FORM 43-101F1
TECHNICAL REPORT

THE EXPLORATION ACTIVITIES OF AURORA ENERGY INC. ON THE CMB URANIUM PROPERTY, LABRADOR, CANADA DURING THE PERIOD JUNE 2005 TO DECEMBER 2005

Located on NTS Sheets:
13J/11, 13J/12, 13J/13, 13J/14, 13K/03, 13K/06, 13K/09

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3.0 SUMMARY

The CMB Uranium Property of Aurora Energy Inc. is located near the north-east coast of Labrador in proximity to the town of Postville on Kaipokok Bay. Postville is approximately 250 km north by north-east of the community of Happy Valley-Goose Bay, Labrador. Happy Valley-Goose Bay is the regional service and government centre for Labrador.

The property consists of 82,900 hectares comprising 3,316 mineral claims in 30 licenses acquired during the period 2003 to 2005. Most of the groups of claims are contiguous and cover much of the historical Kitts-Michelin uranium district in the eastern part of the Central Mineral Belt. The property is bordered to the north-east by Exempt Mineral Lands (EML) which includes the communities of Postville and Makkovik, as well as the Kitts uranium deposit. Access to the property is by fixed-wing aircraft from Happy Valley-Goose Bay to Postville, and then via a 5 to 15 minute helicopter trip.

The 30 licenses which form the CMB Uranium Property are governed by a revised joint venture agreement between Fronteer Development Group Inc. and Altius Resources Inc., signed on June 3rd, 2005 turned over the title of the project to a wholly-owned private entity called Aurora Energy Inc. The ownership of Aurora is currently split between Fronteer (57%) and Altius (43%), with Fronteer serving as the project operator.

Mineralization on the CMB Uranium Property is hosted by Paleoproterozoic supracrustal sequences of the Post Hill and Aillik Groups and is represented by approximately forty uranium showings, including seven significant uranium deposits/prospects (Michelin, Kitts, Rainbow, Burnt Lake, Inda, Gear and Nash). The showings were discovered by the British Newfoundland Exploration Company Limited (Brinex), the provincially-controlled exploration company, and various joint venture partners during the early 1950's to early 1980's. The uranium mineralization is typically hosted within strongly foliated, pelitic metasedimentary rocks of the Post Hill Group or fine-grained felsic metavolcanic rocks of the Aillik Group. Uranium mineralization is associated with magnetite+actinolite+calcite+/-pyrite veining and strong to intense pervasive hematite alteration (+/- magnetite).

Brinex completed a plan to develop the Michelin and Kitts uranium deposits as a combined mining operation, but the project was compromised by the collapse in the price of uranium in the early 1980's. Exploration in the region tailed off, the land holdings lapsed, and the area has remained relatively dormant until recent years. Fronteer and Altius became involved the area in 2003 and established a 50:50 strategic alliance to evaluate the district for IOCG-style targets. Due to an unexpected recovery in the uranium price in mid-2004, a shift in exploration strategy was made by the alliance to once again examine the district for its pure uranium potential.

A preliminary exploration program was carried out by the Fronteer-Altius Alliance in 2004 and included 13,000 line km of airborne magnetic and radiometric surveying followed by four weeks of geological mapping, prospecting and rock/soil sampling in September 2004. The results of the survey were very encouraging with the identification and two large radiometric anomalies in the Jacque's Lake and Otter Lake areas with maximum values of **0.4% U_3O_8** and **4.36% U_3O_8** in surface rock sampling, respectively. An assessment report summarizing these and other findings of the 2004 field work was submitted to the Government of Newfoundland and Labrador in February 2005.

A follow-up program was carried out in 2005 through the wholly-owned subsidiary company called Aurora Energy Inc. This work included 5,783 line km of detailed airborne magnetic and radiometric surveying, air photo imagery capture, geological mapping, geochemical sampling, scintillometer surveys (grid and boulder), and track etch surveys at the Michelin, Michelin East, Otter Lake, Jacque's Lake, White Bear Lake, Melody Hill and Post Hill Trend Target areas. This was followed by a 9,402 m 27-hole diamond drill program from late August until early November with focus on the Michelin, Otter and Jacque's Lake target areas.

The results of the 2005 work were very encouraging and led to the extension of the known mineralization at the Michelin Deposit from a vertical depth of **250 m** to almost **700 m**, the discovery a zone a zone very similar to Michelin at Jacque's Lake **(0.10% U_3O_8/9.2m in JL-05-05**), and the identification of new high grade mineralization at Otter South **(1.0% U_3O_8/0.5m in OL-05-04)**. All zones remain open for expansion both along strike and down-dip/plunge and the potential for the discovery of additional uranium resources in the district is considered excellent.

A **$14.5 million (Can)** budget is proposed for 2006 further evaluate these targets as well as testing other areas within the CMB project area. This work will include 40,000 m of diamond drilling at the Michelin, Michelin East, Jacque's Lake, White Bear Lake, Otter Lake, Melody Hill and Post Hill target areas, a ground gravity survey at Melody Hill, and preliminary resource, metallurgical, environmental, and engineering studies. The field work component will commence in April 2006 and continue to the end of October 2006.

4.0 INTRODUCTION AND TERMS OF REFERENCE

This report on the CMB Uranium Property of Aurora Energy Inc. has been prepared by Dr. D.H.C. Wilton, P. Geo., and Mr. I. R. Cunningham-Dunlop, P. Eng., at the request of Dr. Mark O'Dea, President. The report was commissioned to comply with disclosure and reporting requirements set forth in National Instrument 43-101, Companion Policy 43-101CP, and Form 43 -101F1.

The CMB Uranium Property is held under a shareholders agreement between Fronteer Development Group Inc. and Altius Resources Inc. dated June 3rd, 2005. The property is held through a private holding company called Aurora Energy Inc. with Fronteer currently holding a 57% interest in said entity and Altius holding a 43% interest. Fronteer, as the majority shareholder in the company, is currently the operator of the project. Considerable data are available on the CMB Property in Fronteer's files in Vancouver and as readily available public documents. The public sources of relevant references are listed in Section 23 to this report.

Dr. D.H.C Wilton, the principal author, is a qualified person whom has an "arms-length" independent relationship with both Fronteer Development Group Inc. and Resources Inc. He is a Professor of Minerals Deposits in the Department of Earth Sciences, Memorial University of Newfoundland, St. John's, NL and is also an independent consultant to the Canadian mineral industry (including Fronteer, Altius and Aurora Energy Inc.). He has over 20 years experience conducting research in the CMB and has visited, at one time or another, and has knowledge of, all showings described in this report. Most recently he was employed as a consultant by the Fronteer-Altius Alliance for field work in the CMB during the summer of 2003 and September 2004, and as a consultant by Aurora Energy Inc. in the summer of 2005. He visited and examined core at all three core storage sites on December 10 and 11, 2005.

Mr. I. Cunningham-Dunlop, the co-author is a qualified person but not an independent person with respect to the business activities of Fronteer Development Group Inc. He has worked in his field of expertise for 21 years on exploration properties in Canada, United States, Argentina and Australia. The co-author has been employed by Fronteer Development Group Inc. since November 1st, 2004 as Exploration Manager – Canada/Turkey and personally oversaw the field work carried out on the property between June and October 2005.

The uranium concentrations for work performed by Fronteer are reported as %U_3O_8 unless otherwise indicated. Currency is reported in Canadian dollars unless otherwise noted. All map co-ordinates are given as m in UTM projection NAD 27 (Zone 20 and 21).

5.0 DISCLAIMER

A substantial amount of technical data on the exploration work performed by Brinex (*e.g.*, Morrison, 1956; McClintock, 1978a and b; and Brinex Ltd., 1979), the previous operator of the CMB Uranium Property, has been derived from the 43-101 report filed on behalf of Fronteer Development Group in 2005 (Hall, 2005), and from the assessment report filed on behalf of Altius Resources Inc. and Fronteer Development Group Ltd. in 2005 (Smith *et al*., 2005). This information has been used extensively in this report within Sections 7.0, 8.0, 9.0 and 11.0 (history, geology, structure, alteration and mineralization), however, the authors shall not be held liable for any errors or omissions relating to missing data.

Some of the information presented here is also based on historical exploration records of Brinex and others written twenty to fifty years ago. Although these records are an invaluable practical resource for current exploration, some interpretations of some prospects may not reflect best practice as viewed at the present time. All resource estimates of this period are referred to in this report as historical resource estimates regardless of the quality of these estimates.

The authors have relied on information provided by Fronteer Development Group Inc. on the legal status of the licenses that forms the CMB Uranium Property. An effort was made to review the information provided for obvious errors and omissions, however, the authors shall not be held liable for any errors or omissions relating to the legal status of the claims described in this report.

6.0 PROPERTY DESCRIPTION AND LOCATION

The CMB Uranium Property is located east of Kaipokok Bay on the north-east coast of Labrador, Canada **(Figure 1)**. The nearest community is the town of Postville located approximately four km west of the project boundary. The community of Happy Valley-Goose Bay lies 180 km south of Postville. The project straddles two UTM zones (Zone 20, 21) and seven NTS map sheets (13J/11, 13J/12, 13J/13, 13J/14, 13K/03, 13K/06, 13K/09). The northern and southern limits of the project area are 6094000mN (Zone 21) and 6048500mN (Zone 21), respectively, and the western and eastern limits of the project area are 681000mE (Zone 20) and 345000mE (Zone 21), respectively. Most of the licenses are contiguous and are located 5 to 40 km south of Postville, though some licenses which make up the Croteau and Storm properties are located further west in the Central Mineral Belt and the interior of Labrador.

The CMB Uranium Property consists of 30 map staked licenses registered in the name of Altius Resources Inc. totaling 3,316 units or 82,900 ha **(Figure 2)** and subject to a letter of agreement dated February 5th, 2003, between Fronteer Development Group Inc. (TSX-FRG) of Vancouver, Canada and Altius Resources Inc. (TSX-ALS) regarding an Area of Interest made up of eighteen 1:50,000 scale NTS map sheets. This agreement formed the basis for a 50:50 strategic alliance between Fronteer and Altius Resources Inc. of St. John's, Newfoundland to explore for iron oxide-copper-gold mineralization in the Central Mineral Belt of Labrador. A further agreement was signed on June 3rd, 2005 allowing for the formation of a jointly owned company called Aurora Energy Inc**.** to hold the assets of the CMB Property. Due to dilution during the 2005 work program, Fronteer currently holds a 57% interest in Aurora and Altius holds the remaining 43% with Fronteer currently serving as the project operator. Information on the licenses can be found at www.nr.gov.nl.ca/mines&en/mqrights/mineralrights.

The property is flanked to the north and west by the Exempt Mineral Lands (so-called EML). These are areas exempted from staking to protect local interests during final negotiation of the Labrador Inuit Association land claim. The Labrador Inuit Land Claims Agreement was ratified by parliament in May, 2005. The Treaty was formally signed December 1st, 2005. The treaty outlines the process in which EML lands will be designated. Within 6 months of the effective date of enactment (December 1st, 2005), all EML on the Labrador Inuit Settlement Area (LISA) must be extinguished. However, all EML on Labrador Inuit Land (LIL) will remain until a Land Use Plan is completed by the new Nunatsiavut government. The Nunatsiavut government is now in the process of developing mineral and land use polices from which the Land Use Plan will be developed. This process may take up to a maximum of three years but may be addressed sooner by the Nunatsiavut government.

The distinction between LISA and LIL lands is outlined in **Figure 2** with Michelin, White Bear, Post Hill and 50% of Jacque's Lake falling in LISA and Otter Lake, the other 50% of Jacque's Lake and Melody Hill falling in LIL.

Table 1: Central Mineral Belt Project - Mineral Tenure

Property	License	Claims	Ha.	NTS	Issued	Work Due	Amount Due
Burnt/Emben	09414M	63	1575	13J12E	2003/03/27	2006/03/27	$12,260.82
Burnt/Emben	09413M	42	1050	13J12E	2003/03/27	2006/03/27	$7,459.44
Croteau	09415M	40	1000	13K06	2003/03/27	2006/03/27	$15,964.60
East Micmac Lake	09721M	36	900	13J12W, 13J13W	2003/10/24	2006/10/24	$9,000.00
Kaipokok Bay	10059M	54	1350	13J13E, 13J13W	2004/04/12	2006/04/12	$13,100.62
Makkovik River 1	10050M	147	3675	13J12E	2004/04/12	2006/04/12	$29,704.77
Makkovik River 2	10051M	220	5500	13J13E, 13J12E	2004/04/12	2006/04/12	$63,226.06
Makkovik River 3	10052M	127	3175	13J11W,12 E,13E,14W	2004/04/12	2006/04/12	$10,344.72
Makkovik River 4	10053M	111	2775	13J13E, 13J12E	2004/04/12	2006/04/12	$27,801.82
Makkovik River 5	10054M	170	4250	13J13E	2004/04/12	2006/04/12	$47,604.08
Makkovik River 6	10055M	136	3400	13J13E, 13J14W	2004/04/12	2006/04/12	$36,139.71
Makkovik River 7	10056M	126	3150	13J13E	2004/04/12	2006/04/12	$35,303.78
Makkovik River 9	10058M	30	750	13J13E	2004/04/12	2006/04/12	$8,098.15
Michelin	09412M	190	4750	13J12W, 13K09E	2003/03/27	2006/03/27	$40,823.50
Michelin North	09482M	145	3625	13J12W, 13K09E	2003/04/28	2006/04/28	$13,159.41
Michelin Northeast	09722M	100	2500	13J12W	2003/10/24	2006/10/24	$22,930.53
Michelin Northwest	09723M	42	1050	13K09E	2003/10/24	2006/10/24	$11,873.70
Post Hill	09410M	136	3400	13J13E	2003/03/27	2006/03/27	$33,468.05
Post Hill	09411M	128	3200	13J13E	2003/03/27	2006/03/27	$30,726.00
Post Hill Northeast	09718M	8	200	13J13W	2003/10/24	2006/10/24	$746.02
Post Hill Northwest	09719M	32	800	13J13E	2003/10/24	2006/10/24	$6,410.91
Post Hill West	09720M	60	1500	13J13E, 13J13W	2003/10/24	2006/10/24	$14,268.45
Storm	10726M	72	1800	13K03	2003/03/27	2006/03/27	$5,524.03
Walker Lake	10022M	190	4750	13K09E	2004/04/02	2006/04/02	$45,395.23
West Micmac Lake 1	10046M	181	4525	13J12W, 13K09E	2004/04/12	2006/04/12	$43,702.00
West Micmac Lake 2	10047M	120	3000	13J12W	2004/04/12	2006/04/12	$29,894.07
West Micmac Lake 3	10048M	137	3425	13J12W	2004/04/12	2006/04/12	$34,792.64
West Micmac Lake 4	10049M	166	4150	13J12E, 13J12W	2004/04/12	2006/04/12	$22,397.87
Aurora River	10343M	175	4375	13J/12	2004/10/29	200/10/29	$3,851.66
Melody Lake	10344M	132	3300	13K/09E, 13J12W	2004/10/29	2006/10/29	$1,445.74
Total		**3,316**	**82,900**				**$677,418.38**

Figure 1: Location Map – CMB Project

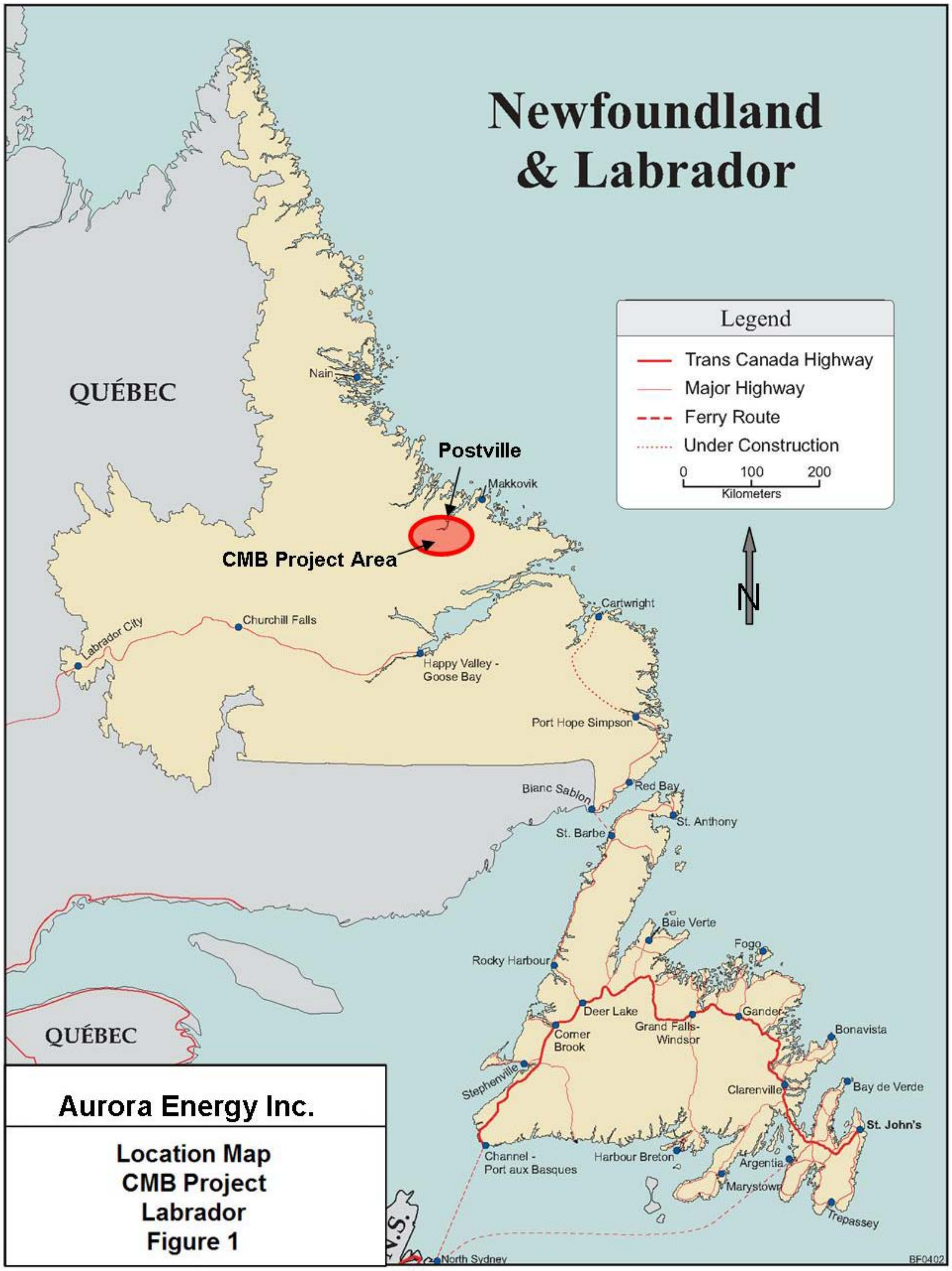
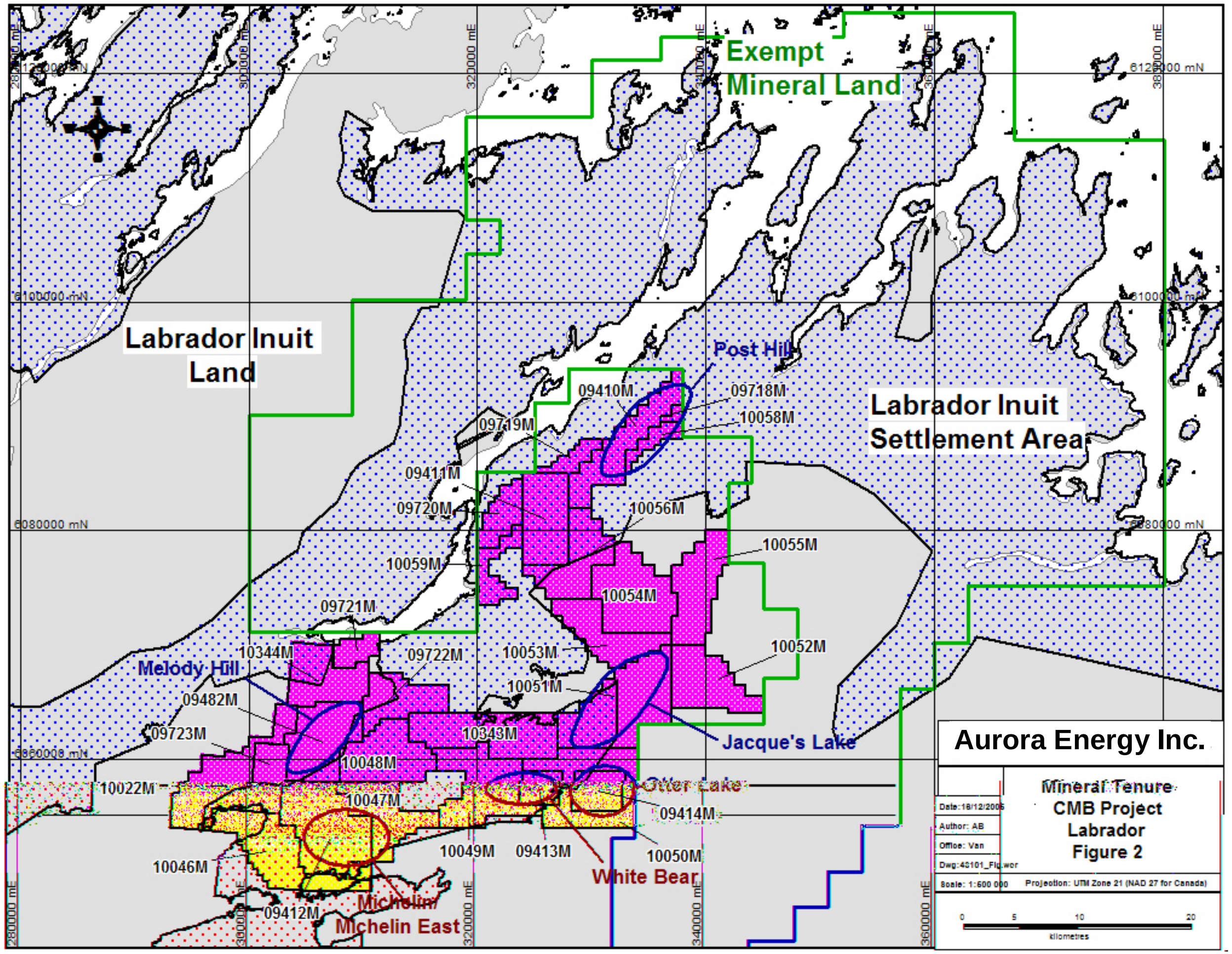


Figure 2: Mineral Tenure – CMB Project



7.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the project area is best gained via the town of Postville which hosts sufficient amenities necessary to support field personnel, including a permanent fixed-wing gravel airstrip. Passenger service flights based in Happy Valley-Goose Bay offered by Air Labrador and Provincial Airlines operate daily to communities along the coast. A coastal supply-ferry boat service owned by Woodwards, Happy Valley-Goose Bay, operates bi-weekly during ice-free periods (June to October) up and down the coast as far north as Nain to as far south as Lewisporte, Newfoundland. Helicopter support to ferry personnel and field gear from Postville to the field area is the preferred mode of transport. Float plane and boat access may also be suitable for certain properties where camps have been established to support major drilling programs. Various snow machines provide for efficient travel during winter. Foot traversing is best suited to access the interior of the project area.

The climate of Labrador is more Arctic than Atlantic because of its location on the eastern side of the continent and experiences strong seasonal contrasts. Winters are very cold lasting almost eight months with normal daytime temperatures for January between -10 and -15 ºC and annual snowfalls to 400 mm annually. The summer season is brief and cool along the coast with July average temperatures between 8 to 10 ºC (with rare hot spells bringing temperatures up to 35 ºC) and average precipitation ranging to 200 mm.

Local infrastructure is limited to facilities in the coastal communities of Postville and Makkovik which include commercial airline service from Happy Valley-Goose Bay and commercial ferry service from Lewisporte, Newfoundland, and Happy Valley-Goose Bay, Labrador. Postville is a clean and progressive village with rental space suitable for the establishment of an exploration base. Prudent exploration practice in coastal Labrador includes the use of service contractors who have established partnerships with the Labrador Inuit Association. Based on experiences with the development of the Voisey's Bay project, the people of Labrador have acquired a good understanding of the exploration business.

The CMB Property is located in a rugged wilderness area of generally moderate gently rolling relief ranging to about 700 m above sea level (a.s.l.). Locally abundant outcrop, numerous lakes, and sparse coniferous forest cover consisting of black spruce, balsam fir and tamarack are most typical of this part of the north-eastern Canadian Shield. A large portion of the project area, immediately east of Kaipokok Bay, was devastated by a forest fire in 1966 and experienced little re-vegetation. Bedrock is exposed as north-easterly trending ridges with intervening marsh. Areas of outcrop are flanked by glacial till, and in turn by minor amounts of glacial outwash in major drainages. Most terrain is covered by sheets of glacial boulders. Extensive areas of burned forest show up as pink coloured areas on Landsat images.

8.0 HISTORY

8.1 BRITISH NEWFOUNDLAND EXPLORATION LIMITED

British Newfoundland Exploration Limited (Brinex), a subsidiary of British Newfoundland Corporation Limited (Brinco), was granted an exploration lease in the Makkovik-Kaipokok Bay area in 1955 following the discovery of encouraging signs of copper, molybdenum and uranium mineralization by prospectors. The first significant uranium showing was discovered by Walter Kitts in 1956. A program of drilling and underground development by means of adit was started on the Kitts deposit in 1957. The project was suspended in 1958, however, as the development was too late to qualify for supply contracts with the Atomic Energy Commission of Canada.

No further exploration was carried out until 1966 when Brinex and Metallgesellschaft A.G. made a joint venture agreement on part A of the lease area containing the Kitts deposit. Metallgesellschaft A.G. subsequently transferred its interest to Urangesellshaft Canada Limited. Exploration under this agreement resulted in the discovery of the Michelin deposit by prospector Leslie Michelin in 1968 as well as the Gear, Inda and Nash prospects between 1968 and 1969. All of these resulted from ground follow-up of radioactivity detected by airborne gamma-ray spectrometer surveys flown by Barringer Research in 1967. A summary report on the geology and reserves of prospects in the Kitts-Michelin area was completed on behalf of Brinex by Derry, Michener and Booth Consultants Ltd. (Booth *et al.*, 1979).

Additional joint venture agreements were made with Urangesellshaft Canada Limited to include part B of a Statutory Agreement obtained by Brinex in 1970. In addition to property scale exploration of the Kitts and Michelin deposits, extensive exploration of other radiometric anomalies was carried out during the 1970's. A good summary of the uranium prospects worked by Brinex in the Kitts-Michelin area was prepared by A.J. Willy (1983). Some of these prospects are discussed in Section 11.0 Mineralization.

Brinex completed a plan to develop the Michelin and Kitts uranium deposits as a combined mining operation but the project was compromised by the collapse in the price of uranium in the early 1980's. Brinex ceded the rights to area B in 1980 and to area A in 1985. Some remediation of the Kitts and Michelin mine sites has been completed.

8.2 FRONTEER-ALTIUS ALLIANCE

8.2.1 2003 Exploration Work

The Altius-Fronteer Alliance carried out field work in the project area during July, 2003 and again in September 2004 following completion of an airborne geophysical survey. By the end of 2004, approximately $1.06 million had been invested in the project.

During 2003, Fronteer and Altius evaluated the potential for iron oxide-copper-gold mineralization in the eastern part of the Central Mineral Belt. This evaluation primarily included the examination and sampling of historical metal occurrences on and adjacent to mineral land tenure. On the basis of widespread hematite alteration and chlorite + epidote + actinolite alteration, additional mineral land tenure required to blanket the Aillik and Post Hill groups was acquired.

8.2.2 2004 Exploration Work

A 12,800 line-km airborne magnetometer and gamma-ray spectrometer survey was completed by Fugro Airborne Surveys Corporation on behalf of the Alliance during the summer of 2004. The block of ground surveyed was approximately 70 by 20 km in size and covered the most of the Kitts-Michelin uranium district. Fixed wing and helicopter components to the survey were flown on a line spacing of 200 m. Anomalies generated by the survey were prospected, evaluated and ranked in the field during September 2004. The Post Hill, Jacque's Lake, Otter Lake–White Bear Lake, Michelin, and Melody Hill areas were identified as project areas with potential for bulk tonnage volcanic-hosted uranium mineralization and a follow-up program for 2005 was recommended.

Results from the 2004 Work Program are summarized in the 43-101 report submitted in Feb 2005 (Hall, 2005).

9.0 GEOLOGICAL SETTING

9.1 REGIONAL GEOLOGY

The Central Mineral Belt (CMB) refers to an area of Archean to Mesoproterozoic crust which is located in Eastern Labrador and is part of the north-eastern Laurentian Shield. The CMB contains portions of the Nain, Makkovik and Churchill tectonic provinces and has been overprinted in the south by the Exterior Thrust Belt of the Grenville Province **(Figure 3)**. The CMB comprises a series of six Proterozoic supracrustal sequences, intrusive suites of various ages and adjacent Archean rocks. These rocks record to varying degree events associated with Makkovikian (~ 1.8 Ga), Labradorian (~ 1.6 Ga) and Grenvillian (~ 0.1 Ga) deformation. Mineral tenure of present interest is located within the Aillik Domain of the Makkovik Province (Ryan, 1984). The Makkovikian orogen is correlated with Ketilidian, Penokean and Svecofennian orogens which formed part of a Paleoproterozoic active margin along the southern margin of Laurentia-Baltica, the so-called North Atlantic Craton (Gower *et al*., 1990).

The constituent Proterozoic sequences of the belt range in age from *ca.* 1.22 to 2.2 Ga, and in decreasing age are the Post Hill (*ca.* 2.2 Ga), Moran Lake (*ca.* 2.0 Ga), Aillik (*ca.* 1.8-1.86 Ga), Bruce River (*ca.* 1.65 Ga), Letitia Lake (*ca.* 1.33 Ga) and Seal Lake (*ca.* 1.22-1.25 Ga) groups. The granitoids are broadly grouped into the Junior Lake Granodiorite (*ca.* 1.9 Ga), Makkovikian (*ca*. 1.8 Ga) and Trans-Labrador Batholith (*ca*. 1.65 Ga) suites (after Kerr, 1994). Sills of the *ca.* 1.43 Ga Michael Gabbro (Emslie *et al*., 1997) intrude southeastern portions of the belt near the Grenville Front.

9.2 DISTRICT GEOLOGY

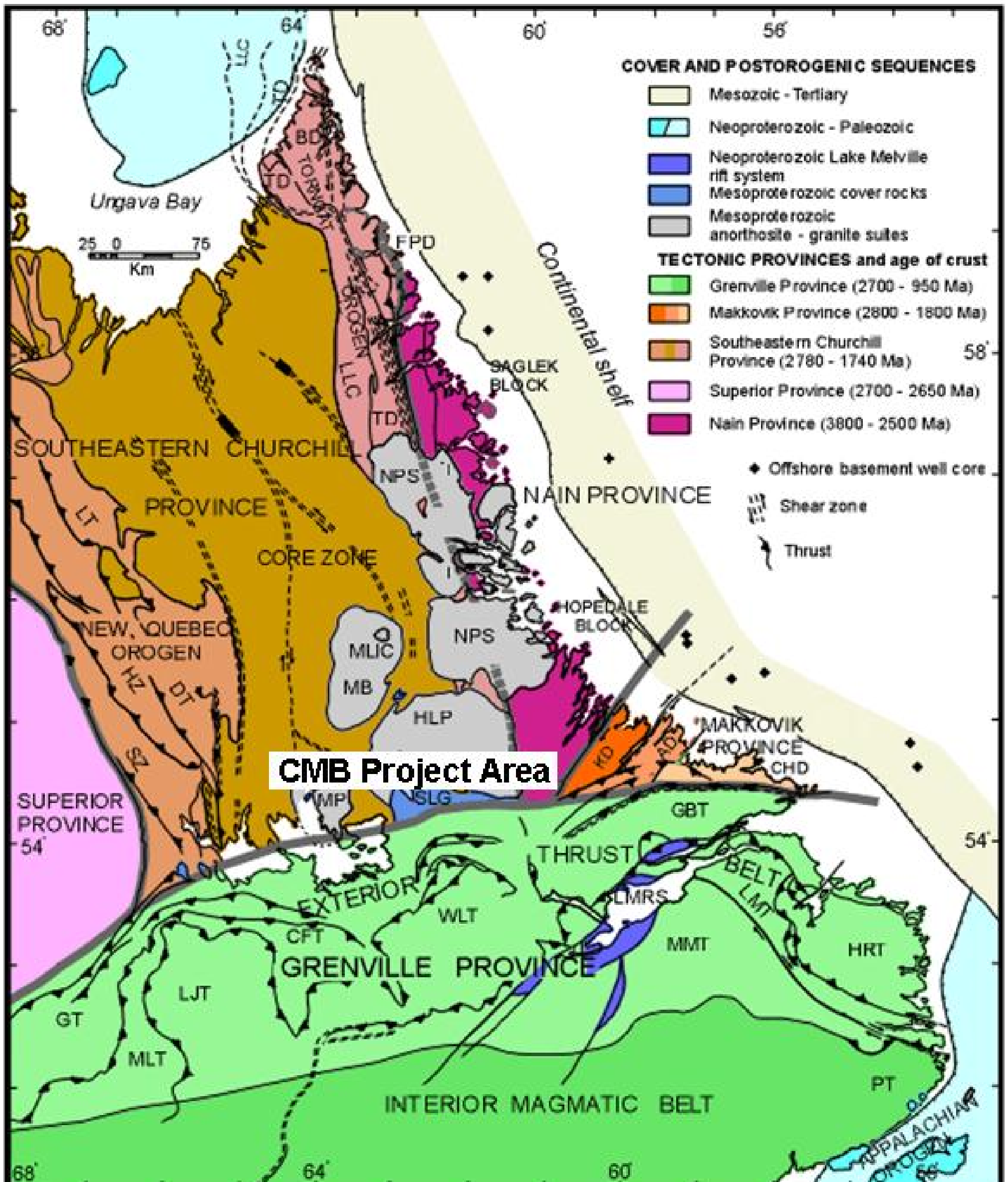
The Makkovik Province consists of the Kaipokok, Aillik and Cape Harrison tectonic domains. The Kaipokok shear zone which defines the boundary between the Kaipokok and Aillik domains also marks the southern limit of Archean crust in the Makkovik Province. The Cape Harrison domain has been interpreted as a magmatic arc developed near the Makkovikian continental margin (Culshaw *et al.* 2000 and Ketchum *et al.* 2002).

The Aillik domain is underlain by strata of the Paleoproterozoic Post Hill (2178-2013 Ma) and Aillik (1860-1810 Ma) groups, as well as extensive granitoid terrain comprised of several intrusive suites including 1815-1790 Ma syntectonic and post tectonic Makkovikian plutons, 1740-1700 Ma post tectonic, A-type plutons and 1650 Ma plutons of the Trans-Labrador batholith **(Figures 4 and 4a)**. Deformation, amphibolite facies regional metamorphism, regional metasomatism and uraniferous mineralization of the Post Hill and Aillik groups have been attributed to Makkovikian Orogeny (1.9 to 1.7 Ga (Ryan, 1984; Gower *et al.* 1990; Wilton, 1996; Culshaw *et al.* 2002). The stratigraphy of the Post Hill and Aillik groups and the distribution of intrusive suites within the Aillik domain are not well defined. A number of uranium occurrences are located along the Nakit Slide (a strand of the Kaipokok shear zone) which is a tectonic contact between lithologies of the Post Hill Group to the north-west and the Aillik Group to the south-east.

The Post Hill Group consists of about 2700 m of metamorphosed siliceous clastic metasedimentary strata and mafic metavolcanic rocks in tectonic contact with Archean gneiss. The Post Hill Group occurs as highly strained, amphibolite and gneiss in thrust sheets near Kaipokok Bay. A rifted, continental margin setting has been interpreted for deposition of the Post Hill Group (Ketchum *et al.* 2002).

The Aillik Group is made up of about 5000 m of metasedimentary rocks, bimodal metavolcanic rocks (dominantly felsic), subvolcanic intrusives and diabase dykes (Bailey, 1979). A lower dominantly metasedimentary section and upper dominantly fragmental, felsic volcanic section have been recognised. Deposition in back-arc basin and in shallow marine to subaerial environments has been inferred for the Aillik Group (Ketchum *et al.*, 2002). The Aillik Group is noted as a host for numerous and varied Cu, Pb, Zn, Mo, and U occurrences (Wilton, 1996). Within the project area, rocks of the Aillik Group are commonly represented by laminated magnetite-feldspar-quartz-bearing metavolcanic lithologies.

Figure 3: Regional Geology Map - CMB Project
(Map from http://www.geosurv.gov.nf..ca/ecsoot/geology.gif)



SZ = Schefferville zone; HZ = Howse zone; DT = Doublet terrane; LT = Laporte terrane;LLC = Lac Lomier complex; TD = Tasiuyak domain; BD Burwell domaine; FPD = Four Peaks domain; KD = Kaipokok domain; AD = Aillik domain; CHD = Cape Harrison domain; GBT = Groswater Bay terrane; LMT = xxxxxx; HRT = Hawke River terrane; MMT = Mealy Mountains terrane; WLT = Wilson Lake terrane; CFT = Churchill Falls terrane; MLT = Molson Lake terrane; LJT = Lac Joseph terrane; GT = Gagnon terrane; PT = Pinware terrane' LMRS = Lake Melville rift system; SLG = Seal Lake group; NPS = Nain Plutonic Suite; MB = Mistastin batholith; HLP = Harp Lake pluton; MP = Michikamau pluton; MLIC = Mistastin Lake impact crater

Aurora Energy Inc.

