	RC
CC-RC-18-14	648192	5563423	1213	18.00	2018	Southern	6"	RC
CC-RC-18-15	648014	5563374	1235	18.00	2018	Southern	6"	RC
CC-RC-18-21	647573	5563232	1311	26.00	2018	Southern	4"	RC
CC-RC-18-22	647560	5563333	1306	19.50	2018	Southern	4"	RC
CC-RC-18-23	647598	5563429	1302	28.00	2018	Southern	4"	RC
CC-RC-18-24	647772	5563135	1284	19.00	2018	Southern	4"	RC
CC-RC-18-25	647759	5563232	1280	34.50	2018	Southern	4"	RC
CC-RC-18-26	647741	5563335	1278	40.00	2018	Southern	4"	RC
CC-RC-18-27	647733	5563437	1280	10.00	2018	Southern	4"	RC
CC-RC-18-28	647928	5563010	1271	9.00	2018	Southern	4"	RC
CC-RC-18-29	647881	5563109	1268	23.00	2018	Southern	4"	RC
CC-RC-18-30	647855	5563198	1265	34.50	2018	Southern	4"	RC
CC-RC-18-31	647825	5563293	1261	40.50	2018	Southern	4"	RC
CC-RC-18-32	648065	5563403	1236	16.50	2018	Southern	4"	RC
CC-RC-18-33	647981	5563308	1232	40.50	2018	Southern	4"	RC
CC-RC-18-34	648067	5562958	1247	16.50	2018	Southern	4"	RC
CC-RC-18-35	648018	5563044	1244	19.50	2018	Southern	4"	RC
CC-RC-18-36	648228	5562898	1224	18.00	2018	Southern	4"	RC
CC-RC-18-37	648176	5562966	1224	18.00	2018	Southern	4"	RC
CC-RC-18-38	648117	5563048	1220	18.00	2018	Southern	4"	RC



CC-RC-18-39	648072	5563137	1217	12.00	2018	Southern	4"	RC
CC-RC-18-40	648327	5562963	1201	6.00	2018	Southern	4"	RC
CC-RC-18-41	648209	5563120	1195	16.50	2018	Southern	4"	RC
CC-RC-18-42	648451	5562953	1171	19.50	2018	Southern	4"	RC
CC-RC-18-43	648380	5563122	1169	30.00	2018	Southern	4"	RC
CC-RC-18-44	648411	5563301	1167	37.50	2018	Southern	4"	RC
CC-RC-18-45	648466	5563380	1167	18.00	2018	Southern	4"	RC
CC-RC-18-46	648509	5563015	1158	24.00	2018	Southern	4"	RC
CC-RC-18-47	648487	5563083	1157	24.00	2018	Southern	4"	RC
CC-RC-18-48	648461	5563268	1154	31.50	2018	Southern	4"	RC
CC-RC-18-49	648558	5563451	1157	13.50	2018	Southern	4"	RC
CC-RC-18-50	648616	5563530	1156	15.00	2018	Southern	4"	RC
CC-RC-18-51	648576	5563148	1139	30.00	2018	Southern	4"	RC
CC-RC-18-52	648579	5563233	1140	31.50	2018	Southern	4"	RC
CC-RC-18-53	648632	5563393	1141	19.50	2018	Southern	4"	RC
CC-RC-18-54	648673	5563479	1140	13.50	2018	Southern	4"	RC
CC-RC-18-55	648795	5563011	1128	46.50	2018	Southern	4"	RC
CC-RC-18-56	648746	5563082	1128	33.00	2018	Southern	4"	RC
CC-RC-18-57	648688	5563307	1129	34.50	2018	Southern	4"	RC
CC-RC-18-58	648710	5563435	1128	16.50	2018	Southern	4"	RC
CC-RC-18-59	648708	5563601	1129	10.50	2018	Southern	4"	RC
CC-RC-18-60	648616	5563715	1129	6.00	2018	Southern	4"	RC
CC-RC-18-16	648487	5564161	1179	12.00	2018	Northern	6"	RC
CC-RC-18-17	648998	5564124	1128	24.00	2018	Northern	6"	RC
CC-RC-18-18	648898	5564189	1158	10.00	2018	Northern	6"	RC
CC-RC-18-19	648740	5564264	1183	17.00	2018	Northern	6"	RC
CC-RC-18-20	648795	5564409	1217	18.00	2018	Northern	6"	RC

Source: Nicola Mining, 2020

Please note, holes CC-RC-18-16 to CC-RC-18-20 (at the bottom of Table 10.2) were drilled on the northern waste dump and have not been included in the current resource estimate due to low grades encountered and insufficient drill density.

## **11.0 SAMPLING PREPARATION, ANALYSES AND SECURITY**

The Company implemented procedures for sample preparation, analysis and security for the Phase 1 and 2 RC drilling programs to ensure best practices are utilized for sample collection and analysis of RC cuttings. RC chip samples were generally collected at 2.0 m intervals for the holes drilled on the Southern historic waste piles while samples were generally collected at 1.0 m intervals at the 3060 Portal waste pile. The RC samples analysed consisted of an approximately 2 kg sample that was split from a larger sample collected at the drill for each interval. The coarse reject samples have been stored at Nicola's secure storage facility on the Craigmont mine property. The split samples were examined for lithology, alteration and mineralization with the results being documented in a digital database prior to being dispatched to the lab for analysis. A total of 667 samples were collected from 60 RC (1437 m) holes drilled at the Southern historic waste piles and another 378 samples from 39 drill holes totalling 432 m of drilling were collected from the RC drilling at the 3060 Portal Stockpile.

Samples were delivered by Nicola employees (to ensure sample security) to Activation Laboratory (ISO 17025 Certified) in Kamloops, British Columbia for analysis. Samples were analysed using ICP Aqua Regia 38-element (IE3) and fire assay gold (IA2) packages. Activation Laboratory is independent of Nicola Mining. Certified reference standards and rock blanks were placed in the sample stream with a ratio of approximately one sample out of 10 while duplicate pairs were inserted at a rate of 3 per 100 samples.

The QA/QC program was conducted in accordance with industry best practice and no quality control issues were discovered with Nicola's RC Drilling programs (Phase I and II) upon which this resource is based.

In the authors' opinion, the database management, validation and assay QA/QC protocols are consistent with common industry practices. Therefore, the database is acceptable for use in resource estimation.

## **12.0 DATA VERIFICATION**

### **12.1 Database Validation**

Verification of geological information and data used in mineral exploration and resource estimation on the New Craigmont Project has been conducted by Mr. Kevin Wells, P.Geo., Nicola's independent QP since January 2017. The procedures of data verification are outlined below. There were no limitations on or failure to conduct such verification and it is the QP's opinion that the data provided for this technical report is adequate.

#### **12.1.1 Collar Coordinate Validation**

Collar locations and elevation data were surveyed post drilling by Alex Bukkos from 3D Survey using a differential GPS, no major discrepancies were observed between the original hole spotting (using a handheld GPS) and the surveyed locations when reviewed by the QP (Kevin Wells, P.Geo). Collar elevation data were validated by comparing GPS survey elevations with the satellite photo's digital elevation model (DEM). Most elevation differences in the collars were less than one metre.

#### **12.1.2 Down-hole Survey Validation**

The resource is based on vertical RC drill holes, as a result no downhole surveying was completed on these holes, they are interpreted to have no deviation from vertical.

