TECHNICAL REPORT on the

THULE COPPER - IRON PROPERTY

Southern British Columbia,

Canada

Latitude 50° 12' 28.1" N, Longitude 120° 55' 13.8" W

Prepared for:

HULDRA SILVER INC.

Suite 610, 837 West Hastings St.

Vancouver, B.C. CANADA, V6C 3N6

Prepared by:
Jim Cuttle, B.Sc., P.Geo.
86 Cloudburst Road
Whistler, B.C. CANADA, V0N-1B1

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1. SUMMARY

The Thule Copper Property (the “Thule Property” or the “Property”), including the former Craigmont copper-iron mine, is located 14 kilometres northwest of Merritt in southern British Columbia. It comprises 20 contiguous mineral claims, 10 contiguous mining leases and 7 freehold properties covering a total area of 8,272 hectares located in the Nicola Mining Division. The claims are owned 100% by Huldra Properties Inc. (the “Huldra Properties”), a subsidiary of Huldra Silver Inc. (“Huldra Silver”).

The Property covers a large area along the southern extents of the Guichon Batholith where many of the copper prospects on the Property have been intermittently explored as early as the 1930's. The most important discovery to date has been the past producing Craigmont Copper-Iron mine located in the central part of the claim holdings.

The former mine (the “Craigmont Mine”) was operated by Craigmont Mines Ltd. (“Craigmont Mines”) from 1961 until 1982 when Placer, the Company's majority shareholder, was forced to cease activity due to falling copper prices. During its operation 34 million tonnes of ore were mined grading about 1.28% (Staargaard, 1995). From 1982 to 1992, Craigmont shipped up to 60,000 tonnes of clean metallurgical magnetite per year from its stockpile to coal producers in western Canada and the United States for use in the coal flotation process. After 1992, Craigmont continued to produce a limited amount of products for the coal industry from re-worked iron fines in the tailings pond. On March 3, 2011, Huldra Silver agreed to buy all outstanding shares of Craigmont Holdings Ltd. in consideration for certain cash and share payments.

The Thule Property is underlain by an east-northeast trending, steeply dipping volcanic pile of Upper Triassic Nicola Group rocks, bound to the north by the Early Jurassic - Late Triassic Guichon Creek Batholith and unconformably overlain by the Middle and Upper Cretaceous Spences Bridge Group. Most of the area is in turn covered by thick gravel overburden.

In the vicinity of the former mine, the Border phase of the Guichon Creek Batholith varies in composition from quartz diorite to granodiorite. These rocks intrude the Nicola Group, a thick volcanic and sedimentary series of agglomerate, breccia, andesitic flows, limestone, argillite and greywacke.

The Thule Property hosts at least two types of mineralization described as copper-iron skarn and copper porphyry. The mineralization is either located in carbonate rich silicate rich rocks or in intrusive rocks along the southern flanks of the Guichon Batholith. Mineralization commonly occurs with skarn assemblages such as actinolite, biotite, epidote and garnet. Chalcopyrite, magnetite, specularite and minor bornite are principle minerals and in the case of the Craigmont

Mine supergene minerals such as chalcocite and native copper have developed in limited amounts above the mineralized body. Gold, molybdenum and silver contents are generally low.

The Craigmont Mine is made up of four zones of copper and iron mineralization known as the No1,2,3 and 4 bodies. Semi-continuous mineralization is found over a strike length of 900 metres and a vertical depth of 600 metres. Mineralization is generally confined to limy horizons between walls of greywacke and andesite.

Although No1 and No2 bodies at the Property are believed to be mined out, historical reports suggest No3 and No4 bodies remain open for exploration. Non-compliant 43-101 estimates by Craigmont Mines calculated a possible reserve of 1.29 million tons grading 1.53% copper at No 3 body between sections 6565E and 8015E (after James Bristow, P. Eng., 1985. Internal document to Craigmont Mines.). The estimate above assumes a 0.7% cut-off grade, a 20 foot minimum width, a tonnage factor of 12 cubic feet per ton and no allowance for dilution or recoveries. Other specific parameters and methods used in this historical resource calculation are unknown. The estimate is considered NI43-101 non-compliant. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Huldra Silver is not treating the historical estimate as current mineral resources or mineral reserves. No4 body is vaguely represented by a mineralized intercept on section 4700E where core from diamond drill hole S100 assayed 149 metres of 0.41% copper.

In 2012, Huldra Silver contracted Scott Hogg and Associates Ltd. to complete a helicopter aeromagnetic gradient and spectrometer survey over the entire Property. A total of 903 line kilometres of magnetic data was collected.

From this data package, SJ Geophysics of Delta B.C identified six magnetic targets along strike of the past producing Craigmont Mine. An additional six other exploration targets were identified by the author during the data compilation and review process.

Recommendations for further work on these targets include; ground follow-up on new magnetic targets that SJ Geophysics suggests may be similar to the past producing Craigmont Mine; digital re-construction of the underground workings to better locate No3 and No4 bodies; drift re-habilitation for underground access; drill test new and refined magnetic targets; discuss option agreements with independent claim holders located along strike of the Property, and review historical geological information on the Guichon - Nicola contact to the northwest and the east of the Craigmont 'blocks' to define near-surface targets for follow-up geochemistry and geological mapping.

The budget includes ground magnetic surveys, 5000 metres of HQ core drilling, 2000 metres of drift re-habilitation, underground surveys and sampling, and associated field support. The estimated cost is Can$ 2,295,000.

2. INTRODUCTION

This technical report, titled TECHNICAL REPORT on the THULE COPPER-IRONPROPERTY, SOUTHERN BRITISH COLUMBIA, CANADA has been prepared by Jim Cuttle, P.Geo. (Qualified Person) at the request of Ryan Sharp, President of Huldra Silver. It presents an independent review of data on the Thule Property, including the past producing Craigmont Mine and identifies potential exploration targets that justify further work.

2.1Scope of Work and Terms of Reference

A site visit to the Property by the author was completed on June 3, 2012 with Ryan Sharp, President of Huldra Silver. The main purpose of the field visit was to obtain a general understanding of the extent of mining activities on the Property, discuss and review geological interpretations established during mine production at Craigmont from 1960's to the early 1980's and further identify exploration opportunities along strike of important mineral producing 'marker' horizons within the Thule Property.

The author was able to use digital and 'hard copy' data provided by Huldra Silver to create and digitize new maps and figures included in this report. Maps are referenced using UTM Nad 83 (Zone 10) or Nad 83 Longitude / Latitude projections. All units of measurement are metric, unless otherwise stated.

This report is based on information believed to be accurate at the time of completion and complies with Canadian National Instrument 43-101. It may be used to support and maintain future public financings.

Cuttle is responsible for all sections and figures in this report unless otherwise indicated.

3. RELIANCE ON OTHER EXPERTS

Cuttle obtained electronic data and other data concerning the Property from several sources, including publications from federal and provincial Geological Surveys, historical files collected by Christopher James Corp. and Gunpoint Exploration Ltd., and from a library of historical assessment reports describing previous work at the previous Craigmont Mine that are recorded in the public domain.

In addition, the author has relied on technical information and opinions concerning the Property from the following experts:

- Geophysical - Scott Hogg and Associates Geophysical, 85 Curlew Drive, Suite 104,Toronto, Ontario Canada. Collection of 903 line kilometres of airborne high resolution three axis magnetic gradient data.
- Geophysical - SJ Geophysics, of Delta, B.C. Data inversion models and interpretation from airborne magnetic data.
- Geological - Various geological interpretations and conclusions from qualified professionals with Placer Development and Craigmont Mines during mine operation.
- Legal - Clark Wilson LLP of Vancouver, B.C., Canada.
- Mineral Tenure - Mineral claim data for the Property were obtained from Mineral Titles On-Line, an internet website managed and maintained by the British Columbia Government. The site offers almost instantaneous title updates throughout the Province including claim information. It is believed to be accurate.

4. PROPERTY DESCRIPTION AND LOCATION

The Thule Property is located on NTS 1:50,000 map 92I/02 approximately 14 kilometres northwest of Merritt in southern British Columbia. The Property comprises 20 contiguous mineral claims, 10 contiguous mining leases and 7 freehold properties covering a total area of 8,272 hectares in the Nicola Mining Division. Claim inclusions not currently part of the Property are held in good standing by Clibetre Mining and Louise Cressy (Fig 2.).

The mineral claims are referenced to a province wide system of electronic staking where by predetermined claim boundaries or polygons are selected on-line with each specific corner referenced to a Universal Transverse Mercator (UTM) geographical grid position or easting and northing. There is no physical evidence of claim boundaries or claim corner posts in the field. The claims are centered on 648250E, 5563600N (UTM Nad83, Zone 10).

Mineral tenures in British Columbia allow for conditional ownership of mineral resources but do not include surface rights.

Table 1: Thule Copper Property Claim Tenure (as of April 29, 2013)

Tenure Number	Name	Tenure Type	Map Number	Issue Date	Good To Date	Area (ha)	Owner 100%
237642		Lease	092I016	1958/Jun/12	2013/Jun/12	39.27	Huldra Properties Inc.
237643		Lease	092I026	1958/Nov/12	2013/Nov/12	179.21	Huldra Properties Inc.
237644		Lease	092I026	1960/Aug/19	2013/Aug/19	4.33	Huldra Properties Inc.
237645		Lease	092I026	1960/Oct/05	2013/Oct/05	17.98	Huldra Properties Inc.
237646		Lease	092I026	1960/Oct/05	2013/Oct/05	19.4	Huldra Properties Inc.
237647		Lease	092I026	1960/Oct/05	2013/Oct/05	14.66	Huldra Properties Inc.
237648		Lease	092I026	1962/Jan/22	2014/Jan/22	15.88	Huldra Properties Inc.
237649		Lease	092I026	1962/Jan/22	2014/Jan/22	19.51	Huldra Properties Inc.
237650		Lease	092I026	1962/Jan/22	2014/Jan/22	20.23	Huldra Properties Inc.
237651		Lease	092I026	1962/Jan/22	2014/Jan/22	16.88	Huldra Properties Inc.
504393	MONT 1	Claim	092I	2005/Jan/20	2017/Apr/01	517.254	Huldra Properties Inc.
504396		Claim	092I	2005/Jan/20	2017/Apr/01	496.136	Huldra Properties Inc.
504398	MONT 3	Claim	092I	2005/Jan/20	2017/Apr/01	434.086	Huldra Properties Inc.
504489	MONT 4	Claim	092I	2005/Jan/21	2017/Apr/01	103.454	Huldra Properties Inc.

Tenure Number	Name	Tenure Type	Map Number	Issue Date	Good To Date	Area (ha)	Owner 100%
507486	MONT 5	Claim	092I	2005/Feb/18	2017/Apr/01	124.152	Huldra Properties Inc.
509453	MONT 6	Claim	092I	2005/Mar/22	2017/Apr/01	455.266	Huldra Properties Inc.
509454	MONT 7	Claim	092I	2005/Mar/22	2017/Apr/01	124.009	Huldra Properties Inc.
512251	MONT 8	Claim	092I	2005/May/09	2017/Apr/01	82.72	Huldra Properties Inc.
512431	MONT 9	Claim	092I	2005/May/11	2017/Apr/02	62.035	Huldra Properties Inc.
514486	MONT	Claim	092I	2005/Jun/14	2017/Apr/01	372.106	Huldra Properties Inc.
514583		Claim	092I	2005/Jun/16	2017/Apr/02	1592.614	Huldra Properties Inc.
514635		Claim	092I	2005/Jun/17	2017/Apr/02	1344.12	Huldra Properties Inc.
514636		Claim	092I	2005/Jun/17	2017/Apr/01	20.677	Huldra Properties Inc.
515305	MONT 100	Claim	092I	2005/Jun/26	2017/Apr/01	413.258	Huldra Properties Inc.
515306	MONT 101	Claim	092I	2005/Jun/26	2017/Apr/01	413.329	Huldra Properties Inc.
515307	MONT 102	Claim	092I	2005/Jun/26	2017/Apr/01	413.434	Huldra Properties Inc.
515308	MONT 103	Claim	092I	2005/Jun/26	2017/Apr/02	206.774	Huldra Properties Inc.
515316	MONT 104	Claim	092I	2005/Jun/27	2017/Apr/01	495.96	Huldra Properties Inc.
515317	MONT 105	Claim	092I	2005/Jun/27	2017/Apr/01	495.958	Huldra Properties Inc.
517647		Claim	092I	2005/Jul/13	2016/Oct/01	289.606	Huldra Properties Inc.

Table 2: Fee Simple Interests within the Thule Copper Property

Description	Acreage	Zoning
Parcel Identifier: 005-729-181 District Lot 1215, Kamloops Division, Yale Land District	322.74	Light Industrial
Parcel Identifier: 001-762-613 District Lot 1612, Kamloops Division, Yale Land District	139.1	Residential
Parcel Identifier: 005-729-360 District Lot 1608, Kamloops Division, Yale Land District	40	Residential
Parcel Identifier: 001-762-605 District Lot 1915, Kamloops Division, Yale Land District	155	Light Industrial
Parcel Identifier: 005-729-211 District Lot 4233, Kamloops Division, Yale Land District	156	Residential
Parcel Identifier: 005-729-289Block A, District Lot 4234, Kamloops Division, Yale Land District	117	Residential
Parcel Identifier: 005-729-319Block A, District Lot 4429, Kamloops Division, Yale Land District	36.6	Residential

4.1 Thule Copper Property Agreement

The Property was acquired by Huldra Silver pursuant to an agreement with Huldra Properties (formerly Craigmont Holdings Ltd.), the shareholders of Craigmont Holdings Ltd., Craigmont Mines and 0906262 B.C. Ltd., dated March 30, 2011.

Huldra Silver remains obligated to transfer ownership in the Property to Thule Copper Corporation, another subsidiary, and then transfer 49.9% of the shares of Thule Copper Corporation to the former Craigmont Holdings Ltd. shareholders.

4.2 Permitting And Environmental Liabilities

Huldra Properties is subject to the normal permitting process as directed by the Inspector of Mines including consultation with First Nations. The company plans to submit applications requesting permits for future exploration activity. This application has not been submitted at the time of writing this report.

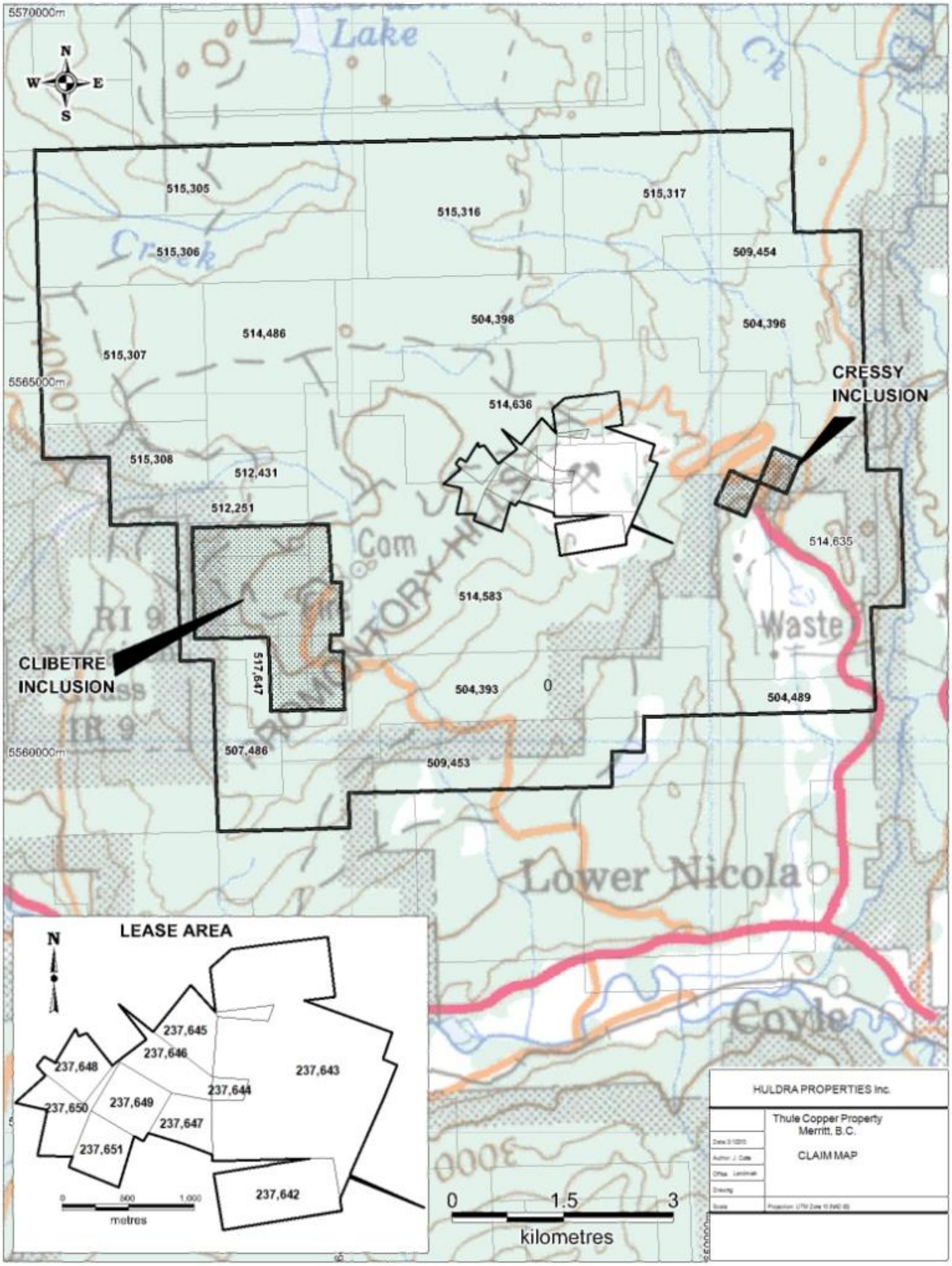
The Property including the old Craigmont Mine site is sufficiently large to accommodate personnel camps, maintenance buildings, processing plants, waste disposal, and mine tailings. The mine site was previously active from 1961 through to 1982.

Since August, 2012, Huldra Silver has been processing silver ore from its Treasure Mountain mine at a newly constructed mill site on mineral claim 514583 on industrial zoned District Lot 1915 (154.98 acres). The 200 tonne per day mill is fully permitted by the Inspector of Mines including permits for the transportation of raw ore from Treasure Mountain to the mill site.

Huldra Properties does not carry any environment liabilities that might be related to previous mining activities on the Property.

Figure 1: Property location

Figure 2:Mineral claim tenure



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

The Property is located in the Interior Plateau Region of southern British Columbia approximately 14 kilometres northwest of the town of Merritt along the Merritt-Spences Bridge Highway #8 before taking the Aberdeen Road north from Lower Nicola. The claims and the old Craigmont Mine site are located along the eastern slopes of the Promontory Hills just west of the Stumbles Creek Valley. A network of old dirt roads and open cat trails allow access through most parts of the property.

Merritt (pop 7,000) and nearby Kamloops (pop 85,000) offer all necessary services, including accommodation, heavy equipment supplies and a highly skilled labour market due to a long history of mining and exploration in the region.

The Property consists of rolling hills with elevations ranging from 800 to 1600 metres above sea level. Vegetation includes open forests of ponderosa pine, with thicker growth of spruce and lodge pole pine at higher elevations. Many of the river valleys and flatter terraces are comprised of thick glacial overburden.

The climate is moderately dry with less than 350mm of annual precipitation. Temperatures range from average winter lows of -8°C to average summer highs of 26°C. Extreme temperatures can reach -30°C to +40°C respectively.