Regional Geology Map
CMB Project
Labrador
Figure 3

Figure 4: District Geology Map - CMB Project
(Geology compiled from Gower *et al*, 1982, and Ryan, 1984)

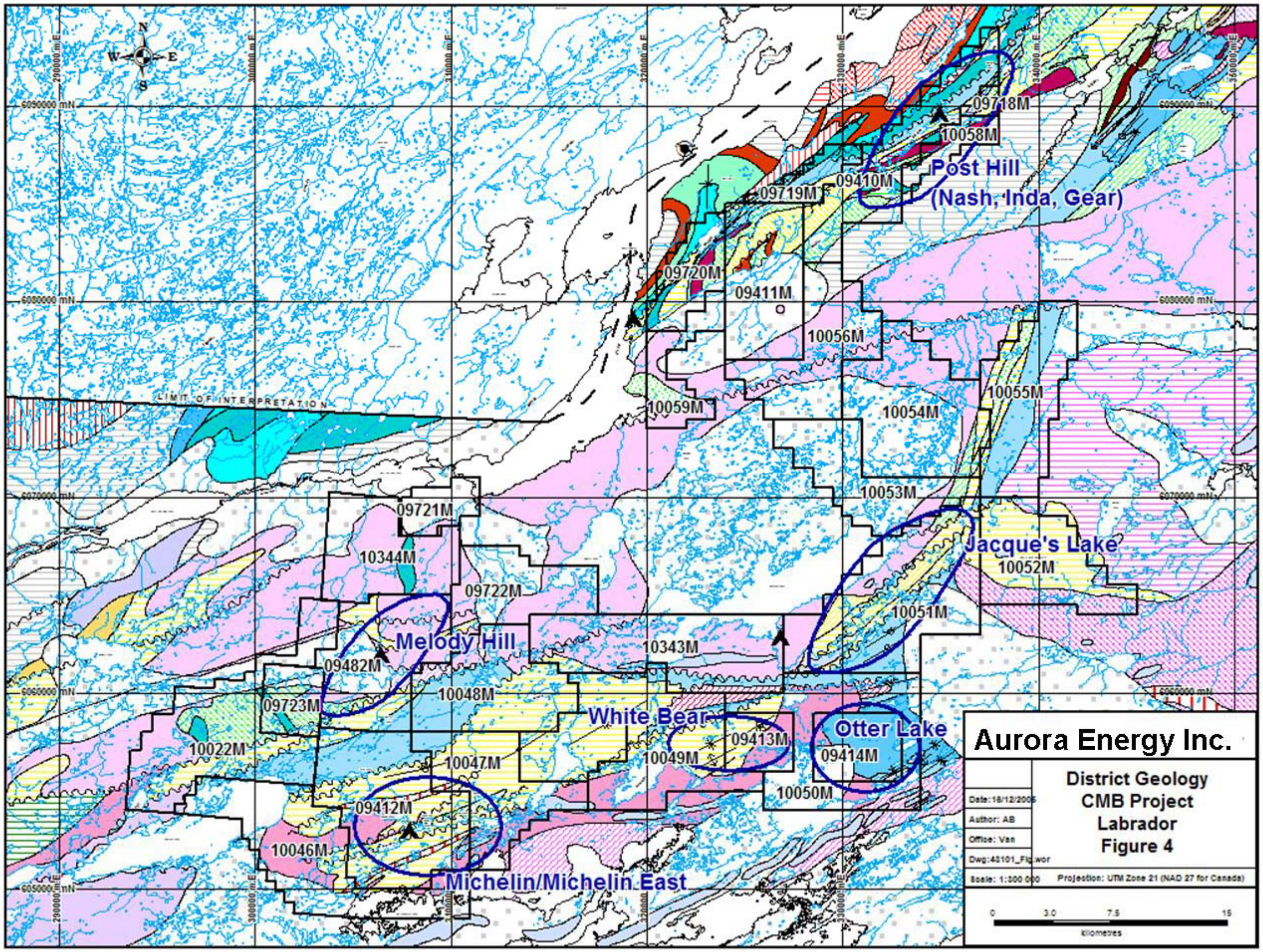
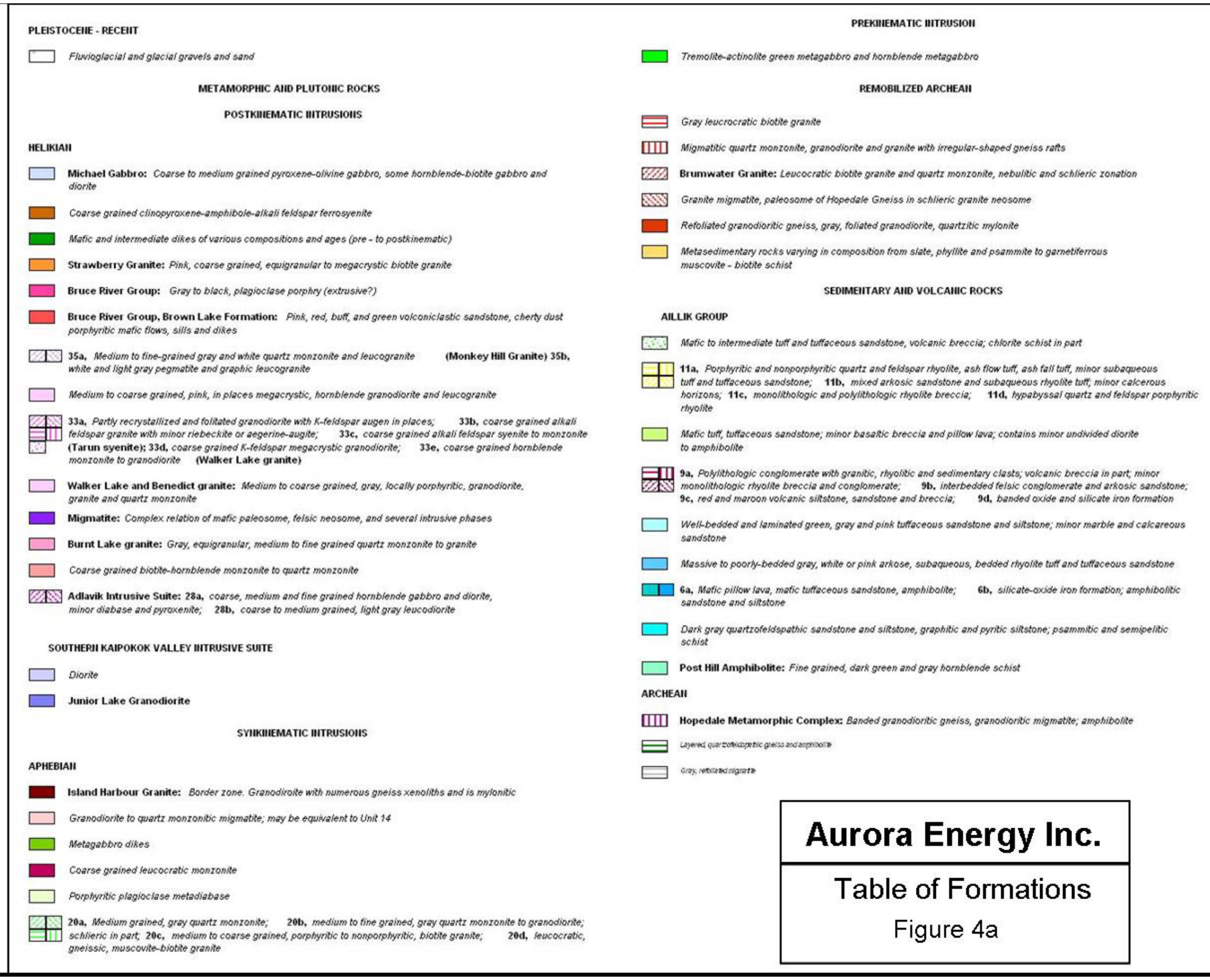


Figure 4a: Table of Formations

(Geology compiled from Gower *et al*, 1982, and Ryan, 1984)



10.0 DEPOSIT TYPES

Uranium mineralization hosted by lithologies of the Post Hill Group has been referred to as syngenetic by early workers and that within the Aillik Group has been called volcanic-hosted, stratabound and possibly syngenetic in origin (Gower *et al.*, 1982; Gandhi, 1986). Pb-Pb ages in the range 1895 to 1697 Ma for uranium mineralization in the Post Hill Group (2178-2013 Ma) support an epigenetic origin for these occurrences (Wilton, 1996). An epigenetic emplacement of the uranium mineralization within the Aillik Group is also indicated by uraniferous fracture-filling and breccias.

Extensive areas of hematite + albite and quartz + epidote + actinolite + chlorite alteration in the Kitts - Michelin area are similar to alteration assemblages developed in iron-oxide-copper-gold (IOCG) districts of Paleoproterozoic age (Hitzman *et al.*, 1992; Haynes, 2000). In some of these districts, a peripheral enrichment in uranium has been exploited as an exploration tool to locate copper-gold mineralization. Consequently, fracture controlled uraninite + magnetite mineralization in the Kitts - Michelin area may represent part of a uranium-rich end member of the iron-oxide class of epigenetic deposits.

11.0 MINERALIZATION

11.1 INTRODUCTION

The Central Mineral Belt of Labrador is one of the most prolific areas of uranium mineralization in Eastern Canada. Approximately 100 metal occurrences are known in the map area held by the Altius-Fronteer Alliance within 1:50,000 scale NTS map sheets 13J/11-14 and 13K/09 and 16. About 70% are called uranium occurrences and about 20% are called copper occurrences (www.nr.gov.nl.ca/mines&en/geosurvey/mods).

Radioactivity is associated with hydrothermal breccias marked by well oxidised wall rocks and dark hornblende-rich fracture-filling. Commonly radioactivity is proportional to the amount of dark coloured matrix component but in some cases salmon-red, crackle brecciated lithologies are also highly radioactive. The matrix of radioactive breccia includes the assemblage: hornblende + titanite (sphene) + calcite (grey or pink) + magnetite± biotite, garnet, (Fe, Cu, Pb, Zn, Mo)-sulphides, fluorite, uraninite.

Selvages and halos of iron oxide are typically developed, whereas malachite and uranophane staining occur more locally. Net-vein, folded and segmented fabrics are observed in radioactive breccias. Locally, initial fracturing preceded the formation of a late subvertical cleavage and breccias were rotated into the plane of this cleavage to produce thinly banded gneiss with discontinuous mafic layers.

11.2 URANIUM PROSPECTS OF THE POST HILL GROUP

Kitts Deposit - The Kitts deposit (Beaven, 1958) is located in the EML and is not part of mineral tenure held by the Altius-Fronteer Alliance. The deposit is associated with a U/Th radiometric anomaly about 0.8 km in diameter although this is probably due in part to surface disturbance. The Kitts deposit is an aggregate of several discontinuous, en echelon zones along a strike length of 400 m. The deepest intercept is in the B-Central zone, approximately 160 m below surface. The mineralization is associated with black, carbonaceous argillite interbedded with greywacke and garnetiferous tuffs (Booth et. al., 1979). Strata strike 320º and dip north-east. Gabbro occurs in the footwall and pillow basalt forms the hanging to the mineralised section. Historical resource estimates for the Kitts deposit are based on intercepts from 94 surface drill holes totalling 9,313 m of drilling, data from 974 m of underground development, and data from 1,598 m (124 holes) of underground drilling (Booth *et al.*, 1979).

Gear Deposit - Uranium mineralization discovered at Gear Lake in 1968 is associated with a roughly circular U/Th radiometric anomaly 0.35 km in diameter. The mineralization occurs within sheared metasedimentary rocks over a strike length of 120 m. An average grade of 0.165% U_3O_8 was obtained for one zone of mineralization 30 m long by 4.9 m wide as outlined to a depth of 70 m.

Inda Deposit - Uranium mineralization discovered at Inda Lake in 1968 is associated with a prominent circular U/Th radiometric anomaly 0.35 km in diameter. The mineralization occurs on the upper, south-eastern limb of a north-easterly trending anticline which is overturned to the north-west. The mineralization occurs as a footwall lens and three hanging wall lenses along a strike length of 1.1 km between Inda and Knife lakes. The 1976 historical resource estimate for the Inda Lake deposit was based on results from 23 holes. Seventy-five percent of the tonnage was in the main or footwall wall lens as defined over an average width of 2.44 m and strike length of 640 m. The grade of mineralization attributable to tonnage in the hanging wall lenses was 0.19% U_3O_8.

Nash Deposit - Uranium mineralization discovered at Nash Lake in 1967 is associated with an oval-shaped U/Th radiometric anomaly 0.7 by 0.3 km in diameter. Drilling during the late 1960's located three zones of mineralization within a shear zone called the Nakit Slide. The1970 historical resource estimate for the main zone was for defined over a strike length of 365 m and vertical extent of 140 m. A dip of 60° east and average width of 1.85 m were reported for the zone. Diamond drill hole NW77-6 in the west extension zone intersected 0.072% U_3O_8 over 3.4 m from 13.4 to 16.8 m, suggesting potential for resource development to the west.

11.3 URANIUM PROSPECTS OF THE ALLIK GROUP

McLean (Jacque's Lake) Prospect- As described by E. R. Morrison (1956), the McLean occurrence near Jacque's Lake was discovered in 1956 by prospector J. McLean working on behalf of Brinex. Mineralization occurs in felsic and intermediate metavolcanic rocks of the Aillik Group. In 1967, four trenches were dug along a strike length of 165 m on the side hill at an elevation of about 235 m. Results from the sampling of these trenches included 0.06% U_3O_8 across 0.9 m from trench #2 and 0.04% U_3O_8 across 2.1 m from trench #3. Prospector A. Andrews, working on behalf of the Urangellschaft/Brinex Joint Venture in 1978, identified a dispersal train of twelve radioactive boulders with an average content of 0.32% U_3O_8 near the base of the ridge (McClintock, 1978a and b). Recent work by Aurora in 2004/2005 identified two strong radiometric anomalies along the side hill and at the base of the ridge extending for a distance of 4 km. Subsequent drilling of the anomalies in late 2005 (7 ddh - 2,180.24m) intersected uranium mineralization in 4 of 7 holes and returned a high of 0.10% U3O8/9.2m in DDH JL-05-05.

Burnt Brook Showing - Uranium mineralization in the Burnt Brook area south of Jacque's Lake was discovered by L. Michelin in 1979. About 110 m of trenching in 14 trenches were documented. The North, South and Dianne zones are hosted by folded metasedimentary and metavolcanic rocks of the Aillik Group. 1980 results included 0.069% U_3O_8 over 6 m in trench #1 on a zone of intermittent radioactivity 125 m in length and 75 m in width, as constrained by trenching, named the North zone. An assay of 0.155% U_3O_8 over 4.8 m was obtained from metapelite in trench #5 on the South zone of intermittent radioactivity defined by four trenches along a strike length of 250 m.

Emben (Otter) Showings - Several occurrences of uranium mineralization with significant base metal and silver values have been documented within the Aillik Group on the east side of the Burnt Lake Granite since the initial discoveries in 1969. One selective grab sample in 1969 from a radioactive boulder assayed 8.49% U_3O_8. Encouraging results by Brinex in 1981 included 0.423% U_3O_8 over 3.0 m in trench #5 across a zone 100 m in strike length called the Emben South Zone. Work by Aurora in 2004/2005 identified a broad 500m x 500m radiometric anomaly covering the old Emben Main, Central and South Showings and drilling in 2005 (10 ddh – 2,685.59m) returned a high of 1.0% U3O8/0.5m in DDH OL-05-04 at Emben (Otter) South.

Burnt Lake Showing- The south and north Burnt Lake showings were discovered in 1956 and 1967, respectively. Mineralization occurs intermittently over a strike length of three km within felsic metavolcanic rocks of the Aillik Group on the north side of the Burnt Lake granite intrusive. Historical trenching and drilling of the Burnt Lake North occurrence in 1977 located a small amount of near surface uranium mineralization grading about 0.08% U_3O_8.

Michelin Deposit - This historic deposit, located in the southwest portion of the claim group, consists of several sub-parallel groups of mineralized zones along a strike length of 1200 metres and to local depths of 700 metres and is open in all directions. The mineralization is largely confined to 150-200 metre thick zone of visibly discernable hematite alteration within a coarse feldspar porphyritic quartz mylonite unit, the boundaries of the zone being essentially conformable with S1 and lithologic contacts. The zones have an average grade of 0.12% U_3O_8, strike approximately 060º, dip about 55º southeast, and contains higher grade shoots which plunge steeply to the south-southwest, consistent with the regional plunge lineation. The most consistently mineralized material occurs within a 65-metre thick interval located near the upper part of the lower half of the alteration zone. This interval contains up to three higher-grade sub-intervals, separated by lower-grade or essentially un-mineralized material. The alteration zone is marked by a gradational replacement of biotite and chlorite by hornblende, and more proximal to mineralization, by pyroxene and actinolite. There is also an increase in calcite and gypsum, although these are still only present in very minor quantities. Hematization increases significantly proximal to mineralization, with associated disappearance of magnetite and locally pyrite. Uranium normally occurs in microscopic disseminations of uraninite associated with strong hematization. New drilling by Aurora in 2005 (10 ddh totalling 4,547.19 m**)** was successful in both confirming the know mineralization above 250 metres and also extending the zone down-plunge to a vertical depth of 700 metres. The best intersection came from DDH M-05-06 which returned 0.1% U3O8/63.0m in the heart of the main plunging shoot at a vertical depth of 550 metres. A new 43-101 compliant resource calculation for the zone by RPA in January 2006 shows a Measured and Indicated Resource of 8,957,000 tonnes @ 0.113% U_3O_8 and an Inferred Resource of 4,116,000 tonnes @ 0.148% U_3O_8.

Rainbow Deposit - The Rainbow Zone of mineralization occurs as a stratiform lens within Aillik Group feldspathic tuff and tuff breccia. Mineralization with an average grade of 0.15%o U_3O_8 occurs over a strike length of 290 m and widths up to 15 m. The main lens as inferred by drilling was 140 m long by 2 to 15 m wide by 79 m deep and is open in all directions.

Michelin East Target – This area was investigated by Brinex staff during the development of the neighboring Michelin Deposit and dozens of the 300 drill holes performed at Michelin fall within the Michelin East target area. Ground work resulted in the discovery of the Chitra Zone, Mikey Lake Zone, and Running Rabbit Zones and follow-up drilling partially tested these zones as well as the a number of the known radiometric anomalies. The best results were 0.11% U3O8/6.7m in DDH CH75-2 from the Chitra Zone.

Melody Hill Anomaly - A northeasterly trending zone of weak radioactivity, 8 x 1 km in size, straddles Melody Lake. Within this zone, a 1.0 km dispersal train of radioactive boulders was identified on the southern slope of Melody Hill about 1.4 km northeast of Melody Lake. Historical results for these boulders include an average of 8.4% U_3O_8 from 27 boulders and a high of 28.2% U_3O_8 from a grab sample collected in 2004. Anomalous uranium content in excess of 100 ppm in lake sediments and an intercept of 0.14% U_3O_8/6.0m in DDH 80-44 on the shoreline suggest a possible source area below Melody Lake.

12.0 EXPLORATION

12.1 2005 FUGRO AIRBORNE MAGNETIC AND RADIOMETIC SURVEY

A detailed 5783.2 line km magnetometer and gamma ray spectrometer survey was flown June 25th to August 16th. The survey was hampered by bad weather and equipment problems. Grids were flown at Michelin, Jacque's Lake, Otter Lake, Melody Hill and Post Hill. The extent of the survey area is shown in **Figure 5** and technical details are included in **Appendix III** from the final report provided Fugro (Farquahar, 2005).

12.1.1 Procedure

Fugro flew the survey with a Jet Ranger 206B helicopter, registration C-GGJP. The base of operations was Makkovik, Labrador. Five grids oriented at 345°, were flown at 50 m spacing. Tie lines were flown perpendicular to the flight lines at 1,000 m intervals. The survey encompassed approximately 5,783 line km as detailed in the following list:

Block 1	1,364.5
Block 2/3	2,112.3
Block 4	1,287.8
Block 5	1,018.6
Total	**5,783.2**

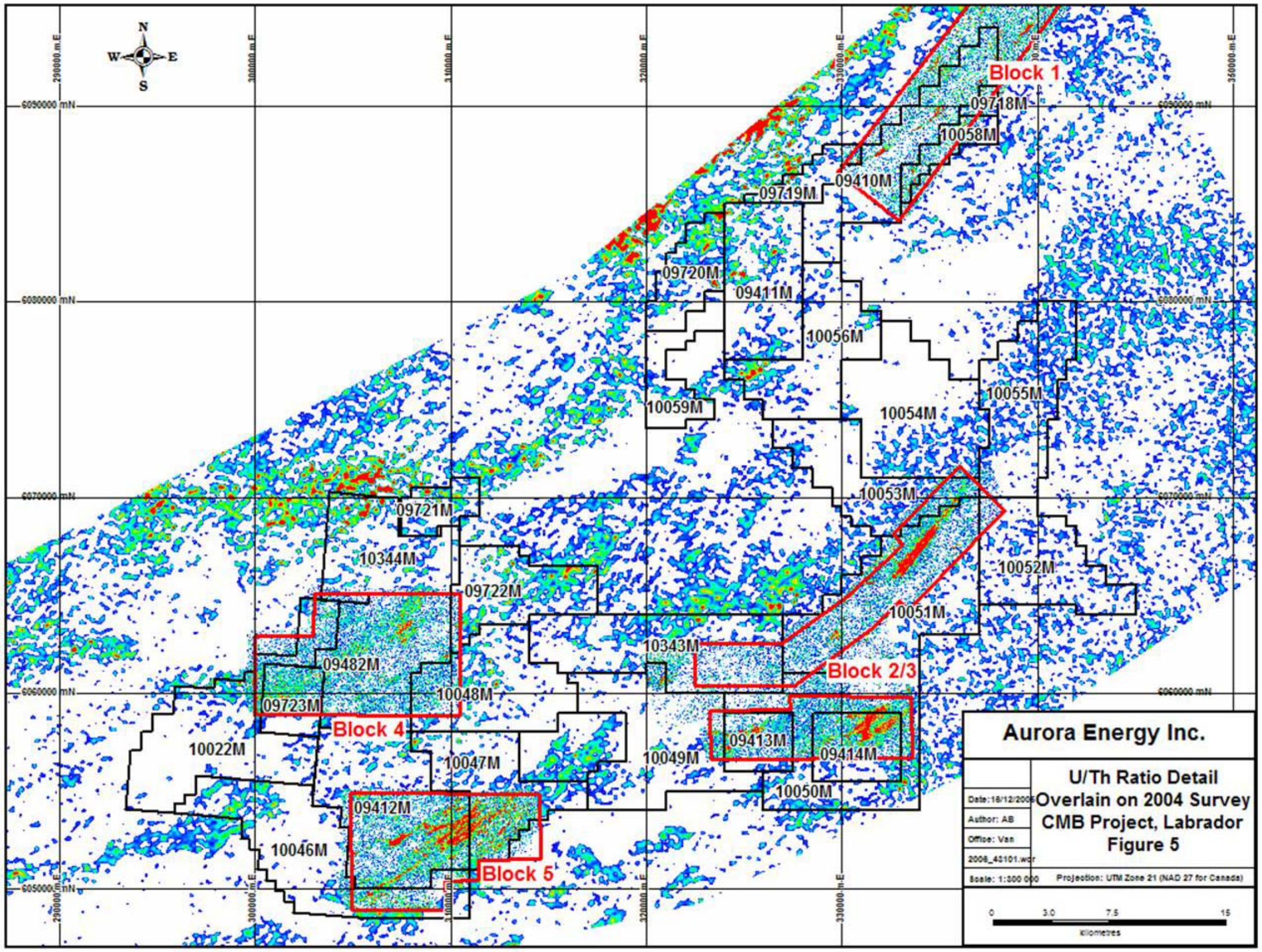
12.2.2 Discussion

The 2005 survey further refined the shape of the radiometric anomalies identified in the 2004 survey in the Michelin, Michelin East, Otter Lake, Jacque's Lake, Melody Hill and Post Hill target areas and was a critical tool used in the planning of drill hole locations during the 2005 diamond drilling program.

12.2 2005 IKONOS PHOTOGRAPHIC SURVEY

In early August, a series of 300 photographic images of the entire project area were captured using IKONOS high resolution satellite system. Cloud cover on previous scheduled survey dates hampered the process. The images were taken at a resolution of 1.0 meter in two 13.8 km swaths at 26° off-nadir, using the panchromatic, blue, green and red image bands. The image area covered 3,746 square km. Processing of the images included ground correction using ortho-rectification for horizontal accuracy. Global GeoScience of Dundas, Ontario was contracted to obtain and process the satellite images via the IKONOS satellite, operated by Space Imaging, LLC.

Figure 5: 2005 U/T Ratio Detail Overlain on 2004 Airborne Survey



12.3 2005 ENVIRONMENTAL WORK AND BASELINE STUDIES

12.3.1 Introduction

The 2005 environmental program included a literature review (Sikumiut Environmental Management Ltd., 2005) , an environmental site and surface water quality assessment at the Michelin adit (Earth Tech, 2005), an historical (archaeological) study on the proposed 2005 drill target areas (Inda, Otter Lake, Jacque's Lake, Michelin and Melody Hill) (Penney, 2005), the development of uranium health, safety and environmental guidelines (Buchnea, 2005) and Aurora staff initiated a regional preliminary surface water quality evaluation (Inda, Otter Lake, Jacque's Lake and Melody Hill) and wildlife log.

12.3.2 Literature Review

Sikumiut Environmental Management Ltd. was contracted in March of 2005 to complete a literature review of historic biophysical data for the Postville – Makkovik area. Socio-economic studies were not included in this review. Reviewed reports extend back to the mid 1970's when an environmental impact assessment of the proposed Kitts-Michelin Uranium Mine Project was completed by Brinex through to the decommissioning reports from the early 1990's.

Sikumiut summarized the biophysical literature in tabular form. Where feasible the information was geo-referenced using MapInfo. The review did not evaluate the historic data in terms of whether it meets current environmental standards. The compiled information was used as reference material for Earth Tech's 2005 environmental site assessment.

12.3.3 Michelin Environmental and Surface Water Quality Assessment

Field observations indicated that the camp site, lagoon, former adit and all former mine access roads were clean and free of significant amounts of waste materials and deleterious substances. A small amount of scattered metal and inert debris (metal, wood timbers, glass and cloth) is present in two areas. A search for oxidation staining, indicating potential acid rock generation issues, was completed and none were located. A small oil-like surface stain (approx. 4.5 m^2 in size) was observed near the entrance of the former adit. Analysis of a soil sample from the stain indicated that the stain is petroleum-based. Although a number of drill collars were visible, Earth Tech did not observe any drill collars with free flowing groundwater. Later anecdotal information indicated that a few collars have visible water flow, suggesting potential seasonally-dependent water discharge.

Seven surface water samples were collected (including one blind field duplicate); samples were analyzed for total and dissolved metals, routine water chemistry, total suspended solids (TSS), as well as total and dissolved radionuclides. Samples were collected from Running Rabbit Lake (for local background), the lagoon, near historical sample sites STN 1, STN 4 and STN 7 and from the marshy area below the rock pile.

With the exception of the Michelin Lake Seep sample, 2005 samples returned lower levels than those sampled in 1992 and were below CCME drinking water and freshwater aquatic life criteria; the Michelin Lake Seep sample is the marshy area located 25 m downstream from the waste rock dump pile. The Seep sample had the most elevated readings for pH (7.47), alkalinity, conductivity, total dissolved solids, total suspended solids and turbidity and returned higher levels than 1992 samples. Total uranium concentration in the Michelin Lake Seep sample was 56,000 ppb, the next highest was 3.6 ppb in the lagoon. Background (Running Rabbit Lake) is 0.5 ppb.

The high values in the Seep sample may result from fine particulate matter that originates from the immediately adjacent waste rock pile. The uranium may have become preferentially dissolved from its host mineral, leaving its decay daughters behind, and then was re-precipitated as another kind of solid. Alternatively, there is a QA/QC error. Additional water samples were taken down stream of the Michelin Lake Seep sample did not contain elevated uranium contents. This sample is recommended for verification in 2006.

Sediment samples were collected from Running Rabbit Lake, Michelin Lake, and the lagoon (Lagoon Primary, Lagoon East and Lagoon West), as close as possible to the 1992 sites. The samples were analyzed for metals and radionuclides. In general, the 2005 data were lower than those of 1992 in all analyzed parameters. Interestingly, the highest metal concentrations for aluminum, iron and manganese were recorded in the background sample at Running Rabbit Lake and that the highest concentrations of barium, uranium and ^{226}Ra were located in the lagoon areas.

12.3.4 Regional Water Quality Baseline Program

In conjunction with the Michelin Site Environmental Due Diligence program, a surface water quality sampling program was undertaken to document conditions prior to and after drilling in the proposed drill areas at Inda, Otter Lake, Melody Hill and Jacque's Lake. Water quality samples were collected prior to, and upon completion of, the 2005 drill program. All sample locations determined by GPS, photographed and flagged. Sample locations were selected based on the water drainage patterns for each of the proposed drill targets. Post-season samples were not collected at the Inda and Melody Hill sites in October as there was no drilling. Twelve samples were collected in July and in October 10 were collected.

12.3.5 Historical (Archaeological) Site Assessment

The Labrador Inuit Association requested that a Historic Resources Overview Assessment (Stage 1) be undertaken on the Michelin, Otter Lake, and Jacque's Lake drill target areas. The assessment was completed to locate, record, identify and photograph historic resources at or near the proposed drill locations. Those areas were inventoried, assessed for the impact of nearby work, and, if appropriate, mitigative measures were to be recommended, should site integrity be adversely impacted. No historic resources were found to be at risk in the immediate proximity of the proposed drill locations. Copies of the archaeological assessment report were submitted to the Torngasok Cultural Centre, Nain and the Provincial Archaeology Office, St. John's.

12.3.6 Scintillometer Survey of Waste Rock Piles

The highest gamma level recorded in the waste rock piles was 2.2 µSv/hr which exceeds the maximum allowable dose of 0.5 µSv/hr calculated from the yearly levels set by the Canadian Nuclear Safety Commission (CNSC). The CNSC has established a maximum radiation dose of 1,000 µSv/yr for non-nuclear power workers but has not established a maximum hourly dose. 0.5 µSv/hr is commonly used a rule of thumb based on worker occupancy of 2000 hours per year. Therefore, waste rock piles should be avoided as possible camp locations and work sites. Radiation dose levels in areas away from the rock pile were substantially lower with background gamma levels recorded at 0.26 µSv/hr south-east of the waste rock pile.

12.4 2005 FIELD EXPLORATION PROGRAM

12.4.1 MICHELIN TARGET AREA

12.4.1.1 Introduction

A field program was carried out on the Michelin Main target area between June 25^{th} and July 25^{th} by Dave Barbour, P. Geo., a geologist with Altius Resources Inc., and a field assistant. The Michelin site, a well known local landmark, is located approximately 45 km south-east from the community of Postville.

The primary focus of the 2005 work was to verify the geological mapping carried out by former Brinex employees and to locate historic grids, trenches and drill hole collars. As part of this work, large portions of the property were remapped and 80 of the 265 Brinex-era (1968-1981) drill holes were relocated in the field with their positions recorded by a hand-held GPS. At some locations, the casings were left in the drill holes, at others the drill hole position was assumed based on the arrangement of the remaining set-up logs, and finally, other drill hole positions could not be recorded due to the lack of any significant remnants of the drilling activity. Field activity at this time also included the re-establishment of a line-grid "box" that had previously been cut and surveyed by Brinex. The "box" is defined by baseline 0+00, tie line 4+58S, and lines 3+03W and 12+03W, as per the new metric coordinates (previously Imperial coordinates). Drill lines 8+67W, 9+40W and 10+00W were also re-cut. The line-cutting, totaling 11.65 km, was done to enable more accurate field location of planned drill holes, and to aid in transferring Brinex mine grid data into a NTS coordinate system. Near the end of the field season, a base station GPS survey was carried out to more accurately record the position of the line-grid "box", some of the historic drill holes and the new drill collars. Surveying was contracted to N E Parrott Surveys Ltd., of Happy Valley-Goose Bay, Labrador.

12.4.1.2 Previous Work

The Michelin deposit was discovered by Brinex prospector Leslie Michelin in 1967 during follow-up of an airborne radiometric survey. The deposit was advanced toward production beginning in the mid-1970's to 1982 when rapidly deteriorating economic and political factors resulted in suspension of all Brinex activities in the region and all licenses were eventually allowed to lapse.

The Michelin deposit was defined from more than 300 diamond drill holes collared from both surface and underground locations, and also accessed via a shallow adit developed along the upper portion of the deposit. The deposit was defined to consist of a series of steep south-west plunging lenses which were subsequently labeled A, C, D E F and G. The A Zone was the most prominent and was the focus of the 2005 drilling campaign.

12.4.1.3 Geology

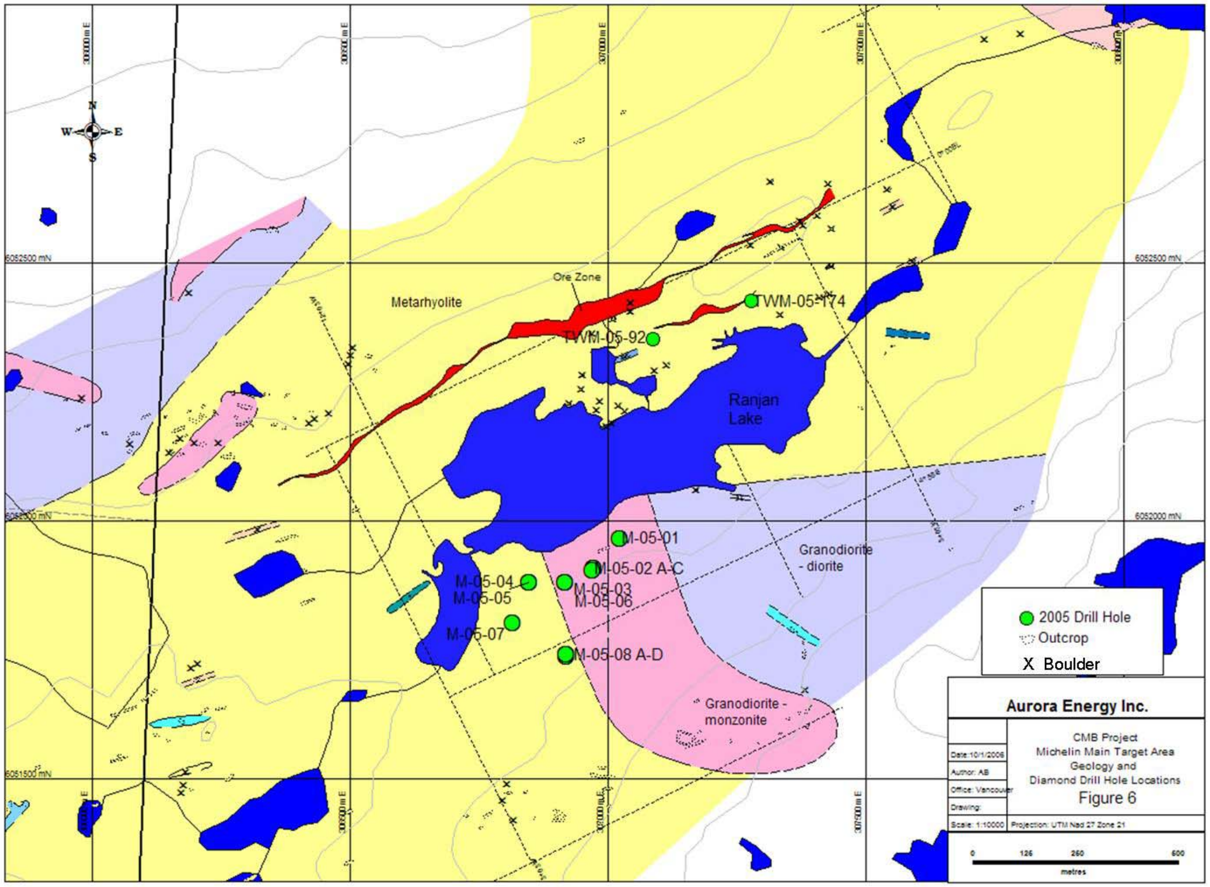
Geological mapping was carried out in the immediate environs of the Michelin uranium lenses, with a couple of traverses extending south to the Rainbow deposit (Maps 1 and 2). A new geology map was created based on this work and surface projections of rock units taken from diamond drill sections through the deposit area **(Figure 6)**. The mapping was undertaken to gain a familiarity with the lithologies and geological setting associated with the uranium deposits. Particular emphasis was placed on defining structural indicators that may have been overlooked by previous workers, especially in light of interpretations of new airborne magnetic and radiometric data, which suggest that a major fold might be present.

a) Lithologies and Contact Relationships - The Michelin area is underlain by metamorphosed felsic volcanics and minor foliated intrusive rocks, both of which are cut by granitoid intrusives and several phases of mafic dikes. The rocks are metamorphosed to upper greenschist facies, with chlorite, biotite, hornblende, actinolite and epidote as stable mineral assemblages. Felsic volcanic rocks comprise a finely porphyritic sequence intercalated with thin coarsely porphyritic units. The volcanics show complete recrystallization of the quartzo-feldspathic groundmass and are strongly deformed and foliated, which has led to various interpretations of their origin. Brinex geologists initially interpreted these rocks as quartzitic meta-sediments. Subsequent microscopic and lithogeochemical investigations resulted in reclassification of the rocks as subaerial ash to lapilli tuffs, with variable lithic, crystal and vitric components.