#### **12.1.3 Assay Verification**

All the collars, surveys, geology and assays were exported from Excel® files into Gemcom software. During this review the QP (Kevin Wells, P.Geo) observed that no identical sample identifications exist; all FROM\_TO data are either zero or a positive value; and no interval exceeds the total depth of its hole.

To validate the data the QP (Kevin Wells, P.Geo) completed the following checks on the database:

- The maximum depth of samples was checked against the depth of the hole.
- The less-than-the-detection-limit values were converted into a positive number equal to one-half the detection limit.

The sample recovery for the RC program (Phase I and II) was 99% for the 3060 Portal area while 89% for the Southern historic waste piles. The missing assay intervals are discussed in detail in section 14.4 of this report. Samples were collected approximately every 2 metres down the hole at the Southern piles and 1 metre down the hole at the 3060 waste pile.

#### **12.1.4 Geological Data Verification and Interpretation**

Several geological variables were captured during core logging. The geological data were verified by the QP (Kevin Wells, P. Geo) and included confirming that the geological designations were correct in each sample interval. This process included the following:

- Examine FROM\_TO intervals for gaps, overlaps and duplicated intervals.



- Look for collar and sample identification mismatches.
- Verify correct geological codes.

## 12.2 QA/QC Protocol

A review of the QA/QC protocols was conducted prior to RC drilling and formalized in a detailed QA/QC manual developed by Nicola. The procedures for the RC drilling programs: the insertion of blanks, standards and duplicate pairs, were examined prior to the commencement of drilling to ensure accepted industry practices and procedures were met. The QA/QC program was conducted in accordance with industry best practice as described in Section 11 (Sampling Preparation, Analyses and Security) of this Technical Report.

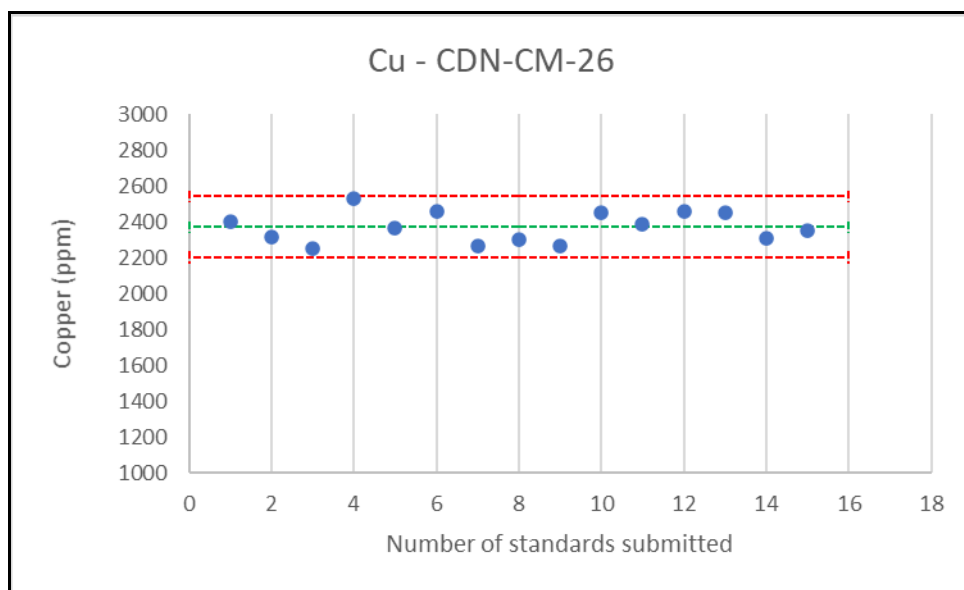
No quality control issues were discovered by the QP (Kevin Wells, P.Geo) for Nicola's RC Drilling programs (Phase I and II) upon which this resource is based.

During the 2018 historic dumps RC program, 667 samples were analyzed and 37 blanks, 38 certified reference material and 8 duplicates were included in the lab shipments. After each batch of analytical results came in, the QA/QC samples were reviewed by a Nicola geologist and reviewed by the QP during the writing of this report.

The "3060 Portal Stockpile" RC program consisted of 378 samples collected from 39 RC holes (totalling 432m). A total of 2 blanks, 22 certified reference material and 32 duplicates were included.

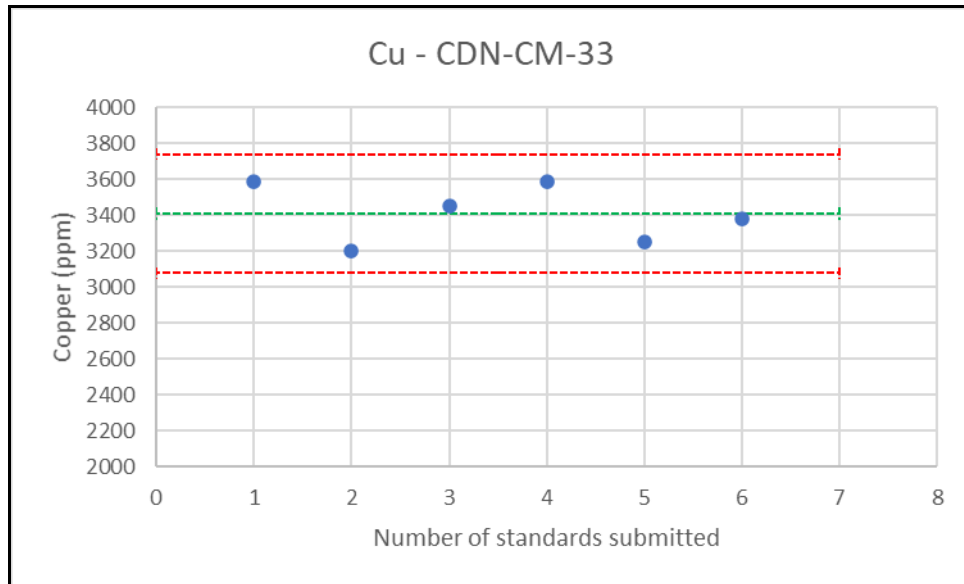
All standards including CM-26, CM33, CM-39 and CM-40 performed well for copper with failure rates well below 5%. Examples of the control chart for CM-26, CM33, CM-39 and CM-40 are shown in Figures 12.1 through Figures 12.4