Summer field work is limited from early April through late November when snow begins to arrive at higher elevations.

Photo 1:Typical vegetation on the Property

6. HISTORY

The Property covers a large area along the southern extents of the Guichon Batholith with many of the copper prospects on the Property being intermittently explored as early as the 1930's through the 1980's. The most important is the Craigmont Copper-Iron Mine located in the central part of Huldra Properties' claim holdings.

6.1 Exploration History - Craigmont Mine

Exploration work was first recorded on the Property area in or before1935 at the Eric Showing copper iron showing located approximately 2.5 kilometres east the present Craigmont open pit. In 1954, fourteen claims forming the core of the Craigmont Mine were staked and later acquired by Craigmont Mines who immediately expanded the property to over 150 claims. Soil and magnetic surveys over known showings and nearby areas identified several legitimate drill targets. In 1957and 1958,a 3,500 foot drill program discovered what is known today as the Craigmont body which underlies the original crown grants Merrell 7 and 8 claims (Lots 5771, 5772) and McLeod 5 and 6 claims (Lots 5777, 5778). Hole S-15 passed through the centre of No 1 body and intersected 195 meters grading over 4% copper.

In November 1957, Canadian Exploration Ltd (Canex), Noranda Exploration and Peerless Oil and Gas optioned the Property and the three formed a private operating company called Birkett Creek Mine Operators Ltd (Birkett). In 1958 to 1959, the group began extensive surface and underground drilling and development work. In 1960, the construction of a mill started and preparation of open pit mining began. Reserves at the time were estimated but are considered NI 43-101 non-compliant. In January1961, under a restructuring plan of Birkett, the operating control of the property was transferred to Craigmont Mines and a 4,000 ton per day mill was put into production in August 1961 to produce copper concentrate. Production during the early years from 1961 to 1967 was mainly from the open pit but included small tonnages from underground development. In 1967, the Company stopped mining from the open pit and changed over to underground mining. For the first eight years of copper production at Craigmont, the associated magnetite iron ore was deposited separately with the tailings. In 1970, the Company installed a magnetite recovery circuit and began to stockpile magnetite next to the mill.

By 1977 the copper reserves were close to depletion and the Company began a property wide exploration program between1977 to 1979. The object of this work was to test for mineralization along a five mile length of the Nicola - Guichon geological contact. This work included the following activities:

- 24 surface diamond drill holes (S-96 to S121 for 1170 metres).
- 11 underground holes totalling 3860 metres (hole locations unknown).
- Surface geological mapping entire property including Promotory Hills area
- Re-logging of drill core from approximately 200 surface and underground holes.

- Ground geophysical surveys including 45 line kilometres of pulse electro-magnetics (PEM), 20 line kilometres very low frequency (VLF), 5.6 line kilometres of induced polarization (IP) and over 17 line kilometres of ground magnetic surveying.

This work examined and expanded on existing zones and also discovered new mineralization, however these were later considered too small or too low grade to warrant development. It was generally concluded that magnetic surveys best identified potential copper-iron mineralization and should be included as a survey in any future exploration program.

The Craigmont Mine operated from 1961 until 1982 when Placer, the Company's majority shareholder was forced to close the mine due to falling copper prices. Approximately 34 million tonnes of ore were mined grading about 1.28% copper (Staargaard, 1995). Minor amounts of gold and silver were recovered. About 600,000 tonnes of media grade iron concentrate remained unsold when milling was complete (NMI-1982). In 1985, the controlling interest in Craigmont was purchased by M. Seven Industries Inc. and subsequently privatized.

From 1982 to 1992, Craigmont and other groups shipped up to 60,000 tonnes per year of clean metallurgical magnetite from its stockpile to coal producers in western Canada and United States for use in the coal flotation process.

In 1985, further review of the 1977 to 1979 exploration program identified several opportunities as outlined by Bristow (1985). These include:

- No 4 body - Embayment areas. The skarn zone between surface hole S-100 (0.41% Cu over 149 metres) and underground hole 30-302 may be large enough to contain 10 million tons of mineralized rock. This target was later tested by surface hole S-124 with results showing 2-8% iron and 0.1 to 0.4% copper and confirms downward continuation of steeply dipping epidote-actinolite skarn.
- No 3 body - West end of Mine block. There is potential of increasing No 3 type reserves between sections 6565E and 8015E as reported by Craigmont Mines in 1979. Estimates are non NI43-101 compliant The mineral is described as highly fractured, siliceous with low iron content. Sub-level cave - Mine block area. They concluded that much of the cave material immediately in the mine area may not be economic until periods of higher commodity prices exist (Bristow, 1985).
- Noranda - Creesy block. Contains native copper mineralization in holes S-117 and S-118, suggesting close proximity to undiscovered mineralization.

Very little exploration work for copper occurred after Craigmont's re-assessment study in 1985.

Realizing the remaining magnetite stockpiles represented only three years of industry demand Craigmont Mines in 1991completed a detailed magnetic survey and a 30 hole drill program (763 meters) on the tailings area supervised by Klohn Leonoff. This work was part of an effort to delineate magnetite reserves within the tailings that later helped to obtain necessary government permits to construct a recovery facility for magnetite (Rice, 1992).

Photo 2: Craigmont open pit

Photo 3: Craigmont tailings pond

In 2004, Craigmont Mines signed an option agreement with Christopher James Gold Corp (CJGC). Work by CJGC included compilation of historical geophysical and geological data, and the development of 3 dimensional models by Kirkham (2006). This work led to new magnetic and IP geophysical surveys and a 8 hole drill program to test newly defined exploration targets along strike of the mine area to the west.

Results of this program were discouraging and the property later reverted back to Craigmont Mines.

In the following years Craigmont Mines continued to produce the following products from the re-worked fines in the tailings pond: 1) 80 grade magnetite (80% size fraction passing through 325 mesh size) used in the coal industry as a recoverable media material to clean coal; and 2) 90 grade magnetite (90% size fraction passing through 325 mesh size). Other products under potential development include +70 mesh sand blasting abrasive and 100% -25 micron magnetite for the specialty paint industry.

On March 3, 2011, Huldra Silver agreed to buy all outstanding shares of Craigmont Mines in consideration for certain cash and share payments.

6.2 Past Production at Craigmont Mines

Copper and iron production from Craigmont is well documented from 1961 through to 1982 in the following table (Information Circular 1996-1, p.10., modified after Kirkham, 2006). Bi-products included minor gold and silver recovery.

Table 3: Craigmont Mine Copper Production (Mined and Milled, 1962 to 1982)

YEAR	Tonnes Mined	Tonnes Milled		Grams Recovered	Kilograms Recovered
1982	690,029	690,029	Copper		3,018,203
1981	1,450,995	1,450,995	Copper		9,545,277
1980	1,950,551	1,950,551	Copper		10,794,185
1979	2,010,812	1,924,570	Copper		16,188,137
1978	1,885,916	1,899,934	Copper		26,290,618
1977	1,849,726	1,884,335	Copper		17,659,393
1976	1,767,514	1,763,219	Gold	7,838	21,107,071
			Copper		
1975	1,771,102	1,774,731	Gold	26,997	20,564,778
			Copper		
1974	1,589,488	1,629,923	Copper		24,260,910
1973	1,275,143	1,296,865	Copper		17,511,143

YEAR	Tonnes Mined	Tonnes Milled		Grams Recovered	Kilograms Recovered
			Iron		35,197,677
1972	1,703,775	1,699,641	Copper		21,270,715
			Iron		35,439,894
1971	1,658,561	1,663,279	Gold	23,421	
			Copper		18,186,143
			Iron		21,692,776
1970	1,635,680	1,630,396	Gold	19,595	
			Copper		17,844,056
			Iron		16,841,797
1969	1,642,771	1,642,771	Copper		17,068,488
1968	1,600,474	1,600,474	Copper		13,833,332
1967	1,087,820	1,755,221	Copper		27,123,960
1966	1,246,554	1,233,250	Copper		15,322,908
1965	1,192,215	1,192,215	Copper		13,806,392
1964	1,668,357	1,668,357	Copper		25,023,404
1963	1,621,781	1,621,781	Copper		27,065,033
1962	1,678,512	1,678,512	Copper		36,205,997
1961	439,141	439,141	Silver	242,510	
			Copper		3,014.326

After 1982 through to 1997, Craigmont continued to mill iron and magnetite ore (Table 4.). Un-recorded production of iron from re-worked tailings continued to 2012.

Table 4:Craigmont Mine Iron Production (Milled, 1983 to 1997)

YEAR	Tonnes Mined	Tonnes Milled	Commodity	Kilograms Recovered
1997		60,000	Magnetite	60,000,000
1996		60,000	Magnetite	60,000,000

YEAR	**Tonnes Mined**	**Tonnes Milled**	**Commodity**	**Kilograms Recovered**
1995		60,000	Magnetite	60,000,000
1994		60,000	Magnetite	60,000,000
1993		60,000	Magnetite	60,000,000
1992		60,000	Magnetite	60,000,000
1991		60,000	Magnetite	60,000,000
1990		56,936	Iron	56,936,000
1989		44,856	Iron	44,856,000
1988		39,271	Iron	39,271,000
1987		32,300	Iron	32,300,000
1986		35,821	Iron	35,821,000
1985		54,225	Iron	54,225,000
1984		48,634	Iron	48,634,000
1983		23,906	Iron	23,906,000

7. GEOLOGICAL SETTING, MINERALIZATION and PROSPECTS

The main regional geology of the area is best summarized by Kirkham, 2006:

"The Promontory Hills area is underlain by a complex east-northeast trending, steeply dipping volcanic pile of Upper Triassic Nicola Group rocks, bounded 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.

In the vicinity of Craigmont Mine, the Border phase of the Guichon Creek Batholith varies in composition from quartz diorite to granodiorite. These rocks intrude the Nicola Group, a thick volcanic and sedimentary series of agglomerate, breccia, andesitic flows, limestone, argillite and greywacke. Attitudes parallel the intrusive contact zone. Sediments immediately adjacent to the batholith are hornfelsed quartzo-feldspathic greywackes. Spences Bridge Group agglomerates and flows dip approximately 15 degrees to the south and outcrop in the areas south and west of the mine."

Within the Property area, mineralization is commonly associated with copper and iron skarn assemblages. Chalcopyrite, magnetite, specularite and minor bornite are principle minerals and in the case of Craigmont Mine supergene minerals such as chalcocite and native copper have developed above the mineralized body. Gold, molybdenum and silver contents are generally low.

Figure 3: Regional geology map

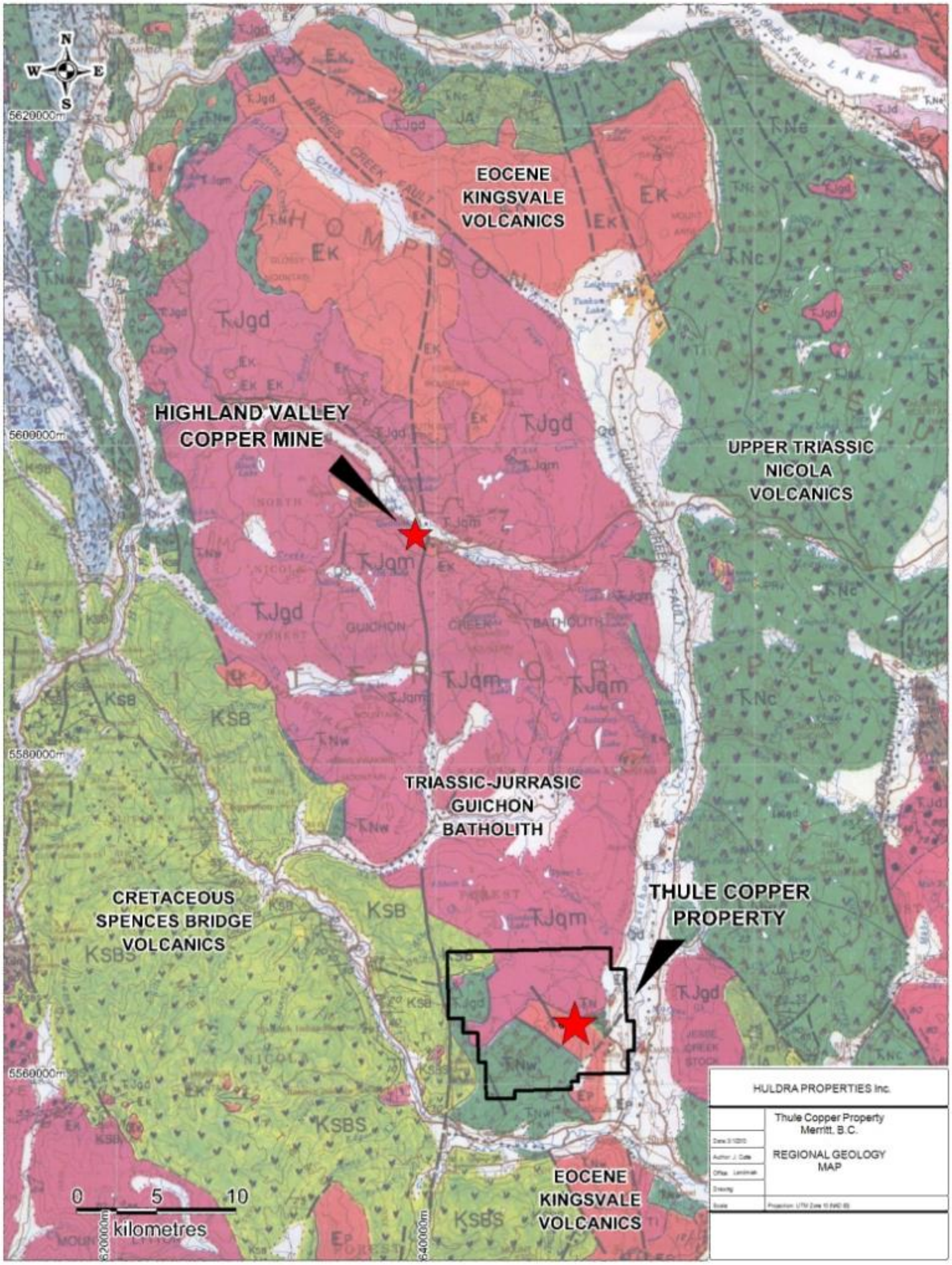
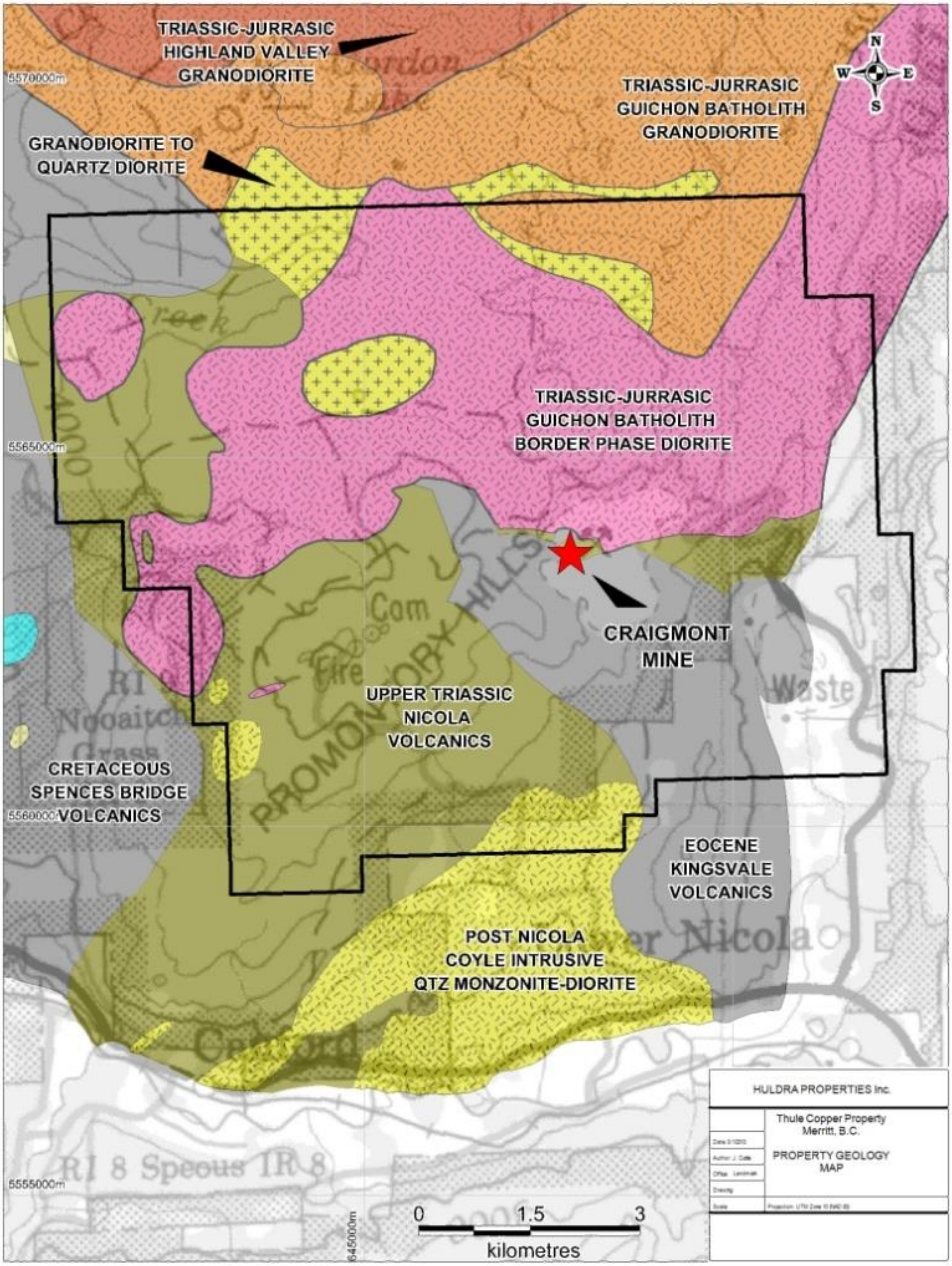


Figure 4: Property geology map



7.2Local Geology, Alteration, Structure and Rock Types - Craigmont Mine

(modified after Kirkham, 2006 and others)

The old mine lies adjacent to the southern margin of the Guichon Creek Batholith. Host rocks to the mineralization are calcareous sedimentary rocks of the Nicola Group comprised of limestones, limy tuffs, greywackes and argillites.

The gross structure at the mine is a large anticline with mineral-bearing drag folds on the north limb. These folds plunge 60 to 70 degrees eastward and are often occupied by diorite dykes. The anticline is cut off by a northwest trending fault on the west and an east trending fault on the south. Mineralized bodies lie within a block bounded by these regional faults and the Guichon Creek intrusive.

Semi-continuous mineral is found over a strike length of 900 metres and a vertical depth of 600 metres. The four main bodies, No1, 2,3 and 4 are confined to the limy horizon between walls of greywacke and andesite. (Figure 6).

Mineralization consists of magnetite, hematite and chalcopyrite and occurs as massive pods, lenses and disseminations extending through the calc silicate horizon. The body is roughly tabular, trends towards the east and dips near vertical. Minor folding and faulting is present but it does not significantly distort the mineralization. Chalcopyrite is associated with, but postdates the magnetite and commonly encloses the magnetite.

Alteration mineralogy indicates thermal zoning. Within the hornfelsed zone, greywackes contain biotite and actinolite. Limestone is commonly altered to marble. Immediately to the south is a massive actinolite skarn which in places is further altered to epidote and garnet (grossularite, andradite).

