

We are committed to providing [accessible customer service](#).  
If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).  
Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).

**Assessment Report on Prospecting  
Conducted on the “Hudson Property”  
Canagco Mining Corporation**

**Town of Cobalt  
Larder Lake Mining District**

**UTM Zone 17  
Nad 83 Projection  
Centred on  
598792N to 5251033N**

**Work Conducted on  
Claims 4243475, 4276102**

**Work Conducted From March 31<sup>st</sup>, 2016 to April 25th, 2015**

**Prepared by:**

Martin Ethier, MSc.

Hinterland Geoscience & Geomatics

**For:  
Brixton Metals Corporation  
25 April 2016**

## **TABLE OF CONTENTS**

|   |    |
|---|----|
| Summary .....                           | 3  |
| Property Description and Location ..... | 3  |
| Property Geology and History .....      | 5  |
| Prospecting.....                        | 5  |
| Data Capture and Integration .....      | 9  |
| List of Personnel .....                 | 10 |

## **LIST OF FIGURES**

|   |    |
|---|----|
| Figure 1. Hudson Bay Claims, Cobalt Area .....                  | 4  |
| Figure 2. Shaft Locations, fenced mine workings & geology ..... | 6  |
| Figure 3. Digital Elevation Model fuse with Airphoto .....      | 11 |
| Figure 4. Hudson Bay Mine Level 1.....                          | 12 |
| Figure 5. Hudson Bay Mine Level 2.....                          | 13 |
| Figure 6. Hudson Bay Mine Level 3.....                          | 14 |
| Figure 7. Hudson Bay Mine Level 4.....                          | 15 |
| Figure 8. Hudson Bay Mine Level 5.....                          | 16 |
| Figure 9. Hudson Bay Mine Below “Level 5”.....                  | 17 |
| Figure 10. Magnetic Data Fused with Airphoto .....              | 18 |
| Figure 11. Geology Fused with Shaded DEM.....                   | 19 |

## Summary

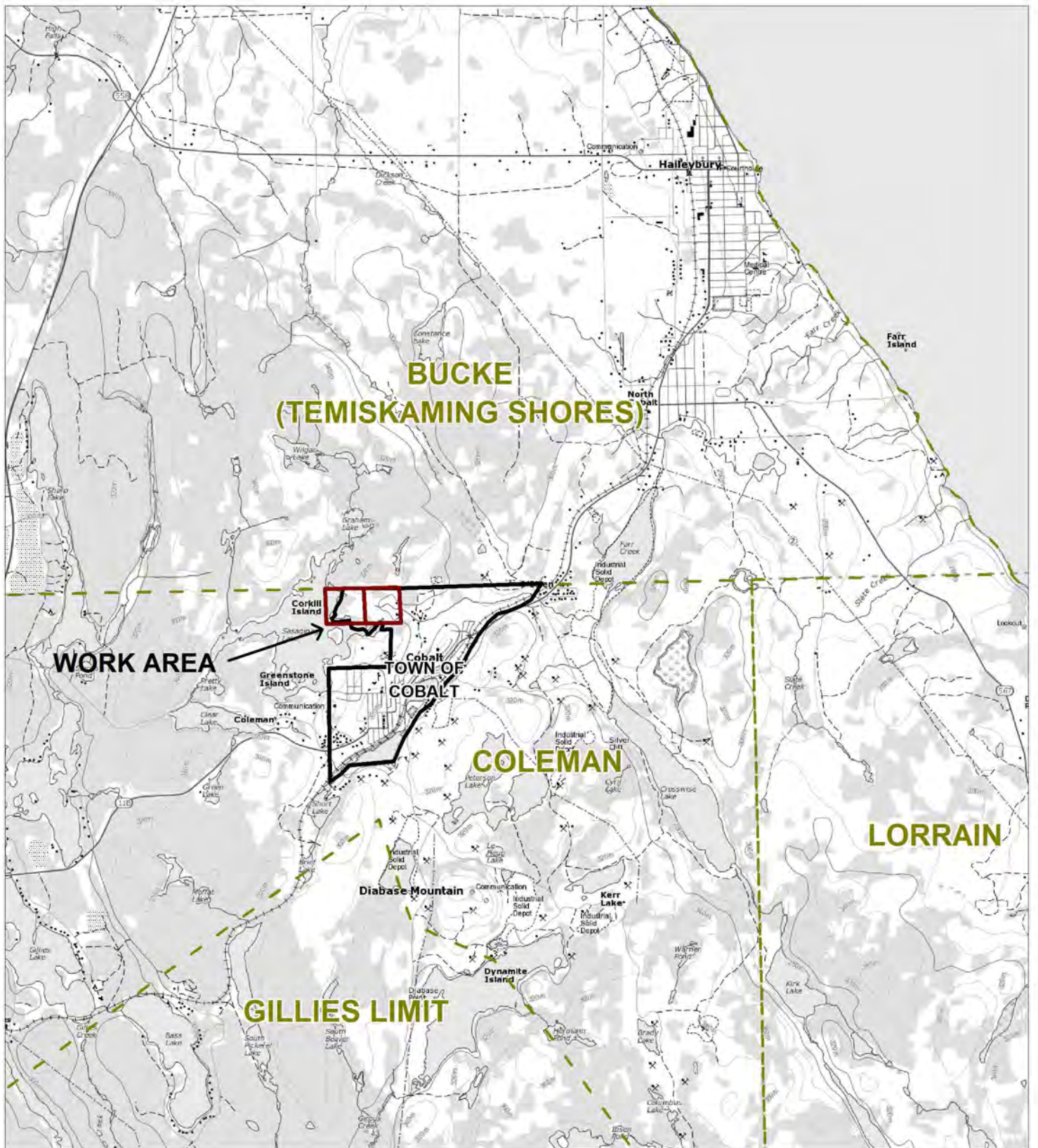
Brixton Metals Corp. is exploring for minerals on several blocks of contiguous mining patents/mining claims covering parts of six townships (Bucke, Coleman, Gillies Limit, Lorrain, Harris and Casey) in the historic Cobalt Mining Camp.

This report consists of ground-truthing as well as ground control positioning (airphoto orthorectification), production of a detailed elevation model (DEM) and the creation of multiple composite maps while integrating these data within a geographical information system (GIS). This data integration resulted in an additional understanding of the areas geological context, especially within the underground mine workings context.

The costs of the labor described above, plus the direct costs of planning the work, writing and producing this report are filed herein as assessment work. This work will help devise all future exploration efforts especially with the requirements for carrying exploration plans and permits. No permits were needed to perform this work.

## Property Description and Location

The “Hudson Bay Mine” claim is located at the extreme north-end of the Town of Cobalt within the limits of the municipality and is bounded to the north by Bucke twp boundary (City of Temiskaming Shores). Claims #4243475 & 4276102 are easily accessed by gravel road into the property via streets within the Town of Cobalt. Claim 4276102 is bounded by Sasaginaga Lake to the west. On April 01<sup>st</sup>, 2006 the author collected simple GPS waypoint using a Garmin GPS MAP76 near shafts located in the study area and after the snow/ice melts on April 22th, 2006 a more precise differential GPS was used. All the shaft areas are fenced off, therefore difficult to get precise measurements. Estimation to the centre of the shaft was determined using compass and Differential GPS point. It must be noted that the shaft location matched up satisfactorily over the orthorectified airphoto (Figure 2). All available maps showed the north shaft north 20-45 m north of the fenced off area, but recently the wood capped shaft collapsed was re-discovered.