**Figure 12.1: Cu (ppm) for CDN-CM-26**



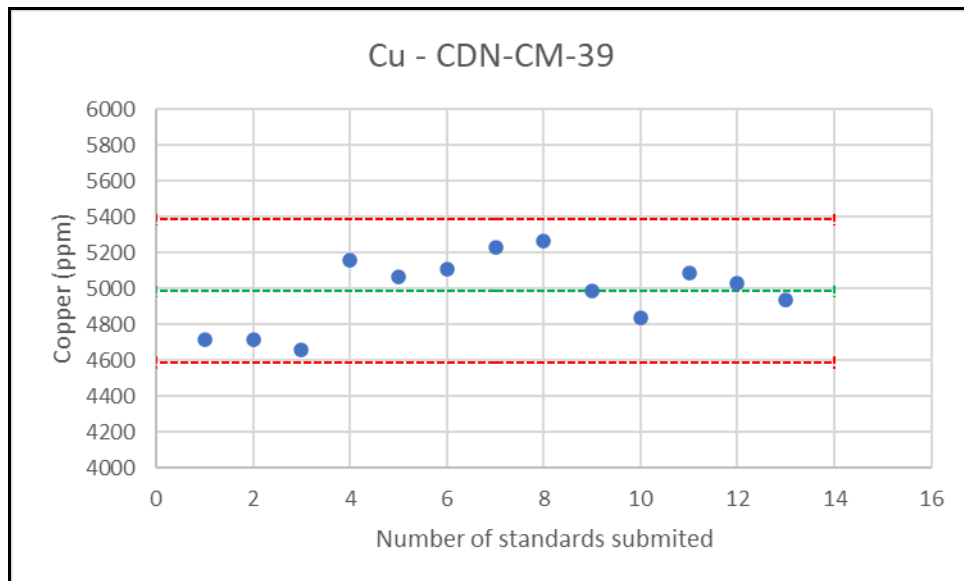
Source: Nicola Mining, 2020

**Figure 12.2: Cu (ppm) for CDN-CM-33**



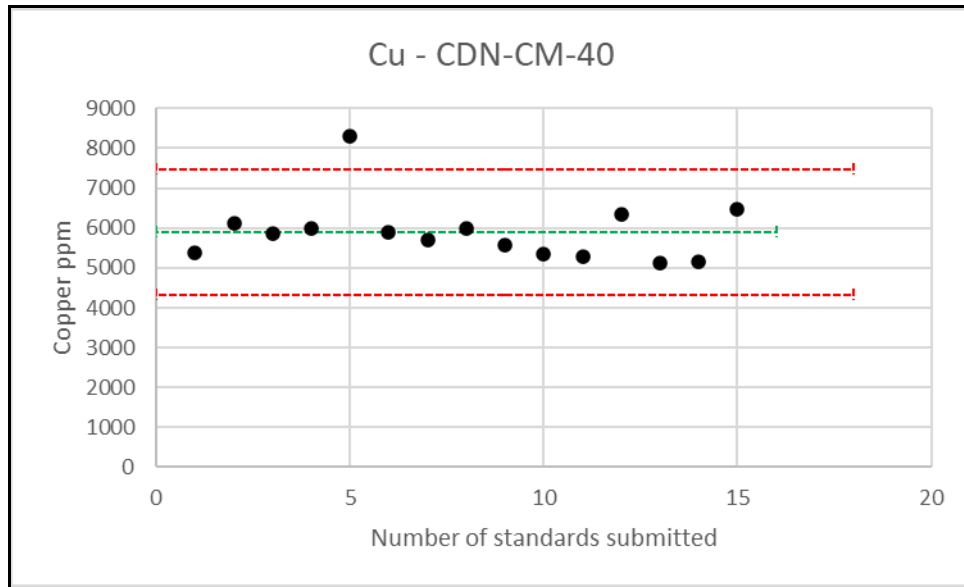
Source: Nicola Mining, 2020

**Figure 12.3: Cu (ppm) for CDN-CM-39**



Source: Nicola Mining, 2020

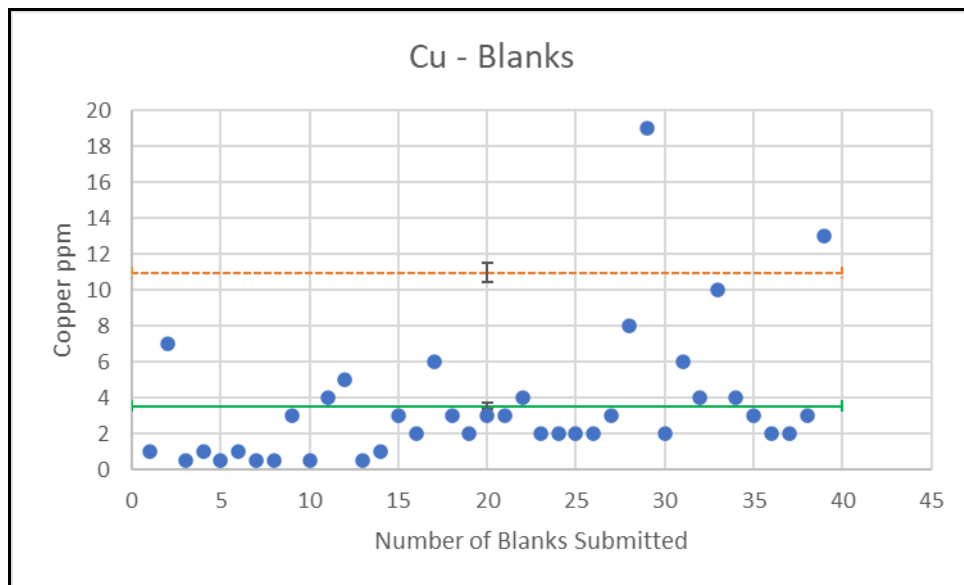
**Figure 12.4: Cu (ppm) for CDN-CM-40**



Source: Nicola Mining, 2020

The mean for the copper in sample blanks is 3.56 ppm (Figure 12.5). All but 2 samples were within 2 standard deviations of the mean. These two failures were investigated by assaying duplicates and more blank material. No abnormalities or assay processes were identified.

**Figure 12.5: Cu (ppm) for Blanks**



Source: Nicola Mining, 2020

### **12.3 Assay Database Verification**

All copper values greater than 0.5% Cu from Nicola's RC drill program were manually compared to the original assay certificates by the QP (Kevin Wells, P.Geo). No errors were found.

### **12.4 Conclusion**

There were no significant issues with the assays from the RC drill program upon which this resource is based.

Observation of the drill core during the site visit inspection and validation of the collected data indicate that the drill data are adequate for interpretation.

In the QP's opinion, the database management, validation and assay QA/QC protocols are consistent with common industry practices. Therefore, the database is acceptable for use in this resource estimation.

## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Nicola received positive grade and copper recovery results on floatation tests conducted at ALS Metallurgy Kamloops (ALS Kamloops is a subsidiary of ALS Global, leader in providing laboratory testing, inspection, certification and verification solutions. <https://www.alsglobal.com/>) laboratory ("ALS"). The tests were designed to simulate copper and magnetite recovery into separate concentrates through floatation and magnetic separation.

Two sample from the mine's historic waste rock terraces underwent sorting via COM Tertiary XRT Sorter tests (Tests were conducted at Tomra Sorting's Test Center located in Hamburg, Germany and announced in a news release on March 29, 2019). The testing provided encouraging results and indicate that low-grade from the historic mine waste terraces can be upgraded to a feed stream appropriate for copper flotation and magnetic separation. Sorted product from the XRT Sorter was used as feed in the flotation and magnetic separation tests. This material had a feed grades of 0.34 percent copper and 6.9 percent iron.

Key results of the tests include the following: Producing a copper concentrate of 29.6% Cu and 29.4% Fe, with recovery of 73.1 % copper in un-optimized laboratory batch tests, as well as a magnetite ( $\text{Fe}_3\text{O}_4$ ) concentrate grading 64.8% Fe or (93.9%  $\text{Fe}_3\text{O}_4$ )

Sorted mill feed material was first ground to a nominal 132umK80 and a underwent an initial rougher separation to confirm copper recoveries. The copper rougher tailings were processed by using magnetic separation. The magnetic rougher concentrate was reground to 28umK80 and cleaned via Davis Tube to produce a high-grade magnetic concentrate.

Initial material that contained 0.34% Cu and 6.87% Fe was separated into 2 key concentrates

1. Cu concentrate containing 29.6% Cu and 29.4% Fe. Copper recovery was 73.1 percent.
2. Magnetite cleaner concentrate containing 64.8% Fe, which was comprised of 93.9%  $\text{Fe}_3\text{O}_4$  and approximately 2.9 percent of the overall feed mass.