Three types of alteration are present. First is a zone of potassic alteration with a related (second) distal hornfels. Third is skarn alteration which overprints the potassic alteration and some of the hornfels. The skarn is garnet-epidote-amphibolite in composition with some chlorite, tourmaline and sericite. Two distinct stages of skarn development are recognized; Stage I skarns contain only relics of the host rocks and Stage II skarns contain relics of both Stage I skarns and host rocks.

- Stage I skarn - characterized by abundant bleached and unaltered relics of the host rock as well as the following associations: 1) Magnetite with chalcopyrite in magnetite rich and actinolite-epidote-magnetite skarn; 2) Epidote with garnet in barren banded epidote-garnet skarn; and 3) Barren massive garnet-epidote-calcite-pyrite skarn.
- Stage II skarn - characterized by the presence of specular hematite that either co-exists or replaces magnetite in Stage I skarn. Stage II skarn is composed of massive garnet which replaces Stage I skarn in the vicinity of diorite plugs. It includes: 1) Specularite rich skarn; and 2) Massive garnet replacement skarn.

The host rocks to the copper and iron minerals are the sedimentary and volcanic rocks of the upper Triassic Nicola Group. In the mine area this group is represented by a complex sequence at least 600 metre thick which has been subdivided into Basalt, Rhyolite, Carbonate and Clastic Sediment Units. All strike and dip parallel to the contact of the batholith, and are within the batholith contact aureole. Only the Clastic Sediment Unit is in contact with the batholith.

The following description of local structure has been taken from Kirkham (2005): "The Nicola Group rocks strike and dip parallel to the contact of the Guichon Creek Batholith. All Nicola Group rocks drilled within the Mine Block have partially developed granoplastic textures and mineral assemblages indicative of the hornblende hornfels facies of contact metamorphism (Drummond 1966). The batholith contact aureole is at least 1,500 feet wide in the Mine Block. Mapping within the major units suggests that changes in lithology along strike and down dip are better explained by interfingering of facies than by drag-folding of a single unit of uniform thickness.

This interpretation is more consistent with mapping in the Promontory area and with stratigraphic relationships in present day volcano-sedimentary environments. A major anticlinal fold comparable to that at Promontory Hills may have its axis in the basalt unit south of the mine workings, but there is insufficient data to support such a hypothesis. Minor folding within the Mine Block is restricted to the Carbonate unit, where measured axis have no consistent orientation. An antiform interpreted from the distribution of a distinctive grit band on section 7415 and minor folds observed on the 3060 level drift. These minor structures may be the result of plug emplacement. Fault sets recognized within the open pit and underground are consistent with trends recognized at Promontory Hill. The two best developed sets, striking 0800 with steep south dip and 280 degrees with near vertical dips, are parallel to the margin of the Guichon Creek Batholith and to bedding, foliation and pervasive shearing in the Nicola Group rocks. Two other sets, striking 030 degrees and dipping 65 degrees east are parallel to the faults that controlled deposition of Kingsvale volcanic rocks nearby."

7.2.1 Basalt Unit

In the mine, the Basalt unit is at least 300 feet thick. It consists of the interbedded plagioclase porphyritic flows, tuffs and derived sandstones and siltstones. The pyroclastic and epiclastic rocks are derived from the flow rocks. Several fine grained basalt flows also occur within the Carbonate unit in the central and eastern part of the mine.

7.2.2 Rhyolite Unit

The Rhyolite unit includes up to 800 feet of white, grey and buff lapilli tuff, lithic tuff, crystal tuff and tuff. All the fragments and crystals are derived from quartz-feldspar porphyritic rhyolite and the matrix is normally aphanitic rhyolite tuff with minor muscovite and chlorite. However, locally the matrix contains biotite and calcite and the fragments and crystals are rounded, suggesting reworking of the tuffs. Quartz feldspar porphyry underlies part of the Betty Lou block in the Promontory Hills area and is associated with small lenses of coarse hornblende biotite granodiorite. This intrusive sequence is known as the Coyle Stock, the majority of which is composed of clear quartz and plagioclase crystals in an aphanitic rhyolite matrix. It shows a gradational contact with the surrounding volcanic rocks and is believed to be a subvolcanic equivalent of the rhyolite.

7.2.3 Carbonate Unit

The Carbonate unit has been subdivided into three facies that are gradational in composition and locally interbedded. In the western part of the mine, there are two discrete lenses of the massive limestone facies that are separated by and grade down dip into rocks of the interbedded and grit facies. Farther east in the mine, the two lenses merge and eventually grade out completely. The interbedded facies consists of thin bedded, light grey to black impure lime siltstone, thin-bedded to laminated dark brown to black quartzo-feldpathic siltstone; and thin-bedded to laminated dark grey to black argillite. The pure sandstone contains mostly quartz and feldspar as impurities but the other three lithologies contain banded and disseminated biotite, pyrite, chalcopyrite and carbon. The grit facies consists of medium- to thick-bedded, grey sandstone, grit and conglomerate. The massive limestone facies consists of several lensoid bodies of nearly pure limestone with few interbeds of rhyolite tuff, argillite or siltstone near margins.

7.2.4 Clastic Sediment Unit

The Clastic Sediment unit is approximately 500 feet thick in the mine area. It consists of variably recrystallized massive to thick-bedded brown to grey, quartzo-feldspathic sandstone and siltstone. A few beds containing relict pyroxene phenoclasts, magnetite, hornblende and andesine may be recrystallized basalt tuff. Much of the sandstone in this unit is recrystallized to a rock of dioritic texture. In hand specimen, it can only be distinguished from adjacent quartz diorite by the presence of siltstone interbeds. However, in thin section the recrystallized sandstone can be distinguished by its total mafic content, the association of hornblende with biotite, chlorite and muscovite rather than clinopyroxene, the presence of volcanic rock fragments and the presence of metamorphic as well as detrital feldspar grains.

7.2.5 Guichon Batholith

The contact of the Guichon Creek Batholith is irregular and difficult to define because of the similarity between the Border phase quartz diorite and the recrystallized sandstone of the Clastic Sediment unit. The Border phase is mainly grey, medium-grained, weakly foliated biotite-hornblende-quartz diorite, although near its margins it ranges from hornblendite to granodiorite and contains numerous partly digested inclusions of Nicola Group rocks. The Border phase is pervasively saussuritized, sericitized and chloritized, but is unmineralized in the mine.

7.2.6 Diorite Plugs

Diorite Plugs, similar to the batholith Border phase, occur as bulbs and fingers that are elongated parallel to the stratigraphy, but which cut all the units in the mine. The plugs are light grey, coarse grained diorite, occasionally with a core of quartz diorite or granodiorite. Fractures in the diorite have haloes up to 1 inch wide of saussurite and chlorite, and veins with epidote, chalcopyrite and chlorite have epidotized haloes. Late prehnite-calcite and laumonite veinlets are common.

Other copper prospects on Thule's property are located well within the Guichon Batholith and show signatures to porphyry copper style mineralization, similar in some respects to other prospects of the Highland Valley area further to the north.

7.2.7 Kingsvale Cretaceous –Eocene Volcanics

A sequence of volcanic agglomerate and flow rock known as the Kingsvale volcanics form a cap over the Nicola rocks between the Craigmont Mine site and the Promontory Hills. Previous drilling indicates this younger cover unit to be up to 200 metres thick and has proven difficult to drill due to a base layer of swelling clays and water filled regolith (Rennie, 2007).

Figure 5:Local geology map

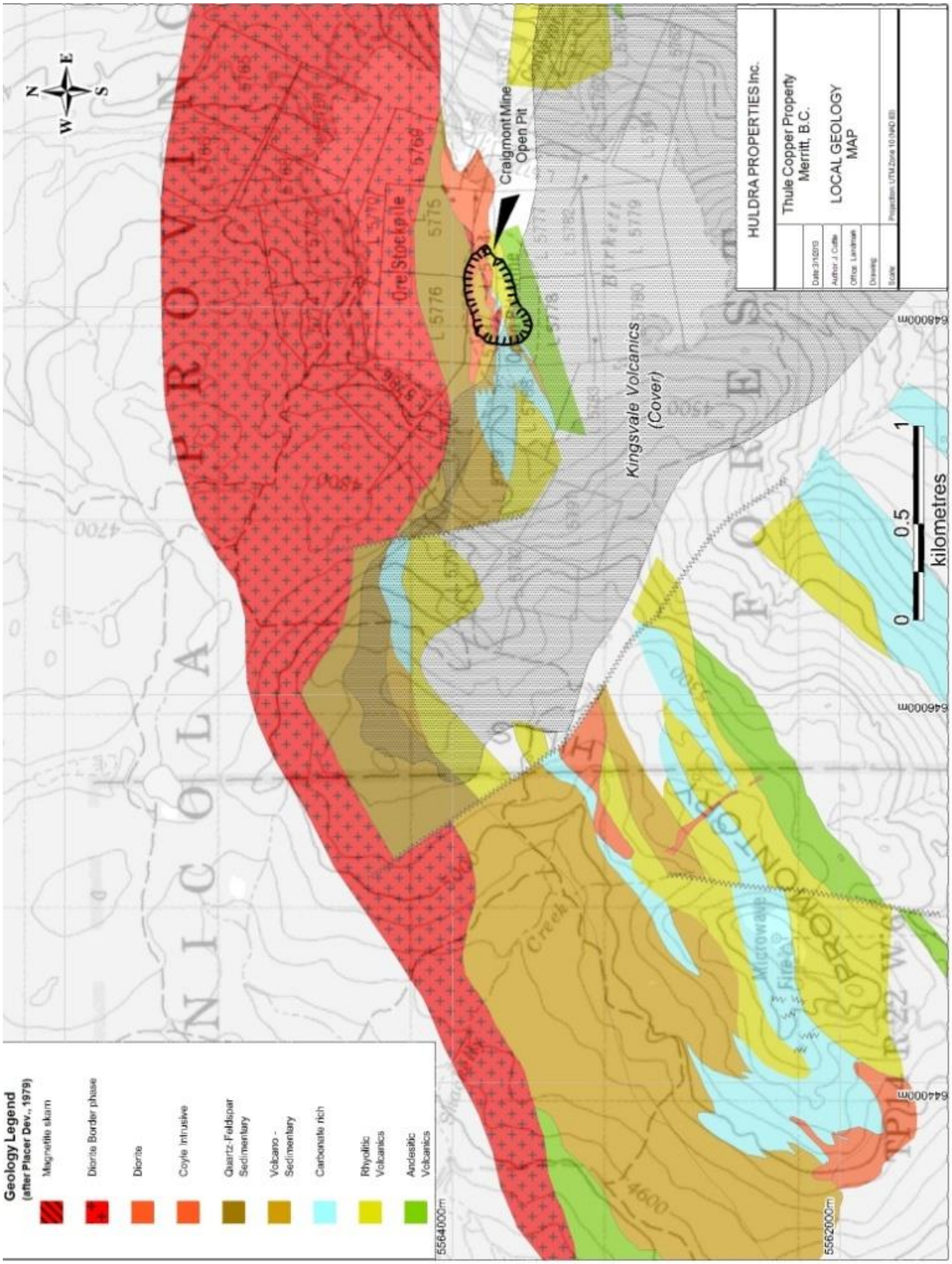


Figure 6: Craigmont vertical longitudinal section looking north (after Bristow, 1985)

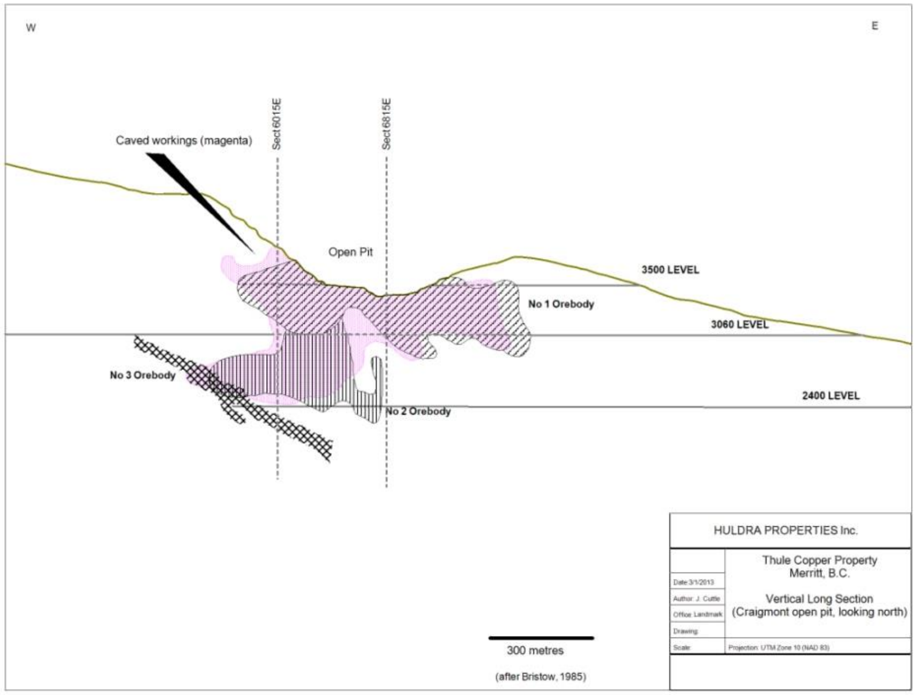
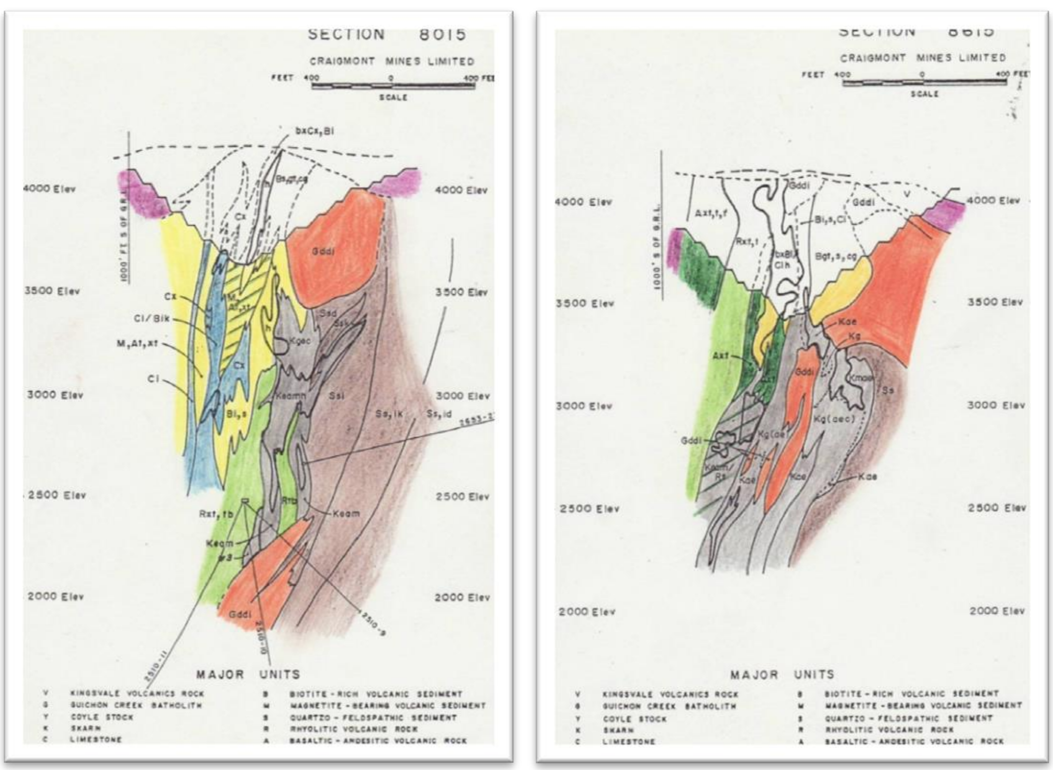


Figure 7: Craigmont section 8015 and 8615, looking west (after Bristow, 1985)



7.3 Descriptions of other mineralized areas on the Thule Copper Property

Other base metal (Cu, Fe, +/- Co, Hg) mineral occurrences have been located within the Property claim boundary that are worthy of mention. These are listed below with descriptions referenced directly from the British Columbia mineral inventory:

- **Eric (MF-092ISE036)**, **Copper, iron**. **Class - Cu Skarn / Porphyry Cu.** The Eric showing originally consisted of a 2.1 metre deep shaft sunk during or prior to 1935. It is located 2500 metres east of the Craigmont pit (092ISE035). Dump rock is epidote-rich and carries chalcopyrite, specular hematite, magnetite and copper carbonates. More recent drilling (1977) on a northeast trending magnetic anomaly revealed 3 to 5 per cent disseminated magnetite and occasional thin fracture-fillings of chalcopyrite within hornfelsed biotitic siltstone to fine-grained greywacke. Dioritic and granitic dykes cut the altered Nicola Group rocks. Assessment reports 212, 5379, 6186, 6746, 6942.
- **Titan Queen (MF-092ISE034)**, **Copper. Class - Porphyry Cu.**The Titan Queen showing, as it was first known, is underlain by quartz diorite to granodiorite assigned to the Border phase of the Guichon Creek Batholith. Potassium feldspar enriched dioritic rocks in fault or shear zones are intensely chloritized and silicified and host tourmaline veins. Mineralization in the veins consists of chalcopyrite, bornite, magnetite and malachite. Chalcopyrite also occurs as weak disseminations in adjacent outcrops. Assessment reports 209, 226, 6811, 14102.
- **Etta (MF-092ISE162)**, **Copper**. **Class - unknown.** The Etta showing is underlain in the west by Nicola Group volcanic breccia, tuff, agglomerate and flows with interbedded limestone and argillite. Kingsvale Group basalt, andesite, hornblende-needle porphyry, volcanic breccia, basal sandstone and conglomerate outcrops in the east. The contact of the two sequences trends northwest. Alteration consists of strong chloritization of the volcanic rocks with occasional small patches of malachite. Mineralization consists of fine disseminations of chalcopyrite and pyrite and occasional flecks of pyrrhotite in Nicola and Kingsvale group rocks.
- **ARH (MF-092ISE040)**, **Copper, iron**. **Class - Cu Skarn**. The ARH showing is situated on the south limb of the major fold near the intrusive contact of Nicola Group volcanic and sedimentary rocks and the Coyle stock. The main rock types are massive to porphyritic andesitic flows and intermediate tuffs with some mixed quartzo-feldspathic rocks, greywacke, argillite and limestone. The Nicola Group rocks are hornfelsed in the contact zone. The Coyle stock is diorite to quartz monzonite and is believed to be related to late stage Nicola Group volcanism. At the contact of limestone and Nicola Group volcanic rocks, small patches of garnet skarn host chalcopyrite and hematite mineralization. Disseminated magnetite and pyrite are also present. Assessment reports 222, 236, 531, 2128, 3889, 5771.
- **Betty Lou (MF-092ISE173)**, **Copper, lead, zinc**. **Class - Cu Skarn**. Several types of alteration are present. The greywacke exhibits hornfelsing and biotite alteration and carries minor disseminated pyrite. Limestone grades to complete recrystallization within

1000 metres of the Guichon Creek Batholith contact. Patches of garnet- epidote skarn occur in the volcanics. Hematite and malachite also occur. Development of actinolite-magnetite skarn similar to that at the Craigmont Mine (092ISE035) is also evident. Controls are the limestone host rock, fold structures and proximity to the batholith. Minor copper mineralization (chalcopyrite) occurs in the skarn zones and disseminated in the country rock. A small occurrence of galena and sphalerite also occurs at the top of Promontory Hills. Assessment reports 235, 280, 359, 516, 5630, 6486, 6934, 16492, 17677.