**LEGEND**

- Township
- Brixton Mining Claims



Image Reference:  
Toporama 31M05 ver.7

Projection: UTM Zone 17 (NAD 83)

0      1      2  
kilometres

**Hudson Bay Claims  
Cobalt Area**

|                    |                        |
|--------------------|------------------------|
| Scale - 1 : 60,000 | Date: April 22th, 2016 |
| <b>Figure - 1</b>  | Author: M.Ethier       |

**BRIXTON METALS**

## Property Geology & History

The Hudson Bay Mine is a former mine operation that is located in the northern portion of Coleman Township inside the Town of Cobalt. Two unpatented mining claims cover the former Hudson Bay Mine site: Claim #4255168 and #4243475.

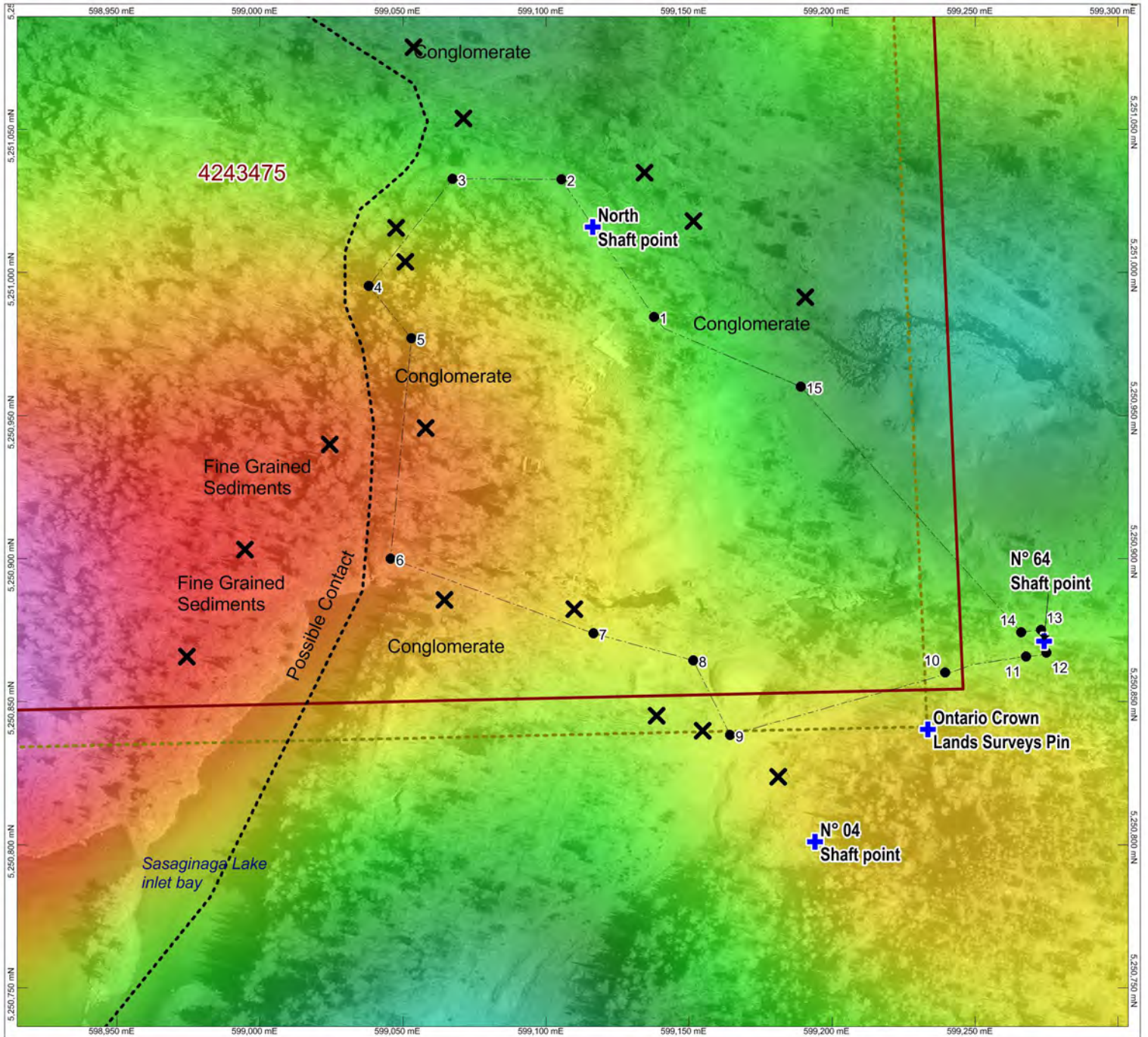
The mine operated from 1905 to 1943 and again in 1953 which produced a total of 6,452,266 oz of Silver and 185,572 lbs of Cobalt. (Sergiades, 1968) The average grade mined from 1905-1916 was 123 oz/ton Ag (Sergiades, 1968). Production came from primarily two veins systems: Vein #1 and Vein #2 both had a strike length of 400ft and extended 200ft vertically (Sergiades, 1968). There is an unknown, small amount of tailings left on the property. However, in a report summarizing mine and mill production in the Cobalt Mining Camp, the Hudson Bay Mill produced 129,278 tons (1912-1920), (Anderson, 1993); and the Trethewey Mill produced 235,575 tons (1910-1919), (Anderson, 1993). Both mills' tailings flow via the Hudson Bay tailings catchment area. There is also, an unknown amount of broken waste rock piles located on the Hudson Bay Property. All shafts and open cuts are fenced or capped. The Hudson Bay Mine property is positioned adjacent to three former mine producers: Trethewey Mine (Claim JB#7) and Coniagas Mine (Claim JB #6) both are located to the south, and the Ferland Chambers Property that is located to the east. All three former mines are currently held by Agnico-Eagle Mines Ltd.

Open pit production from the Coniagas-Trethewey property that operated sporadically from 1978 to 1981.

## Prospecting

In order to effectively do more advance work on the property, precise locations of mine workings/ shafts, claim boundaries and possible geological contacts needed to be established. To start with, an exact corner pin from the Ontario Crown Lands Surveys was located. It determines the bounds of JB7 to the south, and RL400 to the east. The April 2016 MNDM CLAIMAP boundary is 20m northeast of actual boundary (fig 2). The other corner pins where not found, it is recommended to locate them in the future.





|  |                                  |  |                          |  |                            |
|--|----------------------------------|--|--------------------------|--|----------------------------|
|  | Photos Points                    |  | Fence large post         |  | MNDM Claimmap Fabric       |
|  | Chain Link fence                 |  | Rock Outcrop observation |  | Where claim line should be |
|  | Possible Geological Unconformity |  |                          |  |                            |



Image Reference:  
Second Vertical magnetic data fused with orthorectified Airphoto

W N E  
S

Projection: UTM Zone 17 (NAD 83)

0 25 50  
meters

### Shaft locations, fenced mine workings & geology

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 2,000 | Date: April. 22, 2016 |
| Figure - 2        | Author: M.Ethier      |





*UTM Nad83, ellipsoid height (599,233.323 E, 5,250,840.743N, ellheight: 274.5)*

All available maps showed the north shaft north 20-45 m north of the fenced off area and present location, but recently the “moss camouflaged” wood capped shaft collapsed was able to be re-discovered. The surrounding area is extremely dangerous and only within 4 feet of the fenced off area.



*UTM Nad83, ellipsoid height-CENTRE of shaft (2.2m east 70° of point below)  
(599,116.206E, 5,251,016.26N, ellheight: 265.1)*



In order to be certain of location, some workers refer to this other shaft as the main shaft, but unquestionably it is the shaft known as N° 64. By locating the boundary pin, this shaft is not part of the Hudson Bay Claim.



*UTM Nad83, ellipsoid height-CENTRE of shaft pipe (4m east 90° of point below)  
(599,273.979E, 5,250,871.555N, ellheight: 270.3)*

Another open shaft (fenced off) was located and was determined to be the N° 04 shaft. The shaft was also determined to be approximately 35 m south of the claim boundary.



