

N.T.S. 31C/11

**REPORT ON
GROUND GAMMA-RAY SPECTROMETER SURVEY
BLACK RIVER NORTH PROPERTY
GRIMSTHORPE TOWNSHIP, ONTARIO**

**Written by: Robert J. Dillman
8901 Reily Drive
Mount Brydges, Ontario
March 21, 2010**

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G.P.S. WAYPOINT DATA

GAMMA-RAY SPECTROMETER SURVEY: READINGS scale 1 : 2,500

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GAMMA-RAY SPECTROMETER SURVEY: PROFILED READINGS scale 1 : 2,500

Summary

This report summarizes the results of a ground gamma-ray spectrometry survey on the Black River North Property in Grimsthorpe Township, Ontario. The survey was completed by James M. Chard during February 28 to March 3, 2010.

The survey did not show the presence of highly radioactive anomalies indicating uranium-thorium mineralization on the property. However, a series of linear, northwest-trending subtle “highs” were detected which correlate well with gold occurrences on the property. The subtle radioactive responses are believed to be caused by potassic-alteration and potentially mark gold-bearing alteration zones in structures proximal to the unconformity between metasedimentary and metavolcanic units of the Grimsthorpe Group and metavolcanic and metagabbroic flows of the Canniff Lake Complex.

Location, Property Ownership, Access

The Black River North Property is located in the Southern Ontario Mining Division approximately 185 kilometres northeast of Toronto, Ontario, Canada (Figure 1). The property is situated in Grimsthorpe Township in Hastings County (Figure 2).

The property consists of two contiguous unpatented mining claims covering a total area of 80 hectares (Figure 3). Table 1. summarizes the logistics of the mining claims.

Titles to the mining claims comprising the Black River North property are equally held by:

Robert J. Dillman of Mount Brydges, Ontario,

James M. Chard of Cordova Mines, Ontario

The property has good seasonal road access via the Lingham Lake Forest Access Road which crosses through the property. The Lingham Lake Access Road intersects with the Skootamatta Forest Access Road 1.5 km north of the property. The Skootamatta Forest Access Road is also a seasonal road. The Skootamatta Forest Access Road extends from the town of Gilmour located on the Weslemkoon Road to the town of Northbrook on Provincial Highway 41.



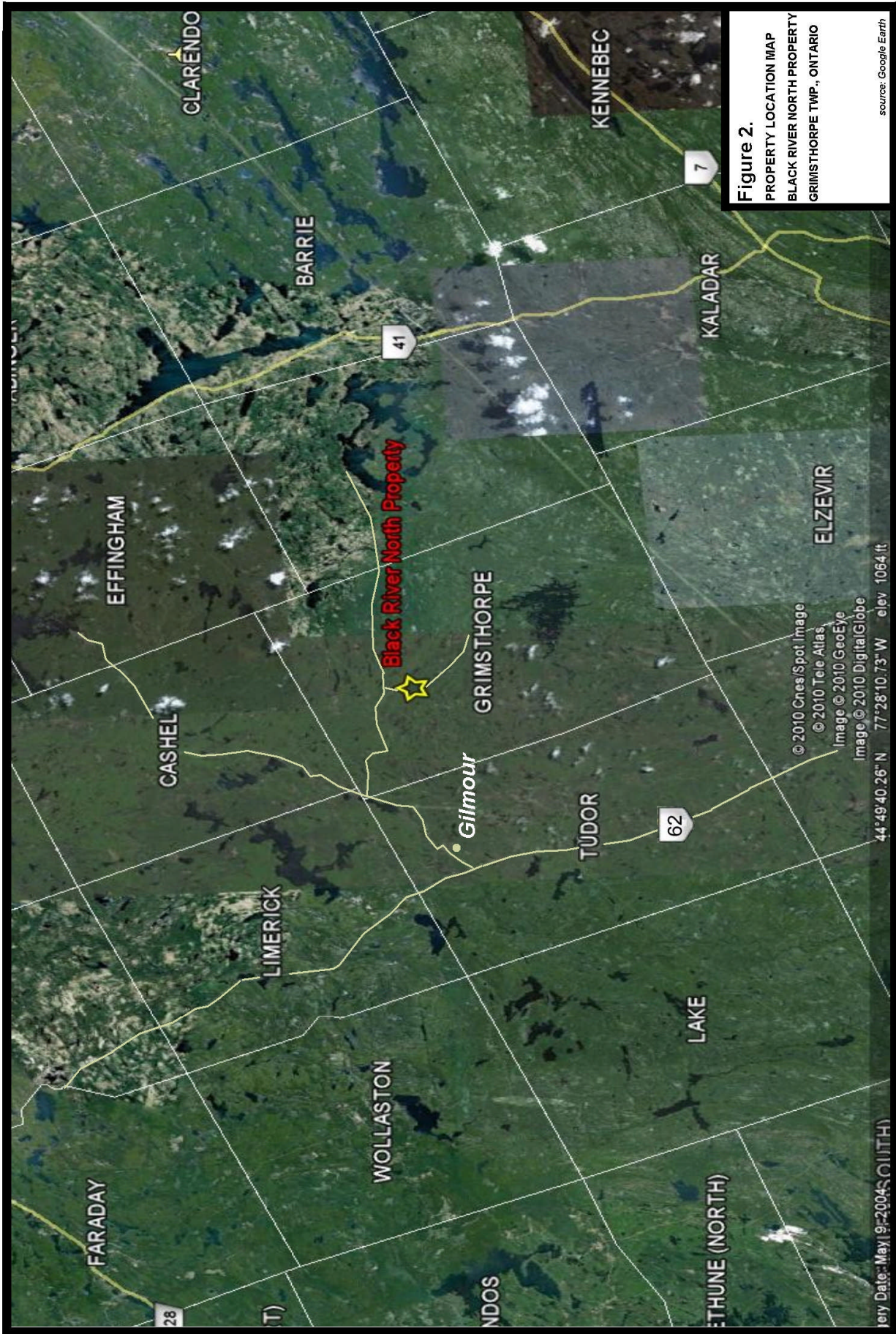




Figure 3.
CLAIM MAP
 BLACK RIVER NORTH PROPERTY
 GRIMSTHORPE TWP., ONTARIO
 source: Google Earth

© 2010 Tele Atlas
 Image © 2010 DigitalGlobe

44°49'34.76" N 77°28'39.34" W elev 996 ft

Table 1.

Claim Logistics

Black River North Property

Grimsthorpe Twp., Ontario

Claim Number	Location	Number of Units	Size Hectares	Assessment Due Date	Amount Due	Assessment Bank
3006613	Lot's 20 & 21, Conc. XIV S.1/2	2	40 ha	08/ 22/ 2010	\$800	\$0
4209865	Lot's 19 & 20, Conc. XV N.1/2	2	40 ha	04/ 07/ 2010	\$800	\$0

Title:

50% Robert J. Dillman
8901 Reily Drive
Mount Brydges, Ontario
N0L 1W0

50% James M. Chard
3495 Country Road 48
Cordova Mines, Ontario
K0L 1Z0

No winter maintenance has been performed on the Skootamatta Road during this season. As a result, an ATV was used to access the property during this survey.

Land Status and Topography

All of the Black River North Property is designated as Crown Land by the Ministry of Northern Development, Mines and Forestry (Figure 4). The south half of lot 16, concession XIV, has Surface Rights Only (S.R.O.) titled to the Queen of England but is also considered as Crown Land by the Ministry.

The Black River North Property is at a mean elevation 300 metres above sea level. The property has gentle topography ranging approximately 23 metres. The central region of the property is crossed by the Black River. The river is generally rocky and fast flowing towards the southeast. The east side of the river is bounded by northwest-southeast orientated ridges of outcrop. The west side of the river is flat and partially covered by swampy ground. Outcrops are rare and are found in areas of higher relief.

Most of the property is covered by mixed forest dominated by spruce, pine, maple and poplar. Areas east of the river have been clear-cut and numerous new skidder trails have been constructed during recent logging activities.

Regional and Local Geology

The Black River North Property is underlain by Proterozoic geological units belonging to the Grimsthorpe Domain of the Central Metasedimentary Belt of the Grenville Structural Provincial (Figure 5).