- **Tom (MF-92ISE037), Copper**. The Tom showing is underlain by ash tuff, volcanic sandstone and volcanic breccia with intercalated augite plagioclase andesitic lavas. These lithologies comprise the core of the major fold and are locally strongly faulted. Mineralization consists of disseminations and fracture-fillings of pyrite, chalcopyrite and specular hematite. Alteration minerals include epidote, calcite and chlorite.
- **Hank 30 (MF-92I038), Copper, iron, cobalt. Class - Cu Skarn.** The Hank 30 showing is underlain by ash tuff, volcanic sandstone, volcanic breccia and intercalated augite plagioclase andesitic lavas, which comprise the core of the major fold. Rare limy units are partially converted to skarn. Strata strikes northeast and dips steeply southeast. This belt is strongly epidotized and hosts weak copper and iron mineralization. Slender veinlets and minor disseminations of chalcopyrite, magnetite, specularite and pyrite occur within the flows and tuffs. Cobaltite is also evident. Skarn zones consisting of garnet, albite, quartz, calcite, chlorite and epidote host sulphide disseminations and veinlets. Assessment reports 240, 274, 330, 450, 4106, 4767.
- **Marb (MF-92ISE033), Copper. Class - Porphyry Cu.** The Marb showing is primarily underlain by medium-grained potassium feldspar-rich quartz diorite designated as the Border phase of the Guichon Creek Batholith (Map 30). A jointing system and faint steeply dipping gneissosity are characteristic of this unit. Rare pyroxene-rich zones are also present. Near its southern boundary, the property is underlain by Nicola Group andesite, tuffs and limestone. Alteration includes chloritization and epidotization. At the contact of the intrusive and the Nicola Group rocks, a wide zone of diorite breccia is developed. Two types of mineralization are found in the breccia zone. The first is disseminated magnetite, pyrite and pyrrhotite in hornfelsed volcanic fragments. Secondly, near strong chloritized shears, chalcopyrite, pyrite and pyrrhotite occurs as fine disseminations and slender veins. The main showing is 300 metres southwest of Camp Lake. Similar mineralization is found 750 metres to the northeast and several kilometres to the southwest near Reserve 9. Assessment reports 232, 735, 1923, 2096.
- **Marb 72 MF-92ISW037), Copper. Class - Cu Skarn**. Minor disseminated pyrite and pyrrhotite occur in altered volcanic fragments and with chalcopyrite in small shears in the contact zone. One skarn outcrop appears brecciated and is comprised of epidote, garnet, actinolite and chlorite with minor chalcopyrite and trace malachite. The Marb 72 showing

is located in outcrop 600 metres north of Shackelly Creek and 19 kilometres northwest of Merritt. Assessment reports 232, 735, 1923, 2096, 9757, 10195.

- **WP (MF-92ISE068), Copper, Mercury. Class - Porphyry Cu.** The WP property is underlain by intermediate to mafic volcanic rocks of the Upper Triassic Nicola Group which are intruded to the north and east by dioritic to granodioritic phases of the Lower Jurassic Guichon Creek Batholith. To the west, both Nicola and Guichon rocks are unconformably overlain by intermediate lavas of the Cretaceous Spences Bridge Group. Nicola Group porphyritic andesite strikes nearly east and dips steeply south. It is intruded by quartz diorite, granite, pegmatite and aplite dykes and is highly altered and epidotized near its contact with Guichon quartz diorite to granodiorite of the Border phase of the batholith. A steeply dipping fault zone strikes approximately north and cuts Nicola Group rocks which have been silicified, sheared, brecciated and mineralized with chalcopyrite, pyrite, specularite and minor cinnabar. In the fault zone fragments are cemented by calcite and albite. The maximum width of the mineralized zone is 60 centimetres and has been traced discontinuously for 61 metres. A quartz vein 15 centimetres wide cuts porphyritic andesite and carries chalcopyrite and malachite mineralization. Assessment reports 185, 190, 243, 245, 407, 2222.
- **Laron (MF-92ISE189), Copper. Class - Porphyry Cu.** The Laron showing is situated near the southeast perimeter of the multistage Lower Jurassic Guichon Creek Batholith. The area is underlain by quartz diorite to granodiorite varieties of the Border phase which represents the oldest rocks in the batholith. Small amounts of disseminated bornite, chalcopyrite and native copper were intersected in a drill hole. Assessment report 390.
- **Jua (MF-92ISE171), Copper. Class - unknown.** The Jua showing is situated near the south-eastern perimeter of the Lower Jurassic Guichon Creek Batholith. The area is underlain by the Border phase which represents the oldest rocks in the batholith. Glacial debris covers most of the property but quartz diorite is exposed in a few outcrops. Two drill holes (1973) intersected sparse native copper mineralization. Assessment reports 3708, 4512.

7.4 Craigmont Magnetite Tailings

After the mine closure, Craigmont Mines continued to produce the following products from stockpiles and re-worked fines in the tailings pond: 1) 80 grade magnetite (80% size fraction passing through 325 mesh size); and 2) 90 grade magnetite (90% size fraction passing through 325 mesh size) both used in the coal industry as a recoverable media material to clean coal. Other products under potential development include +70 mesh sand blasting abrasive and 100% -25 micron magnetite for the specialty paint industry.

It is not clear to the author what resource potential remains within the tailings area.

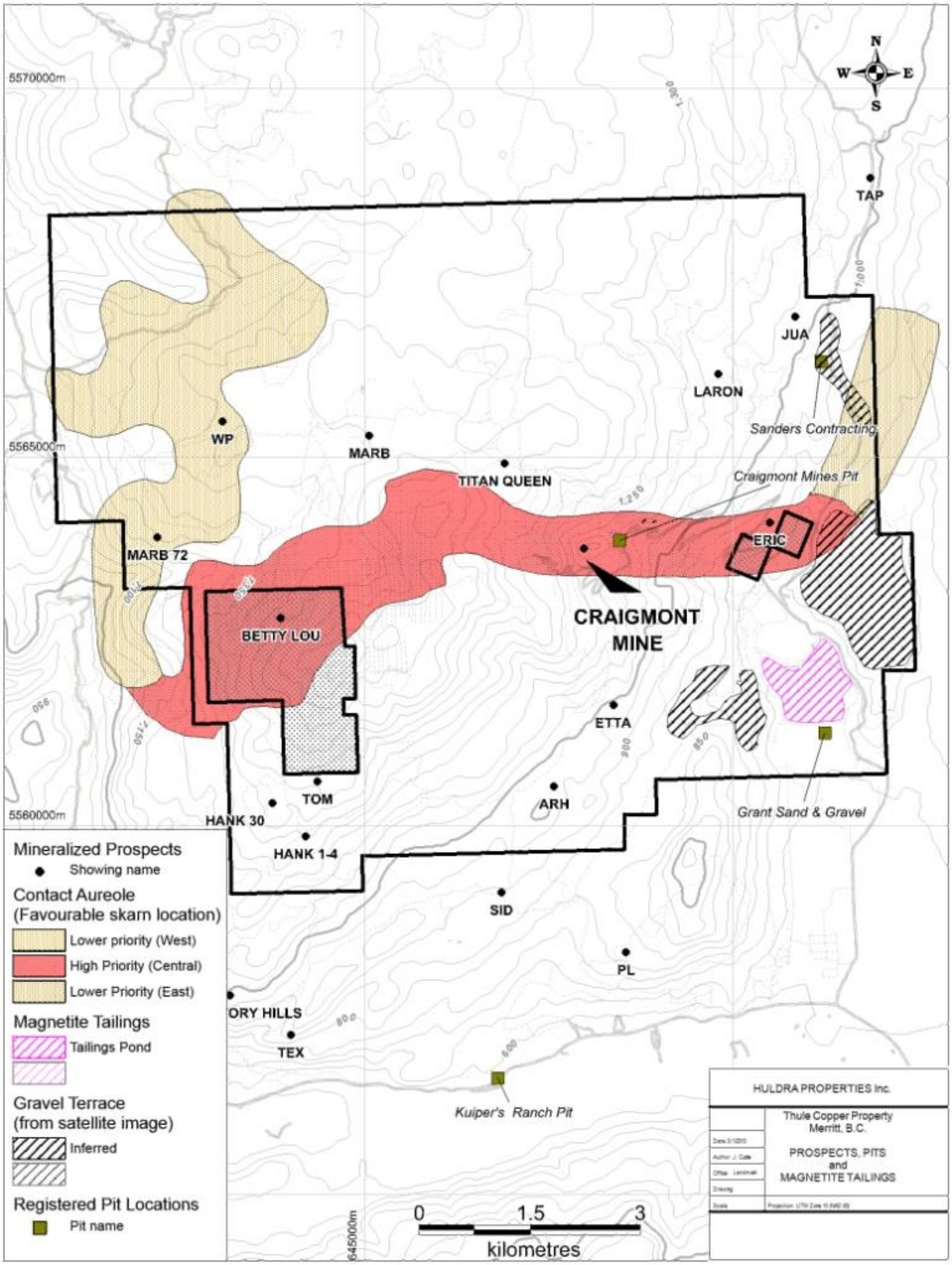
7.5 Aggregate Pits on the Thule Copper Property

In addition to the mineral prospects recorded in the BC government database and the tailings material accumulated on the Property from previous mining activity, there are three gravel pits located along the eastern part of the property. Two of these occur on the elevated terraces east of Stumbles Creek and one is located along old bench roads east of the Craigmont open pit. The quality of gravel or the extent of material is unknown.

Table 5: Aggregate Pits on the Property

Pit name	Ownership	Pit ID #
Sanders	Sanders and Co Contracting	3890
Craigmont Mines	Craigmont Holdings Ltd.	3749
Grant Sand and Gravel	Grant Ranches Ltd	3853

Figure 8: Mineralized prospects, magnetite tailings and aggregate pits

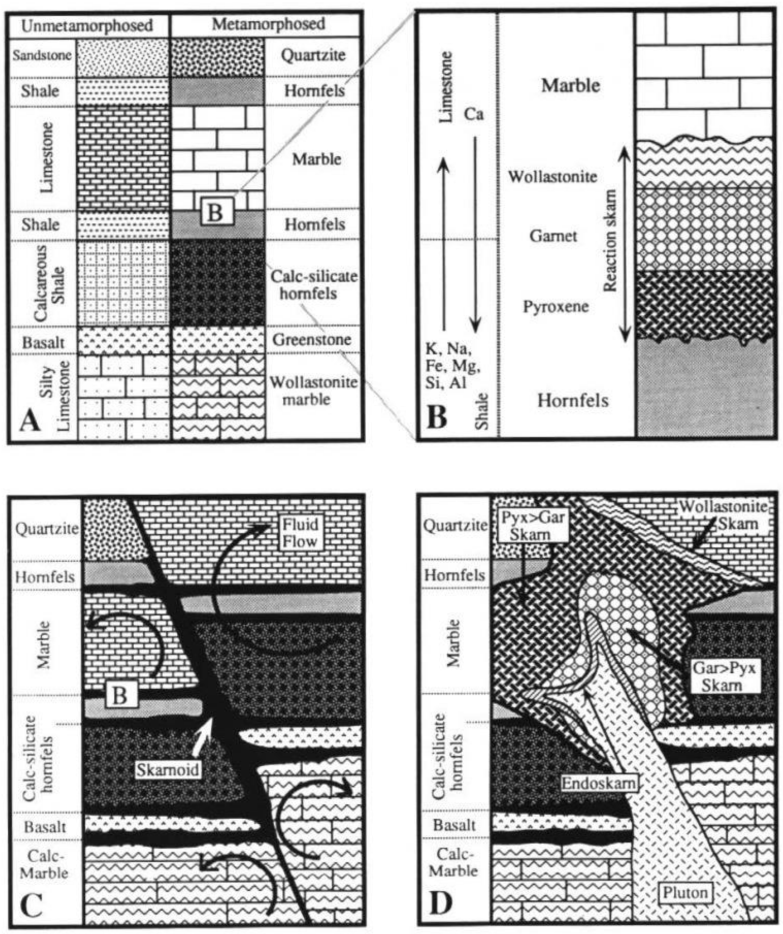


8. DEPOSITS TYPES

The Thule Property hosts two types of mineralization described as copper skarn and copper porphyry. This mineralization is either located in carbonate rich silicate rich rocks or in intrusive rocks along the southern flanks of the Guichon Batholith.

Skarn is the dominant style of mineralization and has been well documented at the former Craigmont Mine. Here copper and iron occurs as tabular, stratiform or pipe like bodies and lenses of disseminated to semi massive sulphide and oxide minerals controlled by chemical changes in carbonate rich rocks by hot fluids from the nearby intrusive Guichon Batholith.

Figure 9: Type of skarn formation:



(A) isochemical metamorphism involves recrystallization and changes in mineral stability without significant mass transfer; (B) **Reaction skarn results from metamorphism of interlayered lithologies, such as shale and limestone, with mass transfer between layers on a small scale;** (C)**Skarnoid results from metamorphism of impure lithologies with some mass transfer by small scale fluid movement;** (D) **Fluid controlled metasomatic skarn typically is coarse grained and does not closely reflect texture of the protolith (after Meinert, 1992).**

Three types of mineral assemblages are present at the former Craigmont Mine where chalcopyrite is associated with varying quantities of magnetite, specularite and/or pyrite. Two stages of mineral genesis are recognized at the mine and are examples of what may be found elsewhere on the property. Stage I includes both barren garnet-epidote skarn and copper rich magnetite and actinolite-epidote-magnetite skarn assemblages. Stage II skarn includes a garnet skarn replacing Stage I iron rich actinolite-epidote-magnetite skarn.

Porphyry style copper mineralization occurs less frequently on the Property as disseminated copper mineralization within the border phase intrusive diorite to quartz diorite host rock.

Craigmont is the largest copper skarn in British Columbia. It contained approximately 34 million tonnes grading 1.28% copper (Staargaard, 1995). Other examples worldwide such as Carr Fork in Utah and Ok Tedi in Papua New Guinea range in size from 1 to over 300 million tonnes with an average grade of 1 to 2% copper.

9. EXPLORATION and SURVEY WORK - HULDRA SILVER - 2012

During 2012Huldra Silver collected the following information on the Thule Property.

9.1 Airborne magnetic and radiometric survey - Scott Hogg and Associates

During June 27th to 28th, 2012, Huldra contracted Scott Hogg and Associates Ltd. to complete a helicopter aeromagnetic gradient and spectrometer survey over the entire Property claim block. A total of 903 line kilometres of data were collected covering 89 square kilometres of area. The data was collected along the following flight line configurations.

- Flight line direction — UTM north-south
- Flight line spacing — 100 metres
- Control line direction — UTM east-west
- Control line spacing — 4500 metres
- Terrain clearance by sensor — 60 metres

The magnetic data was levelled and further gridded by priority methods (GT-GRID) used by Hogg and Associates. Their work produced various digital grids including Total Magnetic field, Vertical Gradient and Pole Reduction of the Calculated Vertical Derivative.

The radiometric data was corrected to IAEA/GSC standards and results for total count (TC), potassium (K), uranium (U), and thorium (Th) were gridded using minimum curvature methods.

Results clearly identify the important magnetic contrasts between the Guichon Batholith and the Nicola volcanics where Craigmont style copper-iron skarn mineralization is known to occur.

9.2 Data compilation - J. Cuttle

Huldra Silver was fortunate to obtain various historical hard copies and electronic data from previous operators at Craigmont including Christopher James Gold Corp. Part of this data was later compiled by the author and used as an important basis of this report. It assisted in the identification of further exploration targets on the Property claims.

9.3 Air magnetic data inversion and interpretation - SJ Geophysics

In December, 2012, SJ Geophysics of Delta B.C. completed an interpretation of airborne magnetic and radiometric data collected earlier in 2012 by Scott Hogg and Associates. The purpose of the study was to identify potential new and untested magnetic features along strike of from the known Craigmont Mine copper / iron deposits.

Detailed work by SJ Geophysics isolated six magnetic anomalies (A through F) that have the potential for magnetite skarn development, similar to the Craigmont deposit. They are located as follows.

Table 6:Location of Airborne Magnetic Anomalies (SJ Geophysics - 2012)

Anomaly	East (utm 83)	North (utm 83)
A	650420	5564070
B	648990	5563850
C	647070	5564110
D	644900	5563470
E	643450	5562950
F	642750	5562440

Details of these anomalies or targets are discussed in the conclusions.