The finely porphyritic felsic meta-volcanics underlie about 75% of the mapped area. They are comprised of up to 3 mm sized feldspar and lesser quartz crystals (porphyroclasts), and abundant tiny chlorite and/or biotite streaks in a very finely recrystallized quartzo-feldspathic matrix. The porphyroclasts occur in varying proportions up to 8%, and consist of gray translucent (alkali feldspar?), minor amounts of pale yellow saussuritized (plagioclase?) and pale gray clear quartz. The quartz crystals are commonly difficult to distinguish from the gray feldspar, a simple Carlsbad style twinning being visible in many of the latter upon close examination. Local outsize gray feldspar porphyroclasts are present. The chlorite-biotite streaks are paper-thin aggregates of very fine-grained material that is flattened along the foliation and elongated down a prominent lineation direction. These may be the remnants of original vitric or lithic fragments, or strictly a result of metamorphic segregation. The rock does contain a minor amount of small, flattened, dark lithic fragments of mafic composition (generally less than 2 cm in long axis). The felsics meta-volcanics are pale gray to reddish in color, variably hematized, and contain approximately 1% finely disseminated magnetite crystals. They contain a fine network of generally sub-mm thick, dark veinlets, which are dominantly foliation parallel to sub-parallel. These veinlets consist of varying proportions of chlorite, biotite, magnetite, hornblende, actinolite, pyroxene, epidote, hematite, a red-brown translucent mineral of hardness 4, and minor calcite. Local decimetres-thick zones of finely laminated quartzo-feldspathic mylonite are an integral part of the felsic meta-volcanics. There are no distinguishable primary textures in this sequence, other than the small mafic fragments, which could suggest that these rocks originated as tuffs, flows or sub-volcanic intrusives; without microscopic study it is even unclear whether the porphyritic feldspars represent original phenocrysts or porphyroblastic growths.

The coarsely porphyritic felsic meta-volcanics are similar to the finely porphyritic variety with the exception that they contain 10 to 30% coarse feldspar crystals (porphyroclasts), 5 to 15 mm in size. The feldspars are dominantly the gray, translucent, simply twinned variety, with lesser pale yellow saussuritized plagioclase; minor smaller, clear gray quartz are also present. As with the finely porphyritic unit, it is commonly difficult to distinguish the quartz from un-twinned crystals of gray feldspar. The feldspars have dark tails, or pressure shadows, that are much more prominent than in the finely porphyritic unit because of the crystal size. The dark chlorite-biotite streaks are present, and commonly are curved with the foliation around the coarse crystals. The curved dark streaks and tailed feldspars give some impression of textures associated with welded pumiceous crystal tuffs, but these are clearly metamorphic textures. The coarse crystals are locally enclosed in a massive, aphanitic, quartzo-feldspathic matrix without the dark streaks, giving the rock a porphyry-like appearance. Contacts with the finely porphyritic material are always a thin mylonite zone or a relatively sharp contact, never gradational. The contact relationships, along with the local porphyry-like

Figure 6: Michelin Target Area, Plan Map Showing 2005 Field Work



appearance, suggest that these units may be syn-volcanic dikes, although their origin as a coarse crystal tuff cannot be discounted. The coarsely porphyritic units are variably hematized, and contain finely disseminated magnetite like the finely porphyritic material, but the dark veinlets are less prominent.

There is a distinct unit of the coarsely porphyritic material that underlies Ranjan Lake and is exposed in one outcrop at its north-east end. This unit differs from the rest in that a thin zone of fine-grained chloritized mafic material occurs at both margins. Inward from the margins the mafic material gradually acquires some of the coarse feldspar porphyroclasts, and then becomes interdigitated on a cm scale with typical coarsely porphyritic felsic meta-volcanics. The mafic rock is confined to within 2 m of the contacts, the rest of the unit is typical of the coarsely porphyritic material.

A complex zone of foliated intrusives may be the oldest rock unit noted in the project area. These outcrop in the north-west and south-west part of the map area, and were previously mapped by Brinex as Long Island Gneiss. The zone consists of well foliated, medium-grained, equigranular diorite to monzodiorite intruding weakly to well foliated, medium to coarse grained, pink, equigranular granodiorite, the foliation in both being the regional fabric. The latter generally occurs as xenoliths in the diorite-monzodiorite, at one locale forming large tabular slabs, suggestive of a roof zone in the dioritic intrusion, with large slabs of the granodiorite caving off and falling into the younger intrusion. The granodiorite was also noted as xenoliths in the felsic meta-volcanics south of Ranjan Lake. Both intrusive lithologies contain small xenoliths of fine-grained foliated mafic intrusives. The sequence is cut by numerous aplitic to pegmatitic, pink granitic veins/dikes, which are pre- or syn-kinematic.

The felsic meta-volcanic units are cut by two phases of pre- or syn-kinematic granitic intrusives. South and west of Ranjan Lake are several small bodies of weakly foliated, medium- to coarse-grained, equigranular to locally feldspar porphyritic, pink monzonitic intrusives. The intrusive contains local variations to quartz monzonite and to monzodiorite. The mafic mineral in the intrusive is biotite. The monzonitic rocks contain xenoliths of the felsic-metavolcanics, and produce a distinct thermal metamorphic effect in the latter adjacent to its contacts, but the contacts are not chilled. Outcropping in the north part of the project area is a larger body of pink, weakly foliated to unfoliated, fine- to medium-grained, equigranular granite. At the east end of Running Rabbit Lake the granite contains xenoliths of, and displays a very irregular contact with the felsic meta-volcanics. The contact is not chilled, although the granite is finer-grained within decametres of the contact. Thin dikes of fine-grained granite to granodiorite, which intrude the felsic meta-volcanics along the north-west side of Ranjan Lake, are probably related to this granite.

Several generations of mafic dikes and small sills are present in the Michelin area. These are assigned to three main categories based on their relationship to the deformation history of the area. Variations in dike morphology suggest that each category may encompass more than one mafic igneous event.

(i) Pre- to early synkinematic: The main lithology in this category is variably, but generally strongly chloritized and foliated, fine-grained mafic dikes that cut all of the above lithologies, with the possible exception of the granite in the north part of the map area. The dikes are dominantly non-magnetic, but locally moderately magnetic, and in places contain small to large plagioclase phenocrysts. Dikes are commonly saussuritized, with abundant mm thick, foliation parallel, chloritic fault gouge seams. Within the alteration zone associated with the Michelin uranium mineralization these dikes often contain significant amounts of biotite intercalated with the chlorite, and more rarely significant amounts of coarse hornblende. Coarse lineated textures within chlorite and biotite rich rocks suggest that hornblende has been replaced at some locales. The chlorite-biotite rich dikes typically contain cm scale crenulations and kink bands. Dike contacts are typically foliation parallel, but locally may be slightly discordant, and may display a weak remnant of chilling. These dikes are considered to be mainly pre-kinematic, but the variation in foliation development, chloritization, and in contact relationships suggest that some may be early syn-kinematic. It is possible that some of the strongly foliated early dikes may instead represent metamorphosed mafic volcanic units.

A second distinct lithology in this category is a thin sill of fine-grained melagabbro that outcrops in the western part of the map area. The melagabbro is weakly foliated and lineated, non-magnetic, and has minor variation to gabbro and leucogabbro. It locally displays chilling against the felsic meta-volcanics, and contains xenoliths of the latter. The sill occurs in two parts, whose geometrical arrangement suggest that they may form a tight antiformal fold closure, the projected hinge of the closure located outside of the map area.

(ii) Late kinematic: This category encompasses fine-grained mafic dikes that contain a weak to moderate foliation, but which display some degree of chilling at their contacts, and/or have contacts that are discordant to the foliation in the adjacent meta-volcanics. The foliation may fade into unfoliated zones in the interior of thicker dikes, and is commonly slightly discordant to the foliation outside of the dike. These dikes are weakly chloritized, and vary from non-magnetic to strongly magnetic. Some dikes exhibit segregation of silica and (feldspar?) into an aphanitic groundmass that poikilitically encloses pyroxene or amphibole crystals. Other dikes may display textural variation from a fine-grained mafic into very fine-grained gabbro.

(iii) Post-kinematic dikes: These include all dikes that are unfoliated, with generally chilled and discordant contacts. The dikes are dark green to black, typically massive, non-porphyritic and fine-grained, with local gradation to coarse diabasic texture. They vary from strongly magnetic to non-magnetic. There are textural features that may indicate different generations of dikes, or just local variations within a single dike phase. These include the presence of up to 1.4-cm sized plagioclase phenocrysts, silica amygdales, epidote-chlorite spots, or granite xenoliths.

b) Structure - The most prominent structural features are a pervasive foliation and associated lineation that affect most of the lithologies in the map area. These represent the oldest fabrics noted, and are thus assigned to S_1 and L_1. The mean S_1 and L_1 fabrics are 60°/155° and 53°/188° respectively (**Figures 1 and 2**). S_1 is recorded as an alignment of phyllosilicate minerals, and by fine laminations in thin mylonite zones within the felsic meta-volcanics. L_1 comprises an alignment of fine-grained biotite and chlorite streaks on the foliation plane, pressure shadows and tails on coarse feldspar porphyroclasts, amphibole crystals, and relict quartz phenocrysts that are stretched 1.5 to 2:1 on the L_1 direction. The sense of rotation on the tailed feldspar porphyroclasts indicates that S_1–L_1 is a shear fabric that records reverse oblique-slip movement, with south side up. The thin mylonite zones accommodated the most significant increments of movement. The contacts of lithologic units within the meta-volcanics, and of early dikes, generally parallel the S_1 fabric.

A second foliation is locally weakly developed in the central part of the map area. It was noted only in the outcrop marking the entrance to the decline, and in a single outcrop about 300 m to the south-west near the north shoreline of Ranjan Lake. The S_2 foliation has a mean orientation of 65°/143° (three measurements only; **Figure 3**). A fabric suitably oriented to be S_2 is more commonly noted in chloritic mafic dikes intersected in drill cores, where foliation in the dikes is oblique to the adjacent foliation in the meta-volcanics. This suggests that S_2 is preferentially developed in the least competent, phyllosilicate-rich lithologies, and that the causative stress was not sufficient to reorient S_1 in the more competent quartzo-feldspathic lithologies (microscopic examination of the fine-grained phyllosilicates in the meta-volcanic units may reveal that S_2 is present on the microscopic level). The S_2 foliation is suitably oriented to represent an axial planar fabric associated with a regional tight synformal fold that is postulated from interpretation of airborne magnetics. However, no other evidence of this fold was noted. Macroscopic parasitic folding is not present, other than the rare cm-scale kinks in chlorite-biotite rich dikes. These are symmetrical and may represent parasitic folding in the hinge zone of a larger fold; the magnetics interpretation suggests that the Michelin area is on the north limb of the fold.

Several other structural features are recorded in the project area. A late, gentle, symmetric macroscopic fold was noted at one outcrop south-west of Ranjan Lake. The fold plunges steeply to the south-west, with an axial surface that strikes 162° and dips steeply west. Very gentle flexures in the lithologic units at Ranjan Lake may be related to this folding event. Diamond drilling in 2005 intersected zones containing a prominent spaced fracture cleavage that dips shallowly north-north-west, almost orthogonal to S_1, reflecting another structural event. The latest structures noted are frequent mm to 5 cm thick chloritic fault gouge seams, which are most prevalent in the chloritized mafic dikes. Most of these parallel S_1, but some are discordant; movement histories on these faults are unknown.

c) Mineralization and Alteration - Uranium mineralization on the Michelin property was discovered and explored by Brinex in the 1960's to early 1980's. During this period, the Michelin and Rainbow deposits were delineated. The Michelin deposit was investigated over the course of this exploration program; the Rainbow area was visited, but there are no surface exposures of the mineralization except for some small trenches, and historic drill cores were not viewed.

The uranium mineralization at Michelin is hosted within a 150- to 200 m thick zone of visibly discernable alteration within the felsic meta-volcanics, the boundaries of the zone being essentially conformable with S_1 and lithologic contacts. The zone has been traced along strike for 1200 m and to a local vertical depth of 706 m, and is open in all directions (Maps 1, 2 and 3). Elevated radioactivity is sporadically distributed throughout this zone. The most consistently mineralized material occurs within a 65-m thick interval, located near the upper part of the lower half of the alteration zone. This interval contains up to three higher-grade sub-intervals, separated by lower-grade or essentially un-mineralized material. The high-grade zones pinch and swell, or have some lateral discontinuity, such that the Brinex resource calculation was based on eight separate lenses. Two smaller lenses of mineralization occur within the upper half of the eastern part of the alteration zone.

The alteration zone is marked by a silica and feldspar destructive alteration, which leaves the rock soft and finely porous or "weathered looking". This is accompanied by a gradational replacement of biotite and chlorite by hornblende, and more proximal to mineralization by pyroxene and actinolite. There is also an increase in calcite and gypsum, although these are still only present in very minor quantities. Early mafic dikes show increased chloritization, locally accompanied by major amounts of biotite, and proximal to mineralization, by hornblende and actinolite. Hematization increases significantly proximal to mineralization, with associated disappearance of magnetite and locally pyrite. Uranium normally occurs in microscopic disseminations of (uraninite?) associated with strong hematization; some cm-sized massive pitchblende veinlets were recorded at the west end of the zone. However, the highest uranium values do not necessarily correlate with the strongest hematite. Microscopic study by Brinex indicates that much of the uranium is intergrown with pyroxene and actinolite. The uranium mineralization is hosted by both finely and coarsely porphyritic phases of the felsic meta-volcanics, with higher grades locally having some preference for the coarsely porphyritic units. The early mafic dikes are unmineralized, but uranium grades often increase adjacent to them.

Two minor occurrences of radioactivity were noted outside of the Michelin zone during the course of geological mapping. An outcrop located 750 m west of Ranjan Lake contains a narrow zone of dark green amphibole stringers, which produced a scintillometer reading of 1350 cps (Map 1). Five hundred m north of the Rainbow Zone a 3 m-sized boulder contains a zone of hematization that reads 7200 cps on the scintillometer.

No other minerals of economic note have been recorded on the property. Fine-grained pyrite occurs ubiquitously as trace amounts in almost all lithologies. Traces of fine-grained sphalerite and galena were locally noted in the felsic meta-volcanics. Chalcopyrite occurs as minor amounts with pyrite and pyrrhotite in rare quartz veins.

12.4.1.4 Discussion

The geological mapping carried out in 2005 essentially confirmed the work carried out by previous Brinex staff with only minor variations as to the limits of the various units due to the incorporation and projection of data from the historic drill holes.

12.4.2 MICHELIN EAST TARGET AREA

12.4.2.1 Introduction

A field program was carried out on the Michelin East target area between June 25th and August 4th by Ian Garsed, a consulting geologist, and a field assistant (Garsed, 2005). The target occupies the area immediately east of the known Michelin Deposit, from Running Rabbit Lake to as far east as Mikey Lake

The primary focus of the 2005 work was to map the main Michelin stratigraphic sequence to the east and into a possible fold closure identified in the airborne radiometric and magnetic data. Work also examined the local structure, stratigraphy, and alteration associated with the known showings in this area and also evaluated number of other combined geophysical/structural targets in the greater Michelin region. During the course of this work, a 2.0 km baseline was established in the Michelin East area, a new 1:5,000 scale geology map was produced, and rock sampling and scintillometer surveys were completed (see below and **Figure 7).**

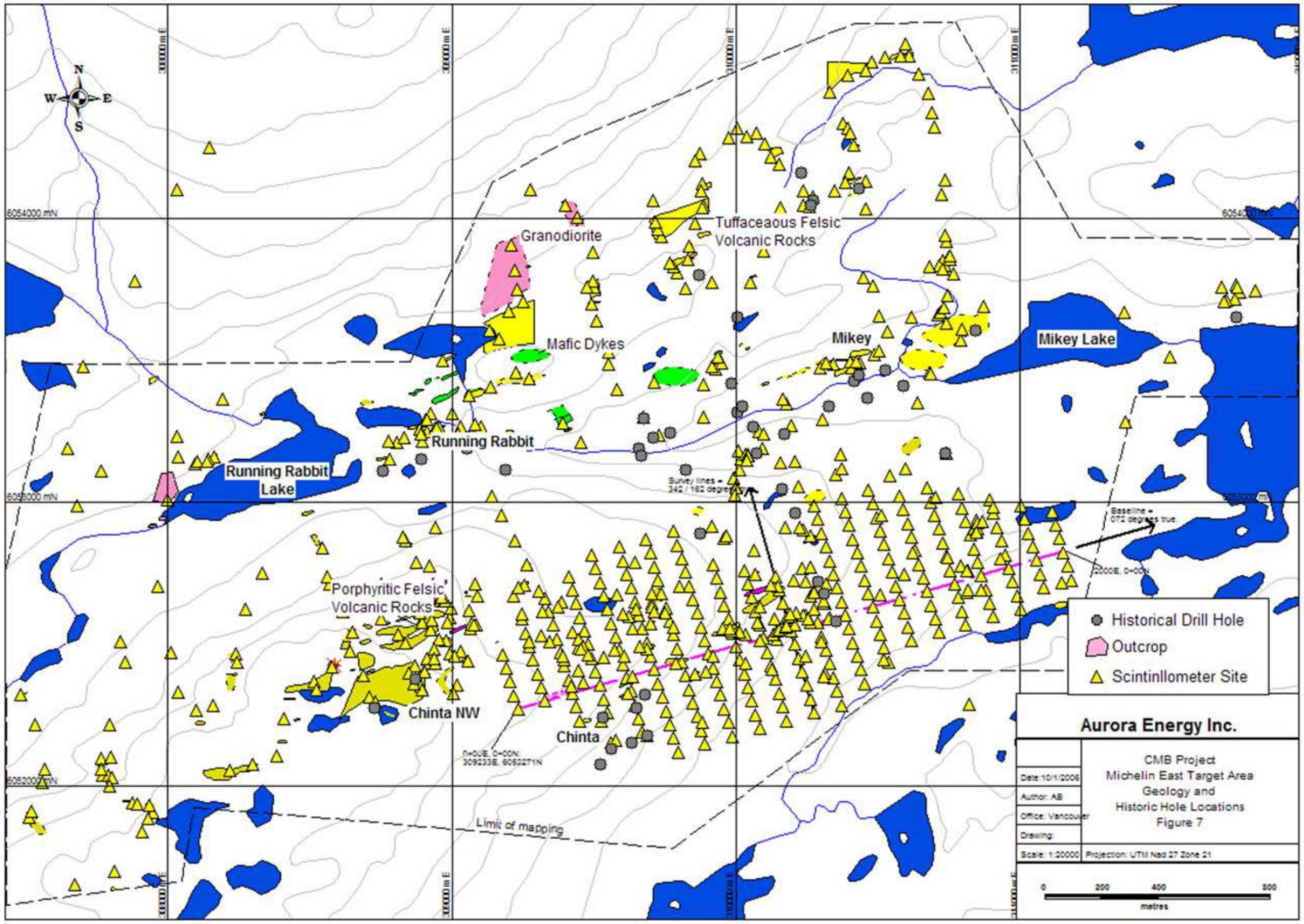
12.4.2.2 Previous Work

The area was investigated by Brinex staff during the development of the neighboring Michelin Deposit and dozens of the aforementioned 300 holes drilled at Michelin fall within the Michelin East target area. The work resulted in the discovery of the Chitra Zone, Mikey Lake Zone, and Running Rabbit zones along with follow-up drilling tested these zones as well as the majority of the known radiometric anomalies.

12.4.2.3 Geology

a) Lithologies - The Michelin East area is dominated by a sequence of felsic volcanic units that form part of the Aillik Group and are host to the main Michelin deposit further to the west. The rocks strike east-north-east to north-east with the dip uncertain, but probably parallel to the regional foliation which dips to the south-east. In the north they bound a mafic unit that that is strongly foliated and interpreted to be a highly strained, conformable dolerite body. To the south the felsics are interpreted as

Figure 7: Michelin East Target Area, Plan Map Showing 2005 Field Work



being sub-volcanic intrusives. They are more porphyritic and have a variable grain size. In some outcrops these become coarser grained and equigranular.

The northern part of the mapping area consists of a sequence of fine-grained quartz-feldspar bearing volcanics; intense shortening, likely recrystallization and extensive mineral stretching, highlighted by strongly aligned hornblende grains and banding, may be entirely tectonic in origin. The rocks are often extremely fine-grained and have been distinguished from the other more porphyritic and granitic felsic units on this basis. They may represent ash tuffs or sheared, recrystallized felsic intrusives. A zone of strongly foliated to sheared amphibolite is located within these fine-grained felsic rocks, particularly in the north-central part of the mapping area. They are composed of medium-grained hornblende-plagioclase and minor quartz with a doleritic texture in the less strained exposures. As the strain increases in the shear zone, the rocks become very strongly veined and altered to an amphibole-albite-quartz-epidote assemblage that in places is strongly brecciated.

To the north of the amphibolites are more felsic volcanic rocks. In the north-eastern part of the area these appear to be pinker, more hematitic and with a slightly higher background radioactivity. These are bound to the north by a medium-grained pale grey to pink granodiorite or leucogranite body.

b) Structure - Outcrop to the south of the felsic tuffs is dominated by fine-grained felsic rocks that are weakly porphyritic. They are usually feldspar-phyric with the phenocrysts consisting of rounded to sub-euhedral feldspars up to 1 to 2 mm in size. Some outcrops exhibit both feldspar and small, rounded quartz-eye phenocrysts. Some outcrops appear more granitic in texture (mapped as quartz monzonites), however, contacts between units are rare and the entire package is interpreted to be a broad area of sub-volcanic intrusives. Minor amphibolite crops out within this sequence, however, the outcrops are scattered and it is not possible to determine their timing relationships or geometry in relation to the felsics.

All outcrops examined show a consistent foliation direction dipping between 50º to 70º to the south-east, with some shallower dips noted in the north-east. No unequivocal bedding has been observed to enable facing directions to be determined. No direct evidence for a major fold closure has been seen, however given the amount of shortening that and the limited outcrop, this cannot be ruled out. The area of the fold closure in the eastern part of the mapping area is completely obscured by bogs and boulder cover. In the north-eastern part of the mapping area (Munna Lake Prospect), where there is much more outcrop, two cleavages have been noted, with the geometry of the later spaced cleavage suggesting that there may be a closure to the south-east. This cleavage strikes more northerly than the main foliation and is typically defined by or associated with narrow hornblende +/- magnetite veinlets and crackle veining. The zones around these vein intersections are usually finely brecciated by irregular crackle veining and associated patches of pale pink feldspar (albite?) alteration.

The main north-east striking foliation is well developed across the entire Michelin East area and is present in all lithologies. In the northern part of the field area there is exposed a zone of strong shearing, present in narrow zones of scattered outcrops over a width of about 400 or 500 m. Only one outcrop with unequivocal kinematic indicators was located and this shows a definite right lateral and possible south-block up displacement. No clear linear structures were measurable in this outcrop. Elsewhere around the mapping area, the stretching lineation plunges consistently to the south and is defined by elongate amphibole grains and stringers on the plane of the main foliation. One outcrop in the shear zone exhibits clear crenulation of the main foliation with the axial planes defining a planar fabric that strikes roughly parallel to the second cleavage observed in outcrops in the Munna Lake Zone.

Very strong shearing is present in the northern part of the mapping area. Shear fabrics parallel the main foliation as developed elsewhere and extensive wall-rock alteration has occurred; most evident in the mafic intrusives that have been sheared and very strongly altered to an amphibole-albite-epidote assemblage. Where the shearing is intense, the mafic rocks display a planar laminated mylonitic texture.

c) Mineralization - The Chitra Prospect is located in the western part of Chitra Zone on the interpreted southern limb of the fold. It consists of a number of small trenches into outcropping mineralization and drill holes underneath these. Interestingly the surface showing is to the south-west and south of the main radiometric anomalies.

The Mikey Lake Zone is located in the north-east and north of the mapping area and consists of a number of small U/Th highs within the broader anomalous area. It is located over another aeromagnetic unit to the north of the interpreted fold closure of the main Michelin zone.

The Munna Lake Prospect is located about 600 m north of the Mikey Lake Zone and consists of a series of outcrops of pink to cream colored tuffaceous felsic volcanic rocks. The felsic rocks in this area display a highly anomalous background radioactivity (500 to 1000 cps) over much broader widths than the mineralized zones seen elsewhere and correspond to a weakly elevated U/Th zone in the airborne data.

In the Running Rabbit Zone, a trench was identified to be at surface of the mineralized zone. The host rock appears to be a strongly foliated to sheared felsic volcanic that is coarsely porphyritic in layers or bands at m scale. This is assumed to be the same as the "coarsely porphyritic rhyolite" described as the host rock at the Michelin deposit. In this trench exposure the feldspar appears to be porphyroblastic rather than magmatic in origin. The outcrop in the trench is strongly banded in places and the feldspar grains vary from late-stage, coarsely euhedral to strongly augened.

12.4.2.4 Geochemistry

a) Rock - Fifteen rock samples were collected from pre-existing trenches in the Michelin East zone and located by hand-held GPS. Three of the samples were grab samples and the remaining twelve were chip samples collected across widths ranging from 0.5 to 1.5 m.

b) Humus - A humus sampling program was completed over four small radiometric anomalies located away from the main Michelin anomaly. One central gridline was sampled across strike on each anomaly at 50 m spacing for a total of 56 samples. Sample locations were flagged and benchmarked using a hand-held GPS unit and recorded in Excel spreadsheets.

12.4.2.5 Scintillometer Survey

A total of 1231 scintillometer readings were collected on the Michelin-Michelin East Target Area during the 2005 field program. These included 1131 readings in the Michelin East zone on various outcrops and boulders as well as a detailed scintillometer survey on a new grid. A total of 100 readings were collected on the Michelin zone in a detailed survey over four anomalies located away from the main body of the Michelin anomaly. An Exploranium GR-110 G Portable Gamma Ray scintillometer was used to obtain the scintillometer values.

A general scintillometer survey was conducted during mapping and prospecting of the Michelin East zone of the target area. A total of 295 readings were collected on boulders and outcrops encountered during mapping and prospecting in the area. A detailed scintillometer survey was also completed on a grid laid out from the cut baseline. The survey consisted of 836 scintillometer readings recorded on 12.5 meter intervals along the 21 cross-lines of the grid. A compass and hip-chain were used to determine the stations, with stations benchmarked every 25 m with a hand-held GPS unit.

A detailed scintillometer survey was completed on four anomalies in the Michelin zone, with a total of 100 scintillometer readings collected between October 2nd - 4th. The readings were taken in 25 meter intervals along a line perpendicular to strike direction and across the middle of each anomaly.

12.4.2.6 Discussion

a) Geology - The mapping and prospecting carried out during the month of July located sources for all of the airborne radiometric anomalies. In the northern part of the mapping area, the anomalies correspond to outcropping or sub-cropping zones of hematitic albite alteration and shearing in what are interpreted to have originally been tuffaceous felsic volcanic rocks. In the case of the Running Rabbit Zone, the rocks have show strong porphyroblastic feldspar growth and were mapped as felsic porphyries. They may correspond to the units termed coarsely porphyritic rhyolite as the host to the Michelin Deposit but the trend of the Mikey Lake-Running Rabbit Zone cannot be traced back to Michelin because of boulder and scree cover. Projecting the strike extension of this zone to the west places it to the north of Michelin; however it is unknown whether it could be folded or off-set across a NW trending fault that is seen in the aeromagnetic images.

Most of the historic Brinex drill holes have been field located and numerous of the previous grid lines. The drill holes largely target the radiometric anomalies in the northern part of the map area and appear to have adequately tested the mineralized zone, and the south-westerly trending anomaly to the south. The best mineralization was intersected in DDH M69-45 which contained **10.3' @ 0.07% U_3O_8**. It is associated with a discrete airborne U/Th anomaly that appears to have a more north-south orientation compared to the dominant ENE strike at surface. It may be the surface expression of a plunging shoot that may parallel the stretching lineation. The results from DDH GM-604, located to the south-west of M69-45, are not known.

Little drilling has been done to test the southern series of airborne radiometric anomalies and further exploration is recommended for these areas with follow-up drilling if results are positive.

b) Geochemisty

i) Rock - The results from the rock sampling essentially confirmed existing zones of mineralization and no new areas of anomalies were identified.

ii) Humus - The humus sampling failed to produce any anomalous spikes over the airborne radiometric anomalies.

c) Scintillometer Survey - Processed radiometric data collected during the 2005 ground scintillometer show a strong spatial correlation with the U/Th anomaly from the 2005 airborne radiometric survey. This correlation indicates the position of the airborne survey data is correctly located with respect to mineralization in the bedrock.

12.4.3 JACQUE'S LAKE TARGET AREA

12.4.3.1 Introduction

A field program was carried out on the Jacque's Lake target area between June 25^{th} and August 20^{th} by Richard Hall and Matthew Lennox-King, geologists with Fronteer Development Group Inc., and various field assistants. The Jacque's Lake area is located 7 km north of the Otter Lake target area at the north-east end of Jacque's Lake, approximately 30 km south-east of Postville.

The primary focus of the 2005 work was to generate a new geology/structure/alteration map for the area and to identify the source of the two large parallel, north-east trending, airborne radiometric anomalies which stretch across the target area for a distance of 4.0 km. A 5.5 km baseline was cut between the two anomalies to aid the field work (Grids 1 and 2) and rock/boulder sampling, soil surveys, grid scintillometer surveys, and track etch surveys were completed (see below and **Figure 8).**

12.4.3.2 Previous Work

The McLean Lake (aka Jacque's Lake) occurrences J1 and J2 were discovered in 1956 by J. McLean on behalf of Brinex. Property scale geological, magnetic and scintillometer surveys with 1,335 m of grid control were completed by Brinex in 1967. Four trenches were cut along a strike length of 165 m on the side of a hill at an elevation of about 235 m. Results from these trenches included 0.06% U_3O_8 across 0.9 m from trench #2, and 0.04% U_3O_8 across 2.1 m from trench #3. During the Urangellschaft/Brinex Joint Venture in 1978, a dispersal train of twelve radioactive boulders, with an average grade of 0.32 % U_3O_8, was identified near the base of the ridge.

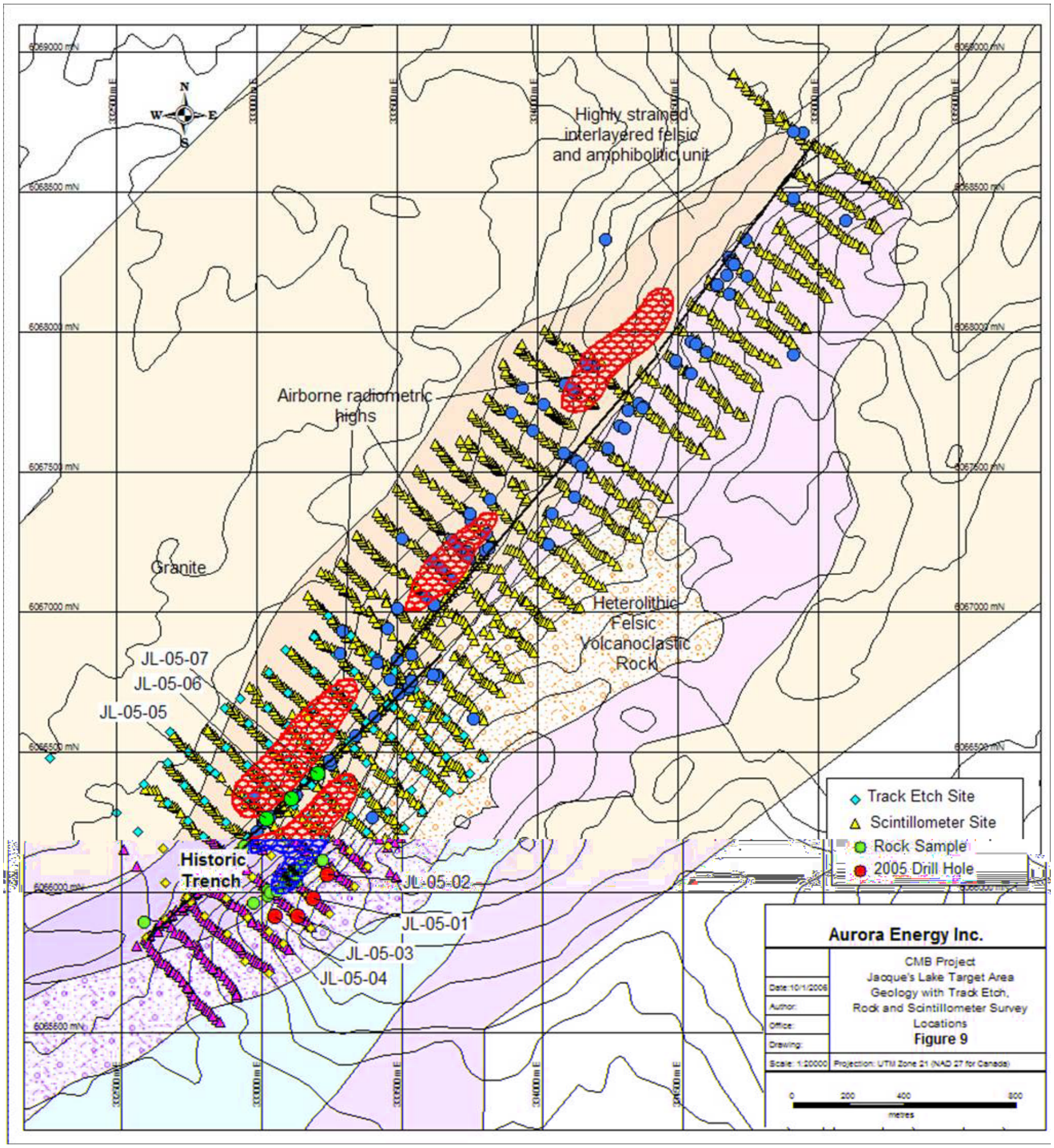
12.4.3.3 Geology

a) Lithologies - The Jacque's Lake target area is underlain by metavolcanic and lesser metasedimentary strata of the Paleoproterozoic Aillik Group. These rocks record to a varying degree events associated with Makkovikian (1.8 Ga), Labradorian (1.6 Ga) and Grenvillian (0.9 Ga) deformation. Deformation, metamorphism, regional metasomatism and uraniferous mineralization of the Aillik Group have been attributed to Makkovikian Orogeny 1.9 to 1.71 Ga (Gower *et al.* 1990 and Ketchum *et al.* 2002). This sequence is intruded by a number of mafic dykes, gabbroic to diabasic, both pre and post-dating the main deformation in the area.

Main Rock Units:

1. **Heterolithic felsic meta-volcaniclastic**: A heterolithic volcaniclastic unit comprising a very fine-grained to aphanitic rhyolitic groundmass with an angular to sub-angular clast assemblage including, but not restricted to, jasperoidal chert, feldspar porphyritic gabbro, quartz vein material. Clast size ranges from <1 mm to greater than 30 cm. In the eastern edge of the project area, very little deformation is recorded in this unit. Strain, and therefore deformation, increases gradually to the west, with the contact zone between Unit 1 and Unit 2 being a high strain corridor to shear zone environment. Alteration within this unit is dominantly epidote + potassium feldspar as flooding and veinlets. Localized actinolite + quartz veining is present.
2. **Very fine-grained to aphanitic quartz porphyritic rhyolite**. This is a moderately strained dark red rock with quartz phenocrysts up to 1 cm. . It crops out up slope from the main Jacque's Lake structural corridor.

Figure 8: Jacque's Lake Target Area, Plan Map Showing 2005 Field Work



Highly strained interlayered felsic and amphibolitic unit
Airborne radiometric highs
Granite
Heterolithic Felsic Volcanoclastic Rock
JL-05-07
JL-05-06
JL-05-05
Historic Trench
JL-05-02
JL-05-01
JL-05-03
JL-05-04
Track Etch Site
Scintillometer Site
Rock Sample
2005 Drill Hole
Aurora Energy Inc.
CMB Project
Jacque's Lake Target Area
Geology with Track Etch,
Rock and Scintillometer Survey
Locations
Figure 9
Projection: UTM Zone 21 (NAD 27 for Canada)

3. **Fine grained to aphanitic felsic metavolcanic**: This is a high strain to locally mylonitic rock consisting of light grey to dark red felsic component with moderate to intense magnetite + actinolite + calcite +/- pyrite veining. Weak to intense pervasive hematite alteration. Radioactivity (up to 2000 cps) is tied to combined intense veining and hematite alteration. The dominant foliation ranges from 220°/70° to 220°/90º.
4. **Fine-grained granite**: Granite consisting of fine grained quartz + plagioclase + potassium feldspar groundmass with mm-sized quartz phenocrysts and 5% blebby hornblende and biotite evenly distributed throughout the unit. This unit is located in the northern portion of the project area.
5. **Post-kinematic gabbro dykes**: A fine to medium-grained, dark green, weakly plagioclase porphyritic rock. Contacts typically crosscut the dominant regional fabric, with little fabric development in the unit itself.
6. **Pre-kinematic mafic dykes**: These are fine-grained, typically strongly amphibolitized. Margins are typically sub-parallel to parallel to regional fabric.
7. **Fine-grained meta-diorite**: Located in the south-western end of the project area. Fine grained, moderate foliation. Moderately magnetic. Contacts are not visible in the immediate project area.
8. **Fine-grained mafic intrusive**: Pre-deformation, fine grained dark green to black, strongly foliated, siliceous. Forms the "plateau" at bottom of Jacque's ridge.

b) Structure – Structural mapping defined a general fabric of 220°/90° with a stretching lineation of 70° to the south east. Strain increases from the south-east to the north-west. Fragments in the heterolithic felsic meta-volcaniclastic exhibit very little flattening in the south-east, but to the west and north they have developed aspect ratios of up to 8:1 along the Jacque's Lake ridge.

c) Alteration/Mineralization - Uranium mineralization at Jacque's Lake is associated with fine-grained to aphanitic felsic metavolcanic rocks. These rocks are strongly foliated to locally mylonitic, and where observed in outcrop, correspond to the main body of the airborne radiometric anomaly. This unit is composed of a light grey to dark red felsic component with moderate to intense magnetite + actinolite + calcite +/- pyrite veining. A weak to intense pervasive hematite alteration is present throughout this lithology. Locally where the host lithology is deficient in either hematite alteration, or magnetite + actinolite + calcite +/- pyrite veining, uranium mineralization is not present. The dominant foliation ranges from 220º/70º to 220º/90º.