The Grimsthorpe Domain is dominated by mafic metavolcanic and volcanoclastic metasedimentary rocks older than 1270 Ma (Easton 1992). The Grimsthorpe Domain includes:

- the younger Grimsthorpe Group, consisting mainly of metavolcanic-clastic metasedimentary rocks and minor metavolcanic flows of the Tudor Formation, minimum age 1279 \pm 3 Ma (Easton 2004)

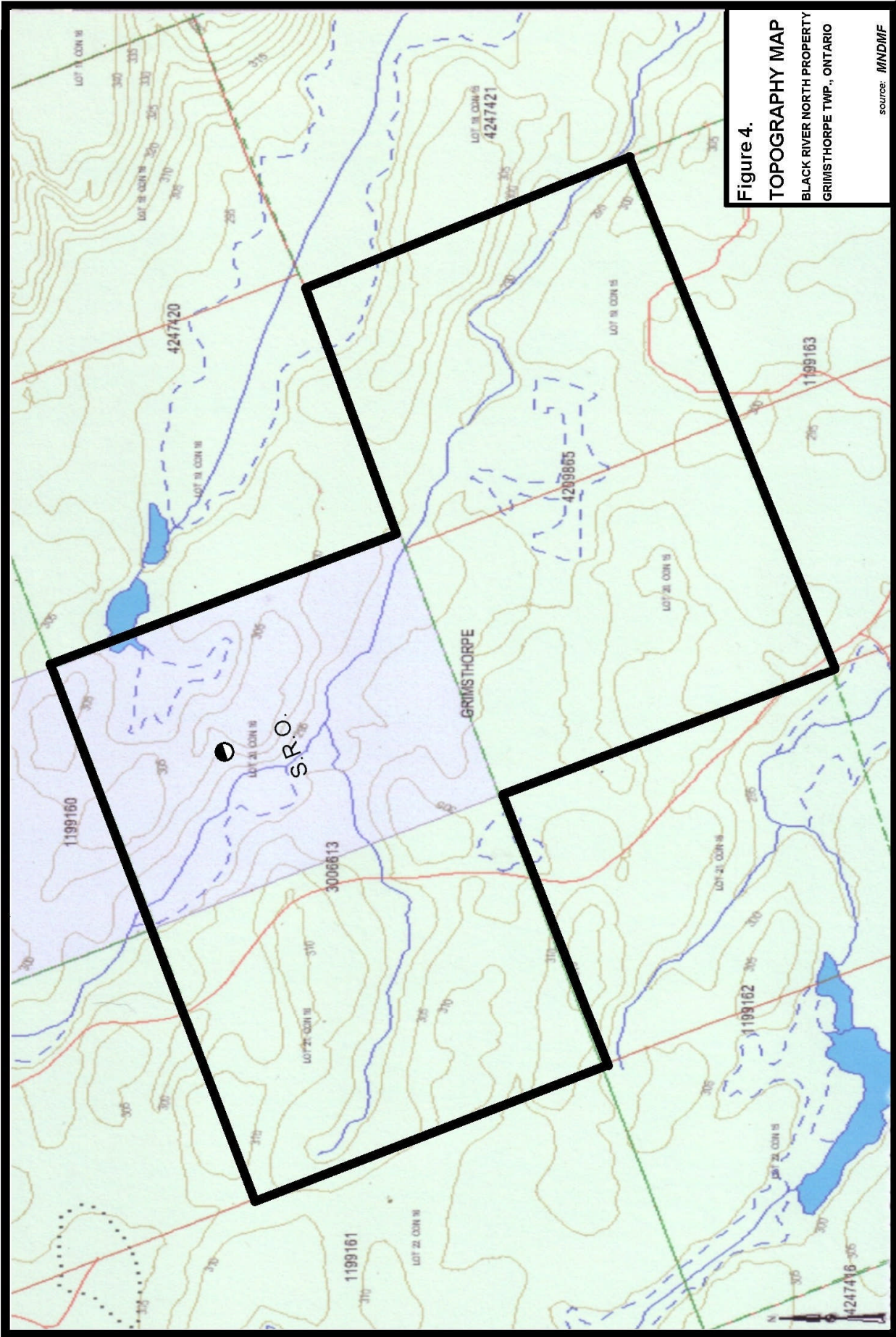


Figure 4.
TOPOGRAPHY MAP
 BLACK RIVER NORTH PROPERTY
 GRIMSTHORPE TWP., ONTARIO
 source: MNDMF

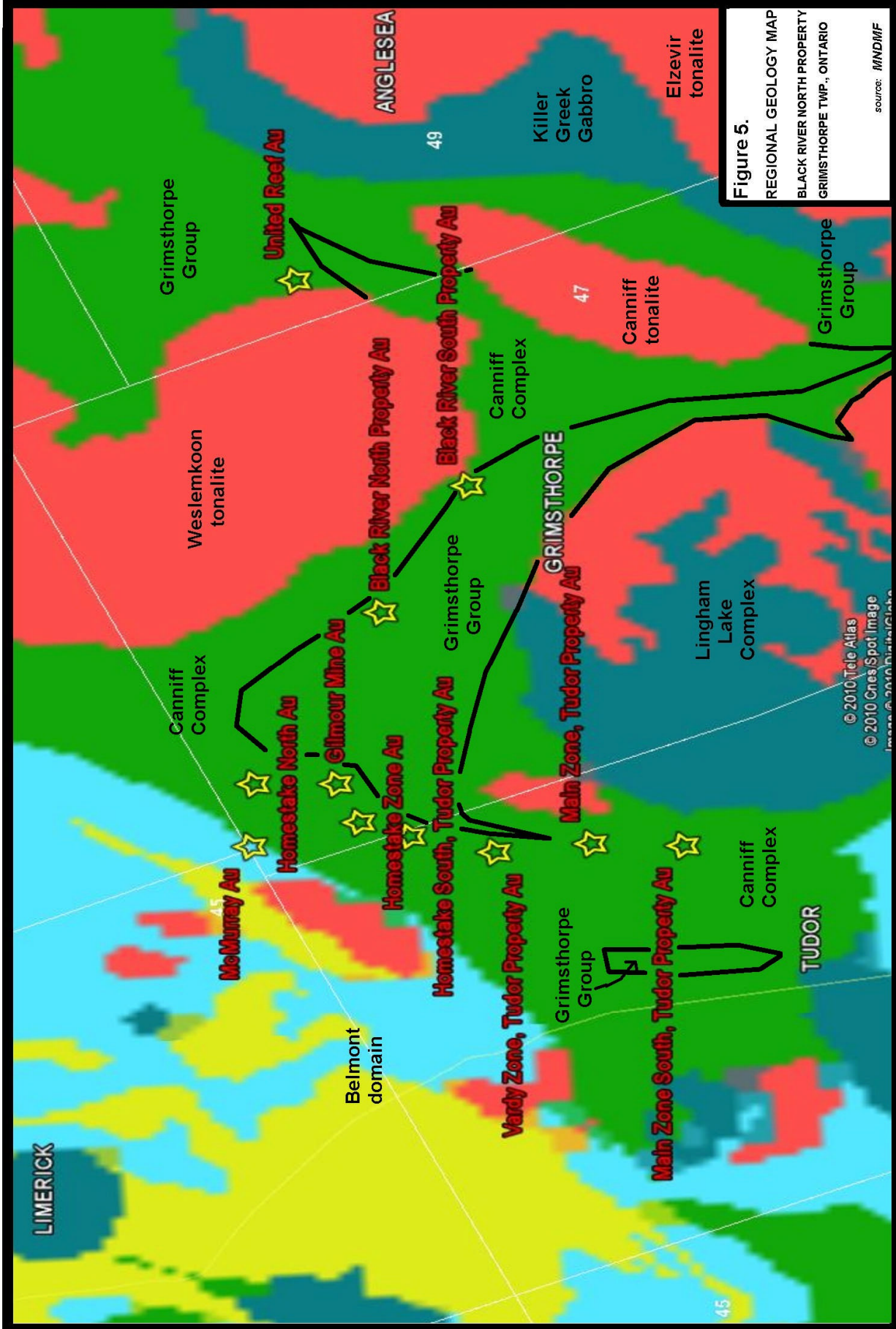


Figure 5.
 REGIONAL GEOLOGY MAP
 BLACK RIVER NORTH PROPERTY
 GRIMSTHORPE TWP., ONTARIO
 source: MNDMIF

 Gold Occurrence

0 10 km

- the older Canniff Complex dominated by massive and pillowed tholeiitic metabasalts, metagabbro and metaperidotite.

