

**URANIUM, RADIUM, AND RADON IN STREAMS, DOMESTIC WELL
WATERS, AND SOILS: A GIS ANALYSIS OF GEOLOGICAL,
GEOCHEMICAL, AND GEOPHYSICAL RELATIONSHIPS**

by

Krista D. Page

Submitted in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science, Honours
Department of Earth Sciences
Dalhousie University Halifax, Nova Scotia
April 1999

Distribution License

DalSpace requires agreement to this non-exclusive distribution license before your item can appear on DalSpace.

NON-EXCLUSIVE DISTRIBUTION LICENSE

You (the author(s) or copyright owner) grant to Dalhousie University the non-exclusive right to reproduce and distribute your submission worldwide in any medium.

You agree that Dalhousie University may, without changing the content, reformat the submission for the purpose of preservation.

You also agree that Dalhousie University may keep more than one copy of this submission for purposes of security, back-up and preservation.

You agree that the submission is your original work, and that you have the right to grant the rights contained in this license. You also agree that your submission does not, to the best of your knowledge, infringe upon anyone's copyright.

If the submission contains material for which you do not hold copyright, you agree that you have obtained the unrestricted permission of the copyright owner to grant Dalhousie University the rights required by this license, and that such third-party owned material is clearly identified and acknowledged within the text or content of the submission.

If the submission is based upon work that has been sponsored or supported by an agency or organization other than Dalhousie University, you assert that you have fulfilled any right of review or other obligations required by such contract or agreement.

Dalhousie University will clearly identify your name(s) as the author(s) or owner(s) of the submission, and will not make any alteration to the content of the files that you have submitted.

If you have questions regarding this license please contact the repository manager at dalspace@dal.ca.

Grant the distribution license by signing and dating below.

Name of signatory

Date

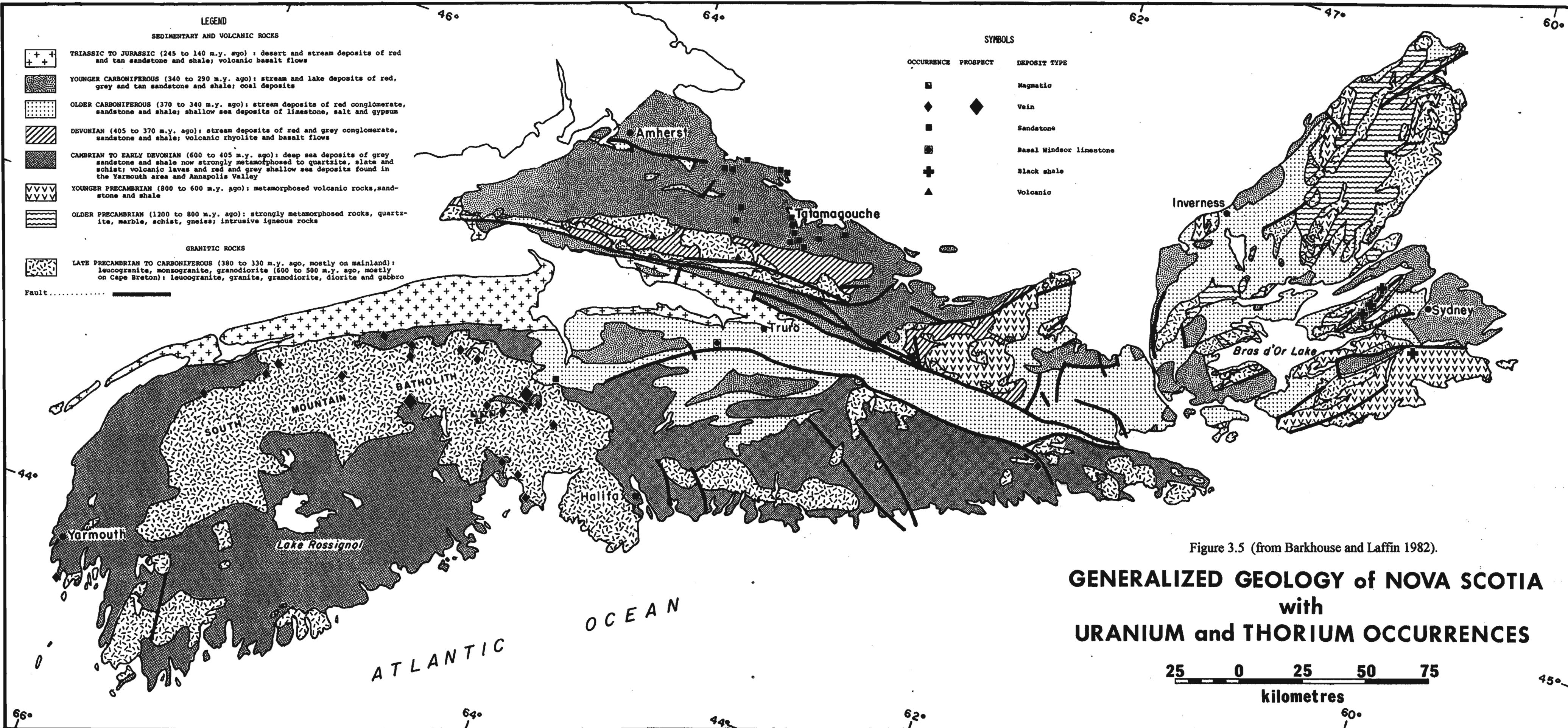


Figure 3.5 (from Barkhouse and Laffin 1982).

GENERALIZED GEOLOGY of NOVA SCOTIA with URANIUM and THORIUM OCCURRENCES

TABLE OF CONTENTS

Table of Contents	iii
List of Tables	vi
List of Figures	vi
List of Enclosures	vi
Acknowledgements	vii
Abstract	viii
1.0.0. Introduction	1
1.1.0. Introductory Statement	1
1.2.0. Purpose of Thesis	1
1.3.0. Study Area	1
1.4.0. Procedure and Limitations	3
1.5.0. Previous Work	3
1.6.0. Organization of Thesis	4
2.0.0. Uranium, Radium, And Radon	5
2.1.0. Geochemistry of U, Ra, and Rn	5
2.1.1. Uranium	5
2.1.2. Radium	5
2.1.3. Radon	5
2.2.0. Mobility of U, Ra and Rn in Groundwater & Surface Water in NS	7
2.2.1. Uranium	7
2.2.2. Radium	8
2.2.3. Radon	8
2.2.4. Correlation of Rn with U and Ra	8
2.3.0. Indoor Radon	9
2.4.0. Effects of U, Ra, and Rn on Health	12
2.4.1. U in water	12
2.4.2. Ra in water	12
2.4.3. Rn in water	12
2.4.4. Rn in indoor air	13
3.0.0. Geology Of Study Area	14
3.1.0. Meguma Supergroup	14
3.1.1. Rawdon Hills	19
3.2.0. South Mountain Batholith	21
3.3.0. Horton Group	21
3.3.1. Panuke Road	24
3.4.0. Windsor Group	27
3.5.0. Pictou Group	28

4.0.0. Geographic Information Systems	29
4.1.0. GIS and its Purpose	29
4.2.0. Choosing a GIS Package	29
4.3.0. Applications of GIS	30
4.3.1. Organization	30
4.3.2. Visualization	30
4.3.3. Spatial query	30
4.3.4. Integration	31
4.3.5. Analysis	31
4.3.6. Prediction	31
4.4.0. Components of a GIS	31
4.4.1. Attribute database	31
4.4.2. Spatial	32
4.5.0. Acquiring and Creating Spatial Data	32
4.5.1. Data sources	33
4.5.2. Map projections and datum	33
4.5.3. Digitizing	35
4.5.4. Data conversion	35
4.5.5. Scale	36
4.5.6. Metadata	36
4.5.7. Error in GIS	37
5.0.0. Data Quality In GIS	38
5.1.0. Aspects of Data Quality	38
5.2.0. Sources of Error	38
5.2.1. Understanding reality	39
5.2.2. Source data	39
5.2.3. Data encoding	40
5.2.4. Data editing and conversion	40
5.2.5. Data processing and analysis	41
5.2.6. Data output	41
5.3.0. Accounting for Error	42
5.3.1. Quantitative error analysis	42
5.3.2. Qualitative error analysis	43
6.0.0. Layer Generation	46
6.1.0. Software Package Used	46
6.2.0. U, Ra, and Rn Data Available in the Study Area	46
6.3.0. Layers and Associated Data Quality	47
6.3.1. Generation of the radiogenic element database	47
6.3.2. Layers used	49
6.3.3. Data quality of layers	49

7.0.0. Compare And Analyze	50
7.1.0. Uranium	50
7.1.1. Observations	50
7.1.2. Interpretation	52
7.2.0. Radium	53
7.2.1. Observations	53
7.2.2. Interpretation	53
7.3.0. Radon	55
7.3.1. Observations	55
7.3.2. Interpretation	57
7.3.3. Rn areas of interest	57
7.4.0. Radon and Geology	59
7.5.0. Radon and Faults/Unconformities	62
7.6.0. Dug versus Drilled Wells	64
7.6.1. Observations	64
7.6.2. Interpretation	64
7.7.0. Are There Accurate Rn Maps for N.S. Residents?	67
7.7.1. Observations	67
7.7.2. Interpretation	67
7.8.0. Scale Issue	67
7.8.1. Observations	67
7.8.2. Interpretation	70
8.0.0. Summary	72
8.1.0. Conclusions	72
8.2.0. Future Work	73
9.0.0. References	75
APPENDIX A Assessment Report (Morse and Harder 1979)	82
APPENDIX B Glossary – GIS Terms	106
APPENDIX C Radiogenic Element Tables	110
APPENDIX D Attributes of Paper Source Maps Used in this Thesis	293
APPENDIX E Data Quality for Radiogenic Element Tables	295
APPENDIX F Available Data Quality for Pre-existing Digital Layers	297

LIST OF TABLES

Table 2.1	Concentrations, health concerns, limits, and units for U, Ra, and Rn	10
Table 3.1	Description of study area units	18
Table 3.2	Average U for granitic rocks	23
Table 5.1	Components of metadata	45
Table 6.1	Final layers available	48

LIST OF FIGURES

Figure 1.1	Study area	2
Figure 2.1	The ^{238}U decay series	6
Figure 3.1	Map of the Maritimes Basin showing the Minas Basin	15
Figure 3.2	Lithologies of the Minas Basin	16
Figure 3.3	Generalized geology map of the study area	17
Figure 3.4	Geology of the Rawdon Hills area	20
Figure 3.5	Generalized geology of NS with U and Th occurrences	22
Figure 3.6	Uranium roll-front occurrence	25
Figure 3.7	Uranium roll-front occurrence (enlarged)	26
Figure 7.1	Uranium distribution	51
Figure 7.2	Radium distribution	54
Figure 7.3	Radon distribution	56
Figure 7.4	Enlargement of Panuke Road	58
Figure 7.5	Enlargement of Rawdon Hills	60
Figure 7.6	Elevated Rn compared to geology	61
Figure 7.7	Elevated Rn compared to faults and unconformities	63
Figure 7.8	Percent diagram of Rn water in dug wells	65
Figure 7.9	Percent diagram of Rn water in drilled wells	66
Figure 7.10	Potential Occurrence of Rn gas in Nova Scotia	68
Figure 7.11	Geology 25K versus geology 500K	69
Figure 7.12	Geology 25K versus geology 500K (enlarged)	71

LIST OF ENCLOSURES (back cover)

- Enclosure #1** Disk including Radiogenic Element Layers
Enclosure #2 3x2-foot U Distribution Map
Enclosure #3 3x2-foot Rn Distribution Map

NOTE: Enclosures #2 and #3 are only available from the Dalhousie Earth Science Office

ACKNOWLEDGEMENTS

I would like to thank Dr. Marcos Zentilli, supervisor of this thesis, for his continuous time and energy; Dr. Martin Gibling, honors supervisor; and Tim Webster, external reader.

I would also like to thank NSDOE; NSDNR, especially Dr. Bob Ryan, Brian Fisher, and Tracy Lenfesty; Gunter Muecke; Charlie Walls; and Don Fox.

I would like to give special thanks to Anne-Marie Ryan for her endless time, patience, and advice. This thesis would not have been possible without Anne-Marie's expertise in the geochemistry of my study area, and would not have been enjoyable without Anne-Marie's gift of dedication and guidance for her students. Thank you Anne-Marie!

ABSTRACT

Elevated levels of $^{238}\text{Uranium}$ (U) and its daughter products $^{226}\text{Radium}$ (Ra) and $^{222}\text{Radon}$ (Rn) in groundwater, surface water, and soils have the potential of posing health risks. In particular, high levels of radioactive elements in water or soil may correlate with high Rn in indoor air, which is considered by some to be carcinogenic. The purpose of this thesis was to determine whether U, Ra, and Rn data from 1978 to 1981 mining exploration activities in Nova Scotia could be used to predict the potential occurrence of elevated Rn in indoor air. To this effect, the writer compiled and entered almost 5000 data points onto maps at a scale of 1:50 000, and generated the accompanying database, from exploration assessment report maps filed at the Nova Scotia Department of Natural Resources. The data have been integrated into 12 basic GIS (U, Ra, and Rn) geochemistry layers. These data have been spatially analyzed against previously existing digital data, using ArcView software. Preexisting layers used include: geographic features, geology, faults, and unconformities, all available at a scale of 1:500 000.

Data synthesized using GIS allowed examination of a variety of combinations of data layers. Analyses performed included the generation of graphs, tables, queries, "contained in" operations, and "distance to" equations, as well as the synthesis of map data. Results indicate that although the study area typically has relatively low U values, Rn and Ra values can be considered elevated in some locations. In particular, this study confirms that there are areas of Nova Scotia where the risk of elevated levels of Rn in indoor air could exist, which were not widely recognized until now. These areas include the Panuke Road area, underlain by Horton Group sedimentary rocks, and the Rawdon Hills area, underlain by the Halifax Group. The results also suggest that the scale of the available digital data is critical in determining the level to which the data can be analyzed, and a limiting factor in the analysis was the generalized scale (<1:50 000) of much of the preexisting layers. Despite this limitation, the advantages of the GIS approach in the exploitation and analysis, of otherwise relatively unmanageable mineral exploration data for environmental purposes are obvious. The data from this thesis are being used to update existing maps of Rn and U potential for the Nova Scotia Department of Environment.

1.0.0. INTRODUCTION

1.1.0. Introductory Statement

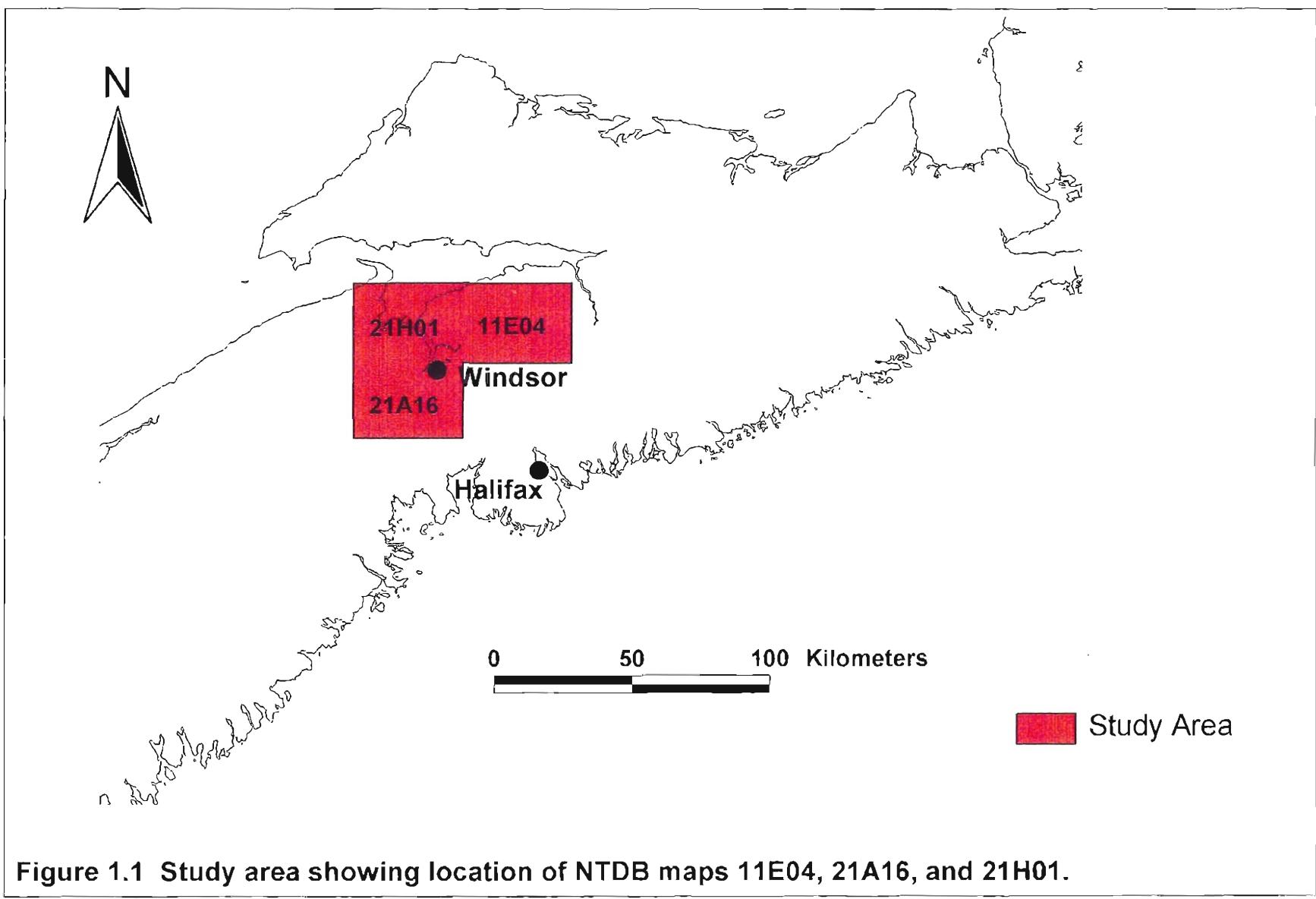
The elements radon (Rn), radium (Ra), and uranium (U) occur naturally in surface soils and groundwaters. These elements have been associated with higher than usual incidences of cancer in localities where humans drink or breathe the contaminated water and air, respectively (NSDOE 1998, Health Protection Branch 1989). More specifically, some studies link incidences of Rn in indoor air to lung cancer (e.g. Hasbrouck 1986), hence Rn in indoor air may be a major concern. These elements are known to occur in relatively elevated concentrations in certain geographically restricted geological environments of Nova Scotia. Therefore, this thesis attempts to analyze the geographic distribution of the above radioactive elements, using a spatial analysis approach.

1.2.0. Purpose of Thesis

The purpose of this thesis is twofold: (1) to determine if data on U, Ra, and Rn may assist in locating areas of elevated Rn, which may correlate to Rn in indoor air; and (2) to determine if a GIS is a useful tool for analyzing environmental risk on the basis of multi-source geological data.

1.3.0. Study Area

The study area for this thesis is limited to the Devonian-Carboniferous strata around Windsor, Nova Scotia, and comprises National Topographic Data Base (NTDB) maps 11E04, 21A16, and 21H01 (Figure 1.1). The study area was chosen for four reasons: (1) data were readily available for the area, (2) no digital data for U, Ra, or Rn existed for this study area, (3) elevated values for Rn are known in the area, and (4) most of the study area is relatively populated.



1.4.0. Procedure and Limitations

Data from U exploration in the Windsor area from 1978 to 1981, before the uranium moratorium was set in Nova Scotia in 1982, were collected and digitized. These data, available through the Nova Scotia Department of Natural Resources (NSDNR) were in non-digital format. Almost 5000 data points for U, Ra, and Rn were selected and digitized by this author for the study area, generating 12 GIS layers. The software used for this thesis is ArcView v.3.1® from ESRI Ltd. To detect areas of elevated Rn, several GIS analyses have been performed on the data. These analyses include: spatially visualizing data, generating statistics, performing spatial queries, integrating and overlaying data, and detecting limitations. Areas where relatively elevated values of Rn are found are then assessed briefly for their associated geological parameters.

Field work was limited to driving through the geographic area for general orientation, assessment of the types of homes and domestic water sources involved, and to evaluate general backgrounds of U in areas with low and high responses using a portable scintillometer.

The main limitations of this thesis are as follows: (1) no Rn in indoor air data are available in the study area, therefore only speculations can be made as to where elevated values of indoor Rn may occur; (2) “data quality” for previously existing digital data were not known; and (3) digital data available for the geological framework of the study area are mainly at a scale of 1:500 000, limiting the accuracy of any interpretation.

1.5.0. Previous Work

Uranium, Ra, and Rn in the study area have been examined by Dyke et al. (1976), Morse and Harder (1978a,b; 1979), Rikeit (1979), Quarch et al. (1980a,b), Barkhouse (1982), O’Beirne-Ryan and Zentilli (1999), and A.M. O’Beirne-Ryan (Ph.D. thesis in progress). The geology of the study area, in particular the Horton Group strata and the Halifax

Group metasedimentary rocks, have been studied by Bell (1929, 1944), Schenk (1970, 1995), Utting (1987), Utting et al. (1989), Martel (1990), Ryan and Horne (1992), King and Horne (1992), Horne and Culshaw (1994), Ryan (1994; 1995), Horne (1995), van de Poll et al. (1995), and Martel and Gibling (1996). Saarberg-Interplan Canada Ltd., a mining company that operated in Nova Scotia between 1978 and 1981, generated the data used for this thesis.

1.6.0. Organization of Thesis

This thesis is an exercise in spatial analysis techniques, rather than a geochemical study. However, for those not familiar with the basic geochemistry of radioactive elements, Chapter 2 provides a brief overview. Chapter 3, geology of the study area, emphasizes the lithologies relevant to the study area and discusses the known U occurrences in association with these lithologies. This being a first Undergraduate thesis with a major GIS involvement in the Department of Earth Sciences at Dalhousie University, a basic introduction to GIS is given in Chapter 4, and a necessary discussion of data quality in GIS is presented in Chapter 5. The individual layers integrated in this study are presented in Chapter 6. Only data layers generated by the author, however, are discussed in any length in terms of their GIS data quality; data quality for other digital layers is discussed only when their supplier made information available to the author. In Chapter 7, the twelve new digital layers are analyzed against the pre-existing digital layers, and interpreted mainly in terms of potential health effects, geological associations, and data limitations. Conclusions and recommendations for future work are presented in Chapter 8. One essential assessment report, a glossary of GIS terms, databases of the 12 GIS layers, a list of paper source maps and their nature, data quality for the 12 GIS layers, and available data quality for pre-existing digital layers are presented as appendices. All the 12 digital layers and their associated databases generated for this thesis are included on a disk in the back cover (or available from the author, c/o Department of Earth Sciences, Dalhousie University).

2.0.0. URANIUM, RADIUM, AND RADON

The elements of relevance for this thesis are uranium (U), radium (Ra), and radon (Rn), all of which are radioactive and may pose health risks. Of particular importance for this thesis is Rn, a gas which may be found in elevated quantities in indoor air. The distribution and concentration of these elements in the study area constitute layers in the GIS analysis (see 7.1.0. Uranium, 7.2.0. Radium, and 7.3.0. Radon), therefore their geochemical behavior in surficial and sub-surficial (groundwater) environments is discussed briefly.

2.1.0. Geochemistry of U, Ra, and Rn

2.1.1. Uranium

Uranium consists of three radioactive isotopes, which occur in fixed proportions in nature: 99.3% ^{238}U , 0.71% ^{235}U , and 0.006% ^{234}U ; hence ^{238}U is the main contributor of radiation from uranium. Uranium-238 is a naturally occurring radioactive isotope with atomic number 92 and atomic mass 238. The decay series for ^{238}U , which has a half-life of 4.51 billion years, is shown in Figure 2.1 (Barkhouse and Laffin 1982). Uranium exists in two oxidation states in nature: U^{4+} and U^{6+} .

2.1.2. Radium

Radium is produced in the decay series of ^{238}U , ^{235}U , and ^{228}Th . However, of significance in this thesis is the isotope which produces the bulk of Rn, which is ^{238}U (see above). Radium-226, as part of the decay series of ^{238}U (Figure 2.1), is a naturally occurring radioactive metal with atomic number 88 and atomic mass 226. Radium-226 is the immediate parent of ^{222}Rn .

2.1.3. Radon

Radon, a naturally occurring radioactive noble gas, consists of three radioactive isotopes: ^{222}Rn , ^{220}Rn , and ^{219}Rn , which decay from ^{238}U , ^{232}Th , and ^{235}U , respectively. Most Rn in

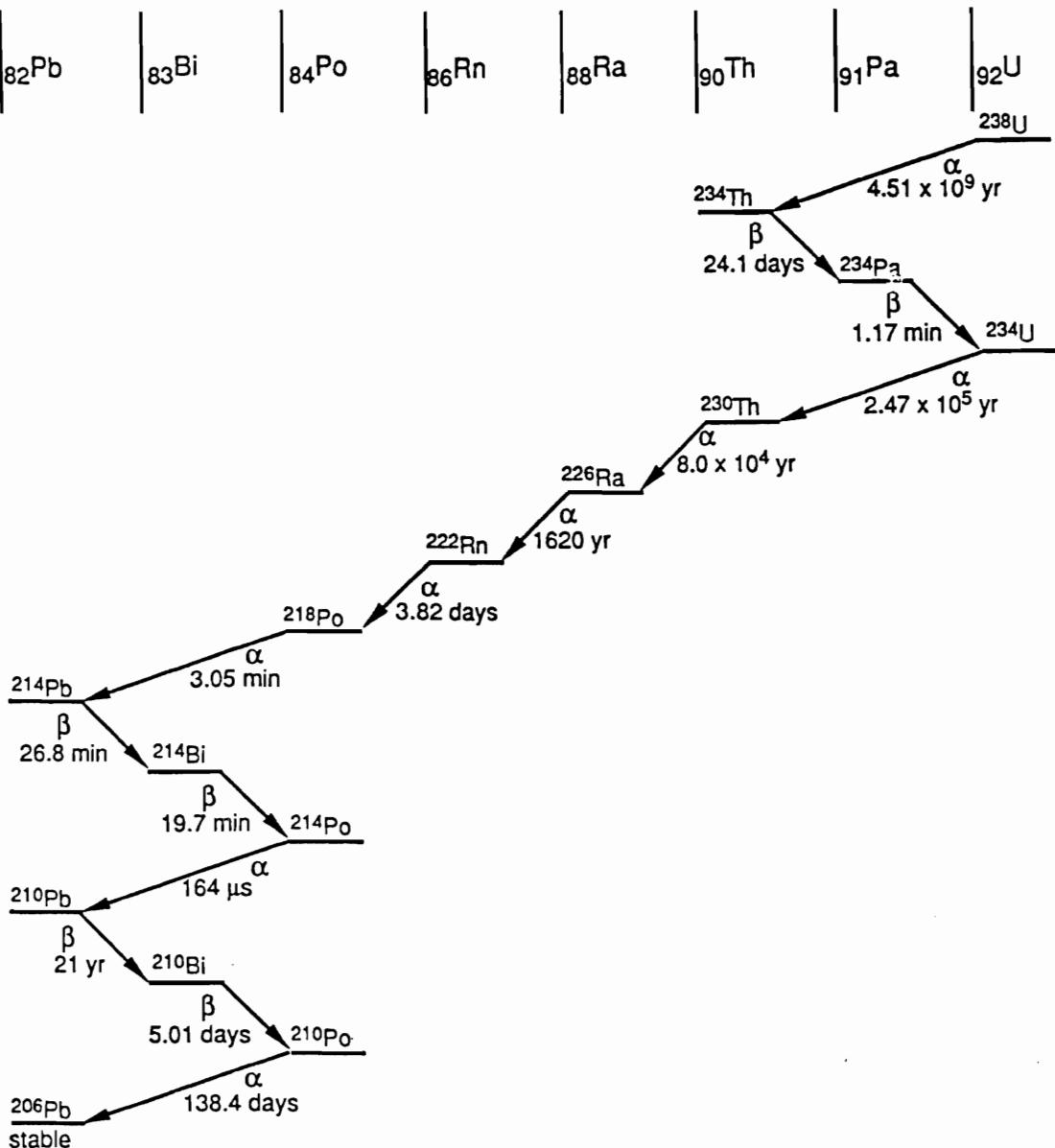


Figure 2.1 The ^{238}U decay series. Pb, lead; Bi, bismuth; Po, polonium; Rn, radon; Th, thorium; Pa, protactinium; U, uranium; yr, years; min, minutes; μs , microseconds; α , alpha decay; β , beta decay (from Wanty and Schoen 1991).

indoor air results from ^{222}Rn (atomic number 86 and atomic mass 222) for two reasons: (1) ^{222}Rn (half-life 3.82 days) is the daughter product of ^{238}U (Figure 2.1), which is the main contributor of radiation from U (see above) and (2) the half-lives of the other Rn isotopes (55.6 seconds for ^{220}Rn and 3.96 seconds for ^{219}Rn) are less than one minute, and thus they rarely occur at any significant distance from their source.

For the sake of simplicity throughout this thesis, ^{238}U , ^{226}Ra , and ^{222}Rn are referred to as U, Ra, and Rn.

2.2.0. Mobility of U, Ra, and Rn in Groundwater and Surface Water in N.S.

2.2.1. Uranium

Uranium occurs in minerals mainly as U^{4+} , but can be found in the U^{6+} state in solution. U^{4+} is insoluble under reducing conditions, however when U^{4+} is oxidized to U^{6+} , the U becomes soluble and may be transported away from its source (Szabo and Zapecka 1991). Thus, in general U is not detected in oxygen deficient waters unless some less common geochemical situation occurs (e.g. presence of phosphates). Within the study area, the Horton Group sandstones can be red or grey, and the shales are predominantly grey in color. Under these conditions the U is generally concentrated in the proximity of the grey, reduced lithologies.

Uranium has difficulty fitting into major rock-forming minerals, such as feldspars and micas, and therefore U is found in some rocks along mineral boundaries (e.g. O'Beirne and Zentilli 1999). In these sites, U is more susceptible to leaching by oxidizing groundwaters, and its escape is unavoidable under conditions of weathering, e.g. oxidation. As a result of uranium's two oxidation states, its mobility and concentrations in groundwater and surface water are affected by a number of criteria: rock type, rate of circulation, climate, pH, and water geochemistry (Wanty and Schoen 1991).

2.2.2. Radium

Radium is typically insoluble under most conditions (Ivanovich and Harmon 1992). However, Ra solubility and mobility are affected by pH and solution composition, for example, Ra becomes soluble in highly saline waters (Ivanovich and Harmon 1992). As U-rich groundwaters move through a system, and U decays to Ra, the Ra is commonly adsorbed to the walls of the water channels because Ra has a relatively strong adsorption to most mineral surfaces (Wanty and Schoen 1991). This Ra subsequently emits Rn into the water; this is how Rn becomes more widely distributed (Dyke et al. 1976).

2.2.3. Radon

Radon is soluble in water (e.g. Ivanovich and Harmon 1992), therefore water can move Rn very readily (Ball et al. 1991).

There are a number of factors that affect Rn mobility in groundwater and surface water. Some of the more important factors are temperature, pressure, flow rate, porosity, permeability, and chemical processes (Wanty and Schoen 1991). For example, Rn is more soluble in cold water than in hot (Ball et al. 1991); and because Rn is degassed from water that is exposed to air, Rn concentrations in surface waters are generally relatively lower than Rn concentrations in groundwaters (Wanty and Schoen 1991). Radon has a short half-life (Figure 2.1), and therefore under most common conditions cannot travel very far from its parent.

2.2.4. Correlation of Rn with U and Ra

Elevated U values in water do not always correlate with elevated Rn values. Reasons may include: (1) if U is locked up in resistate minerals (e.g. zircon), Rn may be released to some extent, even though U is not; and (2) in reducing environments, such as in some stagnant surface or well waters, U can become immobile and fixed in the sediment or rock, whereas Rn gas will enter the waters.

Elevated Ra values in water do not always correlate with elevated Rn values. Reasons for this may include: (1) Ra recently adsorbed to mineral surfaces has not had sufficient time to produce significant quantities of Rn; (2) Ra, which is essentially insoluble in water and adsorbs readily to mineral surfaces, typically has a lower concentration in groundwater than Rn, which is very soluble in water and does not adsorb readily to mineral surfaces; and (3) Ra-rich soil which has been disrupted may increase Rn levels in groundwater that migrates through the soil, even when the Ra remains adsorbed onto soil particles.

2.3.0. Indoor Radon

2.3.1. Sources of Indoor Rn

Radon decay into the atmosphere is generally not a threat because the Rn disperses so readily. However, Rn can concentrate in homes, particularly in basements where ventilation is poor (Health Protection Branch 1989), with the potential of becoming harmful (e.g. Brookins 1990). There are three sources of indoor Rn: water, bedrock/soil, and building materials.

Building Materials Building materials, which can include concrete or bricks containing radioactive materials, do not typically contribute to high indoor Rn values (Hasbrouck 1986) (see Table 2.1 for description of units and acceptable Rn in indoor air levels).

Water High Rn concentrations in groundwater may contribute to the indoor Rn problem in a home (Wanty and Schoen 1991), especially when Rn-rich water is heated (e.g. when taking a shower). However, tap water is a non-continuous source of Rn, so the Rn released from water while the tap is running quickly dissipates, and without a continuous source, the Rn in indoor air is not constantly replenished.

Soil In relation to indoor air, Rn emitted from soil is of greater importance than Rn emitted from water. Hasbrouck (1986) defines soil gas as the mixture of gases, including

Table 2.1 Overview of available concentrations, health concerns, acceptable limits, and Canadian units for U, Ra, and Rn (Hasbrouck 1986; Health Protection Branch 1989; Brookins 1990; NSDOE 1998; www 1998). NOTE: The becquerel (Bq) is defined as one disintegration per second and is the SI unit replacing the curie, a unit based on the activity of one gram of radium (Health Protection Branch 1989). CONVERSION FACTOR: 1 pCi/L = 37.5 Bq/m³ = 0.0375 Bq/L.

	Concentrations	Health Concerns	Acceptable Limits (Canadian)	Canadian Units
U drinking water	<u>Nova Scotia Range:</u> 0.005 mg/L - 0.83 mg/L	Kidneys	0.1 mg/L	mg/L
U soil	<u>Continental Crust:</u> 4 ppm avg. <u>Nova Scotia:</u> 3 ppm avg.	-----	-----	ppm
Ra drinking water	-----	Bone, mouth, sinus cavity cancer, and leukemia	1 Bq/L	Bq/L
Ra soil	-----	-----	-----	Bq/L
Rn drinking water	<u>Nova Scotia Range:</u> <4 Bq/L - >7000 Bq/L	-----	-----	Bq/L
Rn soil	-----	-----	-----	Bq/L
Rn indoor air	<u>Canada:</u> concentrations over land and water rarely exceed 10 Bq/m ³ and 1 Bq/m ³ respectively - average Rn values vary in Canadian homes from 20 to 100 Bq/m ³	Lung cancer	800 Bq/m ³	Bq/m ³

Rn, filling the tiny spaces between soil particles. The terms Rn in soil gas and Rn in soil are equivalent, and therefore are used interchangeably in this thesis.

Radon enters a home primarily from the underlying soil, not from the water or building materials. Ball et al. (1991) have found a direct spatial relationship between soil gas measurements and indoor Rn problems. Radon is a noble gas, therefore physical properties of Rn are more important considerations than its chemical properties. Porosity, permeability, degree of moisture, grain size, mineralogy, temperature, pressure, and wind velocity all contribute to Rn in soil concentrations (Brookins 1990). Porous soils in humid climates, for example, have a higher capacity to contain Rn than less porous soils. Pore spaces fill with water, especially in rainy seasons, and if Rn is being produced, it is trapped in the soil (Ball et al. 1991). Therefore, Rn commonly occurs in higher concentrations in soils during the rainy season. High permeability, either horizontal or vertical, also increases the potential for Rn emissions. Cold temperatures reduce Rn diffusion, thus leading to increased Rn concentration in a specific area in the winter. Combined with winter concentrations, is the added effect of reduced home ventilation in the winter, from shut windows and doors (Wanty and Schoen 1991). High barometric pressure reduces Rn diffusion, and an increase in wind speed may decrease the concentration of Rn in soils and air (Ball et al. 1991).

Ball et al. (1991) concluded that Rn in soil gas is useful when studying localized situations (e.g. Panuke Road area, see 7.0.0. Compare and Analyze). However, for more regional studies it is impractical, and airborne radiometrics are more efficient because elevated values of Rn in soil gas are more likely to be the result of structures, for example faults, than elevated concentrations of Ra or U in soils and rocks. To date, there is no way to predict exactly which homes will have high or low values of radon.