Figure 10: Airborne magnetic survey - Scott Hogg - 2012

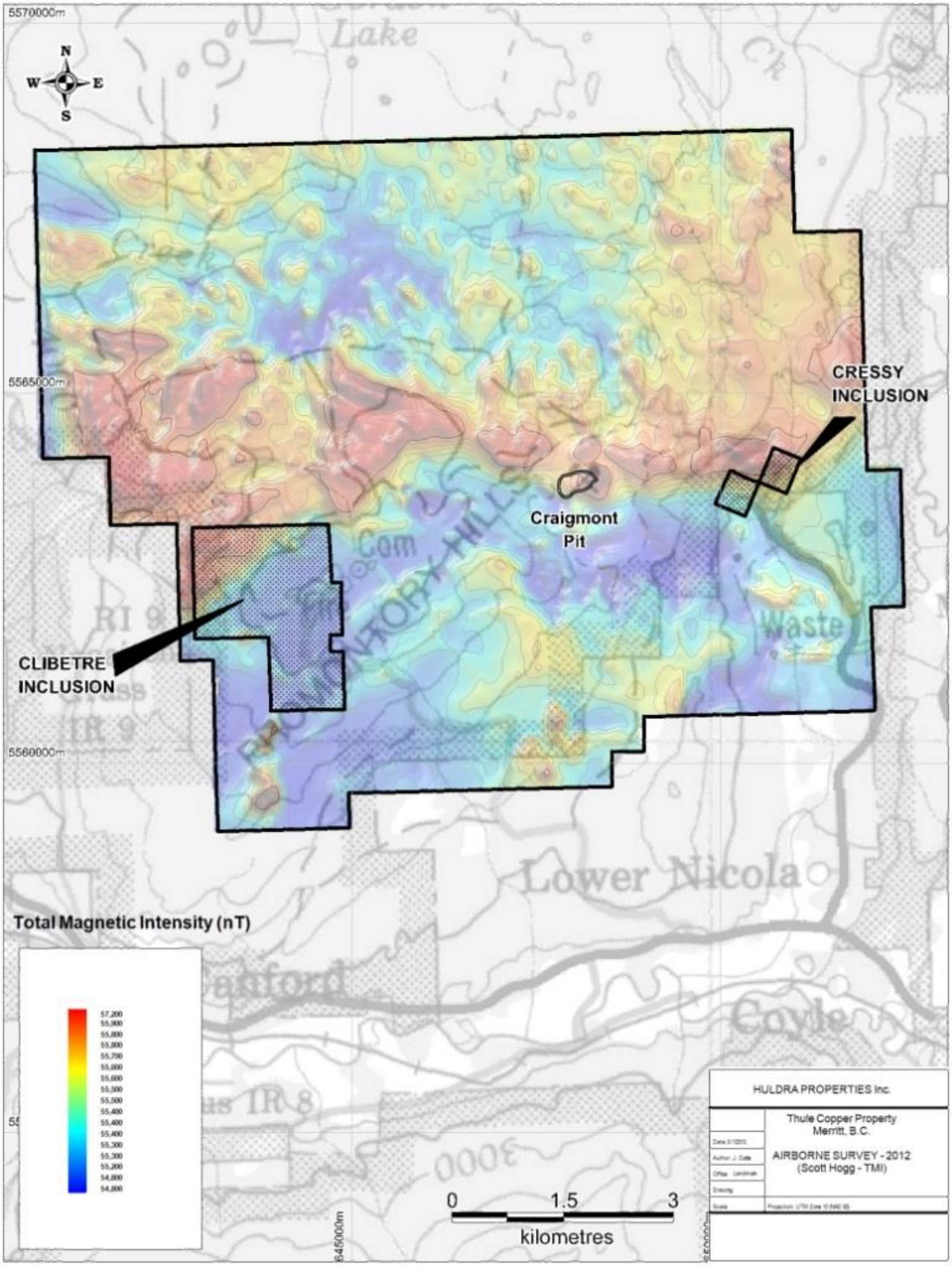
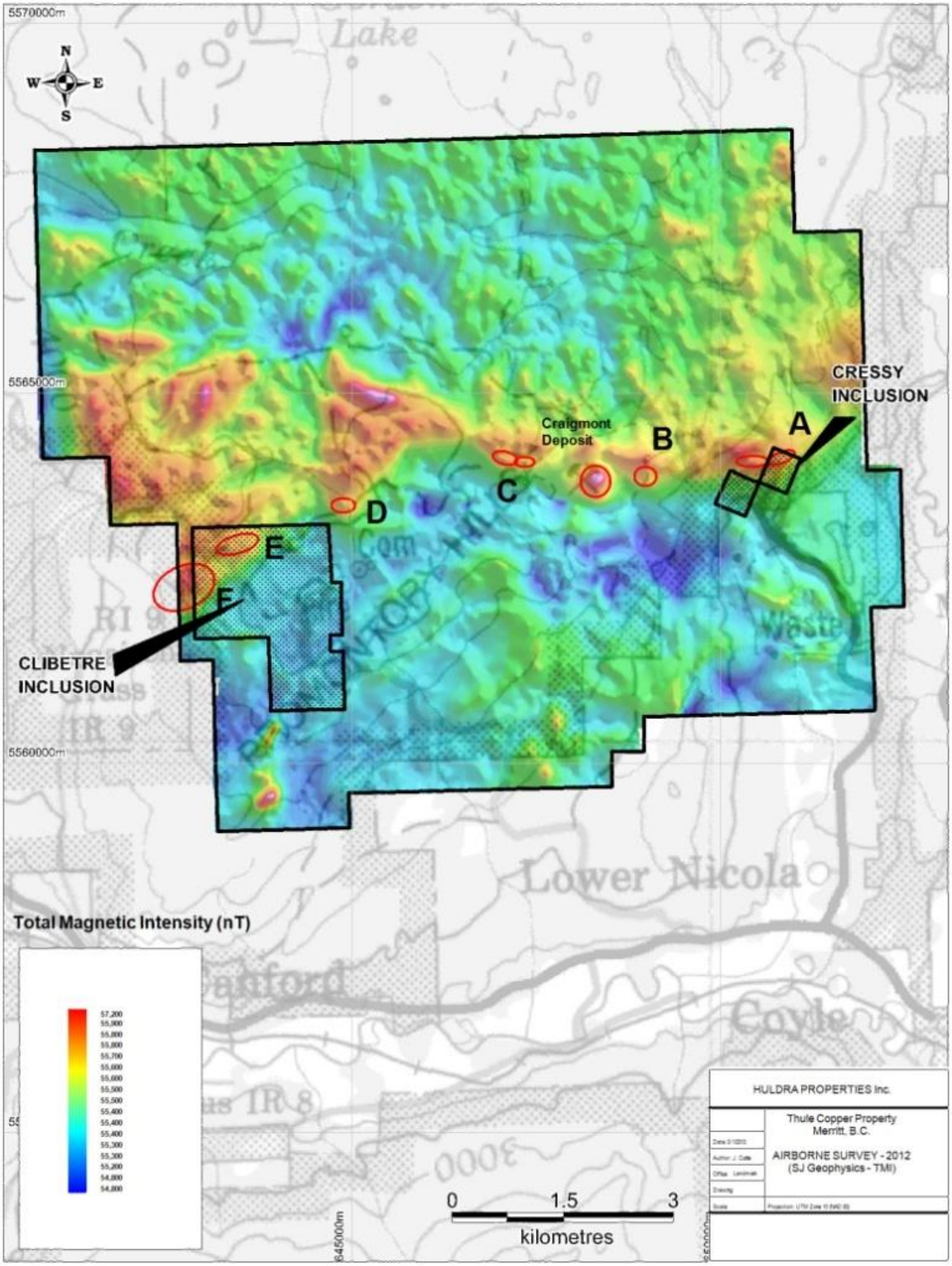


Figure 11: Airborne magnetic re-interpretation - SJ Geophysics - 2012



10. DRILLING

Huldra Silver has not completed any drilling on its Thule Property.

10.1 Historical Drilling

A drill hole database with down hole surveys, assays (Cu, Fe) and corresponding lithologies is available from previous compilations and re-logging work conducted by Christopher James Gold Corp in 2005. A majority of the underground drilling is not available.In the compilation process, location of several surface drill hole collars were corrected by the author to correspond to 1979 scanned and geo-referenced detailed geology base maps from Placer Development.

In this dataset, a total of 168 surface holes and 9 underground holes, some of which dating back to the 1957 discovery holes at Craigmont, tested various skarn assemblages and magnetic targets along a 9.5 kilometres long contact aureole between the Guichon Batholith and the Nicola series of rocks. This will be a critical guide for future exploration planning and geological modeling.

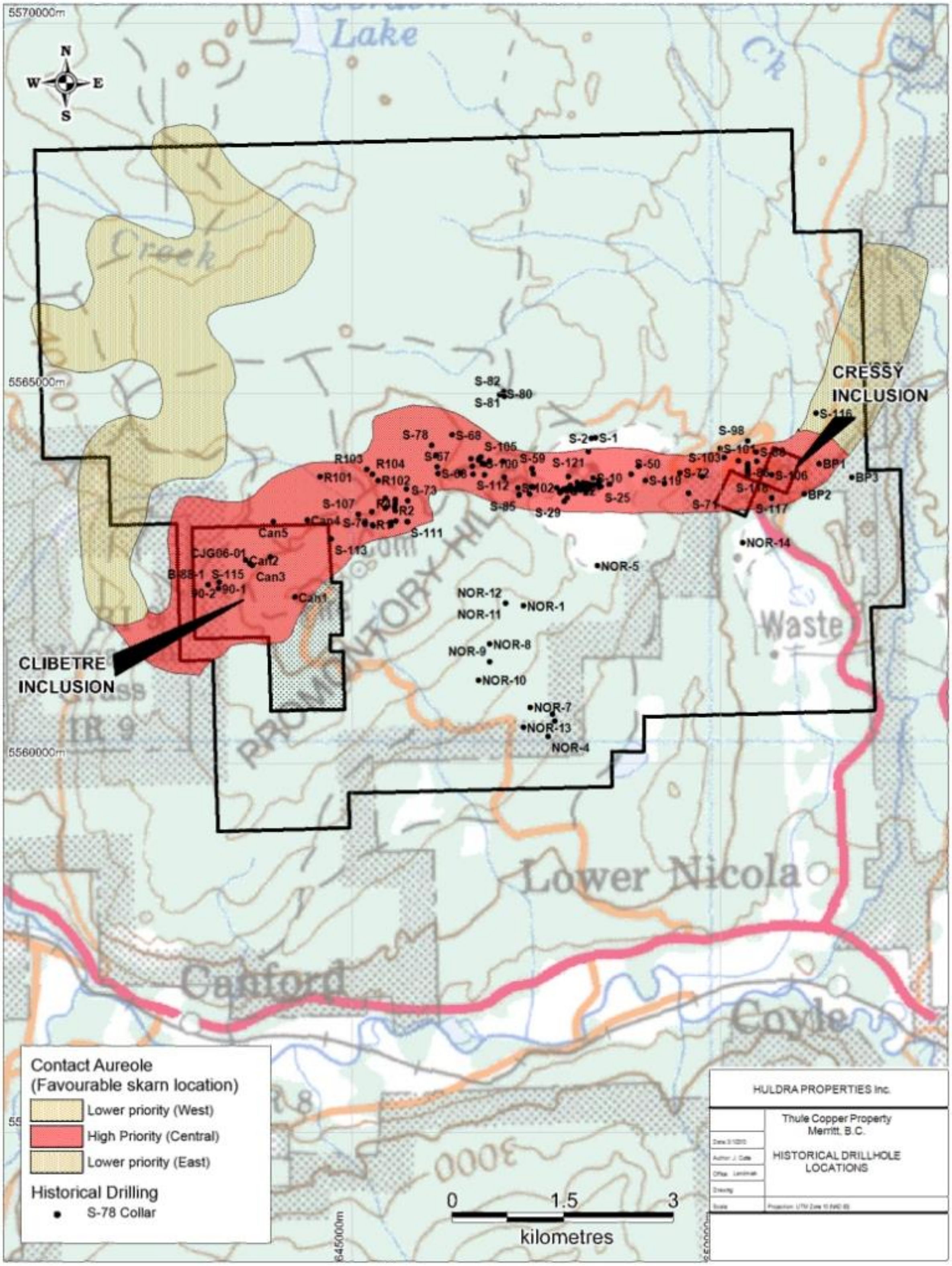
Huldra Silver has a large collection of historic reports and 'hardcopy' maps that will be important for the digital reconstruction of the Craigmont underground workings. This work has yet to be completed however it will be a valuable tool to understand the complex geology of the mine and may help identify similar targets elsewhere on the Property.

Examples of historical drill intercepts recorded during the early discovery of the former Craigmont Mine have been composited below.

Table 7: Examples of Historical Drill Hole intercepts at the former Craigmont Mine

Hole No	Cu %	Length (feet)	Year	Location
S7	2.3	520' (158 m)	1957	No 1 body
S15	4.4	640' (195 m)	1958	No 1 body
30-130	6.0	120' (37 m)	unknown	UG - No 2 body
S100	0.41	488' (149 m)	1978	No 4 body

Figure 12: Location of known historical drill holes - Thule Copper Property - 1957 to 2010



11. SAMPLE PREPARATION, ANALYSIS, QAQC and SECURITY

There has been no QAQC program initiated on the Property by Huldra Silver as it has not completed any drilling or sample collection.

12. DATA VERIFICATION

The author visited the Property on June 3, 2012 to examine previous mining activities and become familiar with local geological features. While on site, helpful discussions and a general overview of the Property was provided by Ryan Sharp, President of Huldra. This field visit included:

- Tour of the Craigmont open pit area, including visual identification of copper and iron bearing waste materials.
- Location of the new mill site used by Huldra Silver to treat silver, lead, zinc ore from its Treasure Mountain Mine.
- Location of the 2400 Level portal (650108E, 5562903N). Currently cemented and closed.
- Location of old core racks (650106E, 5562670N) containing spoiled core from 1950's to 1970's. Author could not determine if this was historic underground drilling.
- Verification that magnetite separation work from the tailings area was ongoing.

No test samples of mineralization were taken from Property as the former open pits at Craigmont are considered too dangerous to access.

Photo 4: Old core racks (left). Typical magnetite / hematite from open pit area (right)

12.1 Opinion

The author has based his data verification of the Thule Property on the immense quantity of available historical data, obvious historical mining activity and detailed mineral production figures available from several government publications. The author is confident that copper and iron was mined from surface and underground excavations.

It is the opinion of the author that the information gathered during the data review process including the Property visit is adequate for the purposes of this technical report.

13. MINERAL PROCESSING and METALLURGICAL TESTING

No metallurgical work has been completed by Huldra Silver on the Property.

14. MINERAL RESOURCE ESTIMATES

No mineral resource estimates have been completed on the Thule Property by Huldra.

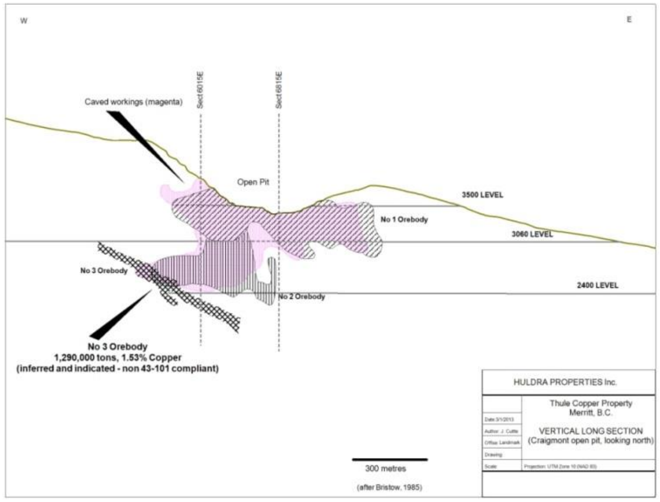
Historical resource calculations at the Craigmont Mine have been recorded in internal memos and geological reports for Placer Development by Bristow (1985).

- 1982 - 1,290,000 tons, 1.53% Copper - Body No 3, (after James Bristow, P. Eng., 1985, Internal document to Craigmont Mines.). The estimate above assumes a 0.7% cut-off grade, a 20 foot minimum width, a tonnage factor of 12 cubic feet per ton and no allowance for dilution or recoveries. Other specific parameters and methods used in this historical resource calculation are unknown. The estimate is considered NI43-101 non-compliant

In addition, it is thought that unknown amounts of remnant mineralization within the sub-level cave exists in the hanging wall of the mined out mineralized bodies. These are primarily within the previously mined No. 1 and No. 2 bodies. This material is believed to grade approximately 0.4% copper (Kirkham, 2005).

A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Huldra Silver is not treating the historical estimate as current mineral resources or mineral reserves.

Figure 13: Craigmont Long Section with location of No 1, 2 and 3 bodies



15. ADJACENT PROPERTIES

There are no adjacent properties of merit to Huldra's claim holdings.

16. OTHER RELEVANT DATA and INFORMATION

Huldra Silver has a large collection of historic reports and 'hardcopy' maps that will be critical for the digital reconstruction of the Craigmont underground workings. It is not clear if this dataset includes underground drill collar locations and associated logs and assays.

17. INTERPRETATION and CONCLUSIONS

Well documented exploration campaigns on the Thule Property have all been completed from the 1970's to 2007; the most comprehensive of which is work completed by Placer Development in the late 1979 and 1985.These specific campaigns were thorough and as a result have generally reduced the potential for 'near surface' economic mineralization surrounding the former Craigmont Mine area.

Future exploration will be considered higher risk and expensive due to the depth of potential new targets and associated copper mineralization. However this should not discourage further exploration.The fact that copper prices currently remain strong and a new on-site mill could be re-designed to accept copper ores if any new sources are located is encouraging. It is important to realize that even during periods of depressed copper prices of $0.60 a pound during the late 1970's and early 1980's that low grade ore of 0.7% copper from underground cave was being mined at a profit (Staargaard, 1995).

To help guide this work it is necessary to be aware of previous mining and exploration experiences and utilize these as part of any future exploration strategy. A point list below identifies some of the important observations to help future exploration.

- The mineral target type on the Property is massive, semi massive and disseminated 'skarn' copper-iron mineralization related to contact metamorphic events that occur along the contact between the Guichon diorite and limey sediments of the Nicola series. Upon closure of the Craigmont Mine in 1982 it produced in excess of 34 million tons of ore grading 1.28% copper with minor gold and silver credits. Iron averaged from 10% to 19%. (after Placer, internal documents and Staargaard, 1995).
- The main exploration 'marker horizon' at the mine site is the mine limestone and other limestone units which act as favourable hosts for copper and iron, especially those within the 800 metre wide contact aureole along the Guichon Batholith and near small intrusive plugs. These plugs are believed to be small fingers of the nearby batholith.
- Mineralized skarn occurs along a favourable limey sedimentary horizon that is bound on the footwall by rhyolitic volcanic rocks and on the hanging wall by biotite rich volcano-sedimentary rocks. Skarn assemblages associated with this favourable horizon occur with interbedded limey sediments and pyritic tuffaceous sediments adjacent to massive 'reefoid' limestone (Bristow, 1985).
- The mineralized bodies at Craigmont were hosted in actinolite skarn replacement of impure limestone on fold structures of the Nicola sediments within an 800 metre wide alteration halo along the main Guichon Batholith contact. This contact continues roughly

8 kilometres on an east-west trend through the entire central portion of the Thule Property.

- At the Craigmont Mine, semi-continuous mineralization was found over a strike length of 900 metres and a vertical depth of 600 metres. The main bodies are confined to the limey sedimentary horizons. The high grade copper was surrounded by lower grade with an abrupt cut-off against 'reefoid' crystalline limestone. This sharp transition can be expected in any further discoveries, so the lack of mineral in any drill hole does not mean that it cannot be expected in nearby altered rocks (Rennie, 2007).
- Craigmont No 1 ore body is a massive garnet skarn with feldspar-specularite-chalcopyrite veins that replace actinolite-magnetite-chalcopyrite skarn and is further intruded by small diorite intrusive plugs. Craigmont No 2 body has developed as actinolite-magnetite-chalcopyrite skarn assemblages in interbedded limy sediments and pyritic tuffaceous sediments adjacent to massive 'reefoid' limestone. Location of these reef bodies will help to identify other potential targets (Bristow, 1985). Craigmont No 3 body is a fine grained siliceous material containing fine chalcopyrite and pyrite as veinlets and disseminations and may represent a feeder zone below parts of the Craigmont deposits. It is generally non-magnetic. Little is known about No 4 body although its location is believed to be represented by intercepts in surface hole S-100 and underground holes 30-302,30-303, and 30-304.
- Magnetic surveys best identified copper-iron mineralization at No 1 and No 2 body and continues to be a critical data set to collect and utilize during future exploration programs. The Craigmont mineralized bodies are generally poor electro-magnetic conductors however pulse EM (PEM) anomalies highlight local areas with favourable geophysical response. Induced polarization (IP) surveys identify strong chargeable anomalies with generally low resistivity and have been effective in mapping rock types west of the mine. Due to the 'erratic' nature of skarn mineralization, bore hole magnetic and bore hole IP surveys were also valid geophysical exploration tools used in previous exploration work.
- A sequence of volcanic agglomerate and flow rock known as the Kingsvale volcanics form a cap over the Nicola rocks between the Craigmont Mine site and the Promontory Hills in the embayment block. Previous drilling indicates this younger cover unit may be up to 200 metres thick. It has proven difficult to drill due to a base layer of swelling clays and water filled regolith. Drill holes have been lost at this interface.

Future work should focus on untested areas along the limestone marker horizons with particular emphasis 300 metres below surface where a majority of historical drilling has never tested. As a prerequisite, it will be necessary to re-log all relevant drill core along this marker, create new geological and structural interpretations and re-visit recent geophysical and geological models before any drill testing begins.

17.1 Follow-up targets identified during and prior to 2012

1. A new airborne magnetic interpretation has been completed by SJ Geophysics from the recent 2012 airborne data collected for Huldra. This work has isolated six magnetic anomalies (A through F) that have potential for magnetite skarn development, similar to the Craigmont deposit. These are identified in Table 6.

This interpretation suggests the Craigmont deposit coincides with a localized strong magnetic high anomaly immediately south of the magnetic rich 'border phase' of the Guichon Creek Batholith. The inversion suggests this is a circular, pipe-like body extending from the surface to greater than 300 metres depth however it is likely that the magnetic signature has been altered from its' "natural" form by mining activities.