12.4.3.4 Geochemistry

a) Rock - A total of 133 rock samples were collected during the mapping and prospecting components of the 2005 field season at the Jacque's Lake Target Area. These samples were collected as grab samples of boulders, outcrops and pre-existing trenches between August 8th and September 11th, 2005. These include 105 samples collected during boulder prospecting and 28 samples from outcrops and/or trenches.

The boulder prospecting was conducted on a portion of the JL Grid #2, which is comprised of 0.4 km-long gridlines, spaced one hundred m apart, and extending perpendicular from both sides of a cut baseline with an orientation of 306°. The baseline of JL Grid #2 extends 4.2 km, from gridline L13+00N to L55+00N, orientated at 036°. The grid was established using a compass, hip-chain, and benchmarked with a hand-held GPS unit. On gridlines L13+00N through to L37+00N, field crews recorded descriptions and locations, using hand-held GPS, of all boulders reading >400 counts per second (cps), and sampled all boulders reading >1000 cps. These readings were obtained by using an Exploranium GR-110 G Portable Gamma Ray scintillometer.

Samples collected from outcrops and trenches in the Jacque's Lake Target Area were used to correlate data obtained in previous field programs and to assist in the mapping and prospecting of the area. Samples from the trenches provided geochemical data for the mineralized zone at surface.

b) Soil - A soil and silt geochemical survey was completed at the Jacque's Lake Target Area during the 2005 field program from late June to late July. This survey was conducted on JL Grid #1 which consists of a 1.4 km-long cut baseline orientated 047° and fifteen cross-lines (L0+00N through L14+00N) extending 0.4 km from either side of the baseline with an orientation of 317°. Stations were staked at 25 m intervals on the cross-lines using a compass and hip-chain; and benchmarked using a hand-held GPS unit and labeled accordingly (*i.e.*, L9+00N; 0+75W).

A total of 353 soil samples were collected using a hand auger from the 'B'-horizon at the 25-meter stations of the cross-lines. Where cross-lines crossed stream beds, a silt sample was collected using either the auger or a hand trowel. A total of 34 silt samples were collected.

12.4.3.5 Scintillometer Survey

A detailed scintillometer survey was completed on the grids in the Jacque's Lake Target Area from late June to mid-September of the 2005 field season. The survey was conducted on cross-lines L0+00N through L37+00N using an Exploranium GR-110 G Portable Gamma Ray scintillometer. Readings were recorded at 12.5 meter intervals and reading locations were either staked or flagged, and benchmarked using a hand-held GPS unit. A total of 1983 scintillometer readings were recorded.

12.4.3.6 Track Etch Survey

A track etch survey was completed on JL Grid #1 during the 2005 field season. The track etch cups were buried on the cross-lines of the grid, spaced at 100 m intervals, in late June through to mid-July, with retrieval of the cups in mid-August after a thirty-day exposure period. Locations of the buried cups were benchmarked using a hand-held

GPS unit. Though a number of the cups were dug up and destroyed by one or more specimens of *Ursus americanus*, a total of 91 track etch cups were collected and submitted for analysis.

12.4.3.7 Discussion

a) Geology – The defining geological feature of the Jacque's Lake target area is the 3 km long airborne radiometric anomaly. The main body of the radiometric anomaly is underlain by a high strain zone with abundant magnetite alteration. This high strain zone has been mapped over a strike length of 3 km and a width of approximately 100 m. Airborne magnetic images and recent diamond drilling indicate a far greater thickness of magnetite alteration than what is observed in surface mapping. Uranium mineralization in outcrop has been mapped in the south-western end of the airborne anomaly over a strike length of approximately 250 m in a northeast-southwest direction.

b) Geochemistry

i) Rock - Boulder samples returned a range of values from 2.7 to 6440 ppm uranium, with 15 assaying above 1000 ppm U. Twelve returned values between 500 and 1000 ppm U, and the remainder contained between 0 and 500 ppm U. The majority of mineralized boulder samples were collected from within the boundaries of the airborne anomaly (only a few boulders assaying greater than 1500 ppm were collected from areas outside the anomaly). The mineralized boulders are similar to the uranium-bearing rocks observed in outcrop and drill core. It is therefore likely that the source of the Jacque's Lake boulder train is located in the south-western portion of the target area. The concentration of mineralized boulders within the bounds of the radiometric anomaly suggests a possible boulder contribution to the strength of the anomaly, rather than a boulder source.

Samples from outcrop returned a range of values between 1 to 1110 ppm uranium, with one sample assaying above 1000 ppm U, four between 500 and 1000 ppm U, and the remainder returning between 0 and 500 ppm U. Mineralized outcrop samples were collected from a fine-grained, highly strained to locally aphanitic felsic metavolcanic unit with magnetite + actinolite + calcite +/- pyrite veining and pervasive hematite alteration. The position of these mineralized samples corresponds to the south western portion of the eastern radiometric anomaly and confirms a bedrock source for the anomaly.

ii) Soil – A majority of the samples returned low concentration levels in all elements. The maximum value was 893 ppm U in one sample. One sample assayed 317 ppm U, another 320 ppm U, with four others returning 132, 137, 137 and 148 ppm. Three hundred and fifty-three samples returned values within the range 0 – 1000 ppm U, of these 346 were in the range of 0 – 100 ppm, with four samples in the range of 50 – 100 ppm U. The three samples assaying 317, 320, and 893 ppm U are all associated with a high percentage of organic material. This is probably reflects the tendency of reduced environments to precipitate uranium from solution, and is consistent with elevated uranium results derived for humus samples from the Gear prospect. Based on the low values returned from the Jacque's Lake soil survey over known mineralization, it would appear that "B" horizon soil samples are not an effective tool for uranium exploration in glaciated terrains.

b) Scintillometer Survey - Processed radiometric data collected during the 2005 ground scintillometer reveal a strong spatial correlation with the U/Th anomaly in the 2005 airborne radiometric survey. This correlation indicates that the position of the airborne survey data is correctly located with respect to mineralization on the ground.

c) Track Etch Survey - Track Etch results from the 2005 field program indicate a strong correlation with data from both the airborne radiometric and ground-based scintillometer surveys. Individual spot highs, offset from the radiometric surveys, were identified in the south-west and north-east areas of the grid. These correspond to possible north-east and south-west extensions of the airborne radiometric anomaly and bedrock uranium mineralization. The Track Etch cups were effective in detecting buried radioactivity that was subsequently confirmed during drilling.

12.4.4 OTTER LAKE TARGET AREA

12.4.4.1 Introduction

A field program was carried out on the Otter Lake target area between June 25th and July 29th by Rod Smith, a geologist with Altius Resources Inc, and a field assistant. The Otter Lake Target Area refers to four separate uranium (+/- base metal) prospects, named the Emben Main, Emben West, Emben Central, and Emben South, respectively. These are located approximately 7 km south of Jacque's Lake and 24 km north-east of the Michelin deposit. The four prospects occupy a local plateau with an elevation of about 375 m a.s.l. that is entirely drift covered with scarce outcrop and numerous large boulder trains which appear to be locally derived.

The primary focus of the 2005 work was to pinpoint the source of the airborne radiometric anomalies and examine the local structure, stratigraphy, and alteration associated with the showings. During the course of this work, a 10.3 km grid was established and rock/boulder sampling and scintillometer/track etch surveys were completed (see below and **Figure 9)**.

12.4.4.2 Previous Work

The first indication of radioactivity within this area was from a strong hydrochemical anomaly defined in 1967 near the present location of the Emben prospects. During the same year, an airborne scintillometer survey by Siegel Associates for Brinex revealed a group of weak to moderately strong radiometric anomalies. Detailed field programs were undertaken in 1969-1970 and 1978-1985 which included prospecting, geological mapping, trenching, and geochemical and geophysical surveys.

12.4.4.3 Geology

a) Lithologies – The Emben Prospects (Main, Central and South), which comprise the bulk of the known uranium mineralization within the Otter Lake Target area, are hosted by porphyritic and non-porphyritic felsic metavolcanics, early and late mafic intrusives, and volcaniclastic units of the Aillik Group. Surrounding the Aillik Group volcanics are the pre- and/or syn-kinematic and post-kinematic granitic intrusions, including the Walker Lake and Burnt Lake granites.

b) Structure and Geophysics – Magnetometer surveys indicate a dominant east-west linear magnetic trend to the north of the target area, possibly related to regional fault structures that are proximal to the Michelin deposit, and a large, circular magnetic high to the south-east which corresponds to a group of Michael Gabbro-like bodies mapped in the region. The Emben prospects of the Otter Lake Target Area exhibit very little magnetic relief.

The airborne radiometric survey displays a large (~5 km^2 in area) roughly circular anomaly within the Otter Lake Target Area, with a significant portion trending towards the north-east; the Emben prospects lie on the western side.

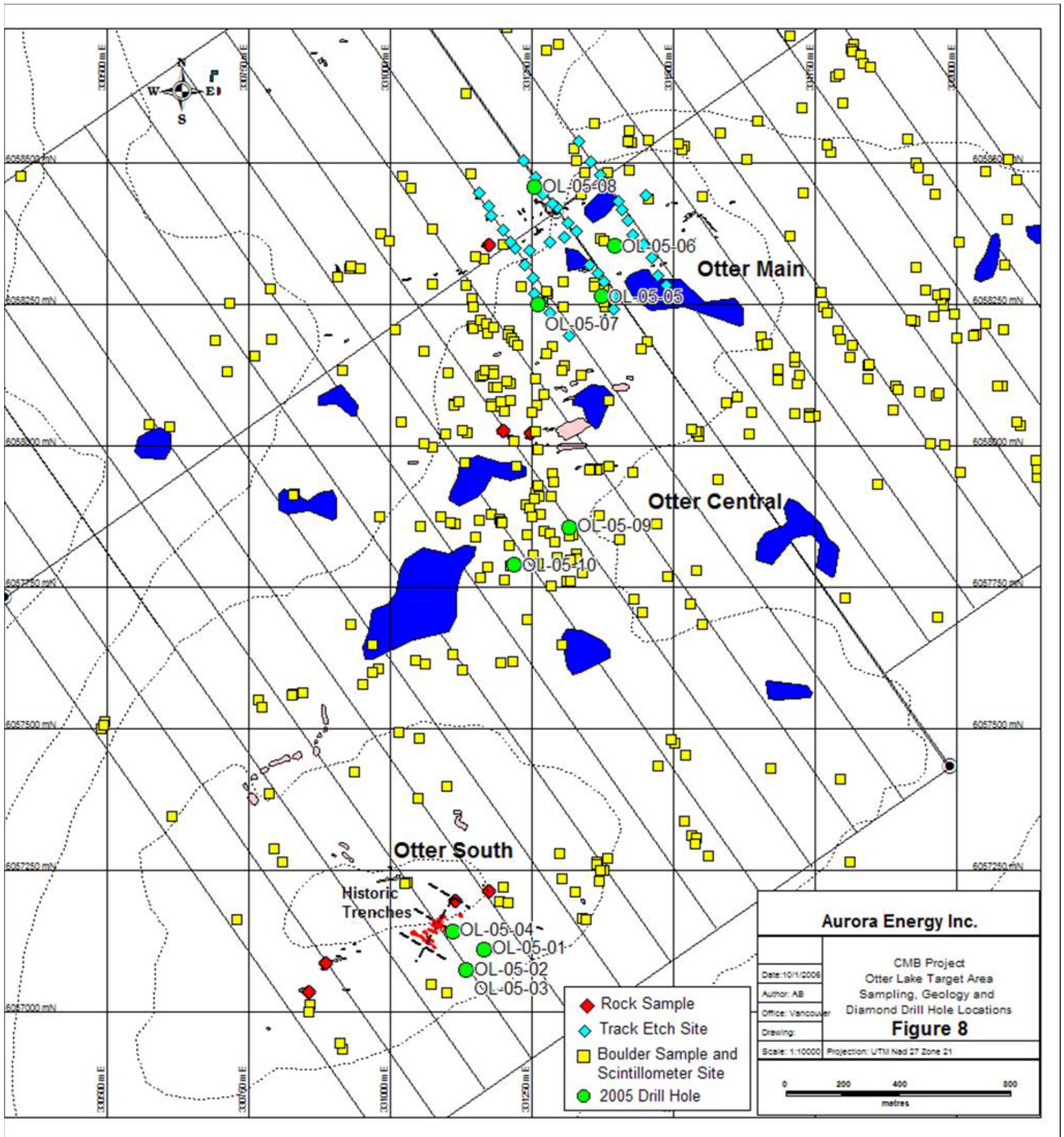
c) Mineralization - Mineralization within the four prospects predominantly occurs in felsic metavolcanic units that have undergone intense, pervasive hematite alteration and have associated alteration mineral assemblages of actinolite + magnetite + calcite +/- disseminated pyrite. These zones are normally interlayered with pre- and/or syn-kinematic mafic intrusions.

12.4.4.4 Geochemistry

a) Rock - A total of 513 rock samples were collected during the mapping and prospecting components of the 2005 field season at the Otter Lake Target Area. These samples were collected as grab samples of boulders (465 samples) and outcrops (48 samples) between July 12^{th} and August 6^{th}, 2005.

b) Boulder - Boulder prospecting was conducted on a grid with a cut baseline (BL0+00) 2.7 km long, orientated to 055°. Cross-lines on the grid have an orientation of 325° and vary in length (ranging 0.6 km to 1.2 km) with respect to the location of airborne radiometric anomalies within the target area. “Tie lines” at the end of the cross-lines were cut parallel to the main baseline. The grid was established using a compass,

Figure 9: Otter Lake Target Area, Plan Map Showing 2005 Field Work



hip-chain, and benchmarked with a hand-held GPS unit. Field crews recorded descriptions and locations of all boulders reading >400 counts per second (cps) using hand-held GPS, and sampled all boulders reading >1000 cps. These readings were obtained using an Exploranium GR-110 G Portable Gamma Ray scintillometer.

Samples collected from outcrops in the Otter Lake Target Area were used to correlate data obtained in previous field programs and to assist in the mapping and prospecting of the area.

12.4.4.5 Scintillometer Survey

A general scintillometer survey was conducted during the boulder prospecting exercise in the Otter Lake Target Area. Various outcrops and pre-existing trenches in the target area were also measured during the mapping and prospecting program. A total of 654 scintillometer readings were collected during the 2005 field program; including 606 readings from boulder prospecting and 141 readings from outcrops and trenches.

A detailed scintillometer survey was not completed on the grid at the Otter Lake Target Area.

12.4.4.6 Track Etch Survey

A track etch survey was completed on the Otter Lake Target Area during the 2005 field season. The track etch cups were buried on the cross-lines of the grid, spaced at 25 meter intervals, on June 27th – 28th, the cups were retrieved on July 27th – 28th after the thirty-day waiting period. Locations of the buried cups were benchmarked using a hand-held GPS unit. A total of 91 track etch cups were collected and submitted for analysis.

12.4.4.7 Discussion

a) Geochemistry - Results for 465 boulder samples collected from the Otter Lake field area show a range of uranium ppm values up to a maximum of 5460 ppm. Twenty-eight samples returned values over 1000 ppm U, 33 samples produced concentrations between 500- 1000 ppm U, 206 samples contained 100-500 ppm U, and 197 samples had only 0-100 ppm U.

A broad correlation is observed between mineralized boulders and the radiometric anomaly. The majority of boulder samples returning greater than 1000 ppm uranium were collected from within the body of the anomalous area. Samples assaying less than 1000 ppm uranium have very little correlation to the radiometric survey and were collected from throughout the Otter Lake area.

Outcrop rock samples collected from the Otter Lake target area returned a range of values. Twelve samples contained 0-100 ppm U (Delayed Neutron Counting), 13 samples had 100-500 ppm U, six had 500-1000 ppm U, another six assayed > 1000 ppm U, and one sample returned 87,575 ppm U.

Five of the samples returning greater than 1000 U ppm at Otter Lake were collected from the Emben (Otter) South target area. These samples were from Brinex trenches and the results were used in targeting drill holes OL-05-01 and OL-05-04. Drill hole OL-05-04 intersected 1.05% U_3O_8 over 30 m directly beneath the sampled area. The remaining sample over 1000 ppm U was collected from the Emben (Otter) Main target area, and was also collected from historic trenches. All samples assaying over 1000 ppm were collected from within the main body of the radiometric anomaly. Those samples with between 100 and 1000 ppm U were collected from the main body of the radiometric anomaly, or in the case of two samples, from the immediate flanks of the anomaly. Samples assaying less than 100 ppm U were collected from both inside and outside the main body of the airborne radiometric anomaly. Mineralized outcrop samples were generally collected from pervasively hematite altered felsic volcanic units. Due to poor exposure in the Otter Lake area, the majority of the samples were collected from existing trenches and cleared areas.

In summary, the presence of uranium mineralization in excess of 500 ppm in outcrop samples indicates the likely presence of a bedrock source for the airborne anomaly. The large number of radioactive boulders collected from within the bounds of the airborne anomaly, however, indicates that there may be a significant surficial contribution to the radiometric high. Future surface work programs in the Otter Lake area should focus on determining the nature of bedrock mineralization, rather than the boulder component.

b) Scintillometer Survey - A total of 654 scintillometer readings greater than 400 CPS were collected during the 2005 field program; including 606 readings from boulders and 141 readings from outcrops and trenches. These readings were derived with an Exploranium GR-110 G Portable Gamma Ray scintillometer.

The 654 scintillometer readings collected during the 2005 field program defined two distinct populations. The first is located within the body of the radiometric anomaly, the second is located to the east in an area of low radiometric relief.

Based on the observation that the eastern population of radiometric boulders had little influence on the airborne survey, it is likely that the “main” population of boulders also has little influence on the airborne anomaly, indicating that the radiometric anomaly is likely from a bedrock source.

c) Track Etch Survey - A total of 40 track etch pots were used during the 2005 Otter Lake field program. The Otter Lake track etch survey was concentrated in the Emben Main target area and was designed to test for buried uranium mineralization not detectable through scintillometer or airborne surveys.

Track etch results from the Emben Main area indicate a general correlation with the airborne radiometric anomaly. High values returned in the track etch results correspond broadly with the location of the radiometric high. Where high track etch values do not coincide with the airborne, they are located on the margins of the anomaly. In the majority of these cases, the track etch pots are described as being buried in thick, dry till. It is possible that the depth of till was sufficient to mask the airborne signal, whereas the underlying mineralization was detectable with track etch pots.

There is a general correlation between scintillometer values recorded at track etch sample site and values returned from the track etch results. Higher scintillometer values tended to produce higher track etch results, however, the relationship is non-linear, with several low scintillometer values producing very high track etch results.

12.4.5 MELODY HILL TARGET AREA

12.4.5.1 Introduction

A field program was carried out on the Melody Hill Target Area between June 25th and July 22nd by Ian Cunningham-Dunlop, Exploration Manager with Fronteer Development Group Inc., and a field assistant. The area was re-visited in September by a four-man sampling crew. The Melody Hill Target Area is located approximately 30 km south-west of Postville and approximately 10 km north of the Michelin Target Area. The prospect is dominated by Melody Hill itself, with elevation of 457 m a.s.l., and bordered to the south-west by Melody Lake. The presence of a high-grade, north-east trending radiometric boulder train, with U_3O_8 values up to 28%, as well as anomalous zones of elevated U/Th ratios, are the predominant features of the Melody Hill Target Area.

The primary focus of the 2005 work was to pinpoint the source of the airborne radiometric anomaly at the top of Melody Hill and to investigate the area immediately north-east of Melody Lake for the possible source of the high grade boulder train. During the course of this work, a 2.7 km grid was established and rock/boulder sampling and humus/track etch surveys were completed (see below and **Figure 10).**

12.4.5.2 Previous Work

The Melody Hill prospect was first discovered in 1965 by personnel with Mokta Ltd. (later Amok Ltd.) through an airborne radiometric survey, with a follow-up ground survey (Morrison,1956). Exploration and prospecting programs were carried out over the next sixteen years, including mapping, geochemical and geophysical surveys, and 58 drill holes. Unfortunately, the source of the high-grade boulders has yet to be determined due to multiple ice movements and is currently postulated to lie immediately north-east of Melody Lake or possibly under the lake itself.

12.4.5.3 Geology

a) Lithologies – The geology underlying Melody Hill consists primarily of the massive Makkovikian Melody Hill Granite which occupies the top of Melody Hill and a suite of lesser granites, felsic to mafic volcanic rocks, and metasedimentary rocks to the south-west**.** Other than the exposures of the granite at the top of the hill, however, the remaining rock units are largely covered by numerous sheets of glacial till and have been largely interpreted from geophysics (see below) and boulder float.

b) Structure and Geophysics – The airborne magnetic and radiometric response of the Melody Hill area is dominated by a major EW-trending magnetic low which corresponds on the ground to a high strain zone in Melody Hill Granite. This zone separates a complex of hornblende granite and augen breccia to the immediate south from main Melody Hill Granite to the north. Apart from this EW-trending shear, the dominant structural elements apparent in the Melody Hill area are NE-trending fault zones. These show apparent sinistral displacement on the main east-west-trending shear zone, though their pattern of displacement elsewhere is not as clear or consistent, and suggests a significant dip-slip component.

The zone of high U/Th ratios on the top of Melody Hill is offset from the main high grade boulder trains and spatially coincides with a zone of relatively unaltered Melody Hill Granite. Some of the magnetic responses within the zone of Melody Hill granite are possibly related to mafic dykes. Although alteration is present in some outcrops and drill holes in the area, the general intensity and distribution of alteration is relatively minor.

12.4.5.4 Geochemistry

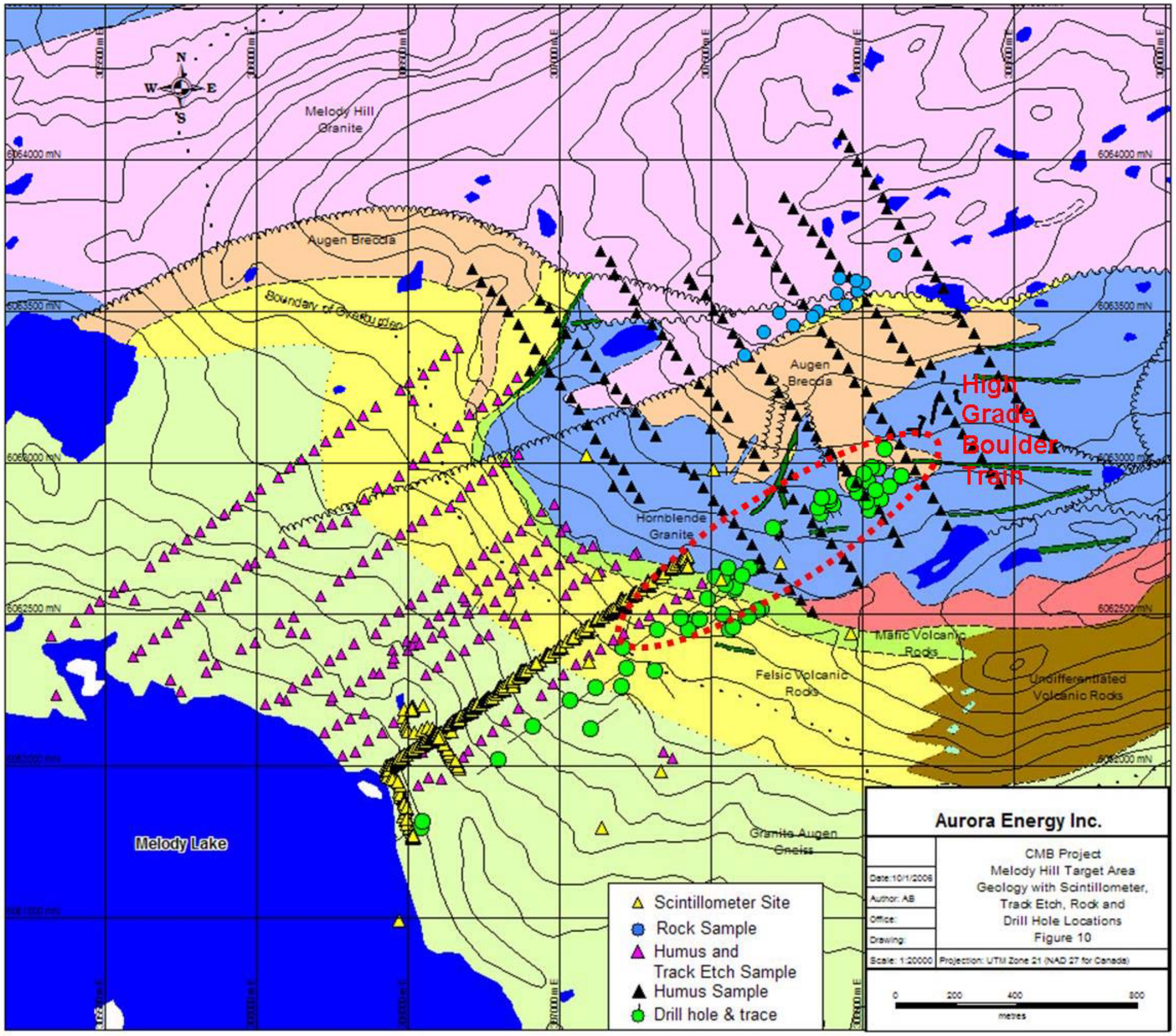
a) Rock - A total of 13 rock samples were collected from the high grade boulder train of the Melody Hill Target Area between July 3rd - 10th; all of the samples were "grab" samples.

b) Humus - A humus sampling program was completed on the Melody Hill Target Area between September 11th - 29th, 2005 and consisted of 409 samples collected from two re-brushed grids. These gridlines were originally cut and surveyed during exploration programs carried from the 1970's; stations at 25 m intervals were compassed, flagged and benchmarked using a hand-held GPS unit. Sampling was carried out in 50 m intervals along the gridlines.

12.4.5.5 Scintillometer Survey

A total of 545 scintillometer readings were collected in a detailed scintillometer survey on the Melody Hill Target Area during the 2005 field program. These readings included 352 collected from the northern, northwest-southeast-trending grid, and 193 from the southern, northwest-southeast-trending grid. These gridlines were originally cut

Figure 10: Melody Hill Target Area, Plan Map Showing 2005 Field Work



and surveyed during exploration programs carried out in the 1970's and the main baseline and tielines were refurbished for the purposes of this program.

The scintillometer survey of the southern, northwest-southeast-trending cross-lines was completed in conjunction with the placement of track-etch cups and a humus sampling program between September 11th and September 25th along the same grid. Scintillometer readings were recorded at 50 meter intervals and locations were benchmarked using a hand-held GPS unit.

The scintillometer survey of the northern, northwest-southeast-trending grid was completed between September 25th - 29th. The scintillometer readings recorded on the 25 m stations of the cross-lines. In addition, humus samples were collected on these gridlines at 50 m intervals.

12.4.5.6 Track Etch Survey

A track etch survey was completed on the southern, northwest-southeast grid of the Melody Hill target area between September 11th - 25th. The track etch cups were buried on the cross-lines of the grid, spaced at 50 m intervals, with retrieval of the cups in mid-October after the thirty-day waiting period. Locations of the buried cups were flagged and benchmarked using a hand-held GPS unit. A total of 239 track etch cups were collected and submitted for analysis.

12.4.5.7 Discussion

a) Rock Geochem - Thirteen gab samples were collected from boulders in the Melody Hill target area. Due to lack of mineralized outcrop, no samples were collected from bedrock sources during 2005. Assay results from boulder samples show a range of uranium ppm values from 82 – 3300 ppm. Four boulders returned greater than 1000 ppm uranium, five between 100 -1000 ppm U, and the remaining samples returning less than 100 ppm U. Assay results in other elements are generally low, and no anomalies were defined.

Due to the lack of mineralized outcrop observed during the 2005 field program, the bedrock source of the Melody Hill boulders, sampled by Brinex and again by Fronteer – Altius during 2003-2005, remains unexplained. A gravity survey is planned for April 2006 in order to locate the as yet unfound source of mineralized material at Melody Hill.

b) Humus - Humus samples collected at Melody Hill during the 2005 field program returned overall low results in uranium. Of the 409 samples collected, only one returned a U value of greater than 100 ppm. Seven samples returned values between 10 and 100 ppm U. All other samples returned U values of less than 10 ppm.

The low values in the Melody humus survey seem to indicate that the source of the radioactive boulders in the Melody area is sufficiently deep to be undetectable with a humus survey. Of note, the eight samples returning greater than 10 ppm U were all collected from the south-western corner of the grid, proximal to an area of elevated airborne radiometrics near the shore of Melody Lake. This may indicate proximity to the boulder source.

c) Scintillometer Survey - Processed scintillometer data collected during the 2005 field program exhibit a good correlation with the data from the airborne radiometric survey. Values are generally low, with a spot high in the north-east portion of the scintillometer grid which corresponds to a larger radiometric high in the airborne data.

d) Track Etch Survey - Processed results from the Melody Track Etch survey show a general concentration of higher results in the eastern portion of the field grids. Elevated results, (*i.e.*, those described by the laboratory as being well to massively exposed) are associated with weak radiometric highs within an area of intermediate relief in the airborne survey data. In the south-western portion of the Melody grid, two heavily exposed Track Etch samples were collected, again proximal to weak highs within an area of intermediate radiometric relief. The Track Etch survey appears to have been inconclusive in terms of locating the source of the Melody boulders. However, the survey did define two areas of buried uranium mineralization.

12.4.6 WHITE BEAR TARGET AREA

12.4.6.1 Introduction

A very brief seven day field program was carried out on the White Bear Target Area by Matthew Lennox-King, a geologist with Fronteer Development Group Inc., and a field assistant. The target, previously known as the Burnt Lake area, is located 30 km due south of Postville and 18 km to the east-north-east of the Michelin deposit. The area of interest is located on the northern shore of Burnt Lake and consists of the North East Showing, the North Showing, the South Showing and the North West Showing.

The main focus of the work was to confirm the position of historic drill hole collars, trenches and grid lines as detailed in the Brinex data. Rock geochemical samples were collected in order to confirm the range of uranium values reported in the Brinex reports.

12.4.6.2 Previous Work

The White Bear project area was first explored by Brinex from 1967 through 1978. Detailed radiometric surveys, ground geophysical surveys, geological mapping and trenching were carried out. Soil geochemical surveys indicated a large anomaly over the known mineralization and led to the targeting and drilling of 17 diamond drill holes in 1977 with for a cumulative total of 564 m. A final round of geological mapping and ground based geophysics were carried out in 1978. No significant work has been carried out since.

12.4.6.3 Geology

a) Lithologies – The geology of the White Bear area has been interpreted to be a thick, interlayered sequence of porphyritic rhyolite ash-flow tuffs, lapilli tuffs and tuffaceous sedimentary rocks of the Aillik Group. This sequence has been intruded by leucogranite and quartz monzonite. Underlying the volcaniclastic succession is a feldspar porphyry with a rhyolitic composition.

b) Structure – Structural observations recorded by Brinex and by the Fronteer-Altius JV, indicate a general NE foliation, with approximately a 50° dip to the south. This foliation is represented by mineral alignment within the pyroclastic units, and hornblende and biotite alignment within the granitic lithologies. Defined fold hinges are recorded in the north region of the project area, plunging 60° to the south.

c) Mineralization - The project area is marked by a strong U/Th anomaly with a 3 km strike length in an east-west direction. This airborne anomaly marks the extent of the uranium mineralization sampled and drilled by Brinex. The uranium mineralization is described as being restricted to the pyroclastic horizon. Mineralization is stratabound, and associated with chlorite and hematite alteration, with associated amphibole, pyrite, magnetite and minor amounts of fluorite, sphalerite, galena and molybdenum.

During the course of 2005 field work, it was found that the highest scintillometer values, and therefore most intense uranium mineralization, were associated with strong to intense, pervasive hematite alteration in variably porphyritic felsic metavolcanics. Mineralization was found to be located within high strain zones, often with late brecciation.

12.4.6.4 Geochemistry

a) Rock – Rock samples were collected from various radioactive outcrops and trenches within the White Bear Target Area during the 2005 CMB field program. A total of 14 grab samples were collected on September 28th, and submitted for geochemical analysis. These samples were used to correlate data obtained in previous field programs and to assist in the mapping and prospecting of the area. Samples from the trenches provided geochemical data of the mineralized zone at surface.

12.4.6.5 Discussion

a) Geochemistry - The 14 samples from the White Bear project area returned a range of uranium values from 10.5 to 6680 ppm U. The complete data are listed in **Table 2**.

Table 2 – White Bear Lake – 2005 Rock Samples

Sample	Project Area	Scint (cps)	U ppm
2408	White Bear	1200	37.6
2409	White Bear	2000	39.7
2410	White Bear	3000	448
2411	White Bear	4000	242
2412	White Bear	10000	643
2413	White Bear	9400	10.5
2414	White Bear	9800	506
2415	White Bear	3800	451
2416	White Bear	5900	311
2417	White Bear	15000	2050
2418	White Bear	15000	6680
2419	White Bear	15000	5170
2420	White Bear	5000	538
2421	White Bear	4500	593

The assay values from the samples collected in the White Bear area confirm the presence of significant uranium mineralization as reported by Brinex in the 1970's. The presence of uranium mineralization in outcrop confirms a likely bedrock source for the airborne radiometric anomaly. Brinex drilling returned values of up to 0.256 %U_3O_8/16.5 m in drill hole 77-7. These zones were not subsequently tested during follow up drilling and thus present clear targets in the White Bear area for future programs. A drill program designed to confirm mineralized intervals reported by Brinex, and to explore the down dip and strike extensions of these zones, is recommended.

12.4.7 POST HILL TREND TARGET AREA

12.4.7.1 Introduction

A short orientation program was carried out over the Gear mineralization on the Post Hill Trend in early July by Dr. Rick Valenta, VP-Exploration Fronteer Development Group Inc., and a field assistant. The Post Hill Trend is located approximately 10 km east of Postville, and approximately 20 km north of the Jacque's Lake Target Area. The Post Hill Trend parallels Kaipokok Bay, located approximately three km to the west, while Post Hill (elevation ~ 440 m a.s.l.) lies eight km to the south-west of the target area The Post Hill Target Area includes the Gear Lake, Inda Lake and Nash Lake prospects..

The main focus of the 2005 work was to compare the responses in soil (MMI), humus, grid-based scintillometer readings, and track etch readings to develop an effective exploration tool for uranium.

12.4.7.2 Previous Work

The prospects were first discovered in 1967-1968 by Brinex personnel. The exploration programs included prospecting, mapping, geochemical and geophysical surveys and diamond drilling, continuing until 1970 (Gear Lake) and 1977 (Nash Lake and Inda Lake).

12.4.7.3 Geology

a) Lithologies - The Post Hill Trend consists of a series of relatively continuous magnetic units that generally follow, but differ in detail from, the mapped stratigraphy. There are a series of somewhat discontinuous magnetic anomalies near the mapped contact between tuffaceous and calcareous sediments of the Post Hill Group and felsic volcanics of the Aillik Group. The three U/Th anomalies displayed from the airborne radiometric survey coincide with, from south-west to north-east, the Inda Lake, Nash Lake and Gear Lake prospects, respectively. The magnetic signatures are more extensive under cover, suggesting additional potential for uranium mineralization along the strike of this zone. The structure of the area is dominated by northeast-trending stratigraphy and faulting, though there are also minor north-west and north-north-west cross-faults apparent from the magnetic survey.

At the Gear Lake Prospect, mineralization occurs within the metasedimentary rocks, concentrated in thin layers and laminae. Unidentified radioactive particles are present within hornblende and biotite, and are associated with localized pyrrhotite and chalcopyrite. Magnetite concentrations are locally high, and sphalerite is present in localized zones.

Mineralization at the Inda Lake prospect is associated with hematite-altered zones within the host rocks; pyrite, minor chalcopyrite and magnetite are also present. Mafic silicates, such as biotite and hornblende, contain small grains of uranium minerals.

The mineralized zone at the Nash Lake Prospect occurs in an area of complex shearing associated with the lower part of the Aillik Group. This sequence, identified as a tuffaceous unit by Brinex personnel, as described is similar to the metamorphosed volcaniclastics, alternating between green, epidote-rich zones and pink, hematite-altered sections, in the Jacque's Lake Target Area.