2.4.0. Effects of U, Ra, and Rn on Health

Table 2.1 gives an overview of available average concentrations, health concerns, acceptable limits, and Canadian units for U, Ra, and Rn.

2.4.1. U in Water

The radioactivity of U is not a major concern in drinking water. What is of concern is uranium's chemical properties, which can affect the kidneys when ingested (NSDOE 1998). The current guideline in Canada for U in drinking water is 0.10 mg/L (NSDOE 1998). The most recent update of the guidelines for Canadian drinking water quality states that "the proposed new guideline for U in drinking water could be as low as 0.01 mg/L" (NSDOE 1998). Values in Nova Scotia range from 0.005 to 0.83 mg/L (NSDOE 1998); hence any concentration of U in water merits assessment.

2.4.2. Ra in Water

Once ingested, Ra can damage health. A known carcinogen, Ra may substitute for calcium in bone tissue, resulting in bone cancer (www 1998). It has been suggested that Ra, upon ingestion, may also contribute to digestive-tract cancer (Brookins 1990), mouth and sinus cavity cancer, and leukemia (www 1998).

2.4.3. Rn in Water

To date, no studies have shown that Rn ingestion causes significant harm, therefore no guidelines for Rn in drinking water have been established in Canada (NSDOE 1998). However, in the Nova Scotia Environmental Act (SNS.1994-95, c.1 in Brown and Fox 1997), the precautionary principle states that in cases of potentially serious environmental damage, a precautionary or anticipatory approach should be taken "even in the absence of scientific certainty".

2.4.4. Rn in Indoor Air

The major Rn health concern is the risk of lung cancer through inhalation (Ball et al. 1991), although some studies argue that exposure to domestic levels of Rn does not increase the risk of lung cancer. Once Rn is inhaled most of it gets exhaled quickly. However, while in the lungs and in the air, some Rn decays into solid radioactive daughter products ^{218}Po , ^{214}Po , and ^{210}Po (Figure 2.1). These daughter products may either: (1) cling onto the lung lining or (2) cling onto dust particles in the air, which can then be inhaled. The solid daughter products, like their parent Rn, release alpha particles. Alpha particles do not penetrate the skin, thus no damage can be done if concentrated outside the body. However, in the lungs the tissue lining is thin, and alpha particles can damage DNA, which may result in the development of cancer cells (Health Protection Branch 1989). Radon has a half-life of only 3.82 days, thus if Rn is in the air, its radioactive daughter products are likely to be there as well (Brookins 1990).

As a result of the health risks associated with U, Ra, and Rn, it is essential that the distribution and concentration of these elements be examined to determine where elevated values might occur in terms of their geographical locations and geological settings.

3.0.0. GEOLOGY OF STUDY AREA

The Maritimes Basin, which is composed of a number of subbasins, is a large Late Paleozoic basin in eastern Canada. The subbasin that underlies a major portion of the study area is the Minas Basin (Figure 3.1), containing strata of four Devonian-Carboniferous groups: the Horton Group, Windsor Group, Mabou (Canso) Group, and Pictou Group (Figure 3.2).

Figure 3.3 shows the generalized geology of the study area. For this thesis, primary units include the Meguma Supergroup (divided into Halifax and Goldenville Groups), South Mountain Batholith (SMB), Horton Group (divided into Horton Bluff and Cheverie Formations), Windsor Group, and Pictou Group; secondary units include the Canso Group and Fundy Group. Table 3.1 gives a summary of the age, composition, depositional environment, and contacts of all units of the study area.

Most of the elevated U, Ra, and Rn data collected and digitized for this thesis lie in the Meguma Supergroup (Rawdon Hills) and Horton Group (Panuke Road) (Figure 3.3 shows Rawdon Hills and Panuke Road locations). Therefore this chapter gives a brief summary of the primary units in Figure 3.3, and focuses on the geology in the Rawdon Hills and Panuke Road areas. Assessment reports prepared by Morse and Harder (1979; 1978a,b) and Quarch et al. (1980a,b) give a more detailed account of where and in what type of geological setting elevated values occur. The assessment report for the Panuke Road area (Morse and Harder 1979), where the highest values of Rn occur, is included in Appendix A.

3.1.0. Meguma Supergroup

The Meguma Supergroup is an Appalachian suspect terrane, which is believed to have docked onto the Avalon Zone in the Middle Devonian (Schenk 1995; Keppie 1985). It is

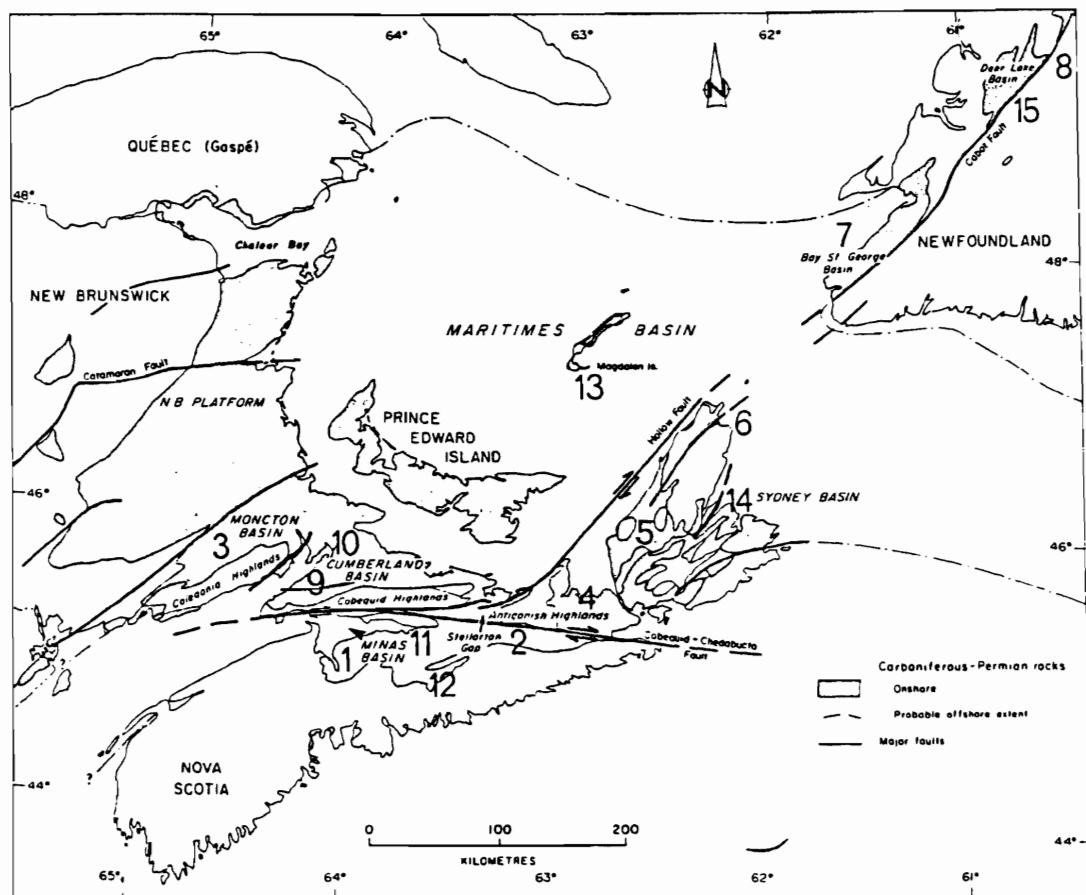


Figure 3.1 Map of the Maritimes Basin showing the Minas Basin. 1-13, which are subbasins, are irrelevant for this thesis (from Martel and Gibling 1996).

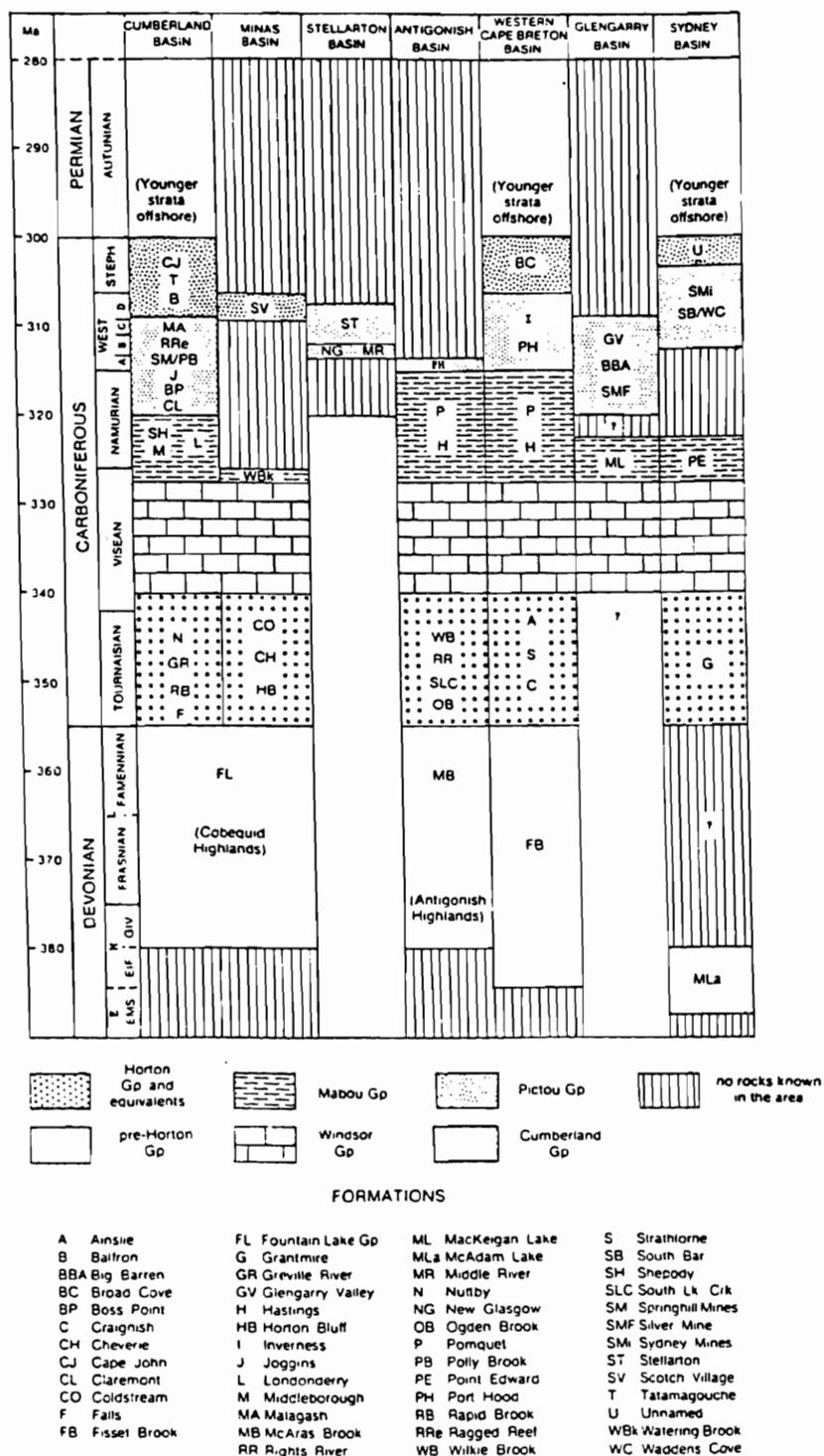


Figure 3.2 Summary of Maritimes Basin stratigraphic units showing general lithologies of the Minas Basin (from Gibling 1995).

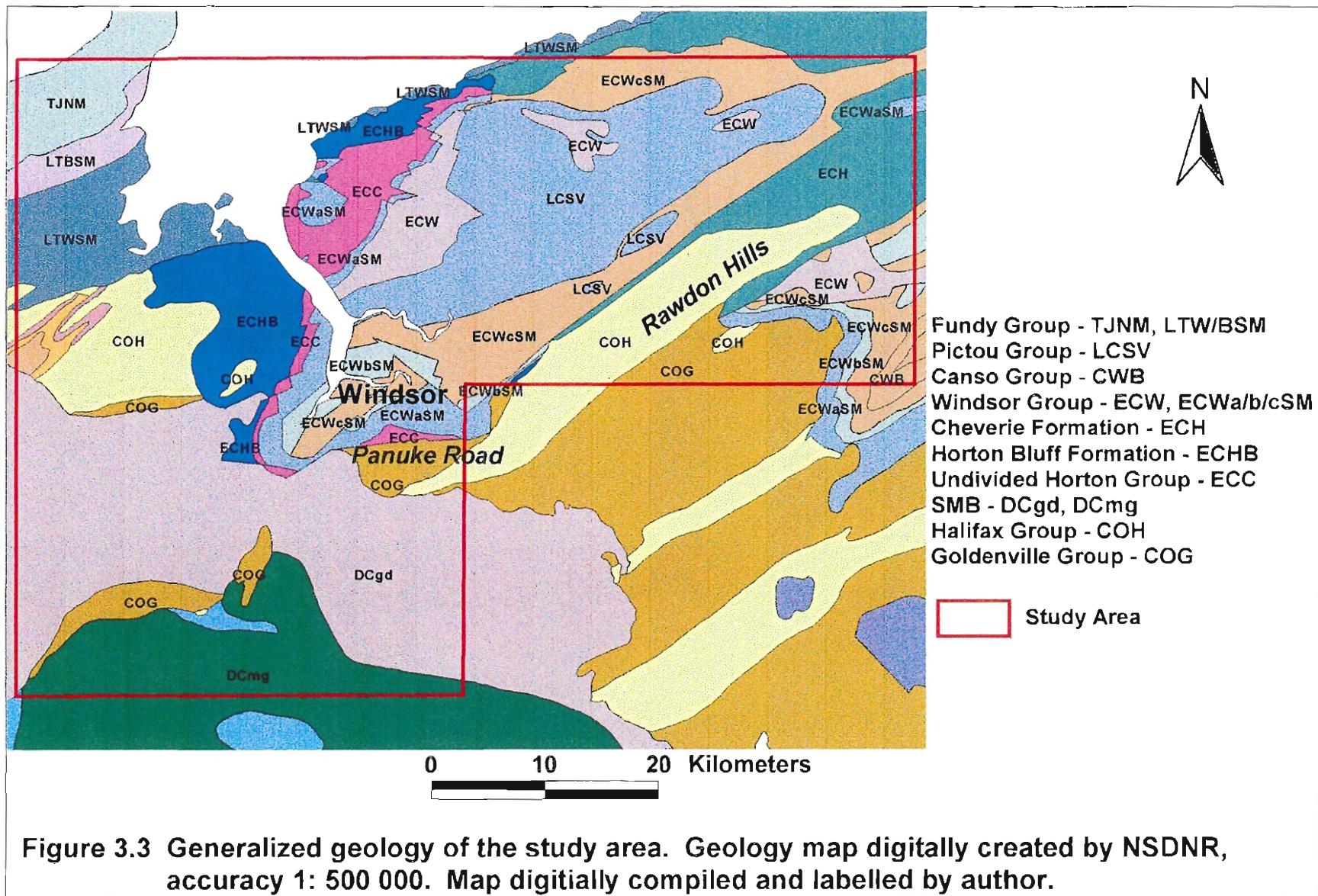


Table 3.1. General age, composition, depositional environment, and contacts of the study area (Schenk 1970; Keppie 1979; Moore and Ferguson 1986; Utting 1989; Martel 1990; Ryan 1994; Schenk 1995; van de Poll et al. 1995; Martel and Gibling 1996).

	Age (Period)	Composition	Depositional Environment
Fundy Group	Triassic to Jurassic	conglomerate, sandstone, siltstone, shale, basalt	alluvial fans, rivers, lakes, wind blown dunes
		angular unconformity	
Pictou Group	Late Carboniferous	grey coal-bearing facies with fine-medium grained sandstone and siltstone	lacustrine, paludal, and flood plain
		angular unconformity	
Canso Group	Early-Late Carboniferous	grey siltstone, minor sandstone with intercalated gypsum and anhydrite	lacustrine
		conformable	
Windsor Group	Early Carboniferous	marine limestone, evaporites, gypsum, and siltstone; salt, anhydrite	open marine succession
		conformable or	unconformable
Cheverie Formation	Early Carboniferous	interbedded red and brown sandstone, conglomerate, siltstone, shale, mudstone; a few quartzite horizons	coarse grained alluvial deposit, braided stream
		disconformity	
Horton Bluff Formation	Late Devonian to Early Carboniferous	sandstone and siltstone; conglomerate and breccias at the base; black and grey shale with minor dolostone and limestone in the center	fluvial/lacustrine and marine incursions
		nonconformity	
South Mountain Batholith	Late Devonian	peraluminous granitoid	intrusion
		Intrusive	
Halifax Group	Late Cambrian to Early Ordovician	carbonaceous, pyrrhotitic and pyritic, grey to black slate with minor quartzarenite and metasiltstone	lower part of a continental rise prism
Goldenville Group	Late Cambrian to Early Ordovician	meta-quartzarenites with minor beds of chloritic slate and siltstone	abyssal plain, deep-sea fan

a sequence of deep water to inner shelf arenites, wackes, and slates (St. Peter 1993) that range in age from Late Cambrian or older to Early Ordovician (Schenk 1995).

The Meguma Supergroup is divided into an underlying Goldenville Group and an overlying Halifax Group. The Goldenville Group is massive, thick-bedded, meta-quartzarenites with minor beds of chloritic slate and siltstone; and the Halifax Group is carbonaceous, pyrrhotitic and pyritic, grey to black slate with minor quartzarenite and metasiltstone (Ryan 1994; Schenk 1995). The boundary between the Goldenville and Halifax Groups is the Goldenville-Halifax transition (GHT) zone. The GHT is a poorly exposed boundary sequence (Schenk 1995) that has been extensively mined for gold (Ryan 1994); none of the literature indicates U exploration or concentration in the GHT.

3.1.1. Rawdon Hills

Ryan and Horne (1992) give a brief summary of the Rawdon Hills geology. Rawdon Hills lies on a NNE trending syncline that is underlain by metasedimentary rocks of the Halifax Group, with Goldenville metasedimentary rocks to the south and Carboniferous strata to the north (Figure 3.4). An unconformity and a fault exists between the overlying Carboniferous strata in the north and the underlying Halifax Group. The Halifax Group is divided into two units, an underlying Rawdon unit and an overlying Glen Brook unit (Figure 3.4). The Glen Brook unit is composed of color-banded grey-green slate, minor thin quartzite, and argillaceous metasiltstone beds; and the Rawdon unit is composed of black sulphide-rich slate with locally graphitic slate and minor metasiltstone (Ryan and Horne 1992). The Rawdon unit lies along the flanks of the syncline and the Glen Brook unit lies in the center (Figure 3.4). NNW trending kink folds and minor folds related to the syncline are apparent in the area. Ryan and Horne (1992) note that a considerable amount of post-Carboniferous deformation has occurred around the syncline. Further geological descriptions for the Rawdon Hills area can be found in Horne (1995) and Ryan (1995). No literature is available on U potential in the Rawdon Hills area.

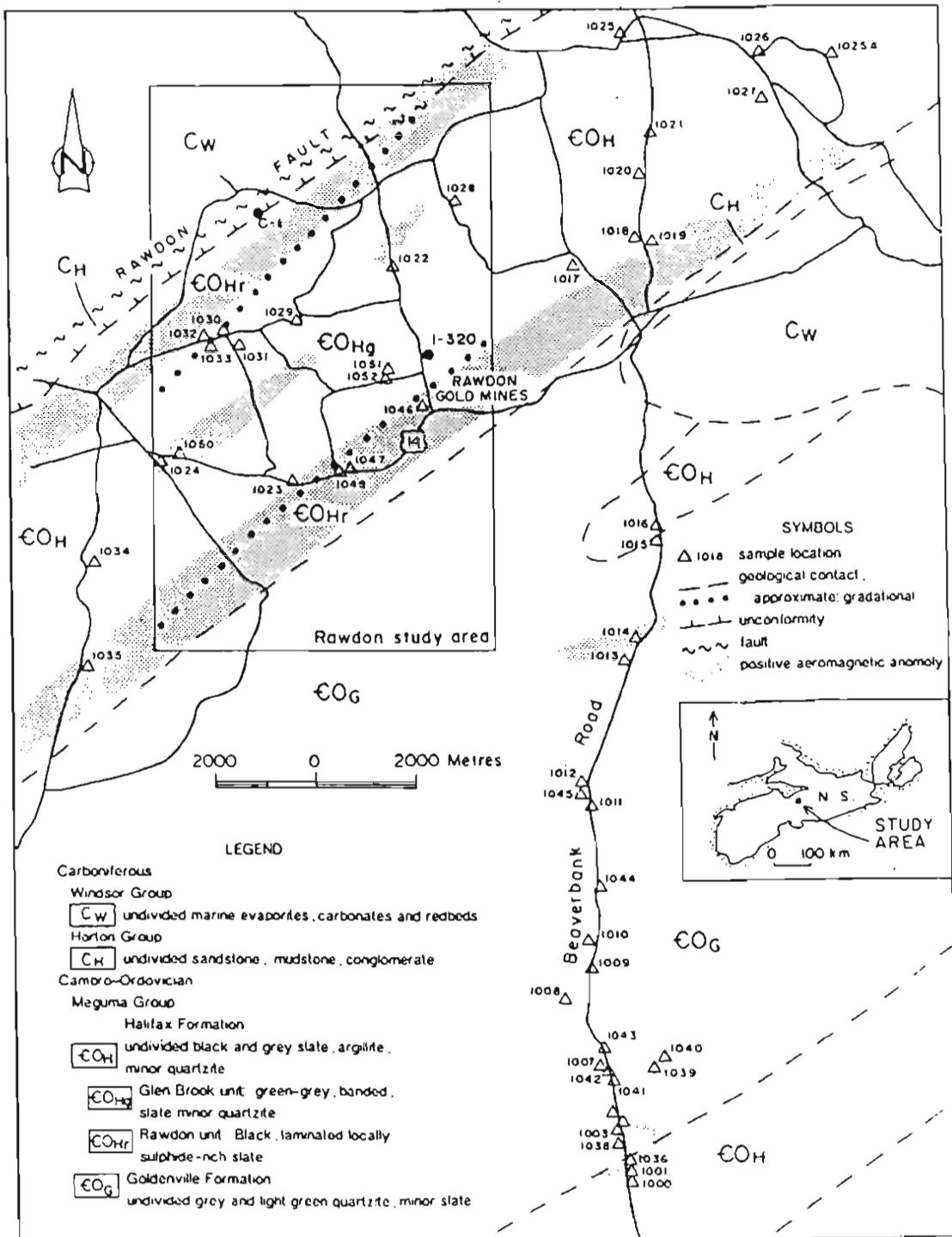


Figure 3.4 Geology of the Rawdon Hills area (from King 1994).

3.2.0. South Mountain Batholith

The South Mountain Batholith (SMB) is a peraluminous granitoid body, which intruded the Meguma Supergroup of southwestern Nova Scotia around 370 Ma (Figure 3.5). The SMB granitoids are located in the southern part of the study area (Figure 3.3). Of importance to this study, the SMB contains a paraintrusive suite of rocks that is enriched in granophile elements such as Sn, U, Rb, Li, F, B, and Cs (Muecke and Clarke 1981). Compared to other granitic bodies in Nova Scotia, and even throughout the world, the SMB is high in U (Table 3.2).

Some data for U, Ra, or Rn have been digitized by the author for this area, however the SMB is not a direct geological study unit for this thesis (see A.M. O’Beirne-Ryan, Ph.D. thesis in progress). The SMB contains a significant amount of U (Figure 3.5; Table 3.2), with some occurrences in close proximity to the study area, and lies adjacent to the Horton Group strata in the Panuke Road area (Figure 3.3). A study conducted in the area by Martel and Gibling (1996) shows northerly paleoflow patterns in river sediments from the Curry Brook Member (Middle Horton Bluff). Therefore, the SMB may be a potential source of U for the Horton Group strata.

3.3.0. Horton Group

The Horton Group is a Late Devonian-Early Carboniferous group that was deposited in local half grabens during an extensional phase that followed the Acadian Orogeny (Martel and Gibling 1996). The Horton Group, which contains abundant plant debris (Uutting et al. 1989; Martel and Gibling 1996), is composed of red and grey-green polymictic conglomerates, arkosic sandstones, mudstones, oil shales, and minor non-marine evaporites (van de Poll et al. 1995). The Horton Group lies with angular unconformity on the Meguma Supergroup and lies with nonconformity on the SMB granitoids (Martel 1990; van de Poll et al. 1995; Martel and Gibling 1996).

Table 3.2 - Average content of U for the different granitic terranes of N.S. and world averages for major granitic rock types (Barkhouse and Laffin 1982).

AREA	REFERENCE	ROCK TYPE	U ppm
SMB	Chatterjee and Muecke (1982)	granodiorite	3.9
		monzogranite	6.1
		leuco-monzogranite	8.3
Cobequid Highlands	Gulf Minerals Canada Limited (1980)	diorite	1.1
		granite	7.9
Cape Breton	Barr et al. (1982)	diorite	1-2
		granodiorite	1-2
		granite	2-5
World Average	Bates et al. (1980)	diorite	2
		granitic	4
World Average	Vinogradov (1962)	diorite	1.8
		granitic	3.5

The Horton Group has been divided by Bell (1929) into an upper Cheverie Formation and a lower Horton Bluff Formation. The Horton Bluff Formation is composed dominantly of sandstone and siltstone, with conglomerates and breccias at the base, and black and grey shale containing minor dolostone and limestone in the center (Moore and Ferguson 1986). The Cheverie Formation is composed of interbedded red and brown sandstone, conglomerate, siltstone, shale, mudstone, and a few quartzite horizons (Utting et al. 1989).

3.3.1. Panuke Road

The Panuke Road area is underlain by Horton Group strata (indicated by ECC on Figure 3.3), which comprise underlying rocks of the Horton Bluff Formation and overlying rocks of the Cheverie Formation. To the north is the Windsor group (ECWaSM), which is underlain by the Horton Group (Figure 3.3). To the south and southeast of the Horton Group is the Meguma Supergroup rocks (COG); to the southwest is the SMB (Dcgd) (Figure 3.3).

Uranium, Ra, and Rn values in the Panuke Road area are generally associated with one of two settings: (1) U, circulating in solution, is trapped when shale, which is likely to contain organic material and generate a reducing environment, is encountered (e.g. Horton Bluff Formation black shales) or (2) U accumulates in sedimentary rocks at a reduction front, along groundwater flow paths (e.g. Cheverie Formation sandstones). Uranium that is picked up and oxidized in water moves through the ground. As water circulates down into the permeable units, it gradually loses its oxidizing capacity, U^{6+} is reduced to U^{4+} , and is deposited as uranium roll-fronts and similar occurrences (Gabelman 1977). Uranium may be deposited so far underground that Rn would never be detected by surface methods, making well water studies an appropriate tool for detecting U, Ra, and Rn (Brookins 1990). A U roll-front occurrence exists in the Panuke Road area. The occurrence is very weathered (Figure 3.6), and the U is probably being redistributed throughout the area (Figure 3.7).



Figure 3.6 In the Panuke Road area (see Figure 3.3 for location), a uranium roll-front occurrence is exposed in the Cheverie Formation arkosic sandstones (Figure 7.4). The sandstones are very weathered, making erosion and distribution of the U in the sandstones very easy.



Figure 3.7 This figure is an enlargement of Figure 3.6. In the Panuke Road area, the uranium roll-front occurrence is adjacent to a stream, which may readily distribute the U in the sandstone throughout the area.

Assessment reports produced by Morse and Harder (1979; 1978b) for the Panuke Road area state that areas of sampling were mainly along the Horton Bluff-SMB contact, the Cheverie-Windsor contact, and within the Horton Group itself. Elevated levels of U and geochemical anomalies are found at these settings. The six highest values of Rn in well water collected in the Lower Carboniferous of Nova Scotia, are confined to an area 100 by 250 m on Panuke Road; the highest value being 1778 Bq/L, about 100 times the average (Morse and Harder 1979; 1978b). The highest value of U in well water is 0.012 mg/L and is associated with the 1778 Bq/L Rn value.

Much of the U in the Panuke Road area is believed to have come from the SMB, where U is leached from the granite and concentrates into sedimentary rocks under certain chemical conditions (Morse and Harder 1979; 1978b).

3.4.0. Windsor Group

The Windsor Group is Early Carboniferous in age (Utting 1987) and is composed dominantly of marine limestones, evaporites, gypsum, and siltstone; with minor amounts of salt and anhydrite (Moore and Ferguson 1986; van de Poll et al. 1995). The contact between the Cheverie Formation and the Windsor Group is conformable in some localities (van de Poll et al. 1995), and unconformable in most (Moore and Ferguson 1986); the Canso conformably overlies the Windsor Group (Moore and Ferguson 1986).

Uranium may be abundant in carbonate rocks and can be carried as a U carbonate ion in solution (e.g. Brookins 1990), however, from analyses done in this study (see 7.4.0. Radon and Geology), no elevated Rn concentrations have been detected in the Windsor Group.

3.5.0. Pictou Group

In the study area, the Pictou Group (Scotch Village Formation) is a grey coal-bearing facies that has fine-medium grained sandstones and siltstones. The Pictou Group was deposited in lacustrine, paludal, and flood plain environments (Bell 1944; Hacquebard 1972; Moore and Ferguson 1986). An angular unconformity lies between the underlying Canso Group and the overlying Pictou Group (Keppie 1979). The Pictou Group is overlain unconformably by the Fundy Group (Triassic-Jurassic) (Keppie 1979).

The author has digitized no data for U, Ra, or Rn for the Pictou or Fundy Group.

4.0.0. GEOGRAPHIC INFORMATION SYSTEMS

This chapter provides an appropriate background on geographic information systems to enable the reader to understand the study at hand. This chapter draws heavily on general references, such as Bonham-Carter (1994) and Castle (1993), where the reader will find a complete overview of GIS. A glossary of GIS terms, indicated by italicized words in the following chapter, can be found in Appendix B.

4.1.0. GIS and its Purpose

According to G. K. Muecke (Dalhousie University, written communication, 1996), geographic information systems (GIS) are “systems of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling, and display of spatially-referenced data for solving complex planning and management problems”. GIS provides assistance for making decisions based on spatial data. GIS is a decision support tool and most authors recommend that it never be used as the sole method in decision making.

4.2.0. Choosing a GIS package

Today there are a vast number of GIS and related software packages in use. Not all packages have the same capabilities, therefore it is important to know the requirements and goals for the project at hand. A decision must be made based on data available at time x, although at time x+t the data and the goal of the project may change (Bonham-Carter 1994).

More commonly used today are Desktop Mapping Systems, which include packages such as ArcView and MapInfo. These systems are used mainly for display and *querying* of spatial data. Desktop Mapping Packages are preferred because they are user-friendly, and

compared to computationally intensive GIS software packages, they are relatively inexpensive. From this point on all packages will be referred to as GIS.

4.3.0. Applications of GIS

The ability of GIS to handle and combine different large sets of data (organize) are among the most important applications (Man 1984). Other applications include the ability to visualize, query, analyze, and predict problems based on spatial observations.

4.3.1. Organization

Organization involves collecting large amounts of data that can be displayed spatially and non-spatially. Proper organization in any GIS project requires a major portion of the time and effort (Bonham-Carter 1994). Data sharing is a problem in many GIS projects, as data may exist in a suitable form but are not available to users. Determining what data exist, how they can be acquired, and once acquired, editing and making the data compatible to the system, is time consuming.

4.3.2. Visualization

Ninety percent of operators use GIS for presentation mapping only (Castle 1993). Humans have an exceptional capability to process spatial relationships when displayed visually (Bonham-Carter 1994). Tables and charts containing the same information do not give similar results. For example, as is the case in this study, a table of Rn in well water values will allow one to determine the highs and lows, but these values are of little use unless they can be related to an exact location.

4.3.3. Spatial Query

Spatially displaying information on a screen is useful, as it helps to determine patterns and trends. However, it is not as useful when it comes to answering questions. For example, do elevated Rn values align with elevated U values on the surface of the Earth? Where is Rn greater than x? Where does Rn reside in terms of the surficial geology or bedrock

geology? Do high Rn values correspond with faults and fractures? Querying spatial databases helps the user to answer these questions.

4.3.4. Integration

Integration is the ability to merge spatial data sets from different sources and display and manipulate phenomena on the basis of a common set of variables. Correlating a U map with a geology map is an example of integration.

4.3.5. Analysis

Analysis is defined as the process of inferring meaning from data (Bonham-Carter 1994). Spatial analysis is the use of spatial data in logical or mathematical models for the purpose of planning and decision making (Castle 1993). Analysis can be done visually (see above); with measurements such as charts, histograms, and tables; through statistical computations; or by fitting models to data values (Bonham-Carter 1994). GIS packages vary, and not all packages can perform the same analysis. To overcome limitations, files can often be converted into another GIS package, which can perform a given operation.

4.3.6. Prediction

Prediction is often the end result of a GIS project. For example, given data for Rn, U, Ra, geology, structures, radiometrics, and surficial geology in a certain area; which areas are likely to have an indoor Rn problem?

4.4.0. Components of a GIS

There are two components to any GIS system: attribute database component and spatial component.

4.4.1. Attribute Database

An attribute is a number, letter, word, sentence, or basically any value. Attributes of spatial objects are usually organized into lists or tables (Bonham-Carter, 1994). An attribute table contains entities (rows) and attributes (columns). For example, in terms

relevant to this study, a water well could have an attribute of Rn values in Bq/L, with an entity of 1000. Another entity of the well water could be the presence or absence of an elevated Ra value; its attribute could be true or false. The organization of attribute data determines the possible types and extent of spatial queries, spatial analysis, and modeling (Bonham-Carter 1994).

In order to create a useable database, a number of criteria have to be met. A database should: (1) contain information of the same type for all its measured variables, (2) be as detailed as necessary for the project at hand, (3) be positionally and internally accurate, (4) be compatible with other *layers* used, (5) be readily updated, and (6) be accessible to whoever needs it (G. K. Muecke, Dalhousie University, written communication, 1996).

4.4.2. Spatial

In a GIS each attribute has spatial significance. Attached to each attribute is a location which corresponds to the surface of the Earth. This can be recorded in latitude/longitude, UTM, in coordinates of the standard cartographic projections, or in arbitrary rectilinear coordinates with a local origin (Bonham-Carter 1994). For example, latitude and longitude are stored as attributes, whereas their actual values are entities.

4.5.0. Acquiring and Creating Spatial Data

GIS is a relatively new tool and good digital data are uncommon. To date, no set standards have been created and enforced about how to produce digital data. Most users create data for the sole purpose of their project, neglecting the fact that other users could benefit from their data in future projects. Therefore, a major portion of the time and effort in a GIS project goes into gathering, creating, properly *geocoding*, and spatially registering data in digital form (Bonham-Carter 1994).

Data capture, which is a component of GIS (see 4.1.0. GIS and its Purpose), has various aspects: (1) data sources, (2) map projections, (3) digitizing, (4) data conversion, (5) scale, (6) metadata, and (7) errors.

4.5.1. Data Sources

Where do data come from? Primary data are data that are collected by the user whereas secondary data are primary data that have been interpreted, edited, and processed by someone else (Bonham-Carter 1994). An example of primary data for this study is taking Rn measurements in well waters. Secondary data are compiled from earlier work and input into a GIS.

Nondigital data are any data that are not in digital (computer) form, for example, a paper map of the geology of Nova Scotia. Digital data are any data that have already been input into the computer. For example, the geomatics center in Sherbrooke, Quebec sells digital base maps of roads, water, streams, and, railways. The database is called the National Topographic DataBase (NTDB), and it is digital in form.

Informal information is an important source for any GIS project (Man 1984). Information in the form of ideas, expertise, or experience is often overlooked when it comes to creating a formal system. Informal information is highly subjective, difficult to verify, and generally non-quantitative, but it is a rich resource and can be useful for interpretation.

One of the most important aspects of GIS is the ability to integrate diverse data sets from numerous sources. In doing so, new information can be created (Man 1984).

4.5.2. Map Projections and Datum

A projection is applied when positions in 3D space are transformed to a 2D planar coordinate system (Jones 1997). In order to work within a single framework, all geographic data used in a GIS project have to be in the same geographic projection. Three main categories of projections include conformal, equal area, and equidistant (Said

and Fisher 1996). Conformal projections (e.g. Lambert) maintain the shape of objects in a layer. Equal area projections (e.g. Albers) maintain the area of an object. Equidistant (e.g. UTM) maintains the distance between objects. Each projection brings a different kind of geometric distortion and each has its own uses. For example, equal area projections are useful for representing point distribution over a large area, as point density is unaffected (Bonham-Carter 1994). Conformal projections are used in smaller regions where area distortion does not matter (Bonham-Carter 1994). Equidistant projections are a compromise between the two.