There are several magnetic high anomalies mapped along strike in the same relative position with respect to the batholith. These are weaker in amplitude than the Craigmont signature. The six are labelled as anomalies A through F and described below by Pezzot, (2012).

- **A**- 2000 metres east of the former Craigmont Mine. This anomaly coincides with a geologically mapped lens of magnetite skarn. The airborne signature suggests this zone extends another 350 metres further east than shown on the geology map. This anomaly occurs in the Nicola sediments, close to the Guichon contact.
- **B** - 650 metres east of the former Craigmont Mine. This subtle response appears as a bulge on the south-eastern edge of the Border Phase intrusive in the Nicola sediments.
- **C** - 1200 metres west northwest of the Craigmont Mine. 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 totalling some 500 metres of strike length.
- **D** - 3500 metres west southwest of the Craigmont Mine and 450 metres south of the batholith.
- **E** - 5000 metres west southwest of the Craigmont Mine and 530 metres south of the batholith.
- **F** - 5700 metres west southwest of the Craigmont Mine and 820 metres south of the batholith. This is a strong anomaly and closest in appearance to the anomaly associated with Craigmont. It is only partially defined by the airborne survey and may extend further to the southwest.

A ground magnetic survey on targets A through F would provide more detailed information and more precisely locate the high susceptibility source material of each anomaly.

2. The Embayment block is not well tested because of the lack of drill density and the relatively shallow depth extent of the holes. Deeper holes were contemplated but never completed (Craigmont Mines, 2004) because of cost and impending mine shut down by Placer

Development. In house notes from past Placer principals (Craigmont Mines, 2004) suggest No 3 and No 4 bodies were open to the west and to depth when the mine was shut down.

3. The Fold Structure Block has not been drilled to depth. Diorite intrusive rocks south of the Guichon intrusion have drill intercepts with skarn mineralization that requires further investigation. A 1000 meter long by 150 metre wide magnetic anomaly with actinolite skarn containing 10-15% magnetite and 5 - 10% pyrite was intersected in hole AB-5 from 91.0 to 93.5 metres. The hole was subsequently lost immediately below this interval. It is not clear how thoroughly this anomaly was investigated with step out holes AB-6, AB-8.

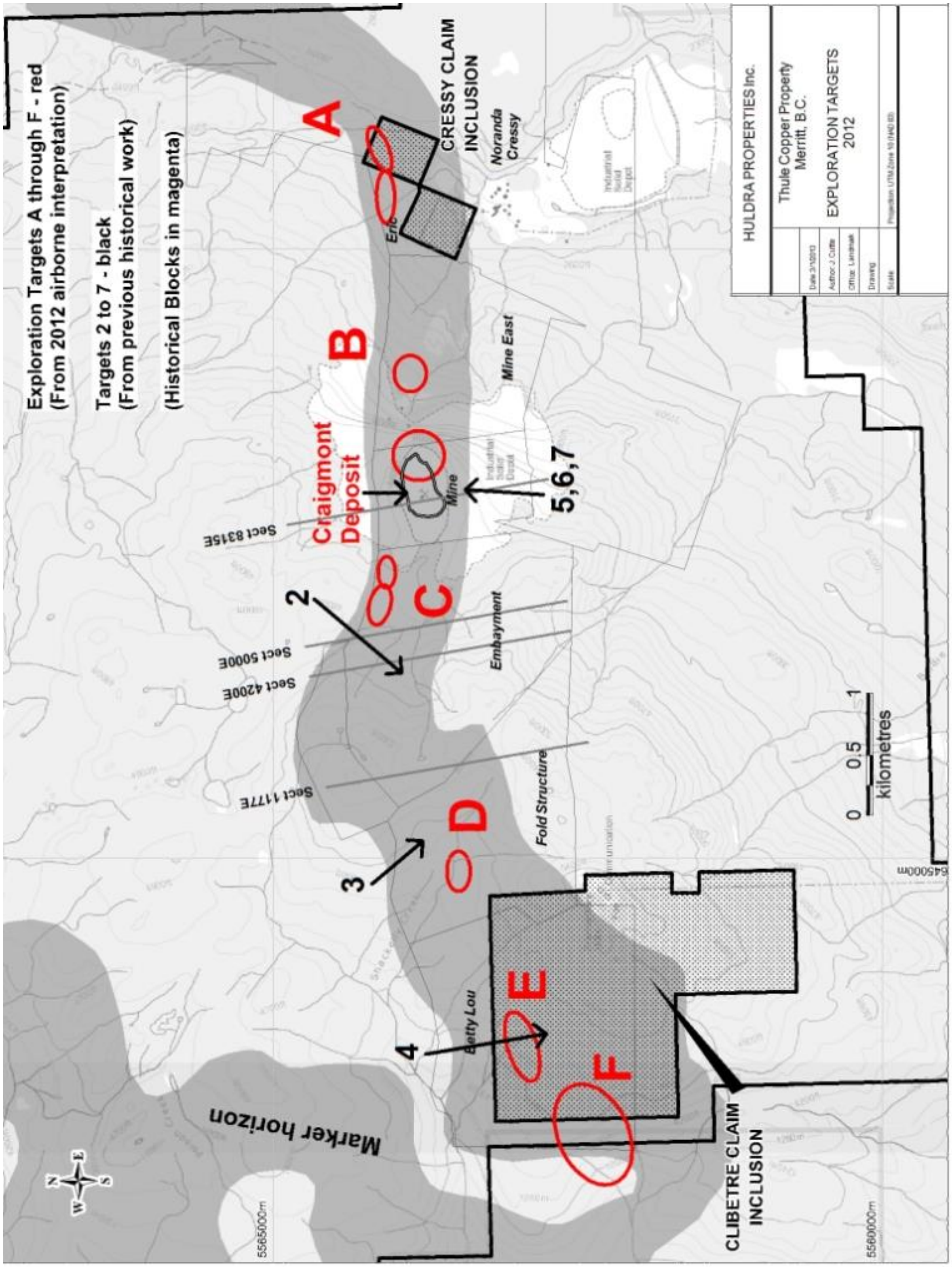
4. A four metre semi massive (40%) magnetite and pyrite (5%) bed from 270m to 274m in hole CJG06-01 may represent skarn mineralization at depth comparable to the east end of Craigmont No 1 body. (Rennie, 2007). No copper mineralization was seen. Drilling did not achieve the proposed depth and was cut short due to budget constraints. This target is located off the current Thule Property.

5. While the average 'cut-off' grades for underground mining at Craigmont was in the order of 0.7% Cu, much of the 'caved' material immediately in the mined area at Craigmont was surrounded by a lower grade haloe grading +/- 0.4%. In 1985 it was concluded that much of the cave material may not be economic until periods of higher commodity prices exist (Bristow, 1985).

6. A massive magnetite outcrop is located in the east end of the pit centered at UTM 648340E, 5563898N. Kimura suggests an undetermined amount of magnetite and hematite remain at this location (Craigmont Mines internal notes, 2004). Trenching and sampling at the same zone by Lindinger (2004) near the toe of the 3760 bench has exposed 200 square meters of mineral grading approximately 75% magnetite. Depth extent of the occurrence is unknown but the magnetite ore continues to the north under overburden. The magnetite is not associated with copper mineralization.

7. Body No 3 is an easterly plunging elongate body underlying No1 and 2 body. It is not believed to have been mined when the Craigmont mill was originally optimized to handle coarser grained, low sulphide chalcopyrite-magnetite minerals. Using a 0.7% cut-off and a 20 foot mining width, Bristow (1985) calculated a possible reserve of 1.29 million tons grading 1.53% copper between section 65655E and 8015E. The zone remains open to the east and west. Similar mineralization was also noted in hole S112a on section 4200E (Staargaard, 1995). The estimate above assumes a 0.7% cut-off grade, a 20 foot minimum width, a tonnage factor of 12 cubic feet per ton and no allowance for dilution or recoveries. Other specific parameters and methods used in this historical resource calculation are unknown and are considered NI43-101 non-compliant A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Huldra Silver is not treating the historical estimate as current mineral resources or mineral reserves.

Figure 14: Exploration targets on the Thule Copper Property



18. RECOMMENDATIONS

Historically, the Property was divided into seven blocks, listed in sequence from east to west according to previous exploration reports by Craigmont Mines. These 'blocks' are outlined in Figure 15 and labelled the "Noranda-Creesy Block", "Eric Block", "Mine East Block", "Mine Block", "Embayment Block", "Fold Block" and the "Betty Lou Block". They are highlighted below to identify specific areas for continued follow-up exploration on the Property.

1. **All Blocks -** Follow-up ground magnetic survey over targets A through F as identified in interpretations by SJ Geophysics (Figure 15).A ground magnetic survey on each target would provide more detailed information and more precisely locate the high susceptibility source material of the anomalies.

2. **All Blocks** - Drill test magnetic targets after interpretation of detailed ground magnetic surveys. Approximately 2500 metres of NQ core drilling. Collar locations to be determined after a detailed interpretation of the ground magnetics..

3. **Mine and Embayment Block**- The goal is to investigate the viability of opening access to No3 and No 4 bodies located in the Mine and Embayment Blocks respectively. Using a 0.7% cutt-off and a 20 foot mining width, Bristow (1985) calculated a possible reserve in No 3 body of 1.29 million tons grading 1.53% copper between section 6565E and 8015E. The estimate above assumes a 0.7% cut-off grade, a 20 foot minimum width, a tonnage factor of 12 cubic feet per ton and no allowance for dilution or recoveries. Other specific parameters and methods used in this historical resource calculation are unknown. The estimate is considered NI43-101 non-compliant. Placer Development internal reports indicate this zone remains open to the east and west. No 4 body is vaguely represented by a mineralized intercept on section 4700E where core from hole S100 assayed 149 metres of 0.41% copper. Similar mineralization was also noted in hole S112a on section 4200E (Staargaard, 1995). A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Huldra Silver is not treating the historical estimate as current mineral resources or mineral reserves.

   An accurate 3 dimensional re-construction of the underground workings including the location of drill holes and corresponding assays and lithology will not only offer a better understanding of where No3 and 4 bodies actually lie but it will also allow a better understanding of how to access these areas via the 2400 and 3060 level haulage drifts. Huldra Silver has a large collection of historic reports and 'hardcopy' level plans that will be critical for the digital reconstruction of these underground workings.

Individuals that may have other information about the underground workings at the former Craigmont Mine include Garth Kirkham of Kirkham Geosystems, Chris Staargaard of Staargaard Geological, Clifford Rennie, geologist from Victoria, B.C., Greg Morrison, consulting geologist from Townsville, Australia or Ed Kimura, geologist from Vancouver, B.C.

4. **Embayment Block** - Magnetic surveys and core re-logging are the main tools to develop drill targets in this area. Emphasis would also be placed on borehole geophysics assuming historical drill collars can be re-entered. Detailed work would concentrate between section 1177E through 5000E where favourable mine geology exists but possibly offset to the north along the embayment fault.

5. **Betty Lou Block** - Discuss possible option agreement with current property owner. Favourable host lithologies and magnetite skarn occur on the property that has not been systematically explored below the 300 metre level.

6. **Eric / Noranda / Cressy Block** - Discuss possible option agreement with current claim holder close to the Eric showing.

7. **Regional Exploration** - All historical information along the Guichon - Nicola contact to the northwest and the east of the Craigmont 'blocks' should be compiled with the intension of defining near-surface targets for follow-up geochemistry and geological mapping.

Table 8: Estimated Budget

Item	**Totals ($Can)**
Compilation of mine workings and 3D model	$30,000
Diamond drilling - 5000 metres HQ (all in)	$1,200,000
Ground magnetic survey/interpretation	$120,000
Collaring of two portals	$75,000
2000 Metres of drift re-habilitation	$300,000
Underground Sampling and Survey	$200,000
Geotechnical Work	$100,000
Support and personnel	$200,000
Travel / office	$40,000
Contingency	$30,000
Total	**$2,295,000**

19. DATE and SIGNATURE PAGE

Effective Date of Report: April 29, 2013.

Submitted with respect and signed May 10, 2013 at Vancouver, British Columbia, Canada.

(Signed by Jim F. Cuttle)

(Signed and sealed copy on file)

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Jim F. Cuttle, B.Sc., P.Geo.

20. AUTHOR CERTIFICATE - JIM F. CUTTLE

I, Jim Cuttle, of the Municipality of Whistler, British Columbia, Canada, do certify that;

- I work as a consulting geologist with a home office at 86 Cloudburst Road, Black Tusk Village, Whistler, British Columbia, Canada. V0N-1B1.
- This certificate relates to the report titled "**TECHNICAL REPORT on the THULE COPPER - IRON PROPERTY, Southern British Columbia, CANADA**", compiled and written for Huldra Silver Inc., and dated effective April 29, 2013.
- I am a graduate of the University of New Brunswick (1980) with a Bachelor of Science Degree in Geology.
- I have practiced my geological profession continuously for over thirty two years in the capacity of exploration and consulting geologist. Work experience has included project generation, mineral property assessment, project management and data compilation for various public and private mineral exploration companies in Canada and Internationally.
- I am a registered member in good standing of The Association of Professional Engineers and Geoscientists of the Province of British Columbia (19313) and have been since July 1992.
- I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, and affiliation with a professional organization I meet the requirements of a "qualified person" as defined in National Instrument 43-101.
- I am responsible for all parts of this report titled "**TECHNICAL REPORT on the THULE COPPER - IRON PROPERTY, Southern British Columbia, CANADA**", compiled and written for Huldra Silver Inc., and dated effective April 29, 2013.
- I certify that I have read National Instrument 43-101 and this Technical Report on the Thule Property has been prepared in compliance with National Instrument 43-101.
- I am independent of the issuer as described in Section 1.5 of NI 43 -101.
- I have no prior involvement with the Thule Property.
- This Technical Report on the Thule Property is based on the author's property visit June 3, 2012, including data review, research and subsequent preparation of this report. I have not previously worked on the property.
- As of April 29, 2013, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

- I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication accessible by the public.

Dated this 10th day of May, 2013

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Jim F. Cuttle, B.Sc., P.Geo.

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APPENDIX I

Copper / Iron Skarns and Porphyry Copper - Deposit Models

COPPER SKARNS

Ray, G.E. (1995): Cu Skarns, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pages 59-60.

IDENTIFICATION

SYNONYMS: Pyrometasomatic and contact metasomatic copper deposits.

COMMODITIES (*BYPRODUCTS*): Cu (Au, Ag, Mo, W, magnetite).

EXAMPLES (British Columbia - *Canada/International*): Craigmont (092ISE035), Phoenix (082ESE020), Old Sport (092L 035), Queen Victoria (082FSW082); ***Mines Gaspé deposits (Québec, Canada), Ruth, Mason Valley and Copper Canyon (Nevada, USA), Carr Fork (Utah, USA), Ok Tedi (Papua New Guinea), Rosita (Nicaragua).***

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Cu-dominant mineralization (generally chalcopyrite) genetically associated with a skarn gangue (includes calcic and magnesian Cu skarns).

TECTONIC SETTING: They are most common where Andean-type plutons intrude older continental-margin carbonate sequences. To a lesser extent (but important in British Columbia), they are associated with oceanic island arc plutonism.

AGE OF MINERALIZATION: Mainly Mesozoic, but may be any age. In British Columbia they are mostly Early to mid-Jurassic.

HOST/ASSOCIATED ROCK TYPES: Porphyritic stocks, dikes and breccia pipes of quartz diorite, granodiorite, monzogranite and tonalite composition, intruding carbonate rocks, calcareous volcanics or tuffs. Cu skarns in oceanic island arcs tend to be associated with more mafic intrusions (quartz diorite to granodiorite), while those formed in continental margin environments are associated with more felsic material.

DEPOSIT FORM: Highly varied; includes stratiform and tabular ore bodies, vertical pipes, narrow lenses, and irregular ore zones that are controlled by intrusive contacts.

TEXTURES: Igneous textures in endoskarn. Coarse to fine-grained, massive granoblastic to mineralogically layered textures in exoskarn. Some hornfelsic textures.

ORE MINERALOGY (Principal and *subordinate*): Moderate to high sulphide content. Chalcopyrite ± pyrite ± magnetite in inner garnet-pyroxene zone. Bornite ± chalcopyrite ± sphalerite ± tennantite in outer wollastonite zone. Either hematite, pyrrhotite or magnetite may predominate (depending on oxidation state). Scheelite and traces of molybdenite, bismuthinite, galena, cosalite, arsenopyrite, enargite, tennantite, loellingite, cobaltite and tetrahedrite may be present.

ALTERATION MINERALOGY: Exoskarn alteration: high garnet:pyroxene ratios. High Fe, low Al, Mn andradite garnet (Ad35-100), and diopsidic clinopyroxene (Hd2-50). The mineral zoning from stock out to marble is commonly: diopside + andradite (proximal); wollastonite ± tremolite ± garnet ± diopside ± vesuvianite (distal). Retrograde alteration to actinolite, chlorite and montmorillonite is common. In British Columbia, skarn alteration associated with some of the alkalic porphyry Cu-Au deposits contains late scapolite veining. Magnesian Cu skarns also contain olivine, serpentine, monticellite and brucite. Endoskarn alteration: Potassic alteration with K-feldspar, epidote, sericite ± pyroxene ± garnet. Retrograde phyllic alteration generates actinolite, chlorite and clay minerals.

ORE CONTROLS: Irregular or tabular ore bodies tend to form in carbonate rocks and/or calcareous volcanics or tuffs near igneous contacts. Pendants within igneous stocks can be important. Cu mineralization is present as stock work veining and disseminations in both endo and exoskarn; it commonly accompanies retrograde alteration.

COMMENTS: Calcic Cu skarns are more economically important than magnesian Cu skarns. Cu skarns are broadly separable into those associated with strongly altered Cu- porphyry systems, and those associated with barren, generally unaltered stocks; a continuum probably exists between these two types (Einaudi et al., 1981). Copper skarn deposits related to mineralized Cu porphyry intrusions tend to be larger, lower grade, and emplaced at higher structural levels than those associated with barren stocks. Most Cu skarns contain oxidized mineral assemblages, and mineral zoning is common in the skarn envelope. Those with reduced assemblages can be enriched in W, Mo, Bi, Zn, As and Au. Over half of the 340 Cu skarn occurrences in British Columbia lie in the WrangelliaTerrane of the Insular Belt, while another third are associated with intraoceanic island arc plutonism in the Quesnellia and Stikinia terranes. Some alkalic and calcalkalic Cu and Cu-Mo porphyry systems in the province (e.g. Copper Mountain, Mount Polley) are associated with variable amounts of Cu-bearing skarn alteration.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Rock analyses may show Cu-Au-Ag-rich inner zones grading outward through Au-Ag zones with high Au:Ag ratios to an outer Pb-Zn-Ag zone. Co-As-Sb-Bi-Mo-W geochemical anomalies are present in the more reduced Cu skarn deposits.

GEOPHYSICAL SIGNATURE: Magnetic, electromagnetic and induced polarization anomalies.

ASSOCIATED DEPOSIT TYPES: Porphyry Cu deposits (L04), Au (K04), Fe (K03) and Pb-Zn (K02) skarns, and replacement Pb-Zn-Ag deposits (M01).

ECONOMIC FACTORS

GRADE AND TONNAGE: Average 1 to 2 % copper. Worldwide, they generally range from 1 to 100 Mt, although some exceptional deposits exceed 300 Mt. Craigmont, British Columbia's largest Cu skarn, contained approximately 34 Mt grading 1.3 % Cu.