The property is situated over the unconformity between the Grimsthorpe Group and the Canniff Complex (Figure 6). The unconformity is juxtaposed with the Black River. Outcrops east of the river consist of metabasalts and metagabbro of the Canniff Complex. Outcrops west of the river consist of northwest trending schistose metasedimentary units and metavolcanic flows of the Grimsthorpe Group.

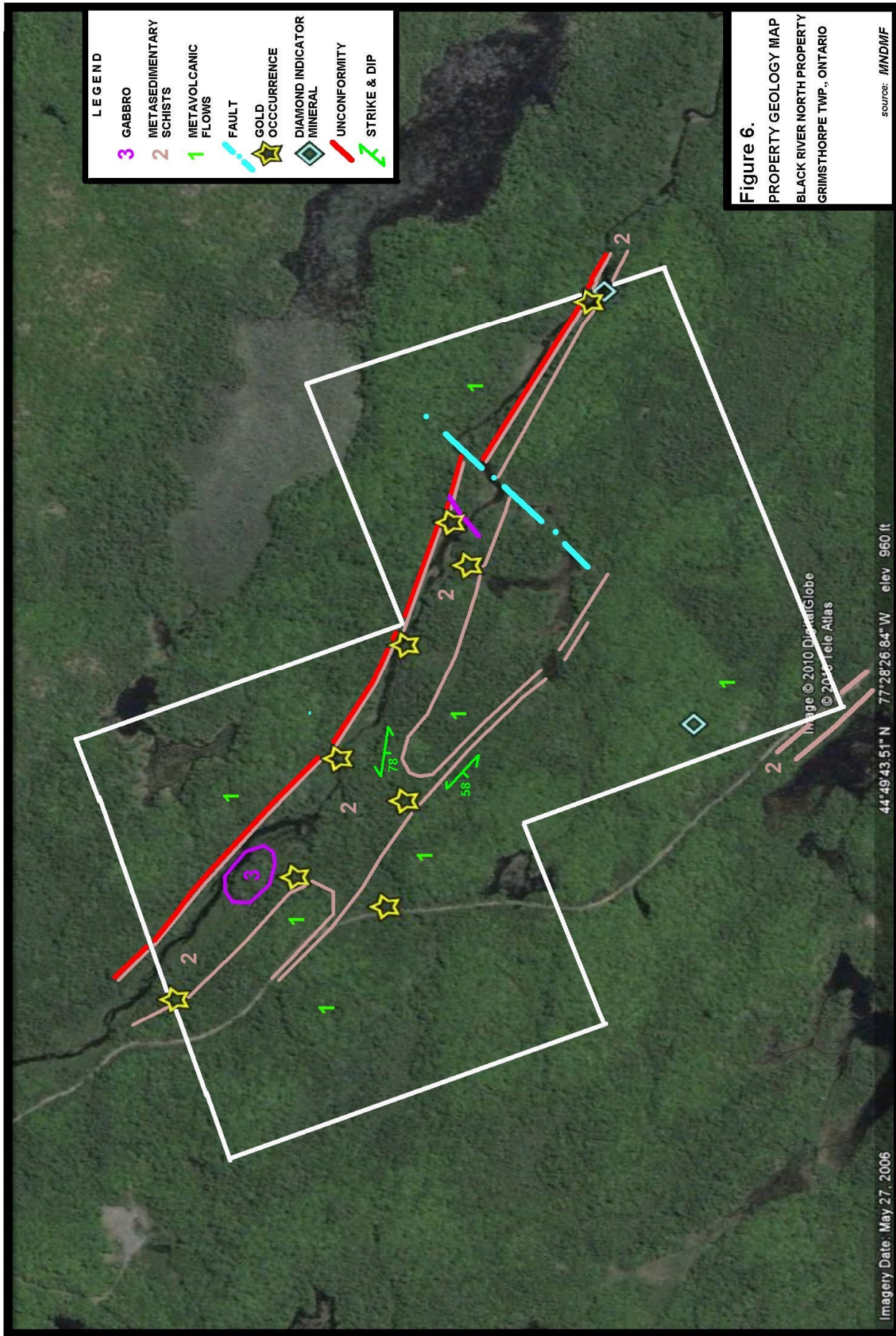
The Grimsthorpe Domain, notably along the Grimsthorpe-Canniff unconformity has been subjected to a variety of mafic and felsic plutonic, intrusive rocks including:

- northwest trending felsic aplite dikes
- east-west striking gabbroic dikes
- small, circular gabbroic plutons

The Grimsthorpe Domain in the area occupied by the property is sandwiched to the southwest by gabbroic and dioritic rocks of the Lingham Lake complex and to the northeast by tonalitic and granodioritic rocks of the Weslemkoon tonalite.

The Grimsthorpe Domain in the project area has been subjected to amphibolite-biotite facies metamorphism. Rock units generally trend northwest-southeast and dip vertical to steeply southwest. Metasedimentary units proximal to the Grimsthorpe-Canniff unconformity are variably sheared by northwest trending structures but are not extensively carbonated like other shear zones in the region. The entire sequence is crossed by a series of southwest to east-west orientated strike-slip faults. The younger faults have displaced the Grimsthorpe-Canniff unconformity. The cross cutting faults occur as:

- tight, brittle fractures with no apparent deformation zones, or
- strong deformation zones up to 25 metres wide with extensive carbonate and chlorite alteration.



Economic Mineralization

A series of gold occurrences have been found in the metasedimentary unit situated west of the Grimsthorpe-Canniff unconformity (Figure 7). The gold occurrences are situated in a 1,200 metre long corridor that is part of a 5 km long gold trend following the unconformity. The gold mineralization occurs in a variety of settings including:

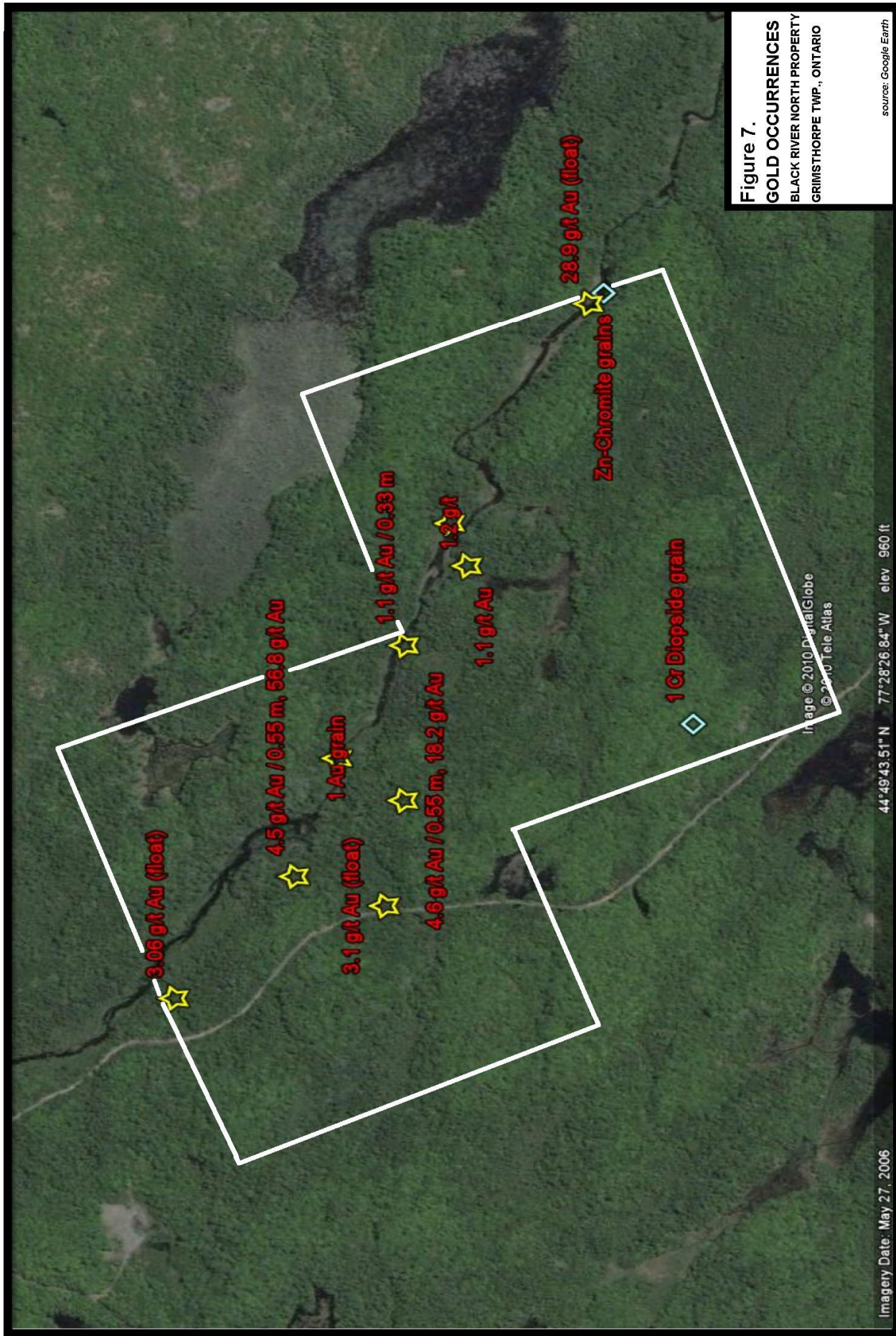
- deformed, saccharoidal quartz veins mineralized with pyrite and arsenopyrite
- bluish-grey quartz stringers mineralized with pyrite and arsenopyrite
- silicified and breccia zones mineralized with pyrite and arsenopyrite.
- white crystalline quartz veins mineralized with pyrite, chlorite and carbonate.