The Earth's surface is irregular in shape, so to overcome this problem all measurements are reduced to a reference surface. The *geoid* is the oldest reference surface, and is defined either by mean sea level or as the equipotential surface of gravity that defines all points at which the force of gravity is equivalent to that experienced at the ocean's surface (Eastman 1997). The surface of gravity defines the geoid as an irregular *ellipsoid*. Variances in topography make the ellipsoid irregular at certain locations. To overcome these irregularities new ellipsoids, which are closer approximations to the true surface of the Earth, are developed. For this reason, many different ellipsoids exist. They can all be defined through a combination of axis length and degree of flattening. Selecting a specific reference ellipsoid to use for a specific area, and orienting it to the landscape, defines what is known as a *datum* (Eastman 1997). The most common datum in North America is the North American Datum (*NAD*) which was modified in 1983 from *NAD27* to *NAD83*. In relation to geographic coordinates, a datum defines latitude and longitude. Latitude and longitude are not set geographic locations, but change with every datum. The difference between datums is very apparent; e.g. typically, depending on the location, converting data from *NAD27* to *NAD83* gives a difference that is greater than 40 meters. For this reason, it is important that all data be of the same datum in a GIS project.

As with most GIS projects, the user takes data in whatever projection and datum they are stored. Most GIS software packages can convert projections and datums. ArcView, the

GIS used in this study, cannot change projections or datums so that the data have to be converted in another software package.

4.5.3. Digitizing

Organizing and entering spatial data are the most costly and time-consuming parts of a GIS project (Ripple 1989). There are a number of ways to enter data. Among the two most common methods are *manual digitizing* and *on-screen digitizing*. Manual digitizing requires a digitizing tablet; on-screen digitizing requires a *scanner*. With manual digitizing, the GIS package for the project has to offer the same coordinate system as the source being digitized. With scanning, a scanner has to be available and maps scanned have to be neat, clean, contain few points and not be worn out. A third, less common, method is head-up digitizing. Head-up digitizing is essentially creating a new layer on top of some geographically referenced *basemap* (e.g. NTDB map), and drawing on features. Unlike data entry with a tablet or scanner, few criteria have to be met and no extra equipment is necessary. As in this study, head-up digitizing is particularly beneficial because the source data must align with roads, streams, or lithology to be useful.

4.5.4. Data Conversion

A database created with a purpose in mind is almost always designed to match the data and file structures of the software chosen (Goodchild 1993). To change the format the user may have to go through a long and tedious process. GIS software packages will only work with certain forms of digital data. If the data are not in the correct form, data conversion is required. Most GIS contain routines for importing and converting data from one form to another, via an interchange format (Bonham-Carter 1994). A number of GIS data translators are available. For example, NTDB maps, the basemaps used in this study, are only available in COGIF format. The COGMIF translator, available at Environment Canada in Dartmouth, Nova Scotia, changes COGIF files into MID/MIF files. ArcView will only work with shape files, but it has a translator to change MIF files into shape files.

4.5.5. Scale

Most data sources are in different scales and everything has to be brought to one scale. Large scale data (e.g. 10K) can be used with small scale data (e.g. 50K), but the resulting *accuracy* will be the smallest scale. A base map is generally chosen for a project and all data digitized or overlaid onto the basemap have to be at the same or larger scale. Data cannot be made more accurate by putting them on a larger scale map.

4.5.6. Metadata

Metadata are defined as data about the data. For example, geological maps are a difficult secondary source of data to deal with, as boundaries change from geologist to geologist and as new information becomes available. A geology map is an interpretation of a geologist's point of view at one time (Bonham-Carter 1994). For this reason, metadata on how and when a geology map was created are essential if proper interpretations are going to be made. Unfortunately metadata are difficult to come by. Because little or no metadata are available, users assume the data are correct. This results in a final product that has a spurious appearance of accuracy (see 5.0.0. Data Quality in GIS).

According to Castle (1993), a good set of metadata should include: (1) the scale at which different sources of data were entered, (2) the accuracy of the data entered (positional and attribute), (3) latest date of revision of the sources entered and the latest date of revision of the final project, (4) *coverage*, (5) legibility, and (6) suitability. Added to this list should be (7) complete documentation of map projections and datum, (8) method of data entry, (9) number and types of conversions, and (10) a progressive error calculation. If metadata are unavailable or unsuitable they must be inventoried; to do otherwise would be a waste of time and money (Castle 1993). In every case the GIS database is no better than the source material (Castle 1993).

4.5.7. Error in GIS

Most vendors neglect to incorporate error when developing a GIS program. The end result is a product that appears to be accurate. Such misconceptions cause enormous problems in data interpretation, analysis, and prediction (see 5.0.0. Data Quality in GIS).

5.0.0. DATA QUALITY IN GIS

This chapter hopefully provides an appropriate background on *data quality* associated with a GIS project, to enable the reader to understand the study at hand. A glossary of GIS terms, indicated by italicized words in the following chapter, can be found in Appendix B.

5.1.0. Aspects of Data Quality

Producing complex and attractive maps is easy with GIS (Heywood et al. 1998). The problem arises when these maps are considered by end users to be error free. Every GIS project will have errors, therefore the user must learn to understand them, document them, and manage them. This will result in an end product that is useful to others, as limitations and accuracy will be known.

Data quality is an important factor when dealing with a GIS project. Data quality can be described by the error or *uncertainty* (hereafter grouped together as error) associated with the data. Error can be examined using parameters such as *positional accuracy*, *attribute accuracy*, *precision*, *bias*, *resolution*, *generalization*, *completeness*, *compatibility*, *consistency*, and *applicability*. The more information that is available on the quality of the data, the better the user is able to assess its suitability and limitations for their purposes (Jones 1997).

For a complete description on aspects of data quality see Heywood et al. (1998) and Jones (1997).

5.2.0. Sources of Error

Sources of error come from (1) understanding reality, (2) source data, (3) *data encoding*, (4) *data editing* and conversion, (5) *data processing* and analysis, and (6) data output (Heywood et al. 1998).

5.2.1. Understanding Reality

Not all errors in GIS are a result of computer processing and manipulation (Heywood et al. 1998). People perceive reality in different ways and this results in *conceptual errors* (Heywood et al. 1998). Conceptual errors are most prominent when two different people collect, encode, edit, and analyze data. Another source of error occurs when reality is reflected through the use of *spatial models* (Heywood et al. 1998). All spatial models are representations or simplifications of the real world, and therefore have limitations. For example, the *raster model* conveys the idea that the world can be portrayed using cells in a grid. The *vector model* assumes that geometric objects in a coordinate system can represent features on the Earth.

5.2.2. Source Data

All data sources include error (Heywood et al. 1998) and many GIS projects use multiple sources of data. Errors can result from: positional error, such as using lines to represent gradational boundaries; attribute error; equipment restrictions; human error, such as misusing operating equipment, misinterpreting results, personal bias, or misrecording data; inappropriate sampling techniques; and time error, such as using a map or database to represent time when they represent a snapshot in time. Questions such as what year? what season? what day? what time of day? are all relevant questions that affect the way in which a data layer can be used. For example, Rn in sediment samples will give a different value in the summer than in the winter. If a date is not incorporated into the metadata, the user must make assumptions.

According to Kemp (1993), a map is not a recommended data source. In order to properly display a paper map, the cartographer has to displace objects so that they do not overlap and generalize the map so that it is legible (Muller 1991). Also, most maps are not generated for the same purpose as the study at hand, therefore necessary parameters may not be included on the map (Goodchild 1993). Unfortunately, most available data are in map form (Goodchild 1993).

5.2.3. Data Encoding

Data encoding is probably the step that contributes the most to error in a GIS project (Heywood et al. 1998). Methods of data input, such as digitizing or scanning, can incorporate large errors if the user has not properly *georeferenced* the data. Most GIS packages do not provide an appropriate method to account for data encoding error. Data encoding not only incorporates new error, but also incorporates all the error associated with the original source document (Jones 1997). On top of the positional, attribute, equipment, and human error of the source document, all these errors are added again while data are being encoded.

Digitizing, the principle data encoding method, introduces human error, such as wobbly hands, under and overshooting, and lack of hand-eye coordination; paper base map error, such as a shrunk, distorted, or folded maps (Heywood et al. 1998 and Jones 1997); and false precision, because digitizing stores an object with many decimal places (Kemp 1993). Data input by digitizing will require editing and cleaning, which may introduce further error. All data encoding methods introduce error, therefore choosing the appropriate method depends on the final data structure needed for the project (Kemp 1993).

5.2.4. Data Editing and Conversion

Data editing is usually a positive process that eliminates error (Heywood et al. 1998). Conversions, on the other hand, introduce error. Conversions include such operations as changing raster data into vector data or vice versa, transferring one file format to another, and changing coordinate systems. Most GIS packages have data conversion software, but no description on the conversion error is provided. Several studies have been done on error introduced in data conversion. One study by Said and Fisher (1996) involves using ArcInfo and Genamap to transform geographical coordinates into Lambert conformal, UTM, and Albers Equal area projections, and then back into geographical coordinates. Any new intersection points and any shifts in coordinates will be an indication of error. ArcInfo produced some error in the x-coordinate, with a maximum magnitude of 0.032 meters. Although this is a small distance, *polygon* area is affected by 256 to 1280 m². No

errors in the Albers Equal area occurred, and no errors were observed for Genamap. Said and Fisher (1996) concluded from this study that, errors do exist in projection conversion, but they are very small and may result from digital rounding which Jones (1997) notes does occur in some packages. Additionally, different GIS packages and different types of projections introduce different errors.

5.2.5. Data Processing and Analysis

Data processing and data analysis can introduce error. Two very important processes in a GIS are the ability to reclassify and overlay data. Reclassification introduces a bias error if the user is manipulating the data to show desired results. The way that data are reclassified (by colors, intervals, sizes and shapes) affects how it is perceived and interpreted (Heywood et al. 1998). Overlaying data also produces errors, such as *slivers*. Slivers can happen for a number of reasons: data layers were digitized with different coordinate systems, or data layers are at different scales (Heywood et al. 1998). Most slivers can be eliminated by visually deleting them or by running an operation to detect and delete them, but the user is assuming that only one of the maps is correct. This assumption cannot be made without introducing error. Also, as the number of layers overlaid increases, the error increases. Upon overlay, the probability of the events in one layer and the events in another layer occurring together is equal to the probability of the event in the first layer occurring multiplied by the probability of the events in the second layer occurring (Newcomer and Szajgin 1989). The accuracy of a multi-layer map from overlay analysis is generally less than the accuracy associated with the least accurate map (Newcomer and Szajgin 1989).

5.2.6. Data Output

In attempting to produce a final product, maps have to be generalized to obtain clarity and understanding (Heywood et al. 1998), which introduces error.

5.3.0. Accounting for Error

The most important information for a user is knowing if the data mean anything (Heywood et al. 1998). Errors will always find their way into a GIS no matter how much care is taken in choice of analysis (Heywood et al. 1998). There are two ways to track error: (1) a quantitative error value, which gives a \pm range on positional accuracy and a percent value on attribute accuracy, and (2) a *lineage* model, which is a qualitative description of each layer.

5.3.1. Quantitative Error Analysis

Few quantitative analyses can be done to determine error. Although, a substantial amount of research has been done on error calculations for positional and attribute accuracy, most data quality issues do not have a set model for deriving a quantitative error value. For example, how would a number value for human bias be calculated?

For data quality issues that can be calculated, there are a number of ways to estimate and quantify error using statistics, models, and graphs. Unfortunately most of these models require prior assumptions or knowledge about the data that seldom exist or are unavailable. For example, (1) a quantitative error value can be obtained for attribute accuracy by selecting a number of points, ground truthing them and deriving a percentage error (Dozier and Strahler 1983). This requires that the user have the time, money, access to equipment, and be locationally close, which is seldom the case. (2) Positional accuracy can be measured by using an independent source of higher accuracy and making comparisons (G. Muecke, Dalhousie University, written communication, 1996), but generally if there is a source of higher accuracy, it is this source that is used in the project. (3) Using internal evidence such as presence or absence of slivers, undershoots, and overshoots provides the user with a sense of data accuracy (G. Muecke, Dalhousie University, written communication, 1996), but most data provided for a project have already been edited and no available information is given on the original internal problems. (4) Scale is sometimes used as a means of determining positional accuracy, but it should be

noted that the scale only shows the best accuracy that the data could possibly have (Jones 1997).

Although there is to date no way to derive an absolute error value, some information on error is better than none. Heywood et al. (1998) suggest a number of simple ways for error checking, including visual inspection, double digitizing, and statistical analysis. Checking the digitized data against the original map should locate major errors. Digitizing something twice and comparing the difference provides a good indication of the degree of digitizing error. Plotting all attribute data in a histogram could show where outliers occur, which are usually errors. Queries are also useful in detecting and correcting errors. For example, when dealing with water wells, a query can select all points that lie in the ocean. The user can then fix the errors and determine their source. It is important to realize that absolute error associated with a layer is not as important as determining if the layer is of adequate quality to support a given use (Lewis and Hutchinson 1996).

In this study, source data are at a scale of 1:10 000 or 1:2500 and digital data are plotted at a scale of 1:50 000. In this instance, most, if not all, positional error associated with data encoding is eliminated through the scale transformation. Therefore, no further error, on top of the source map error, has been introduced.

5.3.2. Qualitative Error Analysis

Aspects of data quality and sources of error (see above) are often used to help construct a lineage, although full service histories are something of a rarity in GIS (Heywood et al. 1998). A lineage is especially important when real life decisions have to be made concerning health, money, or property (Heywood et al. 1998). Liability is an issue with the outcomes of a GIS project (Heywood et al. 1998). If Rn levels in water well data are used to decide which homes are being affected by indoor Rn, who is to blame if the data in the GIS are incorrect? Creating panic over health, decreasing property value, and stress for homeowners is cause enough for people to sue if GIS data are faulty. If metadata come with a GIS project, users can be aware of the limitations of the GIS approach.

For every GIS project, a derived set of metadata should be developed. A list of components should be made for each layer in the project, even if the data are not available. Knowing if data exist or not can also be a help. Table 5.1 is a list of information that should be present for every data layer in a project.

Table 5.1. Components of metadata modified from Jones (1997) and Heywood et al. (1998).

NAME:

General Description of Layer:

Source Data	Company
	Date of Collection
	Time of Collection
	Method of Collection
	Data Collectors
	Aerial Coverage
	Map Scale
	Projection
	Data Type
	Agency Obtained From
	Coordinate System
	Datum
	Informal Information
Input	File Formats
	Input Procedures
	Media Specifications
	<i>Data Model</i>
	Software
	Hardware
	Known Errors
Conversions	Transfer Formats
	Coordinate Transformations
	Data Model Conversions
	Attribute Transformations
Data Quality	Positional Error
	Attribute Error
	Generalization
	Precision
	Completeness
	Consistency
	Final Scale

6.0.0. LAYER GENERATION

6.1.0. Software Package Used

ArcView v.3.1.®, one of the leading software packages for desktop mapping, is the GIS package used in this thesis. ArcView is a tool used to visualize, explore, query, and analyze data geographically (ESRI 1996).

ArcView was selected because: (1) This study relies heavily on pre-existing digital data available through NSDNR, in ArcView format. As noted above, data conversions can introduce error and data quality is an important part of any GIS project (see 5.2.4. Data Editing and Conversion). (2) Desktop mapping packages, such as ArcView, are inexpensive. (3) ArcView has a user-friendly graphical interface that is easy to learn and operate. (4) ArcView, unlike other desktop mapping packages, is a subset of operations obtained from a larger, more inclusive GIS software package, ArcInfo. ArcView has limitations, most of which can be overcome by transferring data into ArcInfo, performing an operation, and returning the data into ArcView. (5) ArcView comes with a number of extensions, such as Spatial Analyst, which are relatively low cost and user friendly.

6.2.0. U, Ra, and Rn Data Available in the Study Area

Data digitized for the three NTDB maps, in the Windsor area (Figure 1.1), were obtained by gathering all Rn in well water data and Rn in stream water data for the area, and the associated U and Ra data. The coverage for Rn in well water and stream water is complete for all three maps, but U and Ra coverage is not (see Appendix B for definitions of coverage and complete).

6.3.0. Layers and Associated Data Quality

6.3.1. Generation of the Radiogenic Database

From 1978 to 1981 Saarberg-Interplan Canada explored for U in the Windsor area. All data on U, Ra, and Rn produced by Saarberg were in paper map form with associated assessment reports. These data were collected and digitized for this thesis, creating 12 GIS layers, referred to as radiogenic element layers (Enclosure #1 contains the twelve layers and their associated attribute tables in shape file format under a:\Layers; Appendix C contains the twelve attribute tables). All data used for radiogenic element layers generation can be found in five assessment reports from Morse and Harder (1979; 1978a,b) and Quarch et al. (1980a,b). All of these reports and their associated maps can be obtained from NSDNR, Halifax N.S. Morse and Harder's (1979) assessment report for the Panuke Road area can be found in Appendix A. This assessment report gives a good overview of methods, analytical techniques, detection limits, sample sizes, and exploration results.

Forty paper maps created by Saarberg were gathered for this thesis. Twenty-five of them were digitized by head-up digitizing. The other fifteen were not digitized for two reasons: (1) the map did not lie within the 3 NTDB map area or (2) the map, at a scale of 1: 2500, was too detailed to digitize using the head-up digitizing method. Attributes for these maps include: map number, assessment report number, year, source, scale, reference map number, title, and digitized status (Appendix D). In the digital radiogenic element databases, a map number field was created. Each point digitized is assigned to its appropriate map number. Appendix D can be joined to each digitized point based on its map number.

Current Canadian standard units are mg/L for U in water, ppm for U in soil/sediment, and Bq/L for Ra and Rn in soil/sediment (Table 6.1). Saarberg recorded data in ppm, ppb, pCi/L and 1978 units. Conversion methods are shown below:

Table 6.1 Final layers available. No GIS analyses have been performed using the Rn in soil gas layer. All layers have been converted into Canadian units (Table 2.1). For definitions of “point” and “polygon” see Appendix B.

ISOTOPE	FIELD	UNITS	# OF POINTS
Uranium	Well Water	mg/L	656
	Stream Water	mg/L	115
	Stream Sediment	ppm	1309
	Soil	ppm	49
Radium	Well Water	>0.30 Bq/L	5
	Stream Water	Bq/L	183
	Soil	Bq/L	47
Radon	Well Water	Bq/L	1184
	Stream Water	Bq/L	185
	Soil Gas	Bq/L	1136
	Soil (point)		2
	Soil (polygon)		3

Equation 1.

Measurements taken in 1978 were measured in pCi/L, however they were later determined by the Geological Survey of Canada and the Ontario Radiation Protection Lab to be low by a factor of two. For Rn and Ra, multiply the 1978 units by 2 to get pCi/L (Morse and Harder 1979).

Equation 2.

Once all units were converted from 1978 units, they were converted into mg/L and Bq/L based on the following formula:

$$\begin{aligned} X_{\text{ppb}}/1000 &= X_{\text{mg/L}} \\ X_{\text{pCi/L}}/27 &= X_{\text{Bq/L}} \end{aligned}$$

6.3.2. Layers Used

For GIS analyses (see 7.0.0. Compare and Analyze), 19 digital layers have been incorporated, 11 of which were digitized for this thesis (Rn in soil gas layer was not used in any GIS analyses in this thesis, Table 6.1). The other eight layers include: NTDB water bodies, roads, streams, and railroads; NSDNR geology map (500K), geology map (25K), fault map, and unconformity map. All NSDNR maps are available on the Internet at <http://www.gov.ns/natr/meb/pubs3.htm#maps>.

6.3.3. Data quality of layers

Appendix E shows metadata for the radiogenic element layers produced for the purpose of this thesis. Complete metadata tables on layers created by other agencies are not available. However, any data that do exist on these layers can be found in Appendix F. Quantitative error calculations for the radiogenic element layers and error analysis or propagation for other layers used in this study are out of the scope of this thesis.

7.0.0. COMPARE AND ANALYZE

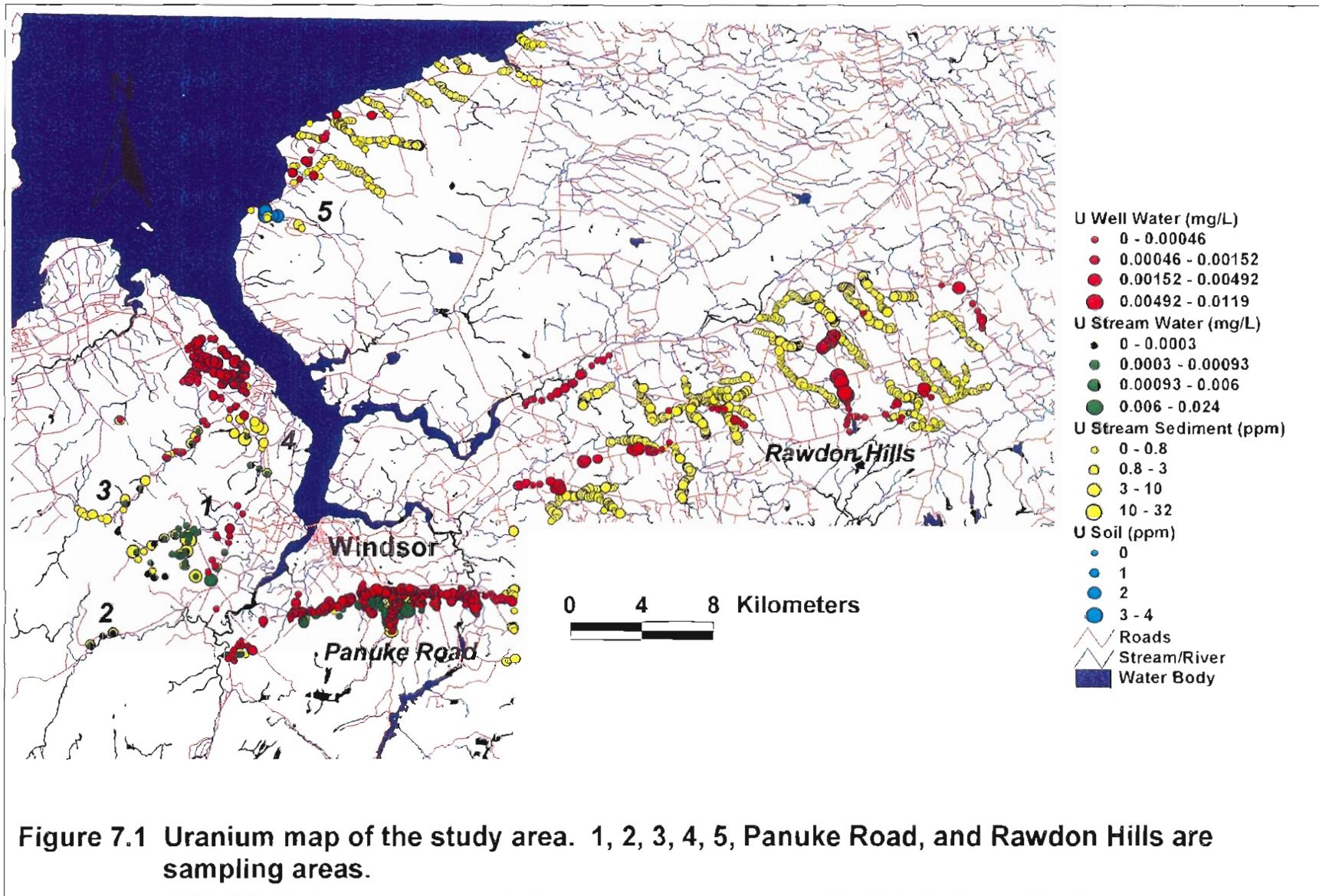
Various comparisons and analyses can be performed on data when a GIS system, with a number of layers, is used. For the purpose of this study, U, Ra, and Rn are analyzed separately to determine where elevated values occur within the study area. U, Ra, and Rn are compared to geological units, faults, and unconformities. Statistical analyses are performed on dug wells in comparison with drilled wells. The issue of availability of accurate Rn maps for Nova Scotia residents is addressed by examining the Rn in soil map of Nova Scotia. Limitations associated with small-scale digital data are discussed. All 12 digital layers, and their associated attribute tables, created by the author for the purpose of this thesis are saved as shape files in an ArcView project (Enclosure #1 under a:\Layers). Attribute tables for all 12 layers are in Appendix C.

7.1.0. Uranium

7.1.1. Observations

All U data digitized for the purpose of this thesis are shown in Figure 7.1 (3x2-foot map of Figure 7.1 in back cover). Uranium data have been divided into 4 GIS layers which include: U in well water, U in stream water, U in stream sediment, and U in soil (Table 6.1). Each of the four layers is represented on the map with graduated size symbols; the smallest symbols correspond to the lowest U values and the biggest symbols correspond to the highest U values. For all analyses performed on U, Ra, and Rn in this chapter, well water values are red, stream water values are green, stream sediment values are yellow, and soil values are cyan.

The U in well water values range from 0 to 0.01190 mg/L. This range is represented by 4 natural break categories. Natural break classification works by creating categories based on groupings or patterns inherent in the data. This classification scheme works well when most of the data values are very low, with only a few high values, which is the case for most of the 12 databases (Appendix C). For consistency, and to prevent bias, all ranges



for U, Ra, and Rn are divided into four natural break categories. The U in stream water values range from 0 to 0.02400 mg/L; U in stream sediment from 0 to 32.00 ppm; and U in soil from 0 to 4 ppm. For Canada, U in water is measured in mg/L and U in sediment or soil is measured in ppm (Table 2.1).

In the study area, numerous data were available for U in well water and U in stream sediment; fewer data were available for U in stream water and U in soil (Table 6.1). The highest values for U in well water are in the Rawdon Hills area. The highest values for U in stream water are in the Panuke Road area. The highest values for U in stream sediment are in the Panuke Road area, area 1, and area 4. The highest values for U in soil are in area 5 (however, area 5 is the only location in the study area where U in soil data are available).

7.1.2. Interpretation

According to present acceptable Canadian limits for U in drinking water (Table 2.1), 0.1 mg/L, all U in well water and stream water data in the study area are below the limit. However, new guidelines are being considered, with the possibility of acceptable limits being as low as 0.01 mg/L (see 2.4.1. U in Water), in which case only 7 out of the 771 values for U in water in the study would be unacceptable (Appendix C). Therefore, according to present Canadian guidelines, U in water values in the study area currently do not pose health concerns.

In Nova Scotia, average soil values for U are about 3 ppm (Table 2.1). Using 3 ppm as a reference, only 1 value in the study area for the U in soil layer is above this average (Appendix C). However, data for U in soil were only available for area 5 (Figure 7.1).

No reference point for U in stream sediment exists (Table 2.1), therefore determining if U in stream sediment is high in the study area is not possible.

7.2.0. Radium

7.2.1. Observations

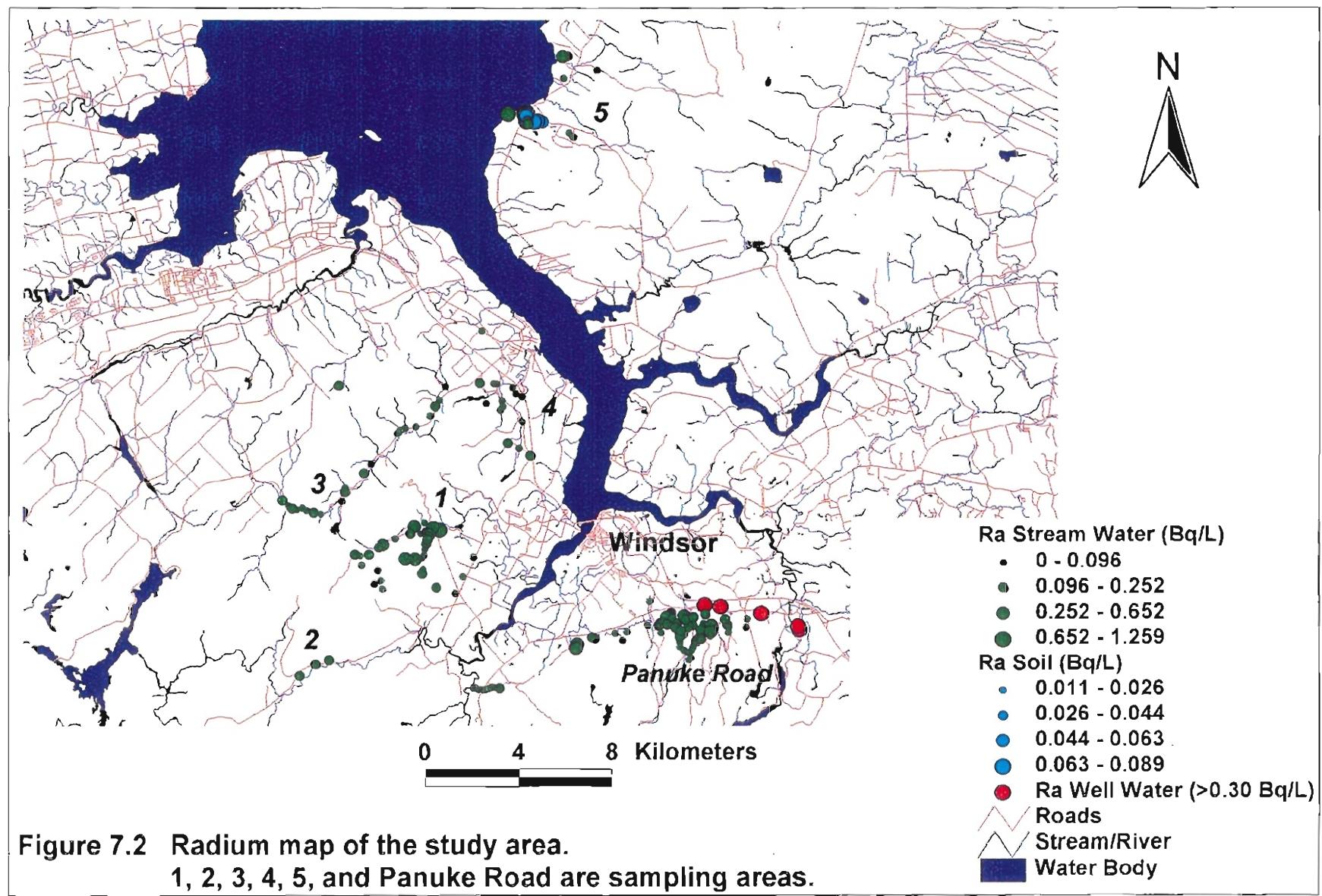
All Ra data digitized for the purpose of this thesis are shown in Figure 7.2. Ra data have been divided into 3 GIS layers which include: Ra in stream water, Ra in soil, and Ra in well water (>0.30 Bq/L, detection limit) (Table 6.1). Two of the layers, Ra in stream water and Ra in soil, are represented on the map with graduated size symbols. The third layer, Ra in well water (>0.30 Bq/L), is represented by a single symbol.

The Ra in stream water values range from 0 to 1.259 Bq/L and Ra in soil values range from 0.011 to 0.089 Bq/L. All well waters that were tested for Rn in the study area (Figure 7.3), were also tested for Ra. Only five of the wells tested detected Ra; detection limit was 0.30 Bq/L (Morse and Harder 1979). For Canada, Ra in water and soil is measured in Bq/L (Table 2.1).

In the study area, more data were available for Ra in stream water than Ra in soil (Table 6.1). The highest values for Ra in stream water are in the Panuke Road area, area 1, and area 5. The highest values for Ra in soil are in area 5 (however, area 5 is the only location in the study area where Ra in soil data are available). All Ra in well water (>0.30 Bq/L) values are in the Panuke Road area. In the study area, no Ra data exist for the Rawdon Hills area.

7.2.2. Interpretation

According to acceptable Canadian limits for Ra in drinking water (Table 2.1), 1 Bq/L, only five water wells that were tested in the study area may be above this limit; only one value of Ra in stream water is above this limit, located in area 5 (Appendix C). There are no clear acceptable limits set for Ra in soil in Canada (Table 2.1). According to this information, the Panuke Road area and area 5 are the only locations in the study area that may cause health problems.



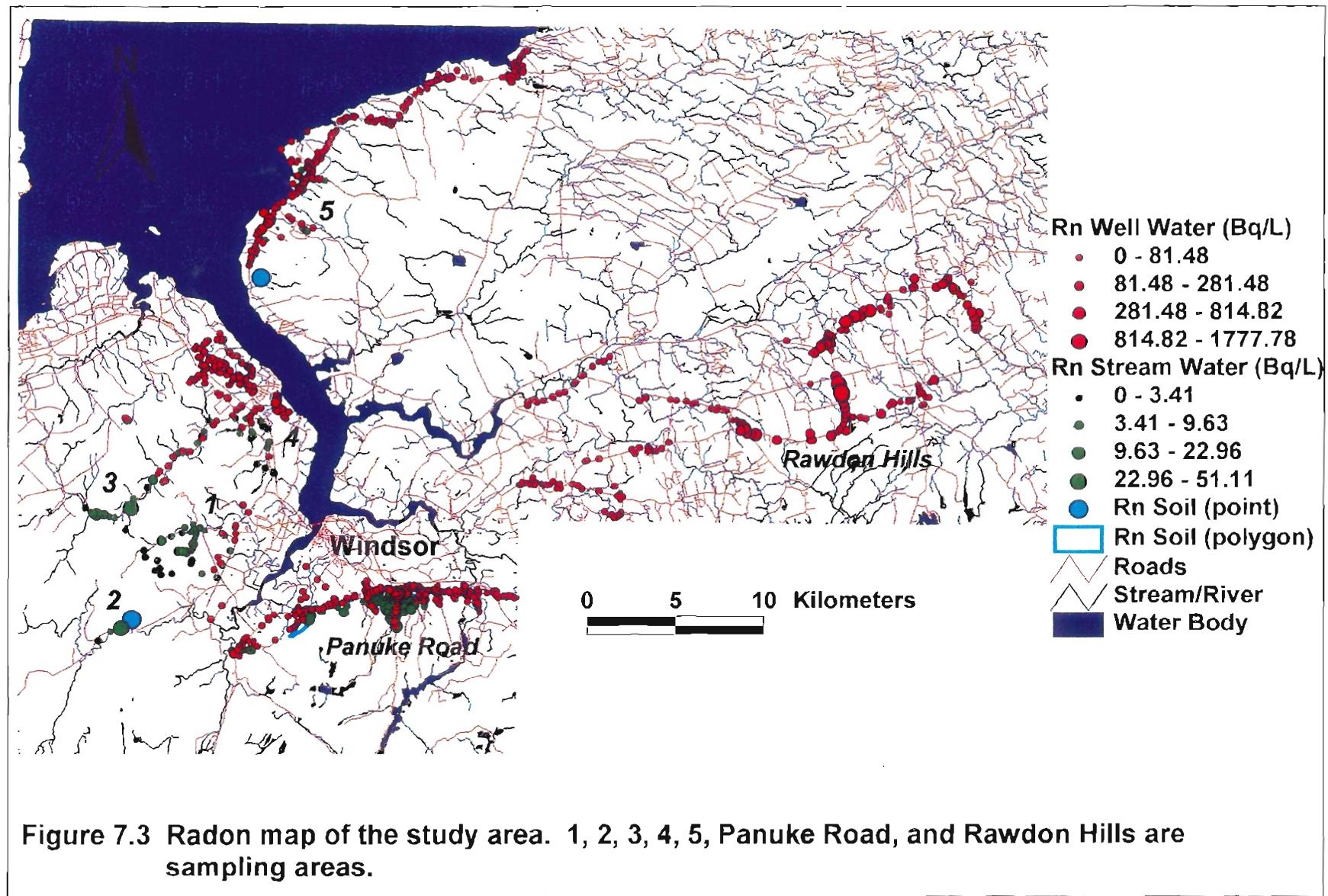
7.3.0. Radon

7.3.1. Observations

All Rn data digitized for the purpose of this thesis, except the Rn in soil gas layer (see Appendix C for explanation), are shown in Figure 7.3 (3x2-foot map of Figure 7.3 in back cover). Radon data have been divided into four GIS layers which include: Rn in well water, Rn in stream water, Rn in soil (point), and Rn in soil (polygon) (Table 6.1). In GIS, point and polygon data cannot be put onto the same layer, therefore two layers were created. Two of the layers, Rn in well water and Rn in stream water, are represented on the map with graduated size symbols. The other two layers, Rn in soil (point) and Rn soil (polygon), are represented by single symbols.

The Rn in well water data range from 0 to 1777.78 Bq/L and Rn in stream water range from 0 to 51.11 Bq/L. No indication is given from the paper source maps or the assessment reports on what values are given to the Rn in soil layers. On the paper source maps, these values are termed “anomalous”. Although no definition of “anomalous” is offered, the author felt it appropriate to include these layers. The assumption will therefore be made that “anomalous” means an elevated value in the study area, relative to other values in the study area (e.g. the background).