The ability to produce a copper concentrate grading 29.6% Cu with 73.1% Cu recovery rate in initial testing is very encouraging. Positive Cu grades were further augmented by the magnetite concentrate that contained 64.8% Fe or (93.9%  $\text{Fe}_3\text{O}_4$ ) and accounting for approximately 2.9% of the overall mass. The Company plans to conduct further testing on the grades of the fines in the historic waste rock terraces, which account for approximately 50% of the tested material and graded 0.25% and additional lab testing to further increase recovery and grades.

The samples provided by Nicola Mining are representative of the style of mineralization at the waste dumps and has been sorted into separate products using the XRT sorting process. This separated product becomes the feed material in the flotation and magnetic separation tests summarized above. Magnetite is produced as a by-product of the copper floatation process utilizing magnetic separators post copper flotation.

Current interpretation from these test results indicate there are no processing factors or deleterious elements that could have a significant effect on potential economic extraction.

## 14.0 MINERAL RESOURCE ESTIMATES

### 14.1 Introduction

Two areas of Inferred Mineral Resource have been outlined consisting of historically sub-economic material remaining from past mining at Craigmont. The consistently-drilled portion of the southern mine dumps cover an area of 82.5 hectares. A smaller area (1.4 ha) of stockpiled material adjacent to the 3060 portal is of much smaller tonnage but of higher grade.

The plan for this stockpiled material is to be crushed and selectively upgraded using the Tomra® process. Material selected via that process as well as the fine (<0.5-inch) fraction will be targeted for metal extraction. Sulphur and iron grades will play a role in future process evaluation and design; these elements have also been estimated and some statistics are included below. The Inferred Mineral Resource described in this report is a copper-only resource at this time.

Since, in its present form, this is not a naturally occurring mineral deposit, the approach to resource estimation is somewhat non-traditional. Geometrical, distance weighting is much more applicable than is a geostatistical approach.

### 14.2 Available Drill Data and Model Setup

The southern dump area has been tested by 60 holes in total. These RC holes total 1,437 m and average 25 m in length; the longest hole is 48 m. The 3060 Portal Stockpile material has been tested by 432 m in 39 RC holes with an average length of 11 m. In total, there are 667 samples from the Southern Dump Piles and 378 samples from the 3060 Portal Area.

Drill-spacing in the two areas is very different. The southern dumps are drilled at a spacing of approximately 100 m. Vertical thickness of material above the original topo surface ranges from 3 to 45 m and averages 20.6 m. The resource model grid covering this material is listed in Table 14.1.

**Table 14.1:** Southern Dump Block Model Setup

<b>Block:</b>	<b>X</b>	<b>Y</b>	<b>Z</b>
origin <sup>(1)</sup>	647,100	5,562,400	1,500
size (m)	15	15	8
no.blocks	160	167	80
no rotation; 2,137,600 blocks			
<sup>(1)</sup> SW model top, block edge			

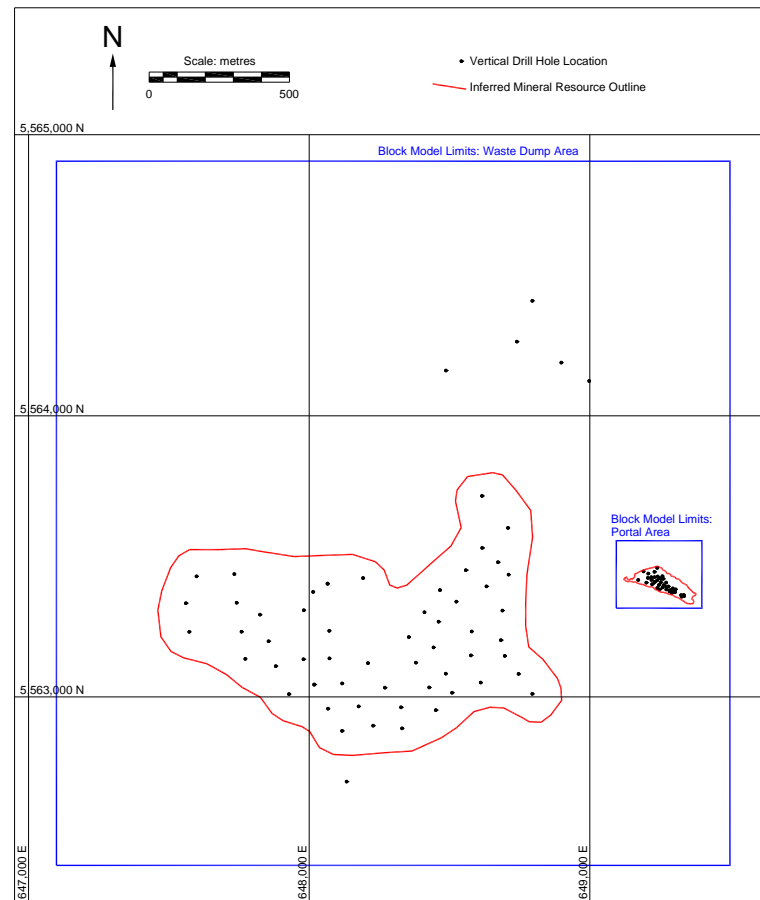
The 3060 Portal area stockpile is drilled at a more variable spacing, generally ranging from 10 to 20m. As such, the resource model block size was reduced to five by five metres as detailed in Table 14.2. Vertical thickness of the portal area piles ranges from 2.5 to 19m, averaging 9.8m. The location of the two models are shown with available drilling and the Inferred Mineral Resource outline, in Figure 14.1.



**Table 14.2:** Portal Area Block Model Setup

Block:	X	Y	Z
origin <sup>(1)</sup>	649,095	5,563,315	1,000
size (m)	5	5	4
no.blocks	61	48	30
no rotation; 87,840 blocks			
<sup>(1)</sup> SW model top, block edge			

**Figure 14.1:** Planview Showing Drill Hole Locations and Block Model Limits



### 14.3 Geologic Model

Due to the fact that this is not an in-situ resource, there is no traditional geologic model associated with this estimate. The most important constraint to quantifying the resource tonnage was the definition of the lower bounding surface on which the volume of (former) waste or low-grade stockpile (portal area) was originally placed.

McElhanney was contracted to create a digital elevation model of the ~1960 original pre-mine topographic surface (5 June, 2019). As part of this process the surface was matched to the

recent LiDAR survey peripheral to the disturbed areas. This surface was used to bound the lower edge of the southern dump volume. The upper surface was based on the LiDAR survey.

The McElhanney surface closely matched drilling beneath the southern dump. Dump material volume was based on that pre-mine surface.

The McElhanney surface, below the portal area stockpile, proved to be inaccurate when compared to the logged original surface in the portal area drilling. Since drilling provided good control on the pre-mine surface, those drill intercepts were used in the core of the stockpile area and merged with the McElhanney surface in the periphery. This combined approach was used to create the lower bounding surface for the portal area volume.

All holes were flagged with the interval between current topography and the lower pre-mine surface; this interval is the target portion of holes composited for grade estimation within the intervening volume.

#### **14.4 Sample Statistics and Assay Compositing**

Statistically, assay and composite grades are quite regular for all metals of interest; no grade capping was required. This is testament to the homogenization that has occurred as the piles were built.