12.4.7.4 Geochemistry

a) Humus - A humus sampling program was completed at the Gear Lake Prospect on the Post Hill Trend. A total of 16 humus samples were collected along one gridline on June 28th - 29th. The samples were collected in 25 m intervals perpendicular to strike direction; these sample locations were flagged and benchmarked using a hand-held GPS unit.

b) Soil - Soil samples were collected on the Gear Lake prospect using the Mobile Metal Ion (MMI) technique. This technique samples the soil, using a hand auger, at a constant depth of 10 to 25 cm below the 'A' horizon, for metal ions that are adsorbed to soil particles. A total of 16 samples were collected at 25 m intervals on the gridline in conjunction with the humus sampling program on June 28th – 29th and submitted to SGS XRAL Labs for the MMI analysis.

12.4.7.5 Scintillometer Survey

A detailed scintillometer survey was conducted at the Gear Lake prospect during the 2005 field program in conjunction with the geochemical survey completed on June 28th – 29th. The survey was completed on the same gridline using an Exploranium GR-110 G Portable Gamma Ray scintillometer, with readings recorded at 25 -five m intervals. Locations of the readings were flagged and benchmarked using a hand-held GPS unit. A total of 13 scintillometer readings were recorded.

12.4.7.6 Track Etch Survey

A track etch survey was completed on the Gear Lake Prospect during the 2005 field season. The track etch cups were buried on the same gridline as the geochemical surveys, spaced at twenty-five m intervals, on June 24th, with retrieval of the cups on August 7th. Locations of the buried cups were flagged and benchmarked using a hand-held GPS unit. A total of 14 track etch cups were collected and submitted for analysis.

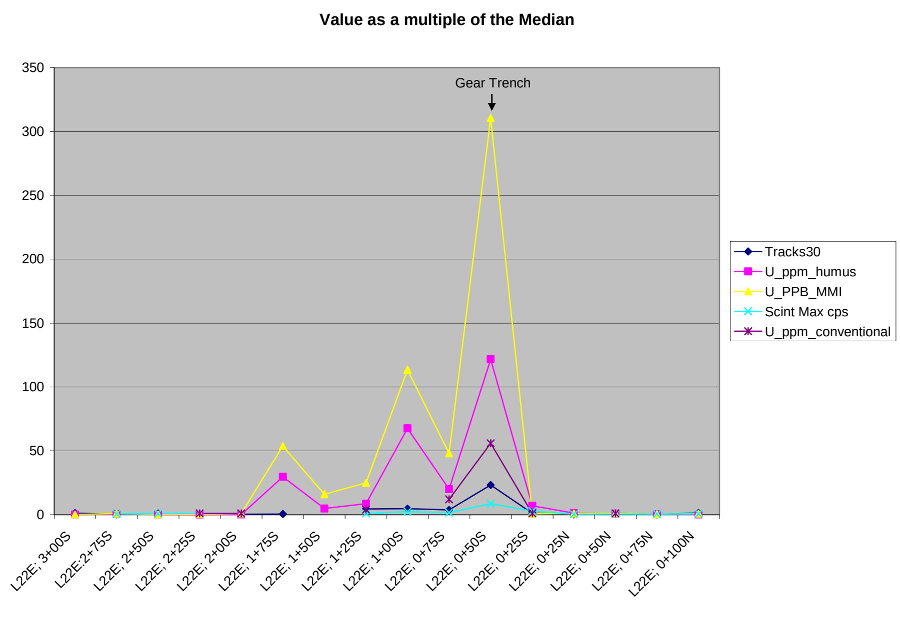
12.4.7.7 Discussion

The combined geochemical and geophysical orientation program at the Gear Lake Prospect was designed to rank the relative effectiveness of the techniques in detecting buried uranium mineralization. This ranking takes into account such factors as ease of collection, speed of analysis, *etc*.. **Table 3** ranks the effectiveness of the techniques summarized above.

Table 3 – Gear Lake Orientation Survey

Ranking (1-best; 5-worst)	Soil	Humus	MMI	Track Etch	Scint
Ease of collection	5	2	3	4	1
Availability of suitable sample	5	2	4	3	1
Speed of analysis	3	2	4	5	1
Detection at depth	4	3	2	1	5
Strength of response	3	2	1	4	5
Cost of sampling	3	2	4	5	1
Ease of interpretation	1	2	4	5	3
OVERALL SCORE (lowest score is best)	**24**	**15**	**22**	**27**	**17**
OVERALL RANKING	**4**	**1**	**3**	**5**	**2**

While all techniques (soil, humus, MMI, scintillometer and track etch cups) were effective in detecting buried uranium mineralization in the Gear trench, humus sampling proved to be the most effective technique. All five techniques indicated an elevated response coincident with the location of the trench, as shown in the chart below.



13.0 SURFACE DIAMOND DRILLING PROGRAMS

A diamond drilling program was carried out on the CMB Uranium Property between August 20th and November 2nd, 2005. A total of 27 drill holes with a cumulative length of **9,401.86 m** were completed in the Michelin, Otter Lake, and Jacque's Lake target areas, testing both known zones of mineralization and new (un-drilled) radiometric anomalies.

A breakdown of the drilling by area is given in the following sections and details of the collar locations and assay composites constitute **Appendices IV and V.** Assay certificates are available on file at the Aurora Energy Inc. office in Vancouver

13.1 MICHELIN TARGET AREA

13.1.1 Introduction

During the 2005 field season, a total of nine completed and six aborted diamond drill holes totaling **4,547.19 m** were drilled in the Michelin Deposit area **(Figure 11)**. Drilling was carried out from August 20th to November 2nd, 2005.

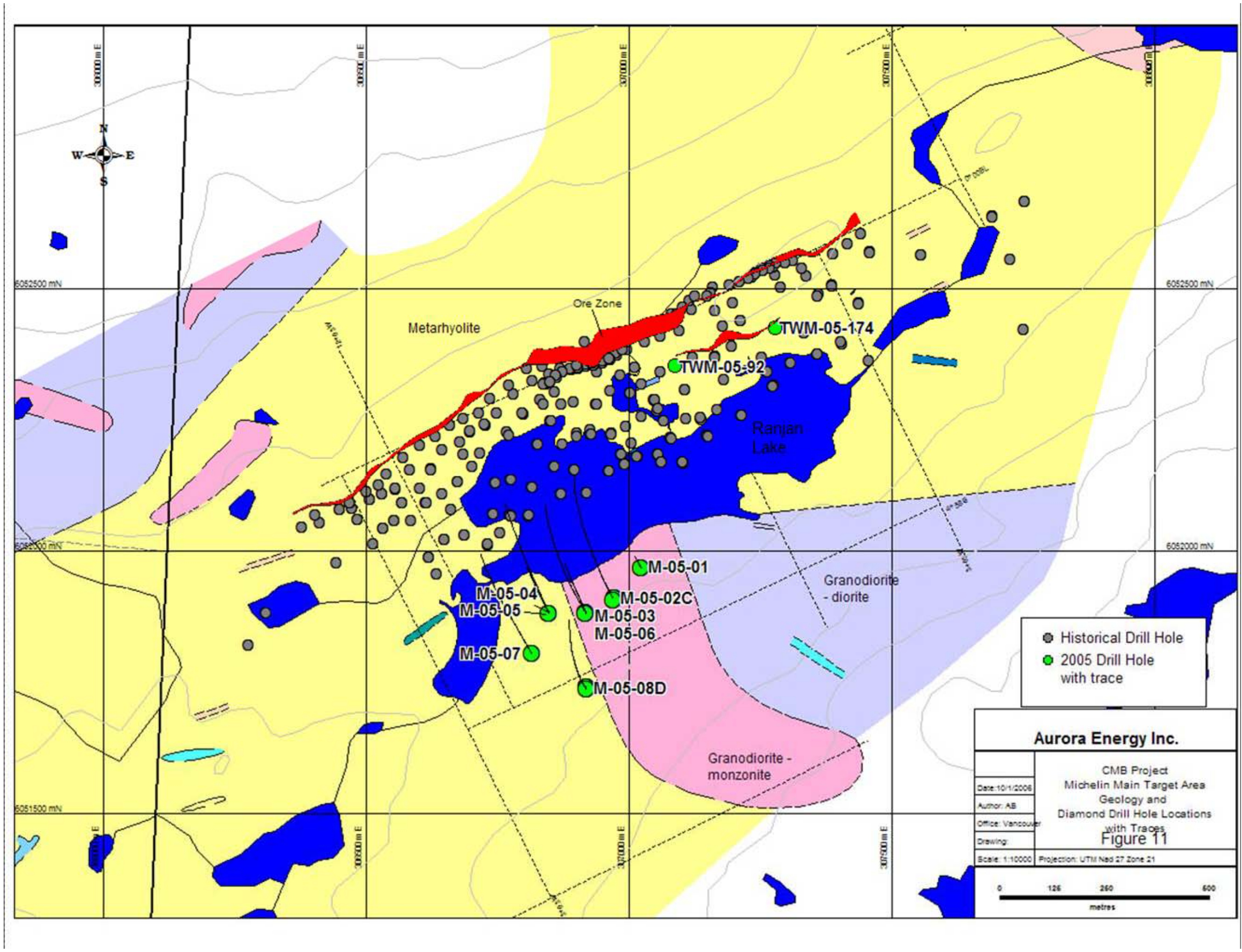
The goal of the 2005 drill program was to confirm the presence of uranium mineralization at Michelin as documented in the historic Brinex drilling, and also to try and extend the known zones below the previously tested vertical depth of 250 m. To that end, two twin holes were drilled in the upper portion of the A Zone, and eight holes were drilled on the down plunge projection of the A Zone to test the zone between 250 and 700 m vertical depth.

Details the individual holes are listed in **Table 4** and in the following summaries.

Table 4 – Summary of 2005 Michelin Drilling

Hole ID	Easting	Northing	Elevation	Azimuth	Dip	Final Depth
M-05-01	307024	6051967	336	332	-57	47.44
M-05-02A	306974	6051910	342	332	-65	28.04
M-05-02B	306974	6051910	342	332	-65	12.80
M-05-02C	306972	6051906	340	332	-65	460.55
M-05-03	306919	6051882	341	332	-65	480.67
M-05-04	306848	6051882	337	332	-70	487.38
M-05-05	306849	6051881	337	332	-85	581.56
M-05-06	306919	6051882	342	332	-85	578.50
M-05-07	306815	6051804	336	332	-80	549.55
M-05-08A	306920	6051742	335	332	-80	148.74
M-05-08B	306920	6051742	335	332	-80	11.28
M-05-08C	306920	6051742	335	332	-80	4.57
M-05-08D	306919	6051737	339	332	-80	801.01
TWM-05-174	307278	6052426	337	332	-90	203.61
TWM-05-92	307088	6052353	336	332	-45	151.49

Figure 11: Michelin Target Area, Plan Map of DDH Locations



13.1.2 Drill Hole Summaries

TWM-05-92 *(Site TWM-92/Az 332º/Dip -45º/TD - 151.49 m)*

This drill hole was targeted to twin and confirm the values returned from Brinex drill hole M-70-92. The best intersection from the previous hole was 11.28 m at 0.16% U3O8. Anomalous radiometric values were intersected in TWM-05-92 from 53.94 – 87.48 m which corresponds to the previous Brinex intercept. The hole was stopped at 151.49 m.

TWM-05-174 *(Site TWM-174/Az 332º/Dip -90º/TD - 203.61 m)*

This drill hole was designed to infill between Brinex drill holes M-76-174 and M-133. Anomalous radiometric values were returned from 139.60 – 167.03 m, and from 200.56 – 203.61 m. The hole was stopped at 203.61 m.

M-05-01 *(Site PDH-2/Az 332º/Dip -65º/TD - 47.5 m)*

This drill hole was designed as part of the first tier of Michelin exploration holes to test the down plunge extension of the Michelin ore body. The hole was only drilled to a depth of 47.5 m due to drilling problems and the drill was moved to M-05-02.

M-05-02A/B/C *(Site PDH-3/Az 332º/Dip -65º/TD – 460.55 m)*

M-05-02A/B were drilled on the first tier of Michelin exploration holes. Both drill holes were lost due to casing problems. M-05-02A was lost at 28.04 m. M-05-02B was lost at 12.88 m.

M-05-2C was drilled in a third attempt at the second Michelin exploration hole. The hole was stopped at a depth of 460.55 m. The hole cored a sequence of felsic metavolcanics cut by two sets of mafic dykes, pre/syn and post-kinematic. From 373.38 to 412 m, an interval of elevated radioactivity was observed corresponding to the down-dip extension of the Michelin ore body. The hole was stopped at 460.55 m.

M-05-03 (*Site PDH-3/Az 332º/Dip -65º/ /TD - 480.67 m*)

This hole was collared 50 m west of M-05-02C. The hole cored the typical Michelin sequence of felsic metavolcanic rocks cut by two sets of mafic dykes (both pre/syn and post-kinematic). An interval of elevated radioactivity was intersected in a strongly hematite-altered section of the felsic volcanic sequence from 377 to 435 m, corresponding to the down-dip extension of the Michelin ore body. The hole was stopped at 480.67 m.

M-05-04 (*Site PDH-13/Az 332º/Dip -70º/ /TD - 487.38 m*)

This hole was drilled 50 m west of M-05-03. The hole cored the typical Michelin sequence of felsic metavolcanic rocks and the two sets of mafic dykes. An interval of elevated radioactivity was intersected in a strongly hematite altered section of the felsic volcanic sequence from 340 to 390 m with cps up to 2800. The hole was stopped at 487.38 m.

M-05-05 (*Site PDH-13/Az 332º/Dip -85º/ /TD - 581.56 m*)

This hole was drilled beneath M-05-04 to intersect the mineralized zone observed in that hole. The hole cored the typical Michelin sequence of felsic metavolcanic rocks and mafic dykes. Elevated radioactivity was intersected in a strongly hematite altered felsic volcanic sequence from 444 – 500 m, cps ranging up to 4400. The hole was stopped at 581.56 m.

M-05-06 *(SitePDH-3/Az 332º/Dip -85º/TD - 578.51 m)*

This hole was part of the second tier to test 200 m down-plunge on the easternmost end of the A-zone. It was drilled on the same set-up as M-05-03 to a depth of 578.51 m, The core consisted of the typical Michelin sequence of felsic metavolcanic rocks and felsic intrusives, cross-cut by abundant pre/syn- and post-tectonic mafic dykes. Mineralization is hosted within moderately strained metamorphosed felsic volcanics, with pervasive hematite alteration, and abundant magnetite + amphibole (actinolite) + calcite veinlets. This zone occurs at a depth of 505.36 m through to 557.17 m, with cps values ranging from 475–6000. The hole was stopped at 578.51 m.

M-05-07 *(Site PDH-15/Az 332º/Dip -80º/TD - 549.55 m)*

This hole is part of the second tier to test 200 m down-plunge on the westernmost end of the A-zone, and was drilled to a depth of 549.55 m. The core consisted of the typical Michelin sequence of felsic metavolcanic rocks and felsic intrusives, and abundant pre/syn- and post-tectonic mafic dykes. Mineralization is hosted within strongly strained metamorphosed felsic volcanics, with patchy hematite alteration, and moderate concentrations of disseminated magnetite + amphibole (actinolite) + calcite. This zone occurs at a depth of 415.44 m through to 470.31 m, with cps values ranging from 260 – 1530. Another minor zone of anomalous radioactivity is present at a depth of 491.64 m to 525.17 m with values ranging from 220 – 370 cps. The hole was stopped at 549.55 m.

M-05-08A/B/C/D *(Site PDH-13/Az 332º/Dip-80º/TD – 801.01 m)*

This hole was collared to the south of M-05-02C to drill test the Michelin ore body beneath the second row of deep holes. Due to various problems such as deflection of the drill rods etc, the hole was re-started four times before finally being let run. The hole intersected the typical Michelin sequence of felsic-metavolcanics with anomalous to ore grade uranium mineralization intersected from 689.5 – 721.77 m. Maximum cps were 1350 at 709.50 m. The hole was stopped at 801.01m.

13.1.3 Discussion

Drill holes TWM-05-92 and TWM-05-174 were drilled as confirmation holes of Brinex drill holes M-70-92 and M-76-174 respectively. Lithologies and grades intersected show an excellent correlation with the Brinex data, as indicated in the comparison below.

Original

M-70-92

from	to	interval	%U3O8
57.52	68.79	11.27	0.162
81.75	83.88	2.13	0.258

Twin
TWM-05-92

from	to	interval	%U3O8
55.23	66.62	11.39	0.156
79.00	82.00	3.00	0.237

Drilling beneath the Michelin deposit provided encouraging results, with mineralized zones being intersected at the calculated depths in all seven completed holes **(Figure 12 and Table 5)**. The width of mineralized intervals intersected ranged from eight m in M-05-08D to a maximum of 63 m in M-05-06. The 2005 drilling was successful in extending the depth extent of uranium mineralization from a previous depth of 250 m to a current depth of 750 m and the zone remains open at depth and along strike.

Uranium mineralization in the Michelin drill holes was strongly associated with intense, pervasive hematite alteration and strong actinolite + calcite veining in strongly foliated felsic metavolcanic rocks. In non-mineralized zones above the Michelin ore body, abundant magnetite is present with the actinolite + calcite veining within a non-hematite-altered felsic metavolcanic rock. This magnetite is largely absent from the mineralized zones. Uranium mineralization generally consists of a broad zone of approximately 0.12 %U_3O_8, enveloping three zones, ranging in width from 5 – 20 m each, with grades ranging from 0.13 %U_3O_8 to 0.34 % U_3O_8.

Drill holes at Michelin deflected between 5 and 20° in azimuth, and shallowed between 6 and 18° in dip. Azimuths deflected to the north, with M-05-07 being drilled with an initial azimuth of 329° and finishing with an end of hole azimuth at 339°.

Figure 12: Michelin Target Area, Vertical Section showing 2005 DDH

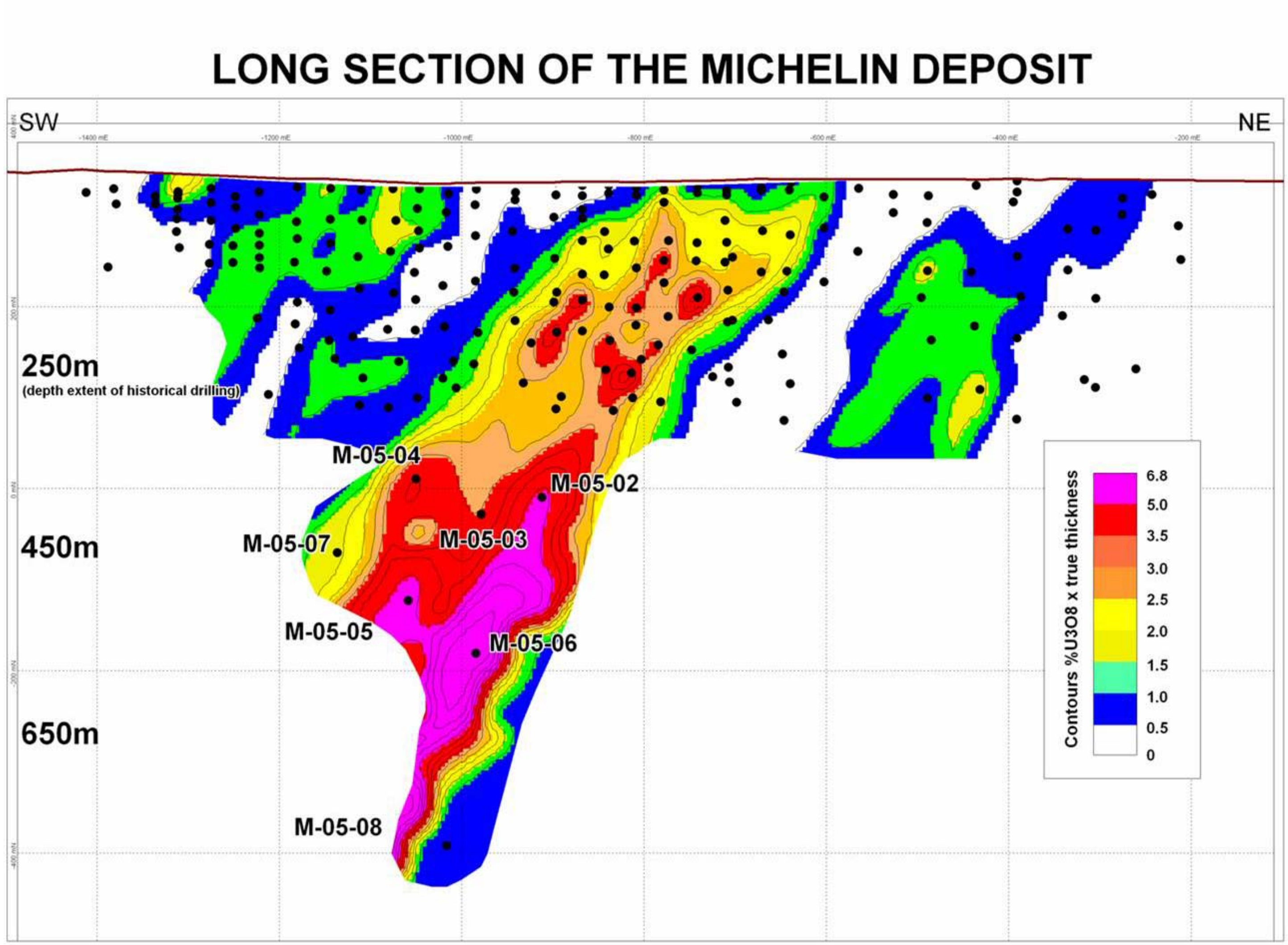


Table 5 – Summary of 2005 Michelin Assay Composites

Hole ID	From(m)	To(m)	Interval(m)	%U3O8
M-05-02C	369.53	412.33	42.80	0.12
incl.	369.53	377.83	8.30	0.15
and incl.	387.12	396.04	8.92	0.14
and incl.	402.72	412.33	9.61	0.24
M-05-03:	377.74	380.19	2.45	0.13
and	381.63	382.63	1.00	0.11
and	384.63	385.63	1.00	0.18
and	387.92	388.92	1.00	0.12
and	418.36	430.42	11.96	0.24
M-05-04	349.95	390.4	40.45	0.10
incl.	349.95	366.95	17.00	0.17
and incl.	349.95	356.95	7.00	0.25
and incl.	359.95	366.95	7.00	0.14
incl.	383.13	390.4	7.27	0.13
M-05-05:	442.75	499.54	56.79	0.09
and incl.	442.75	457.54	14.79	0.21
and incl.	466.47	474.5	8.03	0.12
and incl.	495.41	499.54	4.13	0.24
M-05-06:	485.97	549.47	63.45	0.11
Incl.	503.31	549.47	46.16	0.13
and incl.	503.31	511.16	7.85	0.13
and incl.	524.31	532.24	7.93	0.34
and incl.	542.34	549.47	7.13	0.28
M-05-07:	422.04	443.69	21.65	0.11
incl.	422.04	429.19	7.15	0.21
and incl.	422.04	426.14	4.10	0.24
and incl.	441.19	443.69	2.50	0.10
and	452.69	457.99	5.30	0.11
and	462.85	463.85	1.00	0.10
M-05-08:	689.5	697.65	8.15	0.10
and	706.82	707.32	0.5	0.32
TWM-05-92	55.23	66.62	11.39	0.16
and	79	82	3	0.24
TWM-05-174	152.05	166.36	14.31	0.18

13.2 OTTER LAKE TARGET AREA

13.2.1 Introduction

During the 2005 field season, a total of 10 diamond drill holes totaling **2,685.59 m** were completed on the Otter Lake property **(Figure 13**). Drilling was carried out between August 24th and October 2nd, 2005 on the Emben South, Emben Main and Emben Central target areas.

The goal of the 2005 drill program was to test known showings at Emben South, Emben Main, and Emben Central and to also transect the broad radiometric anomalies with fences of drill holes in an effort to locate a large low grade uranium deposit. Four drill holes were completed at Emben South, four at Emben Main, and two at Emben Central during the course of the two week program.

Details the individual holes are listed found in **Table 6** and in the following summaries.

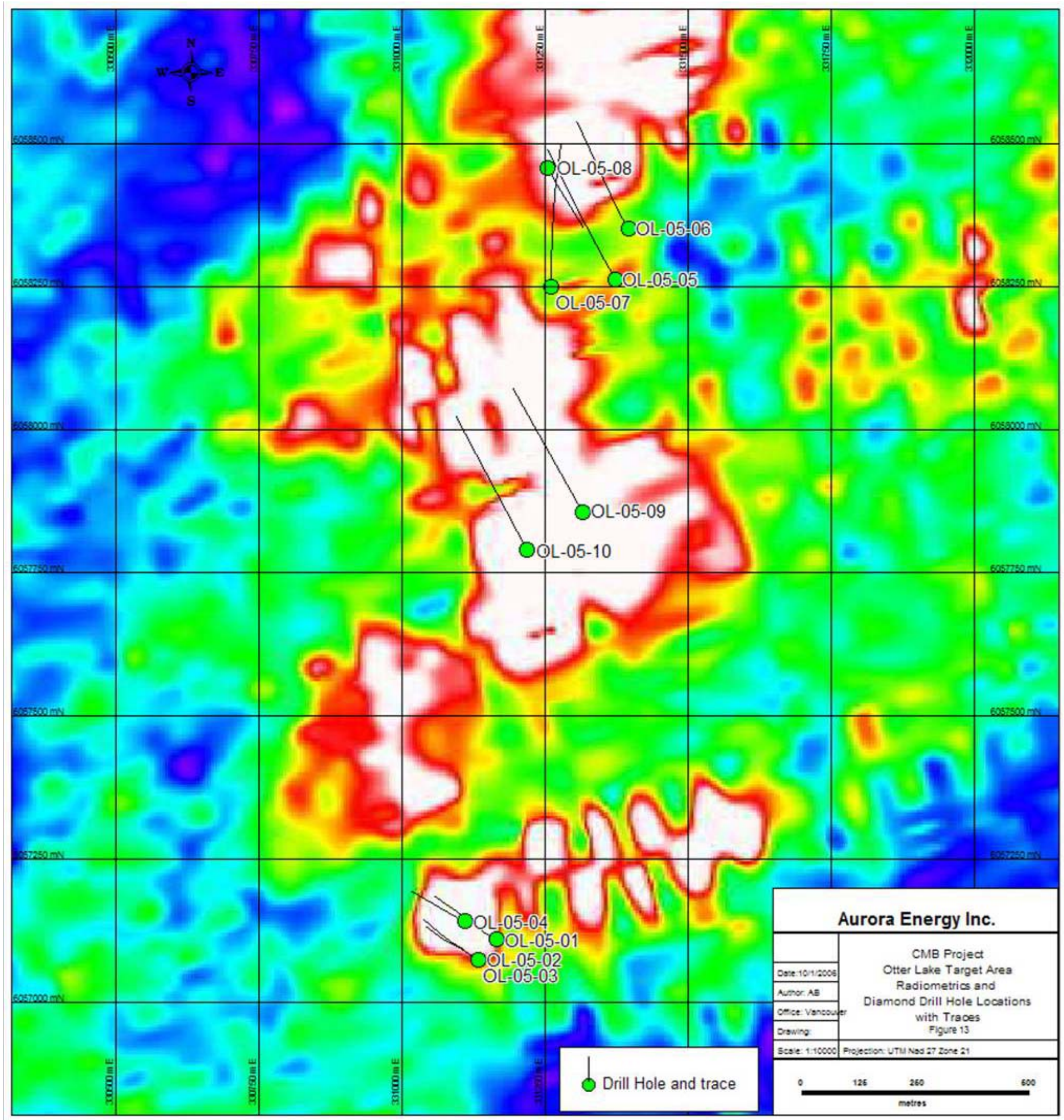
Table 6 – Summary of 2005 Otter Lake Drilling

Hole ID	Easting	Northing	Elevation	Azimuth	Dip	Final Depth
OL-05-01	331165	6057111	400	300	-45	181.96
OL-05-02	331134	6057075	402	300	-45	153.71
OL-05-03	331134	6057075	402	300	-60	224.64
OL-05-04	331110	6057142	408	300	-45	151.18
OL-05-05	331373	6058264	382	332	-45	350.52
OL-05-06	331396	6058353	385	332	-45	289.56
OL-05-07	331261	6058250	380	360	-45	349.91
OL-05-08	331256	6058458	380	152	-45	178.61
OL-05-09	331317	6057857	384	332	-45	356.92
OL-05-10	331220	6057790	388	332	-45	377.04

Emben South (Otter South) - Four drill holes, OL-05-01 to OL-05-04, were completed at the Emben South target on the south-western portion of the airborne radiometric anomaly. A cumulative length of 755 m in four drill holes intersected a sequence of primarily felsic metavolcanic rocks, with small amounts of porphyritic metavolcanic rocks, and cross-cutting pre/syn-kinematic mafic intrusions. Varying amounts of anomalous radioactivity are associated with intense, pervasive, hematite alteration, low magnetic susceptibility values, and proximity to pre/syn kinematic mafic intrusions.

Emben Main (Otter Main) - Drilling at Emben Main targeted the north-eastern portion of the airborne radiometric anomaly. A cumulative length of 1154 m in four drill holes, OL-05-05 to OL-05-08, tested a sequence of felsic metavolcanic rocks, with lesser amounts of porphyritic metavolcanic rocks, and pre/syn and post-kinematic mafic intrusions. As in other areas anomalous radioactivity is associated with intense,

Figure 13: Otter Lake Target Area, Plan Map of DDH Locations



pervasive, hematite alteration, low magnetic susceptibility values, and proximity to pre/syn kinematic mafic intrusions.

Emben Central (Otter Central) - Two drill holes, OL-05-09 and OL-05-10, were completed at Emben Central, targeting the central portion of the airborne radiometric anomaly. A cumulative length of 734 m drilling was completed in two holes which intersected a sequence of primarily felsic metavolcanic rocks, with small amounts of porphyritic metavolcanic rocks and cross-cutting pre/syn and post-kinematic mafic intrusions. As at Emben South and Main, anomalous radioactivity is related to intense, pervasive, hematite alteration, low magnetic susceptibility values, and proximity to pre/syn kinematic mafic intrusions.

13.2.2 Drill Hole Summaries

OL-05-01 *(Site OL-05-10/Az300º/Dip-45°/TD – 181.97 m)*

This drill hole was the first in a series of four holes designed to test the radiometric anomaly at Emben South. Previous work in area comprised a series of trenches with elevated radiometric values. No significant mineralization was intersected in the hole which was stopped at a depth of 181.96 m in a monotonous sequence of felsic metavolcanic rocks cut by a series of pre/syn-kinematic mafic dikes.

OL-05-02A/B *(Site OL-05-11/Az300º/Dip-45°/TD – 24.99 m and 199.03 m)*

These holes were further tests of the Emben South area. OL-05-02A was lost at 24.99 m due to unfavorable drilling conditions. OL-05-02B intersected a broad zone over 40 m long of 400 to 1200 cps from 96.11-142.40 m. The hole was stopped at 197.21m.

OL-05-03 *(Site OL-05-11/Az300°/Dip-60º/TD – 224.64 m)*

This hole was drilled from the same location as OL-05-03 at a steeper angle (60^{o}) to determine if the radioactive zone in the previous holes strengthened with depth. Patchy, weak mineralization was intersected between 51.36-174.15 m, but there was no significant or continuous zone of mineralization as in hole OL05-02B. The hole was stopped at 224.64 m.

OL05-04 *(Site OL-05-12/Az300°/Dip-45°/TD – 151.18 m)*

This hole was collared immediately south of the main Emben South trenches. Mineralization was intersected between 14.57-40.44 m (with cps values ranging between 300-61219) in a deep red, very intensely hematite-altered, strongly foliated fine-grained, weakly feldspar porphyritic, felsic metavolcanic unit. The most anomalous interval (37-9-40.44 m) was strongly magnetic, due to finely disseminated magnetite, and also contains abundant disseminated pyrite and chlorite present as veinlets. Patchy, weak mineralization was intersected between 9.54 to 109.72 m. The hole was stopped at 151.18 m.

OL05-05 *(Site OL-05-1/Az332º/Dip-45°/TD – 351.74 m)*

This drill hole was designed as the first of four holes to test the radiometric anomaly at Emben Main. Previous work in area included a series of trenches with elevated radiometric values. No significant mineralization was intersected in the hole and it was stopped at a depth of 351.74 m.

OL05-06 *(Site OL-05-2/Az300º/Dip-45°/TD – 273.82 m)*

This hole was the second of four holes designed to test the Emben Main area and was drilled immediately east of OL-05-05. Uranium mineralization was intersected from 248.50 to 255.21 m with cps values between 300 to 900, and in small zones from 256.69 to 273.82 m cps values were 300 to 500 cps. The hole was stopped at 273.82 m.

OL05-07 *(Site OL-05-8/Az360º/Dip-45°/TD – 349.91 m)*

This third hole at Emben Main was drilled due north under the main trenches on the north side of Telephone Pond in order to intersect the outcropping mineralization directly down-plunge. Mineralization was intercepted from 18.91 to 130.72 m with cps values ranging between 300 to 1000 and a maximum value of 2427 cps at 47.35 m. the hole was stopped at 349.91 m.

OL05-08 *(Site OL-05-9/Az152º/Dip-45°/TD – 178.61 m)*

This hole was drilled from north to south in an effort to draw closer to the outcropping mineralization in the trenches than was possible from the south due to the presence of numerous ponds. No significant mineralization was intersected in the hole and it was terminated at a depth of 178.61 m.

OL05-09 *(Site OL-05-5/Az332º/Dip-45°/TD – 356.92 m)*

This drill hole was the first of two planned holes to test the broad radiometric anomaly in the Emben Central Zone. No significant mineralization was intersected in the hole and it was stopped at depth of 356.92 m.

OL-05-10 *(Site OL-05-6/Az332º/Dip-45°/TD – 377.04 m)*

This hole was the westernmost hole in the Emben Central Target Area. The hole intersected a succession of altered and well foliated felsic metavolcanic rocks ranging to gneissic in texture. Alteration was described as silica+albite+epidote+K-fsp+hematite, of moderate to locally intense character. Anomalous radioactivity was encountered from 162 – 179 m with cps values from 560 – 765. The hole was stopped at 377.04m

13.2.3 Discussion

Drilling at the Otter Lake target area intersected a succession of variably quartz and feldspar porphyritic felsic metavolcanic rocks of the Aillik Group. This sequence was variably pervasively hematite-altered, with elevated uranium assay values corresponding to the most intense alteration. The sequence was cut by a series of mafic dykes with ages both pre and post-dating the main deformation event.

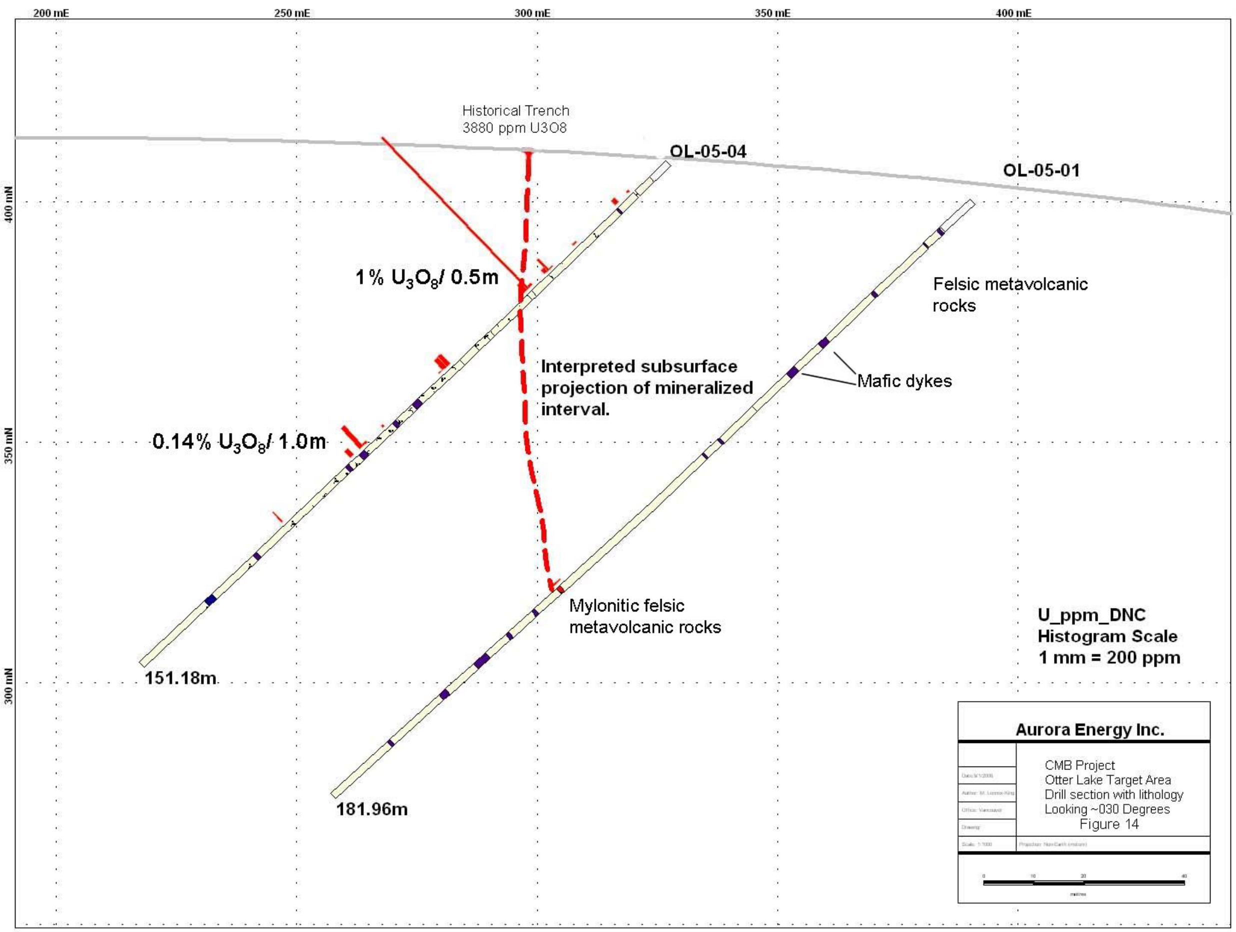
Intervals of uranium mineralization intersected during the Otter Lake drill program were generally narrow, 1 m or less, and in the range of 0.11 %U_3O_8 **(Table 7)**.