In the study area, many data were available for Rn in well water, less for Rn in stream water, and only two and three points were available for Rn in soil (point) and Rn in soil (polygon) respectively (Table 6.1). The highest values for Rn in well water are in the Rawdon Hills area and the Panuke Road area. The highest values for Rn in stream water are in the Panuke Road area, area 2, and area 3 (however, no Rn in stream water data were available in the Rawdon Hills area). Of the two Rn in soil points, one is in area 2 and one is in area 5. Of the three Rn in soil polygons, all three are in the Panuke Road area. No Rn in soil data were available in the Rawdon Hills area.



7.3.2. Interpretation

According to Canadian guidelines, acceptable limits for Rn in water or soil in Canada have not been established (Table 2.1), since neither has proved or disproved health concerns. With no acceptable limits, Rn values can neither be classified as high or low, in relation to health risks. However, since this thesis works by the precautionary principle (see 2.4.3 Radon), it is essential to note that elevated Rn (in relation to the study area) is detected in the Panuke Road area for all Rn layers, especially well water values (see 3.3.1. Panuke Road).

7.3.3. Rn areas of interest

Radon is the main focus of this thesis, therefore further analysis for Rn in the study area is essential. Based on the observations for the study area in sections 7.1.2., 7.2.2., and 7.3.2, two areas of interest were chosen to discuss in more detail: the Panuke Road area and the Rawdon Hills area. These areas were chosen for two reasons: (1) elevated values exist in both locations and (2) the number of data points in the area is sufficient to be representative.

Figure 7.4 is an enlargement of the Panuke Road area showing values for three Rn layers: Rn in well water, Rn in stream water, and Rn in soil (polygon) (no data exist in the area for Rn in soil (point), as seen from the legend). Radon in well water and Rn in stream water are divided into four categories and represented with graduated color symbols. When viewing data in greater detail, graduated color symbols are easier to visualize than graduated size symbols; data points are all the same size, therefore high values do not mask low values. This figure emphasizes that elevated values of Rn are present in the Panuke Road area, especially along the Panuke Road itself, where a cluster of Rn in well water points are available. Upon discovery of one elevated value, the mining companies tend to focus in on an area, which increases the number of sample points. A uranium roll-front occurrence, which was observed in the field (Figure 3.6, 3.7), is plotted on Figure 7.4. Geology of the Panuke Road area, along with possible explanations for elevated values, is discussed in “3.3.1. Panuke Road”.

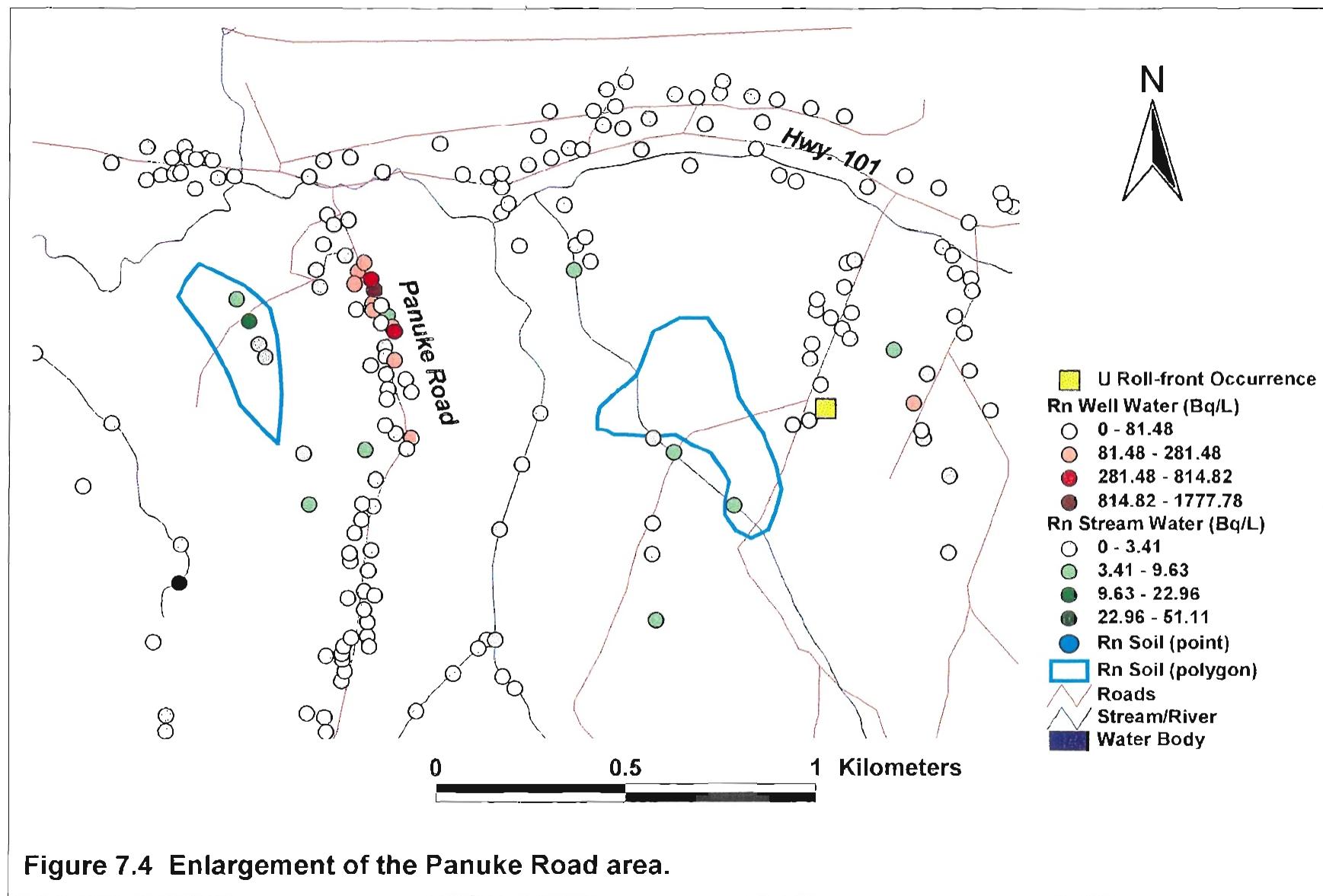


Figure 7.4 Enlargement of the Panuke Road area.

Figure 7.5 is an enlargement of the Rawdon Hills area showing values for one Rn layer: Rn in well water (no data exist in the area for Rn in stream water or Rn in soil, as seen from the legend). Radon in well water is divided into four categories and represented with graduated color symbols. This figure emphasizes that elevated values of Rn are present in the Rawdon Hills area. Geology of the Rawdon Hills area is discussed in “3.1.1. Rawdon Hills”. Possible explanations as to why elevated values are present in the area are not discussed in any of the available literature, and therefore, are beyond the scope of this thesis.

7.4.0. Radon and Geology

In order to determine computationally, instead of visually, in what geological units elevated values of Rn occur, a GIS analysis using all four Rn layers and a geology layer was performed (Figure 7.6). To generate this map: (1) Rn in well water and Rn in stream water data were divided into four natural break categories (see above); (2) for each layer, the two highest categories were selected out by a query; a decision was made arbitrarily (the two highest categories are considered for this analysis as elevated Rn, in relation to other Rn values in the study area); (3) these two highest categories were made into single symbols; (4) Rn in soil anomalies (point and polygon) remain as single symbols (see above); (5) a “contained in” operation was performed using ArcView. This operation took the two highest categories for the Rn in well water and Rn in stream water layers, and the Rn in soil layers, and determined in what geological units these values occurred. The results of this analysis are shown in Figure 7.6, where all yellow highlighted areas are the geological units that correspond to steps 1-5 of this analysis.

Elevated Rn values are found within areas underlain by the Goldenville Group, Halifax Group, SMB, Horton Group (Horton Bluff Formation and undivided), and Windsor Group. However, most elevated Rn values are located in the Rawdon Hills and Panuke Road areas (Figure 7.6). The values that are located in the SMB area are out of the scope of this thesis; the SMB area is being examined in a larger research study (A.M.

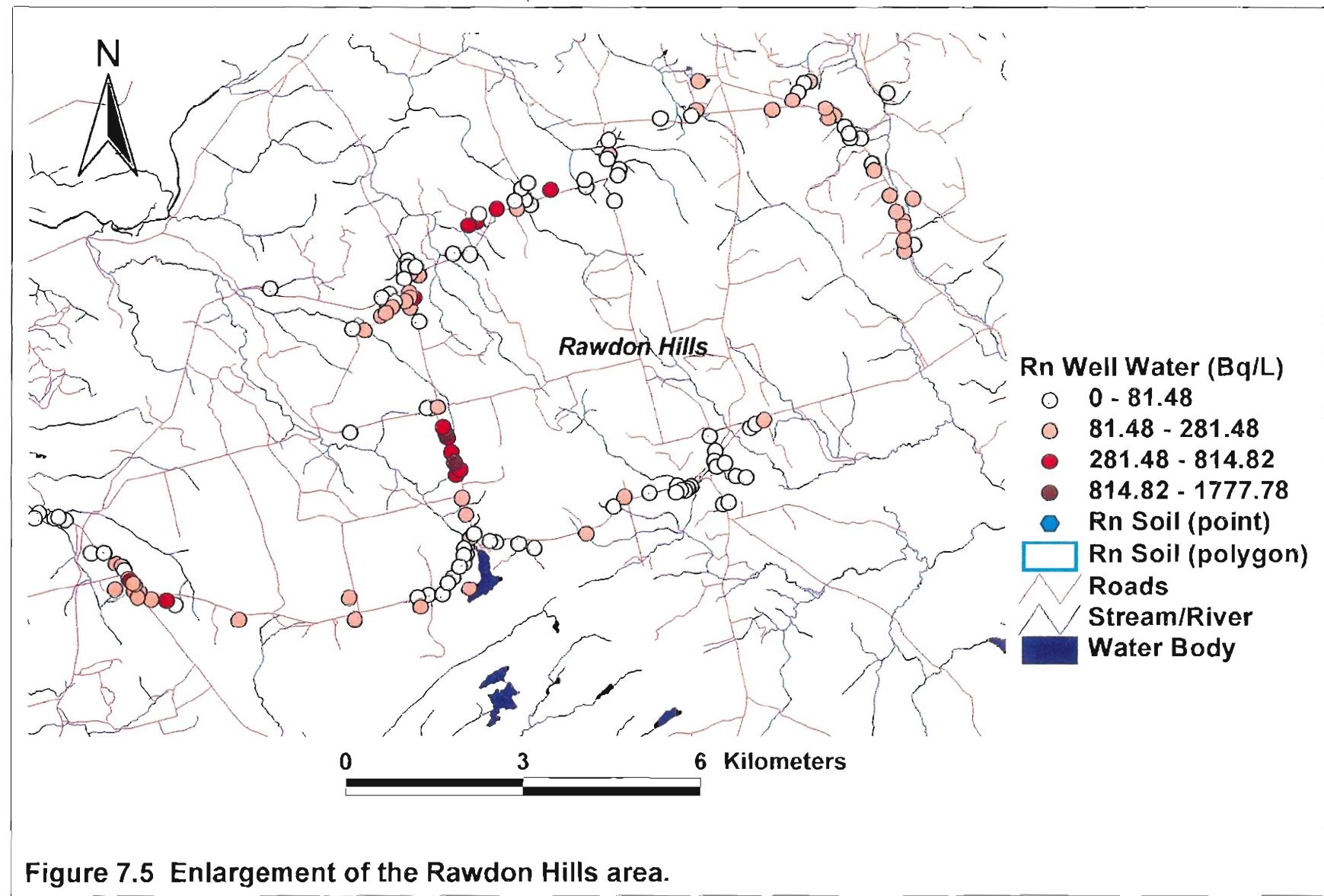
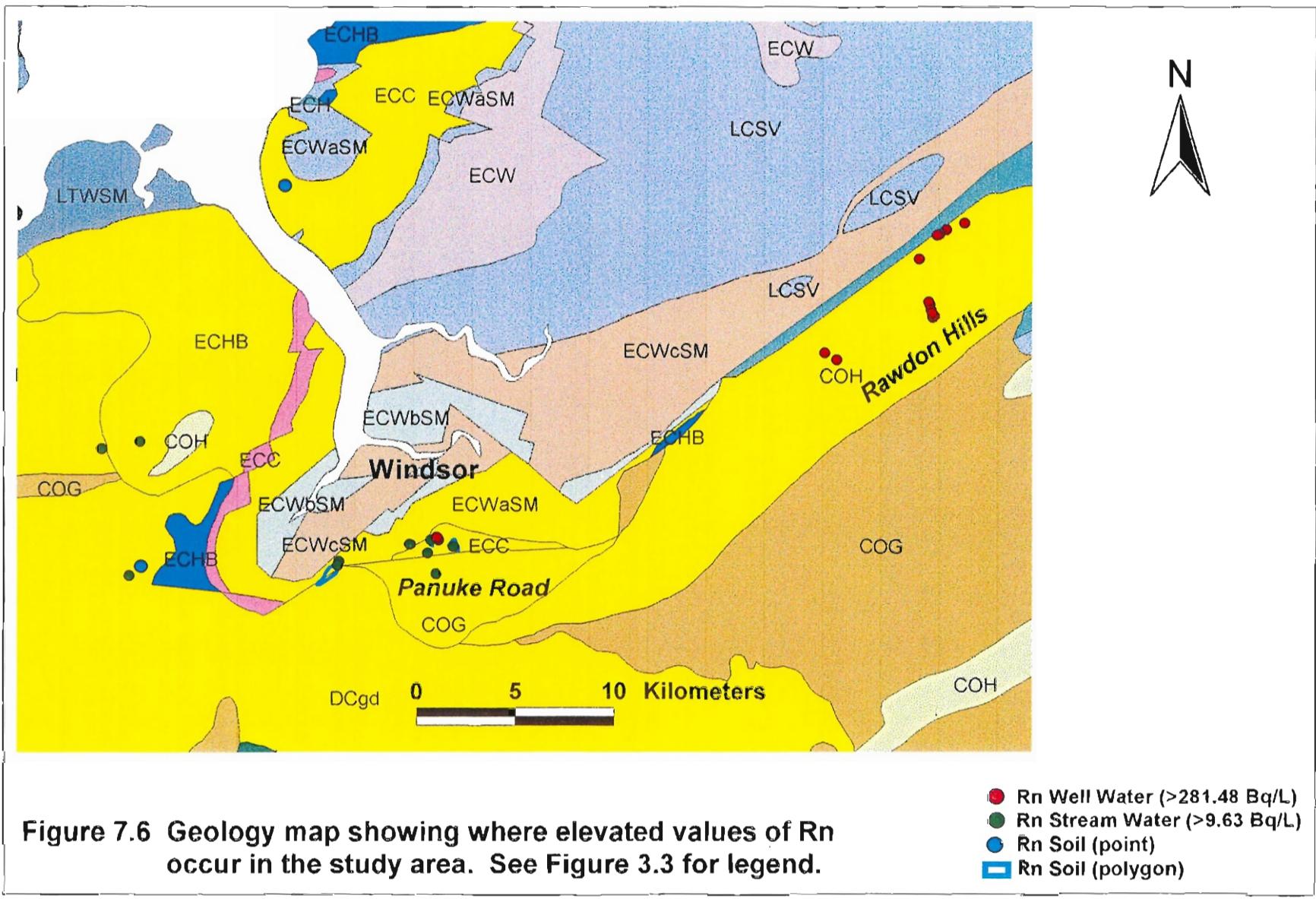


Figure 7.5 Enlargement of the Rawdon Hills area.

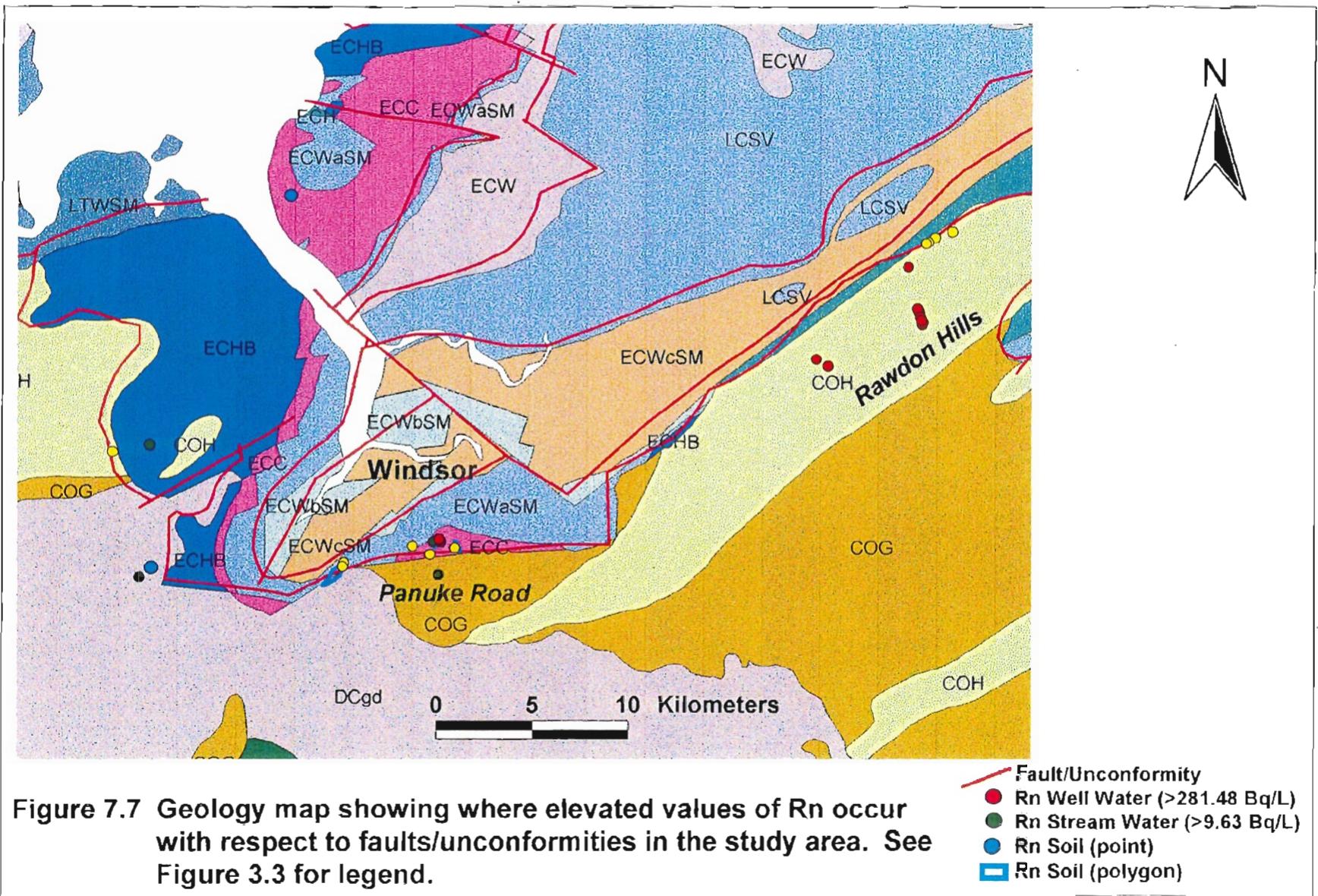


O'Beirne-Ryan, Ph.D. thesis in progress), therefore the initial scope of this thesis limited analysis to the Devonian-Carboniferous units around Windsor (see 1.3.0. Study Area). The values that are in the Windsor Group, in reality, do not correspond to Windsor strata, but to Horton strata (Morse and Harder 1979). The geology map used in the analysis is a 1:500 000 scale map, therefore when data points lie along geological boundaries (as is the case for all data points that lie in the Windsor Group in Figure 7.6), it is questionable as to what geological unit they really belong to (see 7.8.0. Scale Issue).

7.5.0. Radon and Faults/Unconformities

In order to determine if elevated values of Rn correlate with faults or unconformities, a GIS analysis using all 4 Rn layers, a fault map, and an unconformity map was performed (Figure 7.7). To generate this map: (1) steps 1-4 (see 7.4.0. Radon and Geology) were performed and (2) a “distance to” operation was performed using ArcView. This operation took the two highest categories for the Rn in well water and Rn in stream water layers, and the Rn in soil layers, and determined how many elevated Rn points fell within 500 m of a fault or unconformity. A distance of 500 m was chosen by examining Figure 7.7; it is apparent that the red lines (faults/unconformities) do not line up with geological unit boundaries, which should be the case (this is a cartographic problem, see 7.8.0 Scale Issue). Distances are generally off by an average of about 500 m, hence a distance of 500 m was chosen. The results of this analysis are shown in Figure 7.7, where yellow highlighted points are elevated Rn values that fall within 500 m of a fault or unconformity.

Within 500 m of a fault or unconformity, there are: 60% of Rn in stream water values, 22% of Rn in well water values, 0% of Rn in soil (point) values (however, only two values exist), and 100% of Rn in soil (polygon) values (however, only three values exist). This analysis suggests that a reasonable correlation exists between elevated Rn, faults, and unconformities. However, because of scale problems (see 7.8.0. Scale Issue), it is inappropriate to establish a clear link between elevated Rn, faults, and unconformities without fuller studies.



7.6.0. Dug Versus Drilled Wells

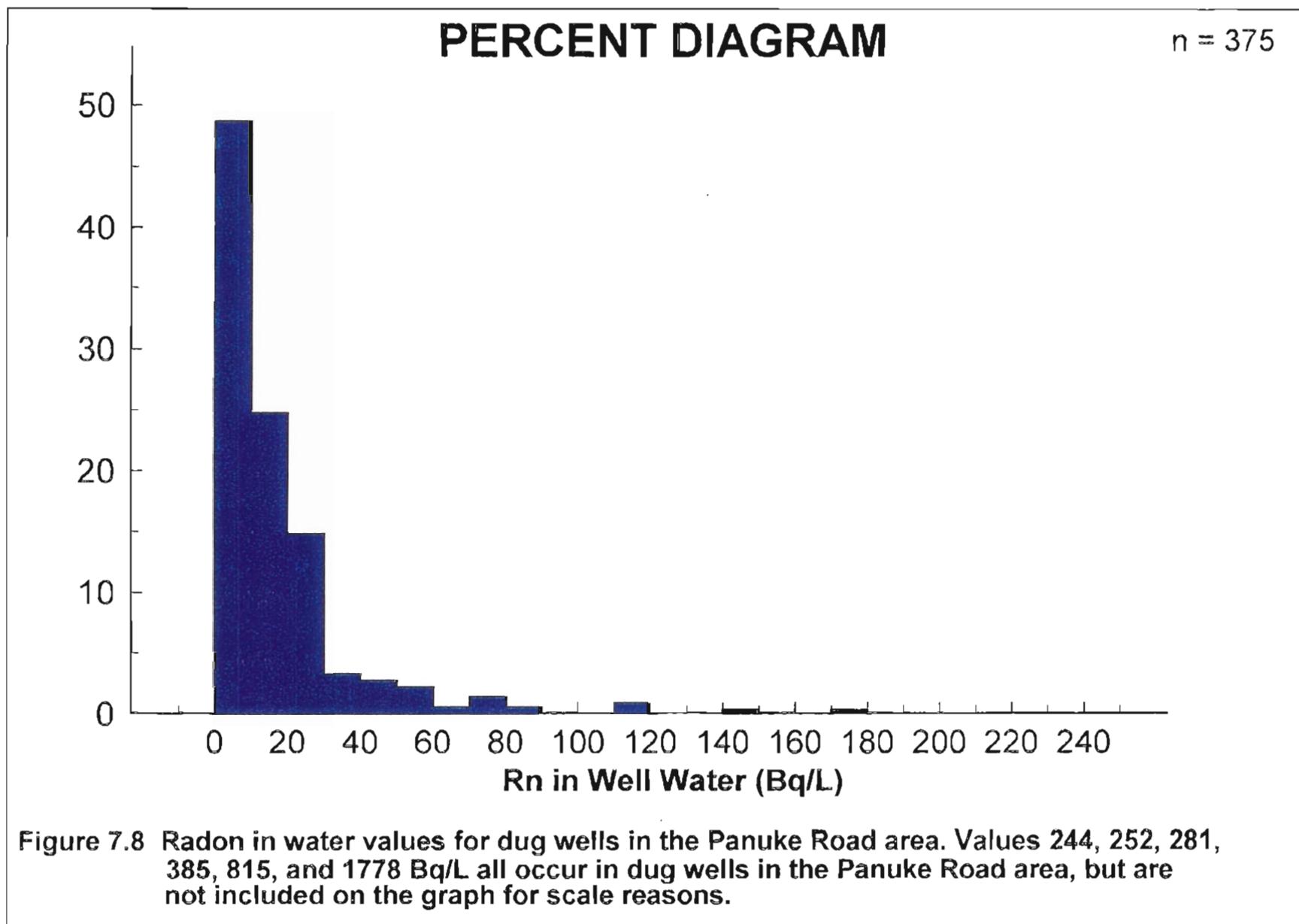
7.6.1. Observations

Data indicating if a well is dug or drilled, and depth of that well, are not available for a lot of the digital data generated for the study area. Therefore, to compare dug and drilled well values requires that data for both be available in one specific location. Data for dug and drilled wells are only available in the Panuke Road area; the rest of the study area either has drilled well data or no data. Therefore, the only location in the study area where a comparison of data values for dug and drilled wells can be made is in the Panuke Road area.

Percent diagrams of dug and drilled wells for Rn in well water values in the Panuke Road area were generated. Results are shown in Figure 7.8 and 7.9, respectively. For Rn values in dug wells (Figure 7.8), values peak at about 5 Bq/L and then gradually decrease. For Rn values in drilled wells (Figure 7.9), values peak at about 35 Bq/L. Overall, drilled well values are higher than dug well values. However, 6 values for the dug wells were not included on the percent diagram (Figure 7.8) because the x-axis range becomes too large, which prevents accurate visualization. These values are 244, 252, 281, 380, 810, and 1778 Bq/L, all of which are higher than any drilled well value.

7.6.2. Interpretation

The maximum Rn in well water value of 1778 Bq/L, lies in the Panuke Road area in a dug well. In the study area, dug wells range in depth from 10-20 feet; drilled wells range in depth from 67-415 feet (Appendix C). Dug wells, which generally lie in the overlying soil or till, are shallower than drilled wells. Drilled wells are generally drilled into the bedrock. It is therefore safe to assume that dug wells represent the surface radioactivity better than drilled wells, which in turn correspond better to the material under home foundations that might contribute to the indoor Rn problem.



PERCENT DIAGRAM

n = 37

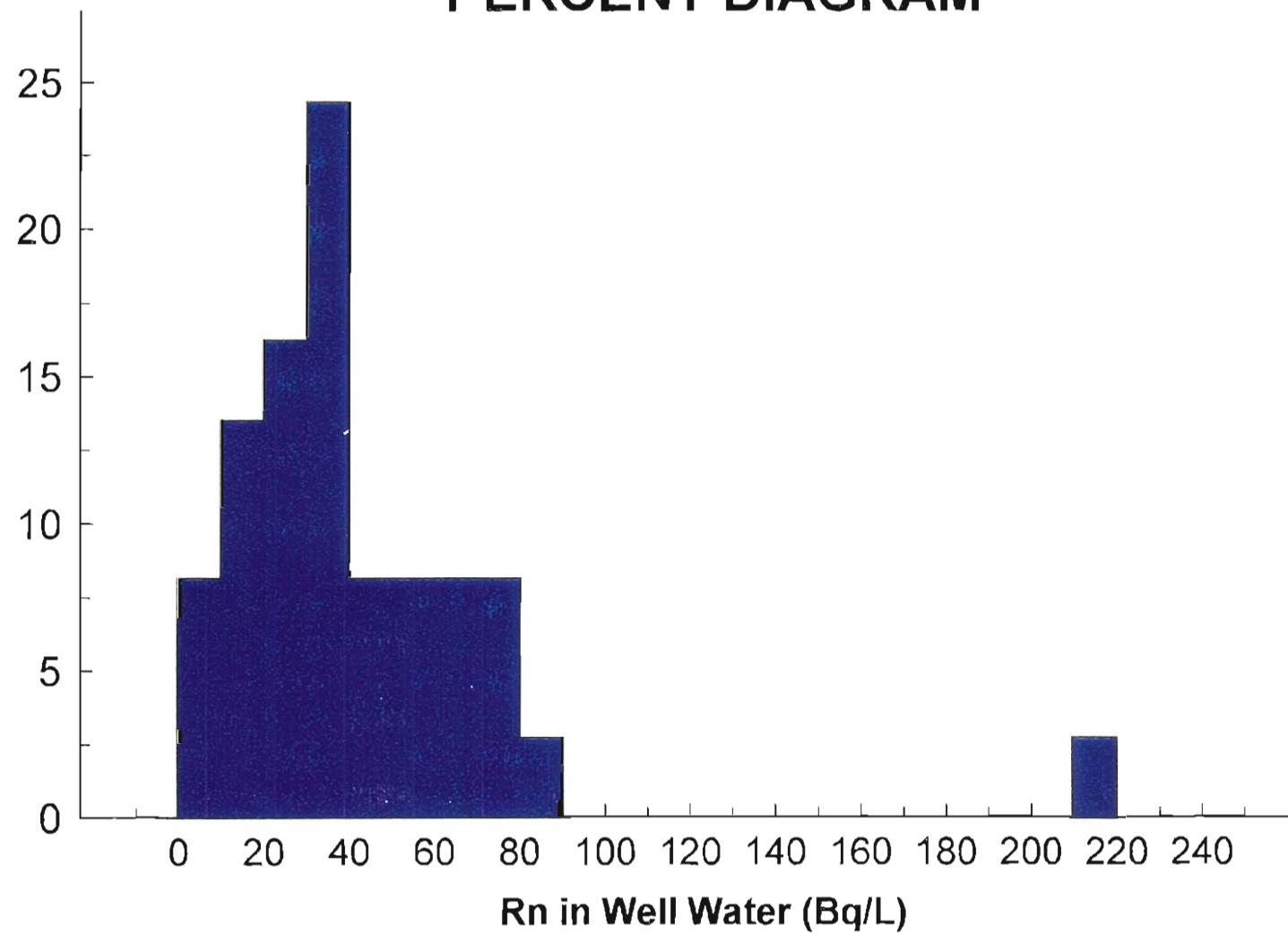


Figure 7.9 Radon in water values for drilled wells in the Panuke Road area.

Depth of well has a significant impact on the measured value of U and Rn. Drilled wells are generally in the bedrock, which typically contain higher values of U (Dyke et al. 1976; NSDOE 1998), therefore it is logical that the deeper the well, the higher the values of U and Rn. Ideally, all wells should be sampled knowing the type of well, depth and yield of well, type of bedrock, type and thickness of overburden, and standard water chemistry (Brutsaert et al. 1981). Radon varies according to these properties (Brutsaert et al. 1981). Unfortunately all wells in the study area do not have data indicating their depth, or whether they were dug or drilled (Appendix C).

7.7.0. Are there Accurate Rn Maps for N.S. Residents?

7.7.1. Observations

Figure 7.10 is the only map made available to Nova Scotia residents, through NSDOE and Nova Scotia Department of Health, if they are trying to determine where elevated values of Rn in soil might occur.

7.7.2. Interpretation

Taking Figure 7.10 at face value, the study area would pose no potential problem for Rn in soil, hence no health concerns. However, this study shows that elevated levels of radioactive elements do occur in the study area, on the surface and in the groundwater (see 7.3.0. Radon). Nova Scotia residents, upon obtaining a copy of Figure 7.10, are unwittingly presented with a false assurance for Rn issues.

7.8.0. Scale Issue

7.8.1. Observations

Geology, fault, and unconformity maps are only available in digital form at a scale of 1:500 000. Digital geology data at a scale of 1:25 000 do exist for parts of the study area (represented by blue lines in Figure 7.11), but they are in line form only, and are therefore of limited use to this study. Figure 7.11 shows the study area outlined in red; the geology

Potential Occurrence Radon Gas in Nova Scotia

Showing areas where naturally deposited, slightly radioactive soils are most likely to enhance radon emission.

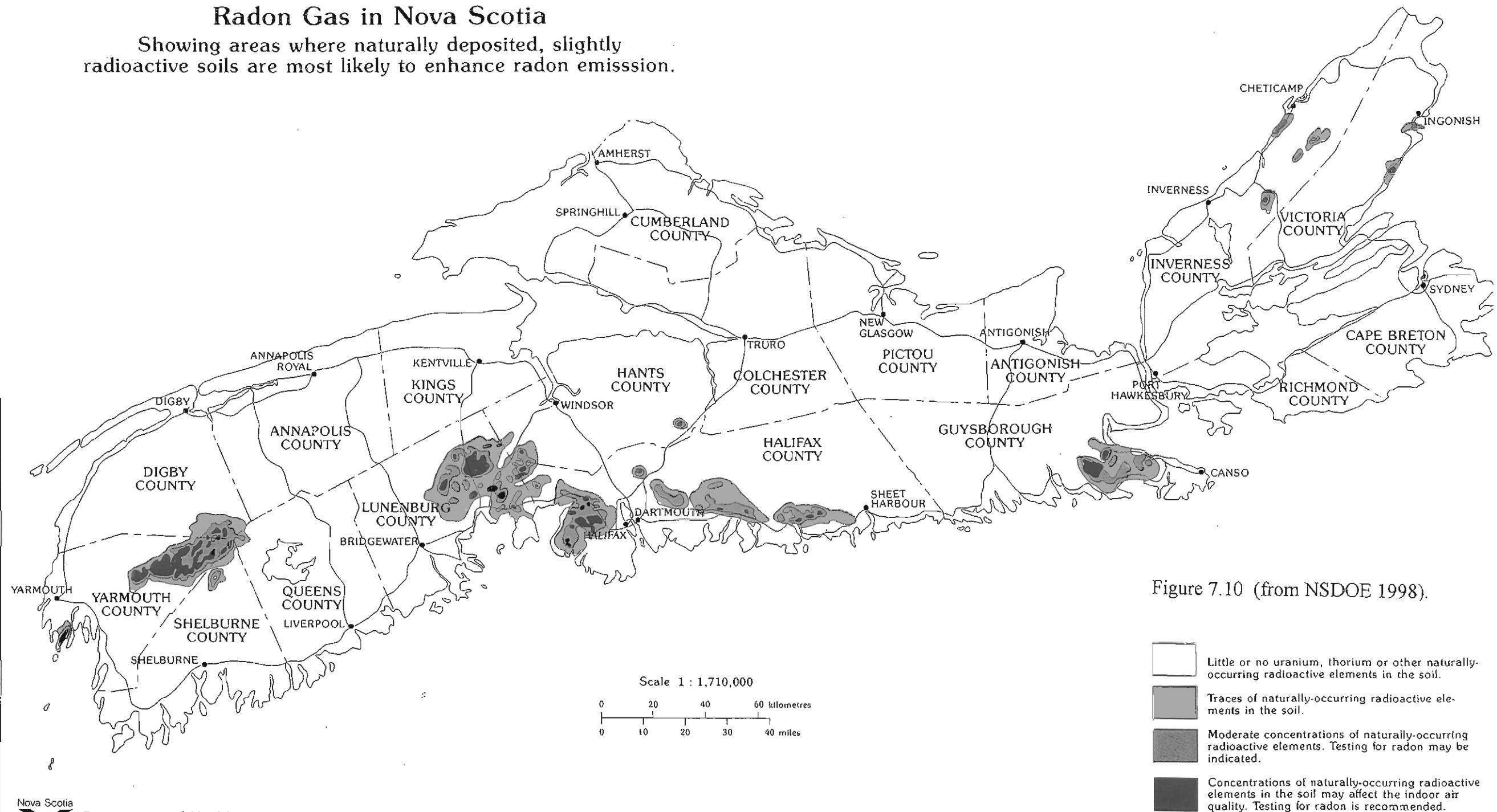
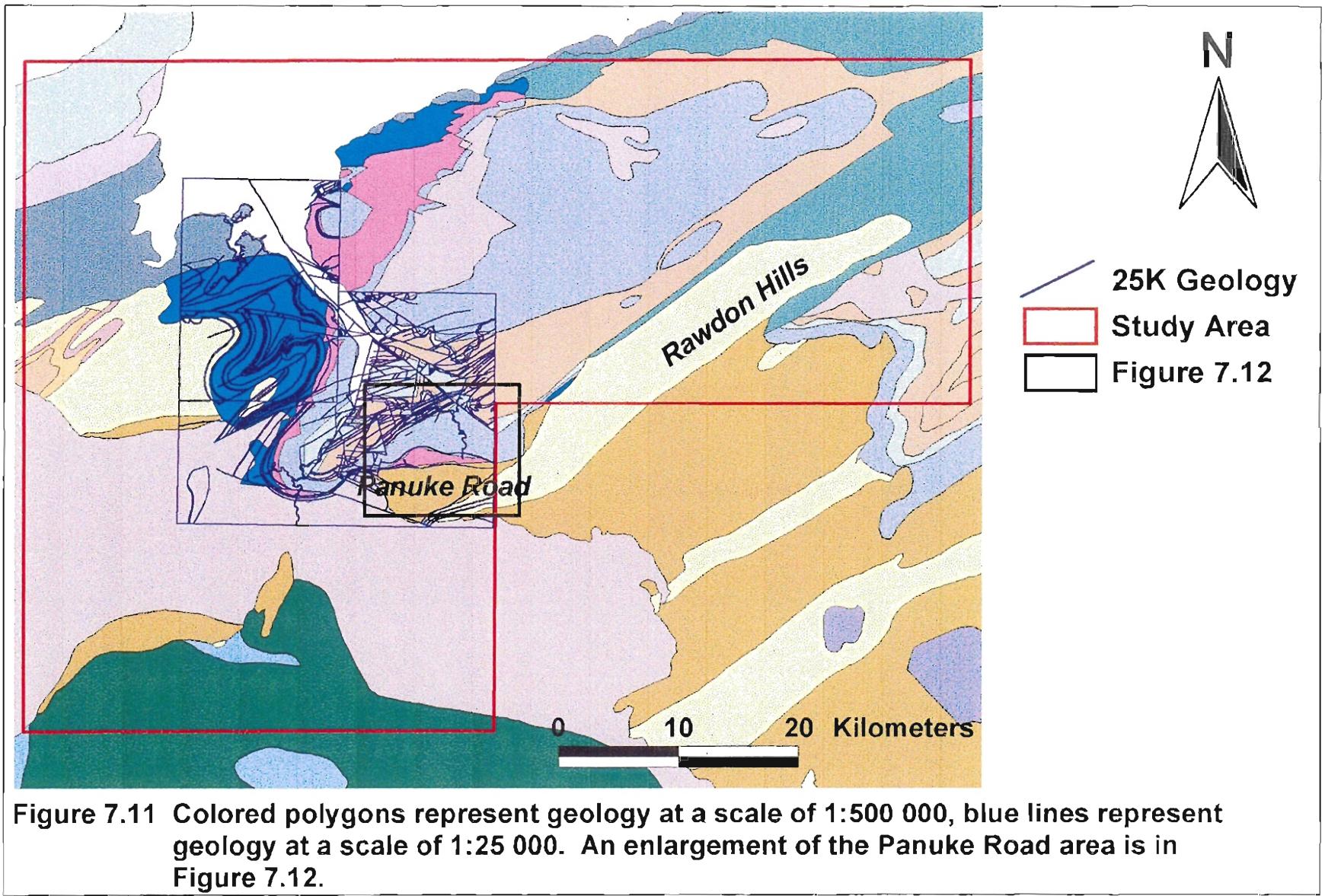


Figure 7.10 (from NSDOE 1998).