*UTM Nad83, ellipsoid height-CENTRE of shaft opening (4.5m southeast 140° of point below)  
(599,193.993E, 5,250,801.484N, ellheight: 278.4)*

| <b>Main Post</b> | <b>X</b>   | <b>Y</b>    | <b>Ellheight</b> |
|------------------|------------|-------------|------------------|
| 1                | 599137.796 | 5250984.422 | 266.717          |
| 2                | 599105.441 | 5251032.591 | 263.578          |
| 3                | 599067.321 | 5251032.705 | 264.913          |
| 4                | 599037.965 | 5250995.235 | 272.775          |
| 5                | 599052.908 | 5250977.091 | 281.332          |
| 6                | 599045.717 | 5250899.936 | 279.304          |
| 7                | 599116.65  | 5250873.845 | 283.391          |
| 8                | 599151.371 | 5250864.362 | 276.938          |
| 9                | 599164.272 | 5250838.424 | 274.196          |
| 10               | 599239.728 | 5250859.603 | 271.644          |
| 11               | 599267.342 | 5250864.224 | 270.084          |
| 12               | 599274.249 | 5250866.485 | 269.493          |
| 13               | 599273.087 | 5250875.14  | 269.226          |
| 14               | 599266.053 | 5250874.189 | 269.443          |
| 15               | 599189.008 | 5250960.076 | 263.72           |

The main 8 ft high chain link fence was mapped using the major fence post. Like the shafts, the data was captured using differential GPS. The entirety of the fenced area is underlain by conglomerate rocks and has a lower magnetic signature compared to the fine grained sediments, most likely volcanic ash sequence to the west (see fig 2).

## Data Capture and Integration

Even though the Hudson Bay claim area has easy access, there are not many comprehensive information and maps that have been generated. The other objective of this report was to accurately position in UTM space the readily available data.

In a previous assessment report, an orthophoto was generated from multiple airphoto. For this report, a detailed digital elevation model (DEM) was constructed (5m pixel) using this data. The elevation data was extracted from the stereo pair of images which are adjacent images of the same area taken from different viewpoints. This method was very useful in creating the detailed DEM/3D surface. After the image (map) layers were geo-corrected, processed and clipped to coincide with the study area the next step was to manipulate the data to maximise their interpretation and integrate them. GPS shaft locations were used as the ground control points, and an excellent georectified correlation was produced in all the images. In order to facilitate future work in the area, it is recommended that the area be investigated by detailed UAV (drone) survey (cm-dm accuracy)

A Series of comprehensive maps were created with the airphoto mosaic and the detailed DEM.

Figure 3. Digital Elevation Model fused with Airphoto

Figure 4. Hudson Bay Mine Level 1

Figure 5. Hudson Bay Mine Level 2

Figure 6. Hudson Bay Mine Level 3

Figure 7. Hudson Bay Mine Level 4

Figure 8. Hudson Bay Mine Level 5

Figure 9. Hudson Bay Mine Below “Level 5”

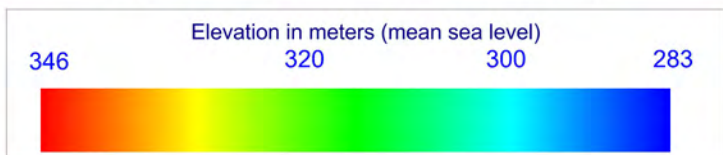
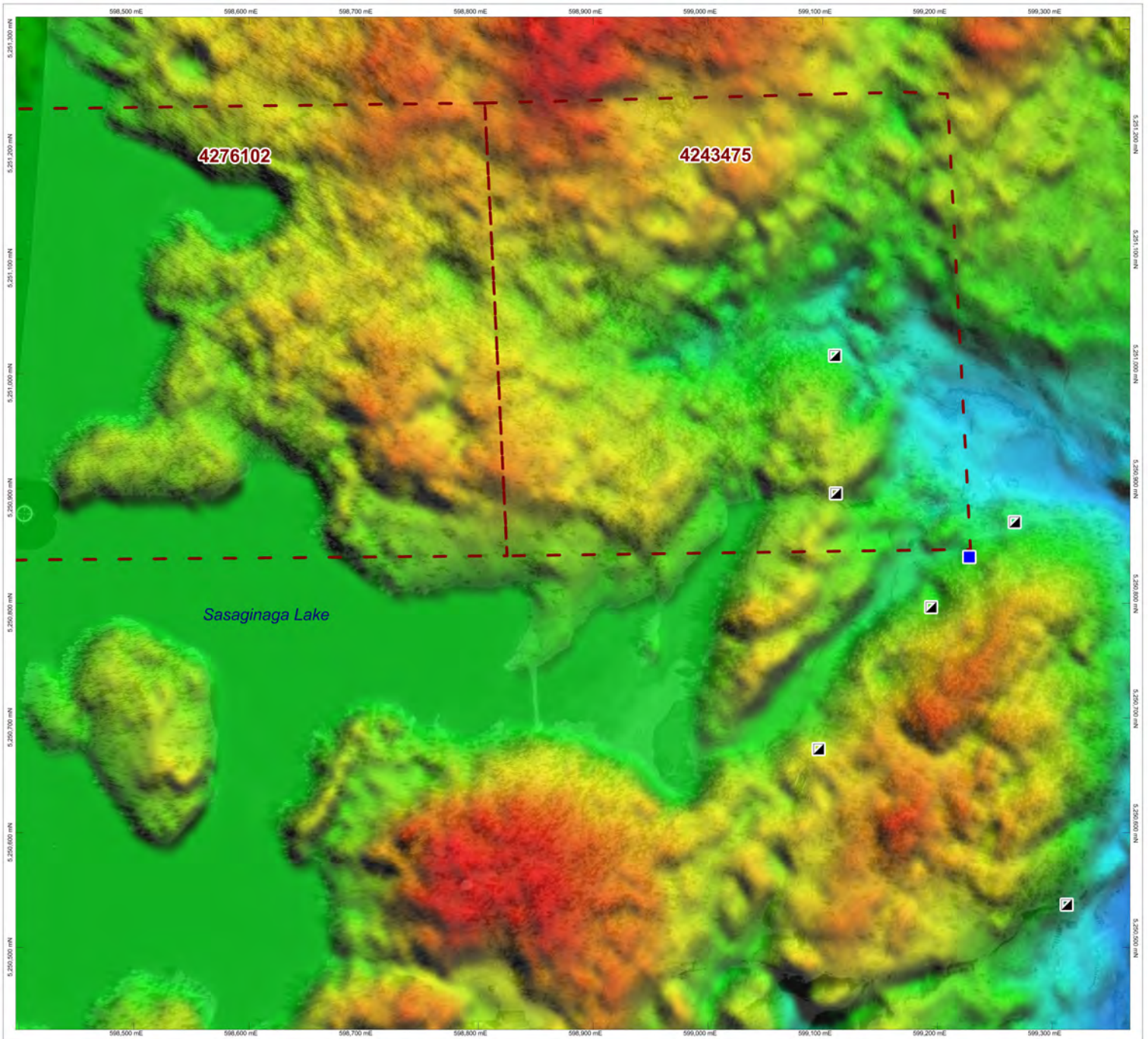
Figure 10. Magnetic Data Fused with Airphoto

Figure 11. Geology Fused with Shaded DEM

## List of Personnel

Martin Ethier, M.Sc. géo  
Hinterland Geosience & Geomatics  
P.O. Box 304  
Haileybury ON, P0J 1K0