Subsurface projections of outcropping mineralization were generally not pierced during the drilling. The exception was 1.03%U_3O_8 over 0.5 m in OL-05-04 **(Figure 14)**. This interval represents the highest assay value from an exploration drill hole in the district and indicates the potential for further high-grade intersections at Otter Lake. In light of this high-grade intercept, it is proposed that follow-up drilling be carried out in the immediate vicinity, with the aim of expanding upon this result and potentially chasing it down-plunge similar to Michelin.

Table 7 – Summary of 2005 Otter Lake Assay Composites (*NSV* = no significant value)

Hole ID	From - m	To - m	Interval	%U3O8
OL-05-01 to OL-05-03:	***NSV***			
OL-05-04	37.94	40.44	2.50	0.23
Incl.	38.94	39.44	0.50	1.03
OL-05-04	86.42	87.42	1.00	0.14
OL-05-05	*NSV*			
OL-05-06	***NSV***			
OL-05-07	33.53	34.44	0.91	0.12
OL-05-08	***NSV***			
OL-05-09	269.44	269.94	0.51	0.11
OL-05-10	297.79	298.79	1.00	0.11

Figure 14: Otter Lake Target Area, DDH Cross-Section OL-04-01/OL-04-04



13.3 JACQUE'S LAKE TARGET AREA

13.3.1 Introduction

During the 2005 field season, a total of seven diamond drill holes with a cumulative length of **2,180.24 m** were completed on the Jacque's Lake property **(Figure 15).** Drilling was carried out from October 3rd - 31st, 2005 on the two main radiometric anomalies.

Four holes were targeted along the eastern branch of the airborne U/Th anomaly, with the remaining three targeting the western branch. Drill holes were designed to test the full subsurface projection of the airborne anomaly, as well as known uranium mineralization in outcrop. The holes targeting the eastern radiometric anomaly were drilled from the top of "Jacque's ridge", along an azimuth of 315°. Drill hole inclinations were from -50 to -55°, depending on steepness of the slope. The three remaining holes targeting the western branch of the radiometric anomaly were drilled at the base of the slope, west of "Jacque's ridge", with azimuth 315° and inclination -45°.

Details concerning the individual holes are listed in **Table 8** and in the following summaries.

Table 8 – Summary of 2005 Jacque's Lake Drilling

Hole ID	Easting	Northing	Elevation	Azimuth	Dip	Final Depth
JL-05-01	333182	6065979	293	315	-55	358.75
JL-05-02	333234	6066065	283	315	-55	327.66
JL-05-03	333127	6065913	283	315	-55	361.80
JL-05-04	333049	6065915	261	315	-50	303.28
JL-05-05	333036	6066262	192	315	-45	287.73
JL-05-06	333122	6066333	197	315	-45	282.55
JL-05-07	333218	6066421	209	315	-45	268.52
JL-05-08	333210	6066498	210	315	-45	250.00

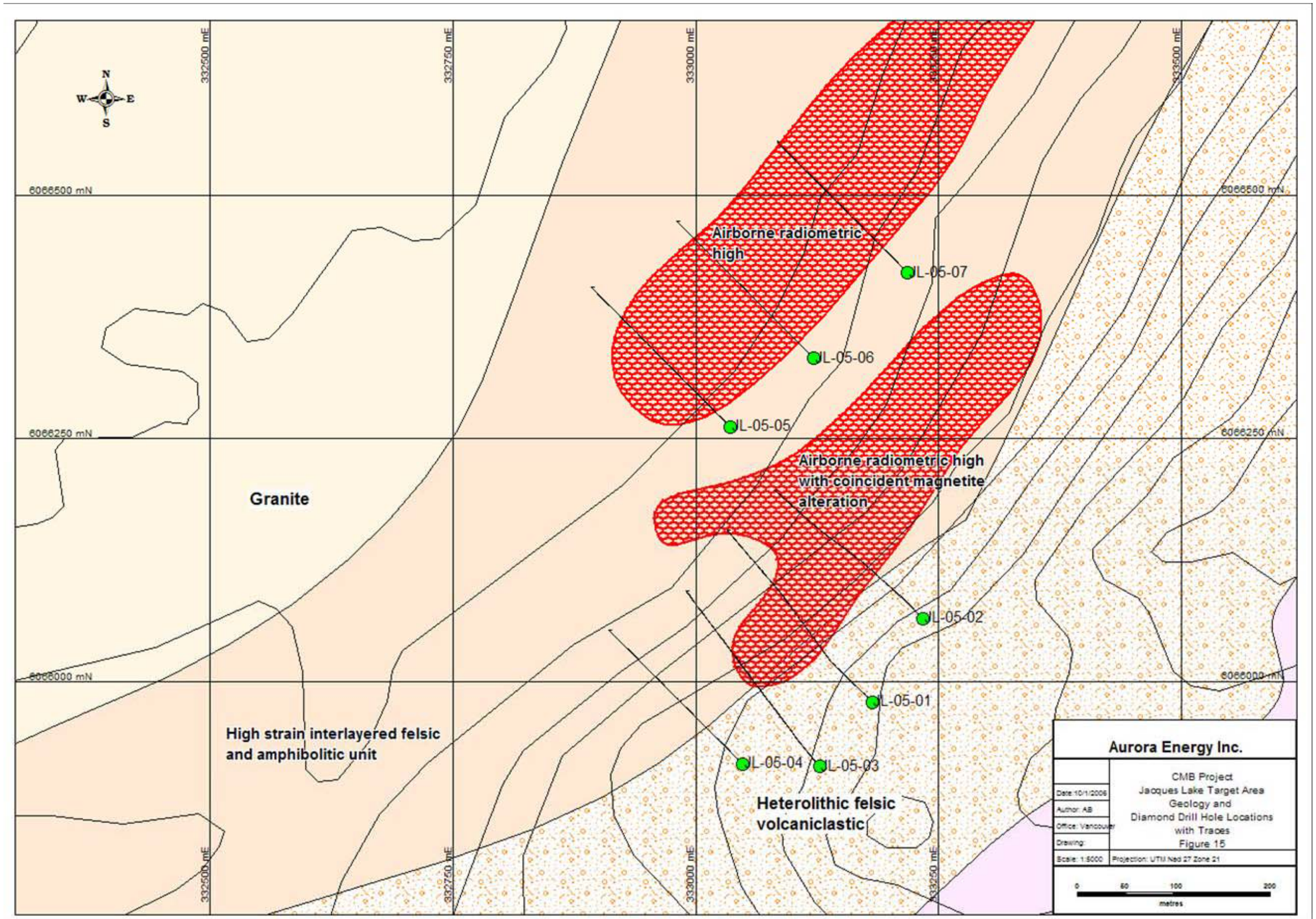
13.3.2 Drill Hole Summaries

Eastern Radiometric Anomaly

JL-05-01 (*Site JL-05-01/Az315°/Dip-55°/ TD - 358.76 m*)

This was the first hole targeting the eastern branch of the airborne radiometric anomaly. The hole intersected a sequence of heterolithic felsic meta-volcaniclastic rocks cut by abundant, both pre/syn and post-kinematic, mafic dykes. From 133-167 m, cps values ranged from 200 to 1021, and from 182-239 m, 200-1630. These intersections correspond to a sub-vertical subsurface projection of the known outcropping uranium mineralization. Anomalous radioactivity was hosted within a highly strained, moderate to strongly pervasively hematized felsic metavolcanic rock, with abundant magnetite+actinolite+calcite veining. The hole was stopped at a depth of 358.76 m.

Figure 15: Jacque's Lake Target Area, Plan Map of DDH Locations



JL-05-02 *(Site JL-05-02/Az315°/Dip-55°/ TD - 327.66 m)*

This was the second hole targeting the eastern branch of the airborne radiometric anomaly and is located ~100m north-east of JL-05-01. The hole intersected a sequence of felsic metavolcanics and abundant mafic dykes, both pre/syn and post-kinematic. Anomalous scintillometer values were recorded from 106-121 m, 151-173 m, 206 – 255 m, and 304 – 319 m. Counts-per-second from 206-255 m range from 180 to 1476. These intersections are consistent with a sub-vertical subsurface projection of the airborne uranium anomaly. As in JL-05-01, anomalous radioactivity was hosted within a very highly strained, moderate to strongly, pervasively hematized felsic metavolcanic rock, with abundant magnetite+actinolite+calcite veining. The hole was stopped at a depth of 327.66 m.

JL-05-03 *(Site JL05-03/Az315°/Dip-55/ TD - 358.75 m)*

This hole was drilled as the third hole targeting the eastern branch of the airborne radiometric anomaly. The collar was located ~100 m to the south-west of JL-05-01. The hole intersected a sequence of felsic metavolcanic rocks and abundant mafic dykes. Anomalous radioactivity was observed from 194-228 m, and from 240-280 m. Maximum cps ranged from 160 to 2055. These intersections are consistent with a sub-vertical subsurface projection of the airborne uranium anomaly. As in holes JL-05-01 and 02, anomalous radioactivity was hosted within a highly strained, moderate to strongly, pervasively hematized felsic metavolcanic, with abundant magnetite+actinolite+calcite veining. The hole was stopped at a depth of 358.75 m.

JL-05-04 *(Site JL05-04/Az315°/Dip/-50°/ TD - 303.28 m)*

This hole was the fourth hole targeting the eastern branch of the airborne radiometric anomaly. The hole was designed to test the south-west extension of mineralization intersected in JL-05-03. The collar was located ~80 m west of JL-05-03. The hole intersected a sequence of felsic metavolcanics cut by abundant mafic dykes, both pre/syn and post kinematic. Maximum cps values were in the range of 300-400 at a depth of 100-160m. These values are consistent with the projected extension of the airborne uranium anomaly. The hole was stopped at a depth of 303.28 m.

Western Airborne Radiometric Anomaly

JL-05-05 *(Site JL05-05/Az315°/Dip-45°/ TD - 287.73 m)*

This hole was the first hole targeting the western branch of the airborne radiometric anomaly. The hole intersected a sequence of felsic to intermediate metavolcanics cut by pre/syn and post kinematic mafic dikes. From 3.05-156.95 m, maximum cps values ranged from 300-2000 in three separate zones: (3.05-62.18 m) 150-1100 cps; (90.66-99.61 m) 150-1500 cps and; (132.30-156.95 m) 300-2000 cps. Anomalous radioactivity corresponds with intense veining/veinlets of magnetite + actinolite + carbonate. Zones with high strain hematite alteration, along with veining described above, contain the highest scintillometer values (1500-2000 cps). The hole was stopped at a depth of 287.73 m.

JL-05-06 *(Site JL05-06/Az315°/Dip-45°/ TD - 282.55 m)*

This hole was the second hole targeting the western branch of the airborne radiometric anomaly. The hole intersected a sequence of felsic to intermediate metavolcanic rocks cut by pre/syn and post-kinematic mafic dikes. No anomalous radioactivity was detected within this sequence. Maximum scintillometer values were 200-300 cps over less than 10 cm intervals, with cps decreasing to background levels on either side of these intervals. The hole was stopped at a depth of 282.55 m.

JL-05-07 *(Site JL05-07/Az315º/Dip-45º/ TD - 261.52 m)*

This hole was the third that targeted the western branch of the airborne radiometric anomaly. The hole intersected a sequence of felsic to intermediate metavolcanic rocks cut by pre/syn and post-kinematic mafic dikes. No anomalous radioactivity was detected in this sequence. Maximum cps values were 200-300 over less than 10 cm wide intervals, cps decreased to background levels on either side of these intervals. The hole was stopped at a depth of 261.52 m.

13.3.3 Discussion

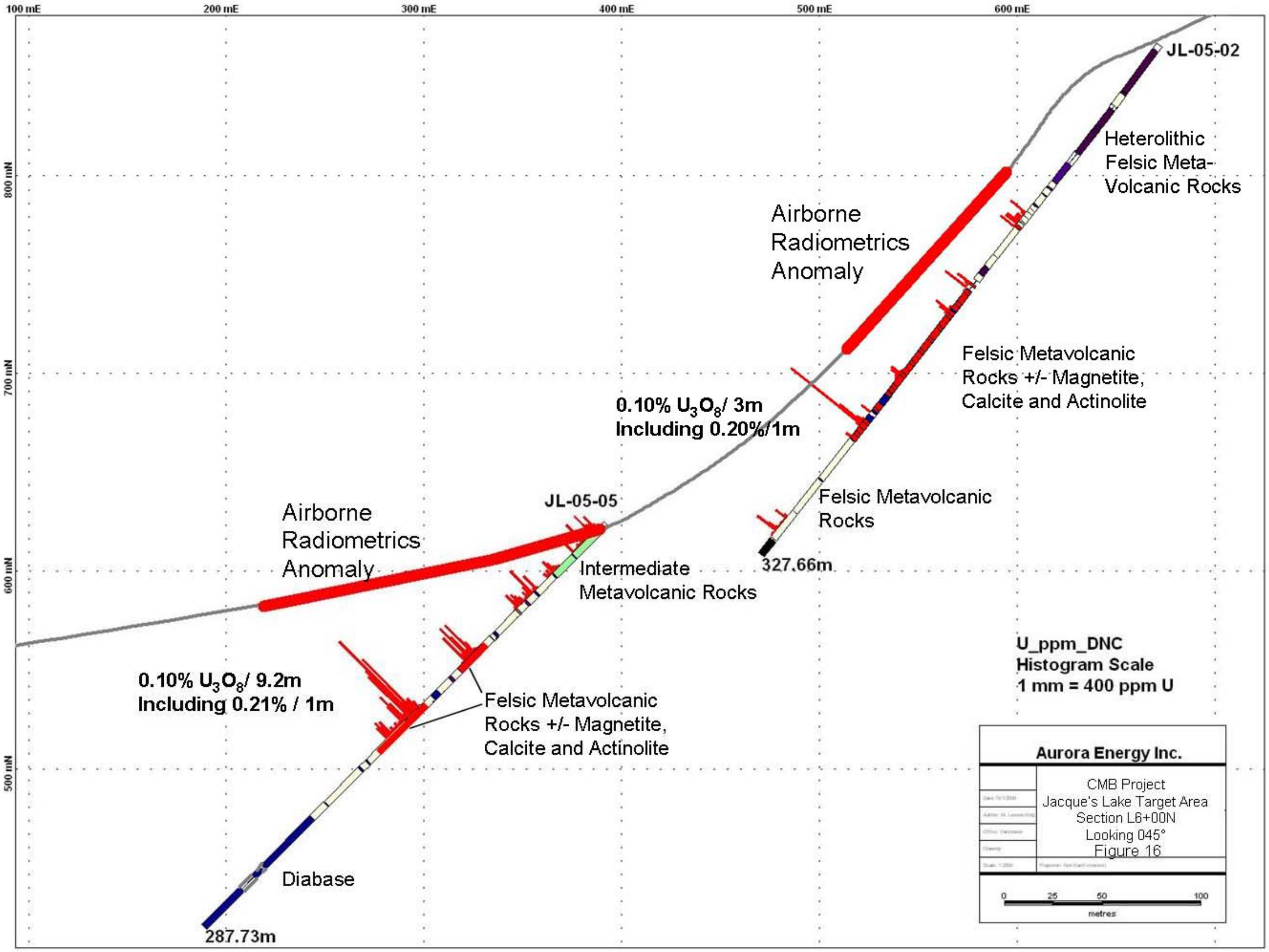
a) Eastern Radiometric Anomaly - Drill holes JL-05-01 through JL-05-04 were drilled from the top of the ridge to the south of Jacque's Lake over a 200 m strike length, in order to test the eastern branch of the airborne U/Th anomaly. All four drill holes intersected zones of anomalous radioactivity (>200 cps over several m) **(Figure 16 and Table 9).**

In drill core, a drastic increase in strain was observed from east to west, with the heterolithic volcaniclastic unit being relatively unstrained/unfoliated in the south-east and becoming progressively higher strain towards the north-west. The "cliff" at Jacque's Lake represents the centre of this high strain corridor.

Uranium mineralization observed in core was associated with a fine-grained to aphanitic high strain to mylonitic felsic metavolcanic unit. This unit is variably pervasively hematite-altered, with strong magnetite + actinolite + calcite veining. Anomalous intersections were generally broad and generally in excess of 10 m. High-grade values (*i.e.,* intersection with > 1000 cps) were generally discreet with down hole lengths of 20 cm maximum. Comparisons can be made with the Michelin mineralization in terms of a common strongly hematized and sheared felsic host rock, but the intensity of magnetite and calcite veining appears much higher at Jacque's.

b) Western Radiometric Anomaly - Drill holes JL-05-05 through JL-05-07 were drilled from the base of the ridge in order to test the western branch of the airborne U/Th anomaly. The southernmost hole, JL-05-05, drilled through the head of the anomaly, returned the most significant results from the Jacque's Lake drilling program with an intercept of **0.1 %U_3O_8/9.2m.**

Figure 16: Jacque's Lake Target Area, DDH Cross-Section JL05-02/JL-05-05



Drill holes JL-05-06 and JL-05-07, collared further to the north-east from JL-05-05, did not intersect any anomalous radioactivity downhole. The position of these drill holes corresponds to the main body of the western radiometric anomaly, indicating that this portion of the airborne anomaly may be a product of a boulder dispersion train, sourced from the outcropping mineralization in the south-western portion of the project area. This conclusion is supported by the presence of radioactive boulders, similar in appearance to outcropping mineralization, along the Jacque's Lake trend.

In summary (**Table 9**), drilling at Jacque's Lake intersected anomalous zones of uranium mineralization over a strike length of approximately 200 m. This may represent a continuous sheet or a series of individual uraniferous shoots. Observations from drill core include a strong stretching lineation of approximately 70° to the south-east so the potential exists for shoots similar in style and size to the main Michelin zones.

Table 9 – Summary of 2005 Jacque's Lake Assay Composites

Hole_ID	From (m)	To (m)	Interval	%U3O8
JL-05-01	159.08	164.08	5.00	0.10
and	231.00	232.00	1.00	0.10
JL-05-02	241.90	244.90	3.00	0.10
and	243.90	244.90	100	0.21
JL-05-03	245.00	249.00	4.00	0.10
JL-05-04	***NSV***			
JL-05-05	135.33	144.48	9.15	0.10
including	137.33	139.38	2.05	0.20
JL-05-06	***NSV***			
JL-05-07	***NSV***			

In light of the initial results from drilling at Jacque's Lake, an intensive follow up drill program is recommended for 2006. This drill program should test the down-dip and down-plunge extension of existing mineralization and the possible strike extensions of the known mineralized zones. As only 180 m of the 4000 m long radiometric anomaly have been tested, the potential for other discoveries along its length is considered excellent.

14.0 SAMPLING METHOD AND APPROACH

14.1 ROCK SAMPLING

Rock samples were collected using rock hammer or maul and averaged 1.0.5-2.0 kg. Locations were determined by hand-held GPS and descriptions entered into the appropriate Excel file. Samples were placed in polyvinyl sample bags with the reference sample tag, and then sealed with a plastic zip tie. Geochemical standards and blanks were inserted into the shipments at the discretion of the supervising geologist; normally every 25 samples.

14.2 SOIL AND SILT SAMPLING

Soil samples were collected from the lower 'B' horizon and/or upper 'C' horizon using a manual soil auger and/or a hand trowel at 25 m stations along the grid. The locations were recorded with hand-held GPS. These samples were individually placed in kraft paper bags with the sample reference tag and placed in security sealed plastic pails for shipment.

MMI samples were collected 15 cm below the 'A' horizon using a manual soil auger at 25 m stations along the grid. These samples were individually placed in kraft paper bags with the sample reference tag and placed in security sealed plastic pails for shipment.

Silt samples were collected from any stream intersected along the grid. Samples were manually sieved in the field and different mesh sizes were placed in individual kraft paper bags with the sample reference tag, and placed in security sealed lidded plastic pails for shipment.

14.3 HUMUS SAMPLING

Humus samples were collected from the base of the O-Horizon; the top, organic soil layer composed mainly of leaf litter and humus (decomposed organic matter). The samples were placed polyvinyl sample bag with the reference sample tag, and then sealed with a plastic zip tie. Sample locations were determined with a hand-held GPS. Samples were then placed, in sequence, in lidded security sealed plastic pails for shipment.

14.4 CORE DRILLING AND LOGGING

Diamond drilling was performed by Falcon Drilling of Prince George, B.C. using one F-1000 and one F-2000 portable fly rig. Drilling took place from August 20th, 2005 to November 2nd, 2005. All drilling was supervised by Fronteer/Altius technical staff and general industry standards in all matters were followed.

Helicopter support for the drilling was a Bell 407 (and alternatively a Bell L-4) provided by Universal Helicopters of Happy Valley-Goose Bay, Labrador.

All proposed drill collars were surveyed with hand-held GPS units by Fronteer/Altius geologists. All final drill collars were surveyed using the real-time, satellite and base station corrected TOPCON HYPER GPS system by N.E. Parrott C.L.S. from Happy Valley-Goose Bay, Labrador. Control was relative to two local survey monuments located at Michelin and Jacque's Lake.

BTW diameter core was drilled and the core was placed in wooden core trays with depth markers every drill run (up to 3 m). Core recovery during these programs was excellent. The boxes were securely sealed and delivered once a day by helicopter to the temporary core logging facilities that were set up in each of the three respective drilling areas (Michelin, Jacque's Lake, and Otter Lake). Reflex survey tests were taken generally at 75-100 m intervals down-hole to provide down-hole survey control. All holes were cemented following completion and casing was left in the hole. Core logging procedures followed industry standards and a defined sample protocol.

14.5 DRILL CORE SAMPLING

All samples collected by Fronteer/Altius staff during 2005 drill programs on the CMB Project were subjected to a quality control procedure that ensured a best practice in the handling, sampling, analysis, and storage of the drill core.

Drill core sampling was done based on visual indications of mineralization and zones of anomalous radioactivity based on scintillometer readings. Sampling intervals were predominantly in the 0.5 to 1.0 m range; though in areas of homogenous lithology, samples were collected in 1.5 m intervals as well narrow zones of mineralization were broken out as well.

14.6 TRACK ETCH SURVEY

Ground geophysical surveys using track etch cups, obtained and analyzed by Alpha Track, were conducted at the Otter Lake, Jacque's Lake, Melody Hill and Gear Lake prospects during the 2005 field season. The track etch cups use small cellulose-nitrate films sensitive to alpha particles emitted by radon gas, a daughter product of uranium.

The cups were buried in numerical sequence in holes ranging from 0.3 to 0.5 m depth along predetermined gridlines with 100 m spacing between each. The location of each cup was recorded using a hand-held GPS unit, marked with decomposable flagging tape, and left in place for a minimum of 30 days. Upon retrieval, the track etch cups were placed in shipping containers and sent to Altius Resources Inc. in St. John's, who forwarded the shipment to Alpha Track in Vancouver for analysis. The processing of the detectors entails the etching of the nitro-cellulose film. This etching process highlights the "tracks" caused by the alpha particles on the nitro-cellulose film. These tracks are counted optically and are proportional to the radon gas levels at the sample location.

14.7 SCINTILLOMETER SURVEY

Detailed scintillometer surveys were completed on the Jacque's Lake, Michelin, Melody Hill and Otter Lake prospects during the 2005 field season. These surveys consisted of field personnel walking the same gridlines as used for the track etch and geochemical surveys, using a hand-held scintillometer to measure background radioactivity. Measurements were recorded as "counts per second" (cps) at 12.5 m intervals, using a Exploranium GR-110 G Portable Gamma Ray scintillometer, with the locations benchmarked using hand-held GPS units. The data were imported into mapping software and used to correlate results from the airborne geophysical survey.

14.8 HEALTH AND SAFETY PROTOCOLS FOR PERSONNEL

The company developed ***Uranium Exploration Health and Safety and Environmental Protection Guidelines*** specific to the CMB project (Buchnea 2005). The guidelines provide workers with background information and procedures to ensure personal safety and proper handling of radioactive materials while working on the project.

The guidelines emphasized minimal handling of radioactive samples, maximizing the distance from mineralized core or rocks, sufficient ventilation and personal hygiene (washing hands before eating and not licking rock samples) as the most effective way to reduce potential exposure to radiation. In the field, workers wore gloves when handling rock samples and monitored their clothing prior to entering the helicopter at the end of the day with a Geiger Mueller detector attached to the Ludlum model 3-97 m. When returning to town, all field gear was stored in a central location away from kitchen and sleeping facilities. During the drill program workers handling mineralized core were required to wear coveralls, safety glasses, gloves and dust mask when splitting core. Core was kept wet and split using a core splitter rather then a rock saw to reduce dust in the core splitting facility. The core shack facilities were monitored on a regular basis to ensure radioactive levels were kept to a minimum.

Scintillometers were used to monitor daily external dosages. To measure the cumulative external dosages, all field workers were supplied with thermo luminescent radiation dosimeters (TLDs). The TLD's were supplied by Health Canada's National Dosimetry Service and were submitted every 3 months to Health Canada, which reports the results and maintains a central registry. The Health Canada TLD dosimetry program indicated that no worker received a measurable dose during the 2005 exploration program.

15.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

15.1 DRILL CORE SAMPLES

Core samples were split using a manual core splitter; with one-half of the core selected for analysis and the remaining half returned to the core box for reference. The samples were placed in a polyvinyl sample bag with the reference sample tag, and then sealed with a plastic zip tie. Every 25 samples a duplicate of one-quarter of the sample interval, as well as a geochemical blank, and a geochemical standard were inserted into the shipments at pre-designated locations in the sample series. The pails were then delivered by helicopter to the main Fronteer/Altius storage facility in Postville, Labrador to await processing for shipment.

15.2 SHIPPING

Once in Postville, Labrador, the rock, soil, silt, humus, drill core sample buckets were double checked to ensure all samples were present and in the appropriate shipping containers (lidded plastic pails). In addition, rock and drill core samples were individually scanned with Exploranium GR-110 G Portable Gamma Ray scintillometer for data correlation purposes.

As per regulations for the Transportation of Dangerous Goods Act, all containers were labeled “UN2910” on the outside, with signage indicating “Excepted Package: Radioactive Material” placed within each container. The individual containers were then scanned with a S.E. International Inc. “Inspector” contamination meter to ensure compliance with the maximum allowable limit of 5 µSv/hr measured at a distance of one m from the package.

Analytical request forms from Activation Laboratories Ltd. were completed, copied, and placed in the designated container. Pails were then sealed with numbered security “zip-tie” tags, which were previously recorded on the laboratory forms. The containers were shipped from Postville to CAI Logistical Services in Happy Valley-Goose Bay, who arranged shipment via truck to the Activation Laboratories in Ancaster, Ontario.

15.3 ASSAY LABORATORY

The processing and analysis of samples was conducted by Activation Laboratories (“Actlabs”) in Ancaster, Ontario and check samples were sent to SGS Laboratories in Mississauga, Ontario. Both Actlabs and SGS operate according to the guidelines set out in ISO/IEC Guide 25 – “General requirements for the competence of calibration and testing laboratories”.

15.4 SAMPLE PREPARATION (Activation Laboratories, Ancaster, Ontario)

15.4.1 Soil and Silt Preparation

Soil and silt samples were dried at 60 ºC and sieved with -80 mesh to obtain material suitable for analysis.

15.4.2 Humus Preparation

Humus and vegetation samples were dried at below 60°C and then blended to obtain material suitable for analysis.

15.4.3 Rock and Drill Core Preparation

Using preparation method RX-1, rock and drill core samples were crushed up to 75% passing 2 mm, mechanically split (riffle) to obtain a representative sample and then pulverized using hardened steel to 85% passing 75mesh. Remaining pulps and coarse reject were bagged and stored.

15.5 ASSAY PROCEDURES (Activation Laboratories and SGS Laboratories)

For rock, drill core, soil, and silt samples, uranium was determined by delayed neutron counting (DNC) of a 30 g sub-sample. The samples are placed in a neutron flux produced by a nuclear reactor where the U^{235} within the sample absorbs neutrons which indicate some of the fission products of U^{235}, including neutrons. The sample is rapidly removed from the reactor; the neutrons are thermalized, and measured by an array of BF_3 neutron detectors. Total uranium from 0.1 ppm up to 2% U_3O_8 can be measured using this method.

For rock, drill core, soil, and silt samples, the ICP/OES aqua regia multi-element package provides analytical results for a suite of thirty-five elements. Samples were prepped and pulped, with 0.5 g of sample undergoing digestion with aqua regia (0.5 mL H_2O + 0.6 mL concentrated HNO_3, and 1.8 mL concentrated HCl) for two hours at 95^{o}C, then cooled and diluted to 10 mL with de-ionized water and homogenized. This solution was then analyzed with a Perkin-Elmer OPTIMA 3000 Radical ion-coupled plasma (ICP) spectrometer for the 35 element suite, with a matrix standard and blank inserted every thirteen samples.

For humus samples, a six to fifteen gram humus sample is compressed under 30 tons of pressure to form a briquette (smaller samples are weighed in vials). Briquettes are stacked and irradiated at a thermal flux of 7×10^{12} n cm^{-2} s^{-1} for 15 minutes. After a seven-day decay, samples are counted on a high purity Ge Detector with a resolution of better than 1.7 Kev for the 1332 Kev photopeak. Intensities for gamma rays are decay corrected and compared to a calibration developed from multiple certified reference materials. Additional analysis was conducted using package 2C1-Vegetation Ash – ICP-

OES for Ag, Cu, Mo, Ni, Pb and Zn. This analysis consists of vegetation samples being ashed at 475° over a 24 hour period. The ash sample is then digested with aqua regia for 2 hours at 95°C and analyzed by ICP using a Perkin Elmer Optima 3000.

Selected soil samples were analyzed at the SGS laboratories in Mississauga, Ontario using the MMI-M5 package. The MMI-M5 package is a 32 element analysis package, including uranium. The MMI-M5 was specifically selected for the Gear orientation program due to the large suite of elements available, and the relatively low cost per sample compared to other MMI packages available.

Assays results from both Actlabs and SGS were forwarded electronically and by regular mail to Fronteer's office in Vancouver where the final assay certificates are presently on file and catalogued.

15.6 STORAGE OF DRILL CORE PULPS AND REJECTS

All drill core has been left on site at Michelin, Otter Lake, and Jacque's Lake camps in cross-stacked piles.

All pulps and coarse rejects are currently stored at the Actlabs facility in Ancaster, Ontario and will remain there until Actlabs is otherwise advised.

16.0 DATA VERIFICATION

Upon receipt of analytical batches, blanks, standards and duplicates were examined for evidence of laboratory contamination, analytical error, assay reproducibly and drill-bit contamination.

16.1 STANDARDS

Standards were used to test the accuracy of the assays and to monitor the consistency of the laboratory. A total of five different standards were purchased the Canadian Certified Reference Materials Project, Natural Resources Canada, for use during the 2005 CMB Regional Program. The standards chosen were designed to test the accuracy of the assays from low, 220 ppm uranium, through to high grade, 10,200 ppm uranium. The published standard information is summarized in **Table 10**.

Table 10 - CMB 2005 Exploration Program Geochem Standards

Standard	Field ID	U ppm	%U3O8	Th	Ni
BL-1	STD-1	220	0.0260	15 ppm	
BL-4A	STD-2	1248	0.1473		
RL-1	STD-3	2010	0.2372	19.6 micro g/g	185 micro g/g
BL-2	STD-4	4530	0.5345	16 ppm	
BL-3	STD-5	10,200	1.2036	15 ppm	

Standards were systematically inserted into the sample sequence every 25 samples. To date a total of 69 standards have been submitted to Actlabs for analysis. The majority of standards submitted to date have been STD-1 and STD-2, due to the generally low grade nature of mineralization in the CMB.

Standards with Field ID STD-1, STD-3, STD-4 and STD-5 generally returned U ppm values well within accepted ranges **(Chart 1).** Standard STD-2 consistently returned values at least 100 ppm above the published value **(Chart 2).** The average difference between the published uranium ppm value for STD-2 and assayed values was 124 ppm uranium. These assay results are summarized in **Table 11**. With the rest of the standards returning generally acceptable values, it is likely that the high assays of STD-2 are due to a problem with standard preparation at source rather than a systematic problem in the lab.

Table 11 - CMB 2005 Exploration Standard 2 Statistics	ppm
Average Difference ppm:	124
Minimum Difference ppm:	82
Maximum Difference ppm:	166

Chart 1 – CMB Project – All Standards – Returned vs. Published U ppm

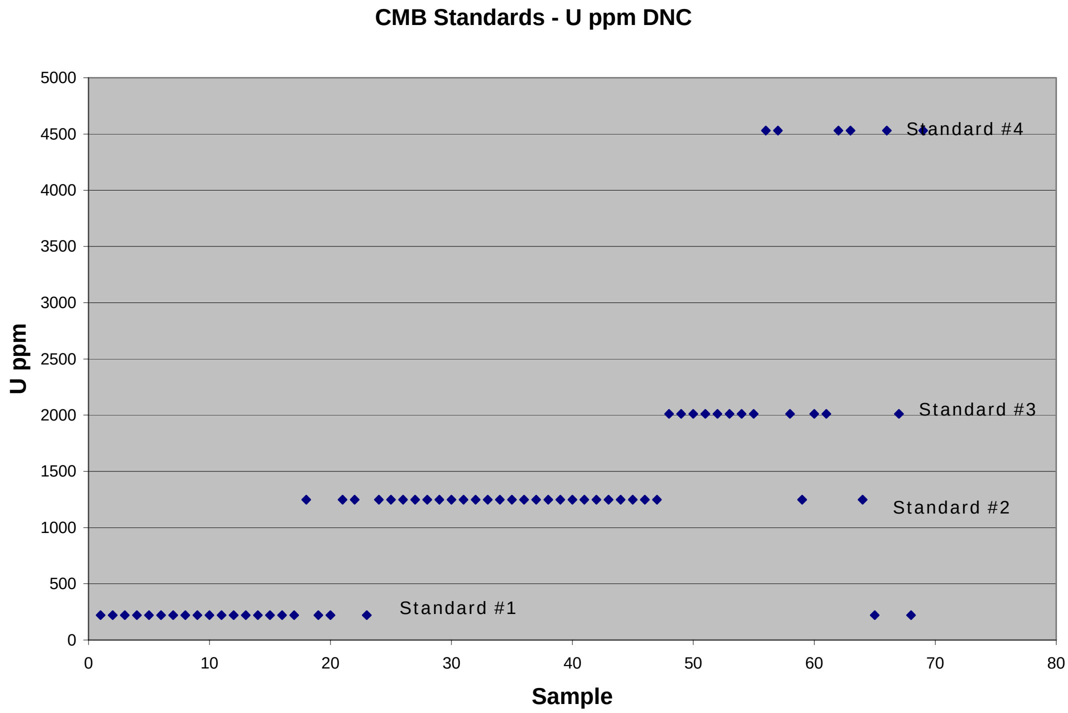
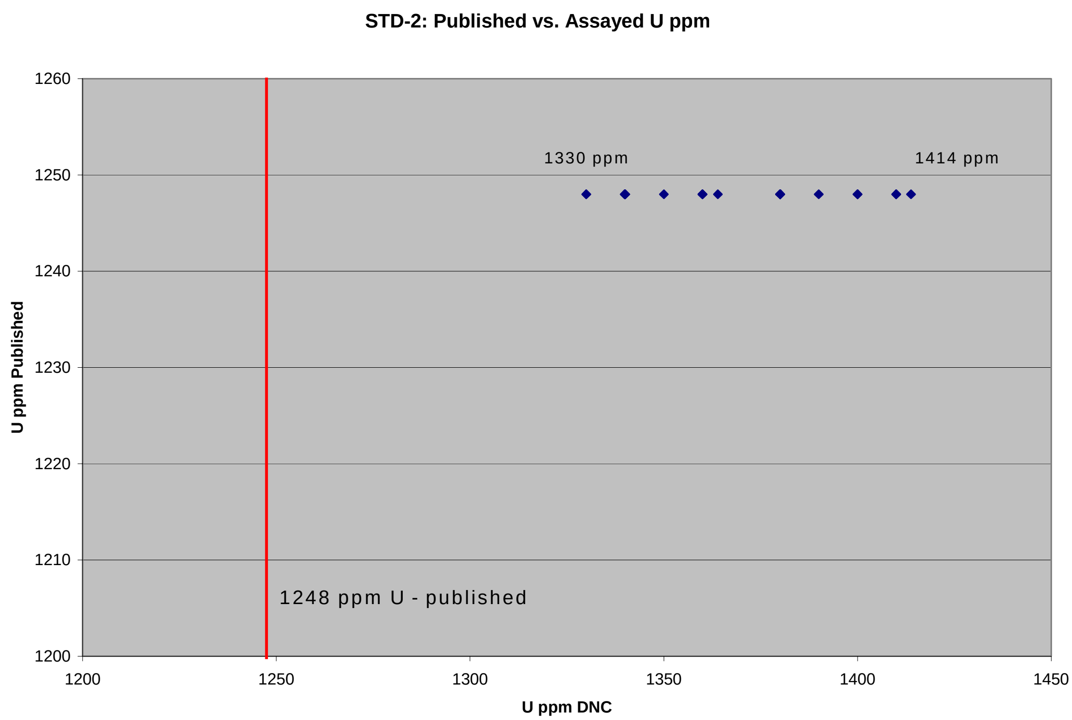


Chart 2 – CMB Project – Standard 2 – Returned vs. Published U ppm



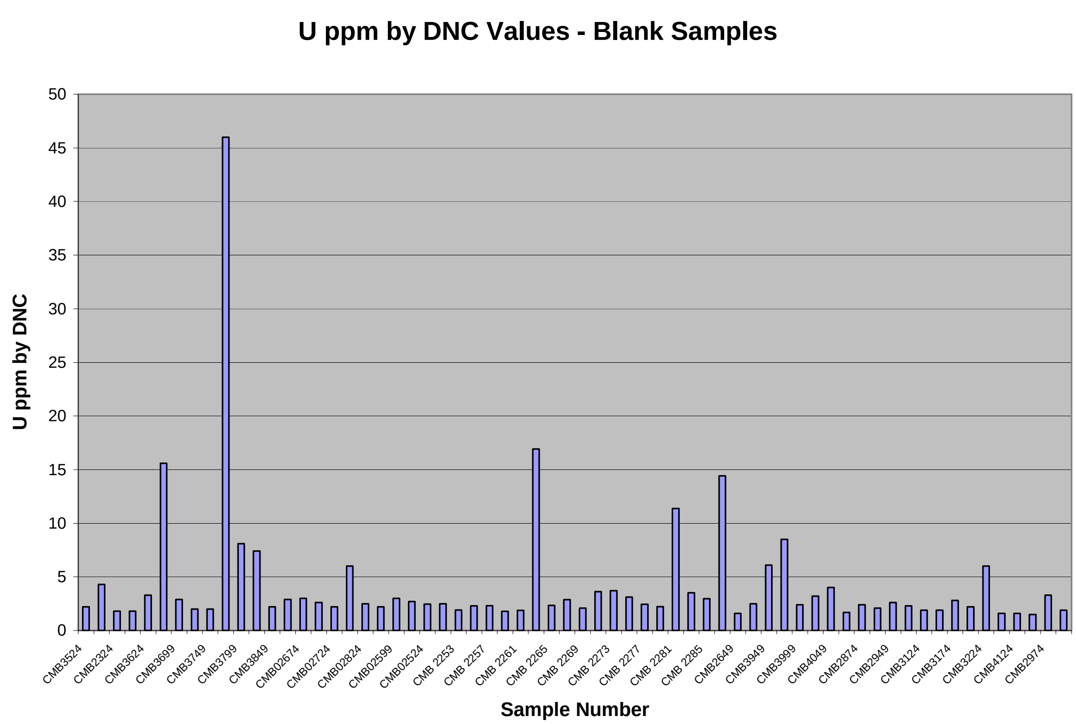
16.2 BLANKS

Blanks are generally used to check the cleanliness of the laboratory and should produce negligible uranium results on a consistent basis. Blank material was sourced from a large gabbroic boulder on the southern shore of Kaipokok Bay. Results returned from this material were very low, with 63 of 64 blanks returned assaying less than 20 ppm U. One blank returned a value of 46 ppm, which, while elevated with respect to average returned, is still negligible. This sample was in a part of the sample sequence with generally low uranium values, and as such, lab contamination is not suspected. The problem may lie with the blank material itself so a re-run of the coarse reject is recommended.