Indicator minerals of potential diamond-bearing rocks have also been detected on the property. The minerals include chrome diopside indicative of kimberlite and Zn-chromite grains potentially representing Wawa-style diamond lamprophyre. Although potential diamond-bearing rocks have not been found on the property, kimberlite dikes found at Vardy Lake and at Picton attest to the potential for diamond-bearing rocks to occur in the area.

History of Exploration

In 1941 and 1942, the geology of Grimsthorpe Township and surrounding area was mapped by V. B. Meen on behalf of the Ontario Department of Mines (Meen, 1942). The area was re-mapped in 1990 by R. M. Easton and F. Ford of the Ontario Geological Survey (Easton and Ford, 1990). Prior to 1991, there is no record of mineral exploration in the area covered by the Black River North Property.

In 1991, gold was discovered along the Black River by the author. Between 1991 and 2003, the author completed various low-cost surveys to explore the extent of gold mineralization and fulfil the rigorous duties of assessment work required to maintain claims over the gold occurrences. The surveys completed on the property include:



- prospecting, geological mapping, manual trenching, soil and heavy mineral sampling, ground magnetometer and VLF surveys.

Reports for all the surveys are available online at the Ministry of Northern Development, Mines and Forestry website.

Survey Dates and Personnel

The ground spectrometer survey over the Black River North Property was completed during February 28 to March 3, 2010. The survey was performed by James M. Chard of Cordova Mines, Ontario.

Survey Logistics

The ground spectrometry survey was completed on flagged lines using a GPS and compass to calculate navigation and distances.

Instrument readings were recorded at 25 metre intervals on grid lines spaced approximately 100 metres apart. The GPS coordinates for the survey lines are appended to this report.

The instrument used for the survey was an Exploranium Gamma Radiation Detector Model GR-110G. The instrument uses a 4.5 cubic inch Sodium-Iodide detector and measures radiation in Counts Per Second (cps) at a rate of one reading per second. The instrument has an audio alarm which can be set to react to changes in background radiation. The instrument does not differentiate between uranium, thorium or potassium radioactive responses.

Background radiation over exposed or thinly covered outcrop ranges 20 to 30 cps. Areas of deep overburden returned responses ranging 10 to 20 cps.

Results from the survey and the interpretation of the results have been plotted at a scale of 1 : 2,500 on maps accompanying this report.

Survey Results

The results of the spectrometer survey are summarized in Figure 7. The survey detected five linear type “subtle” high radioactive trends ranging 30 to 37 cps and fourteen bulls-eye type responses ranging 30 to 55 cps.

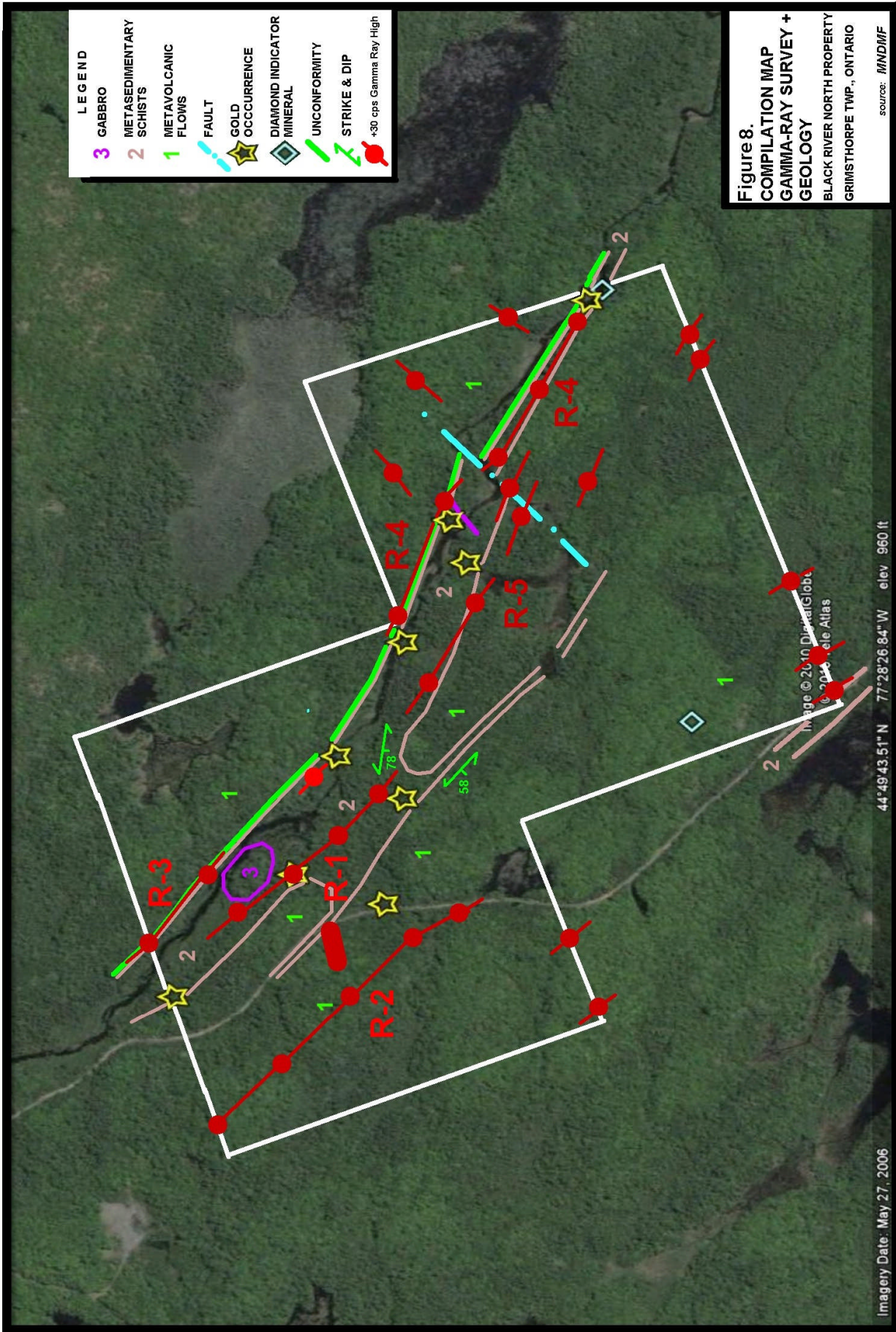
The linear radioactive features trend northwest-southeast and correlate well with the strike of bedrock and the Grimsthorpe-Canniff unconformity. Most of the linear features with the exception of the R-2 anomaly occur in greywacke and phyllite schists belonging to the Grimsthorpe Group. The R-2 could be associated with a parallel metasedimentary unit.

The R-1 ranges 30 to 37 cps and forms the most prominent feature detected by the survey. The anomaly extends southeast for 300 metres between lines 1+00S at 4+25E to line 4+00S at 6+00E. The R-1 anomaly correlates directly with the gold occurrence on line 2+00S at 4+75E and appears to extend between the gold-bearing boulders found in the vicinity of 0+50S, 3+75E to the gold occurrence at 4+15S, 5+75E.