**LEGEND**

- Brixton Claims
- Shaft Location
- Claim Corner post



Image Reference:  
Colour DEM fused with orthorectified Airphoto

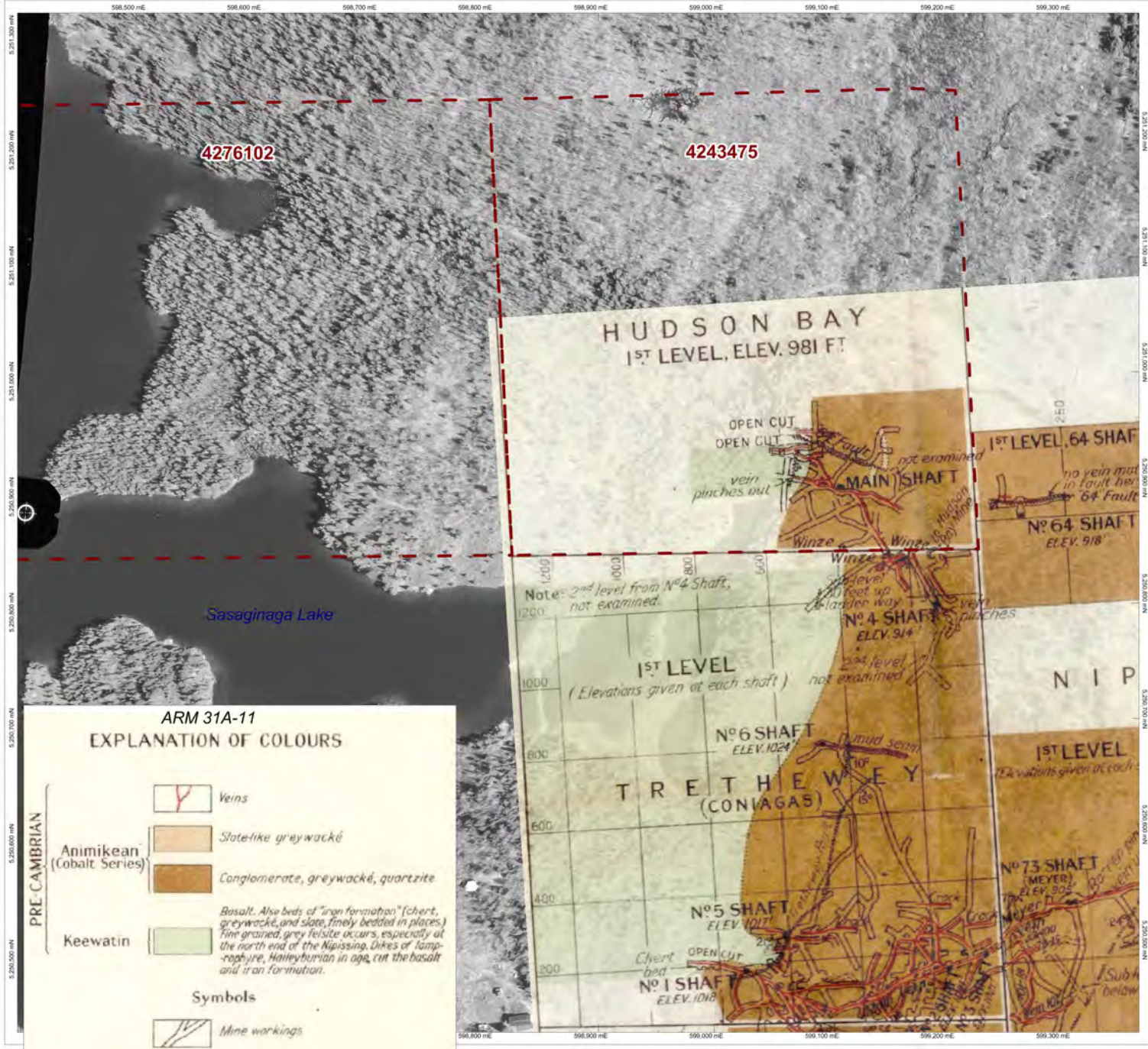
Projection: UTM Zone 17 (NAD 83)

**Digital Elevation Model  
fused with Airphoto**

|                   |                      |
|-------------------|----------------------|
| Scale - 1 : 5,000 | Date: April.11, 2016 |
| Figure - 3        | Author: M.Ethier     |

**BRIXTON METALS**





4276102

4243475

Sasaginaga Lake

**ARM 31A-11  
EXPLANATION OF COLOURS**

PRE CAMBRIAN

- Veins
- Slate-like greywacké
- Conglomerate, greywacké, quartzite
- Basalt. Also beds of "iron formation" (chert, greywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation.

**Symbols**

- Mine workings
- Raise or winze
- Geological boundary
- Fault
- Strike and dip

Elevations in feet above sea level

**Explanatory Notes**

The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.

Elevation Above Sea Level  
1st Level 981 ft = 299 metres

**LEGEND**

Brixton Claims

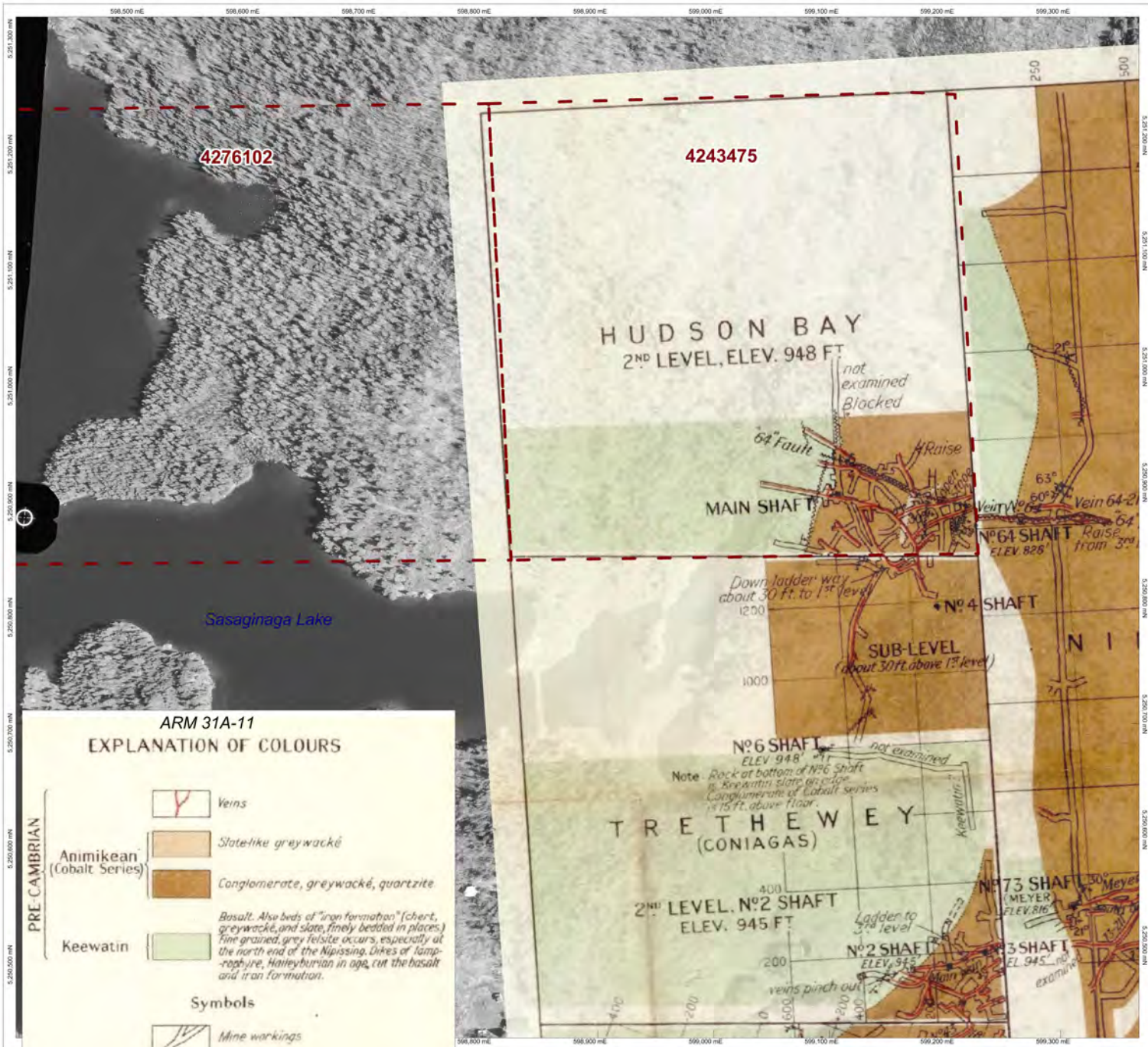
Image Reference:  
Parts of ARM 31A-11 overlap on the orthorectified Airphoto

Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine  
Level 1**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April. 11, 2016 |
| Figure - 4        | Author: M.Ethier      |





**ARM 31A-11**  
**EXPLANATION OF COLOURS**

**PRE-CAMBRIAN**

**Anemikite (Cobalt Series)**

- Slate-like graywacké
- Conglomerate, graywacké, quartzite

**Keewatin**

Basalt. Also beds of "iron formation" (chert, graywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation.

**Symbols**

- Mine workings
- Raise or winze
- Geological boundary
- Fault
- Strike and dip

Elevations in feet above sea level

**Explanatory Notes**

The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.

Elevation Above Sea Level  
2nd Level 948 ft = 289 metres

**LEGEND**

Brixton Claims

Image Reference:  
Parts of ARM 31A-11 overlain  
on the orthorectified Airphoto

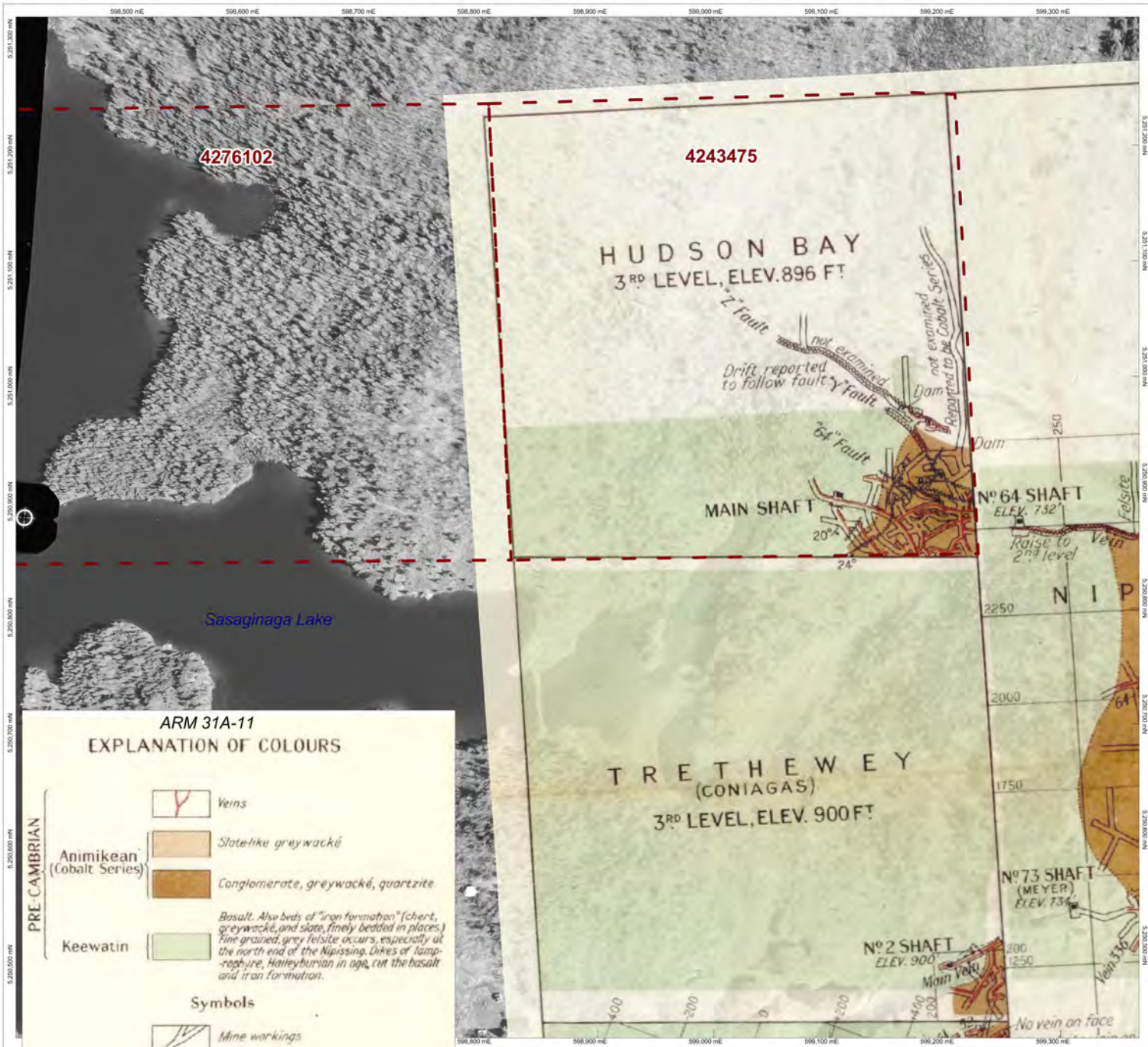
Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine  
Level 2**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April. 11, 2016 |
| Figure - 5        | Author: M. Ethier     |

**BRIXTON METALS**





**ARM 31A-11**  
**EXPLANATION OF COLOURS**

**PRE-CAMBRIAN**

**Animikean (Cobalt Series)**

- Slate-like greywacké
- Conglomerate, greywacké, quartzite

**Keewatin**

- Basalt. Also beds of "iron formation" (chert, greywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation.