To date 64 assay results for 64 blank samples have been received from Actlabs. These data are summarized below and in **Chart 3.**

Average	4.3
Median	2.5
Max	46
Min	1.5

Chart 3 – CMB Uranium Project – Blank Data Results



16.3 CORE DUPLICATES

Duplicate samples are used to monitor sample batches for potential mix-ups and monitor the data variability as a function of both laboratory error and sample homogeneity. Duplicate core samples were systematically taken every 25 and 26 samples. The duplicate core samples are comprised of one-quarter split drill core, covering the same sample interval.

To date analyses have been received for a total of 80 core duplicate samples for the 2005 CMB Drill Program. The results of these analyses are presented in the **Charts 4 and 5** below. Core duplicate samples returned differences between 0 and 220 ppm U by Delayed Neutron Counting (DNC). Thirty-three of 40 pairs of duplicate samples had a relative difference of less than 100 ppm uranium. This indicates reasonable sample homogeneity in mineralized CMB rocks.

Chart 4 – CMB Project – Core duplicates – U ppm assays.

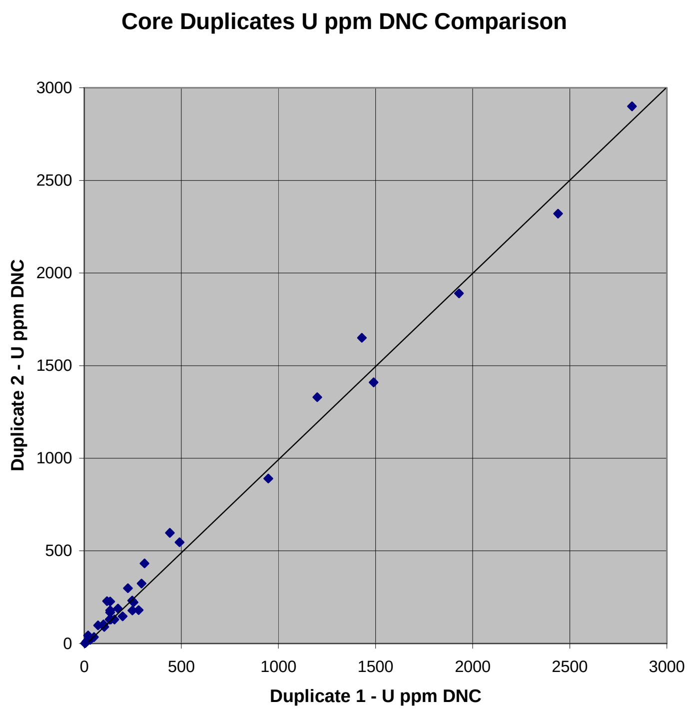
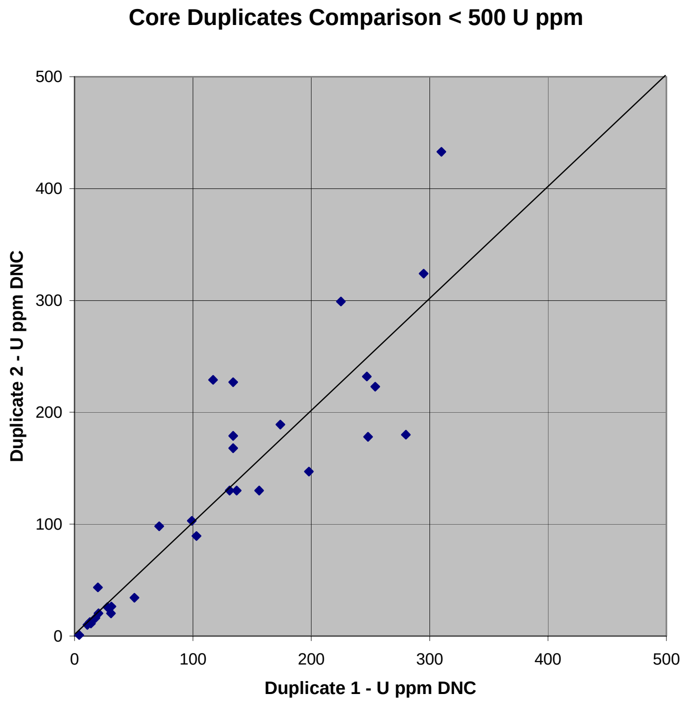


Chart 5 – CMB Project – Core duplicates – U ppm assays, <500 U ppm



16.4 CHECK ASSAYS

A protocol was initiated to send the pulps of all samples that assayed over 1000 ppm uranium to second laboratory for check analysis. This approach is used to identify variations in analytical procedures between laboratories, possible sample mix-ups, and whether substantial biases have been introduced during the course of the project. The secondary laboratory selected was SGS XRAL, in Toronto, Ontario. A total of 115 samples were selected for check assay analysis, representing all samples, both rock and drill core, greater than 1000 ppm.

Check assays were analyzed using the procedure ICA-50 for uranium, with results returned as %U_3O_8. Procedure ICA-50 is an element specific, quantitative, ICP based analysis recommended by RPA.

Average	0.02
Maximum	0.11
Minimum	-0.38

Results from the check assays were on average 0.02% U_3O_8 lower than those received from Actlabs. A maximum difference of 0.11% U_3O_8 was observed, with a minimum of -0.38% U_3O_8. This last result is likely due to a lab issue rather than extreme variability in the sample material. When this sample is discounted, the minimum difference becomes -0.01 %U_30_8. The consistent difference between the two sets of results is most likely due to the different analyses used.

A further eight standards were submitted with this shipment. Results from the analysis of the standards were drastically different from those sent to Actlabs, with STD-2 assaying approximately 60 ppm less than the published values in four out of four standards analyzed. The higher grade standards returned progressively larger differences between the published and returned $\%U_3O_8$ values, with STD-5 returning a value of 370 ppm less than the expected. It is recommended that this discrepancy be presented to SGS and the samples be re-run to confirm the results. Results are summarized in **Table 12**.

Table 12 – Check Assays – Summary of Standards

Sample_ID	STD-#	Published U ppm	Published %U3O8-calc	U3O8 ICA50 0.01%	Published %U3O8 calc-%U3O8 ICA50
CMB03228	1	220	0.03	0.02	0.01
CMB03227	2	1248	0.15	0.14	0.01
CMB03229	2	1248	0.15	0.14	0.01
CMB03231	2	1248	0.15	0.14	0.01
CMB03233	2	1248	0.15	0.14	0.01
CMB03230	3	2010	0.24	0.22	0.02
CMB03232	4	4530	0.53	0.51	0.02
CMB03234	5	10200	1.20	1.16	0.04

17.0 ADJACENT PROPERTIES

The Mustang Lake property, held by Monster Copper and Santoy Resources, is located eight km north-east of the Michelin Deposit. Three boulder trains were discovered on the Mustang Lake property by Brinex in the late 1970's. These are the Irving Zone, where 117 boulders averaged 1.28% U_3O_8 (range 0.09 to 6.25%); the South Prospect, where 40 boulders averaged 0.55% U_3O_8 (range 0.02 to 3.5%); and Mustang Lake East, where 22 boulders averaged 0.1% U_3O_8 (range 0.02 to 0.6%). Santoy has confirmed the existence and distribution of the three boulder trains by prospecting during the past field season. Santoy's assays from grab samples of boulders in the boulder trains are 1.60% U_3O_8 from Irving Zone, 0.32% U_3O_8 from South Prospect and 0.46% U_3O_8 from Mustang Lake East (Monster Copper Press Release, January 18, 2006).

The Moran Lake Property, held by Crosshair Exploration, lies approximately 65 km west of the Michelin Deposit and 75 km south-west of Postville. Exploration in the Moran Lake area started in the 1950's. Detailed exploration was initiated in 1976, when Shell Canada began several trenching and subsequent drilling programs on two mineralized zones. Drilling produced several high grade drill intersections including 0.56% U_3O_8 over 3.99 m. Uranium mineralization at Moran Lake occurs in two areas known as the B and C Zones, located approximately 3 km apart. Shell Canada reported that the Upper C Zone hosts an inferred geological resource of 500 tonnes (1.1 million pounds) of contained U_3O_8, whereas the Lower C Zone has a potential resource of 2,236 tonnes (4.92 million pounds) of contained U_3O_8 (Crosshair Press Release, Wednesday, November 23, 2005).

18.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Application of the conventional acid leach-solvent extraction process for uranium to produce yellowcake was part of the mining proposal for the Kitts-Michelin deposits made by Brinex in the late 1970's. Recoveries of 95% or better were indicated for sulphuric acid leach tests on 65-75%, minus 200 mesh material, for a duration of 48 hours at a pH of 1.5 (Lakefield Research, 1976).

19.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Calculations of mineral resources are not presented as part of this report. However, historical resource estimates for prospects in the Kitts-Michelin area of the Central Mineral Belt as documented in the Canadian Geological Survey Mineral Occurrence Database are listed in **Table 13.**

A new 43-101 compliant resource calculation for the Michelin Deposit has been prepared by Roscoe Postle Associates of Toronto, Ontario based on the historical Brinex work and new 2005 drilling. Details of this resource can be found in the 43-101 Report prepared by RPA titled "Technical Report on the Michelin Uranium Deposit, Newfoundland and Labrador, Canada" and are summarized in **Table 14**.

Table 13. Historical Resource Estimates for Uranium Prospects in the Kitts-Michelin area, Labrador

Prospect	Tonnes	Grade (wt% U_3O_8)	Tonnes U_3O_8
Michelin	6,426,095	0.130	8,354
Kitts	184,957	0.730	1,350
Rainbow	270,000	0.100	270
Burnt Lake	<140,000	0.082	115
Inda	514,000	0.155	797
Gear	77,000	0.145	112
Nash	216,000	0.224	484

Note: source is Geological Survey of Newfoundland and Labrador Mineral Occurrence Database

Table 14 – 2005 Resource Estimate (Roscoe Postle Associates, 2006)

Category	Tonnes	Grade (wt% U_3O_8)	Pounds U_3O_8
Measured	342,000	0.113	851,000
Indicated	8,615,000	0.113	21,374,000
Inferred	4,116,000	0.148	13,360,00

20.0 OTHER RELEVANT DATA AND INFORMATION

The Nunatsiavut Government came into effect December 1st, 2005. The current Board of the Labrador Inuit Association became the transitional government which will be in place until an election is held. The Nunatsiavut Government will operate on a consensus basis rather than an adversarial party system. The Nunatsiavut Government will observe federal and provincial laws and, in time, take greater control over policy.

The effective date marks the transition of the Labrador Inuit Lands Claims Agreement into a legal and constitutional reality.

Sections of the Agreement which deal specifically with exploration interests in Labrador are Part 4.11 Subsurface Interests and Part 4.12 Subsurface Resource Development in Labrador Inuit Lands. For the purposes of this report, the following paraphrased parts are of note:

- Administration of subsurface resources in the Labrador Inuit Settlement Area rest with the Province (4.11.1). The Province is obliged to consult with the Nunatsiavut Government about conditions to be attached to a subsurface interest in Labrador Inuit Lands (4.12.4).
- Exploration of Labrador Inuit Lands requires approval of an application in the form of a work plan made to the Nunatsiavut Government and the Province (4.11.13(b)). Fifteen days is indicated as the time frame for processing applications. Approval from both the Provincial and Nunatsiavut governments is required before work can proceed.
- Explorationists must obtain consent from the Nunatsiavut Government for access to Labrador Inuit Lands (4.11.13(a)).
- Development of a subsurface resource in Labrador Inuit Lands requires an Inuit Impacts and Benefits Agreement with the Nunatsiavut Government (4.12.1).

21.0 INTERPRETATION AND CONCLUSIONS

The 2005 Field Program was highly successful in extending both the known zone of mineralization at the historic Michelin Deposit and also discovering new zones in the CMB District through the application of modern ideas and exploration technologies.

21.1 MICHELIN TARGET AREA

The 2005 drill campaign successfully confirmed the presence of uranium mineralization in the upper portion the historic Michelin A Zone as documented in the previous work by Brinex. The lithologies and assay intercepts in the two new twin holes, TWM-05-92 and TWM-05-174, showed an excellent correlation to those reported in the original holes, M-70-92 and M-76-174, providing Aurora staff with a high level of confidence in the caliber of the work carried out by Brinex.

Of the seven new completed holes drilled on the down-plunge extension of the Michelin A Zone, all seven intersected the Michelin mineralization where projected, with comparable and/or higher grades and/or widths to those holes that pierced the upper portion of the zone (*i.e.*, **0.11 %U_3O_8/63.45 m** in DDH M-05-06). As a result of this work, the Michelin A Zone has now been extended from a vertical depth of 250 m to almost 700 m, translating into a new dip length of almost 1000 m. The zone remains open for expansion at depth and along strike and the potential for the continuation of the zone below 700 m vertical depth is considered excellent.

More work is recommended to: a) infill the 2005 drill pattern to bring the zone to an indicated resource category; b) continue testing the down-plunge extension of the zone to at least 1000 m vertical depth; and c) test similar shoots along strike for similar down-plunge potential.

21.2 OTTER LAKE TARGET AREA

The Otter Lake Target Area was drill tested for the first time in the fall of 2005 as a follow-up to an aggressive summer field program. The Otter Lake target is characterized by a broad 3 km^2 radiometric anomaly with over 700 widespread radioactive boulders and less than 5% bedrock exposure.

Aurora intersected anomalous levels of uranium in four of ten drill holes completed during the drill program in three distinct areas within the main radiometric anomaly. The most encouraging results came from Otter South, where DDH OL-05-04 intersected **1.0% U_3O_8/0.50 m** as well as a separate interval assaying **0.14% U_3O_8 over 1.0 m**. The mineralization within this high grade interval was hosted within a deep red, very intensely hematite-altered, strongly foliated, fine-grained, weakly feldspar porphyritic, felsic metavolcanic unit with abundant fine magnetite, pyrite and chlorite as veinlets. The assay from DDH OL-05-04 represents the highest grade drill intercept in an exploration hole to date on the CMB Project (excluding historic Michelin drill holes) and the zone remains open at depth and along strike.

Further work is recommended to test the strike and depth potential of this zone as well as remaining targets within the anomaly.

21.3 JACQUE'S LAKE TARGET AREA

As with Otter Lake, the 2005 drilling program at Jacque's Lake was also the first drilling campaign completed in this area. The Jacque's Lake Target is defined by a 4 km long x 400 m wide airborne radiometric anomaly, underlain by a high strain zone in felsic metavolcanics with abundant magnetite alteration. Uranium mineralization in outcrop has been mapped at the south-western end of this anomaly over a strike length of approximately 220 m in the northeastern-southwestern direction.

The 2005 drilling targeted the main anomaly and its subsidiary branches and was successful in delineating uranium mineralization over a strike length of 180 m and at a vertical depth of 20-80 m in four of seven holes. The most significant result was returned in DDH JL-05-05 with a maximum of **0.10 %U_3O_8/9.2 m** in JL-05-05 on the southern end of the western branch of the anomaly. This result combined with intercepts of **0.10 %U_3O_8/5.0 m, 0.10 %U_3O_8/3.0 m, and 0.10 %U_3O_8/4.0 m** in holes DDH JL-05-01, 02 and 03 on the eastern branch of the anomaly, respectively, make this a successful first pass test on this target. All intercepts remain open along strike and at depth, thus further drilling is warranted to follow-up on this target

In comparison to the Michelin Deposit;

- Both the Michelin Deposit and the Jacque's Lake Target Area are hosted within strongly foliated, fine-grained felsic metavolcanic rocks of the Aillik Group.
- Both are associated with a strong airborne radiometric anomaly and a pronounced zone of shearing/deformation reflecting a major through-going structure.
- Uranium mineralization in both cases is associated with magnetite + actinolite + calcite +/- pyrite veining, and strong to intense pervasive hematite alteration at Michelin and strong hematite-magnetite alteration at Jacque's Lake.
- %U_3O_8 grades from the first seven holes at Jacque's Lake compare favorably to grades from the first seven holes drilled into the Michelin Deposit, which returned an average of 0.11 %U_3O_8 over 3.9 m.
- The Michelin deposit plunges approximately 40° to the south-west, whereas the strata hosting uranium mineralization at Jacque's Lake exhibit a lineation plunging 70° to the south-east**.**

22.0 RECOMMENDATIONS

A **$14,500,000 Can. budget** is proposed for 2006 to continue to evaluate the CMB mineral properties located in the historic Kitts-Michelin Uranium District of north-east central Labrador.

22.1 2006 WORK PROGRAM

The target of the new 2006 exploration program is to build on the momentum from 2005 and discover a single large economic deposit, or series of deposits, in the CMB.

The 2006 proposed work includes:

- The metallurgical testing of core rejects from the 2005 drilling campaign at Lakefield Research (February-March, 2006).
- A 40,000 m diamond drill program at Michelin, Michelin East, Jacque’s Lake, White Bear Lake, Otter Lake, Rainbow, Melody Hill, and Post Hill (April-September, 2006).
- An ongoing geological mapping and geochemical sampling program throughout the claim group (June-October, 2006).
- A gravity survey at Melody Hill to identify the source of high grade boulders (April, 2006)
- An environmental baseline survey and ongoing monitoring program (April-October, 2006)
- An updated resource calculation and economic study of Michelin deposit by year-end 2006.
- Initiation of pre-feasibility work (October-December, 2006).

22.2 BREAKDOWN OF 2006 WORK PROGRAM

22.2.1 Metallurgical Testing (February-March, 2006)

Given the encouraging results obtained in drilling in 2005, preliminary metallurgical testing should be initiated on samples from Michelin, Jacque’s Lake, and maybe Otter Lake. This may be possible through the use of coarse rejects from the 2005 drilling campaign and the submission of these samples to Lakefield Research in Ontario for test work.

Previous metallurgical work was performed by Brinex/Lakefield on bulk samples collected in 1975 from the Michelin adit and the results of this work indicated recoveries on the order of 90-92%.

22.2.2 Diamond Drilling (April-October, 2006) – 40,000 m

A 40,000 m drill program is proposed to follow-up the 2005 results from Michelin, Jacque's Lake and Otter Lake, as well as testing new targets at Michelin East, White Bear Lake, Rainbow, Melody Hill, and Post Hill Trend. A breakdown of these targets is given below.

a) Michelin Main (20,000 m)

- Begin infill drilling the main A Zone shoot from 250 to 750 m vertical depth (10,000 m).
- Continue drilling down-plunge on main A Zone shoot to 1000 m vertical depth and also test for the down-plunge extension of other parallel shoots such as the South Zone (10,000 m).

b) Michelin East (5,000 m)

- Test new radiometric and structural targets in the immediate Michelin area for Michelin analogues.

c) Jacque's Lake (7,500 m)

- Follow-up on the encouraging results in DDH JL-05-01/-02/05 and begin following this mineralization down-plunge.
- Continue testing other targets along 4,000m strike length of the main radiometric anomalies.

d) White Bear Lake (2,500 m)

- Follow-up on the results obtained in the old Brinex Drilling (0.26% U_3O_8/16.5 m in DD 77-7)

e) Otter Lake (2,000 m)

- Follow-up on the 1.0% U_3O_8/0.5 m intercept in DDH OL-05-04 at Otter South.

f) Rainbow (1,000 m)

- Test for the down-plunge extent of known mineralization at Rainbow.

g) Melody Hill (1,000 m)

- Test for the source of high grade boulders near the shore of Melody Lake and also follow-up on any prominent anomalies identified in the gravity survey.

h) Post Hill (1,000 m)

- Test for the down-plunge extent of known mineralization at the Gear, Inda, and Nash showings.

The diamond drill program will be based out of the hamlet of Postville, Labrador and also from a dedicated drill camp in the Michelin area and will utilize four helicopter-supported diamond core rigs and two helicopters for a period of 150 days. The continued refinement of the individual drill targets will continue over the upcoming months and through the summer exploration work.

22.2.3 Field Work (June-October, 2006)

a) Michelin/Michelin East Area

- Continue to investigate new radiometric and structural targets in the Michelin area in preparation for drill testing.
- Select and spot drill holes.
- Two weeks – one Geologist + assistant.

b) Jacque's Lake

- Continue to build a geology/structure/alteration map for the main anomaly.
- Continue humus sampling and scintillometer surveys over Grid 3 to the north-east.
- Select and spot drill holes.
- Four weeks – one Geologist + assistant for mapping.
- Two weeks – four technicians for sampling/scintillometer work.

c) White Bear Lake

- Continue to build a geology/structure/alteration map for the main anomaly.
- Carry out humus sampling and scintillometer surveys over the key target areas.
- Select and spot drill holes.
- Four weeks – one Geologist + assistant.
- Two weeks – four technicians for sampling and scintillometer work.

d) Otter Lake

- Continue to build a geology/structure/alteration map for the main anomaly.
- Select and spot drill holes.
- Two weeks – one Geologist + assistant.

e) Melody Hill

- Continue to build a geology/structure/alteration map for the main anomaly.
- Select and spot drill holes.
- Two weeks – one Geologist + assistant.

f) Post Hill

- Select and spot drill holes.
- One week - one Geologist.

g) Regional

- Evaluate other anomalies from the airborne survey and any known showings or prospects.
- Timing and personnel to be determined.

22.2.4 Gravity Survey – Melody Hill (April, 2006)

A gravity survey is recommended to try and identify the possible till-covered source of the high-grade mineralized boulders in the area between the north-east shore of Melody Lake and the visible boulder trains present two km uphill to the north-east. This survey should be carried out at the start of the 2006 Work Program.

22.2.5 Environmental Work (April-October, 2006)

An environmental baseline and monitoring program will be carried out again this year and in addition to the before-and-after sampling of water in drill target areas. It will be expanded to include water sampling during the spring run off and the establishment of a year-round weather station to begin building baseline data.

22.2.6 Updated 43-101 Resource Calculation and Scoping Study (October-December, 2006)

Once the 2006 Work Program is completed, then the 43-101 resource estimations and economic scoping study should be once again revisited and updated to reflect the new drill data.

22.2.7 Pre-Feasibility Work (Late 2006)

If results from the 2006 Work Program remain encouraging, then preliminary engineering work should be initiated that will encompass studies of basic mine planning, processing, waste treatment, and infrastructure. To this end, a search for a suitable engineering firm should be initiated in early 2006 so that this framework is in place.

22.3 BUDGET FOR 2006 WORK PROGRAM (Canadian$)

A budget of **$14.5 million ($Can)** has been proposed to carry out the 2006 Work Program with breakdown in **Table 15**. This covers the previously discussed 40,000 m drill program, basic field work, a gravity survey at Melody Hill, as well as sufficient funds to carry out preliminary metallurgy, deposit modeling/scoping studies, environmental work, and ongoing community relations.

Table 15 – Budget for Proposed 2006 Work Program

Description	Cost ($Can)

Labor	$1,503,650
General and Administration	$246,000
Engineering/Environmental	$370,000
Drilling and Assays	$5,150,000
Geophysics	$50,000
Geochemistry	$100,000
Field Support	$3,946,321
Travel and Lodging	$182,500
Land and Community Relations	$435,000
Subtotal	**$11,983,471**
Contingency (10%)	$1,198,347
Subtotal	**$13,181,818**
Management Fee (10%)	$1,318,182
Total	**$14,500,000**

Respectively Submitted at Vancouver, Canada, this 18th day of January, 2006 by

Ian R. Cunningham-Dunlop, P. Eng.
Exploration Manager – Canada/Turkey
Fronteer Development Group Inc.

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Appendix I Certificate of Authors

2537 Sechelt Drive
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Tel: 604-929-7871

I, **Ian R. Cunningham-Dunlop, P.Eng.**, do hereby certify that:

- I am currently Exploration Manager – Canada/Turkey with Fronteer Development Group Inc. of Suite 1640, 1066 West Hastings Street, Vancouver, B.C. V6E 3X1

- I graduated with the degree of Bachelor of Applied Science (Geological Engineering) from Queen's University, Kingston, Ontario, in 1984 and have worked continuously in the industry since that time.

- I am a member of the Prospectors and Developers Association of Canada, the Canadian Institute of Mining and Metallurgy, the Association of Professional Engineers of Ontario (PEO – Reg. No. 10161503), the Association of Professional Engineers and Geoscientists of B.C (APEGBC – Reg. No. 27221) and the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (PEG – Reg. No. 04385).

- I have worked as a geologist for a total of 21 year since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Supervision of mineral exploration programs on properties in Canada, United States, Argentina and Australia.
    - Currently employed by Fronteer Development Group Inc. since November 1st, 2004 as Exploration Manager – Canada/Turkey and personally oversaw the field work carried out on the property between June and October 2005.

- I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI432-101") and certify that by reason of my education, affiliation with professional associations (as deemed in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

- I am responsible for the preparation of all sections of the report titled "The Exploration Activities of Aurora Energy Inc. on the CMB Uranium Property" relating to the CMB Uranium Property. I have worked on the property in a technical capacity since January 1st, 2005 and personally supervised the 2005 Exploration Program.

- As of January 18th, 2006 and 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 and I have read the disclosure being filed and it fairly and accurately represents the information in the Technical Report that supports the disclosure.

- I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which make the Technical Report misleading.

- I am not independent of the issuer applying all the tests in Section 1.5 of National Instrument 43-101 and acknowledge that I hold securities of the Fronteer Development Group Inc. in the form of a stock option agreement.

- I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

- 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 in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 18th day of January, 2006 in Vancouver, B.C., Canada

Appendix I Certificate of Authors

7 Yellowknife St.
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Tel: 709-754-6624

I, **Derek H. C. Wilton, P.Geo**., hereby certify that:

- I am a Professor in the Department of Earth Sciences, Memorial University of Newfoundland, Prince Phillip Parkway, St. John's, NL, A1B 3X5

- I graduated with the degrees of BSc. (Geology) from Memorial University of Newfoundland, St. John's, NL, in 1976, MSc. (Geological Sciences) form the University of British Columbia, Vancouver, BC, in 1978, and Ph.D. (Earth Sciences) from Memorial University of Newfoundland, St. John's, NL, in 1984, and have worked continuously as an academic researcher and industry consultant since 1984.

- I am a Professional Geoscientist duly registered with the Professional Engineers and Geoscientists – Newfoundland and Labrador (PEG-NL – Reg. No. 02840) and am a Fellow of the Canadian Institute of Mining and Metallurgy (CIM), Geological Association of Canada, and the Society of Economic Geologists.

- I have worked as a geologist for a total of 22 years since my graduation. My relevant experience for the purpose of the Technical Report is:
  - I have conducted research and mineral exploration work in this region of Labrador intermittently since 1984.
  - I have been involved with the Fronteer-Altius Alliance each year since they initiated work in the region in 2003.

- I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI432-101") and certify that by reason of my education, affiliation with professional associations (as deemed in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

- I am responsible in part for the preparation of all sections of the report titled "The Exploration Activities of Aurora Energy Inc. on the CMB Uranium Property" relating to the CMB Uranium Property. I have worked on the property in a consulting technical capacity since July, 2003.

- As of January 18th, 2006 and 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 and I have read the disclosure being filed and it fairly and accurately represents the information in the Technical Report that supports the disclosure.

- I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which make the Technical Report misleading.

- I am independent of the issuer applying all the tests in Section 1.5 of National Instrument 43-101, I hold no securities of the Fronteer Development Group Inc. nor Altius Resources Inc.. and do not expect to receive same.

- I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

- 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 in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 18th day of January, 2006 in St. John's, NL, Canada

Appendix II Consent of Authors

CONSENT OF AUTHOR

TO: British Columbia Securities Commission
TSX Venture Exchange

I, **Ian R. Cunningham-Dunlop, P.Eng**., do hereby consent to the filing, with the regulatory authorities referred to above, of the Technical Report titled “The Exploration Activities of Aurora Energy Inc. on the CMB Uranium Property”, dated January 18th, 2006, and to the written disclosure of the Technical Report and of extracts from or a summary of the Technical Report in the written disclosure of Aurora Energy Inc. being filed.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report, or that the written disclosure in the Information Report of Aurora Energy Inc. contains any misrepresentation of the information contained in the Technical Report.

Dated this 18th Day of January, 2006 in Vancouver, B.C., Canada

Appendix II Consent of Authors

CONSENT OF AUTHOR

TO: British Columbia Securities Commission
TSX Venture Exchange

I, **Derek Wilton, P.Geo**., do hereby consent to the filing, with the regulatory authorities referred to above, of the Technical Report titled "The Exploration Activities of Aurora Energy Inc. on the CMB Uranium Property", dated January 18th, 2006, and to the written disclosure of the Technical Report and of extracts from or a summary of the Technical Report in the written disclosure of Aurora Energy Inc. being filed.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report, or that the written disclosure in the Information Report of Aurora Energy Inc. contains any misrepresentation of the information contained in the Technical Report.