The R-3 anomaly occurs over the unconformity and possibly extends to the bull-eye response at line 3+00S, 6+25E.

The R-4 anomaly also occurs over the unconformity and possibly is the extension of the R-3 anomaly. The R-4 anomaly strikes 400 metres between line 5+50S at 8+75E to 9+50S at 11+50E and has a radioactive intensity ranging 31 to 36 cps. The anomaly appears to link gold occurrences found along the river bank at 4+75S and 6+50S with gold-bearing boulders found on the river bank at 9+00S.

The R-5 anomaly is formed by a cluster of radioactive responses ranging +30 cps situated west of the river between 5+50S and 8+50S and close to the gold occurrences at 6+50S. The cluster of anomalies have short strike lengths, the longest being 200 metres in length. The anomalies appear to be focused around an east-west trending fault located between 6+50S and 7+50S.



Many of the bulls-eye type radioactive features were detected over mafic metavolcanic rocks. The strongest anomalies, ranging 54 and 55 cps were detected along the trail located west of the river in the north half of lot 19, concession XV. A third bulls-eye feature ranging 41 cps was detected on the north-south claim line also in the southeast corner of the property. The strongest bulls-eye anomalies are all situated close to the location where Zn-chromite grains have been found in heavy mineral concentrates collected in the river.

A radioactive response detected immediately west of the road on line 2+00S could be a linear feature striking northeast and parallel with the survey line.

Discussion of Results

The spectrometry survey did not show the presence of high radioactivity associated with uranium or thorium mineralization and it can be concluded that such deposits do not exist on the claims. The spectrometer did detect several subtle linear responses which correlate directly or closely to gold occurrences in metasedimentary rocks situated adjacent to the Grimsthorpe-Canniff unconformity. It is believed the weak radioactive responses are caused by zones of potassic alteration occurring within the metasedimentary units of the Grimsthorpe Group. The alteration could be associated with pervasive zones of silicification, biotite, sericite and/or K-feldspar mineralization and have potential association with the gold occurrences on the property. Thus, the spectrometer could be a useful tool for locating other zones of mineralization in the area.

Recommendations

Good correlation exists between the location of gold occurrences on the property and the location of the R-1 and R-4 radioactive anomalies. Additional exploration of the anomalies as potential gold-bearing structures is warranted. A combined trenching and diamond drill program is recommended as the next phase of exploration. The program should initially focus trenching and drilling on the bedrock gold occurrences on lines 2+00S and 4+15S and expand exploration along strike guided by the results of this survey. A budget for the proposed program is \$241,500 and is derived on the following cost estimate:

Trenching

Hoe-Hoe Excavator	20 hours @ \$120 / hr	\$2,400	
Washing, cleaning trenches	5 days @ \$350 / day	1,700	
Mapping, Sampling	5 days @ \$500 / day	2,500	
Equipment, Supplies	pump, saw	5,000	
Assays	200 samples @ \$35 / sample	7,000	
Food, Hotel Transportation		3,000	
Maps, Reports		<u>3,500</u>	
		\$25,100	\$25,100

Drill Program

Drilling 6 holes, 1,200 metres	1,200 metres @ \$120 / metre	\$144,000	
Supervision, Logging	14 days @ \$500 / day	7,000	
Sampling	14 days @ \$350 / day	4,900	
Equipment, Supplies	saw	5,000	
Assays	200 samples @ \$35 / sample	7,000	
Food, Hotel, Transportation		7,000	
Maps, Sections, Reports		<u>10,000</u>	
		\$184,900	\$184,900
			\$210,000

Contingency 15% **\$31,500**

Total **\$241,500**

Respectfully submitted,

Robert Dillman B.Sc.
March 21, 2010

References

- Christie, B . J. 1992.** Report on Prospecting, Geological Mapping and Soil Sampling, Dillman: Black River Property, Grimsthorpe Township, Southern Ontario Mining Division, Ontario. Unpublished internal report for Homestake Minerals.
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- Easton, R. M. and Ford, F. 1990.** Geology of the Grimsthorpe Area: In Summary of Field Work and Other Activities 1990. Ontario Geological Survey, Miscellaneous Paper 151, p. 99-110.
- Meen, V. B. 1942.** Geology of Grimsthorpe-Barrie Area, Ontario Department of Mines, Vol. 51, pt. 4, p. 1-50 (with Map 51d: published 1944).

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arjadee1@yahoo.com

CERIFICATE of AUTHOR

I, **Robert J. Dillman, Professional Geologist**, do certify that:

1. I am the **President** and the holder of a **Certificate of Authorization** for:

**ARJADEE PROSPECTING
8901 Reily Drive
Mount Brydges, Ontario, Canada
N0L1W0**

2. I graduated in 1991 with a **Bachelor of Science Degree** in **Geology** at the **University of Western Ontario**.

3. I am an active member of:

**Association of Professional Geoscientists of Ontario, APGO
Prospectors and Developers Association of Canada, PDAC
Geological Association of Canada, GAC**