IMPORTANCE: Historically, these deposits were a major source of copper, although porphyry deposits have become much more important during the last 30 years . However, major Cu skarns are still worked throughout the world, including in China and the U.S.

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IRON SKARNS

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IDENTIFICATION

SYNONYMS: Pyrometasomatic or contact metasomatic iron deposits.

COMMODITIES (*BYPRODUCTS*): Magnetite (Cu, Ag, Au, Co, phlogopite, borate minerals).

EXAMPLES (British Columbia - *Canada/International*): Tasu (103C 003), Jessie (103B 026), Merry Widow (092L 044), Iron Crown (092L 034), Iron Hill (092F 075), Yellow Kid (092F 258), Prescott (092F 106), Paxton (092F 107), Lake (092F 259);***Shinyama (Japan), Cornwall Iron Springs (Utah, USA) Eagle Mountain (California, USA), Perschansk, Dashkesan, Sheregesh and Teya (Russia), Daiquiri (Cuba), San Leone (Italy).***

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Magnetite-dominant mineralization genetically associated with a skarn gangue (includes calcic and magnesian Fe skarns).

TECTONIC SETTING: Calcic Fe skarns: Intra and non-intraoceanic island arcs; rifted continental margins. Magnesian Fe skarns: Cordilleran-type, synorogenic continental margins.

AGE OF MINERALIZATION: Can be of any age, mainly Mesozoic to Cenozoic. Typically Early to mid-Jurassic in British Columbia.

HOST/ASSOCIATED ROCK TYPES: Calcic Fe skarns: Fe-rich, Si-poor intrusions derived from primitive oceanic crust. Large to small stocks and dikes of gabbro to syenite (mostly gabbro-diorite) intruding limestone, calcareous clastic sedimentary rocks, tuffs or mafic volcanics at a high to intermediate structural level. Magnesian Fe skarns: Small stocks, dikes and sills of granodiorite to granite intruding dolomite and dolomitic sedimentary rocks.

DEPOSIT FORM: Variable and includes stratiform orebodies, vertical pipes, fault- controlled sheets, massive lenses or veins, and irregular ore zones along intrusive margins.

TEXTURES: Igneous textures in endoskarn. Coarse to fine-grained, massive granoblastic to mineralogically layered textures in exoskarn. Some hornfelsic textures. Magnetite varies from massive to disseminated to veins.

ORE MINERALOGY(Principal and *Subordinate*): Calcic Fe skarns: Magnetite ± chalcopyrite ± pyrite ± cobaltite ± pyrrhotite ± arsenopyrite ± sphalerite ± galena ± molybdenite ± bornite ±

hematite ± martite ± gold. Rarely, can contain tellurobismuthite ± fluorite ± scheelite. Magnesian Fe skarns: Magnetite ± chalcopyrite ± bornite ± pyrite ± pyrhhotite ± sphalerite ± molybdenite.

EXOSKARN ALTERATION (both calcic and magnesian): High Fe, low Mn, diopside-hedenbergite clinopyroxene (Hd20-80) and grossular-andradite garnet (Ad20-95), ± epidote ± apatite. Late stage amphibole ± chlorite ± ilvaite ± epidote ± scapolite ± albite ± K-feldspar. Magnesian Fe skarns can contain olivine, spinel, phlogopite, xanthophyllite, brucite, serpentine, and rare borate minerals such as ludwigite, szaibelyite, fluorborite and kotoite.

ENDOSKARN ALTERATION: Calcic Fe skarns: Extensive endoskarn with Na-silicates ± garnet ± pyroxene ± epidote ± scapolite. Magnesian skarns: Minor pyroxene ± garnet endoskarn, and propyllitic alteration.

ORE CONTROLS: Stratigraphic and structural controls. Close proximity to contacts between intrusions and carbonate sequences, volcanics or calcareous tuffs and sediments. Fracture zones near igneous contacts can also be important.

ASSOCIATED DEPOSIT TYPES: Cu porphyries (L03, L04); Cu (K01) and Pb-Zn (K02) skarns; small Pb-Zn veins (I05).

COMMENTS: In both calcic and magnesian Fe skarns, early magnetite is locally intergrown with, or cut by, garnet and magnesian silicates (Korzhinski, 1964, 1965;.Sangster, 1969; Burt, 1977). Some calcic Fe skarns contain relatively small pockets of pyrrhotite-pyrite mineralization that postdate the magnetite; this mineralization can be Au-rich. By-product magnetite is also derived from some Sn, Cu and calcic Pb-Zn skarns. Over 90% of the 146 Fe skarn occurrences in British Columbia lie within the Wrangellia Terrane of the Insular Belt. The majority of these form where Early to mid-Jurassic dioritic plutons intrude Late Triassic limestones.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Calcic Fe skarn: enriched in Fe, Cu, Co, Au, Ni, As, Cr. Overall Cu and Au grades are low (<0.2% Cu and 0.5 g/t Au). Magnesian Fe skarn: enriched in Fe, Cu, Zn, Bo.

GEOPHYSICAL SIGNATURE: Strong positive magnetic, electromagnetic and induced polarization anomalies. Possible gravity anomalies.

OTHER EXPLORATION GUIDES: Magnetite-rich float. In the Wrangellia Terrane of British Columbia, the upper and lower contacts of the Late Triassic Quatsino limestone (or equivalent units) are favourable horizons for Fe skarn development.

ECONOMIC FACTORS

GRADE AND TONNAGE: Grades are typically 40 to 50% Fe. Worldwide, calcic Fe skarns range from 3 to 150 Mt whereas magnesian Fe skarns can be larger (exceeding 250 Mt). In British Columbia, they reach 20 Mt and average approximately 4 Mt mined ore.

IMPORTANCE: Worldwide, these deposits were once an important source of iron, but in the last 40 years the market has been increasingly dominated by iron formation deposits. Nearly 90 % of British Columbia's historic iron production was from skarns.

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PORPHYRY Copper +/- Mo +/- Au

Panteleyev, A. (1995): Porphyry Cu+/-Mo+/-Au, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pages 87-92.

IDENTIFICATION

SYNONYM: Cal alkaline porphyry Cu, Cu-Mo, Cu-Au.

COMMODITIES (*BYPRODUCTS*): Cu, Mo and Au are generally present but quantities range from insufficient for economic recovery to major ore constituents. Minor Ag in most deposits; rare recovery of Re from Island Copper mine.

EXAMPLES (British Columbia - *Canada/International*):
Volcanic type deposits (Cu + Au * Mo) - Fish Lake (092O 041), Kemess (094E 021,094), Hushamu (EXPO, 092L 240), Red Dog (092L 200), Poison Mountain (092O 046), Bell (093M 001), Morrison (093M 007), Island Copper (092L 158); ***Dos Pobres (USA); Far Southeast (Lepanto/Mankayan), Dizon, Guianaong, Taysan and Santo Thomas II (Philippines), Frieda River and Panguna (Papua New Guinea).*** Classic deposits (Cu + Mo * Au) - Brenda (092HNE047), Berg (093E 046), Huckleberrry (093E 037), Schaft Creek (104G 015); ***Casino (Yukon, Canada), Inspiration, Morenci, Ray, Sierrita-Experanza, Twin Buttes, Kalamazoo and Santa Rita (Arizona, USA), Bingham (Utah, USA),El Salvador, (Chile), Bajo de la Alumbrera (Argentina).*** Plutonic deposits (Cu * Mo) - Highland Valley Copper (092ISE001,011,012,045), Gibraltar (093B 012,007), Catface (092F 120);***Chuquicamata, La Escondida and Quebrada Blanca (Chile).***

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Stock works of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite occur in large zones of economically bulk-mineable mineralization in or adjoining porphyritic intrusions and related breccia bodies. Disseminated sulphide minerals are present, generally in subordinate amounts. The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the host rock intrusions and wall rocks.

TECTONIC SETTINGS: In orogenic belts at convergent plate boundaries, commonly linked to subduction-related magmatism. Also in association with emplacement of high-level stocks during extensional tectonism related to strike-slip faulting and back-arc spreading following continent margin accretion.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: High-level (epizonal) stock emplacement levels in volcano-plutonic arcs, commonly oceanic volcanic island and continent-margin arcs. Virtually any type of country rock can be mineralized, but commonly the high-level stocks and related dikes intrude their coeval and cogenetic volcanic piles.

AGE OF MINERALIZATION: Two main periods in the Canadian Cordillera: the Triassic/Jurassic (210-180 Ma) and Cretaceous/Tertiary (85-45 Ma). Elsewhere deposits are mainly Tertiary, but range from Archean to Quaternary.

HOST/ASSOCIATED ROCK TYPES: Intrusions range from coarse-grained phaneritic to porphyritic stocks, batholiths and dike swarms; rarely pegmatitic. Compositions range from calcalkaline quartz diorite to granodiorite and quartz monzonite. Commonly there is multiple emplacement of successive intrusive phases and a wide variety of breccias. Alkalic porphyry Cu-Au deposits are associated with syenitic and other alkalic rocks and are considered to be a distinct deposit type (see model L03).

DEPOSIT FORM: Large zones of hydrothermally altered rock contain quartz veins and stock works, sulphide-bearing veinlets; fractures and lesser disseminations in areas up to 10 km2 in size, commonly coincident wholly or in part with hydrothermal or intrusion breccias and dike swarms. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization. Cordilleran deposits are commonly subdivided according to their morphology into three classes - classic, volcanic and plutonic (see Sutherland Brown,1976;McMillanandPanteleyev,1988):

* Volcanic type deposits (e.g. Island Copper) are associated with multiple intrusions in subvolcanic settings of small stocks, sills, dikes and diverse types of intrusive breccias. Reconstruction of volcanic landforms, structures, vent-proximal extrusive deposits and subvolcanic intrusive centres is possible in many cases, or can be inferred. Mineralization at depths of 1 km, or less, is mainly associated with breccia development or as lithologically controlled preferential replacement in host rocks with high primary permeability. Propylitic alteration is widespread and generally flanks early, centrally located potassic alteration; the latter is commonly well mineralized. Younger mineralized phyllic alteration commonly overprints the early mineralization. Barren advanced argillic alteration is rarely present as a late, high-level hydrothermal carapace.

* Classic deposits (e.g., Berg) are stock related with multiple emplacements at shallow depth (1 to 2 km) of generally equant, cylindrical porphyritic intrusions. Numerous dikes and breccias of pre, intra, and post-mineralization age modify the stock geometry. Ore bodies occur along margins and adjacent to intrusions as annular ore shells. Lateral outward zoning of alteration and sulphide minerals from a weakly mineralized potassic/propylitic core is usual. Surrounding ore zones with potassic (commonly biotite-rich) or phyllic alteration contain molybdenite * chalcopyrite, then chalcopyrite and a generally widespread propylitic, barren pyritic aureole or 'halo'.

* Plutonic deposits (e.g., the Highland Valley deposits) are found in large plutonic to batholithic intrusions immobilized at relatively deep levels, say 2 to 4 km. Related dikes and intrusive breccia bodies can be emplaced at shallower levels. Host rocks are phaneriticcoarse grained to porphyritic. The intrusions can display internal compositional differences as a result of

differentiation with gradational to sharp boundaries between the different phases of magma emplacement. Local swarms of dikes, many with associated breccias, and fault zones are sites of mineralization. Ore bodies around silicified alteration zones tend to occur as diffuse vein stock works carrying chalcopyrite, bornite and minor pyrite in intensely fractured rocks but, overall, sulphide minerals are sparse. Much of the early potassic and phyllic alteration in central parts of ore bodies is restricted to the margins of mineralized fractures as selvages. Later phyllic-argillic alteration forms envelopes on the veins and fractures and is more pervasive and widespread. Propylitic alteration is widespread but unobtrusive and is indicated by the presence of rare pyrite with chloritized mafic minerals, saussuritized plagioclase and small amounts of epidote.

TEXTURE/STRUCTURE: Quartz, quartz-sulphide and sulphide veinlets and stock works; sulphide grains in fractures and fracture selvages. Minor disseminated sulphides commonly replacing primary mafic minerals. Quartz phenocrysts can be partially reabsorbed and overgrown by silica.

ORE MINERALOGY (Principal and *subordinate*): Pyrite is the predominant sulphide mineral; in some deposits the Fe oxide minerals magnetite, and rarely hematite, are abundant. Ore minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold , electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite and barite.

GANGUE MINERALOGY (Principal and *subordinate*): Gangue minerals in mineralized veins are mainly quartz with lesser biotite, sericite, K-feldspar, magnetite, chlorite, calcite, epidote, anhydrite and tourmaline. Many of these minerals are also pervasive alteration products of primary igneous mineral grains.

ALTERATION MINERALOGY: Quartz, sericite, biotite, K-feldspar, albite, anhydrite/gypsum, magnetite, actinolite, chlorite, epidote, calcite, clay minerals, tourmaline. Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic host rocks by biotite-rich rocks that grade outward into propylitic rocks. The biotite is a fine-grained, 'shreddy' looking secondary mineral that is commonly referred to as an early developed biotite (EDB) or a 'biotitehornfels'. These older alteration assemblages in cupriferous zones can be partially to completely overprinted by later biotite and K-feldspar and then phyllic (quartz-sericite-pyrite) alteration, less commonly argillic, and rarely, in the uppermost parts of some ore deposits, advanced argillic alteration (kaolinite-pyrophyllite).

WEATHERING: Secondary (supergene) zones carry chalcocite, covellite and other Cu*2S minerals (digenite, djurleite, etc.), chrysocolla, native copper and copper oxide, carbonate and sulphate minerals. Oxidized and leached zones at surface are marked by ferruginous 'cappings' with supergene clay minerals, limonite (goethite, hematite and jarosite) and residual quartz.

ORE CONTROLS: Igneous contacts, both internal between intrusive phases and external with wall rocks; cupolas and the uppermost, bifurcating parts of stocks, dike swarms. Breccias, mainly early formed intrusive and hydrothermal types. Zones of most intensely developed fracturing give rise to ore-grade vein stock works, notably where there are coincident or intersecting multiple mineralized fracture sets.

ASSOCIATED DEPOSIT TYPES: Skarn Cu (K01), porphyry Au (K02), epithermal Au-Ag in low sulphidation type (H05) or epithermal Cu-Au-Ag as high-sulphidation type enargite-bearing veins (L01), replacements and stock works; auriferous and polymetallic base metal quartz and quartz-carbonate veins (I01, I05), Au-Ag and base metal sulphide mantos and replacements in carbonate and non- carbonate rocks (M01, M04), placer Au (C01, C02).

COMMENTS: Subdivision of porphyry copper deposits can be made on the basis of metal content, mainly ratios between Cu, Mo and Au. This is a purely arbitrary, economically based criterion, an artefact of mainly metal prices and metallurgy. There are few differences in the style of mineralization between deposits although the morphology of cal alkaline deposits does provide a basis for subdivision into three distinct subtypes - the 'volcanic, classic, and plutonic' types. A fundamental contrast can be made on the compositional differences between cal alkaline quartz-bearing porphyry copper deposits and the alkalic (silica under saturated) class. The alkalic porphyry copper deposits are described in a separate model - L03.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Calcalkalic systems can be zoned with a cupriferous (* Mo) ore zone having a ‘barren’, low-grade pyritic core and surrounded by a pyritic halo with peripheral base and precious metal-bearing veins. Central zones with Cu commonly have coincident Mo, Au and Ag with possibly Bi, W, B and Sr. Peripheral enrichment in Pb, Zn, Mn, V, Sb, As, Se, Te, Co, Ba, Rb and possibly Hg is documented. Overall the deposits are large-scale repositories of sulphur, mainly in the form of metal sulphides, chiefly pyrite.

GEOPHYSICAL SIGNATURE: Ore zones, particularly those with higher Au content, can be associated with magnetite-rich rocks and are indicated by magnetic surveys. Alternatively the more intensely hydrothermally altered rocks, particularly those with quartz-pyrite-sericite (phyllic) alteration produce magnetic and resistivity lows. Pyritic haloes surrounding cupriferous rocks respond well to induced polarization (I.P.) surveys but in sulphide-poor systems the ore itself provides the only significant IP response.

OTHER EXPLORATION GUIDES: Porphyry deposits are marked by large-scale, zoned metal and alteration assemblages. Ore zones can form within certain intrusive phases and breccias or are present as vertical 'shells' or mineralized cupolas around particular intrusive bodies. Weathering can produce a pronounced vertical zonation with an oxidized, limonitic leached zone at surface (leached capping), an underlying zone with copper enrichment (supergene zone with secondary copper minerals) and at depth a zone of primary mineralization (the hypogene zone).

ECONOMIC FACTORS

TYPICAL GRADE AND TONNAGE:
Worldwide according Cox and Singer (1988) based on their subdivision of 55 deposits into subtypes according to metal ratios, typical porphyry Cu deposits contain (median values): Porphyry Cu-Au: 160 Mt with 0.55 % Cu, 0.003 % Mo, 0.38 g/t Au and 1.7 g/t Ag. Porphyry Cu-Au-Mo: 390 Mt with 0.48 % Cu, 0.015 % Mo, 0.15 g/t Au and 1.6 g/t Ag. Porphyry Cu-Mo: 500 Mt with 0.41 % Cu, 0.016 % Mo, 0.012 g/t Au and 1.22 g/t Ag. A similar subdivision by Cox (1986) using a larger data base results in: Porphyry Cu: 140 Mt with 0.54 %Cu, <0.002 % Mo, <0.02g/t Au and <1 g/t Ag. Porphyry Cu-Au: 100 Mt with 0.5 %Cu, <0.002 % Mo, 0.38g/t Au and 1g/t Ag. (This includes deposits from the British Columbia alkalic porphyry class, B.C. model L03.) Porphyry Cu-Mo: 500 Mt with 0.42 % Cu, 0.016 % Mo, 0.012 g/t Au and 1.2 g/t Ag. British Columbia porphyry Cu * Mo ± Au deposits range from <50 to >900 Mt with commonly 0.2 to 0.5 % Cu, <0.1 to 0.6 g/t Au, and 1 to 3 g/t Ag. Mo contents are variable from negligible to 0.04 % Mo. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37 % Cu, *0.01 % Mo, 0.3g /t Au and 1.3 g/t Ag.

ECONOMIC LIMITATIONS: Mine production in British Columbia is from primary (hypogene) ores. Rare exceptions are Afton mine where native copper was recovered from an oxide zone, and Gibraltar and Bell mines where incipient supergene enrichment has provided some economic benefits.

END USES: Porphyry copper deposits produce Cu and Mo concentrates, mainly for international export.

IMPORTANCE: Porphyry deposits contain the largest reserves of Cu, significant Mo resources and close to 50 % of Au reserves in British Columbia.