- [Lightest shade box] Little or no uranium, thorium or other naturally occurring radioactive elements in the soil.
- [Moderately light shade box] Traces of naturally-occurring radioactive elements in the soil.
- [Moderately dark shade box] Moderate concentrations of naturally-occurring radioactive elements. Testing for radon may be indicated.
- [Darkest shade box] Concentrations of naturally-occurring radioactive elements in the soil may affect the indoor air quality. Testing for radon is recommended.



at a scale of 1:500 000, represented by the colored polygons; and the geology at a scale of 1:25 000, represented by blue lines. Figure 7.12 is an enlargement of the Panuke Road area (outlined in black on Figure 7.11), blue lines represent geology at a scale of 1:25 000 and colored polygons represent geology at a scale of 1:500 000. Figure 7.12 shows the difference in detail between the 1:25 000 geology map and the 1:500 000 geology map.

7.8.2. Interpretation

In using a 1:500 000 scale geology map, all the detail that is associated with a larger scale map (e.g. 1:25 000) is lost. For example, in the Rawdon Hills area, geology is represented by the Halifax Group (Figure 3.3), and the interpretations are made based on the assumption that all the values in the Rawdon Hills area lie in Halifax Group. However, upon more detailed examination, the Rawdon Hills area is divided into a number of units (Figure 3.4), which would be outlined on a larger scale map.

Using a 1:500 000 geology map may produce generalized or biased results. To illustrate this point, water well locations are shown in Figure 7.12. If an analysis were to be performed on these points to determine in what geological unit they occur, many of the points would be mis-represented. For example, all of the points that lie in between the 1:25 000 geology blue lines and the 1:500 000 pink ECC polygon boundary would be classified in the Windsor Group for the 1:500 000 scale map, when in reality they belong to the Horton Group (Morse and Harder 1979).

For this type of study, where individual water wells are being examined, a larger scale geology map (e.g. 1:25 000 as opposed to 1:500 000) would be more useful, as it would produce more accurate and reliable interpretations. This, of course, is not possible in many areas, which have not been mapped in such detail.

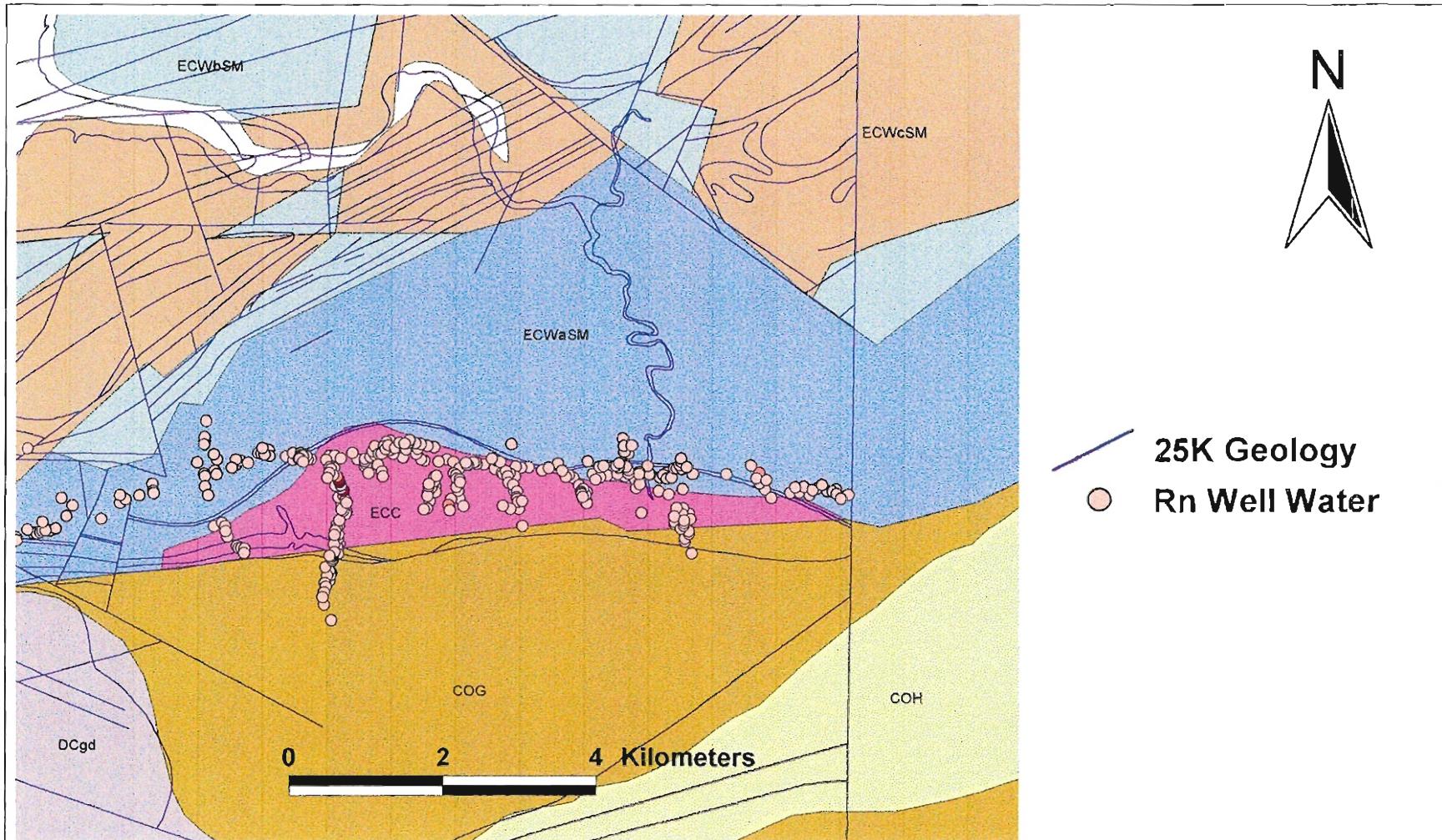


Figure 7.12 Colored polygons represent geology at a scale of 1:500 000, blue lines represent geology at a scale of 1:25 000. See Figure 7.11 for location. See Figure 3.3 for legend.

8.0.0. SUMMARY

8.1.0. Conclusions

1. All U in well water and stream water values in the study area are below current acceptable Canadian limits for drinking water (see 7.1.0. Uranium).
2. One U in soil value in the study area is above Nova Scotia's average of 3 ppm (see 7.1.0. Uranium).
3. Radium is detected in only five water wells, all in the Panuke Road. One Ra in stream water value is above the acceptable limit for Ra in drinking water; it is located in area 5 (see 7.2.0. Radium).
4. Most elevated values of Rn, in relation to the study area, occur in the Panuke Road area (see 7.3.0. Radon).
5. The Rawdon Hills and Panuke Road areas, focused areas of study, are locations of elevated values of U and Rn. These environments corresponds to Halifax Group metasedimentary rocks and Horton strata, respectively (see 3.1.1. Rawdon Hills, 3.3.1. Panuke Road, 7.3.0. Radon, and 7.4.0. Radon and Geology).
6. The highest Rn values in the study area correspond to the Goldenville Group, Halifax Group, SMB, Horton Group, and Windsor Group (see 7.4.0. Radon and Geology).
7. The analysis performed in this study indicates a possible correlation between elevated Rn values, faults, and unconformities; however, fuller studies are required (see 7.5.0. Radon and Faults/Unconformities).

8. Drilled wells generally have overall higher values of Rn in well water than dug wells, however the highest values in the study area are found in the dug wells, in the Panuke Road area (see 7.6.0. Dug versus Drilled Wells).
9. The Rn data generated for this thesis should contribute to the development of an updated Rn assessment policy for the province of Nova Scotia (see 7.7.0. Are there Accurate Rn Maps for N.S. Residents).
10. Data arising from large scale maps (scales <1:50 000) allow for more accurate interpretation of U, Ra, Rn than those extracted from 1:500 000 maps (see 7.8.0. Scale Issue).
11. Every location has different conditions and properties, and U, Ra, and Rn vary so much according to these conditions and properties. Therefore, Rn prediction is almost impossible when only one area has been studied.
12. GIS is a useful tool for this type of study because it aids in organizing, spatially visualizing, generating statistics, performing queries, integrating/overlaying, and detecting limitations.

8.2.0. Future Work

1. A comparison of water well depths to Quaternary and surficial geology maps is essential for determining the type of geological setting in which U, Ra, and Rn are likely to occur. Quaternary sediments, formed from advance and retreats during the ice ages, have been deposited throughout Nova Scotia, in some places up to 100 m thick (Stea and Finck 1992). It is important to know if these sediments are the reason for elevated values in some locations, or if it is the underlying bedrock (e.g. A.M. O'Beirne-Ryan, Ph.D. thesis in progress).

2. No indoor Rn data were available in the study area, therefore no positive or negative correlations can be made for Rn in well water, stream water, and soil to Rn in indoor air. Collecting and comparing indoor Rn values to elevated values of Rn in well water, stream water, and soil would provide an extremely useful comparison for this study.
3. Detailed geological studies of the Rawdon Hills and Panuke Road areas, to pinpoint causes of elevated U, Ra, and Rn, are essential for Rn prediction.

9.0.0. REFERENCES

- Ball, T.K., Cameron, D.G., Colman, T.B. and Roberts, P.D. 1991. Behavior of Radon in the Geological Environment: A Review. *Quarterly Journal of Engineering Geology*. **24**: 169-182.
- Barkhouse, R. B. and Laffin, J.J. 1982. Uranium in Nova Scotia: A Background Summary for the Uranium Inquiry, Nova Scotia. Report 82-7. Department of Mines and Energy.
- Barr, S.M., O'Reilly, G.A., and O'Beirne, A.M. 1982. Geology and Geochemistry of Selected Granitoid Plutons of Cape Breton Island. Nova Scotia Department of Mines and Energy. Paper 82-1.
- Bates, D.V., Murray, J.W., and Raudsepp, V. 1980. Royal Commission of Inquiry Health and Environmental Protection Uranium Mining. Province of British Columbia. **1**: 328.
- Bell, W.A. 1929. Horton-Windsor District, Nova Scotia. Geological Survey of Canada Memoir 155.
- Bell, W.A. 1944. Carboniferous Rock and Fossil Floras of Northern Nova Scotia. Geological Survey of Canada. **238**: 276.
- Bonham-Carter, G.F. 1994. Geographic Information Systems for Geoscientists: Modeling with GIS. Pergamon, Canada.
- Brookins, D.G. 1990. The Indoor Radon Problem. Columbia University Press, New York.
- Brown, J.C.S. and Fox, D. 1997. Sustainable Development and the Precautionary Principle: Implications for Acid Rock Drainage Regulations in Nova Scotia. *Atlantic Geology*. **33**: 76.
- Brutsaert, W. F., Norton, S.A., Hess, C.T., and Williams, J.S. 1981. Geologic and Hydrologic Factors Controlling Radon-222 in Ground Water in Maine. *Ground Water*. **19**: 407-417.
- Castle, G.H. 1993. Profiting from a Geographic Information System. GIS World Incorporation, Fort Collins, CO.
- Chatterjee, A.K. and Muecke, G.K. 1982. Geochemistry and the Distribution of Uranium and Thorium in the Granitic Rocks of the South Mountain Batholith, Nova Scotia: Some Genetic and Exploration Implications. In *Uranium in Granites*. Edited by Y.T. Maurice. Geological Survey of Canada. Paper 81-23, pp. 11-17.

- Dozier, J. and Strahler, A.H. 1983. Ground Investigations in Support of Remote Sensing. In *Manual of Remote Sensing*, 2nd edition. Edited by D.S. Simonett and F.T. Ulaby. American Society of Photogrammetry and Remote Sensing, Ch. 23.
- Dyke, W., Chatterjee, A.K., Gemmell, D.E. and Murricane, K. 1976. Well Water Trace Element Reconnaissance, Eastern Maritime Canada. *Journal of Geochemical Exploration*. 6: 139-162.
- Eastman, J.R. 1997. Idrisi for Windows User's Guide, Version 2.0. Clark Labs for Cartographic Technology and Geographic Analysis, Worcester, MA.
- Environmental Systems Research Institute (ESRI) 1996. ArcView GIS - The Geographic Information System for Everyone. New York, pp. 1.
- Fox, D. Prediction of Acid Rock Drainage (ARD) Risk from Sulphidic Slates Using GIS Analysis of Mineralogical, Geochemical, Magnetic, and Geological Parameters: A Test Case in Southern Nova Scotia. Ph.D. thesis in progress, Dalhousie University, Halifax, Nova Scotia.
- Gabelman, J.W. 1977. Migration of Uranium and Thorium - Exploration Significance. The American Association of Petroleum Geologists.
- Gibling, M.R. 1995. Upper Paleozoic Rocks, Nova Scotia. In Chapter 5 of *Geology of the Appalachian-Caledonian Orogen in Canada and Greenland*. Edited by H. Williams. Geological Survey of Canada. 6: 493-523.
- Goodchild, M.F. 1993. Data Models and Data Quality: Problems and Prospects. In Environmental Modeling with GIS. Edited by M. F. Goodchild, B.O. Parks, and L.T. Steyaert. Oxford University Press, New York, pp. 94-107.
- Gulf Minerals Canada Limited 1980. Report on Uranium Exploration: Cobiquid Project, Nova Scotia. Nova Scotia Department of Mines and Energy, Assessment Report 11E/12D - 54E-52 (04).
- Hacquebard, P.A. 1972. The Carboniferous of Eastern Canada; 7th International Congress on Carboniferous Stratigraphy and Geology, Compte Rendu. 1: 69-90.
- Hasbrouck, S. 1986. Radon in Water and Air - Health Risks and Control Measures. Land and Water Resource Center, University of Maine.
- Health Protection Branch 1989. Radon: You and your Family - A Personal Perspective. Minister of Supply and Services Canada.

- Heywood, I., Cornelius, S., and Carver, S. 1998. An Introduction to Geographical Information Systems. Addison Wesley Longman Limited, Singapore.
- Horne, R.J. 1995. Update on Bedrock Mapping of the Rawdon Syncline. *In* Minerals and Energy Branch Report of Activities 1994. Minerals and Energy Branch Report 95-1. *Edited by* D.R. MacDonald and K.A. Mills. pp. 57-61.
- Horne, R.J. and Culshaw, N. 1994. Preliminary Evaluation of Flexural Slip and its Significance in Localizing Auriferous Veins in the Meguma Group, Nova Scotia. *In* Mines and Mineral Branch Report of Activities 1993. Mines and Energy Branch Report 94-1. *Edited by* D.R. MacDonald. pp. 147-160.
- Hunter, G.J., Höck, B., Robey, M., and Goodchild, M.F. 1996. Experimental Development of a Model of Vector Data Uncertainty. *In* Spatial Accuracy and Assessment in Natural Resources and Environmental Sciences: Second International Symposium. *Edited by* H.T. Mowrer, R.L. Czaplewski, and R.H. Hamre. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, pp. 217-224.
- Ivanovich, M. and Harmon, R.S. 1992. Uranium Series Disequilibrium: Applications to Earth, Marine, and Environmental Sciences, 2nd edition. Clarendon Press, Oxford.
- Jones, C. 1997. Geographical Information Systems and Computer Cartography. Addison Wesley Longman Limited, Singapore.
- Kemp, K. 1993. Spatial Databases: Sources and Issues. *In* Environmental Modeling with GIS. *Edited by* M. F. Goodchild, B.O. Parks, and L.T. Steyaert. Oxford University Press, New York, pp. 363-371.
- Keppie, J.D. 1979. Geological Map of the Province of Nova Scotia 1:500 000. Nova Scotia Department of Mines and Energy.
- Keppie, J.D. 1985. Geology and Tectonics of Nova Scotia. *In* Excursion 1: Appalachian Geotraverse. *Edited by* J.D. Keppie, K.L. Currie, J.B. Murphy, R.K. Pickerell, L.R. Fyffe, and P. St. Julien. Geological Association of Canada, Annual Meeting, Fredericton, New Brunswick. p.181.
- King, M.S. 1994. Magnetic Mineralogy and Susceptibility of the North-Central Meguma Group: Implications for the Interpretation of Aeromagnetic Total Field, First Derivative, and Second Derivative. Cooperation: Canada-Nova Scotia Cooperation Agreement on Mineral Development.

- King, S. and Horne, R.J. 1992. Meguma Mapping Project: Magnetic Study. *In Programs and Summaries, Sixteenth Annual Open House and Review Activities. Mines and Energy Branch Report 92-4. Edited by D.R. MacDonald and K.A. Mills.* p. 20.
- Lewis, A. and Hutchinson, M.F. 1996. Data Accuracy to Data Quality: Using Spatial Statistics to Predict the Implications of Spatial Error in Point Data. *In Spatial Accuracy and Assessment in Natural Resources and Environmental Sciences: Second International Symposium. Edited by H.T. Mowrer, R.L. Czaplewski, and R.H. Hamre. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, pp. 577-584.*
- Man, W.H.E. 1984. Conceptual Framework and Guidelines for Establishing Geographic Information Systems: Capable of Integrating Natural Resources Data and Socio-economic Data for Development-oriented Planning, Monitoring, and Research. United Nations Educational, Scientific, and Cultural Organization.
- Martel, T.A. 1990. Stratigraphy, Fluviolacustrine Sedimentology and Cyclicity of the Late Devonian/Early Carboniferous Horton Bluff Formation, Nova Scotia, Canada. Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia.
- Martel, T.A. and Gibling, M.R. 1996. Stratigraphy and Tectonic History of the Upper Devonian to Lower Carboniferous Horton Bluff Formation, Nova Scotia, Canada. *Atlantic Geology.* **32:**13-38.
- Moore, R.G. and Ferguson, S.A. 1986. Geological Map of the Windsor Area, Nova Scotia. Nova Scotia Department of Mines and Energy. Map 86-2.
- Morse, R.H. and Harder, D.G. 1978a. Report on Uranium Exploration. Nova Scotia Department of Mines and Energy, Assessment Report 21H/01 - 54I-05 (02) (433135).
- Morse, R.H. and Harder, D.G. 1978b. Report on Uranium Exploration. Nova Scotia Department of Mines and Energy, Assessment Report 21A/16D - 54I-57 (02) (433134).
- Morse, R.H. and Harder, D.G. 1979. Report on Uranium Exploration. Nova Scotia Department of Mines and Energy, Assessment Report 21A/16D - 54I-57 (04) (433240).
- Muecke, G.K. 1996. Geographical Information Management; unpublished lecture notes, Dalhousie University, Halifax, Nova Scotia.
- Muecke, G.K. and Clarke, D.B. 1981. Geochemical Evolution of the South Mountain Batholith, Nova Scotia. *Canadian Journal of Earth Sciences.* **12:** 1209-1218.

- Muller, J.C. 1991. Generalization of Spatial Databases. *In Geographical Information Systems: Principles and Applications, Volume 1.* Edited by D.J. Maguire, M.F. Goodchild, and D.W. Rhind, London, pp. 457-475.
- Newcomer, A.J. and Szajgin, J. 1989. Accumulation of Thematic Map Errors in Digital Overlay Analysis. *In Fundamentals of Geographic Information Systems: A Compendium.* Edited by W.J. Ripple. American Congress of Surveying and Mapping, pp. 129-133.
- Nova Scotia Department of the Environment (NSDOE) 1998. Uranium and Radon in Nova Scotia's Drinking Water - An Information Package for Homeowners.
- O'Beirne-Ryan, A.M. Mineralogy and Distribution of U in Nova Scotia Rocks and their Environmental Importance. Ph.D. thesis in progress, Dalhousie University, Halifax, Nova Scotia.
- O'Beirne-Ryan, A.M. and Zentilli, M. 1999. Distribution of Uranium in Selected Rock Types in Centralmainland Nova Scotia: Implications for the Occurrence of High Levels of Radon in Domestic Well Waters and Indoor Air. AGS Colloquium and Annual Meeting. Abstract, p.32.
- Quarch, H., Rikeit, K., Ryan, R.J., and Adams, C. 1980a. Report on Uranium Exploration. Nova Scotia Department of Mines and Energy, Assessment Report 11E/04B - AR 80-002 (434102).
- Quarch, H., Rikeit, K., Ryan, R.J., and Adams, C. 1980b. Report on Uranium Exploration. Nova Scotia Department of Mines and Energy, Assessment Report 21H/01D - AR 80-005 (434123).
- Rikeit, K. 1979. Information on the Natural Occurrence of Uranium, Radium, and Radon in Well Waters, Stream Waters, Stream Sediments and Soil in Carboniferous Environment South and North-West of Windsor, Hants County, Nova Scotia. Assessment Report 79-008.
- Ripple, W.J. 1989. Fundamentals of Geographic Information Systems: A Compendium. American Congress of Surveying and Mapping, p. 39.
- Ryan, R.J. 1994. Preliminary Investigations of Meguma Group Stratigraphy in the Beaverbank Area, Nova Scotia. *In Mines and Mineral Branch Report of Activities 1993.* Mines and Energy Branch Report 94-1. Edited by D.R. MacDonald. p. 137-140.

- Ryan, R.J. 1995. Update on Meguma Group Mapping and Economic Geology as Part of a Multi-disciplinary Study of the Central Meguma Area, Nova Scotia. *In Minerals and Energy Branch Report of Activities 1994. Minerals and Energy Branch Report 95-1. Edited by D.R. MacDonald and K.A. Mills.* p. 53-56.
- Ryan, R.J. and Horne, R.J. 1992. Meguma Mapping Project: Preliminary Investigations. *In Programs and Summaries, Sixteenth Annual Open House and Review Activities. Mines and Energy Branch Report 92-4. Edited by D.R. MacDonald and K.A. Mills.* p. 19.
- Said, M.N. and Fisher, F.P. 1996. Moving Into Secondary Map Projections - An Analysis of Potential Inconsistencies in Spatial Data. *In Spatial Accuracy and Assessment in Natural Resources and Environmental Sciences: Second International Symposium. Edited by H.T. Mowrer, R.L. Czaplewski, and R.H. Hamre. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, pp. 585-592.*
- Schenk, P.E. 1970. Regional Variation of the Flysch-like Meguma Group (Lower Paleozoic) of Nova Scotia compared to recent sedimentation of the Scotia Shelf; Geological Association of Canada, Special Paper. **7:** 127-153.
- Schenk, P.E. 1995. Meguma Zone. *In Chapter 3 of Geology of the Appalachian-Caledonian Orogen in Canada and Greenland. Edited by H. Williams. Geological Survey of Canada. **6:** 261-277.*
- Stea, R.R. and Finck, P.W. 1992. Quaternary and Surficial Geological Mapping. *In Programs and Summaries, Sixteenth Annual Open House and Review Activities. Mines and Energy Branch Report 92-4. Edited by D.R. MacDonald and K.A. Mills.* p. 23.
- St. Peter, C. 1993. Maritimes Basin Evolution: Key Geologic and Seismic Evidence from the Moncton Subbasin in New Brunswick. *Atlantic Geology. **29:** 233-270.*
- Szabo, Z. and Zapczca, O.S. 1991. Geologic and Geochemical Factors Controlling Uranium, Radium-226, and Radon-222 in Ground Water, Newark Basin, New Jersey. *In Field Studies of Radon in Rocks, Soils, and Water. Edited by Linda C.S. Gundersen and Richard B. Wanty. U.S. Geological Survey Bulletin, pp. 243-265.*
- Utting, J. 1987. Palynology of the Lower Carboniferous Windsor Group and Windsor Canso Boundary Beds of Nova Scotia, and their Equivalents in Quebec, New Brunswick, and Newfoundland; Geological Survey of Canada, Bulletin 374, p. 93.

- Utting, J., Keppie, J.D. and Giles, P.S. 1989. Palynology and Stratigraphy of the Lower Carboniferous Horton Group, Nova Scotia. Contributions to Canadian Paleontology. Geological Survey of Canada Bulletin 396, pp. 117-128.
- van de Poll, H.W., Gibling, M.R., and Hyde, R.S. 1995. Introduction: Upper Paleozoic Rocks. *In Chapter 5 of Geology of the Appalachian-Caledonian Orogen in Canada and Greenland. Edited by H. Williams. Geological Survey of Canada. 6: 449-455.*
- Vinogradov, A.P. 1962. Average Contents of Chemical Elements on the Principal Types of Igneous Rocks of the Earth's Crust. *Geochemistry. 7: 641-664.*
- Wanty, R.B. and Schoen, R. 1991. A Review of the Chemical Processes Affecting the Mobility of Radionuclides in Natural Waters, with Applications. *In Field Studies of Radon in Rocks, Soils, and Water. Edited by L.C.S. Gunderson and R.B. Wanty.*
- www.newstimes.com/archive98/jun2298/rgf.htm
- Zentilli, M. and Fox, D. 1997. Geology and Mineralogy of the Meguma Group and their Importance to Environmental Problems in Nova Scotia. *Atlantic Geology. 33: 81-86.*

APPENDIX A

188 WILLOW AVENUE • TORONTO, CANADA • M4E 3K5 • Tel. (416) 699-5760

DEC 12 15/4/79

GITA

54-1 S7 04 **433240**

URANIUM EXPLORATION **433240**

PROPERTY NO. 1

21A/1bC

WINDSOR, NOVA SCOTIA

21A/1bD

1979 PROGRAM

21H/01A

for

Saarberg-Interplan Canada Ltd.

by

Robert H. Morse, Ph.D., P.Eng.

D. Glenn Harder, B.A., B.Sc.

Work by R. H. Morse & Associates Ltd. on Property No. 1 consisted of radon-in-soil-gas, well and stream geochemistry, scintillometry, geology and trenching. A strong well water anomaly was found on Panuke Road in an area of important uranium mineralization in Horton orthoquartzite, greywacke and arkose. Rock and soil samples here are strongly depleted in uranium relative to the radium series, indicating uranium leaching. Less spectacular radon-in-soil-gas anomalies were noted in the same area. A weaker radium-uranium well water anomaly was found north of Newport Corner. Anomalous radium was noted in stream sediments in the Allen Brook area. Recent deposits of radioactive elements were found in soil northwest of Mines Road, with radon-in-soil-gas anomalies along strike to the southwest. The Horton-Granite contact in this area has associated anomalous levels of radon and radium in stream water. The radon-in-soil-gas anomaly along the Horton-Granite contact at Ashland Road discovered in 1978 was confirmed in 1979, but at a lower level. The vertical-to-slightly-overturned Horton rocks in this area were found to continue to the west for 2.6 km, indicating a major structure.

Respectfully submitted,

Robert H. Morse

Robert H. Morse, Ph.D., F.G.S.

T. Glenn Harder

T. Glenn Harder, B.A., M.Sc.

R. H. Morse & Associates Ltd.TABLE OF CONTENTS

	Page
Summary	
Introduction	1
Geochemical Reconnaissance	1
Allen Brook Area	3
Mines Road Area	4
Ashland Road Area	6
Martock Area	7
Panuke Road Area	7
Recommendations	9
Statistical Summary	10
TABLE I Trenches and Auger Samples, Mines Road Area	11
TABLE II Trenches, Panuke Road Area	12
Appendix -- Analytical Techniques	A1

R. H. Morse & Associates Ltd.

LIST OF FIGURES

Fig. 1	Key Map	Page 16
1 - 1	Index Compilation and Miscellaneous 1:50,000	In pocket
1 - 2a	Radon in Wells, Hantsport Area 1:10,000	"
1 - 2b	Geochemistry, Hantsport Area, 1:10,000	"
1 - 3	Allen Brook Area, 1:10,000	"
1 - 4a	Radon Well Water Geochemistry, Property No. 1E, 1:10,000	"
1 - 4b	Uranium Well Water Geochemistry, Property No. 1E, 1:10,000	"
1 - 4c	Stream Geochemistry, Property No. 1E, 1:10,000	"
1 - 5	Mines Road Area, 1:2500	"
1 - 6	Ashland Road Area, 1:2500	"
1 - 7	Martock Area, 1:2500	"
1 - 8	Panuke Road Area, 1:2500	"

Property No. 1 is L-shaped covering the area of Horton Group rocks around Windsor, Nova Scotia, from Hantsport in the northwest, southwards to the Mines Road area and then east past St. Croix. The property has been extended to the east and northeast to the Rawdon area, but the area covered in this report stops at $63^{\circ}58'$ (see Fig. 1 - 1).

Work by R. H. Morse & Associates Ltd. on the property continued from April, 1979, through August and on a limited scale until time of writing. It consisted of radon-in-soil-gas, well and stream geochemistry, scintillometry, geology and trenching. Analytical and radon techniques are described in the appendix.

GEOCHEMICAL RECONNAISSANCE

Water samples were collected from almost all the wells within the claim group. Stream waters and sediments were collected over much of the area as well. Water samples were analysed for radon and uranium and sediment samples for radium and uranium. Results are presented in all of the figures except Figs. 1 - 7 and 1 - 8, but most can be found on the 1:10,000-scale maps Figs. 1 - 2 and 1 - 4.

The most striking result of the well water survey is the anomaly on Panuke road near the area of uranium mineralization (described below). Of the 1400 well water samples collected in the project to date the six highest radon values are in an area 100 by 250 meters. Only one well in this area is not anomalous, and the explanation may be that this sample was dipped from the surface which may have been effectively degassed. The other samples were taken from some depth, either with a bucket or through an

electric pump. The highest radon value observed is 24,000 "1978 ⁸⁸units" or about 50,000 pCi/l. This is 100 times the average of the samples collected in this study and also 100 times the average of the 1700 samples collected by Dyck (J. Geochim. Exploration, Nov. 1976). The highest value is also about the same as the highest value observed by the author in a set of 700 well water samples from the Catahoula formation, the major uranium producing horizon in East Texas.

The highest uranium value observed in the program to date, 1130 parts per 10^{11} , is associated with the same anomaly. However, none of the other uranium values are anomalous.

Radium was detected in only 12 of the water samples collected to date in the 1978 and 1979 programs. The detection limit for radium in the field lab is about 8 pCi/l and these 12 values are only marginally above that value. One of the radium values is within the radon anomaly. Two others are within 700 meters and a third within 1300. Levels of uranium and radium in the anomalous samples are comparable with the highest found in the Texas reconnaissance. Radium values exceeding 100 pCi/l, however, are common in waters from wells producing from the Burns uranium deposit in southeast Texas (Morse and Cook, Mining Engineering, June, 1979).

The radon and radium anomalies are from dug wells, up to a few meters deep. The high uranium value is from a drilled well of unknown depth. Follow-up in the immediate area of the anomaly resulted in the discovery of a soil gamma anomaly in the ditch of Panuke road. Gamma radiation here varies in time but averages around 6000 cpm. Surface soil at this gamma anomaly carries background levels of radium and uranium. At 20-30 and 30-40 cm depth, elevated radium values of 260 and 140 "1978 units" respectively were observed. Uranium values were only 1.4 and .5 respectively (background).

This disequilibrium is comparable with soil and rock analyses elsewhere in this area (see Table II).

In streams in the area of the mineralization, radon values range up to 690, and radium-in-sediment up to 88 "1978 units". These values are from a small tributary to Maple Brook. Only one anomalous value of uranium in sediment was observed, 10 ppm, also in a very small stream. The absence of geochemical anomalies in the major streams crossing the mineralization can be explained by the fact that these streams draw most of their water (and sediment) from upstream in areas underlain by Maguma series rocks. A moderately anomalous value of uranium in stream water, .41 ppb, was observed in a small tributary into the right bank of Lebreau Creek, 1 km west of the mineralized area. The radon value of 126 in Lebreau Creek is strongly anomalous for such a large stream. Checking at this point and upstream, however, failed to confirm this anomaly.

ALLEN BROOK AREA (FIG. 1 - 3)

Exploration of the Allen Brook area, 3 km west of Windsor, was limited to reconnaissance geological, scintillometer and geochemical traverses. Outcrops and boulders of arkose and shale of the Horton Group as well as granite were examined. High, but not anomalous, levels of gamma radiation were noted in the shale (up to 3500 cpm). High levels of radium (up to 113 "1978 units") and uranium (up to 4 ppm) are common in the stream sediments throughout the area. The explanation for these anomalies is not known. More detailed exploration by radon-in-soil-gas and gamma surveys is indicated.

Detailed uranium exploration was carried out in the Mines Road area, southwest of Falmouth. The target was the Horton-Granite contact and the Horton Group itself. Uranium mineralization had been discovered in the Horton Group in the Avon River in 1978. Results of the 1979 work are presented in Fig. 1 - 5

The highest elevations in the area are in the northwest portion, underlain by granite. Adjacent to this and parallel to the contact is a northeast-trending depression, occupied by two major streams. Further to the southeast, the ground rises slightly, then drops off towards Mines Road.

An anomaly or group of anomalies 1.5 km long was discovered along the depression, just southeast of the stream flowing southwesterly. The anomaly is defined mostly by elevated gamma radioactivity (up to 20,000 cpm at surface). However, moderately high radon-in-soil-gas readings (up to 25 pCi/l0cc) were noted in the central and especially the southwestern portions. The spectrometer indicates that the gamma anomalies are due to the uranium series. High levels of radon in water and radium in sediment are associated with these anomalies, and the upper reaches of the main stream carries anomalous levels of both--up to 140 and 147 "1978 units" respectively. The anomaly extends off the property to the southwest.

Limited initial excavation to 30 cm gave evidence that the radioactivity was concentrated in the A-horizon, implying some movement and pointing to a source further to the southeast within the Horton. The major creek precludes the possibility that the anomaly is due to movement downhill from the granite, as no radioactivity was noted between the creek and the granite. Overburden trenching down to 1.5 meters at 5 locations and soil augering were carried out

to confirm the hydromorphic nature of these gamma anomalies. Soil samples
were collected from various horizons and analysed for uranium and radium.
Results are presented in Table I. Sandstone bedrock was found in one trench and angular sandstone boulders, believed close to source, in most of the others. No radioactive rocks were found and in most cases radioactivity dropped off with depth. Radium and uranium do not increase with depth and in some cases decrease strongly. Where radium and uranium contents were substantially above the detection limits, eU/U ratios were calculated. In most cases these are much higher than unity, the value expected at equilibrium, indicating that radium is present in excess of its parent uranium. The gamma anomalies are concluded to be due to hydromorphically transported radium. The highest uranium value observed is 16.6 ppm in an organic soil.

Diamond drill holes were put down at three locations uphill from these hydromorphic anomalies to look for the bedrock source. These are indicated on Fig. 1 - 5 as 1/8, 1/9, 1/10.