4. I have been a **licensed Prospector in Ontario** since 1985.

5. I have worked continuously as a **Professional Geologist** for 19 years.

6. Unless stated otherwise, **I am responsible** for the preparation of all sections of the Assessment Report titled:

**REPORT ON GROUND GAMMA-RAY SURVEY
BLACK RIVER NORTH PROPERTY
GRIMSTHORPE TOWNSHIP, ONTARIO**

dated, **March 21, 2010**

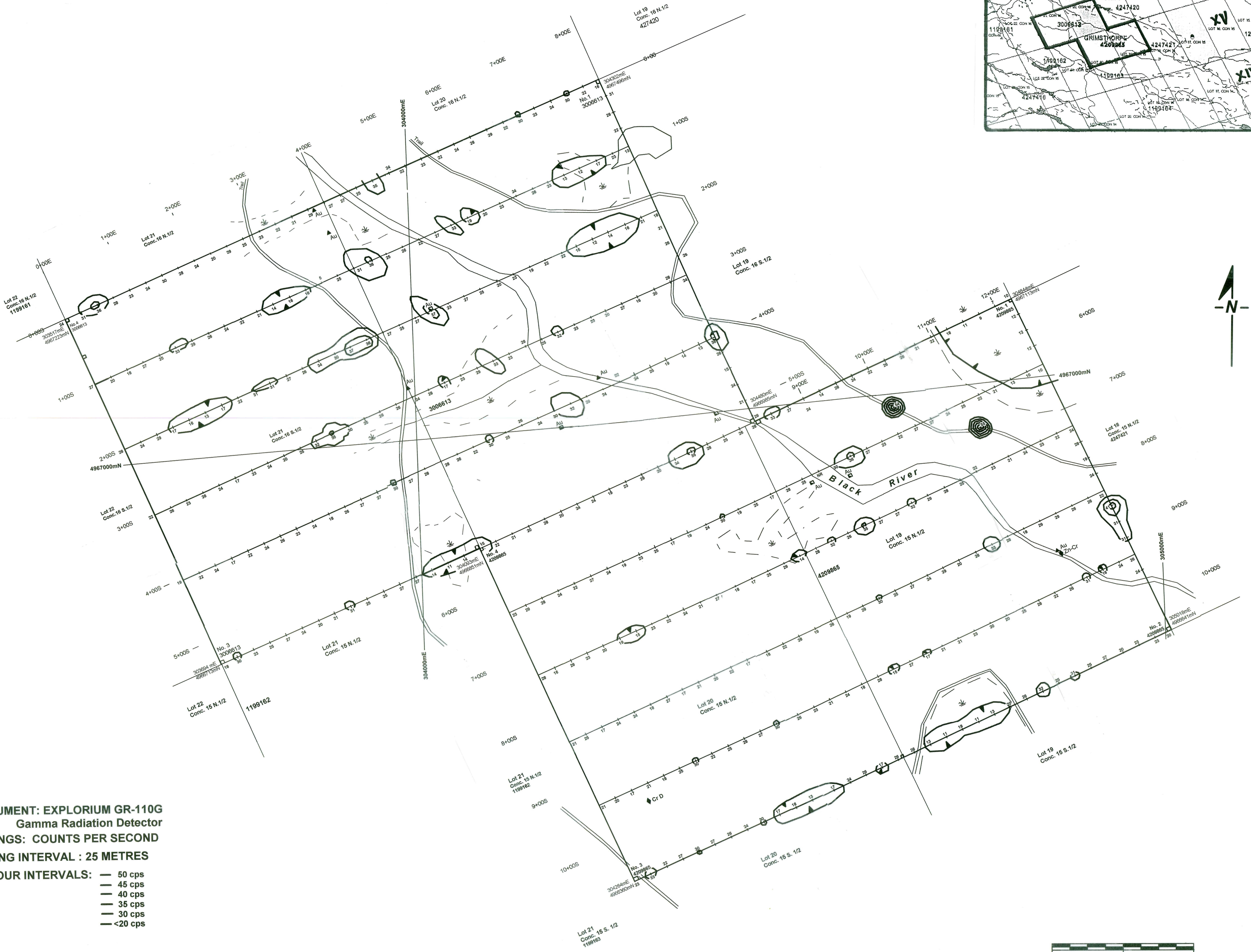
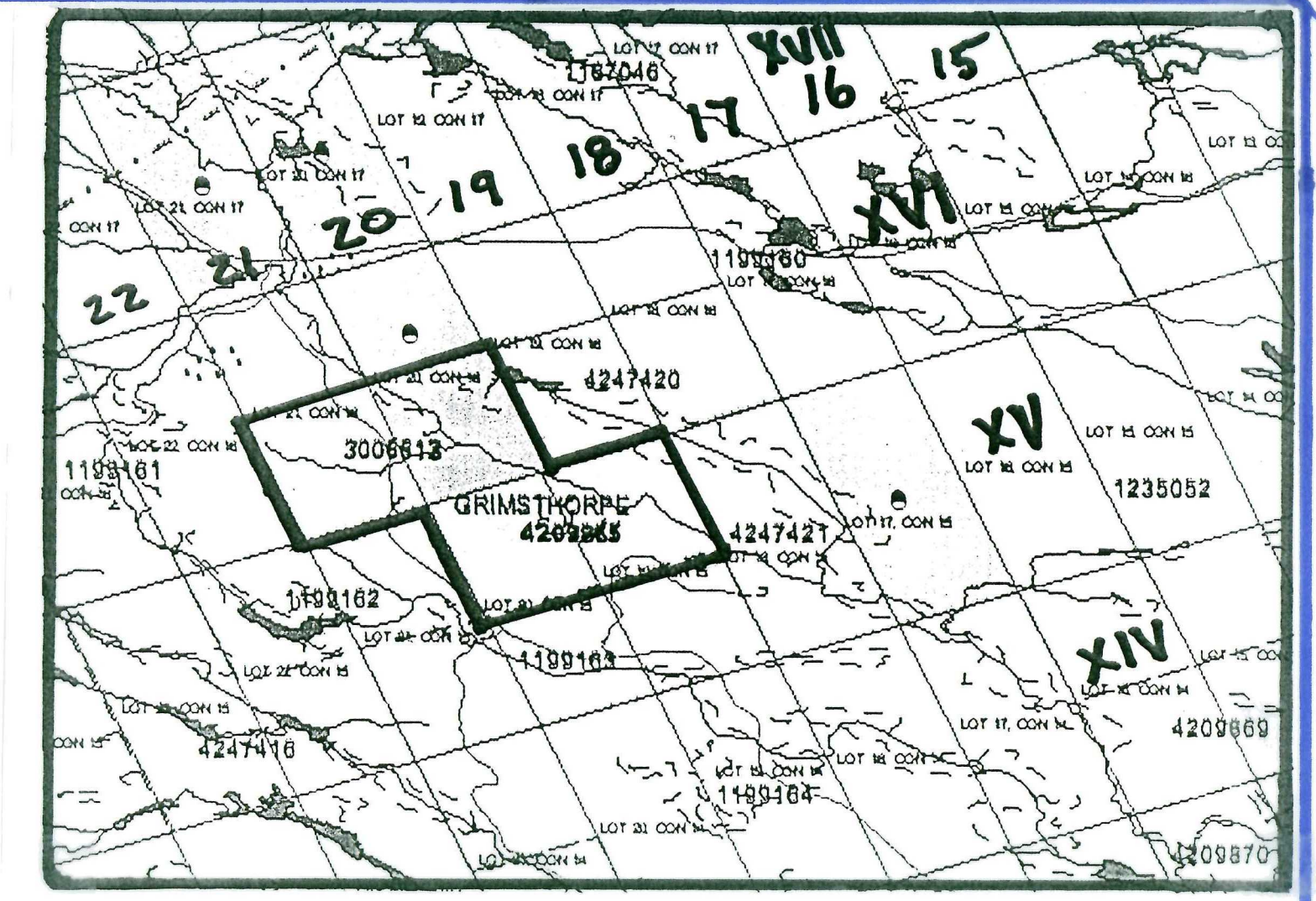
7. I am not aware of any material fact or material change with respect to the subject matter of the Assessment Report that is not contained in the Assessment Report and its omission to disclose makes the Assessment Report misleading.

Dated this 21st day of March, 2010

**Robert J. Dillman B.Sc. P. Geo
March 21, 2010**

APPENDIX I.
 G.P.S. WAYPOINT DATA
 RADIOMETRIC GAMMA-RAY SPECTROMETER SURVEY
 GRIMSTHORPE TWP, ONTARIO
 BLACK RIVER NORTH PROPERTY

NAD83	UTM/UPS	METRIC	ZONE 18T
<u>Line Number</u>	<u>Co-ordinates East to West</u>		
	E	N	E N
0+00	304302	4967496 to	303517 4967223
1+00S	304334	4967401 to	303550 4967128
2+00S	304367	4967307 to	303584 4967035
3+00S	304402	4967214 to	303617 4966940
4+00S	304437	4967120 to	303650 4966846
5+50S	304844	4967113 to to 303694 4966713	304480 4966985 to 304093 4966851
6+50S	304877	4967018 to	304126 4966757
7+50S	304909	4966924 to	304160 4966664
8+50S	304942	4966830 to	304194 4966569
9+50S	304973	4966735 to	304228 4966475
11+00S	305018	4966641 to	304264 4966360
55 cps	304789	4966946	
54 cps	304657	4966975	