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APPENDIX II

Historical Diamond Drill hole Locations - Thule Property

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
90-1	643201.60	5562354.00	1422.60	245.70	0.00	-90.00			Surface
90-2	643209.50	5562437.00	1424.60	384.10	0.00	-90.00			Surface
B-88-1	643059.50	5562403.00	1396.00	288.00	185.00	-72.00			Surface
BP1	651330.00	5564042.00	823.00	304.80	0.00	-90.00			Surface
BP2	651134.10	5563630.50	779.80	304.80	0.00	-90.00			Surface
BP3	651778.10	5563859.50	792.50	304.80	0.00	-90.00			Surface
Can1	644237.65	5562239.32	1668.00	379.80	0.00	-55.00			Surface
Can2	643568.73	5562738.95	1448.20	384.40	180.00	-90.00			Surface
Can3	643664.69	5562661.75	1472.60	243.50	180.00	-90.00			Surface
Can4	644402.54	5563278.83	1490.90	510.50	0.00	-42.00			Surface
Can5	643944.83	5563261.73	1442.10	304.80	0.00	-90.00			Surface
NOR-1	647329.80	5562122.50	1220.70	68.60	0.00	-54.00			Surface
NOR-10	646720.10	5561116.50	1170.40	159.40	0.00	-48.50			Surface
NOR-11	647088.30	5562153.00	1188.70	36.60	0.00	-43.50			Surface
NOR-12	647088.30	5562153.00	1188.70	39.60	0.00	-48.00			Surface
NOR-13	647329.80	5560476.50	944.90	138.40	180.00	-46.80			Surface
NOR-14	650297.90	5562976.50	732.50	229.80	325.40	-48.40			Surface
NOR-2	647726.00	5560659.50	950.00	106.70	0.00	-58.00			Surface
NOR-3	647756.40	5560568.00	950.00	86.00	0.00	-50.00			Surface
NOR-4	647665.00	5560354.50	950.00	75.90	246.00	-50.00			Surface
NOR-5	648327.10	5562662.50	1170.90	110.60	334.00	-65.00			Surface
NOR-6	651880.40	5565356.50	899.20	62.80	0.00	-90.00			Surface
NOR-7	647421.20	5560751.00	978.40	122.50	0.00	-50.00			Surface
NOR-8	646872.60	5561604.50	1193.30	28.40	0.00	-46.00			Surface
NOR-9	646872.60	5561360.50	1162.80	84.70	0.00	-47.00			Surface
R1	645283.51	5563216.24	1551.00	304.80	0.00	-90.00			Surface
R101	644575.71	5563862.27	1448.30	163.70	2.00	-45.00			Surface
R102	645362.64	5563819.26	1530.10	336.20	136.30	-40.00			Surface
R103	645209.33	5563966.50	1532.50	109.70	136.30	-45.00			Surface

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
R104	645283.23	5563897.56	1532.00	172.80	136.30	-50.00			Surface
R2	645597.15	5563408.83	1571.20	304.80	0.00	-90.00			Surface
R3	645585.57	5563447.17	1572.30	304.80	0.00	-90.00			Surface
R4	645595.50	5563499.83	1577.90	304.80	0.00	-90.00			Surface
R5	645597.15	5563554.97	1581.50	304.80	0.00	-90.00			Surface
S-1	648305.34	5564395.23	1246.60	121.90	0.00	-90.00			Surface
S-10	648271.10	5563850.00	1188.20	113.40	0.00	-90.00			Surface
S-100	646772.73	5564044.73	1450.90	590.70	353.10	-52.70	5-Jan-78	7-Feb-78	Surface
S-101	649993.44	5564248.82	963.90	189.30	183.40	-48.80	7-Jan-78	21-Jan-78	Surface
S-102	647252.40	5563719.43	1360.10	479.80	353.40	-46.80	18-Jan-78		Surface
S-103	650051.38	5564124.92	918.70	404.80	184.00	-48.50	27-Jan-78	13-Feb-78	Surface
S-104	646620.31	5564107.33	1485.60	459.00	349.50	-51.00	7-Feb-78	27-Feb-78	Surface
S-105	646754.33	5564133.81	1473.70	582.80	353.10	-55.20	13-Feb-78		Surface
S-106	650688.06	5563890.26	806.10	216.70	2.40	-51.00	19-Feb-78	24-Feb-78	Surface
S-107	645094.91	5563357.96	1492.50	523.30	181.50	-46.00	2-Mar-78	17-Mar-78	Surface
S-108	646641.27	5564006.42	1474.30	551.10	347.80	-51.40			Surface
S-109	645180.94	5563238.85	1533.70	251.80	173.70	-42.50	18-Mar-78	28-Mar-78	Surface
S-11	648089.00	5563756.00	1252.50	157.30	0.00	-90.00			Surface
S-110	646867.93	5564081.97	1436.30	246.90	355.70	-43.00	28-Mar-78	7-Apr-78	Surface
S-111	645754.94	5563259.59	1585.20	683.40	3.90	-47.00	4-Apr-78		Surface
S-112	646644.03	5563897.22	1456.50	567.20	352.80	-61.00	10-Apr-78	6-May-78	Surface
S-112A	646644.03	5563897.22	1456.50	533.40	352.80	-60.00	6-May-78	15-May-78	Surface
S-112B	646644.03	5563897.22	1456.50	710.20	352.80	-61.00	7-Jun-78	21-Jun-78	Surface
S-113	644727.90	5563023.50	1564.20	685.80	4.30	-46.00	24-Apr-78	30-May-78	Surface
S-114	643904.03	5562779.75	1509.80	370.60	179.90	-47.70	16-Aug-78	13-Sep-78	Surface
S-115	643058.80	5562403.50	1397.00	622.10	185.20	-48.00	16-Sep-78	10-Nov-78	Surface
S-116	651293.70	5564724.00	883.90	275.20	0.00	-90.00	20-Nov-78	28-Nov-78	Surface
S-117	650693.18	5563579.38	778.30	621.80	0.00	-90.00	1-Dec-78	16-Dec-78	Surface
S-118	650692.74	5563575.37	778.30	434.30	4.40	-57.30	6-Jan-79	31-Jan-79	Surface

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
S-119	648985.26	5563819.61	1045.40	267.90	0.80	-47.00	22-Feb-79	12-Mar-79	Surface
S-12	648088.90	5563757.00	1252.50	64.30	0.00	-90.00	30-Jan-58		Surface
S-120	648888.10	5564008.59	1085.50	247.20	0.30	-47.30	14-Mar-79	27-Mar-79	Surface
S-121	648206.40	5564206.26	1235.10	150.90	313.20	-46.50	2-Apr-79	26-Apr-79	Surface
S-124	646771.44	5564046.65	1450.90	445.60	352.00	-66.00	20-Sep-85	8-Oct-85	Surface
S-13	648140.00	5563785.50	1236.60	45.70	0.00	-90.00	1-Feb-58		Surface
S-14	647961.80	5563750.00	1279.50	80.50	0.00	-90.00	7-Feb-58	16-Feb-58	Surface
S-15	648147.40	5563724.50	1243.70	428.20	0.00	-90.00	6-Feb-58		Surface
S-16	647976.40	5563687.00	1280.90	121.90	0.00	-90.00	18-Feb-58		Surface
S-17	647975.60	5563687.00	1280.90	171.60	0.00	-90.00			Surface
S-18	648150.60	5563690.50	1248.90	494.70	0.00	-90.00			Surface
S-19	648146.80	5563725.00	1243.90	177.70	353.60	-65.00	10-Apr-58		Surface
S-2	648244.28	5564383.65	1252.70	65.80	0.00	-90.00	NA	NA	Surface
S-20	648352.40	5563724.50	1173.50	266.70	349.50	-65.00	11-Apr-58		Surface
S-21	648170.00	5563759.50	1231.60	360.00	0.00	-90.00	25-Apr-58		Surface
S-22	647913.60	5563678.50	1295.60	174.00	0.00	-90.00			Surface
S-23	648352.40	5563724.00	1173.50	230.70	0.00	-90.00			Surface
S-24	647923.80	5563586.50	1289.90	432.50	0.00	-90.00			Surface
S-25	648382.60	5563729.00	1165.10	157.90	0.00	-43.50			Surface
S-26	648180.30	5563666.00	1239.10	172.20	354.70	-48.50			Surface
S-27	648231.30	5563702.00	1216.60	183.20	346.80	-62.00			Surface
S-28	647942.50	5563863.50	1274.50	289.90	191.60	-58.00	31-Aug-58		Surface
S-29	647878.40	5563533.00	1297.40	433.40	346.50	-59.00	24-Sep-58		Surface
S-3	648346.30	5563785.50	1170.70	151.50	0.00	-90.00	NA	NA	Surface
S-30	647912.30	5563709.50	1285.50	54.30	351.00	-29.90	4-Aug-59	21-Aug-59	Surface
S-31	647912.30	5563709.00	1285.40	54.30	351.10	-55.10	22-Aug-59	28-Aug-59	Surface
S-32	647968.90	5563697.00	1278.50	78.00	351.50	-50.50	29-Aug-59	10-Sep-59	Surface
S-33	647995.40	5563695.50	1273.40	87.50	349.00	-50.00	10-Sep-59	22-Sep-59	Surface
S-34	648024.10	5563702.50	1263.30	87.20	347.70	-49.70	11-Sep-59	18-Sep-59	Surface

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
S-35	648049.30	5563720.00	1255.90	86.00	350.80	-50.10	19-Sep-59	27-Sep-59	Surface
S-36	647995.50	5563695.00	1273.70	82.90	347.60	-70.80	22-Sep-59	6-Oct-59	Surface
S-37	648049.40	5563719.00	1255.60	61.60	0.00	-90.00	27-Sep-59	30-Sep-59	Surface
S-38	648049.50	5563718.00	1255.90	72.50	171.00	-48.80	30-Sep-59	4-Oct-59	Surface
S-39	648113.10	5563747.00	1244.70	62.50	0.00	-90.00	5-Oct-59	10-Oct-59	Surface
S-4	648229.60	5563767.00	1209.30	187.80	0.00	-90.00			Surface
S-40	648085.30	5563735.50	1251.50	68.30	0.00	-90.00	7-Oct-59	16-Oct-59	Surface
S-41	648112.80	5563749.00	1244.60	60.40	346.50	-35.00	10-Oct-59	13-Oct-59	Surface
S-42	648140.90	5563761.00	1236.10	27.70	352.20	-35.00	14-Oct-59	16-Oct-59	Surface
S-43	648141.00	5563760.00	1235.90	55.20	350.70	-74.50	16-Oct-59	20-Oct-59	Surface
S-44	648085.10	5563737.00	1252.10	53.00	354.00	-28.70	16-Oct-59	20-Oct-59	Surface
S-45	648171.40	5563764.50	1225.30	46.00	359.30	-34.40	19-Oct-59	25-Oct-59	Surface
S-46	648086.80	5563735.00	1252.00	40.80	172.00	-49.70	20-Oct-59	25-Oct-59	Surface
S-47	648200.30	5563772.50	1213.80	43.60	347.40	-32.20	26-Oct-59	31-Oct-59	Surface
S-48	648171.40	5563763.00	1225.30	62.20	359.70	-64.90	26-Oct-59	29-Oct-59	Surface
S-49	648200.70	5563770.50	1214.50	61.00	0.00	-90.00	31-Oct-59	5-Nov-59	Surface
S-5	648348.00	5563819.00	1169.20	224.30	0.00	-90.00			Surface
S-50	648792.71	5563900.28	1072.00	115.20	359.90	-51.00			Surface
S-51	648793.17	5563898.05	1072.00	115.20	359.90	-45.00	9-Mar-60	18-Mar-60	Surface
S-52	647057.90	5564070.97	1420.20	122.20	359.30	-65.40	13-Aug-60	30-Aug-60	Surface
S-53	647068.24	5563861.83	1394.20	129.50	352.30	-43.40	31-Aug-60	19-Sep-60	Surface
S-54	647068.24	5563861.83	1393.60	66.80	119.10	-89.90	Sep-60	Oct-60	Surface
S-55	647874.40	5563697.00	1285.20	107.00	346.80	-67.80		13-Mar-62	Surface
S-56	647874.10	5563696.00	1283.70	55.50	349.00	-39.00		23-Mar-62	Surface
S-57	647819.60	5563648.50	1314.50	145.10	354.00	-53.50	26-Mar-62	17-Apr-62	Surface
S-58	647842.90	5563675.50	1304.50	125.00	354.90	-69.20	17-Apr-62	8-May-62	Surface
S-59	647447.59	5563970.72	1361.30	263.70	0.00	-90.00	11-Sep-62	28-Oct-62	Surface
S-6	648291.80	5563761.50	1187.90	147.80	0.00	-90.00			Surface
S-60	649238.86	5563777.72	994.20	217.00	0.30	-54.40	1-Nov-62	17-Dec-62	Surface

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
S-61	646803.96	5563892.27	1423.40	387.90	352.20	-46.10	9-Apr-64	12-Jun-64	Surface
S-62	646479.15	5563917.63	1486.50	649.20	352.70	-44.70	13-Jun-64	31-Aug-64	Surface
S-63	646167.29	5563910.18	1543.90	883.90	350.30	-69.10	Sep-64	3-Mar-65	Surface
S-64	648501.00	5563767.50	1128.30	80.80	0.00	-90.00	2-Oct-64	14-Oct-64	Surface
S-65	648489.30	5563764.50	1128.80	213.40	0.00	-90.00	15-Oct-64	3-Nov-64	Surface
S-66	646167.29	5563910.18	1544.50	420.90	350.60	-54.00	16-Mar-65	7-May-65	Surface
S-67	646161.78	5564001.17	1561.90	434.30	349.20	-53.80	14-May-65	5-Jul-65	Surface
S-68	646364.99	5564431.04	1564.90	260.20	351.30	-47.00	14-Jul-65	30-Jul-65	Surface
S-69	647461.21	5563906.75	1334.70	230.10	193.60	-83.50	8-Aug-65	7-Sep-65	Surface
S-7	648055.30	5563790.00	1258.00	234.70	175.20	-57.80			Surface
S-70	647461.21	5563906.75	1426.00	54.90	170.10	-70.40	7-Sep-65	17-Sep-65	Surface
S-71	649566.01	5563639.55	896.10	87.20	352.40	-57.20	1-Jun-67	17-Jun-67	Surface
S-72	649449.24	5563919.45	964.40	173.70	0.00	-83.00	20-Jun-67	11-Jul-67	Surface
S-73	645758.24	5563543.60	1602.90	474.30	4.90	-47.10	14-Jul-67	18-Sep-67	Surface
S-74	645463.28	5563441.79	1545.30	316.70	179.60	-43.60	19-Sep-67	5-Oct-67	Surface
S-75	645463.28	5563441.79	1545.30	159.40	179.60	-60.00	5-Oct-67	16-Oct-67	Surface
S-76	645463.28	5563441.79	1545.30	368.20	179.60	-80.00	17-Oct-67	9-Nov-67	Surface
S-77	645460.53	5563574.69	1550.20	580.30	178.40	-82.00	18-May-68	11-Jul-68	Surface
S-78	646086.77	5564289.58	1613.70	614.80	348.00	-55.10	28-Jun-68	30-Aug-68	Surface
S-79	645277.44	5563387.74	1500.70	295.10	170.00	-60.00	11-Jul-68	26-Jul-68	Surface
S-8	648033.00	5563680.50	1273.60	170.70	357.90	-59.00			Surface
S-80	647055.41	5564988.55	1463.00	65.50	286.00	-34.00	19-Jul-71	26-Jul-71	Surface
S-81	647065.16	5565020.97	1463.00	63.40	289.00	-45.00	26-Jul-71	28-Jul-71	Surface
S-82	647067.05	5565019.71	1463.00	42.40	0.00	-90.00	29-Jul-71	31-Jul-71	Surface
S-83	647073.65	5564953.31	1463.00	76.20	293.50	-45.00	3-Aug-71	6-Aug-71	Surface
S-84	647005.37	5564978.16	1463.00	50.00	111.00	-65.00	10-Aug-71	13-Aug-71	Surface
S-85	647268.82	5563613.07	1350.30	333.20	349.00	-63.00	11-Feb-72	25-Feb-72	Surface
S-86	650486.83	5564078.57	847.10	152.70	351.50	-79.20	22-Aug-73	4-Sep-73	Surface
S-87	650487.72	5564075.89	846.40	137.80	184.40	-67.20	5-Sep-73	14-Sep-73	Surface

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
S-88	650486.38	5564202.47	877.10	166.70	184.00	-57.50	7-Feb-74	22-Feb-74	Surface
S-89	650364.93	5563997.67	858.30	39.30	358.50	-45.00	26-Feb-74	6-Mar-74	Surface
S-9	648096.70	5563688.00	1261.20	42.40	355.50	-60.00	22-Dec-57	2-Jan-58	Surface
S-90	650366.71	5564041.80	865.40	147.20	2.00	-53.00	12-Mar-74	22-Mar-74	Surface
S-91	650368.94	5563935.27	843.70	25.30	0.00	-79.00	26-Mar-74	28-Mar-74	Surface
S-92	650369.00	5563933.14	843.80	203.60	359.60	-74.60	28-Mar-74	18-Apr-74	Surface
S-93	650364.93	5563995.44	857.40	188.10	1.60	-65.00	26-Apr-74	7-May-74	Surface
S-94	650242.14	5564081.24	893.80	218.50	358.60	-77.00	8-May-74	23-May-74	Surface
S-95	649747.86	5563863.29	906.60	220.10	353.30	-52.00	3-Oct-75	5-Nov-75	Surface
S-96	647409.43	5563630.21	1347.00	427.90	349.00	-56.00	14-Sep-77	3-Oct-77	Surface
S-97	646144.12	5564155.59	1595.30	722.40	347.20	-65.00	11-Oct-77	9-Dec-77	Surface
S-98	650361.59	5564349.55	922.70	696.50	181.50	-53.00	1-Nov-77	12-Dec-77	Surface
S-99	647272.38	5563626.64	1352.00	394.40	354.40	-50.00	3-Jan-78	16-Jan-78	Surface
DDH-AB-1	646725.80	5564115.50	1466.00	145.40	355.00	-60.00	10-Aug-05	18-Aug-05	Surface
DDH-AB-2	646725.00	5564095.00	1462.00	159.40	355.00	-60.00	18-Aug-05	22-Aug-05	Surface
DDH-AB-3	645747.00	5563703.00	1600.00	90.50	0.00	-60.00	23-Aug-05	27-Aug-05	Surface
DDH-AB-4	645293.00	5563196.00	1550.00	151.20	180.00	-50.00	28-Aug-05	2-Sep-05	Surface
DDH-AB-5	645534.00	5563205.00	1550.00	95.40	180.00	-50.00	10-Sep-05	17-Sep-05	Surface
DDH-AB-6	645603.00	5563270.00	1550.00	305.10	180.00	-45.00	20-Sep-05	3-Oct-05	Surface
DDH-AB-7	645758.00	5563260.00	1590.00	126.80	180.00	-50.00	6-Oct-05	14-Oct-05	Surface
DDH-AB-8	645540.00	5563250.00	1540.00	188.36	180.00	-45.00	19-Oct-05	27-Oct-05	Surface
30-301	647776.27	5563713.88	935.74	36.58	8.50	55.00	9-Apr-65	12-Apr-65	UG
30-302	646806.92	5564035.23	937.74	259.99	6.84	0.00	9-Aug-65	20-May-66	UG
30-303	646807	5564034.64	937.06	277.06	2.90	-45.00	May-66	Aug-66	UG
30-304	646807	5564034.64	937.06	283.16	2.90	-65.33	11-Aug-66	23-Sep-66	UG
30-305	647438.84	5563730.64	932.95	251.46	171.50	-85.00	24-Sep-66	31-Oct-66	UG
30-306	647438.84	5563731.99	936.61	191.11	14.11	20.65	31-Oct-66	21-Nov-66	UG
30-307	647438.98	5563732.09	937.11	185.32	13.88	35.78	21-Nov-66	1-Dec-66	UG
30-308	647470.13	5563727.38	933.7	182.88	8.07	0.13	2-Dec-66	10-Dec-66	UG

Hole_ID	UTM83_E	UTM83_N	Elev m	Length	Azimuth	Dip	Start	Finish	Type
30-309	647470.14	5563727.58	935.83	152.40	7.11	16.48	11-Dec-66	16-Dec-66	UG
CJG06-01	643629.00	5562690.00	1468.00	377	0	-90			Surface