Still to be drilled is the radon anomaly near the west end of the map at TM1 and TM4. Cherty carbonaceous shale encountered in two trenches here appears to be pretty much in place. As shown in the table on Fig. 1 - 5, results of trenching and augering indicate that radium levels in the soil here are low. The radon anomalies cannot be explained by hydromorphic transport of radium as were the gamma anomalies described above. A deeper source is suggested, and at least one hole should be drilled at this location.

Elsewhere in the Mines Road area, geochemical anomalies were observed close to the Horton-Granite contact. On Baseline K at SE is one of the very rare water samples with detectable radium. This sample also contains the highest uranium value (90 parts per 10^{11}) in the Mines Road area. Radon

values in water too are elevated in this general area. At the other end of Fig. 1 - 5, near the contact, are two small streams with elevated radon values. It is likely that this contact is mineralized as is the case at Ashland Road.

Of scientific interest is a group of radioactive boulders (Baseline C, 10+50W) of very coarse, poorly sorted Horton sandstone. Gamma-ray readings range up to 6500 cpm, but the spectrometer indicates thorium. Neutron activation assays indicate 22.2 ppm uranium and 307 ppm thorium which confirms the field observation. Placer concentrations of thorium-bearing monazite, zircon, etc. are common in sandstones. This discovery is probably unrelated to any potentially economic mineralization and has no bearing on the significance of the uranium-related anomaly described above.

ASHLAND ROAD AREA (FIG. 1 - 6)

In the Ashland Road area the 1978 radon grid was extended to the west. Results were generally disappointing although a few radon values over 10 pCi/l were found near the Horton-Granite contact which support the 1978 interpretation somewhat. Some weakly anomalous streams were noted west of the hill slope which may be related to mineralization along the contact. A steep southerly dip was noted in sandstone at L31W. This agrees well with the southerly dip observed at the occurrence on L9+50W. The contact is apparently faulted, increasing its favorability as a mineralized horizon. At least one diamond drill hole should be located to cross this structure.

The Ashland Road radon grid was extended to the east to cover the Horton Group as far as Stark Road. The western portion of this is illustrated in Fig. 1 - 7.

Most of the radon-in-soil-gas readings in this area are low, but the 1978 anomaly was confirmed by a value of 29 pCi/10cc on L54W. Also, about 300 meters to the south, a strong gamma-ray anomaly was discovered. Trenching at this point indicates that the radioactivity is restricted to the A-horizon, and that the anomaly is hydromorphic. The spectrometer indicates uranium.

Gamma radiation up to 15,000 cpm was found in bedrock in Mountain Brook on L31. Several other weak gamma radon anomalies were noted elsewhere.

PANUKE ROAD AREA (FIG. 1 - 8)

Extension of the radon grid eastward to Stark Road is illustrated on Fig. 1 - 3. Radon-in-soil-gas, detailed scintillometry and geochemistry resulted in the discovery of uranium mineralization in bedrock as well as gamma, radon and geochemical anomalies (see also Figs. 1 - 4a, b, and c). Overburden trenches were excavated at 23 locations on gamma or radon anomalies (see Table II). Unlike the Mines Road area, radioactivity in most of these trenches increases downwards, and in many cases radioactive bedrock was encountered. The anomalous area is about 1000 x 1800 meters. Most of the units of the upper Horton in the Panuke Road area display some anomalous radioactivity. However, the strongest radioactivity was obtained in a carbonaceous orthoquartzite unit which gave off-scale (100,000 cpm).

readings in two trenches. The second highest radioactivity was obtained in the upper "Greywacke" which gave readings of up to 20,000 cpm on boulders and loose slabs. A radioactive swamp (4000 - 20,000 cpm) in the northern part of the anomaly was found to be underlain by a whitish weathered arkose. Here, weak radioactivity was found in the arkose and the A-horizon. The occurrence of uranium mineralization in several stratigraphic units suggests a structural rather than a stratigraphic control.

Uranium assays of the radioactive rock specimens (Table II) was much lower than predicted by the McPhar Model TV-1A portable gamma-ray spectrometer. Ratios of eU/U calculated on this basis were much greater than unity, indicating strong disequilibrium in favor of the radium series (Ra^{214}). Probably uranium has been leached out of the rocks leaving the radium series behind; thus assays of fresh material would be much higher. It is also possible that the disequilibrium is caused at least in part by recent precipitation of radium in the rock.

Uranium in soils in this area (Table II) is also lower than expected. The highest value observed is 34 ppm (T10) in intimate contact with radioactive rock carrying 555 ppm. A B-horizon sample at T5 carries 8 ppm. None of the other 14 soil samples have more than 1.4 ppm. The six soil samples analysed for radium have a strong excess of radium over uranium (eU/U greater than 1). Based on this limited evidence, it seems that soil uranium geochemistry in this terrain would be ineffective.

Although radon in soil gas was useful, along with gamma surveys, in locating trenches, the values encountered were somewhat lower than might be expected. The highest value observed is 43 pCi/lOcc on LPE, but the anomaly threshold used for trench locations is much lower. The presence of impermeable shale layers about 4 meters thick may explain some of the low values.

1. The drilling program in the Panuke road area should be continued. The grid layout should be modified to reflect the geochemical and scintillometer results. Holes should be drilled at the following locations (see Fig. 1 - 4)
 - the broad gamma anomaly north of hole 1/17,
 - the western part of the radon anomaly southwest of hole 1/30,
 - the northern part of the well water anomaly near the high uranium value,
 - the three radium anomalies north of Highway No. 1.
2. The faulted contact between Horton and granite in the Ashland Road area should be tested with the drill. This contact is known to be mineralized and has associated gamma and radon anomalies.
3. The Horton-Granite contact in the Mines Road area should be drilled. This contact has associated geochemical anomalies.
4. Detailed surface exploration should be carried out upstream from radium anomalies in stream sediments in the Allen Brook area.
5. Surface exploration and drilling should be carried out to test the radium well-water anomalies north of Newport Corner. High uranium values also occur in some of these wells (up to 708 parts per 10^{11} , the second highest observed in the program to date).
6. The radon-in-soil-gas anomaly at the southwest end of the Mines Road grid should be drilled.

Field work by R. H. Morse & Associates Ltd. in 1979 on Property No. 1 commenced April 21 and was mostly complete by August 22. Field work was by R. H. Morse, D. G. Harder, M. Brison, J. Mason and J. Dill. Analytical work was by S. Harder, K. O'Leary and K. Kral. The following work was accomplished (1978 figures given for comparison):

	<u>1978</u>	<u>1979</u>
Radon determinations in soil gas	868	2652
Water samples collected and analysed	82	1170
Soil and sediment samples collected and analysed	29	466
Km scintillometer traverses (on foot)	25	225
Km geological traverse		177
Trenches and pits		30
Km baseline chained		19
Major landowners contacted		100

TABLE I - TRENCHES AND AUGER SAMPLES, MINED ROAD AREA

TRENCHES					SAMPLES							
No.	Size Meters (depth first)	Location for Trench	Geology of Trench	Max. Gamma in Trench X1000	Max. Gamma on Surface X1000	No.	Depth cm	Type	No.	Depth cm	Uptake	cf/u
TM-1	2.5 x 1 x 1.5	Gamma, radon in soil anomaly	No bedrock, poorly sorted brn soil (till) incl. boulders, granite, slate, a few pieces coaly shale. No red. boulders.	4	2.5	MIA	0-10	brown loam	3	3.4		
						MIB	10-20	red-brown till	23	4.1		
						730	50-150	brown-grey clay	18	0		
						729	150	" "	32	0		
TM-2	4.2 x 1.0 x 1.8	Gamma, radon in water, radium and uranium in soil anomaly	No bedrock, till cover, high- est gamma where A horizon is thickest (2-4 cm), many coarse boulders, in wet area.	10	10 walls	MIA	0-10	organic	420	16.6	3.2	
						MIB	10-20	pale red-brn clay	1200	10.9	13	
						MIC	20-30	" "	280	4.5	7.3	
						654	0-20	till	580	5.2	140	
TM-3	4 x 1 x 1	Gamma, radon and uranium in soil anomaly	Bedrock at 60 cm depth. White f.g. ss (cherty), 10 cm. Under- lain by coaly shale, 10 cm; underlain by more f.g. white ss. Highest gamma along A horizon (2 cm). In wet area.	10	6 upper walls	MIA	0-5	fluffy organic	100	1.1	11	
						MIB	5-40	brn sandy clay	460	3.5	16	
						MIC	40-60	red-brn till	580	4.4	15	
						82A	0-5	organic	45	0		
						85B	5-10	coarse sand	1500	7.7	23	
						734	0-5	organic	230	2.8	9.6	
						735	5-30	brn clay-sand	73	1.9	4.5	
TM-4	2.5 x 1.8 x 1.0	Radon in soil anomaly	Similar to TM-1 (till). A few coaly shale fragments	3.5	2.5	726	0-15	clay-sand-org	14	0 ^a		
						728	15-25	sandy clay	23	0 ^a		
						729	25-35	sandy clay	17	0 ^a		
						725	35	" "	31	0 ^a		
TM-5		Gamma anomaly	Angular boulder of arkose grit and quartz sandstone; wet area.	8 walls	5	991A	0-5	organic		0 ^a		
						991B	5-10	iron sandy clay		0 ^a		
						991C	10-20	red-brn rubbery clay		0 ^a		
AUGER SAMPLES					No.							
					M2	0	M2B	10-40	lt brn clay	180	4.6	4.6
					M3	1.5	M3A	0-8	organic			
							M3B	8-10	lt brn silt clay	120	5.2	2.7
							M3C	10-20	wet s/a	87		
					M5	6	M5A	0-10	organic	1000	4.7	49
						M5B	10-40	rd-brn silt clay	160	3.5	2.4	
						M5C	40-70	rd-brn clay till	78	4.2	3.2	
					M6	5	M6A	0-20	gray clay	260	6.9	4.4
						M6B	20-40	gray clay	100	9.9	1.7	
						M6C	40-60	gray silt clay	77	6.7	1.1	
						M6D	60-80	gray & rd till	69			
						M6E	80-100	purple till with manganese	25	7.0	.4	
					M7	6	M7A	0-5	organic	180	3.1	6.8
						M7B	5-10	gray & rd silt clay	80	5.2	1.0	
						M7C	10-20	brn silt clay till	63	6.0	1.1	

^a No activation (AER) except noted.^b Fluorometry (Atlantic, Inc., New York.)^c Fluorometry (G.R. Morris & Assoc., Ltd.)

TABLE II - TRENCHES, PARKE ROAD AREA

No.	Size Meters (depth last)	Reason for Trench	Geology of Trench	Rock Unit	Max. Gamma In Trench X1000	Max. Gamma on Surface X1000	Samples	Upper	eU	eU/U
T1	2.5 x 0.8 x 1.0	Gamma and nearby radon in soil	Bedrock on bottom of trench, grey f.g. micaceous sandstone with minor coal material. Overburden-red sandy clay.	M12	10	2	746-soils			
							A horizon	0	1.5 ^b	high
							Leached "	0	3.5 ^b	high
							B "	0	19 ^b	high
							C "	0	47	high
T2	9 x 0.7 x 1.3	Gamma and nearby radon in soil	Overburden-red sandy clay, 60 cm. Mineralization at least 70 cm thick assoc. with organic material in orthoquartzite(OQ) Green shale fragments near surface.		>100	8	T2-1	171	1400 ^a	8
							T2-2	118	3400 ^a	29
							T2-3	134		
							T2-4	389		
T3	11.0 x 0.7 x 0.7	Gamma anomaly on strike with T1 and T2	On west bank, OQ (2m thick) underlain by coal (.5m) under- lain by lower OQ (3m).	M12	20 upper OQ 10 coal 5 lower OQ	5	T3-1	74.5		
T4	0.6 x 0.6 x 1.0	Gamma anomaly	Red sandy clay; loose slabs of OQ, some radioactive.	M12	10	10	T4-1	272		
T5	0.7 x 0.7 x 0.7	To determine why north extension of mineralization at T2	Red sandy clay; no bedrock.		3.5	2	748-soils			
							A horizon	0	1.8 ^b	high
							B horizon	8	21	2.7
T6	4.0 x 0.7 x 0.5	Weak gamma, stra- tigraphic info	On west bank, exposed 2.5m vertical section, blk shale (>0.7m) underlain by white OQ (minor organic), jointed.		6 shale 3 OQ	2.5				
T7	4 x 0.7 x 1.0	Weak gamma, stra- tigraphic info	On west bank, exposed 3 m vert. section of blk shale (.7m wide) underlain by OQ, jointed, minor organic.		6 shale 2 OQ	2.5				

* Rock = Neutron Activation (AECL)
Soil = Fluorimetry (Atlanta Ind. Res. Inst.)

^a TV-1A
^b Radium + 3.46

^c For detailed stratigraphy see report
by R. J. Lyon.

TABLE II TRENCHES, FAIRFAX ROAD AREA, continued

No.	Size Meters (depth first)	Reason for Trench	Geology of Trench	Rock Unit ^a	Max. Gamma In Trench X1000	Max. Gamma on Surface X1000	Samples	Upper ^b eU	eU	eU/U
T8	0.6 x 0.6 x 0.3	Weak gamma	F.g. OQ, very minor disseminated organic.	MW2	15	6	T8-1	166		
T9	8.0 x 0.8 x 1.0	Radioactive boulder on bank	On east bank-OQ overlying shale.		15	10 on fallen slab				
T10	9.0 x 0.8 x 1.5	Gamma anomaly	On east bank-OQ overlying shale, disseminated organic rusty stain.	MW2	>100	25	T10-S soil-talus T10-1 T10-2	34 555 417	4000 ^b 8600 ^b	7 21
T11	4.5 x 1.5 x 0.7	Clean out old coal trench to determine strat.	On west bank.							
T12a	2.0 x 0.8 x 1.2	Near radioactive swamp	Bottom 60cm cuts through badly weathered, mod. sorted arkose, low brn.		5.5	3				
T12b	1.6 x 0.8 x 1.0	Near radioactive swamp	Bottom 50cm cuts through arkose as far as T12a; boulders of 'greywacke' on surface.		5.5	3	T12b			
T12c	4 holes: New deep	High gamma in swamp	Holes in area of 10sq.m where TV-1A readings 5-20K. In recently formed swamp. Holes filled with water. A hor. 3-8cm deep. Gray residual soil (fresh pink felds.) 30cm deep. Bedrock-pinkish arkose weathering white hand specimen 2x3.6.		15	20	T12c-1 soil T12c-2 org. soil T12c-3 soil T12c-4 rock	<.5 1 <.5 80.5		
T14a	1.5 x 0.5 x 0.5	Gamma anomaly	In recent swamp, 2cm org. layer, lgt. brn residual soil from weathered arkose. A few nonradioactive arkose boulders.		7 over water	6				

^a Rocks - Neutron Activation (AEC)
^b Gamma - Fluorimetry (Atlantic Ind. Res. Inst.)

^a TV-1A
^b Radium = 8.46

^b For detailed stratigraphy see report by R. J. Ryan.

TABLE II TRENCHES, PANDEK ROAD AREA, continued

No.	Size Meters (depth X width)	Reason for Trench	Geology of Trench	Rock Unit ^a	Max. Gamma in Trench X1000	Max. Gamma on Surface X1000	Samples	Uppmt	eU	eU/H
T13b	1.5 x 0.5 x 0.5	Gamma anomaly	Similar T13a, but a few radioactive bldrs arkose (lnd spce, 2xH.G.). Some radioactivity in A hor. Similar sit. to T12e.	MBS	8 on sides	8	T13b-1 T13b-S soil T13b-1S soil	35.3 1	<.5	
T14	3.2 x 1.0 x 0.8	Gamma, radon anomaly	Bedrock at 50cm. Bottom trench is contact of "greywacke" and underlying arkose. High gamma in frac. greywacke or contact.	MBS	25	4	T14-1 greywacke PKI arkose	30.9	39.2	
T15	1.3 x 1.0	Gamma anomaly, nearby radio-active bldrs	Bottom 20cm cuts into wthrd arkose, loose slabs of mildly rad. "greywacke" (max. along fractures) near surface.		8	5				
T16	1.0 x 1.0 x 1.0	Weak gamma, look for greywacke	Bottom 30cm wthrd arkose (lgt grey to brown).		6	3				
T17	1.6 x 0.8 x 0.7	Same as T16	Same as T16.		5.5	4				
T18	0.0 x 0.6	Weak gamma	Bottom 20cm is grn siltstone overlain by brown siltstone.		6	3				
T19	1.5 x 1.0 x 0.7	Weak gamma	Bottom 20cm is grn siltstone(?). MBS	MBS	7	3.5	T19-1	7.8		
T20	1.5 x 0.5 x 0.7	Weak gamma	Grn and maroon siltstone.	MBS	9	4	T20-1	8.3		
T21	1.0 x 1.0 x 0.7	Weak gamma	Slabs on bttm of trench are grn siliceous siltstone.	MBS	9.5	3	T21-1	17.7		
T22a	1.0 x 0.5 x 0.7	Weak gamma	On road-turned-swamp, A hor., 2m deep, underlain by ten residual soil resulting from wthrd arkose which is probable source of anomaly.		9	4				

^a Results - Neutron Activation (ANCL)

Results - Fluorometry (Atlantic Ind. Res. Inst.)

^b TV-1A

Radium = 8.46

For detailed stratigraphy see report
by R. J. Ryan.

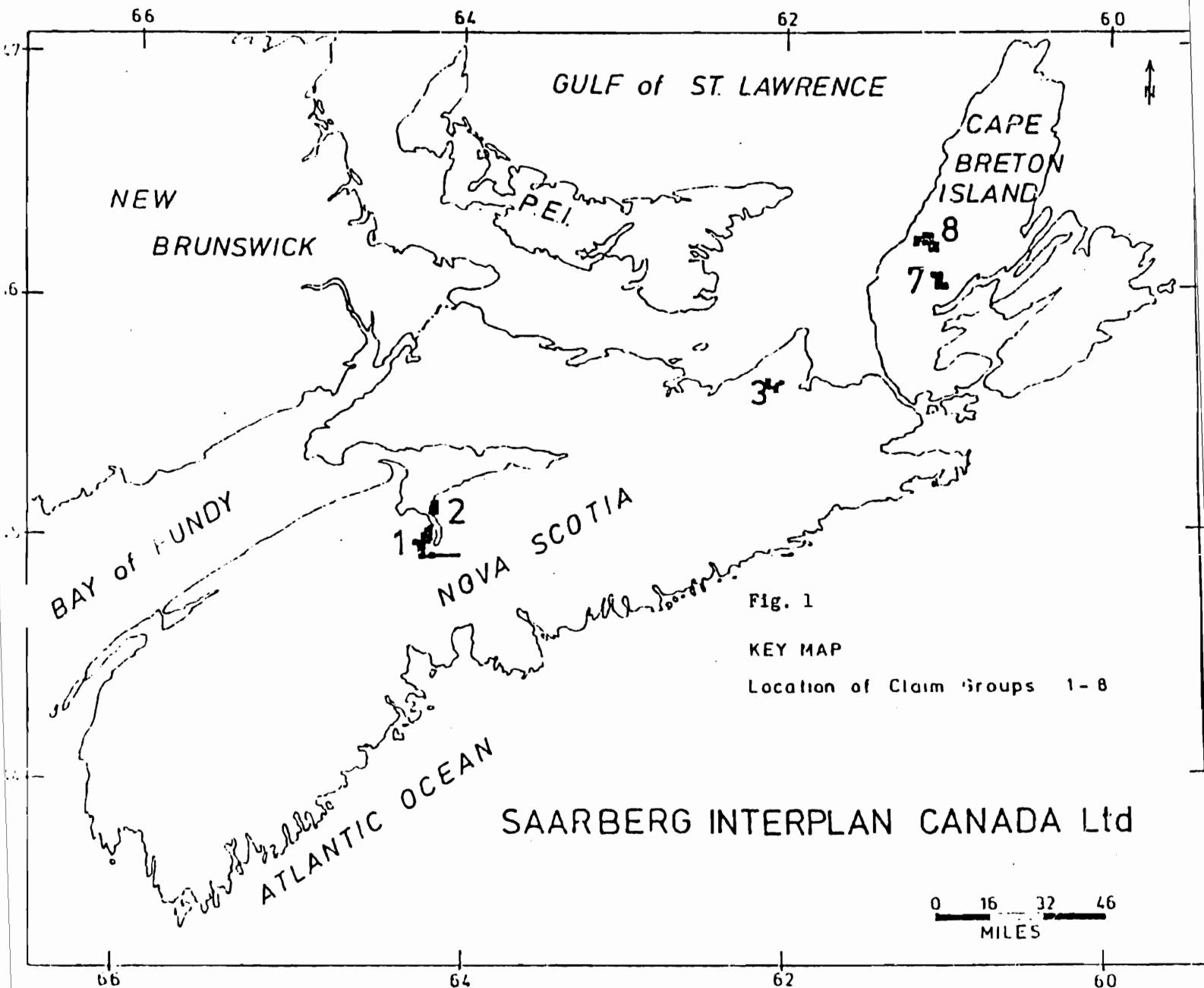
TABLE II TRENCHES, PARKE ROAD AREA, continued

Box	Size Meters (depth, last)	Reason for Trench	Geology of Trench	Rocky Unit	Max. Gamma in Trench X1000	Max. Gamma on Surface X1000	Sample	Upper eff	eff	eff/0
T22b	0.5 x 0.5 x 0.5	Weak gamma	Same as T22a. Sample of residual soil.		5.5	5	T22b soil	<.5		
T23	0.8 x 0.6 x 0.6	Weak gamma	Trenched bedrock which is green siltstone.	M05	6	4	T23-1	4.2		
PR2			Drk grn siltstone (slab 1cm thick), fresh, minor courser drk qtz; boulder(subtercep?).				PR2	158		
PR3			Gry poorly sorted arkose, sub rounded pink feldspar, f.g. muscovite(2mm), subangular drk qtz fragments, rusty sub-paral- lel fractures few apart, high radioactivity along fractures; boulder(close to source?).				PR3	26		very high
9-1-2nd		Weak gamma	Reddish-brn soil sample col- lected with auger.		6	508A 508B 508C	.9 1.4 .5	.5	22	

^a Rocks - Neutron Activation (AECL)
^b Gamma - Fluorimetry (Atlantic Ind. Res. Inst.)

^a TV-1A
 Iodine + 0.46

^b For detailed stratigraphy see report
 by R. J. Ryan.



APPENDIX -- ANALYTICAL TECHNIQUES

Well water and stream water samples were analysed for radon (Rn) and radium (Ra) in a field lab. Radon determinations were made by degassing the sample into a sealed scintillation flask and counting the resulting scintillations with an EDA-type portable radon detector. Samples were counted for 6 minutes and cell background for 3. Cell background was subtracted from the sample reading. Radon decay between sampling and analysis was corrected for by reference to the 3.825-day half-life of radon. The resulting net counts per minute was multiplied by 3.6 to give the result plotted on the maps. In the 1978 reports this was described as picocuries per liter; however, further calibration of the laboratory technique against the labs at the Geological Survey of Canada and the Ontario Radiation Protection Lab indicates that the 1978 results were low by a factor of two. In order to make the results for the two years comparable, the 1979 net counts per minute were multiplied by the same 3.6 factor. In the legends these units are now referred to as "1978 units". To convert to pCi/l, multiply the "1978 units" by two. Detection limit for radon in water was about 4 "1978 units" or 8 pCi/l.

Radium, the parent of radon, was determined by a slight modification of the above. First, all the radon originally present in the sample was removed by aerating with an aquarium pump; then the new radon was allowed to build up to equilibrium in the sample; finally this radon was determined as described above and expressed as radium in the same units. Counting times for radium were ten minutes for the sample and five for cell background. Detection limit was about 4 "1978 units" or 8 pCi/l.

Stream sediments were also analysed in the field lab for radium. Fifty cc of sample were placed in an 8-oz. jar, covered with water and allowed to equilibrate as described above. After two weeks the sample was mixed to allow transfer of radon from the sediment sample to the water which was then decanted and analysed as above. Results were calculated as described above and expressed in 1978 as pCi/100cc, and in 1979 as "1978 units". To correct these to actual pCi/100cc, multiply by two. Counting times of 4 to 6 minutes for the sample and 2 to 3 minutes for cell background were used. Detection limit for radium in sediment was about 2 "1978 units" or 4 pc/100cc.

Some sediment samples were also analysed for uranium using a Barringer Uranium Field Kit. Five milligrams of minus-80-mesh sample were fused in a platinum dish with a fluoride salt over a propane torch. The disc was then illuminated by ultraviolet light and the green fluorescence compared visually with standards. The field kit is not sufficiently sensitive for water samples. A detection limit of 2 ppm is reported by the manufacturer.

Air samples were extracted from the soil in the field by means of an EDA Heavy Duty Sampling Probe. Radon analyses were made on the spot using EDA portable radon detectors, the same instruments described above. Cell background was counted for one minute and the sample for two and sometimes three one-minute intervals. Radon-222, the isotope from the uranium decay series, was resolved from thoron, from the thorium decay series, by means of the following formula:

Counts per minute due to radon is equal to

105

$$1.56C_2 - .74C_1 \quad \text{for a two minute counting time and}$$

$$.87C_3 + .32C_2 - .34C_1 \quad \text{for three minutes.}$$

C_1 , C_2 , and C_3 are the net counts (cell background removed) in each of the first three minutes respectively. This was converted to pCi/l by multiplying by 5. To simplify data presentation on the maps, this value was divided by 100 which gives the result in pCi/10cc.

McPhar Model TV-1A portable gamma-ray spectrometers were carried at all times during the radon survey. Gamma radiation was monitored not only along the radon lines but in between while the operator was returning to the baseline.

APPENDIX B - GLOSSARY

Accuracy - the extent to which an estimated data value approaches its true value (Heywood et al. 1998) or the difference between a recorded value and its true value (Jones 1997)

Applicability - a term used to describe the appropriateness or suitability of data for a set of commands, operations, or analysis (Heywood et al. 1998)

Attribute Accuracy - defined as the closeness of attribute values to their true value (G.K. Muecke, Dalhousie University, Written Communication, 1996)

Basemap - a map portraying background reference information onto which other information is placed; basemaps usually show the location and extent of natural Earth surface features and permanent man made objects (Bonham-Carter 1994)

Bias - the systematic variation of data from reality (Heywood et al. 1998)

Compatibility - refers to the ability of two data sets to be used together sensibly (Heywood et al. 1998)

Completeness - refers to a data set that covers the study area and the time period of interest in its entirety (Heywood et al. 1998)

Conceptual Error - errors associated with the representation of the real world for study and communication (Heywood et al. 1998)

Coverage - the extent of available data with respect to the selected theme or target area (Bonham-Carter 1994)

Data Capture - the encoding of data into a computer compatible format (Bonham-Carter 1994)

Data Editing - the process of correcting errors in data input into a GIS. This can be carried out manually or automatically (Heywood et al. 1998).

Data Encoding - the process by which data are transferred from some non-GIS source, such as a paper map, into a GIS format (Heywood et al. 1998)

Data Model - collection of concepts allowing for the representation of an environment according to arbitrary requirements (Bonham-Carter 1994)

Data Processing - operations performed on data using a computer system (Bonham-Carter 1994)

Data Quality - describes the overall fitness or suitability of the data for a specific purpose or is used to indicate data free from errors and other problems (Heywood et al. 1998)

Datum - a model of the earth used for geodetic calculations (Bonham-Carter 1994)

Digitizer - a piece of computer hardware used to convert analogue data into digital format (Heywood et al. 1998)

Ellipsoid - a solid, often used to represent Earth, having all its planar sections as ellipses or circles (Bonham-Carter 1994)

Error - the physical difference between the real world and the GIS facsimile (Heywood et al. 1998); it implies some degree of knowledge has been attained about differences between actual results or observations and the truth to which they pertain (Hunter et al. 1996) (see *uncertainty*)

Generalization - the process of simplifying the complexities of the real world to produce scale models and maps (Heywood et al. 1998)

Geocoding - process of assigning geographic locations to objects (Bonham-Carter 1994)

Geoid - a surface around the Earth such that each point on the surface is normal to the direction of gravity, coincides with mean sea level of the oceans (Bonham-Carter 1994)

Georeferencing - the manner in which locations in raster images and vector files are related to earth surface locations (Eastman 1997)

Line - a geometric object represented by a series of points (Bonham-Carter 1994)

Lineage - a record of data history that presents essential information about the development of data from their source to their present format (Heywood et al. 1998)

Layer - A subset of a spatial data set dealing with one thematic topic (Bonham-Carter 1994)

Manual Digitizing - commonly, a process of manually encoding analog maps into computer readable format using a *digitizer* (Bonham-Carter 1994)

NAD (North American Datum) - the official reference *ellipsoid* used for primary geodetic work in North America (Bonham-Carter 1994)

NAD27 (North American Datum 1927) - a *datum* with its origin at Meales Ranch, Kansas (Bonham-Carter 1994)

NAD83 (North American Datum 1983) - an Earth-centered *datum* defined on satellite and terrestrial data (Bonham-Carter 1994)

On-screen Digitizing - an automated process of converting information in analog form (photograph, map, graph) into a digital representation, directly readable by a computer system using a *scanner* (Bonham-Carter 1994)

Point - in *vector models*, geographic objects are represented with points, *lines*, and *polygons*; a point is an object represented by an n-tuple of coordinates, with zero length and zero area (Bonham-Carter 1994)

Polygon - a class of spatial objects having nonzero area and perimeter, and representing a closed boundary region of uniform characteristics (Bonham-Carter 1994)

Positional Accuracy - reliability of locating cartographic features relative to their true position (Bonham-Carter 1994)

Precision - the recorded level of detail of the data (Heywood et al. 1998)

Query - a set of conditions or questions that form the basis for the retrieval of information from a database (Bonham-Carter 1994)

Raster Model- an element of space that has been sub-divided into regular tiles (Bonham-Carter 1994)

Resolution - describes the smallest feature in a data set that can be displayed and mapped (Heywood et al. 1998), the smallest distance over which it is possible to record a change (Jones 1997).

Scale - the ratio between a recorded distance on a map and the real world distance that it represents (Jones 1997)

Scanner - a device that produces a digital image from analog data input (Bonham-Carter 1994)

Slivers - polygons created in an overlay process of two vector graphic files when boundaries are not in perfect registration (Bonham-Carter 1994)

Spatial Model - a model of how objects are located in a spatial context (Bonham-Carter 1994)

Uncertainty - conveys the fact that it is the lack of such knowledge which is responsible for hesitancy in accepting those same results or observations without caution (Hunter et al. 1996) (see *error*)

Vector Model - a term describing a class of spatial data structures in which spatial information is represented as quantities with a magnitude and direction (Bonham-Carter 1994)

APPENDIX C

Database description of the 12 GIS layers (Table 6.1) digitized for this thesis:

Coordinate System

All layers, except Rn in soil (point) and Rn in soil (polygon), generated for the purpose of this thesis (Table 6.1) were digitized as latitude/longitude coordinates. These layers have latitude and longitude entities. The Rn in soil (point) layer has Easting and Northing entities. The Rn in soil (polygon) layer has no coordinate entities; polygons are areas, and therefore do not have one set location. All layers have been converted to UTM coordinates, NAD27.

All coordinates are recorded with 16 decimal places, the maximum that ArcView will allow. Coordinates are not accurate to 16 decimal places; they have an estimated precision of about 4-5 decimal places. All decimal places were kept to ensure that all data points would be placed in the same location on the map if the databases are ever imported into another GIS package.

Rn in Soil Gas Layer

The Rn in soil gas layer (containing 1136 points, Table 6.1) has not been incorporated into the analyses of this thesis for three reasons: (1) all Rn in soil gas data in paper map format were at a scale of 1:2500, and once digitized, the data were so clustered into select areas that it only generated confusion; (2) after 1136 points were digitized, it became apparent that the data were going to be of minimal use, therefore only about 2/3 of the data for Rn in soil gas were entered - the layer is incomplete; and (3) Rn in soil gas anomalies were highlighted on the paper maps, therefore Rn in soil can be accounted for in the study area through the Rn in soil (point) and Rn in soil (polygon) layers.

Database Codes

(1) Occasionally in the database the numbers -999, -995, and -994 are present. They mean the following:

- 999 = Not Sampled
- 995 = Deep (pertaining to water wells)
- 994 = Unknown

(2) The source paper maps had values of Tr (trace) and ND (not detected) for a number of points. Tr and ND have been accounted for by setting:

- Tr = detection limit
- ND = 1/2 detection limit

There were only 3 layers that Tr and ND occurred in: (1) U in well water (mg/L); detection limit was 0.00002 mg/L, (2) U in stream water (mg/L); detection limit 0.00005 mg/L, and (3) U in stream sediment; detection limit was 0.1 ppm (Morse and Harder 1979; 1978a,b and Quarch et al. 1980a,b).