**Symbols**

- Mine workings
- Raise or winze
- Geological boundary
- Fault
- Strike and dip

*Elevations in feet above sea level*

**Explanatory Notes**

*The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.*

Elevation Above Sea Level  
3rd Level 896 ft = 273 metres

**LEGEND**

- Brixton Claims

Image Reference:  
Parts of ARM 31A-11 overlap on the orthorectified Airphoto

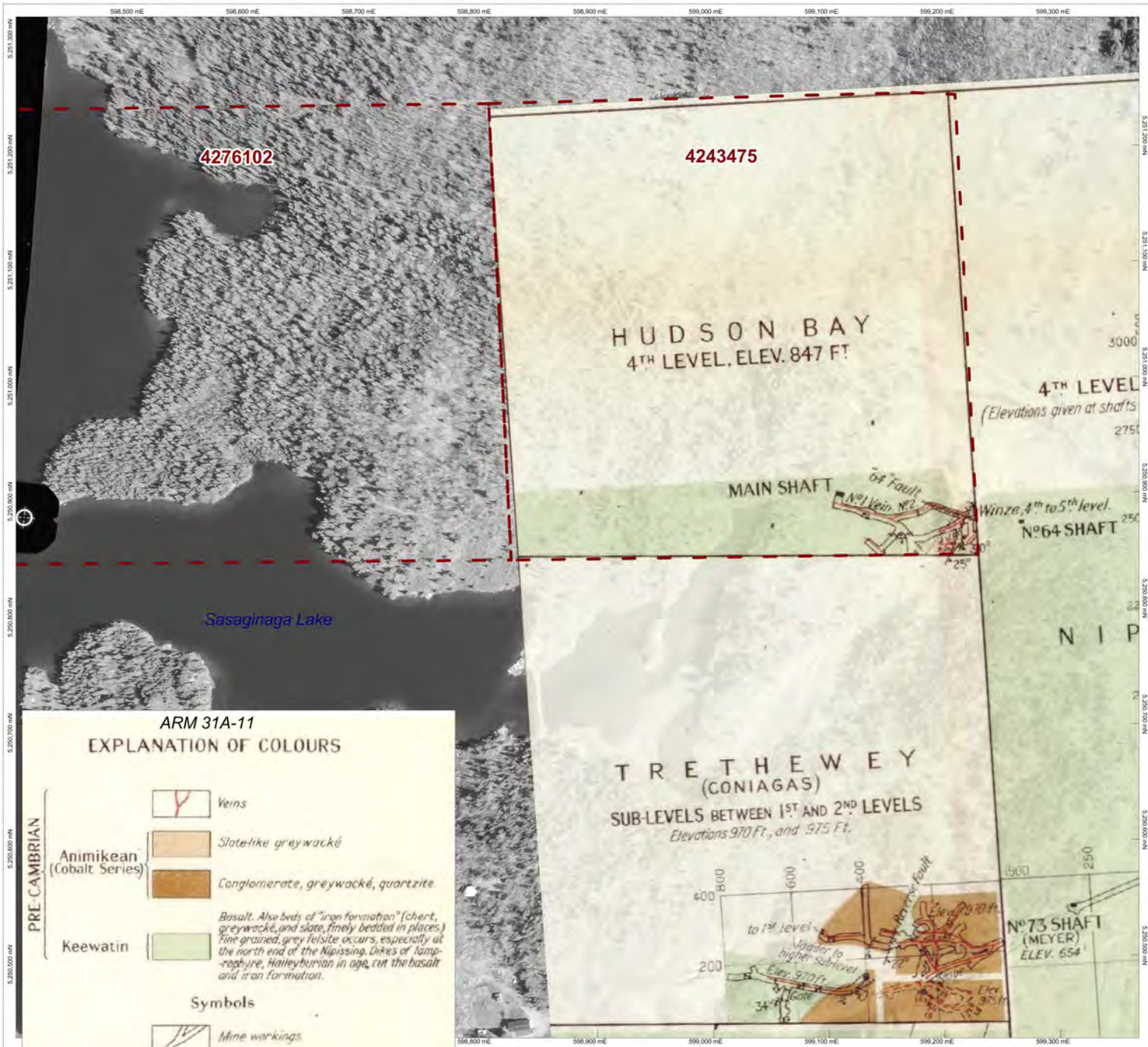
Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine Level 3**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April. 11, 2016 |
| Figure - 6        | Author: M.Ethier      |

**BRIXTON METALS**





**ARM 31A-11**  
**EXPLANATION OF COLOURS**

**PRE-CAMBRIAN**

|                              |  |  |
|------------------------------|--|--|
| Animikean<br>(Cobalt Series) |  | Slate-like graywacké   |
|                              |  | Conglomerate, graywacké, quartzite   |
| Keewatin                     |  | Basalt. Also beds of "iron formation" (chert, graywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation. |

**Symbols**

|  |                     |
|--|---------------------|
|  | Veins               |
|  | Mine workings       |
|  | Raise or winze      |
|  | Geological boundary |
|  | Fault               |
|  | Strike and dip      |

*Elevations in feet above sea level*

**Explanatory Notes**

*The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.*

*Elevation Above Sea Level*  
4th Level 847 ft = 258 metres

**LEGEND**

Brixton Claims

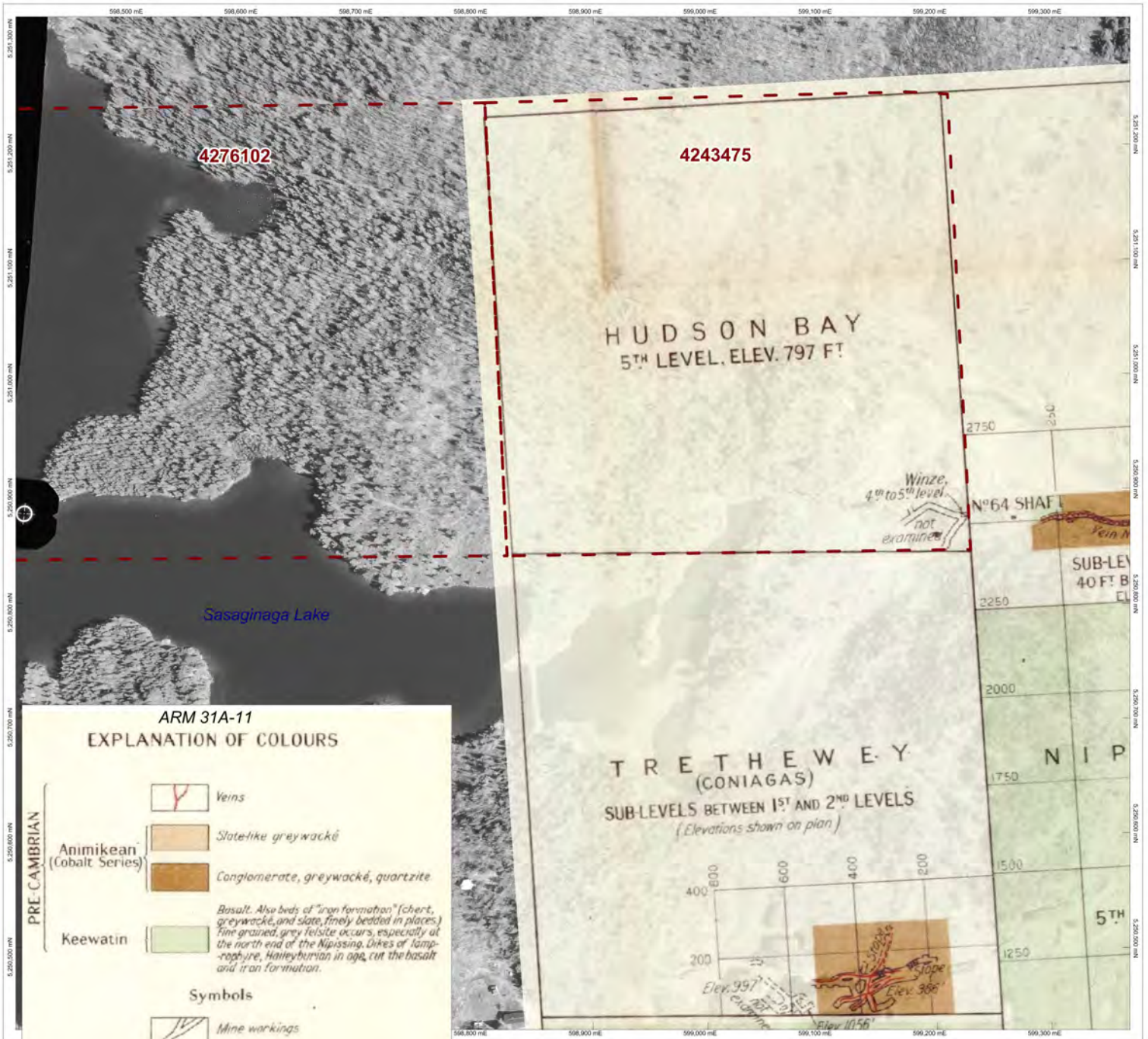
*Image Reference:*  
Parts of ARM 31A-11 overlap on the orthorectified Airphoto

Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine**  
**Level 4**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April. 11, 2016 |
| Figure - 7        | Author: M. Ethier     |





4276102

4243475

HUDSON BAY  
5<sup>TH</sup> LEVEL, ELEV. 797 FT

Winze,  
4<sup>th</sup> to 5<sup>th</sup> level  
not  
excavated

N<sup>o</sup> 64 SHAF

SUB-LEV  
40 FT B

Sasaginaga Lake

**ARM 31A-11  
EXPLANATION OF COLOURS**

PRE-CAMBRIAN

- Veins
- Slate-like greywacké
- Conglomerate, greywacké, quartzite
- Basalt. Also beds of "iron formation" (chert, greywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation.