Assays were composited to a target length of four metres. Ninety-nine percent of southern dump samples were 2m in length; ninety-one percent of portal area samples were 1m in length. In a more traditional resource estimate, two metre composites might have been appropriate, to preserve some of the deposit variability. In this case, however, averaging assays over a longer composite interval is more suited to the mixing of material that would have occurred as the piles were built.

Samples of less than a full four-metre composite interval, occurring at the bottom of the intersection above the pre-mine surface, were dealt with in such a way as to preserve the influence of all samples. Compositing targeted a length of four metres, but overall intersections per hole were divided such that composites were of equal length, and as close to four metres as possible. Composites used for estimation range in length from 3.0 to 4.7 m in the southern dump area (averaging 4.0 m) and from 2.5 to 5.0 m in the portal area (averaging 3.7 m).

Missing assays can be handled in two ways during the compositing process. In an in-situ mineral deposit, intervals without assays are typically given a default near-zero value, since sampling is often based on the visual presence of mineralization; if material was not sampled it was, visually, unmineralized. There are instances where missing intervals are ignored on compositing which has the effect of estimating nearby blocks based on adjacent samples/holes and preserving the local average grade. The latter approach is generally used when assays are missing due to technical, drill related issues; this was typically the case in RC drilling of the surface piles at Craigmont; logs of unsampled intervals recorded “No Return”.

Table 14.3 lists the proportion sampled, compared to the total intersected length, for Nicola surface material drilling. The choice of compositing approach will have little impact for the portal area material where 99% of the intersected length was sampled; the 4 m of missing samples

were ignored during grade compositing. More material was unsampled for the southern dump drilling making the compositing approach potentially more impactful on results.

**Table 14.3: Sampled Intervals**

Location	No. Holes	Interval (m)	Sampled (m)	
Southern Dump	60	1,235	1,103	89%
Portal Area	38	371	367	99%
Total:	98	1,605	1,469	92%

The impact of compositing method, in the southern dump area, was quantified by estimating grades using various sets of composites. Ignoring missing intervals versus filling them with very low values was judged to be too conservative; the difference in estimated copper grade was 9%. The decision was taken to 'back-fill' missing intervals with values based on adjacent samples for the majority of cases. One longer, missing interval was assigned a value of 0.09 %Cu – the average intersected grade within the volume being assessed. Summary assay statistics, including the impact of 'back-filling' unsampled intervals in the southern dump holes, is presented in Table 14.4. The CV value is a measure of the dispersion of the data series around the mean (co-efficient of variation). Composite data is summarized in Table 14.5.

**Table 14.4: Assay Statistics over Intervals of Estimation**

Location	Count	Cu (%)			Fe (%)			S (%)		
		mean	max	CV	mean	max	CV	mean	max	CV
Southern Dump	558	0.09	1.48	1.3	4.14	20.90	0.4	0.14	0.82	1.0
including 'back-filled' intervals	623	0.09	1.48	1.3	4.12	20.90	0.4	0.13	0.82	1.0
Portal Area	339	0.22	2.13	1.1	5.56	18.50	0.4	0.34	4.63	1.2

**Table 14.5: Composites Used for Estimation**

Location	Count	Composite Length (m)			Cu (%)			Fe (%)			S (%)		
		mean	min	max	mean	max	CV	mean	max	CV	mean	max	CV
Southern Dump	309	4.0	3.0	4.7	0.09	0.69	1.1	4.11	14.87	0.3	0.13	0.65	1.0
Portal Area	99	3.7	2.5	5.0	0.22	1.23	0.8	5.61	10.53	0.3	0.33	1.79	0.9

## 14.5 Grade Interpolation

Since the material being included in this mineral resource estimate is not in a naturally occurring setting, a decision was made to estimate grade by geometric rather than by geostatistical methodology. Down-hole semi-variograms were calculated and examined as input to the decision on inverse distance weighting. Examination of grades estimated using varied sample selection and inverse distance weighting parameters led to the selection of inverse distance cubed (ID3) for the estimation of southern dump and portal area grades. Parameters used for grade estimation are listed in Table 14.6.

**Table 14.6: Grade Estimation Parameters**

Location	Pass	Search Direction (dip/azimuth)			Axis Radii (m)			Number of Samples for Estimate		
		X	Y	Z	X	Y	Z	min	max	max/hole
Southern Dump	1	00/090	00/000	90/000	200	200	24	1	12	6
	2	00/090	00/000	90/000	400	400	100	1	12	6
Portal Area	1	00/172	-07/082	83/082	50	50	10	1	8	6

Grades of copper, iron and sulphur were estimate by relatively few samples in order to match the grade close to sample data. Intervals of intersection with the surficial material was as short as 2.5m – less than the 4m composite interval; this fact supported grade estimation using a minimum of one sample to properly reflected intersected grades in thinner areas of the piles.

## 14.6 Density Assignment

Density has been assigned to the Craigmont dump and stockpile material based on historic and current assumptions; no bulk density measurements are currently available. Future work must include some density measurement work.

In the southern dump area, material was assigned a density of 1.8 tonnes/m<sup>3</sup>. This is based on an assumed rock density of 2.4 t/m<sup>3</sup> and ~30% void space. The number is felt to be conservatively realistic and matches values reported for waste dumps at Castle Mountain and Mesquite in California.

Portal area material was assigned a density of 2.15 t/m<sup>3</sup>. The material was originally mined as ore; based on historic measurements it was assumed the in-situ density would have averaged 2.7 t/m<sup>3</sup>. Applying ~25% void space (lower than southern dump due to finer material), yields a value of 2.15 t/m<sup>3</sup>.