U Well Water (mg/L) Layer: 656 Data Points

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	0.00000	Dug	-994	45.111210526048500	-63.679041451365400
11	0.00000	Dug	-994	45.119404943102200	-63.687701413915300
11	0.00000	Dug	-994	45.118963064967100	-63.688971813553800
11	0.00000	Dug	-994	45.098912844586600	-63.672290913953500
11	0.00000	Dug	-994	45.100404183292500	-63.672511853021000
11	0.00000	Dug	-994	45.103552565005200	-63.672788026855500
11	0.00000	Dug	-994	45.102724043501900	-63.672622322554800
11	0.00000	Dug	-994	45.104933434177400	-63.674168896027700
11	0.00000	Dug	-994	45.107363763920500	-63.675604999966800
11	0.00000	Dug	-994	45.120178229838600	-63.701068227502300
11	0.00000	Dug	-994	45.106093364282100	-63.756137290090100
11	0.00000	Dug	-994	45.094494063235500	-63.776518919071900
11	0.00000	Dug	-994	45.094825471836800	-63.778396901146100
11	0.00000	Dug	-994	45.091834573686200	-63.778603547949100
11	0.00000	Dug	-994	45.091097393723500	-63.778445580814200
11	0.00000	Dug	-994	45.090465525183900	-63.779472367190900
11	0.00001	Dug	-994	45.089623033797900	-63.782263119907100
11	0.00001	Dug	-994	45.088280313151500	-63.784579971218600
11	0.00001	Dug	-994	45.088727886700300	-63.783579512697700
11	0.00001	Dug	-994	45.068307260604800	-63.712548709096900
11	0.00001	Dug	-994	45.065922183091700	-63.712223471254200
11	0.00001	Dug	-994	45.064512819106600	-63.708049585606300
11	0.00001	Dug	-994	45.061156905578500	-63.731872374358500
11	0.00001	Dug	-994	45.054106757080300	-63.728199738861700
11	0.00001	Dug	-994	45.052467187662100	-63.729347437454500
11	0.00001	Dug	-994	45.059746875878900	-63.734233354320600
11	0.00001	Dug	-994	45.055536947896200	-63.739951553654600
11	0.00001	Dug	-994	45.053899111359600	-63.754487352917500
11	0.00001	Dug	-994	45.054148768784300	-63.759376237346000

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	0.00001	Dug	-994	45.054301038855800	-63.760670532953600
11	0.00001	Dug	-994	45.046814427007700	-63.764959473300500
11	0.00001	Dug	-994	45.054688058620800	-63.764927750368900
11	0.00001	Dug	-994	45.053165357906000	-63.766196667631300
11	0.00001	Dug	-994	45.052118501164500	-63.766260113494500
11	0.00001	Dug	-994	45.050310294065600	-63.767148355578100
11	0.00001	Dug	-994	45.058272749887100	-63.765879438315700
11	0.00001	Dug	-994	45.060747138548700	-63.766767680399400
11	0.00001	Dug	-994	45.064173215157200	-63.768131766456500
11	0.00001	Dug	-994	45.065029734309300	-63.767306970235900
11	0.00001	Dug	-994	45.074324553256300	-63.773492941890100
11	0.00001	Dug	-994	45.074387999119400	-63.774539798631500
11	0.00001	Dug	-994	45.069883342837900	-63.770035142350100
11	0.00001	Dug	-994	45.070486078537500	-63.770415817528800
11	0.00001	Dug	-994	45.071469489415900	-63.771018553228400
11	0.00001	Dug	-994	45.066140036913900	-63.768512441635200
21	0.00001	Dug	-994	45.201947783084600	-64.130236182609500
21	0.00001	Dug	-994	45.202146690531400	-64.105446875439000
21	0.00001	Dug	-994	45.190180814428800	-64.139153147680500
21	0.00001	Dug	-994	45.192513715764700	-64.137493198653000
21	0.00001	Dug	-994	45.169641004594900	-64.155717720836400
21	0.00001	Dug	-994	45.172601638684900	-64.160525087081500
21	0.00001	Dug	-994	45.179607495591000	-64.148521328073000
21	0.00001	Dug	-994	45.177812061551200	-64.150060271535600
21	0.00001	Dug	-994	45.184151042956800	-64.147825139363700
21	0.00001	Dug	-994	45.178544891771500	-64.151928988597400
21	0.00001	Dug	-994	45.171253231079500	-64.146029705324000
17	0.00001	Dug	-994	45.051858383574400	-63.845993499712100
17	0.00001	Dug	-994	45.051962097869900	-63.843271197717800
17	0.00001	Dug	-994	45.050234994902100	-63.840655870366600

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	0.00001	Dug	-994	45.049346770518700	-63.838879421599700
17	0.00001	Dug	-994	45.057965584990300	-63.857299406250100
17	0.00001	Dug	-994	45.057354143438100	-63.853125653046100
17	0.00001	Dug	-994	45.057646572006500	-63.861845341268400
17	0.00001	Dug	-994	45.057114883700300	-63.858256445201300
17	0.00001	Dug	-994	45.056192979166400	-63.892266219217800
17	0.00001	Dug	-994	45.083467281811600	-63.935446994013400
17	0.00001	Dug	-994	45.074160351111600	-63.954104345743800
17	0.00001	Dug	-994	45.073725447807800	-63.955452545985400
17	0.00001	Dug	-994	45.080335978024700	-63.939709046390100
17	0.00001	Dug	-994	45.080770881328400	-63.943318743811100
17	0.00001	Dug	-994	45.078248442166700	-63.947493815527000
17	0.00002	Dug	-994	45.081075313641000	-63.941448659605000
17	0.00002	Dug	-994	45.081510216944800	-63.939230652756000
17	0.00002	Dug	-994	45.064679459090000	-63.971283026241500
17	0.00002	Dug	-994	45.066984446599900	-63.965803244614400
17	0.00002	Dug	-994	45.069419905100800	-63.960410443648100
17	0.00002	Dug	-994	45.070028769726000	-63.959671108031700
17	0.00002	Dug	-994	45.062200510258700	-63.975588568948600
17	0.00002	Dug	-994	45.063026826535800	-63.976023472252300
17	0.00002	Dug	-994	45.060808819686800	-63.982634002469100
17	0.00002	Dug	-994	45.058242890194700	-63.993941488366400
17	0.00002	Dug	-994	45.059634580766700	-63.993724036714500
17	0.00002	Dug	-994	45.060678348695700	-63.991810462178000
17	0.00002	Dug	-994	45.061287213320900	-63.988331235748100
17	0.00002	Dug	-994	45.017977843226100	-63.998568224849400
17	0.00002	Dug	-994	45.018104888728300	-63.997450259465400
17	0.00002	Dug	-994	45.019085517092400	-63.992601596998300
17	0.00002	Dug	-994	45.018676921940700	-63.983013230771400
17	0.00002	Dug	-994	45.016353888255200	-63.968857536864100

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	0.00002	Dug	-994	45.018905479853600	-63.969444892394700
17	0.00002	Dug	-994	45.016362400654200	-63.971881566606800
17	0.00002	Dug	-994	45.018767153370000	-63.971551711145800
17	0.00002	Dug	-994	45.020097215712800	-63.974956670743400
17	0.00002	Dug	-994	45.018075520951700	-63.987512459259700
17	0.00002	Dug	-994	45.031642156848600	-63.942130732122300
17	0.00002	Dug	-994	45.030046082037200	-63.952026395953000
17	0.00002	Dug	-994	45.030578106974300	-63.950483523635300
17	0.00002	Dug	-994	45.036430381282800	-63.918402419926200
17	0.00002	Dug	-994	45.037175216194800	-63.913401385517200
17	0.00002	Dug	-994	45.034461889015400	-63.916221117684000
17	0.00002	Dug	-994	45.037600836144500	-63.906963883777900
17	0.00002	Dug	-994	45.037175216194800	-63.905687023928800
17	0.00002	Dug	-994	45.035738748864500	-63.903133304230500
17	0.00002	Dug	-994	45.035951558839400	-63.901218014456900
17	0.00002	Dug	-994	45.035708216147400	-63.906277357165200
17	0.00002	Dug	-994	45.037034698688400	-63.896996746425900
17	0.00002	Dug	-994	45.040282685074900	-63.891713877002200
104	0.00002	Dug	-994	45.083470793318500	-64.208030372886100
102	0.00002	Dug	-994	45.051428620608500	-64.192267751065400
102	0.00002	Dug	-994	45.050752775375000	-64.192219476405800
102	0.00002	Dug	-994	45.054264775119900	-64.201893898664500
102	0.00002	Dug	-994	45.032926728386600	-64.239783163324600
102	0.00002	Dug	-994	45.032048541264700	-64.235931777913900
102	0.00002	Dug	-994	45.032486343308500	-64.234459958851200
102	0.00002	Dug	-994	45.029754285422700	-64.245545065614700
102	0.00002	Dug	-994	45.029303150791600	-64.245708542972400
102	0.00002	Dug	-994	45.029897328110600	-64.246925191768500
102	0.00002	Dug	-994	45.039715154752500	-64.224779228879700
102	0.00002	Dug	-994	45.039175336625600	-64.225333126422300

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	0.00002	Dug	-994	45.046221998223100	-64.218307477742100
102	0.00002	Dug	-994	45.048529945964100	-64.220375383425800
102	0.00002	Dug	-994	45.067328074310000	-64.224843357087900
102	0.00002	Dug	-994	45.070798352518000	-64.224747935358900
102	0.00002	Dug	-994	45.072428335368500	-64.226751750267800
102	0.00002	Dug	-994	45.070550365731500	-64.230136241584200
102	0.00002	Dug	-994	45.069926642845000	-64.229769345768700
102	0.00002	Dug	-994	45.071724432341400	-64.228778727066600
102	0.00002	Dug	-994	45.071687742759800	-64.229145622882200
102	0.00002	Dug	-994	45.068862644979900	-64.231457066520300
102	0.00002	Dug	-994	45.068605817909000	-64.232667822711700
102	0.00002	Dug	-994	45.068495749164300	-64.234905887186700
102	0.00002	Dug	-994	45.067688578370000	-64.235896505888800
102	0.00002	Dug	415	45.069779884518800	-64.224669493932200
102	0.00002	Dug	90	45.060465317000900	-64.209037439089900
102	0.00002	Dug	67	45.059605404933200	-64.208292181964500
102	0.00002	Dug	-994	45.062483745459500	-64.215241912656000
102	0.00002	Dug	-994	45.061894514791500	-64.213313521378800
102	0.00002	Dug	-994	45.061064235213800	-64.214009884895600
102	0.00002	Dug	-994	45.055436239701300	-64.198889478699700
102	0.00002	Dug	100	45.055920786879900	-64.198330385801300
102	0.00002	Dug	110	45.056218969759100	-64.197901747912400
102	0.00002	Dug	-994	45.062818772373100	-64.190704343701400
102	0.00002	Dug	-994	45.062650525216900	-64.191085703922200
102	0.00002	Dug	-994	45.063009452483500	-64.191007188582600
102	0.00002	Dug	-994	45.065673526005600	-64.194208351879400
102	0.00002	Dug	-994	45.065405053350600	-64.194257165089400
102	0.00002	Dug	-994	45.064599635385700	-64.193939879224500
102	0.00002	Dug	-994	45.066820636440600	-64.195233429289400
102	0.00002	Dug	-994	45.067601647800600	-64.196356133119400

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	0.00002	Dug	-994	45.067943340270600	-64.197405617134300
102	0.00002	Dug	250	45.066600976995600	-64.192548702739500
102	0.00002	Dug	-994	45.067015889280600	-64.193402933914500
102	0.00002	Dug	-994	45.070847726265500	-64.195013769844400
102	0.00004	Dug	-994	45.070524530561100	-64.195415068630500
102	0.00005	Dug	-994	45.070386274550600	-64.195816994480900
102	0.00005	Dug	-994	45.071872803675400	-64.192743955579500
102	0.00005	Dug	-994	45.071384671575400	-64.191059899834500
102	0.00005	Dug	-994	45.070994165895500	-64.191352779094500
102	0.00005	Dug	-994	45.075802267080300	-64.194989363239400
102	0.00005	Dug	-994	45.075192101955300	-64.193524966939500
102	0.00005	Dug	-994	45.074411090595300	-64.192329043294500
102	0.00005	Dug	-994	45.077876828505200	-64.198894420039300
102	0.00005	Dug	-994	45.077657169060200	-64.198211035099300
102	0.00005	Dug	-994	45.076241585970300	-64.194501231139400
102	0.00005	Dug	211	45.076485652020300	-64.194745297189400
102	0.00005	Dug	-994	45.075948706710300	-64.193866659409500
102	0.00005	Dug	-994	45.076265992575300	-64.193036834839500
102	0.00005	Dug	-994	45.075899893500300	-64.192353449899500
102	0.00005	Dug	196	45.075021255720300	-64.191670064959500
102	0.00005	Dug	-994	45.074801596275300	-64.190742613969600
102	0.00005	Dug	-994	45.082343237220100	-64.207339105369000
102	0.00005	Dug	-994	45.081318159810100	-64.205215730734100
102	0.00005	Dug	-994	45.081196126785100	-64.205435390179100
102	0.00005	Dug	-994	45.088835394149900	-64.214343801003800
102	0.00005	Dug	-994	45.089372339459800	-64.213587196248800
102	0.00006	Dug	-994	45.089299119644800	-64.216906494528700
102	0.00006	Dug	-994	45.074035532826800	-64.219588572871200
102	0.00006	Dug	-994	45.079868960931500	-64.228132018756900
13	0.00006	Dug	190	45.078559884545800	-64.228109052504500

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	0.00006	Dug	-994	45.077181909402900	-64.218601024018900
102	0.00006	Dug	-994	45.075735035503000	-64.218440260252200
102	0.00006	Dug	-994	45.073782904050600	-64.216488128799800
102	0.00006	Dug	-994	45.074219262845800	-64.216281432528400
102	0.00006	Dug	-994	45.076952246879100	-64.216097702509400
102	0.00006	Dug	-994	45.078766580817200	-64.215477613695100
102	0.00006	Dug	-994	45.078307255769600	-64.214076672299900
102	0.00006	Dug	-994	45.082487113702900	-64.224962675928300
102	0.00006	Dug	-994	45.079891927183900	-64.219864167899800
102	0.00006	Dug	-994	45.080603881007700	-64.221747400595000
102	0.00006	Dug	-994	45.079639298407700	-64.222068928128400
102	0.00006	Dug	-994	45.080167522212400	-64.220736885490300
102	0.00006	Dug	-994	45.078812513322000	-64.222482320671200
102	0.00006	Dug	-994	45.078192424507700	-64.216855588837900
102	0.00006	Dug	-994	45.079157007107700	-64.217774238933100
102	0.00006	Dug	-994	45.079593365902900	-64.219221112833100
102	0.00006	Dug	-994	45.078720648312500	-64.219818235395000
102	0.00006	Dug	-994	45.080305319726700	-64.219129247823600
102	0.00007	Dug	294	45.077572335693400	-64.217016352604600
102	0.00007	Dug	-994	45.074357060360100	-64.224204789599800
102	0.00007	Dug	-994	45.075229777950600	-64.223584700785500
102	0.00007	Dug	-994	45.075275710455300	-64.224365553366400
102	0.00007	Dug	-994	45.076860381869600	-64.226593279847400
102	0.00007	Dug	300	45.075758001755300	-64.226639212352100
102	0.00007	Dug	-994	45.076309191812500	-64.227351166175900
102	0.00007	Dug	-994	45.076538854336300	-64.227052604895000
102	0.00007	Dug	-994	45.076194360550600	-64.225146405947400
102	0.00007	Dug	-994	45.071183651480400	-64.201347714962200
102	0.00007	Dug	-994	45.070964340845400	-64.201219783758500
102	0.00007	Dug	-994	45.066806576724400	-64.207570654229100

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	0.00007	Dug	-994	45.067788905610100	-64.206245652476200
102	0.00007	Dug	-994	45.068953993358300	-64.205286168448300
102	0.00007	Dug	-994	45.069045372789600	-64.204326684420400
102	0.00008	Dug	-994	45.069730718523800	-64.203230131245600
102	0.00008	Dug	-994	45.068652763950700	-64.199391855433400
102	0.00008	Dug	-994	45.070471095737100	-64.200127137139300
102	0.00008	Dug	-994	45.069855048902400	-64.200673630299200
102	0.00008	Dug	-994	45.069248938306900	-64.200166882096400
102	0.00008	Dug	-994	45.068851488736100	-64.199560771501000
102	0.00008	Dug	-994	45.069547025485000	-64.199332237997800
102	0.00008	Dug	-994	45.070173008559000	-64.199719751329300
102	0.00008	Dug	-994	45.070331988387300	-64.199600516458000
102	0.00008	Dug	-994	45.070103454884100	-64.201538083115600
102	0.00008	Dug	-994	45.069745750270400	-64.201587764312000
102	0.00008	Dug	250	45.070242562233900	-64.203296797466300
102	0.00008	Dug	-994	45.070699629240300	-64.201110824827000
102	0.00008	Dug	-994	45.071251711534700	-64.200197311829200
102	0.00008	Dug	-994	45.071422490647100	-64.200694123792600
102	0.00008	Dug	-994	45.072043505601500	-64.200305989446200
102	0.00008	Dug	-994	45.071748523498200	-64.201221986503800
102	0.00008	Dug	-994	45.071562219011900	-64.205724344922900
102	0.00008	Dug	-994	45.071092576452600	-64.205720463579400
102	0.00008	Dug	160	45.070898509279400	-64.204245553062800
102	0.00008	Dug	-994	45.068045721832900	-64.199083366254800
102	0.00008	Dug	-994	45.066784285206800	-64.199529720753200
102	0.00008	Dug	-994	45.067094792684000	-64.200034295403600
102	0.00008	Dug	-994	45.073440789248800	-64.214899840873400
102	0.00009	Dug	-994	45.072548080251900	-64.214531113244200
102	0.00009	Dug	-994	45.072664520555800	-64.210513922758300
102	0.00009	Dug	-994	45.073499009400700	-64.213657810964700

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	0.00009	Dug	-994	45.072412233230600	-64.213890691572600
102	0.00009	Dug	137	45.072198759340100	-64.209892907803900
102	0.00009	Dug	-994	45.071888251862900	-64.209465960022800
102	0.00009	Dug	-994	45.071713591407000	-64.208883758503100
102	0.00009	Dug	-994	45.071480710799100	-64.209349519718900
102	0.00009	Dug	-994	45.076118916239400	-64.209660027196100
102	0.00009	Dug	131	45.077923740950500	-64.211717139232300
102	0.00009	Dug	-994	45.077593826756000	-64.210863243670100
102	0.00009	Dug	-994	45.077205692409500	-64.209970534673200
102	0.00009	Dug	-994	45.076933998367000	-64.211329004885900
102	0.00010	Dug	-994	45.077943147667800	-64.212532221359900
102	0.00010	Dug	-994	45.078176028275700	-64.213657810964700
102	0.00010	Dug	250	45.076836964780400	-64.214259419201700
102	0.00010	Dug	-994	45.084463804688500	-64.232035972270000
102	0.00010	Dug	-994	45.084619058427100	-64.232734614093600
102	0.00010	Dug	-994	45.083551688974300	-64.232618173789700
102	0.00010	Dug	-994	45.085802868183800	-64.231220890142400
102	0.00010	Dug	-994	45.084638465144400	-64.228930897498200
102	0.00010	Dug	-994	45.083920416603400	-64.226194550355600
102	0.00010	Dug	-994	45.084444397971200	-64.227087259352500
102	0.00010	Dug	-994	45.084522024840500	-64.228096408653300
102	0.00010	Dug	-994	45.083435248670300	-64.225418281662700
102	0.00010	Dug	-994	45.087064304809800	-64.225942263030400
102	0.00010	Dug	-994	45.088733282499600	-64.223322356191800
102	0.00010	Dug	-994	45.088480995174400	-64.224098624884700
102	0.00010	Dug	-994	45.087471845873600	-64.225010740598900
102	0.00010	Dug	-994	45.080204030236000	-64.229716869549900
102	0.00010	Dug	-994	45.080689198169100	-64.229183184823500
101	0.00011	Dug	-994	44.960751877437300	-64.004006308802000
101	0.00011	Dug	-994	44.960962119369500	-64.002569655599100

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00011	Dug	-994	44.960366433895100	-64.000502276599800
101	0.00011	Dug	-994	44.960681796793300	-64.003095260429400
101	0.00011	Dug	-994	44.960471554861200	-64.002464534633000
101	0.00011	Dug	-994	44.959875869386800	-64.001728687870600
101	0.00011	Dug	-994	44.960546192988500	-64.010202394059700
101	0.00011	Dug	-994	44.960326985515500	-64.006987351123200
101	0.00012	Dug	-994	44.960619262146100	-64.008741010906800
101	0.00012	Dug	-994	44.961240349986100	-64.007900715593800
101	0.00012	Dug	-994	44.961167280828500	-64.009362098746800
101	0.00012	Dug	-994	44.961057677092000	-64.005708640864400
101	0.00012	Dug	-994	44.960838469619000	-64.006512401598500
101	0.00012	Dug	-994	44.961459557459100	-64.004904880130200
101	0.00012	Dug	-994	44.962847871454400	-64.015426838831600
101	0.00012	Dug	-994	44.963688166767300	-64.016742083669300
101	0.00013	Dug	-994	44.960875004197900	-64.014440405203300
101	0.00013	Dug	-994	44.961605695774400	-64.015280700516300
101	0.00013	Dug	-994	44.962190249035500	-64.015828719198700
101	0.00014	Dug	-994	44.959888570569600	-64.013380902417400
101	0.00014	Dug	-994	44.962628663981400	-64.020870491076400
101	0.00014	Dug	-994	44.962592129402600	-64.026387212478800
101	0.00014	Dug	-994	44.953275811802500	-64.026460281636500
101	0.00015	Dug	-994	44.954700660376600	-64.027556319001200
101	0.00015	Dug	-994	44.957915703313100	-64.026935231161200
101	0.00015	Dug	-994	44.958536791153100	-64.027921664789400
101	0.00015	Dug	-994	44.957879168734300	-64.028067803104700
101	0.00015	Dug	-994	44.958573325732000	-64.029017702154200
101	0.00015	Dug	-994	44.956594148665500	-64.027390004873700
101	0.00015	Dug	-994	44.955528491867400	-64.027567614340100
101	0.00016	Dug	-994	44.955062267018200	-64.027589815523400
101	0.00016	Dug	-994	44.955595095417200	-64.026945981207800

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00016	Dug	-994	44.955883710800100	-64.026990383574400
101	0.00016	Dug	-994	44.956727355765200	-64.029321507820300
101	0.00016	Dug	-994	44.956971568781500	-64.029277105453700
101	0.00016	Dug	-994	44.957571000730400	-64.029388111370200
101	0.00017	Dug	-994	44.957282385347600	-64.026746170558200
101	0.00017	Dug	-994	44.956172326182900	-64.028255851022200
101	0.00017	Dug	-994	44.956527545115600	-64.027856229722900
101	0.00017	Dug	-994	44.956838361681700	-64.027789626173000
101	0.00017	Dug	-994	44.957126977064500	-64.027789626173000
101	0.00017	Dug	-994	44.957970622029700	-64.034849602460500
101	0.00018	Dug	-994	44.960545959291800	-64.032007850998900
101	0.00018	Dug	-994	44.962100042122400	-64.031763637982600
101	0.00018	Dug	-994	44.962743876437900	-64.030120750418900
101	0.00018	Dug	-994	44.962721675254600	-64.030764584734400
101	0.00018	Dug	-994	44.962455261055100	-64.031230809583600
101	0.00018	Dug	-994	44.962055639755800	-64.030653578817900
101	0.00018	Dug	-994	44.962122243305700	-64.029920939769200
101	0.00018	Dug	-994	44.963254503653700	-64.029055093620800
101	0.00019	Dug	-994	44.963143497737200	-64.028189247472300
101	0.00019	Dug	-994	44.963609722586400	-64.028522265221700
101	0.00019	Dug	-994	44.963987142702400	-64.028278052205500
101	0.00019	Dug	-994	44.964386764001700	-64.028366856938700
101	0.00019	Dug	-994	44.963387710753400	-64.027345602507100
101	0.00019	Dug	-994	44.960790172308000	-64.028056040372500
101	0.00020	Dug	-994	44.960212941542400	-64.030431566985000
101	0.00020	Dug	-994	44.961833627922800	-64.035937460441900
101	0.00020	Dug	-994	44.960812373491300	-64.035804253342100
101	0.00020	Dug	-994	44.961656018456500	-64.035249223759800
101	0.00020	Dug	-994	44.961300799523800	-64.035227022576500
101	0.00020	Dug	-994	44.962521864605000	-64.033362123179800

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00020	Dug	-994	44.962544065788300	-64.033606336196000
101	0.00021	Dug	-994	44.963476515486600	-64.033917152762200
101	0.00022	Dug	-994	44.966701237360000	-64.038041022559000
101	0.00022	Dug	-994	44.963634698917600	-64.048732279889000
101	0.00022	Dug	-994	44.961969610170500	-64.046234646768500
101	0.00022	Dug	-994	44.962108367566100	-64.047448773979800
101	0.00022	Dug	-994	44.960235142725700	-64.044257353881300
101	0.00023	Dug	-994	44.960339210772400	-64.043945149741300
101	0.00023	Dug	-994	44.961102376448100	-64.045263344999300
101	0.00023	Dug	-994	44.959506666398800	-64.044569558021400
101	0.00023	Dug	-994	44.959402598352200	-64.044049217788000
101	0.00023	Dug	-994	44.959055704863200	-64.043945149741300
101	0.00023	Dug	-994	44.959957627934500	-64.044187975183500
101	0.00023	Dug	-994	44.960720793610200	-64.044534868672500
101	0.00023	Dug	-994	44.960373900121300	-64.044916451510400
101	0.00023	Dug	-994	44.960209255151900	-64.044833389380700
101	0.00023	Dug	-994	44.959762435628000	-64.044641377547600
101	0.00023	Dug	-994	44.962316503659500	-64.040649661596100
101	0.00023	Dug	-994	44.962212435612800	-64.037666377590900
101	0.00024	Dug	-994	44.962455261055100	-64.038949883500100
101	0.00024	Dug	-994	44.962455261055100	-64.043008537321100
101	0.00024	Dug	-994	44.962073678217200	-64.041794410109700
101	0.00024	Dug	-994	44.961830852774900	-64.042488197087600
101	0.00024	Dug	-994	44.962698974071300	-64.035258685298200
101	0.00024	Dug	-994	44.962485956321200	-64.035322590623200
101	0.00024	Dug	-994	44.962975897146500	-64.037069336174500
101	0.00024	Dug	-994	44.963316725546800	-64.037474069899800
101	0.00024	Dug	-994	44.963231518446700	-64.038752176400800
101	0.00025	Dug	-994	44.963401932646800	-64.039093004801000
101	0.00025	Dug	-994	44.963742761047100	-64.038603063975700

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00025	Dug	-994	44.964893056897900	-64.037133241499600
101	0.00025	Dug	-994	44.965127376423100	-64.037687087650000
101	0.00025	Dug	-994	44.965809033223600	-64.037772294750000
101	0.00025	Dug	-994	44.965872938548600	-64.036536791799100
101	0.00025	Dug	-994	44.963295423771700	-64.041904839103100
101	0.00026	Dug	-994	44.963423234421800	-64.041201880527500
101	0.00026	Dug	-994	44.963977080572200	-64.043843300629500
101	0.00026	Dug	-994	44.961953411945800	-64.014233833357900
101	0.00026	Dug	-994	44.963128005133700	-64.050255134909200
101	0.00026	Dug	-994	44.962795164899100	-64.048050068354800
101	0.00026	Dug	-994	44.963169610163100	-64.053625142284700
101	0.00027	Dug	-994	44.963211215192400	-64.055788603809700
101	0.00027	Dug	-994	44.962046274371200	-64.055871813868400
101	0.00027	Dug	-994	44.962420719635200	-64.056745519484200
101	0.00028	Dug	-994	44.962919979987100	-64.059200216214500
101	0.00028	Dug	-994	44.962670349811100	-64.057327989894800
101	0.00028	Dug	-994	44.962046274371200	-64.057036754689500
101	0.00029	Dug	-994	44.961297383843300	-64.056870334572200
101	0.00029	Dug	-994	44.958240966614300	-64.055128866916100
101	0.00030	Dug	-994	44.960306847047000	-64.055914483418700
101	0.00030	Dug	-994	44.960306847047000	-64.055478029806100
101	0.00030	Dug	-994	44.959608521266900	-64.055507126713600
101	0.00030	Dug	-994	44.959375746006900	-64.055448932898600
101	0.00031	Dug	-994	44.959084776931900	-64.055303448361100
101	0.00031	Dug	-994	44.959172067654400	-64.054663316396000
101	0.00031	Dug	-994	44.960394137769500	-64.055012479286100
101	0.00031	Dug	-994	44.956262376904000	-64.054488734951000
101	0.00032	Dug	-994	44.958211869706800	-64.056554615383800
101	0.00032	Dug	-994	44.958590129504300	-64.057805782406400
101	0.00033	Dug	-994	44.965825299182000	-64.056438839157700

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00033	Dug	-994	44.963873581907300	-64.058860849751600
101	0.00033	Dug	-994	44.963756008577500	-64.058320012434600
101	0.00033	Dug	-994	44.963991155237100	-64.067232070833500
101	0.00033	Dug	-994	44.963708979245600	-64.066103366867400
101	0.00033	Dug	-994	44.962909480602900	-64.065092236231100
101	0.00033	Dug	-994	44.963426803254000	-64.061094743017900
101	0.00033	Dug	-994	44.964132243232900	-64.059754407058100
101	0.00034	Dug	-994	44.963473832586000	-64.062223446984000
101	0.00034	Dug	-994	44.963756008577500	-64.062482108309500
101	0.00035	Dug	-994	44.963285715258300	-64.063634326941600
101	0.00036	Dug	-994	44.963356259256200	-64.063892988267100
101	0.00036	Dug	-994	44.963614920581700	-64.064034076262900
101	0.00036	Dug	-994	44.959029560719500	-64.069936257418900
101	0.00036	Dug	-994	44.958183032744900	-64.070312492074300
101	0.00037	Dug	-994	44.958065459415100	-64.070853329391400
101	0.00037	Dug	-994	44.960746131334600	-64.068948641448600
101	0.00038	Dug	-994	44.960369896679200	-64.069254332106100
101	0.00038	Dug	-994	44.960134750019600	-64.068995670780500
101	0.00038	Dug	-994	44.960628558004800	-64.069630566761500
101	0.00038	Dug	-994	44.961357512649500	-64.069207302774200
101	0.00039	Dug	-994	44.961921864632600	-64.069136758776300
101	0.00039	Dug	-994	44.961992408630500	-64.068878097450700
101	0.00039	Dug	-994	44.959993662023800	-64.070241948076400
101	0.00040	Dug	-994	44.959640942034400	-64.070312492074300
101	0.00040	Dug	-994	44.960793160666500	-64.070124374746600
101	0.00040	Dug	-994	44.961051821992100	-64.070100860080700
101	0.00040	Dug	-994	44.962321613953900	-64.065962278871600
101	0.00040	Dug	-994	44.962133496626200	-64.065609558882200
101	0.00040	Dug	-994	44.961710232639000	-64.065515500218400
101	0.00041	Dug	-994	44.959405795374800	-64.064998177567300

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00041	Dug	-994	44.958465208736400	-64.064292737588500
101	0.00041	Dug	-994	44.959311736711000	-64.066409057524900
101	0.00042	Dug	-994	44.958606296732200	-64.066832321512200
101	0.00042	Dug	-994	44.957971400751300	-64.066573660186600
101	0.00042	Dug	-994	44.960299352681300	-64.065186294895000
101	0.00043	Dug	-994	44.960699102002700	-64.065515500218400
101	0.00043	Dug	-994	44.961592659309100	-64.064998177567300
101	0.00043	Dug	-994	44.961310483317600	-64.064951148235400
101	0.00043	Dug	-994	44.963708979245600	-64.068478348129400
101	0.00044	Dug	-994	44.964155757898800	-64.086631670250700
101	0.00044	Dug	-994	44.964249816562700	-64.085738112944200
101	0.00044	Dug	-994	44.963920611239200	-64.084656438310100
101	0.00044	Dug	-994	44.963779523243500	-64.087101963569900
101	0.00044	Dug	-994	44.963826552575400	-64.081129238416000
101	0.00045	Dug	-994	44.963873581907300	-64.081975766390600
101	0.00045	Dug	-994	44.964602536552100	-64.082751750367300
101	0.00045	Dug	-994	44.963003539266800	-64.080658945096800
101	0.00045	Dug	-994	44.963215171260400	-64.080447313103200
101	0.00046	Dug	-994	44.963591405915800	-64.080682459762800
101	0.00046	Dug	-994	44.963920611239200	-64.080682459762800
101	0.00047	Dug	-994	44.964132243232900	-64.079788902456300
101	0.00047	Dug	-994	44.964296845894600	-64.079036433145600
101	0.00047	Dug	-994	44.962227555290100	-64.080047563781800
101	0.00047	Dug	-994	44.963826552575400	-64.070853329391400
101	0.00048	Dug	-994	44.963967640571100	-64.071417681374400
101	0.00048	Dug	-994	44.964579021886100	-64.072193665351100
101	0.00048	Dug	-994	44.964155757898800	-64.074404043951400
101	0.00048	Dug	-994	44.962439187283700	-64.077860699847500
101	0.00048	Dug	-994	44.961874835300700	-64.077672582519800
101	0.00048	Dug	-994	44.964531992554200	-64.076026555902600

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00048	Dug	-994	44.964814168545700	-64.079459697132800
101	0.00048	Dug	-994	44.965402035194700	-64.079106977143400
101	0.00048	Dug	-994	44.965942872511800	-64.077225803866600
101	0.00048	Dug	-994	44.965425549860700	-64.077649067853900
101	0.00048	Dug	-994	44.964531992554200	-64.078448566496500
101	0.00049	Dug	-994	44.964508477888200	-64.078001787843300
101	0.00050	Dug	-994	44.965096344537200	-64.077319862530500
101	0.00050	Dug	-994	44.965543123190500	-64.076920113209100
101	0.00050	Dug	-994	44.965260947198900	-64.075791409243000
101	0.00050	Dug	-994	44.965848813848000	-64.074944881268500
101	0.00050	Dug	-994	44.965213917867000	-64.072005548023400
101	0.00051	Dug	-994	44.965143373869100	-64.073910235966200
101	0.00051	Dug	-994	44.965378520528800	-64.069277846772000
101	0.00051	Dug	-994	44.965566637856400	-64.070406550738100
101	0.00051	Dug	-994	44.965754755184100	-64.071535254704200
101	0.00052	Dug	-994	44.965825299182000	-64.072381782678800
101	0.00052	Dug	-994	44.965895843179900	-64.073439942647000
101	0.00052	Dug	-994	44.965778269850100	-64.074192411957700
101	0.00052	Dug	-994	44.944803187813500	-64.085879200940000
101	0.00052	Dug	-994	44.946613817092500	-64.087078448903900
101	0.00053	Dug	-994	44.949702561143900	-64.086233465555800
101	0.00053	Dug	-994	44.949493436896700	-64.086248403002000
101	0.00054	Dug	-994	44.950389683670400	-64.085874966846300
101	0.00054	Dug	-994	44.950150684530800	-64.086069153647300
101	0.00054	Dug	-994	44.951002118965800	-64.086323090233200
101	0.00054	Dug	-994	44.950658557702500	-64.086263340448300
101	0.00054	Dug	-994	44.950075997299600	-64.086621839157700
101	0.00054	Dug	-994	44.949314187542000	-64.086741338727600
101	0.00055	Dug	-994	44.949209625418400	-64.086950462974800
101	0.00056	Dug	-994	44.948806314370200	-64.086816025958700

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00056	Drilled	-994	44.948104254397500	-64.087084899990800
101	0.00056	Drilled	-994	44.947506756548400	-64.087294024238000
101	0.00056	Drilled	-994	44.951091743643200	-64.086905650636100
101	0.00056	Drilled	-994	44.951853553400800	-64.085770404722700
101	0.00056	Drilled	-994	44.952092552540400	-64.085680780045400
101	0.00058	Drilled	-994	44.956021100898500	-64.084799470717900
101	0.00058	Drilled	-994	44.956080850683400	-64.085157969427400
101	0.00058	Drilled	-994	44.952929049529200	-64.084933907733900
101	0.00059	Drilled	-994	44.953257673346200	-64.084933907733900
101	0.00059	Drilled	-994	44.953556422270800	-64.085053407303800
101	0.00059	Drilled	-994	44.952690050389600	-64.084874157949000
101	0.00059	Drilled	-994	44.954497481383200	-64.084933907733900
101	0.00059	Drilled	-994	44.954990417108700	-64.084844283056600
101	0.00060	Drilled	-994	44.954706605630400	-64.085531405583100
101	0.00060	Drilled	-994	44.953825296302900	-64.085591155368000
101	0.00060	Drilled	-994	44.952361426572600	-64.085740529830300
101	0.00060	Drilled	-994	44.952510801034800	-64.085770404722700
101	0.00060	Drilled	-994	44.952675112943300	-64.085725592384000
101	0.00060	Drilled	-994	44.952884237190500	-64.085471655798200
101	0.00060	Drilled	-994	44.952451051249900	-64.086293215340700
101	0.00061	Drilled	-994	44.955707414527700	-64.085187844319800
101	0.00061	Drilled	-994	44.955378790710700	-64.085411906013200
101	0.00062	Drilled	-994	44.954900792431400	-64.085561280475500
101	0.00062	Drilled	-994	44.957634345091100	-64.083574600127200
101	0.00063	Drilled	-994	44.957380408505200	-64.083709037143200
101	0.00063	Drilled	-994	44.956648473640100	-64.084724783486700
101	0.00063	Drilled	-994	44.957738907214700	-64.084082473298900
101	0.00063	Drilled	-994	44.959143027160200	-64.084440972008400
101	0.00064	Drilled	-994	44.958784528450700	-64.084366284777300
101	0.00064	Drilled	-994	44.958545529311000	-64.084396159669700

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00064	Drilled	-994	44.957933094015700	-64.084440972008400
101	0.00065	Drilled	-994	44.959785337348000	-64.084485784347100
101	0.00065	Drilled	-994	44.959561275654600	-64.084455909454600
101	0.00066	Drilled	-994	44.959352151407400	-64.084963782626400
101	0.00066	Drilled	-994	44.959471650977200	-64.084157160530100
101	0.00066	Drilled	-994	44.959023527590300	-64.083783724374400
101	0.00067	Drilled	-994	44.958724778665800	-64.083589537573400
101	0.00067	Drilled	-994	44.960248398181100	-64.084261722653700
101	0.00068	Drilled	-994	44.960143836057500	-64.084172097976300
101	0.00068	Drilled	-994	44.960352960304700	-64.084620221363100
101	0.00070	Drilled	-994	44.961562893449100	-64.085411906013200
101	0.00070	Drilled	-994	44.961099832616100	-64.085157969427400
101	0.00070	Drilled	-994	44.961129707508500	-64.084859220502800
101	0.00070	Drilled	-994	44.961383644094400	-64.084978720072600
101	0.00072	Drilled	-994	44.962772826593600	-64.085770404722700
101	0.00072	Drilled	-994	44.962892326163500	-64.086472464695500
101	0.00073	Drilled	-994	44.962668264470000	-64.086248403002000
101	0.00073	Drilled	-994	44.961936329604900	-64.085860029400100
101	0.00073	Drilled	-994	44.962190266190700	-64.086591964265300
101	0.00074	Drilled	-994	44.961592768341600	-64.086816025958700
101	0.00074	Drilled	-994	44.964176287109700	-64.091667394146400
101	0.00075	Drilled	-994	44.964041506310200	-64.093689106139400
101	0.00075	Drilled	-994	44.963656418311500	-64.092514587743500
101	0.00075	Drilled	-994	44.964426594308800	-64.092495333343500
101	0.00076	Drilled	-994	44.963769385393700	-64.089594272608000
101	0.00076	Drilled	-994	44.963722246337200	-64.090124586992600
101	0.00077	Drilled	-994	44.964134713080800	-64.090324927982300
101	0.00077	Drilled	-994	44.964441116947400	-64.091255924346300
101	0.00079	Drilled	-994	44.964205421665400	-64.091149861469400
101	0.00079		-994	44.964158282609000	-64.090867027131000