Dated this 18th Day of January, 2006 in St. John's, NL, Canada

Appendix III – CMB Work History – 1951-2005

Year	Description of Work	Area	Data Source	# of Holes	Meterage
1951-1953	Prospecting	Regional	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1953	Initial geological reconnaissance by Brinex in CMB	Regional	Labrador North\1413939283--023.tif		
1954	Radioactivity discovered during reconnaissance of east central portion of the Labrador reserved areas	Regional	Monkey Hill\697718432--003.tif		
1955	British-Newfoundland Corporation ("Brinco") granted exploration lease in the Makkovik-Kaipokok Bay area. Signed over to subsidiary "Brinex" in November. Application to Atomic Energy Board of Canada by British-Newfoundland Exploration Ltd. for permit approved for area bounded by 54°33' - 55°00' (lat) and 59°03' - 59°14' (long); ~60 sq. mi.	Regional Monkey Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Monkey Hill\697718432--003.tif		
1955-1956	Detailed mapping (~2.8 km^2), radiometric grid surveys (~8900 m^2), stripping (71.10 m^2), trenching (176.61 m^3) , sampling, packsack diamond drilling (unknown # of holes - 49.83 m total), diamond drilling (15 holes - 1719.68 m total), prospecting (~15.5 km^2)	Monkey Hill	Monkey Hill\697718432--003.tif	15	1,719.68
1956	Prospecting Prospecting Prospecting "Kitts Deposit" discovered: A, B, and C Zones Diamond drilling (6 holes - 547.73 m total) at Winter Lake	Jacque's Lake Post Hill Otter Lake Kitts Shoal Lake (Monkey Hill area?)	Kaipokok Bay Area/975528072--003.tif Kaipokok Bay Area/975528072--003.tif Kaipokok Bay Area/975528072--003.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	6	547.73
1957	Statutory agreement lease granted "McLean Lake" and "Burnt Lake" showings (Jacque's Lake/White Bear Mountain) discovered	Regional Jacque's Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--016.tif		
1957-1958	Drilling A, B, and C zones (76 holes - 7903.16 m total); adit excavation	Kitts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	76	7,903.16
1958	Anderson Lake discovery	Kitts - Post Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1960	Discovery of "John Michelin Radiometric Showing" - 55°04'25" N, 59°10'00" W	Michelin	Michelin\967134490--010.tif		
1965	Two samples collected @ "John Michelin Radiometric Showing" for U_3O_8 analysis Discovery of Melody Hill anomaly by airborne survey by Mokta Ltd. (Amok Ltd.); with follow-up on ground	Michelin Melody Hill	Michelin\967134490--010.tif Melody Hill\1673906873--016.tif		
1966	Signed joint venture agreement with Urangesellschaft Canada Ltd.	Kitts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		

Year	Description of Work	Area	Data Source	# of Holes	Meterage
1966-1967	Lake geochemistry	"Area A"	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1967	Airborne geophysical surveys	Regional	Michelin\967134490--006.tif		
	Prospecting, mapping, bedrock and boulder survey and sampling (Michelin and White Bear Mountain in report)	Jacque's Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1968	Ground and airborne geophysical surveys	Post Hill	Michelin\967134490--006.tif		
	Ground geophysical surveys	Jacque's Lake	Michelin\967134490--006.tif		
	Ground geophysical surveys	Otter Lake	Michelin\967134490--006.tif		
	Ground geophysical surveys	Gear Lake	Michelin\967134490--006.tif		
	Ground geophysical surveys	Nash Lake	Michelin\967134490--006.tif		
	Ground geophysical surveys	Michelin	Michelin\967134490--006.tif		
	Discovery of Michelin Uranium Prospect. Line-cutting, local mapping, trenching, radiometric and magnetic surveys	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--018.tif		
	Drilling C and C-North Extension (27 holes - 2040.33 m total)	Kitts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	27	2,040.33
	Drilling (23 holes - 1809.90 m total)	Gear Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	23	1,809.90
	Drilling (unknown # of holes - 944.88 m total)	Nash Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	??	944.88
1968-1969	Discovery of Gear, Inda, Knife Lake, Nash, Nash West Extension, Witch Lake and Kitts South	Kitts - Post Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1969	Scintillometer, spectrometer, radon, magnetometer and electromagnetometer surveys, soil sampling (453 samples), stream sediment sampling (55 samples), mapping, glacial interpretations	Michelin and Kitts Belts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--018.tif		
	Knife Lake discovery, drilling (7 holes - 582.78 m total)	Kitts - Post Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	7	582.78
	Discovery of Emben North, South Doak, Asha Pond, Mickey Lake, Saroj Lake	Otter Lake, Michelin, White Bear	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Drilling (unknown # of holes - 6705.60 m total)	Nash Lake - Inda Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	??	6,705.60
1969-1970	Drilling (92 holes - 12129.21 m total); boulder tracing	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	92	12,129.21
	Drilling (unknown # of holes - 1462.74 m total)	Gear Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	??	1,462.74
	Drilling (22 holes - 3553.05 m total)	Inda Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	22	3,553.05
1970	Boulder prospecting	Melody Hill	Melody Hill\1673906873--016.tif		
	Airborne geophysical surveys; mapping; prospecting; boulder tracing - discovery of Ribs Lake, Walter Lake and Melody Hill (?)	"Area B"	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Mapping, prospecting, boulder tracing	Kitts - Post Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		

Year	Description of Work	Area	Data Source	# of Holes	Meterage
	Discovery of Rainbow Zone and Elbow Pond	Otter Lake, Michelin, White Bear	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1971	Boulder and grid prospecting (~5 km^2)	Melody Hill	Melody Hill\1673906873--016.tif		
	Discovery of Chitra, Active Pond and Fiddle Pond	Otter Lake, Michelin, White Bear	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Drilling (12 holes - 1035.71 m total) - Rainbow Zone; relogging Michelin core	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	12	1,035.71
	Drilling (unknown # of holes and meterage) - Witch Lake	Kitts - Post Hill	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	??	??
1972-1973	No field work carried out	Regional	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1974	Detailed boulder and grid prospecting (~0.3 km^2)	Melody Hill	Melody Hill\1673906873--016.tif		
	Geological surveys	Otter Lake and White Bear	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Radon surveys, track etch traverses (unknown # of cups), mapping, stripping and trenching (Michelin), scintillometer survey, ground magnetometer survey (Michelin),	Otter Lake, Michelin, White Bear	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Lake sediment sampling (140 samples), heavy mineral studies (42 drift samples)	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Helium survey (60 lakes)	Regional	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Decline and underground drilling, surface fill-in drilling (18 holes - 1693.16 m total) - A and B zones	Kitts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	18	1,693.16
1975	Mapping (1:6000 over 10 km^2); radon emanometer survey (3 line km); fluxgate magnetometer survey (2.5 line km)	Melody Hill	Melody Hill\1673906873--016.tif		
	Underground program - 100' level: drifting (412 face samples, 261 muck samples, drilling (56 holes - 1773.94 m total), sampling and assaying, mapping, bulk sampling (86 drums (45 gallons each)); drilling: Running Rabbit Lake (unknown meterage); Chitra (11 holes - 1073.81 m total); Fiddle Pond (2 holes - 190.50 m total); Active Pond (7 x-ray holes - 201.17 m total); Rainbow (9 holes - 807.42 m); Mickey Lake (4 holes - 452.63 m total)	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	89	4,499.47
	Drilling (3 x-ray holes - 48.77 m total)	Kitts - Punch Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	3	48.77
1975-1976	Surface fill-in drilling - holes M-75-93 to M-75-99, M-76-100 to M-76-183 (90 holes - 16151.96 m total); bulk sampling	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif	90	16,151.96
1976	Mapping (1:25000), trenching (11 locations) and sampling (Burnt Lake North and South)	Jacque's Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--016.tif		
	Bulk sample - 100' level	Michelin	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		

Year	Description of Work	Area	Data Source	# of Holes	Meterage
	Preliminary feasibility study completed (Kilborn Ltd.)	Michelin and Kitts Belts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Feasibility study commenced (Kilborn Ltd.)	Michelin and Kitts Belts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Golder Drilling (rock mechanics) GK - 1, 2 and 3	Kitts	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
	Golder Drilling (rock mechanics) GM - 1, 2 and 3 Surveys, environmental studies, camp construction and road building	Michelin Regional	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif		
1977	General geological, geophysical and geochemical exploration, principally in areas around Michelin and Burnt Lake Drilling (unknown # of holes - 3383.28 m total) - in prospects other than Kitts and Michelin deposits Trenching (20 locations); mapping; magnetic, ground radiometric and spectrometer surveys; soil sampling; drilling (17 holes - 1851 m total) - Burnt Lake North	Michelin and Jacque's Lake Regional Jacque's Lake	Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--024.tif Labrador MODS Sheets	 ?? 17	 3,383.28 1,851.00
1978	Prospecting; fluxgate magnetometer survey (35 line km); radon emanometer survey (0.5 km^2); grid work (143.5 line km); mapping (1:2500 over 88 line km); proton magnetometer survey (61 line km); VLF-EM16 survey (99 line km); scintillometer survey (14 line km); soil sampling (558 samples); trenching (1 trench - 12.5 m); packsack drilling (3 holes - 9.3 m total); mapping (1:10000 over 115 km^2); environmental study (Melody Hill watershed); camp construction. Line cutting and surveying (73.5 line km), mapping, drilling (1 Winkie hole - 30 m total) - Burnt Lake	Melody Hill Jacque's Lake	Melody Hill\1673906873--016.tif Kitts-Michelin_Brinex-Urangesellschaft Joint Venture/975094906--065.tif	 1	 30.00
1979	Proton magnetometer survey (84.5 line km); VLF-EM16 survey (53 line km); prospecting; soil sampling (772 samples); diamond drilling (37 holes - 3454 m total); scintillometer survey (37.8 line km); trenching (9 trenches - 580 m total; 1 area 50 x 30 m stripped); line cutting (85.8 line km); environmental study (Melody Hill watershed); camp expansion. Environmental Impact Statement submitted; public hearings held Surface fill-in drilling (65 holes - 3943 m total); second feasibility report commissioned (Kilborn Ltd.)	Melody Hill Kitts Michelin	Melody Hill\1673906873--016.tif Labrador MODS Sheets Labrador MODS Sheets	 65	 3,943.00
1980	Diamond drilling (11 holes - 885 m total); extended license acquisition (7.97 sq. mi.); track etch survey (200 cups); lake bottom sediment sampling; prospecting Recommendation by Environmental Assessment Board that project development not be allowed to proceed Nash Lake studied as part as a Ph. D. thesis (Evans, 1980) Mapping and prospecting (85 km^2) surrounding Michelin deposit along southern boundary of Area 'A' ("Crescent Prospect")	Melody Hill Kitts and Michelin Deposits Nash Lake Michelin	Melody Hill\1673906873--016.tif Labrador MODS Sheets Labrador MODS Sheets Labrador North\1413939283--012.tif	11	885.00

Year	Description of Work	Area	Data Source	# of Holes	Meterage
1981	Diamond drilling (11 holes - 1524 m total); lake bottom sediment sampling (239); ground acquisition; track etch survey (200 cups)	Melody Hill	Melody Hill\1673906873--016.tif	11	1,524.00
	Trenching (13 locations - 66 m total), line cutting (15 km), magnetometer survey (13.5 line km), VLF-EM survey (13.5 line km), scintillometer survey (16 line km), prospecting, mapping (0.8 km^2)	Jacque's Lake	Labrador North\1413939283--019.tif		
1982	Track etch survey (200 cups); whole rock analysis study; detailed and regional till sampling (GSC)	Melody Hill	Melody Hill\1673906873--016.tif		
1984	Reconnaissance sampling program carried out by R.J. Wardle and D. Wilton	Regional	Labrador MODS Sheets		
	License # 222M staked by Brinco Mining Ltd. License # 112M staked by Brinco Mining Ltd. License # 111M staked by Brinco Mining Ltd. License # 116M staked by Brinco Mining Ltd. License # 120M and 121M staked. Prospecting and scintillometer survey completed (Burnt Lake prospect)	Burnt Lake North Emben Main Zone Gear Lake Punch Lake Jacque's Lake	Labrador MODS Sheets Labrador MODS Sheets Labrador MODS Sheets Labrador MODS Sheets Brinco-Commonwealth Labrador Uranium Joint Venture/1998338606--008.tif		
1985	Concession surrendered by Brinco Mining Ltd (McLean Lake) Soil sampling (62 samples total) for Au analysis	Jacque's Lake Otter Lake	Labrador MODS Sheets Emben/-371988077--002.tif		
1987	License # 222M transferred to Western Canada Mining License # 112M transferred to Western Canada Mining License # 111M transferred to Western Canada Mining. Lease #113 acquired and transferred to Edison Development Canada Inc. Lease #113 acquired by Western Canada Mining and transferred to Edison Development Canada Inc.	Burnt Lake North Emben Main Zone Gear Lake Inda Lake	Labrador MODS Sheets Labrador MODS Sheets Labrador MODS Sheets Labrador MODS Sheets		
2003-2004	29 Licenses issued to Altius Resources Inc., partnered with Fronteer	Regional	First and Second Year Assessment Report		
2004	Fronteer-Altius Joint Venture 4 additional licenses acquired 13,000 line km of airborne radiometrics/magnetic survey, prospecting, rock/soil sampling	Regional	First and Second Year Assessment Report		
2005	Fronteer-Altius Joint Venture - Formation of Aurora Energy Inc. 3 licenses dropped - now 30 licenses total (3316 units) 5,800 line km detailed airborne radiometric/magnetic survey, IKONOS air photo, geological mapping, geochemical sampling (rock/soil/humus), scintillometer surveys (grid and boulder), track etch surveys Diamond drilling (27 holes - 9402 m total)	Michelin Jacque's Lake Otter Lake White Bear Melody Hill	Second and Third Year Assessment Report (Draft)	27	9,402.00
			Total	**612**	**83,846.41**

Appendix IV - Technical Details of 2005 Fugro Magnetometer and Gamma Ray Spectrometer Survey (Farquhar, 2005).

The survey area was located in Labrador and was comprised of approximately five (5) blocks. Flight lines were flown at 50 m intervals along (345°) direction. Tie lines were flown perpendicular to the flight lines at 1,000 m intervals. The survey encompassed approximately 5,783 line km as detailed in the following table:

Block 1	1,364.5
Block 2/3	2,112.3
Block 4	1,287.8
Block 5	1,018.6
Total	**5,783.2**

Survey operations commenced on June 25th, 2005, and were completed on August 16th, 2005.

Fugro flew the survey with a Jet Ranger 206B helicopter, registration C-GGJP. The base of operations was Makkovik, Labrador.

The magnetometer was mounted in a forward-stinger, termed the HM1, developed specifically to provide a safe platform at which low-level high-resolution magnetic survey data can be acquired cost-effectively. The HM1 system utilizes a rigid Kevlar boom attached to hard-points on the skid frame of a Jet Ranger 206B helicopter projecting forward of the helicopter. The nose-mounted position is magnetically the quietest location in the helicopter environment and provides a stable and safe installation that does not compromise the flight characteristics of the helicopter. The system employs real-time compensation using a flux gate magnetometer to account for magnetic noise induced by aircraft maneuvers. The actual airborne magnetometer was a Scintrex CS-2 cesium split-beam total field magnetic sensor, with a sampling interval of 0.1 seconds and in-flight sensitivity of 0.01 nT. This magnetometer is rated to perform continuously in areas of high magnetic gradient with the ambient range of the sensor approximately 20,000 - 100,000 nT.

An Exploranium GR820 256-channel spectrometer with 16.8 litres (1024 cubic inches) of main (downward) NaI crystal detector was used for the radiometrics component of this survey. Additionally, one 4.2 litres (256 cubic inches) upward looking detector was employed. The spectrometer was calibrated daily using cesium and thorium hand samples. One of the features of the GR820 is Automatic Gain Control based on monitoring of the thorium peak, which does not require operator adjustment or maintenance of the crystals at a constant temperature. For the main and upward spectrometers, total count, potassium, uranium, thorium and cosmic windows are recorded, along with the entire 256 channel spectra and live-time at a rate of 1 sample per second.

A Fugro-designed and manufactured FASDAS data acquisition and compensation system was utilized. FASDAS integrates the data from all of the geophysical measurement systems utilizing advanced clock synchronization techniques to ensure exceptional time stability. FASDAS incorporates magnetic decoupler systems and real-time magnetic compensation systems while recording all of the raw data to permit complete post-flight analysis and post-flight compensation if desired.

A differential GPS system provided in-flight navigation control. The system determines the absolute position of the helicopter in three dimensions by monitoring range information of forty-eight orbiting satellites. Ashtech GG24 GPS receivers are used to monitor both the NAVSTAR GPS system and the GLONASS GPS system. The Ashtech GG24 uses advanced methods to blend NAVSTAR and GLONASS signals into a single position. The GG24 uses all available satellites from both systems to increase the overall accuracy of the navigation. A Fugro dual frequency GPS receiver was employed as a base station to apply corrections to the raw GPS measurements.

Ancillary equipment included a color flight path video system (Panasonic VHS color video camera and cassette recorder), Sperry AA300 series radar altimeter, an Optech laser altimeter, and a CF-1 magnetic and GPS base station.

Appendix IV - 2005 DDH Program – Summary of Holes by Area

TARGET	HOLE_ID	EAST-UTM	NORTH-UTM	ELEV	AZ	DIP	Date Start	Date Finish	FL DEPTH	OBJECTIVE
Michelin	TWM-05-92	307088	6052353	336	332	-45	Aug 20	Aug 21	151.49	A Zone - Twin of old hole M-70-92 (11.28m @ 0.16% U3O8)
	TWM-05-174	307278	6052426	337	332	-90	Aug 22	Aug 23	203.61	E Zone - Infill hole between M76-174 & M-133
	M-05-01	307024	6051967	336	332	-57	Aug 20	Aug 22	47.55	First tier of three holes 100 metres down plunge on A Zone (westernmost)
	M-05-02A	306974	6051910	342	332	-65	Aug 22	Aug 25	27.43	First tier of three holes 100 metres down plunge on A Zone (easternmost)
	M-05-02B	306974	6051910	342	332	-65	Aug 25	Aug 26	12.80	First tier of three holes 100 metres down plunge on A Zone (easternmost)
	M-05-02C	306972	6051906	340	332	-65	Aug 26	Sept 5	460.55	First tier of three holes 100 metres down plunge on A Zone (easternmost)
	M-05-03	306919	6051882	341	332	-65	Sept 6	Sept 11	480.67	First tier of three holes 100 metres down plunge on A Zone (central)
	M-05-04	306848	6051882	337	332	-70	Sept 11	Sept 19	487.38	First tier of three holes 100 metres down plunge on A Zone (westernmost)
	M-05-05	306849	6051881	337	332	-85	Sept 19	Sept 29	578.51	Second tier of three holes 200 metres down plunge on A Zone (central)
	M-05-06	306919	6051882	342	332	-85	Sept 29	Oct 9	578.51	Second tier of three holes 200 metres down plunge on A Zone (easternmost)
	M-05-07	306815	6051804	336	332	-80	Oct 9	Oct 16	549.55	Second tier of three holes 200 metres down plunge on A Zone (westernmost)
	M-05-08A	306920	6051742	335	332	-80	Oct 17	Oct 18	136.55	Third tier with one hole 300 metres down plunge on A Zone (centre of plunge)
	M-05-08B	306920	6051742	335	332	-80	Oct 19	Oct 19	15.85	Re-attempt at M-05-08 after hole deviating off target
	M-05-08C	306920	6051742	335	332	-80	Oct 19	Oct 19	4.57	Re-attempt at M-05-08 after hole deviating off target
	M-05-08D	306919	6051737	339	332	-80	Oct 20	Oct 31	801.01	Re-attempt at M-05-08 after hole deviating off target
									4,536.03	
Otter Lake	OL-05-01	331165	6057111	400	300	-45	Aug 24	Aug 28	181.97	Test of Emben South Zone
	OL-05-02A	331134	6057075	402	300	-45	Aug 28	Aug 29	24.99	Test of Emben South Zone
	OL-05-02B	331134	6057075	402	300	-45	Aug 29	Aug 31	199.03	Test of Emben South Zone
	OL-05-03	331134	6057075	402	300	-60	Aug 31	Sept 2	224.64	Test of Emben South Zone
	OL-05-04	331110	6057142	408	300	-45	Sept 3	Sept 4	151.18	Test of Emben South Zone
	OL-05-05	331373	6058264	382	332	-45	Sept 5	Sept 9	351.74	Test of Emben Main Zone
	OL-05-06	331396	6058353	385	332	-45	Sept 9	Sept 13	289.56	Test of Emben Main Zone
	OL-05-07	331261	6058250	380	360	-45	Sept 13	Sept 19	349.91	Test of Emben Main Zone
	OL-05-08	331254	6058456	380	152	-45	Sept 19	Sept 21	178.61	Test of Emben Main Zone
	OL-05-09	331317	6057857	384	332	-45	Sept 22	Sept 27	356.92	Test of Emben Central Zone
	OL-05-10	331220	6057790	388	332	-45	Sept 27	Oct 2	377.04	Test of Emben Central Zone
									2,685.59	
Jacque's Lake	JL-05-01	333182	6065979	293	315	-58	Oct 3	Oct 7	358.75	Eastern Anomaly
	JL-05-02	332337	6066065	283	315	-55	Oct 8	Oct 12	327.66	Eastern Anomaly
	JL-05-03	333127	6065913	283	315	-55	Oct 12	Oct 17	358.75	Eastern Anomaly
	JL-05-04	333049	6065915	261	315	-50	Oct 17	Oct 22	303.28	New site southwest along ridge from M-05-03
	JL-05-05	333036	6066262	192	315	-45	Oct 22	Oct 26	287.73	Western Anomaly
	JL-05-06	333121	6066333	197	315	-45	Oct 27	Oct 29	282.55	Western Anomaly
	JL-05-07	333218	6066421	209	315	-45	Oct 29	Oct 31	261.52	Western Anomaly
									2,180.24	
									9,401.86	

Appendix V – 2005 DDH Program – Summary of Assay Composites by Area

Target	Hole ID	From (m)	To (m)	Interval (m)	%U3O8
	TWM-05-92	55.23	66.62	11.39	0.16
	and	79.00	82.00	3.00	0.24
	TWM-05-174	152.05	166.36	14.31	0.18
	M-05-01	***NSV***			
	M-05-02C	369.53	412.33	42.80	0.12
	incl.	369.53	377.83	8.30	0.15
	and incl.	387.12	396.04	8.92	0.14
	and incl.	402.72	412.33	9.61	0.24
	M-05-03	377.74	380.19	2.45	0.11
	and	384.63	385.63	1.00	0.17
	and	418.36	430.42	11.96	0.22
	M-05-03	377.74	380.19	2.45	0.13
	and	381.63	382.63	1.00	0.11
	and	384.63	385.63	1.00	0.18
	and	387.92	388.92	1.00	0.12
	and	418.36	430.42	11.96	0.24
	M-05-04	349.95	390.40	40.45	0.10
	incl.	349.95	366.95	17.00	0.17
	and incl.	349.95	356.95	7.00	0.25
	and incl.	359.95	366.95	7.00	0.14
	incl.	383.13	390.40	7.27	0.13
	M-05-05				
	incl.	442.75	499.54	56.79	0.09
	and incl.	442.75	457.54	14.79	0.21
	and incl.	466.47	474.50	8.03	0.12
	and incl.	495.41	499.54	4.13	0.24
	M-05-05	442.75	499.54	56.79	0.10
	incl.	442.75	457.54	14.79	0.21
	and incl.	466.47	474.50	8.03	0.11
	and incl.	495.41	499.54	4.13	0.21
	M-05-06	485.97	549.47	63.45	0.11
	incl.	503.31	549.47	46.16	0.13
	and incl.	503.31	511.16	7.85	0.13
	and incl.	524.31	532.24	7.93	0.34
	and incl.	542.34	549.47	7.13	0.28

	M-05-07	422.04	443.69	21.65	0.11
	incl.	422.04	429.19	7.15	0.21
	and incl.	422.04	426.14	4.10	0.24
	and incl.	441.19	443.69	2.50	0.10
	and	452.69	457.99	5.30	0.11
	and	462.85	463.85	1.00	0.10
	M-05-08	689.50	697.65	8.15	0.10
	and	706.82	707.32	0.50	0.32
Otter Lake	**OL05-01**	***NSV***			
	OL-05-02	***NSV***			
	OL-05-03	***NSV***			
	OL-05-04	37.94	40.44	2.50	0.23
	incl	38.94	39.44	0.50	1.03
	and	86.42	87.42	1.00	0.14
	OL-05-05	***NSV***			
	OL-05-06	***NSV***			
	OL-05-07	33.53	34.44	0.91	0.12
	OL-05-08	***NSV***			
	OL-05-09	269.44	269.94	0.51	0.11
	OL-05-10	297.79	298.79	1.00	0.11
Jacque's Lake	**JL-05-01**	159.08	164.08	5.00	0.10
	and	231.00	232.00	1.00	0.10
	JL-05-02	241.90	244.90	3.00	0.10
	and	243.90	244.90	1.00	0.21
	JL-05-03	245.00	249.00	4.00	0.10
	JL-05-04	***NSV***			
	JL-05-05	135.33	144.48	9.15	0.10
	incl.	137.33	139.38	2.05	0.20
	JL-05-06	***NSV***			

Appendix VI – Actlabs Analytical Methods – Rock Sample Preparation (RX-1)

Rock Sample Preparation Procedure (www.actlabs.com)

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To obtain meaningful analytical results, it is imperative that sample collection and preparation be done properly. ACTLABS can advise on sampling protocol for your field program if requested. Once the samples arrive in the laboratory, ACTLABS will ensure that they are prepared properly. As a routine practice with rock and core, the entire sample is crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample and then pulverized to at least 95% minus 150 mesh (106 microns).

As a routine practice, we will automatically use cleaner sand between each sample at no cost to the customer. Quality of crushing and pulverization is routinely checked as part of our quality assurance program. Randomization of samples in larger orders (>100) provides an excellent means to monitor data for systematic errors. The data is resorted after analysis according to sample number. Please request **Code Random (additional $1.00/sample)** if you prefer randomization.

Samples submitted in an unorganized fashion will be subject to a sorting surcharge and may substantially slow turnaround time. Providing an accurate detailed sample list by e-mail will also aid in improving turnaround time and for Quality Control purposes.

Additional charges may apply for poorly organized batches. **Code CP2** - Sample list not provided for orders over 25 samples **($0.25/sample); Code CP3** - Sorting chaotic shipments **($0.50/sample)**.

Rock, Core and Drill Cuttings

Code	*Description*	*Price (USD)*
Code RX1	*crush up to 75% passing 2 mm, split (250 g) and pulverize (hardened steel) to 85% passing 75m (< 5 kg)*	*$6.50*
Code RX1 Terminator	*crush up to 90% passing 2 mm, split (250 g) and pulverize (hardened steel) to 85% passing 75m (< 5 kg)*	*$7.25*
Code RX2	*crush, split and pulverize with mild steel (100 g) (best for low contamination)*	*$6.75*
Code RX3	*oversize charge per kilogram (if required)*	*$1.50*
Code RX4	*pulverization only (mild steel) (coarse pulp or crushed rock)*	*$5.00*
Code RX5	*pulverize ceramic (100 g)*	*$12.25*
Code RX6	*hand pulverize small samples (agate mortar and pestle)*	*$12.25*
Code RX7	*crush only (split)*	*$3.75*
Code RX8	*sample prep only surcharge, no analyses*	*$2.00*
Code RX9	*compositing (per composite)*	*$2.00*
Code RX10	*dry drill cuttings in plastic bags*	*$1.75*
Code RX11	*checking quality of pulps or rejects prepared by other labs and issuing report*	*$6.75*

Note: Larger sample sizes than listed above can be pulverized at additional cost.

Pulverization Contaminants Added

(amount added depends on hardness of material and particle size required)

Mill Type	*Contaminant Added*
Mild Steel (best choice)	*Fe (up to 0.2%)*
Hardened Steel	*Fe (up to 0.2%), Cr (up to 200 ppm), trace Ni, Si, Mn and C*
Ceramic	*Al (up to 0.2%), Ba, trace REE*
Tungsten Carbide	*W (up to 0.1%), Co, C, Ta, Nb and Ti*
Agate	*Si (up to 0.3%), Al, Na, Fe, K, Ca, Mg, Pb*

Appendix VII – Actlabs Analytical Methods – Soil Sample Preparation (S-1)

Soil Sample Preparation Procedure (www.actlabs.com)

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Geological samples range from rock, drill core, panning concentrates, soils, sediments and vegetation. The purpose of sample preparation is to produce a smaller, dry, manageable sample suitable for laboratory-scale analysis while at the same time ensuring that the prepared sample is homogeneous and fully representative of the original sample.

Soil and sediment samples are dried and sieved to obtain material suitable for analysis.

To obtain meaningful analytical results, it is imperative that sample collection and preparation be done properly. Actlabs can advise on sampling protocol for your field program is requested. Once the samples arrive in the laboratory, Actlabs will ensure that they are prepared properly.

Randomization of samples in larger orders (>100) provides an excellent means to monitor data for systematic errors. The data is resorted after analysis according to sample number. Please request Code Random (additional $1/sample) if you prefer randomization.

Soils, Stream and Lake Bottom Sediments

Code	*Description*	*Price (USD)*
Code S1	*drying (60ºC) and sieving (-80 mesh) save all portions*	*$2.75*
Code S1 DIS	*drying (60ºC) and sieving (-80 mesh), discard oversize*	*$2.50*
Code S1-230	*drying (60ºC) and sieving (-230 mesh), save oversize*	*$3.75*
Code S1-230 DIS	*drying (60ºC) and sieving (-230 mesh), discard oversize*	*$3.50*
Code S2	*lake bottom sediment preparation crush and sieve (-80 mesh)*	*$5.50*
Code S3	*alternate size fractions and bracket sieving, add*	*$2.00*
Code S4	*Enzyme LeachSM or SGH drying (40ºC) and sieving (-60 mesh)*	*$3.00*
Code S5	*wet or damp samples submitted in plastic bags, add*	*$1.50*
Code S6	*separating -2 micron material*	*$55.00*
Code S7	*methylene iodide heavy mineral separation specific gravity of 3.3 (250 grams)*	*$43.00*

Appendix VIII – Actlabs Analytical Methods – Humus Sample Preparation (B-1)

Humus Sample Preparation Procedure (www.actlabs.com)

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Geological samples range from rock, drill core, panning concentrates, soils, sediments and vegetation. The purpose of sample preparation is to produce a smaller, dry, manageable sample suitable for laboratory-scale analysis while at the same time ensuring that the prepared sample is homogeneous and fully representative of the original sample.

Humus and vegetation samples are dried below 60°C and then blended, macerated or ashed to obtain material suitable for analysis.

To obtain meaningful analytical results, it is imperative that sample collection and preparation be done properly. Actlabs can advise on sampling protocol for your field program is requested. Once the samples arrive in the laboratory, Actlabs will ensure that they are prepared properly.

Randomization of samples in larger orders (>100) provides an excellent means to monitor data for systematic errors. The data is resorted after analysis according to sample number. Please request Code Random (additional $1/sample) if you prefer randomization.

Biogeochemical Samples

Code	***Description***	***Price (CDN)***
Code B1	*Drying and blending humus*	*$3.25*
Code B2	*Drying and macerating vegetation*	*$4.25*
Code B3	*Dry ashing and weighing ash into vial*	*$6.25*
Code B4	*Washing vegetation*	*$3.00*
Code B5	*Samples submitted in plastic bags*	*$1.50*

Appendix IX – Actlabs Analytical Methods – Uranium Analysis (5D-U)

Code 5D – Miscellaneous Elements Requiring Specific Methods (www.actlabs.com)

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Analysis	*Method*	*Detection Limit*	*Upper Limit*
C-Total	*Infrared*	*0.01%*	
C-Graphitic	*Infrared*	*0.05%*	
C-Organic	*Infrared*	*0.05%*	
F	*ISE*	*100 ppm*	*10,000 ppm*
Li	*Total Digestion ICP*	*1 ppm*	*10,000 ppm*
Sn	*Fusion ICP*	*1 ppm*	*10,000 ppm*
U	***DNC***	***0.1 ppm***	***10,000 ppm***
B-Total	*PGNAA*	*0.5 ppm*	*10,000 ppm*
B-Total	*PGNAA*	*2 ppm*	*10,000 ppm*
Tl	*Total Digestion ICP-MS*	*0.2 ppm*	*10,000 ppm*

Code 5D – C (Organic)

0.5 g of sample is titrated with 25% HCl to drive off the CO2 (inorganic C). The sample is neutralized with ammonium hydroxide and dried on a hot plate. Sample residue is analyzed by LECO Combustion-IR technique to provide a value for total carbon, which is composed of organic C and graphitic C. The graphitic C content is subtracted to provide the organic C content.

Code 5D – C (Graphitic)

0.5 g of sample is ignited at 1,000°C to drive off organic and inorganic carbon (CO2). The residue is analyzed by LECO Combustion-IR t o provide a graphitic carbon value.

Code 5D - F

0.5 g samples are fused with sodium hydroxide in an oven at 580°C for 1 hour to release the fluoride ions from the sample matrix. The fuseate is dissolved in sulphuric acid with ammonium citrate buffer. The fluoride-ion electrode is immersed in this solution to measure the fluoride-ion activity directly.

Code 5D - B

1 g samples are encapsulated in a polyethylene vial and placed in a thermalized beam of neutrons produced from a nuclear reactor. Samples are measured for the doppler broadened prompt gamma ray at 478 KeV using a high purity GE detector. Samples are compared to certified reference materials used to calibrate the system.

Appendix X– Actlabs Analytical Methods – Multi-element analysis (1E3)

Code 1E1/1E3** – Aqua Regia - ICP-OES (www.actlabs.com)

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0.5 g of sample is digested with aqua regia (0.5 ml H2O, 0.6 ml concentrated HNO3 and 1.8 ml concentrated HCl) for 2 hours at 95°C. Sample is cooled then diluted to 10 ml with deionized water and homogenized. The samples are then analyzed using a Perkin Elmer OPTIMA 3000 Radial ICP for the 30 element suite. A matrix standard and blank are run every 13 samples. For vegetation a 0.25 g sample is used.

A series of USGS-geochemical standards are used as controls. This digestion is near total for base metals however will only be partial for silicates and oxides.

Code 1E1 Elements and Detection Limits (ppm)

Element	*Detection Limit*	*Upper Limit*
*Ag**	*0.2*	*100*
*Al**	*0.01%*	
*As**	*10*	
*Ba**	*1*	
*Be**	*1*	
Bi	*10*	
*Ca**	*0.01%*	
Cd	*0.5*	*2,000*
*Co**	*1*	
*Cr**	*2*	
Cu	*1*	*10,000*
*Fe**	*0.01%*	
*K**	*0.01%*	
*Mg**	*0.01%*	
*Mn**	*2*	*10,000*
*Mo**	*2*	*10,000*
*Na**	*0.01%*	
*Ni**	*1*	*10,000*
*P**	*0.001%*	
*Pb**	*2*	*5,000*
*S**	*100*	
*Sb**	*10*	
*Sc**	*1*	
*Sn**	*10*	
*Ti**	*0.01%*	
*V**	*1*	
*W**	*10*	
*Y**	*1*	
*Zn**	*1*	*10,000*
*Zr**	*1*	

Notes:

* Element may only be partially extracted.

**** 1E3 includes B, Ga, Hg, La, Sb, Sr, Tl and U but includes Sn, Y, and Zr.**

*** Assays are recommended for values which exceed the upper limits.

Appendix XI – Actlabs Analytical Methods – Humus Analysis (2A-15g & 2C1-Pb)

Code 2A – Humus - INAA (www.actlabs.com)

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Humus samples weighing 6 to 15 g are compressed under 30 tons of pressure to form a briquette (smaller samples are weighed in vials). Briquettes are stacked and irradiated at a thermal flux of 7 x 1012 n cm-2 s-1 for 15 minutes. After a 7 day decay samples are counted on a high purity Ge Detector with a resolution of better than 1.7 Kev for the 1332 Kev photopeak. Intensities for gamma rays are decay corrected and compared to a calibration developed from multiple certified reference materials.

Description of lines used is available in Hoffman, E.L. 1992. Instrumental Neutron Activation in Geoanalysis. Journal of Geochemical Exploration, volume 44, pp. 297-319.

Code 2A (Humus) Elements and Detection Limits (ppm)

Element	*Detection Limit*
Ag	*2*
As	*1*
Au	*1 ppb*
Ba	*100*
Br	*1*
Ca	*0.5%*
Ce	*1*
Co	*1*
Cr	*1*
Cs	*0.5*
Eu	*0.2*
Fe	*0.05%*
Hf	*0.5*
Hg	*0.5*
Ir	*5 ppb*
La	*0.1*
Lu	*0.01*
Mo	*0.5*
Na	*100*
Nd	*3*
Ni	*10*
Rb	*20*
Sb	*0.1*
Sc	*0.1*
Se	*2*
Sm	*0.1*
Sr	*100*
Ta	*0.5*
Tb	*0.2*
Th	*0.5*
U	*0.1*
W	*1*
Yb	*0.1*
Zn	*20*

Appendix XII – SGS Analytical Methods – Check Rock Analysis (ICA50)

ICA50 – Ore Grade Analysis of Uranium by Fusion / ICPES

Purpose:
To briefly describe the procedure for the quantitative analyses of mineralized geological analyses. Elemental concentration in these samples are normally high, that is greater than 1%. Results are frequently used for commercial feasibility studies and an accuracy of better than 5% at 30 times detection limit is required.

Digestion:
A 0.20 gram sample is weighed into a zirconium crucible. Add 1 gm Na_2O_2 and 0.1 gm NaOH. Sample is heated in furnace at 550 C for 30 minutes. Crucible is transferred into vial with 30 mls distilled water, cake is allowed to disintegrate, then 10mls. HNO_3 is added. Mix until dissolved, add 2 g of tartaric acid , 05 mls of 1000 mg/L Lutethium solution, mix well. Transfer 15 mls to plastic tubes ready for ICP analysis.

Instrumentation:
Samples are analyzed on an ICPES Instrument. The calibration stds. are made up of a blank, 5ppm , 50 ppm, 100 ppm and 150 ppm standard solutions. Drift check solution is also used in standards and samples to monitor drift.

Quality Control:
A standard reference material is digested and analyzed with each batch of 48 samples or less to ensure batch accuracy. A calibration standard is analyzed every 24^{th} sample. Duplicates are digested and analyzed every 12 samples or less to ensure batch precision.

Quality Control Parameters:

Parameter	Criteria
Method Blank /Standard Blank	<LOQ
Sample Duplicate and CRM	10 to 100× D.L. ±20% >100× ±5%

Reporting:
Results from the instruments are processed automatically, loaded into the LIMS where the QC parameters are checked before final reporting.

Detection and Upper Limits:

All elements are reported in % level. Detection limit is 0.01%, no upper limit.

(www.sgs.com)

Appendix XIII - Sampling Protocol

The following protocol outlines the procedure that will be applied to sampling drill core at the CMB Uranium Property. The geologist in charge of logging and/or geotechnical assistant will be responsible for adhering to the following protocol:

Pre-logging

- Inspection of core boxes, for missing boxes and footage errors.
- Digital photographs will be taken of all core boxes and
- RQD and core loss will be noted.

Logging

- Notes will be collected on rock units, alteration, structure, mineralization and recorded on paper logging forms and then transferred into Excel spread sheets

Sampling

- Standardized sample booklets will be utilized at all times. All booklets will be marked up, prior to use, with the standards, blanks and duplicates clearly defined.
- Standards and blanks and duplicates (1/4 core) will be entered every 25^{th} sample in the sample stream.
- All holes will be sampled where deemed radioactive with hand-held scintillometer or at the discretion of the geologist. Typical samples lengths will be 0.5-1.5 m.
- The beginning of a sample will be clearly marked with a black marker, by a line perpendicular to the core with the sample tag placed at the beginning of the sample.
- For each sample interval, all required parts ('From-To') of the standard sample card will be filled in and half of the sample number tag will be placed at the starting point of the sample interval in the core box.
- The second half of the tag will be put into the sample bag (labeled on both sides with the sample number) by the splitter when he is taking the sample.

Double-Check

- The geologist will double-check that all of the samples collected are properly labeled with the sample tags inside of the sample bags.

Scintillometer Readings

- Scintillometer measements will be recorded by taking each piece of core from the core box and scanning the individual pieces with the scintillometer. This is done to minimize background readings generated by the mass of core present in the core box. The maximum value is measured in each 3 m "run" of core will be recorded, as will the average of values recorded.

Magnetic Susceptibility Readings

- Magnetic susceptibility readings will be collected every m, roughly corresponding to the top, middle, and bottom of each 3 m "run" of core.

Appendix XIV - QA/QC Sampling

At the CMB Uranium Property, the insertion of "blind" quality control samples takes place in the core shack before samples are shipped to the lab. These samples inserted on a routine basis and are used to check laboratory quality and cleanliness**.** At the beginning of sampling, sample tags are pre-marked with locations for standards, duplicates and blanks before logging.

Duplicate samples

- Duplicates are taken every 25 samples within the sample series. Duplicate samples are used to monitor sample batches for potential mix-ups and monitor the data variability as a function of both laboratory error and sample homogeneity. The duplicate samples are ¼ spilt cores done on site before the sample leaves camp.

Blanks

- Non-mineralized material from the Michel Gabbro was used as a blank, where material was collected from an outcrop in the project area, broken with a hammer and inserted into the sample series every 25 samples.

Standards

- Standards were used to test the accuracy of the assays and to monitor the consistency of the laboratory. A total of five different standards were purchased the Canadian Certified Reference Materials Project, Natural Resources Canada, for use during the 2005 CMB Regional Program. The standards chosen were designed to test the accuracy of the assays from low, 220 ppm uranium, through to high grade, 10,200 ppm uranium. Standards were inserted into the sample series every 25 samples.

Check Samples:

- 5% of all assayed sample pulps were sent to SGS Laboratories in Mississauga, Ontario for analysis. This approach identifies variations in analytical procedures between laboratories, possible sample mix-ups, and whether substantial biases have been introduced during the course of the project.

Analyzing Data

- Results of the standards and the blanks are checked and reviewed quickly after results are received. Control charts are used to monitor the data and decide immediately whether the results are acceptable.