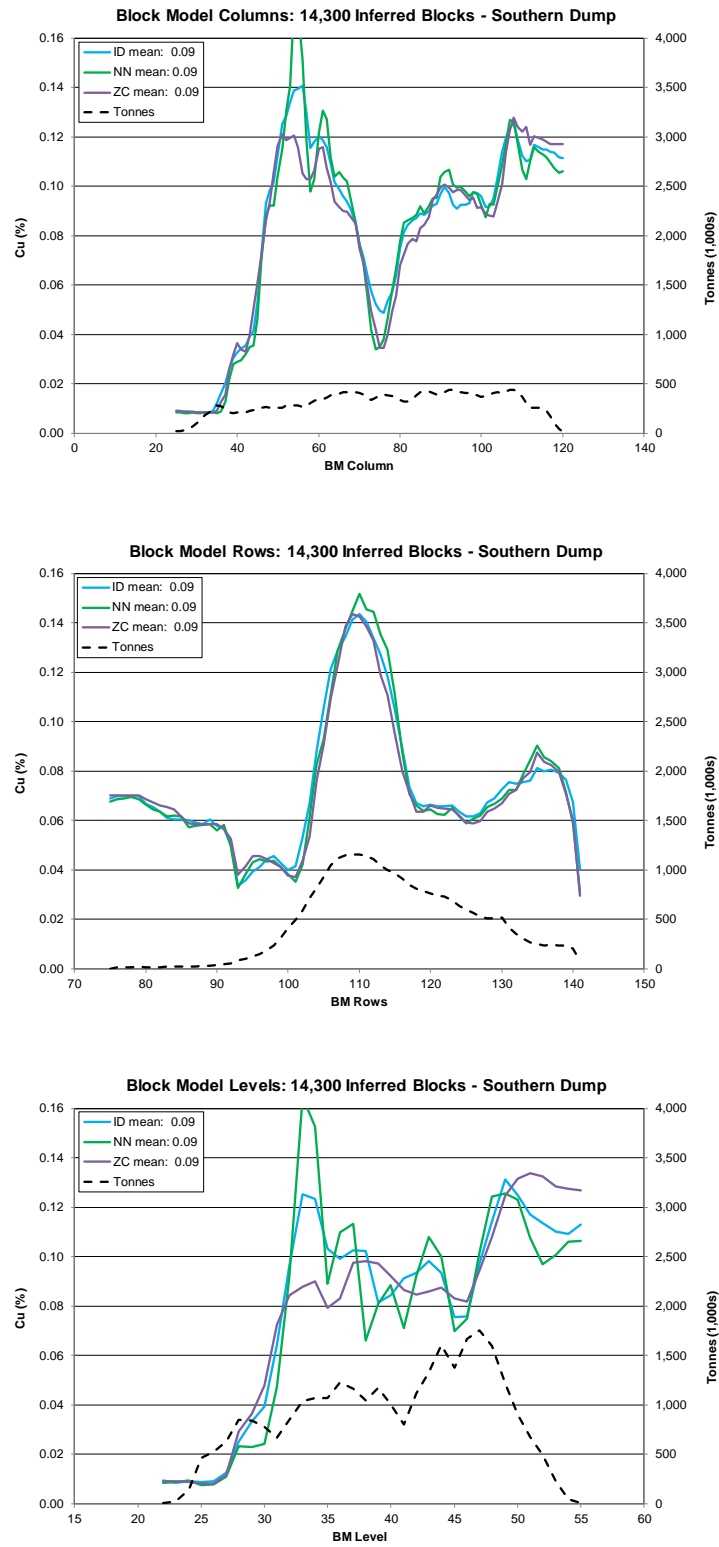
## 14.7 Model Validation

Estimated grades were validated using a variety of approaches. Block grades were compared visually to supporting composite data on section and plan maps. Results compared well.

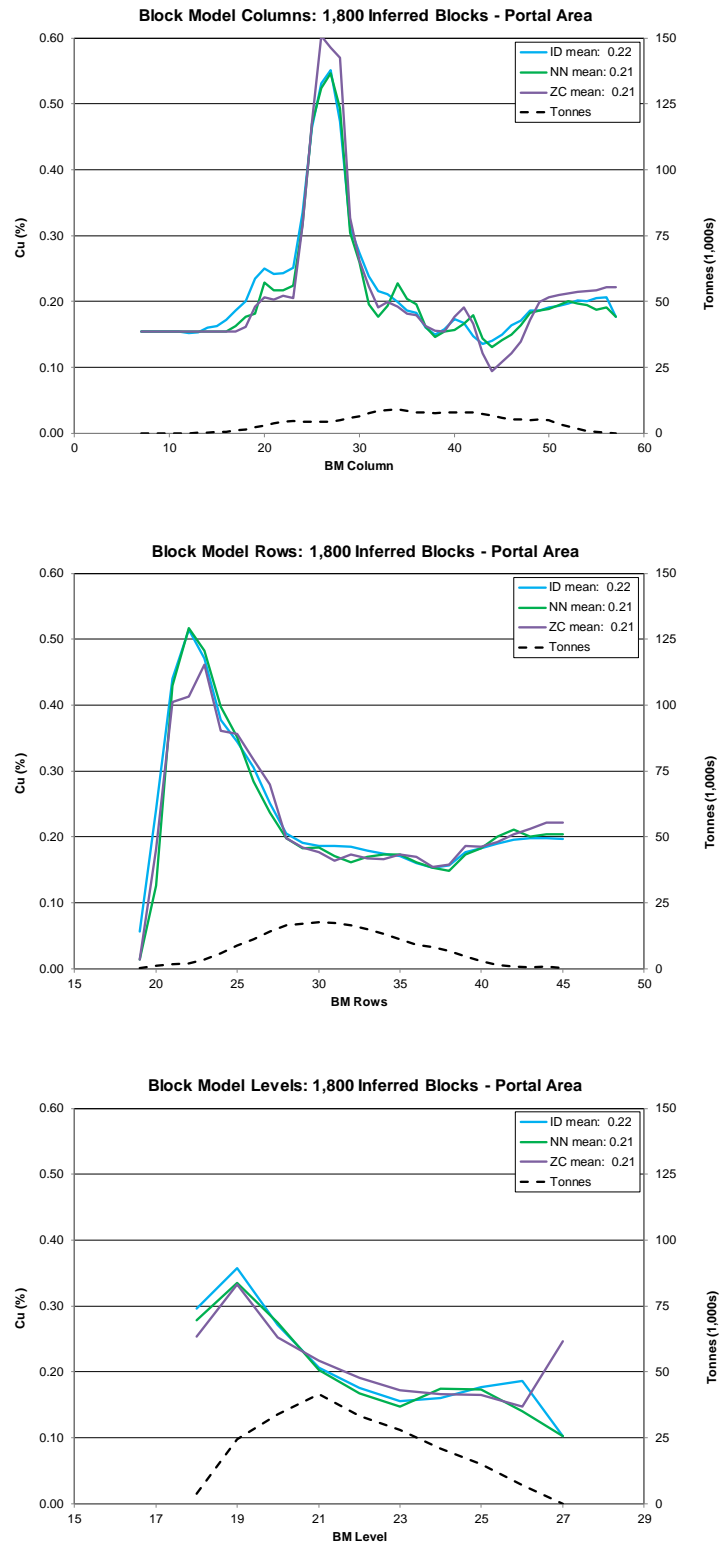
Grades were also estimated by two other techniques and results were compared globally and spatially by generating swath plots along rows, columns and levels of the block models. A nearest neighbour (NN) model was estimated using the same search as the ID3 interpolation, but used a maximum of two composites, in the southern dump area, to estimate blocks – two 4m samples matching the block height. A single 4m composite was used to estimate the 4m high blocks in the portal area.

A second check model used a composite set made up of one, variable-length, composite per hole across the interval of intersection within the pile. Blocks were then estimated by a single sample making the results essentially a polygonal estimate. This approach is referred to as a zone composite (ZC) model in Figure 14.2 (southern dump) and Figure 14.3 (portal area) below. Block model average copper grades above zero cut-off are also tabled on the plots.

**Figure 14.2: Swath Plots Through ID3 and Check Models - Southern Dump Material**



**Figure 14.3: Swath Plots Through ID3 and Check Models - Portal Area**





## 14.8 Resource Classification and Tabulation

The southern dump and portal area materials have been sufficiently drill-tested to declare an Inferred Mineral Resource. The lack of in-situ density testwork must be addressed as part of future efforts to upgrade resource confidence.

In both areas, material was classified as Inferred where it was within the area of reasonably consistent drill spacing. In the southern dump area, blocks classified as Inferred are generally within 100 m of the closest sample and the drill spacing is approximately 100 m.

In the smaller and more tightly drilled portal area, drill spacing is typically less than 25 m; the limit of the Inferred Mineral Resource extends a maximum of 40, in plan-view, to the edge of the pile.

Initial metallurgical and process optimization testwork indicates a low copper cut-off grade will be achievable. The anticipated processing of surface pile material will include mechanical screening targeting various size fractions for Tomra® XRT-based product upgrading. Initial work indicated that upgrading inherent to the separation of the fine fraction (<0.5 inch) coupled with the Tomra separated mineralized material, will yield a feed material mass reduction of 38% and a copper grade upgrade of 44% for southern dump material. Portal stockpile testing indicates potential for feed mass reduction of 54% and copper grade increase of 66%. Testwork to date is encouraging, but preliminary in nature. Further work needs to be conducted, and processing scenarios evaluated, and documented in future technical reports.