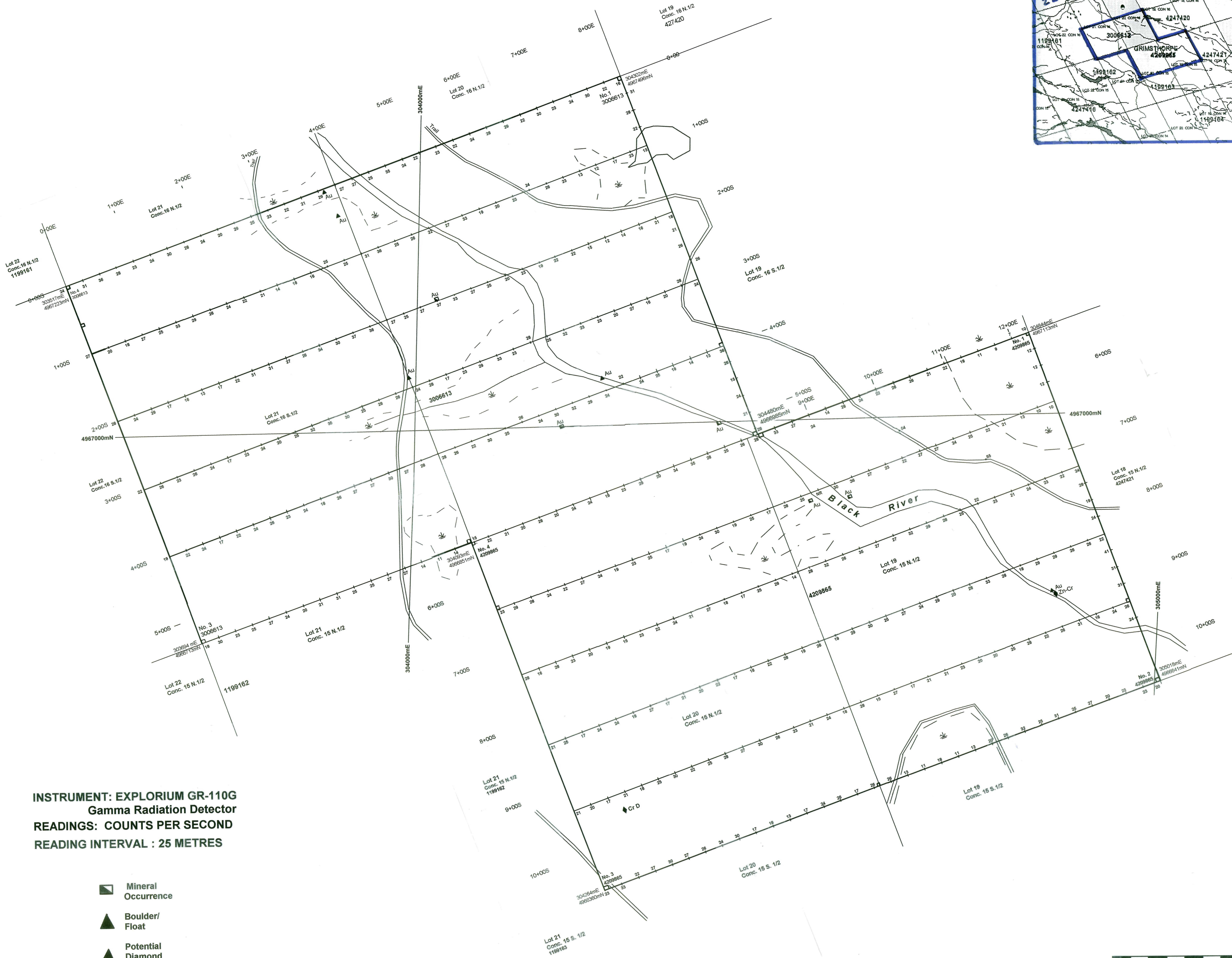
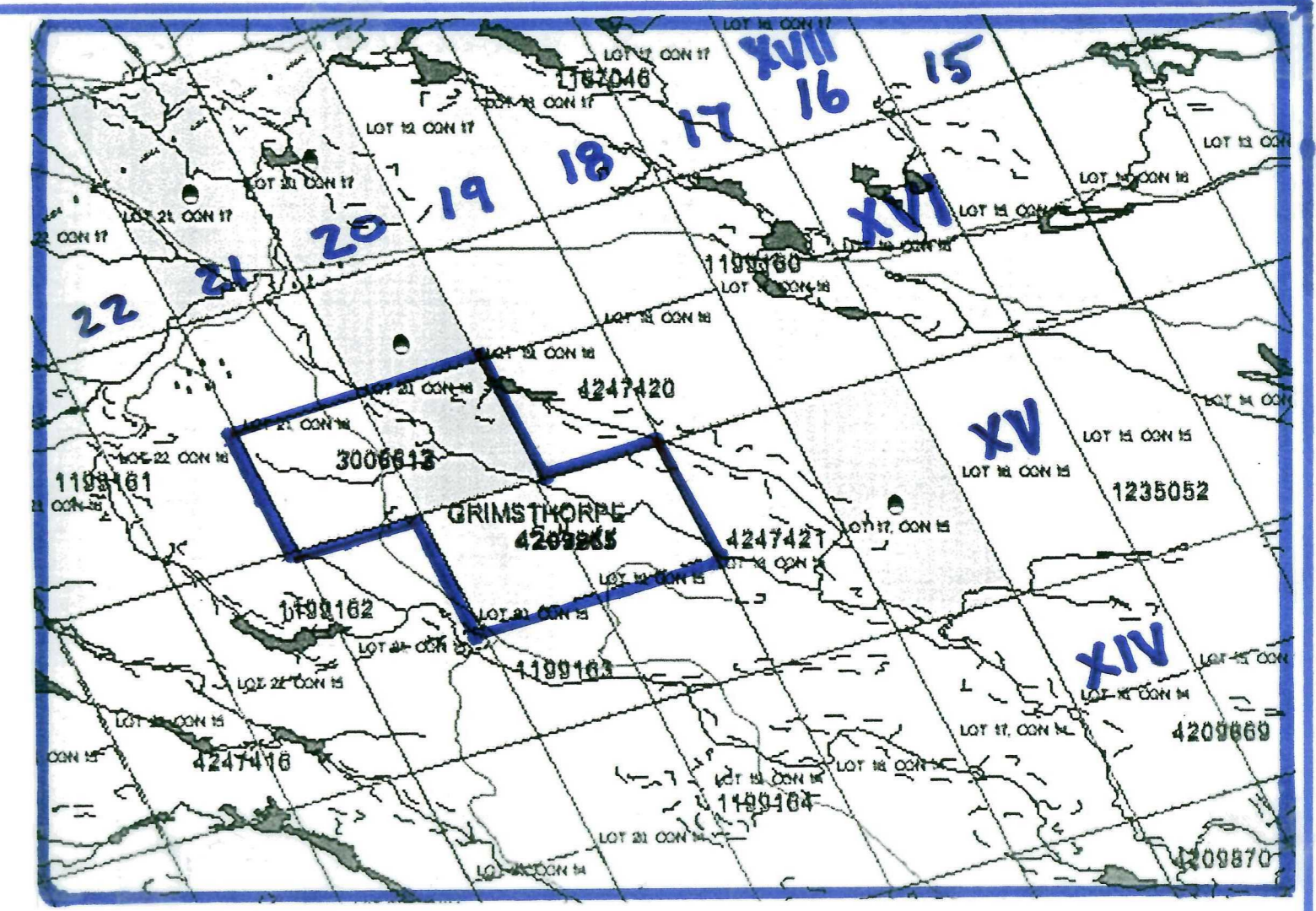
INSTRUMENT: EXPLORIUM GR-110G
Gamma Radiation Detector
READINGS: COUNTS PER SECOND
READING INTERVAL : 25 METRES
CONTOUR INTERVALS:

- 50 cps
- 45 cps
- 40 cps
- 35 cps
- 30 cps
- <20 cps

- Mineral Occurrence
- ▲ Boulder/Float
- ◆ Potential Diamond Indicator Mineral



GAMMA-RAY SPECTROMETER SURVEY	
CONTOURED READINGS	
BLACK RIVER NORTH PROPERTY	
GRIMSTHORPE TWP., ONTARIO	
Date: March 20, 2010	Survey by: JMC
Scale 1 : 2500	Drawn by: RJD