**Symbols**

- Mine workings
- Raise or winze
- Geological boundary
- Fault
- Strike and dip

Elevations in feet above sea-level

**Explanatory Notes**

The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.

Elevation Above Sea Level  
5th Level 797 ft = 243 metres

**LEGEND**

Brixton Claims

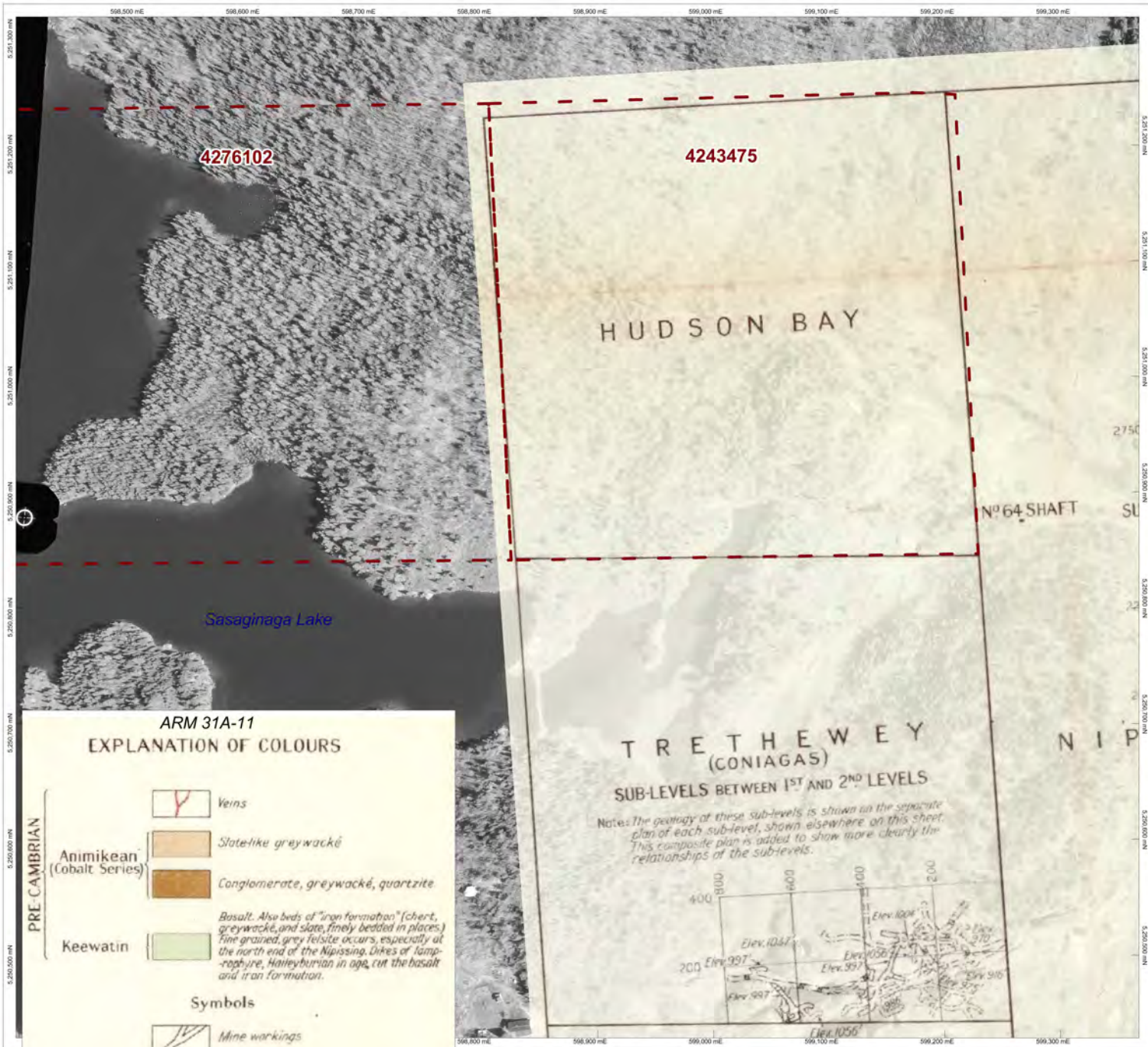
Image Reference:  
Parts of ARM 31A-11 overlain  
on the orthorectified Airphoto

Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine  
Level 5**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April, 11, 2016 |
| Figure - 8        | Author: M.Ethier      |





**ARM 31A-11  
EXPLANATION OF COLOURS**

**PRE-CAMBRIAN**

**Animikean (Cobalt Series)**

- Slate-like greywacké
- Conglomerate, greywacké, quartzite

**Keewatin**

Basalt. Also beds of "iron formation" (chert, greywacké, and slate, finely bedded in places.) Fine grained, grey felsite occurs, especially at the north end of the Nipissing. Dikes of lamprophyre, Haileyburian in age, cut the basalt and iron formation.

**Symbols**

- Mine workings
- Raise or winze
- Geological boundary
- Fault
- Strike and dip

*Elevations in feet above sea-level*

**Explanatory Notes**

The plans of the mine levels were furnished by the Companies. The geological survey of the mine workings was done in the year 1921 by the Ontario Department of Mines. The plans were drawn for photolithography by A. Braidwood.

Elevation Above Sea Level  
"BELOW" 5th Level 797 ft = 243 metres  
NO WORKINGS MAPPED