In order to establish reasonable prospects of eventual economic extraction a three-year trailing average copper price of US\$2.8/lb and an anticipated annual production scenario was considered; a cut-off grade of 0.06% copper is deemed appropriate. Table 14.7 lists a range of cut-offs; the Inferred Mineral Resource is high-lighted.

**Table 14.7:** Estimated Dump Material at Range of Copper Cut-off Grades

Cut-off (Cu %)	Southern Dump		Portal Area		Estimated	
	Tonnes (1,000s)	Cu (%)	Tonnes (1,000s)	Cu (%)	Tonnes (1,000s)	Cu (%)
<b>0.06</b>	<b>18,465</b>	<b>0.13</b>	<b>204</b>	<b>0.23</b>	<b>18,669</b>	<b>0.13</b>
0.10	13,090	0.16	195	0.23	13,285	0.16
0.15	4,843	0.21	154	0.26	4,997	0.21
0.20	2,396	0.26	91	0.32	2,486	0.26
0.25	1,278	0.29	50	0.41	1,327	0.29

## **15.0 MINERAL RESERVE ESTIMATES**

At present, there are no mineral reserve estimates for the New Craigmont Project.

## **16.0 MINING METHODS**

This section is not applicable.

## **17.0 RECOVERY METHODS**

This section is not applicable.

## **18.0 PROJECT INFRASTRUCTURE**

This section is not applicable.

## **19.0 MARKET STUDIES AND CONTRACTS**

This section is not applicable.



## **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

Nicola has the necessary permits to conduct drill programs. Baseline environmental studies are ongoing, and discussions have been initiated with the local communities and government agencies. Refer to Section 4.2 (Land Use and Mining Tenure) of this Technical Report for additional information.

## **21.0 CAPITAL AND OPERATING COSTS**

This section is not applicable.

## **22.0 ECONOMIC ANALYSIS**

This section is not applicable.

## **23.0 ADJACENT PROPERTIES**

No mineral resources on adjacent properties have published reserves.

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

There is no other relevant data or information.

## 25.0 INTERPRETATION AND CONCLUSIONS

This report details the Inferred Mineral Resource of two areas of broken material from the historic mining at Craigmont, mainly the historic southern dump area (covering 82.5 hectares) and a much smaller but higher grade stockpile of material located at the 3060 portal (1.4 hectares).

In conclusion, an initial inferred Mineral Resource of 18.669 million tonnes at a grade of 0.13% Cu is present using a cut-off grade of 0.06% Cu. This resource is based on the following assumptions:

- Copper price of \$2.8/lb. US.
- an anticipated annual production scenario.
- a cut-off grade of 0.06% copper.
- an in-situ density of 1.8t/m<sup>3</sup> and 2.15 t/m<sup>3</sup> for the southern dump and portal material, respectively.

In estimating the initial resource in these historically sub-economic mine dumps, the original topographic surface for the southern historic mine dump was used via a digital elevation model of the pre-mine surface developed by McElhanney. The lower boundary for the material located adjacent to the 3060 portal was further constrained by the intersection of original soil at the base of the RC drill holes.

No grade capping was required based on the low variability of sample assays within the piles - an indication of the homogenization that occurred as the waste piles were built. Missing assay intervals, due to drill related technical issues, were handled by averaging adjacent samples, thus preserving average hole grades.

In its present form, this is not a naturally occurring deposit. Therefore geometrical, distance weighting is more applicable than is a geostatistical grade estimation approach.

A density of 1.8 tonnes/m<sup>3</sup> was used for the historic dump area, this is based on a rock density of 2.4 t/m<sup>3</sup> and a 30% void space. The portal area material was assigned a density of 2.15 t/m<sup>3</sup>. The higher value for the portal area is based on the fact this material was originally mined as ore, thus a density of 2.7 t/m<sup>3</sup> was used as an in-situ value, assuming 30% void, yields a density of 2.15 t/m<sup>3</sup>. No bulk density measurements were currently available; therefore, any future work must include density measurements; the scope of a density measurement program should be dictated by results. The more variable the density values, the more measurements will be required to attain a stable average or to adequately populate the resource model blocks.

In conclusion, the historic southern dump and portal dump areas have been sufficiently drill tested to declare an Inferred Mineral Resource. In-situ density test work needs to be addressed in future work programs in an effort to increase the resource confidence. Initial metallurgical and



process optimization test work indicates a low copper cut-off grade is justified. The Tomra XRT process will be used to mechanically screen higher grade material. Initial work indicated that upgrading inherent to the separation of the fine fraction (<0.5 inch) coupled with the Tomra separated mineralized material, will yield a feed material mass reduction of 38% and a copper grade upgrade of 44% for historic dump material. Portal stockpile testing indicates potential for feed mass reduction of 54% and copper grade increase of 66%.

## 26.0 RECOMMENDATIONS

Additional exploration work on the New Craigmont Property is warranted to further increase the confidence of this initial resource and explore the remainder of the property for yet undiscovered mineralized bodies. This proposed work program is grouped as such and should include the following:

- 1) Bulk Density testing: Bulk density testing should be done to ensure the values used in the resource are appropriate.
- 2) Additional testing on the cost benefits of the Tomra sorting process on the resource material.
- 3) Trench sampling of both the Southern and 3060 Portal waste piles to determine the grade and volume of the fine material within the waste piles.
- 4) Additional RC drilling of the Northern historic waste pile to determine if there is additional material to add to the resource.
- 5) On a property scale, additional geological mapping followed by diamond drilling to explore untested anomalies is warranted.

A total budget of **\$199,500** Cdn. is proposed to advance the confidence of this resource. A budget of **\$1,501,500** Cdn is proposed for property scale exploration to further advance untested exploration targets within the project area. These two programs are independent of one another. Table 26.1 details the proposed program for 2020.

**Table 26.1: Proposed Program: 2020**

<b><u>Historic Waste Pile Work</u></b>	
<b>Bulk Density Testing:</b>	
Lab Cost: 200 @ \$30/ sample	\$6 000
<b>Tomra Sorting tests:</b>	
Test Costs	\$40 000
<b>Trench Sampling:</b>	
Trenching cost (\$2500/ day)	\$10 000
Assay Costs: \$35/ sample	\$5 000
<b>RC drilling on Northern waste piles:</b>	
Mob/ demob	\$10 000
1000m @ \$100/m	\$100 000
Assay Costs: \$35/ sample	\$17 500
Geologist (1 month)	\$11 000
<hr/>	
<b>Sub-Total:</b>	<b>\$199 500</b>
<b><u>Property Scale Program</u></b>	
<b>Diamond Drilling:</b>	
<b><u>Target Delimitation</u></b>	
Contract cost (5000m @ \$120/m)	\$600 000
Assay Costs (\$35/ sample)	\$87 500
Geologist	\$50 000
<b><u>Target Confirmation</u></b>	
Contract cost (2000m @ \$120/m)	\$240 000
Assay Costs (\$35/ sample)	\$35 000
Geologist	\$25 000
<b>Geophysics</b>	
<b><u>Target Development</u></b>	
IP Surveying	\$200 000
Ground Magnetism	\$200 000
<b>Geological mapping:</b>	
<b><u>Target Generation</u></b>	
Geologist (mapping/ trenching)	\$25 000
Trenching cost (\$2500/ day)	\$25 000
Assay Costs	\$14 000
<hr/>	
<b>Sub-Total:</b>	<b>\$1 501 500</b>
<hr/>	
<b>TOTAL:</b>	<b>\$1 701 000</b>