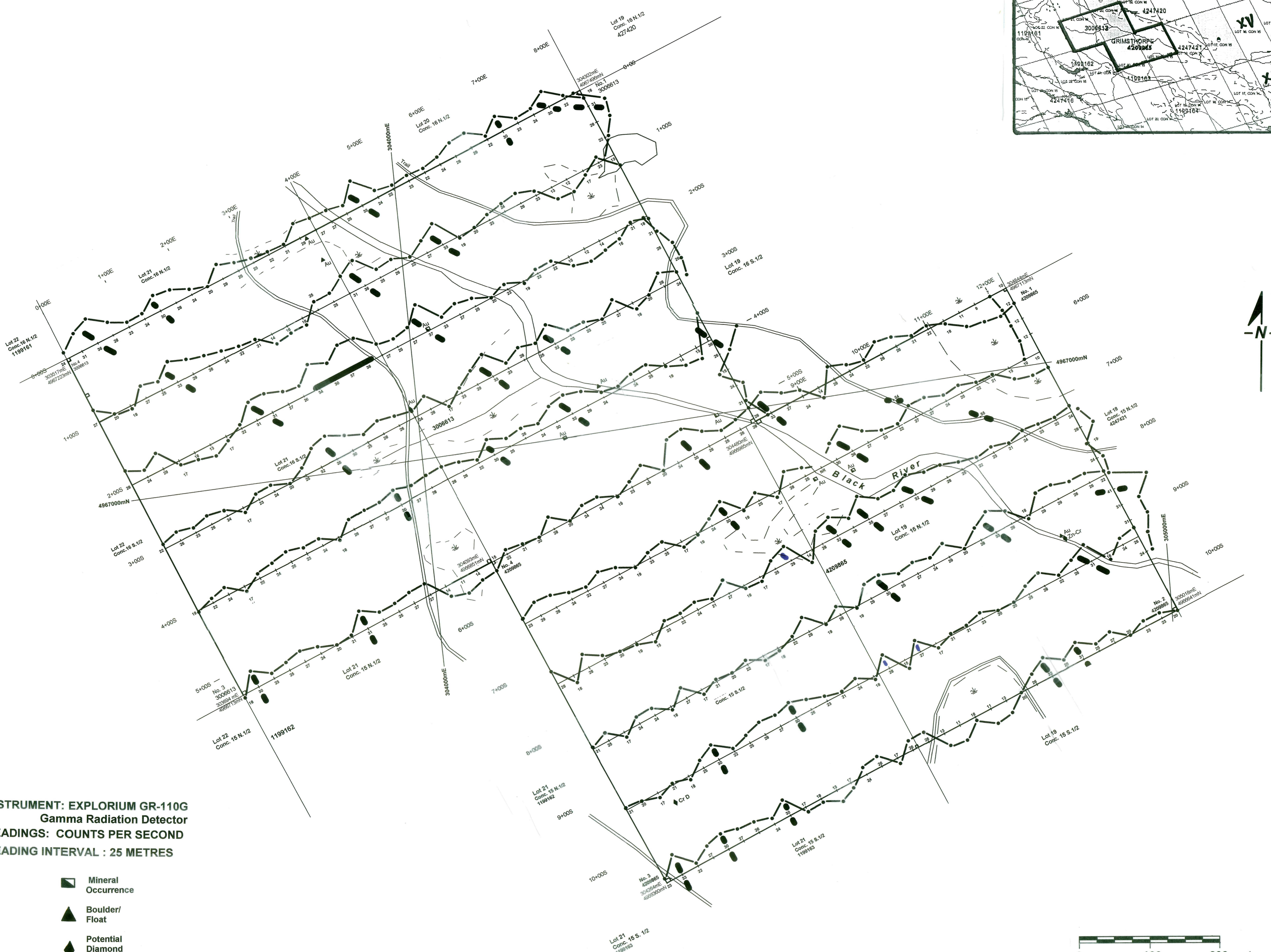
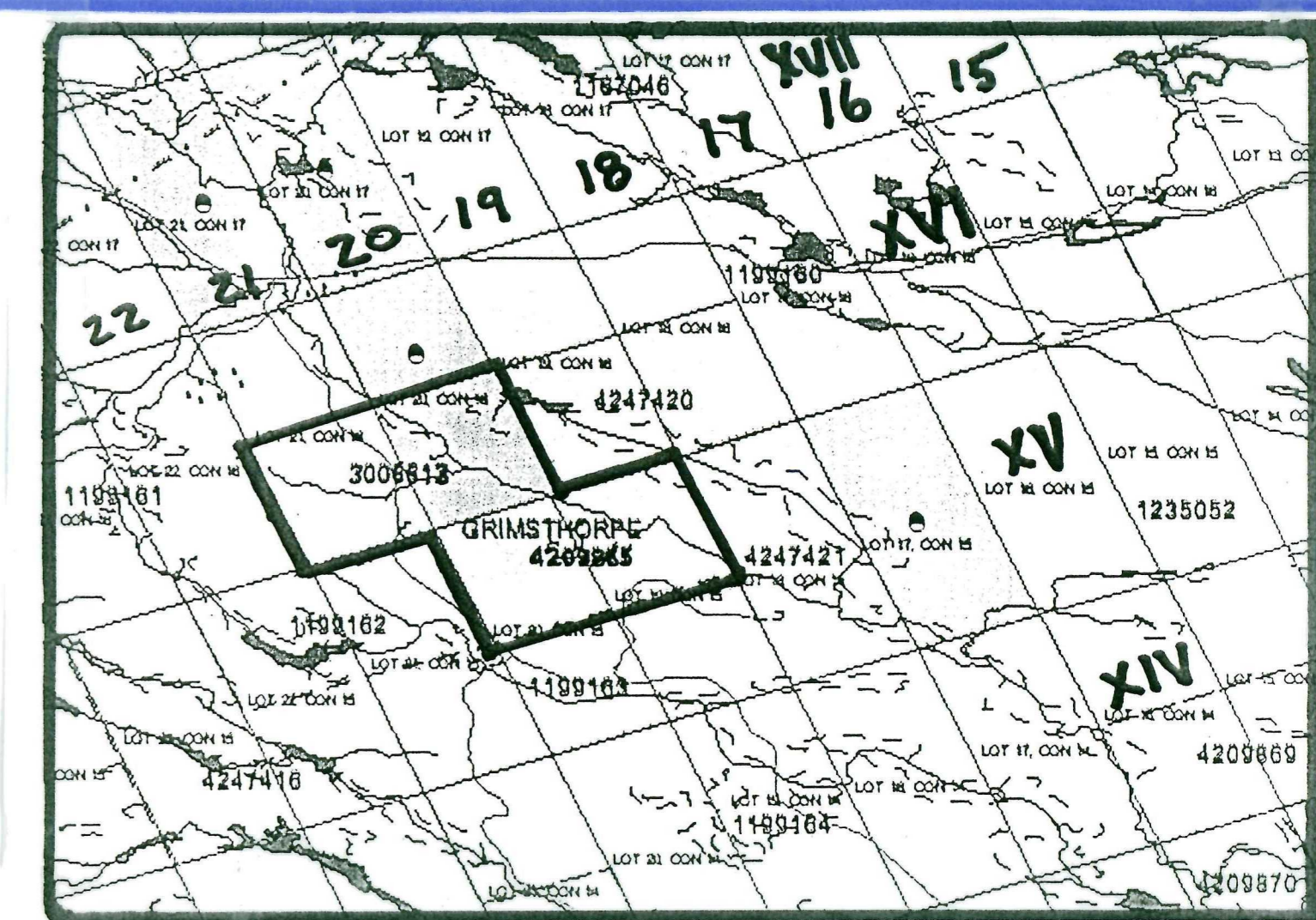


INSTRUMENT: EXPLORIM GR-110G
Gamma Radiation Detector
READINGS: COUNTS PER SECOND
READING INTERVAL : 25 METRES

-  Mineral Occurrence
-  Boulder/Float
-  Potential Diamond Indicator Mineral

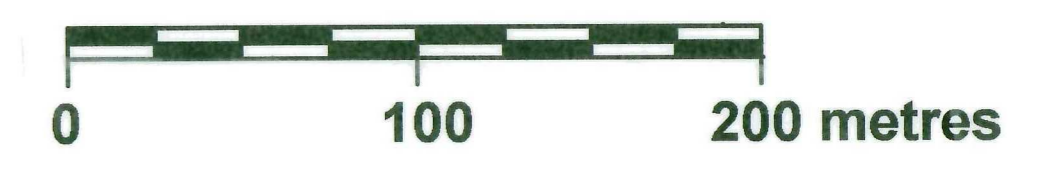
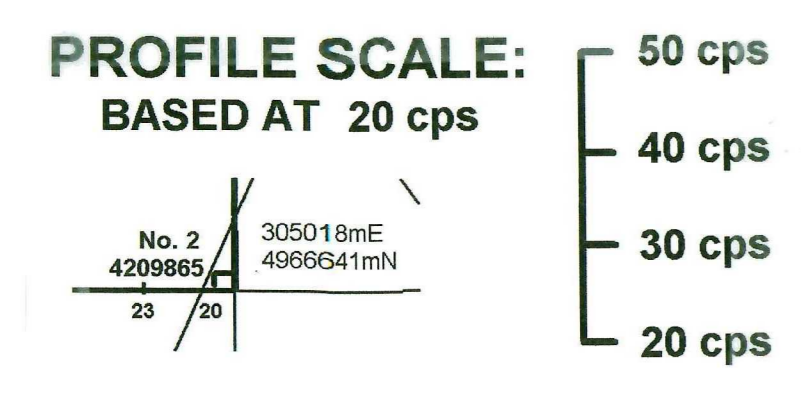
0 100 200 metres

GAMMA-RAY SPECTROMETER SURVEY	
INSTRUMENT READINGS	
BLACK RIVER NORTH PROPERTY	
GRIMSTHORPE TWP., ONTARIO	
Date: March 20, 2010	Survey by: JMC
Scale 1 : 2500	Drawn by: RJD



INSTRUMENT: EXPLORIUM GR-110G
Gamma Radiation Detector
READINGS: COUNTS PER SECOND
READING INTERVAL : 25 METRES

- Mineral Occurrence
- Boulder/Float
- Potential Diamond Indicator Mineral



GAMMA-RAY SPECTROMETER SURVEY	
PROFILED READINGS	
BLACK RIVER NORTH PROPERTY	
GRIMSTHORPE TWP., ONTARIO	
Date: March 20, 2010	Survey by: JMC
Scale 1 : 2500	Drawn by: RJD