**LEGEND**

Brixton Claims

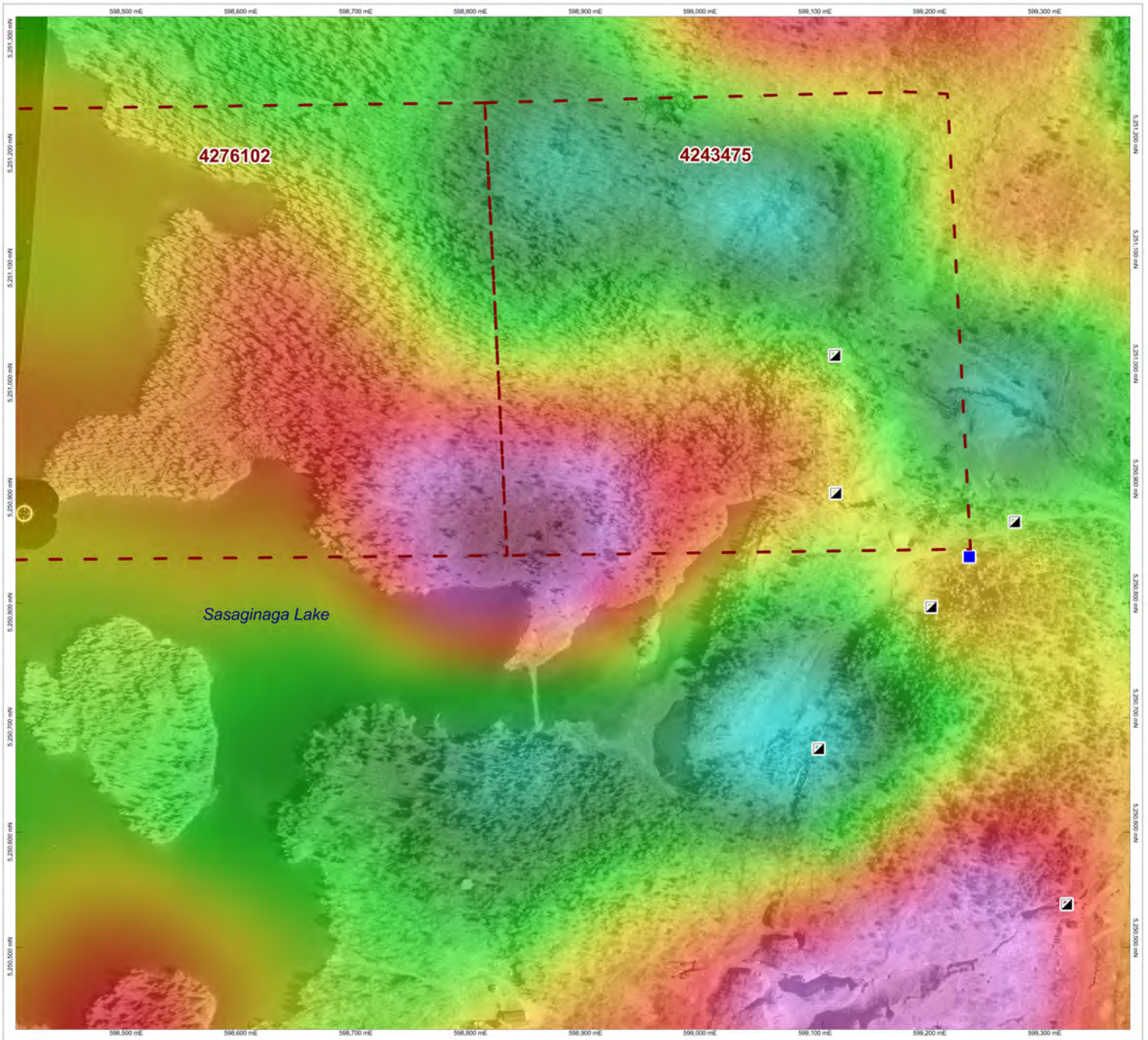
Image Reference:  
Parts of ARM 31A-11 overlain  
on the orthorectified Airphoto

Projection: UTM Zone 17 (NAD 83)

**Hudson Bay Mine  
Below "Level 5"**

|                   |                       |
|-------------------|-----------------------|
| Scale - 1 : 5,000 | Date: April, 11, 2016 |
| Figure - 9        | Author: M.Ethier      |





Second Vertical Derivative magnetic data (OGS Geophysical Data Set 1103)

**LEGEND**

- Brixton Claims
- Shaft Location
- Claim Corner post



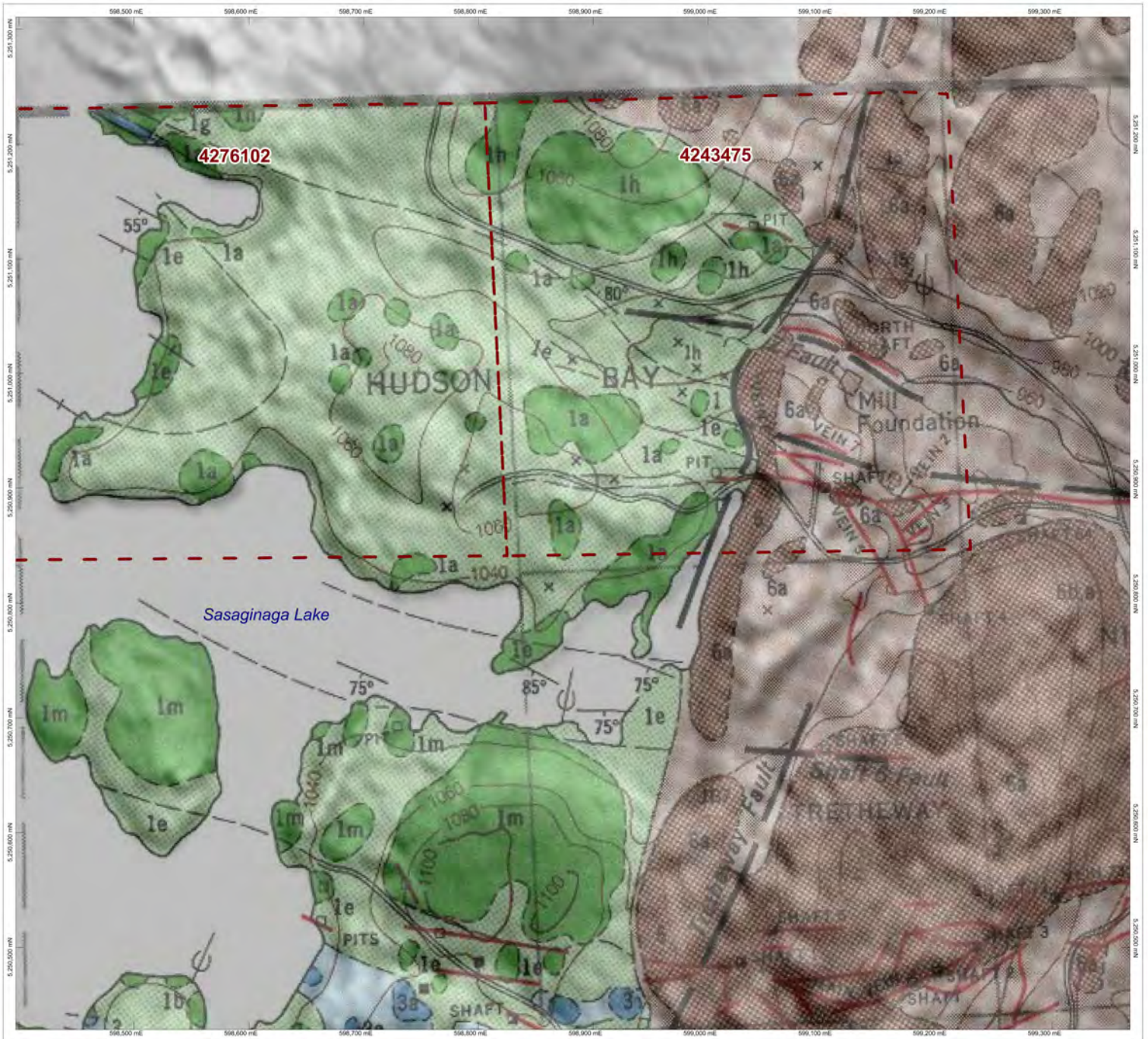
Image Reference:  
Second Vertical Derivative magnetic data  
fused with orthorectified Airphoto

Projection: UTM Zone 17 (NAD 83)

**Magnetic Data  
fused with Airphoto**

|                   |                      |
|-------------------|----------------------|
| Scale - 1 : 5,000 | Date: April.11, 2016 |
| Figure - 10       | Author: M.Ethier     |





Georectified (OGS Map 2050 Cobalt Silver Area Northern Sheet) fused with Shaded Greyscaled DEM

**LEGEND**

- Brixton Claims
- Shaft Location
- Claim Corner post



Image Reference:  
Geology map 2050  
fused with Shaded Relief Greyscaled DEM

Projection: UTM Zone 17 (NAD 83)

**Geology  
fused with Shaded DEM**

|                   |                      |
|-------------------|----------------------|
| Scale - 1 : 5,000 | Date: April.11, 2016 |
| Figure - 11       | Author: M.Ethier     |

**BRIXTON METALS**