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## 28.0 DATE AND SIGNATURE PAGES

### CERTIFICATE of QUALIFIED PERSON

Kevin Wells, P. Geo, KWW Geoscience & Exploration Corporation

I, Kevin Wells, P. Geo, do hereby certify that:

1. I am an independent consultant of: KWW Geoscience & Exploration Corporation and have an address at 11460 Waresley Street, Maple Ridge, British Columbia, Canada, V2X 9Y9
2. I graduated from the Laurentian University in Sudbury Ontario in 1994 with a Bachelor of Science Honors Degree in Geology.
3. I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC), Licence Number 34227.
4. I have practiced my profession for 26 years and have been involved in mineral exploration, mineral resource estimations on numerous base metal, Ni-PGE and gold projects and exploration programs in Canada, the United States and China.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and certify by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation and review of all the items except Section 14 of the Technical Report titled: “**NI 43-101 Technical Report on the Preliminary Copper Resource for the Southern Dump and 3060 Portal Dump, New Craigmont Mine, Merritt, British Columbia, Canada**” with an effective date of May 21<sup>th</sup>, 2020.
7. I have visited site 4 times to review exploration procedures to ensure industry standards are being applied. I also reviewed the company’s press releases pertaining to surface exploration to ensure industry guidelines have been followed. The most recent site visit was May 13, 2020.
8. Prior to commencement of work in support of this Technical Report, in January 2017, I have had no involvement with the project.
9. I have read NI 43-101, Form 43-101F1 Technical Report “Form 43-101F1”) and the Technical Report and confirm the portions of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101 and Form 43-101F1.
10. I am independent of Nicola Mining Inc. applying all the tests in section 1.5 of NI 43-101.
11. As of the effective date of the Technical Report, to the best of my knowledge, the information within the sections of the Technical Report for which I am responsible contain all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated May 21, 2020  
“SIGNED AND SEALED”

Kevin Wells, P. Geo. (APEGBC #34227)  
Consulting Geologist,  
KWW Geoscience & Exploration Corporation

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## CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: “NI 43-101 Technical Report on the Preliminary Copper Resource for the Southern Waste and 3060 Portal Waste Dumps”, prepared for Nicola Mining Inc. with an effective date May 21, 2020 (the “Technical Report”).

I, James N. Gray, P. Geo, do hereby certify that:

1. I am a Consulting Geologist with the Advantage Geoservices Limited. with an office 1051 Bullmoose Trail, Osoyoos, BC, V0H 1V6;
2. I am a graduate of the University of Waterloo in 1985 where I obtained a B.Sc in Geology. I have practiced my profession continuously since 1985. My experience includes resource estimation work at operating mines as well as base and precious metal projects in North and South America, Europe, Asia and Africa;
3. I am a Professional Geologist registered with the Engineers and Geoscientists British Columbia (#27022);
4. I have visited the property on October 29<sup>th</sup>, 2018;
5. I have read the definition of “qualified person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to 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. As a qualified person, I am independent of the issuer as defined in Section 1.5 of NI 43-101;
7. I am the co-author of the Technical Report, responsible for Section 14, as well as relevant parts of the Executive Summary, Interpretation and Conclusions, and Recommendations and accept professional responsibility for those sections of this technical report;
8. I have had no prior involvement with the subject property.
9. I have read NI 43-101 and Form 43-101F1 and confirm that this Technical Report has been prepared in compliance therewith;
10. As of the effective date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

Dated this 21<sup>st</sup> day of May 2020 in Osoyoos, British Columbia, Canada.

*“signed and sealed”*

James N. Gray, P. Geo (APEGBC 27022)  
Consulting Geologist  
Advantage Geoservices Limited

**APPENDIX I: Nicola Mining Drill Hole Co-Ordinates.**

Hole ID	Project Area	Year	East	North	Elevation	Azimuth	Dip	Length
CC-19-71	Craigmont Central	2019	647641.1	5563495.3	1299.7	357	-68.0	701.04
CC-19-72	Craigmont Central	2019	647686.9	5563374.1	1289.4	358	-57.5	731.52
CC-19-73	Craigmont Central	2019	647732.9	5563429.5	1279.4	356	-64.0	710.14
CC-19-74	Craigmont Central	2019	647434.0	5563502.3	1321.1	1.05	-67.8	754.99
CC-19-75	Craigmont Central	2019	647917.3	5563427.0	1254.8	12	-66.4	750.00
CC-DDH-THU-003	Craigmont Central	2016	647023.0	5564993.0	1462.0	60	-55.0	136.00
CC-DDH-THU-004	Craigmont Central	2016	647022.0	5564994.0	1462.0	25	-45.0	164.00
CE-DDH-THU-001	Craigmont East	2016	650546.0	5564067.0	836.0	25	-45.0	80.00
CE-DDH-THU-001A	Craigmont East	2016	650547.0	5564067.0	835.0	25	-45.0	235.00
CW-DDH-THU-002	Craigmont West	2016	646725.0	5564094.0	1463.0	40	-60.0	448.00
NC-2017-01	Craigmont West	2017	646725.1	5564091.0	1463.1	30	-70.0	535.53
NC-2017-02	Craigmont West	2017	646726.4	5564091.0	1463.2	50	-55.0	344.00
NC-2017-03	Craigmont West	2017	646627.0	5564000.6	1471.8	10	-55.0	615.00
NC-2017-04	Craigmont West	2017	646624.0	5563996.3	1472.2	355	-50.0	688.00
NC-2017-05	Craigmont West	2017	646546.7	5563946.8	1476.7	335	-49.0	812.90
CW-NC-2018-01	Craigmont West	2018	646727.1	5564093.3	1463.2	30	-57.0	389.00
CW-NC-2018-02	Craigmont West	2018	646624.0	5563996.3	1472.2	140	-58.0	642.21
CW-NC-2018-03	Craigmont West	2018	646780.3	5564074.8	1455.6	357	-59.0	410.57
CW-18-01	Craigmont West	2018	646524.5	5563998.9	1484.7	0	-62.0	604.42
CW-18-02	Craigmont West	2018	646453.7	5564099.2	1515.0	0	-52.0	598.02
CW-18-03	Craigmont West	2018	646453.7	5564098.6	1514.8	0	-75.0	258.17
EP-18-01	Promontory	2018	645748.5	5563025.4	1599.4	180	-60.0	520.29
EP-18-02	Promontory	2018	646100.4	5562923.9	1624.0	180	-70.0	261.21
CC-18-01	Craigmont Central	2018	647834.8	5563405.5	1259.9	360	-78.0	386.18
CC-18-02	Craigmont Central	2018	647919.3	5563984.6	1207.9	180	-75.0	348.69
CC-18-03	Craigmont Central	2018	648340.0	5563940.0	1163.5	180	-80.0	492.50
CC-18-04	Craigmont Central	2018	647844.8	5563946.9	1209.9	180	-80.0	238.66
CC-18-05	Craigmont Central	2018	648151.1	5564036.7	1209.0	180	-80.0	282.24
CC-18-06	Craigmont Central	2018	647910.8	5564146.2	1268.3	180	-80.0	371.86
CC-18-07	Craigmont Central	2018	647544.0	5564027.0	1250.0	215	-82.0	142.34
CC-18-08	Craigmont Central	2018	647547.7	5564032.2	1322.5	215	-82.0	492.56