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00079		-994	44.963816524450100	-64.091597682505200
101	0.00080		-994	44.963840093978300	-64.091385556751400
101	0.00080		-994	44.963451196762900	-64.090878811895100
101	0.00080		-994	44.964771090342300	-64.096535498663700
101	0.00081		-994	44.964099358788500	-64.096390398755700
101	0.00082		-994	44.965756591240200	-64.107107168610300
101	0.00082		-994	44.966198519894000	-64.107107168610300
101	0.00082		-994	44.965333076280300	-64.107199237079800
101	0.00083		-994	44.968058302978800	-64.106923031671200
101	0.00083		-994	44.963178674093100	-64.108285645020400
101	0.00084		-994	44.962957709766200	-64.101896093234300
101	0.00084		-994	44.963473293195600	-64.101214786559600
101	0.00085		-994	44.963602189053000	-64.101914506928200
101	0.00088		-994	44.964375564197100	-64.098268595534300
101	0.00089		-994	44.964320323115400	-64.097771425798800
101	0.00089		-994	44.964246668339800	-64.097219014981600
101	0.00090		-994	44.965001629790000	-64.097587288859700
101	0.00090		-994	44.963565361665100	-64.105026421198700
101	0.00090		-994	44.964173013564100	-64.105560418322000
101	0.00092		-994	44.961852888131700	-64.107107168610300
101	0.00094		-994	44.960361378925100	-64.106978272752900
101	0.00095		-994	44.959330212066200	-64.106425861935700
101	0.00095		-994	44.962239575703800	-64.105357867689000
101	0.00095		-994	44.961816060743900	-64.105063248586500
101	0.00096		-994	44.962607849581900	-64.102540572521000
101	0.00097		-994	44.963215501480900	-64.099944241680000
101	0.00097		-994	44.955725731483700	-64.105353264265500
101	0.00100		-994	44.956163056714000	-64.104087322809300
101	0.00100		-994	44.955748748601100	-64.103511894874700
101	0.00100		-994	44.953216865688700	-64.101279234488300

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00101		-994	44.953216865688700	-64.100864926375400
101	0.00102		-994	44.953147814336500	-64.100289498440800
101	0.00103		-994	44.952641437754100	-64.100381566910300
101	0.00105		-994	44.954528841379700	-64.103143620996500
101	0.00105		-994	44.955196337783800	-64.103488877757300
101	0.00106		-994	44.959237442500300	-64.117783933987100
101	0.00107		-994	44.960582734753800	-64.115686860768400
101	0.00108		-994	44.959751818950200	-64.115469239962700
101	0.00109		-994	44.959494630725200	-64.115390105124200
101	0.00111		-994	44.956388588316400	-64.123976235095200
101	0.00112		-994	44.958287824439000	-64.120929543815200
101	0.00112		-994	44.958742849760100	-64.120019493173100
101	0.00114		-994	44.959217658790700	-64.120929543815200
101	0.00114		-994	44.957911933956400	-64.128704541692100
101	0.00115		-994	44.958782417179300	-64.130623561524300
101	0.00118		-994	44.956625992831700	-64.129713510882200
101	0.00120		-994	44.954899864168200	-64.132532689501700
101	0.00121		-994	44.955171890175400	-64.131469315110100
101	0.00122		-994	44.954627838161100	-64.134659438284800
101	0.00123		-994	44.954850404894200	-64.133719712078300
101	0.00126		-994	44.954949323442300	-64.133175660064000
101	0.00126		-994	44.955913779285800	-64.133719712078300
101	0.00128		-994	44.962148739017700	-64.152314853509800
101	0.00129		-994	44.957898332656100	-64.153860455823100
101	0.00129		-994	44.954289235664600	-64.136604202303200
101	0.00130		-994	44.954996910159700	-64.136169947499400
101	0.00131		-994	44.954031899484500	-64.138003467782100
101	0.00132		-994	44.953710229259500	-64.138019551293400
101	0.00133		-994	44.953428767812600	-64.145144546777900
101	0.00134		-994	44.953694145748300	-64.141783092926300

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	0.00136		-994	44.953686103992600	-64.143218546305500
101	0.00139		-994	44.953259890944500	-64.141702675370000
101	0.00140		-994	44.953340308500700	-64.148968401578000
101	0.00140		-994	44.953601665558600	-64.148341144639200
101	0.00142		-994	44.952725114195300	-64.154927342496800
101	0.00145		-994	44.952885949307800	-64.153801496709200
101	0.00146		-994	44.953549394147000	-64.149981662786900
101	0.00148		-994	44.953308141478200	-64.150685316404200
101	0.00148		-994	44.952326364041600	-64.151455980907700
101	0.00150		-994	44.953468976590700	-64.155952666339100
101	0.00150		-994	44.954393778487700	-64.155711413670300
101	0.00152		-994	44.952604487860900	-64.155610891725000
101	0.00157		-994	44.952584383471900	-64.157500704297100
101	0.00159		-994	44.951961147410900	-64.158003314023700
101	0.00160		-994	44.951317806960800	-64.158144044747200
101	0.00160		-994	44.949749664613700	-64.157601226242400
31	0.00160		-994	44.972765606196100	-64.215954844573000
31	0.00160		-994	44.976071204016400	-64.211229825479500
31	0.00163		-994	44.987640708067600	-64.201603766386400
31	0.00163		-994	44.990150781093200	-64.209128342442700
31	0.00170		-994	44.990633787472600	-64.210094244089900
31	0.00173		-994	44.991554719920000	-64.210461175090400
31	0.00173		-994	44.991223210434400	-64.200983537542400
31	0.00176		-994	44.994675117878400	-64.201055645349700
31	0.00177		-994	44.995601562968100	-64.200901213538200
31	0.00180		-994	45.002353488405600	-64.192004305550200
31	0.00190		-994	45.006074540844800	-64.195818581937500
31	0.00190		-994	44.978824402388800	-64.213233640826900
31	0.00191		-994	44.954381847699600	-64.209983263994400
31	0.00195		-994	44.936122905475200	-64.194734585047200

Map #	U Well Water (mg/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
31	0.00201		-994	44.937518926642300	-64.193895480506600
31	0.00201		-994	44.938618061292100	-64.191965094963500
31	0.00224		-994	44.936475302702400	-64.190510191529000
31	0.00227		-994	44.936357336691700	-64.187035595214600
31	0.00283		-994	44.935131257968600	-64.186359316703100
31	0.00300		-994	44.933995736434600	-64.184382925133400
31	0.00304		-994	44.947254760060200	-64.176624703624600
31	0.00349		-994	44.948563539489000	-64.176759973636900
31	0.00371		-994	44.931042348797800	-64.199096017703200
31	0.00401		-994	44.928727061406800	-64.197113415185600
31	0.00463		-994	44.929638970477800	-64.199260258941400
31	0.00492		-994	44.930100803954100	-64.199772832882200
31	0.00630		-994	44.929589944055900	-64.201309757518600
31	0.00682		-994	44.934110606062700	-64.197418731899900
31	0.00870		-994	44.931955194345900	-64.198534655666800
31	0.01190		-994	45.048451895353200	-64.279522570014800

U Stream Water (mg/L): 115 Data Points

Map #	U Stream Water (mg/L)	Latitude	Longitude
2	0.00000	44.992886400743400	-64.223162710803600
2	0.00000	44.994458965381100	-64.226018157119500
2	0.00000	44.993796832902100	-64.226845822718300
2	0.00000	44.995783230339200	-64.231232450392000
2	0.00000	44.994252048981400	-64.236777809904000
2	0.00000	44.991479369225400	-64.233425764228800
2	0.00000	44.991189686265900	-64.239219423420500
2	0.00000	44.991231069545800	-64.229080519835100
2	0.00000	44.990124303255700	-64.229298031371000
2	0.00000	44.987292472818100	-64.230585227024500
2	0.00000	44.988880014124000	-64.229855816154200
2	0.00000	44.983001820639900	-64.231572077025500
2	0.00000	44.981757531508200	-64.232773459635400
2	0.00000	44.975879338024100	-64.232473113982900
2	0.00000	44.977552692373600	-64.231958235721500
2	0.00005	44.981285559768600	-64.236205981377900
2	0.00005	44.980384522811200	-64.235605290073000
2	0.00005	44.981414279333900	-64.241526390078900
2	0.00005	44.981414279333900	-64.238737466163100
2	0.00005	44.989223266298300	-64.247018424867000
2	0.00005	44.986691781513100	-64.253797655308500
2	0.00005	44.982272409769600	-64.266154733581800
2	0.00005	44.977000270905600	-64.256361319985000
2	0.00005	44.969891196577900	-64.253408814954900
2	0.00005	44.971728132041700	-64.258066854225800
2	0.00005	44.970542839377400	-64.245935035192000
2	0.00005	44.970609880817700	-64.224548815741300
103	0.00005	44.949407311512300	-64.149874575441500
103	0.00005	44.949789283672600	-64.147710066533300

Map #	U Stream Water (mg/L)	Latitude	Longitude
103	0.00005	44.947964305573500	-64.148410348827100
103	0.00005	44.952038675283100	-64.138394189957600
103	0.00005	44.951550599745000	-64.123200186248900
103	0.00005	44.954882245809600	-64.120823470584900
103	0.00005	44.966702162102600	-64.108515478753800
103	0.00005	44.954532104662700	-64.102271294967100
103	0.00005	44.962144940027300	-64.096845242840400
103	0.00005	44.961718886587400	-64.097377809640300
103	0.00005	44.961292833147400	-64.098016889800300
103	0.00005	44.960405221814100	-64.099135280080200
103	0.00005	44.957121059880900	-64.103591088973300
103	0.00005	44.957351838827600	-64.103502327840000
103	0.00005	44.957973166760900	-64.102952008813400
103	0.00005	44.958132936800900	-64.102650220960100
103	0.00005	44.958310459067500	-64.102383937560100
103	0.00005	44.957387343280900	-64.102188663066700
103	0.00005	44.957888843684200	-64.093534452567200
103	0.00005	44.944829861943200	-64.085407261296800
103	0.00005	44.944302842714100	-64.086627726880000
103	0.00005	44.946993414568100	-64.087404386796700
103	0.00005	44.947048890276500	-64.086378086192600
103	0.00005	44.952018210449600	-64.080399313911000
103	0.00005	44.951742461024500	-64.079985689773500
103	0.00005	44.947778563039800	-64.085414506578600
103	0.00005	44.954138034154400	-64.091222478843200
103	0.00005	44.951001384444800	-64.091601634302600
103	0.00005	44.950622228985400	-64.091601634302600
103	0.00005	44.949002201113400	-64.091584399963600
103	0.00005	44.947881969074200	-64.089343935885200
103	0.00005	44.947588985310100	-64.089326701546200

Map #	U Stream Water (mg/L)	Latitude	Longitude
103	0.00005	44.952724818351200	-64.092049727118300
103	0.00005	44.957338272115700	-64.085100035662600
103	0.00005	44.956041576227100	-64.086938634310600
103	0.00005	44.958267248274700	-64.079274580999000
103	0.00006	44.957047967066000	-64.079855191098400
103	0.00006	44.962254104290300	-64.078171421810200
103	0.00006	44.957705991845300	-64.075500615353200
103	0.00006	44.957376979455600	-64.074803883233900
103	0.00006	44.956157698247000	-64.072771747886200
103	0.00006	44.954977124378300	-64.075481261683200
103	0.00006	44.953390123440000	-64.075307078653400
103	0.00006	44.957783406525200	-64.066501158813100
103	0.00006	44.959873602882900	-64.067526903322000
103	0.00006	44.956912491376200	-64.065610889994100
103	0.00006	44.955112600068100	-64.065610889994100
103	0.00007	44.960144554262600	-64.055372798575400
103	0.00007	44.956970552386100	-64.056108238034500
14	0.00008	44.952280746099600	-64.139861988016800
14	0.00008	44.957296610990100	-64.109424034103500
14	0.00008	44.957644787089700	-64.103358574449700
14	0.00008	44.957644787089700	-64.102477067587400
14	0.00008	44.958319983835300	-64.102158224679800
14	0.00008	44.958882647790000	-64.101426761538700
14	0.00009	44.957475987903300	-64.099026061998800
14	0.00009	44.957194655926000	-64.096625362458900
14	0.00009	44.956406926389400	-64.094468483966000
14	0.00009	44.955056532898200	-64.091186277563800
13	0.00009	45.022766121604100	-64.175015152013600
13	0.00010	45.021998961753600	-64.174454540436200
13	0.00010	45.024931624074000	-64.180508906999000

Map #	U Stream Water (mg/L)	Latitude	Longitude
13	0.00010	45.026751698713300	-64.186677147027400
13	0.00010	45.040968967521200	-64.189900942845600
13	0.00010	45.072651091245500	-64.191154758661600
13	0.00011	45.068206373372500	-64.199592630596700
13	0.00012	45.069873298752600	-64.201919867956000
13	0.00013	45.069291566875300	-64.234473100610500
13	0.00016	45.048280100763600	-64.221044928005900
13	0.00017	45.043076348226600	-64.224394406239800
13	0.00018	45.037078258281600	-64.228602788942700
31	0.00019	45.006824028782300	-64.274413261738900
31	0.00024	45.014256112147200	-64.264431622768300
31	0.00024	44.982514680741800	-64.204512012351200
31	0.00029	44.974975789548000	-64.209861126707700
31	0.00030	44.968652327612900	-64.213979885815500
31	0.00035	44.935672594995000	-64.297730158466500
31	0.00037	44.940332799964900	-64.289098708651500
31	0.00041	44.941997908905800	-64.281684089858300
31	0.00052	44.931636050420400	-64.203396048364000
31	0.00069	44.931932732004700	-64.202202359045600
31	0.00073	44.931597253882900	-64.201084360411100
31	0.00093	44.931260830831800	-64.200055234551300
31	0.00600	44.931122157077300	-64.198230323207300
31	0.01400	44.932198129650300	-64.191942159889900
31	0.01600	44.932279354898400	-64.193232614196400
31	0.01900	44.931726097472100	-64.194820998525700
31	0.02400	44.931327362662800	-64.196723639214300

U Stream Sediment (ppm): 1309 Data Points

Map #	U Stream Sediment (ppm)	Latitude	Longitude
2	0.00	44.992886400743400	-64.223162710803600
2	0.00	44.994458965381100	-64.226018157119500
2	0.00	44.991479369225400	-64.233425764228800
2	0.00	44.991189686265900	-64.239219423420500
2	0.00	44.990124303255700	-64.229298031371000
2	0.00	44.985275866294300	-64.231185918329400
2	0.00	44.987292472818100	-64.230585227024500
2	0.00	44.988880014124000	-64.229855816154200
2	0.00	44.983001820639900	-64.231572077025500
2	0.00	44.981757531508200	-64.232773459635400
2	0.00	44.975879338024100	-64.232473113982900
2	0.00	44.977552692373600	-64.231958235721500
2	0.00	44.981285559768600	-64.236205981377900
2	0.00	44.980384522811200	-64.235605290073000
2	0.00	44.981414279333900	-64.241526390078900
2	0.00	44.981414279333900	-64.238737466163100
2	0.00	44.989223266298300	-64.247018424867000
2	0.00	44.986691781513100	-64.253797655308500
2	0.00	44.985619118468600	-64.255985887919400
2	0.00	44.982572755422100	-64.268729124888700
2	0.00	44.982272409769600	-64.266154733581800
2	0.00	44.982658568465600	-64.261392109664000
2	0.00	44.978668261939900	-64.265082070537200
2	0.00	44.977000270905600	-64.256361319985000
2	0.00	44.973018009352700	-64.254602152592000
2	0.00	44.969891196577900	-64.253408814954900
2	0.00	44.970542839377400	-64.245935035192000
2	0.00	44.970609880817700	-64.224548815741300
7	0.00	45.035346113742300	-64.179256786306400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
7	0.00	45.037836430769700	-64.177982444390000
7	0.00	45.044782335083500	-64.179442950637300
7	0.00	45.045904964409500	-64.182724158137200
7	0.00	45.048306852020300	-64.184513871584200
7	0.00	45.043118031695000	-64.190338548285800
7	0.00	45.039563284671700	-64.191202130896000
7	0.00	45.042143976793200	-64.198857487892900
7	0.00	45.049512236102500	-64.193265836936000
7	0.00	45.049711462028600	-64.194760031381600
7	0.00	45.049749262917900	-64.202572902803600
5	0.00	45.241647915954000	-64.000921266270100
5	0.00	45.240059842352600	-64.001198548962400
5	0.00	45.240185879940000	-63.999887758053300
5	0.00	45.240261502492500	-63.998476137074400
5	0.00	45.237816373296800	-63.996888063473000
5	0.00	45.238270108611400	-63.995904970291200
5	0.00	45.239505276968000	-63.995753725186300
5	0.00	45.237413053017100	-63.996056215396100
5	0.00	45.237387845499600	-63.994367311724900
5	0.00	45.236606412457600	-63.993106935850800
5	0.00	45.238950711583400	-63.991871767494200
5	0.00	45.239152371723300	-63.990107241270400
5	0.00	45.239101956688300	-63.988619997739000
5	0.00	45.238849881513500	-63.987687319592200
5	0.00	45.238270108611400	-63.986326113648200
5	0.00	45.238320523646400	-63.985267397914000
5	0.00	45.237387845499600	-63.992577577983700
5	0.00	45.238219693576500	-63.992199465221400
5	0.00	45.223700163507000	-64.001904359451900
5	0.00	45.219320357344600	-63.987189471121900

Map #	U Stream Sediment (ppm)	Latitude	Longitude
5	0.00	45.221526015124200	-63.993585878682900
5	0.00	45.221778090299000	-63.997997194242200
5	0.00	45.219572432519400	-63.991128145728500
5	0.00	45.225559217921300	-64.008615860981400
5	0.00	45.224992048778000	-64.010065293236600
5	0.00	45.224708464206300	-64.013468308096600
5	0.00	45.225055067571700	-64.014760193367500
5	0.00	45.225118086365400	-64.012333969809900
5	0.00	45.225266754561800	-64.039382717878200
5	0.00	45.230488220695000	-64.045923176500300
5	0.00	45.228351670878500	-64.043078076999700
5	0.00	45.230019487827100	-64.045083817643800
5	0.00	45.229343640436200	-64.044462474074700
5	0.00	45.228754999160200	-64.043786626683700
5	0.00	45.227981044889900	-64.042576641838700
5	0.00	45.226967273803500	-64.042325924258200
5	0.00	45.226236922590700	-64.041421160815400
5	0.00	45.225931701188300	-64.040712611131400
5	0.00	45.225693710220900	-64.054264542269400
5	0.00	45.228219742850600	-64.059912265878400
5	0.00	45.227061518282400	-64.057286956857000
5	0.00	45.226245245729500	-64.056360377202400
5	0.00	45.225748863771700	-64.055257306185100
5	0.00	45.227833667994600	-64.058985686223800
5	0.00	45.219317270321000	-64.063478675450100
5	0.00	45.217997678527800	-64.057984864719100
5	0.00	45.217836095859200	-64.056665272925800
5	0.00	45.217486000077300	-64.055614985580200
5	0.00	45.216516504066000	-64.055264889798300
5	0.00	45.215870173391700	-64.055668846469700

Map #	U Stream Sediment (ppm)	Latitude	Longitude
5	0.00	45.214927607825100	-64.054834002682100
5	0.00	45.210780319332000	-64.039968397174500
5	0.00	45.212369215572900	-64.049636426843400
5	0.00	45.210995762890100	-64.042176693644800
5	0.00	45.211453580451000	-64.044061824778000
5	0.00	45.211857537122400	-64.045462207905600
5	0.00	45.211453580451000	-64.047616643486400
5	0.00	45.212450006907200	-64.048505348163500
5	0.00	45.212692380910000	-64.047320408594000
5	0.00	45.212692380910000	-64.046243190803600
5	0.00	45.214712164267000	-64.053675993557400
5	0.00	45.214281277150900	-64.052814219325100
5	0.00	45.213769598700400	-64.051737001534700
5	0.00	45.213204059360500	-64.050417409741400
5	0.00	45.207918908791500	-64.066643927718000
5	0.00	45.214367170542100	-64.079197789966700
5	0.00	45.213962207243700	-64.078419014393000
5	0.00	45.213588394968300	-64.077484483704500
5	0.00	45.211438974384800	-64.072842981285000
5	0.00	45.209538761984900	-64.069759030013000
5	0.00	45.208978043571800	-64.068793348301500
5	0.00	45.208355023112800	-64.067765364544200
5	0.00	45.208884590502900	-64.066363568511500
5	0.00	45.208323872089800	-64.065335584754100
5	0.00	45.209289553801300	-64.065086376570500
5	0.00	45.210660198811000	-64.071285430137500
5	0.00	45.212404656096200	-64.075148156983300
5	0.05	45.213152280647000	-64.076768010176600
5	0.05	45.212747317348700	-64.075864630511100
5	0.05	45.211937390752000	-64.074182475271800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
5	0.05	45.211501276430700	-64.073746360950500
26	0.05	45.188537908732000	-64.084313341039300
26	0.05	45.188694241794400	-64.085166318109300
26	0.05	45.188949637391600	-64.086034663139500
26	0.05	45.189256112108100	-64.086673152132300
26	0.05	45.189485968145500	-64.087286101565400
26	0.05	45.187672659406000	-64.080007327047600
26	0.05	45.187238486890900	-64.078934665539700
26	0.05	45.187340645129700	-64.078347255666300
26	0.05	45.187442803368600	-64.077708766673500
26	0.05	45.187493882488000	-64.076993659001600
26	0.05	45.187749278085100	-64.075665601896600
26	0.05	45.187647119846300	-64.074976033784400
26	0.05	45.187902515443400	-64.083736102765500
26	0.05	45.187647119846300	-64.082637901697900
26	0.05	45.187621580286600	-64.082050491824500
26	0.05	45.187519422047700	-64.081488621510900
26	0.05	45.187570501167100	-64.080977830316600
26	0.05	45.187621580286600	-64.080492578682100
26	0.05	45.187110789092300	-64.071196178947100
26	0.05	45.187264026450600	-64.071911286619000
26	0.05	45.187417263808900	-64.072549775611800
26	0.05	45.187366184689400	-64.073545818440500
26	0.05	45.187544961607400	-64.074312005231900
26	0.05	45.206804072159400	-64.098961866997500
26	0.05	45.201890592327800	-64.092976355202700
26	0.05	45.203885762926100	-64.095715992442100
26	0.05	45.204272885579500	-64.096698688408500
26	0.05	45.205166245548900	-64.098157843025100
26	0.05	45.205910712190000	-64.099021424328800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
26	0.05	45.203230632281900	-64.095299091123100
26	0.05	45.202783952297200	-64.094614181813200
26	0.05	45.202337272312500	-64.093631485846900
26	0.05	45.208028956441000	-64.104633742136300
26	0.10	45.208580599873500	-64.106477834995400
26	0.10	45.208689882606800	-64.105353784023800
26	0.10	45.208799165340200	-64.107445767776500
26	0.10	45.209205072635400	-64.108195135090900
26	0.10	45.210297899968900	-64.111458005272300
26	0.10	45.210157393597500	-64.110771085234100
26	0.10	45.209891992673600	-64.110052941557800
26	0.10	45.209720262664100	-64.109475304252900
26	0.10	45.209548532654500	-64.108616654205200
26	0.10	45.189785351349500	-64.099370447175100
26	0.10	45.190078245869600	-64.098554526726000
26	0.10	45.189262325420500	-64.093910056477100
26	0.10	45.189617983052200	-64.093052293953700
26	0.10	45.189910877572400	-64.091985321058700
26	0.10	45.189701667200800	-64.090541769494900
26	0.10	45.189471535792100	-64.089621243860000
26	0.10	45.189597062015000	-64.088784402373700
26	0.10	45.189576140977900	-64.095939397081400
26	0.10	45.189387851643500	-64.094872424186400
26	0.10	45.189806272386600	-64.097487553831000
26	0.10	45.188781141565900	-64.099328605100800
26	0.10	45.187818773856700	-64.099182157840700
26	0.10	45.187776931782400	-64.098512684651700
26	0.10	45.187484037262200	-64.097006369976400
26	0.10	45.187191142742000	-64.095730186709800
26	0.10	45.189827193423800	-64.111985832580800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
26	0.10	45.189471535792100	-64.105709521433700
26	0.10	45.189785351349500	-64.104705311650100
26	0.10	45.189680746163700	-64.103742943940900
26	0.10	45.189597062015000	-64.102717813120200
26	0.10	45.189827193423800	-64.101776366448200
26	0.10	45.189931798609500	-64.100793077701800
26	0.10	45.189848114460900	-64.100018999327000
26	0.10	45.189764430312300	-64.110877017611400
26	0.10	45.189597062015000	-64.109642676419200
26	0.10	45.189199562309100	-64.108010835520900
26	0.10	45.189283246457700	-64.106776494328700
26	0.10	45.189546996848000	-64.117360252212600
26	0.10	45.187012147967200	-64.112307341529700
26	0.10	45.189244829431800	-64.116201943783600
26	0.10	45.189379126061200	-64.116537685357300
26	0.10	45.189530209769300	-64.116974149403000
26	0.10	45.190218479995300	-64.115077209512000
26	0.10	45.189782015949600	-64.115496886479000
26	0.10	45.189966673815000	-64.114137133105900
26	0.10	45.189916312579000	-64.113264205014500
26	0.10	45.187314315383500	-64.113180269621100
26	0.10	45.187633269878400	-64.114321790971400
26	0.10	45.187868288979900	-64.115412951085600
26	0.10	45.188254391789600	-64.116420175806500
26	0.10	45.185467736728600	-64.109890002199600
26	0.20	45.185014485604200	-64.109503899390000
26	0.20	45.197571220457500	-64.128036834253600
26	0.20	45.199048483381400	-64.120096546037600
26	0.20	45.199065270460100	-64.119156469631500
26	0.20	45.199484947427100	-64.122681756154400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
26	0.20	45.199484947427100	-64.121238067387900
26	0.20	45.199048483381400	-64.123722555032700
26	0.20	45.198494509784900	-64.125266966271300
26	0.20	45.198225916526000	-64.126777803352600
26	0.20	45.198209129447300	-64.132418261789300
26	0.20	45.198041258660500	-64.131226379203000
26	0.20	45.197890174952400	-64.130135219088700
26	0.20	45.197504072142700	-64.129077633131800
26	0.20	45.198561658099600	-64.128725104479500
26	0.20	45.197185117647800	-64.127751453916100
26	0.20	45.196631144051300	-64.127231054476900
26	0.20	45.196362550792400	-64.126106320205300
26	0.20	45.196396124949800	-64.125233392113900
26	0.20	45.195892512589400	-64.124729779753500
26	0.20	45.195422474386300	-64.124796928068200
26	0.20	45.195002797419300	-64.124679418517500
26	0.20	45.194683842924400	-64.124377251101200
26	0.20	45.193542321574100	-64.120465861768600
26	0.20	45.192803690112100	-64.119861526936100
26	0.20	45.192132206964900	-64.119324340418300
26	0.20	45.191309640109500	-64.118871089293900
26	0.20	45.190571008647500	-64.118283541540100
26	0.20	45.189916312579000	-64.117964587045100
26	0.20	45.194180230563900	-64.123470748852400
26	0.20	45.193911637305000	-64.122581033682400
26	0.20	45.193810914833000	-64.121573808961500
26	0.20	45.207611428291700	-64.103231261254900
26	0.20	45.207649727206700	-64.101718454111400
26	0.20	45.207151841311400	-64.100224796425300
26	0.20	45.170070325615600	-64.106377296860200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
26	0.20	45.167953205297800	-64.107815852973500
26	0.20	45.166378936343500	-64.105563019814900
26	0.20	45.168333201252300	-64.105780160360300
26	0.20	45.169283191138400	-64.106214441451100
26	0.20	45.166731789729800	-64.107137288769100
26	0.20	45.163936105207600	-64.099075946020600
26	0.20	45.162768974776000	-64.098017385861700
26	0.20	45.164831809957400	-64.102278769065500
26	0.20	45.165401803889200	-64.103445899497100
26	0.20	45.165944655252700	-64.104477317087800
26	0.20	45.163963247775800	-64.100623072406700
26	0.20	45.174141710842100	-64.117940030903500
26	0.20	45.173517431774000	-64.114710065290400
26	0.20	45.173191720955900	-64.112782942949900
26	0.20	45.172730297296900	-64.111235816563800
26	0.20	45.171888877683400	-64.109960115859500
26	0.20	45.171481739160800	-64.109118696246000
26	0.20	45.170721747251800	-64.108250134064400
26	0.20	45.170287466161000	-64.107327286746300
26	0.20	45.175281698705500	-64.119785725539500
26	0.20	45.175878835205400	-64.121061426243800
26	0.20	45.175553124387300	-64.122852835743500
26	0.20	45.176123118319000	-64.123585685084200
26	0.20	45.180547356931800	-64.135609842786600
26	0.20	45.180954495454500	-64.134361284650400
26	0.20	45.176479303978400	-64.124829964251400
26	0.20	45.176644043906600	-64.126246727633600
26	0.20	45.177220633655200	-64.127992970872200
26	0.20	45.178670345023100	-64.130249907888100
26	0.20	45.179790576534700	-64.131419561378200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
26	0.20	45.180218900347900	-64.132572740875400
26	0.20	45.180630750168300	-64.133561180444400
26	0.20	45.180844912074900	-64.137168984871300
26	0.20	45.172739707609000	-64.151373685177800
26	0.20	45.175540286387900	-64.142333581619400
26	0.20	45.176343393537700	-64.141798176852900
26	0.20	45.176734650867100	-64.140603812373600
26	0.20	45.178608567550000	-64.139121153020100
26	0.20	45.179967671957400	-64.137700271139700
26	0.20	45.173336889848600	-64.149973395788300
26	0.20	45.173995849561300	-64.146843337153100
26	0.20	45.174572439309900	-64.144063350865200
26	0.20	45.191356606522900	-64.156817824991500
26	0.20	45.189779993929100	-64.141663038630500
26	0.20	45.197502178062000	-64.149320871229100
26	0.20	45.191099200385100	-64.149159992393000
26	0.20	45.190970497316200	-64.147744258635300
26	0.20	45.190713091178500	-64.146135470274200
26	0.20	45.190520036575100	-64.144591033447600
26	0.20	45.190037400066800	-64.143625760431000
26	0.30	45.189715642394600	-64.142724838948800
26	0.30	45.191485309591800	-64.152731502554500
26	0.30	45.191646188427900	-64.151798405305100
26	0.30	45.191420958057300	-64.150672253452300
26	0.30	45.191227903454000	-64.149964386573500
26	0.30	45.191195727686800	-64.155498618535500
26	0.30	45.191324430755700	-64.153954181708900
103	0.30	44.949407311512300	-64.149874575441500
103	0.30	44.949789283672600	-64.147710066533300
103	0.30	44.947964305573500	-64.148410348827100

Map #	U Stream Sediment (ppm)	Latitude	Longitude
103	0.30	44.952038675283100	-64.138394189957600
103	0.30	44.954118301489100	-64.127465542038600
103	0.30	44.951550599745000	-64.123200186248900
103	0.30	44.954882245809600	-64.120823470584900
103	0.30	44.966702162102600	-64.108515478753800
103	0.30	44.954532104662700	-64.102271294967100
103	0.30	44.962144940027300	-64.096845242840400
103	0.30	44.961718886587400	-64.097377809640300
103	0.30	44.961292833147400	-64.098016889800300
103	0.30	44.960405221814100	-64.099135280080200
103	0.30	44.958665503600800	-64.101727105173400
103	0.30	44.957121059880900	-64.103591088973300
103	0.30	44.957351838827600	-64.103502327840000
103	0.30	44.957973166760900	-64.102952008813400
103	0.30	44.958132936800900	-64.102650220960100
103	0.30	44.958310459067500	-64.102383937560100
103	0.30	44.957387343280900	-64.102188663066700
103	0.30	44.944829861943200	-64.085407261296800
103	0.30	44.944302842714100	-64.086627726880000
103	0.30	44.946993414568100	-64.087404386796700
103	0.30	44.952879927402800	-64.080950812761100
103	0.30	44.952879927402800	-64.080657828997000
103	0.30	44.951173727835400	-64.083277448534700
103	0.30	44.952069913466800	-64.082053810461200
103	0.30	44.952673115334000	-64.081226562186100
103	0.30	44.951742461024500	-64.079985689773500
103	0.30	44.950294776543200	-64.084001290775400
103	0.30	44.947778563039800	-64.085414506578600
103	0.30	44.949002201113400	-64.091584399963600
103	0.30	44.961189652441400	-64.086687036600800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
103	0.30	44.959815541873000	-64.088680464608600
103	0.30	44.960860640051800	-64.089454611407800
103	0.30	44.957338272115700	-64.085100035662600
103	0.30	44.957241503765800	-64.087151524680300
103	0.30	44.959505883153300	-64.088467574238900
103	0.30	44.960512273992200	-64.084403303543400
103	0.30	44.956041576227100	-64.086938634310600
103	0.30	44.958267248274700	-64.079274580999000
103	0.30	44.957047967066000	-64.079855191098400
103	0.30	44.955519027137700	-64.080571276887600
103	0.30	44.962254104290300	-64.078171421810200
103	0.30	44.957705991845300	-64.075500615353200
103	0.30	44.957376979455600	-64.074803883233900
103	0.30	44.956157698247000	-64.072771747886200
103	0.30	44.955712563837500	-64.075481261683200
103	0.30	44.953390123440000	-64.075307078653400
103	0.30	44.957783406525200	-64.066501158813100
103	0.30	44.959873602882900	-64.067526903322000
103	0.30	44.956912491376200	-64.065610889994100
103	0.30	44.955112600068100	-64.065610889994100
103	0.30	44.960144554262600	-64.055372798575400
103	0.30	44.956970552386100	-64.056108238034500
14	0.30	44.952280746099600	-64.139861988016800
14	0.30	44.957296610990100	-64.109424034103500
14	0.30	44.957644787089700	-64.103358574449700
14	0.30	44.957644787089700	-64.102477067587400
14	0.30	44.958319983835300	-64.102158224679800
14	0.30	44.958882647790000	-64.101426761538700
14	0.30	44.957475987903300	-64.099026061998800
14	0.30	44.957194655926000	-64.096625362458900

Map #	U Stream Sediment (ppm)	Latitude	Longitude
14	0.30	44.956406926389400	-64.094468483966000
14	0.30	44.955056532898200	-64.091186277563800
14	0.30	44.961658456633000	-64.078207495676300
22	0.30	45.176007129022600	-64.157838842907200
22	0.30	45.175835610074200	-64.159143419557300
22	0.30	45.175967005596100	-64.160425525807500
22	0.30	45.170904138199700	-64.141317030107300
22	0.30	45.167716197712600	-64.159579374897600
22	0.30	45.150803034878400	-64.179276292907100
22	0.30	45.151002281158900	-64.178678554065800
22	0.30	45.150888426141500	-64.177596931400600
22	0.30	45.149721412213200	-64.178166206487500
22	0.30	45.146647326743500	-64.156021405604000
22	0.30	45.145309530289100	-64.154398971606000
22	0.30	45.145081820254300	-64.153545058975600
22	0.30	45.153535555295900	-64.189580171981500
38	0.30	45.106104827888500	-63.698241184771000
38	0.30	45.105575029532600	-63.700985016746300
38	0.30	45.104614154171200	-63.704455737365400
38	0.30	45.103320182899600	-63.707175995845000
38	0.30	45.105832832516100	-63.699640755045700
38	0.30	45.105329084372100	-63.702785456593500
38	0.30	45.103900993550600	-63.705835795255000
38	0.30	45.102602589338200	-63.692356537499700
38	0.30	45.099240934482900	-63.687745241309200
38	0.30	45.101714347379300	-63.691243416501200
38	0.30	45.100981019678400	-63.689702003103800
38	0.30	45.100244915906600	-63.688617670608300
38	0.30	45.105563047065100	-63.697151719929400
38	0.30	45.105072907180600	-63.696339083547700

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.30	45.104168282267200	-63.694795436052900
38	0.30	45.103453717893700	-63.693307914349000
38	0.30	45.098614851897600	-63.687361321378800
38	0.30	45.097762379212900	-63.686625182664800
38	0.30	45.096718846861600	-63.685994319027000
38	0.30	45.095863944516900	-63.685661466633100
38	0.30	45.088749351158600	-63.673723954262100
38	0.30	45.092734151185200	-63.681187707136600
38	0.30	45.090011025094000	-63.676631726585300
38	0.30	45.092078377737900	-63.680442063072800
38	0.30	45.091390489455500	-63.679741852163600
38	0.30	45.090752185469800	-63.678784428858900
38	0.40	45.090499289363500	-63.677668754786900
38	0.40	45.089556702637000	-63.676151446322500
38	0.40	45.089427363228000	-63.675267935557500
38	0.40	45.089171387761500	-63.674667886168700
38	0.40	45.077083123441200	-63.683514396692500
38	0.40	45.074375348900700	-63.695769089525200
38	0.40	45.067431006926400	-63.686737424155000
38	0.40	45.073153237678500	-63.693418174513400
38	0.40	45.073224999161700	-63.692859403827400
38	0.40	45.073122048959800	-63.691796778322600
38	0.40	45.070078997855600	-63.688498903965700
38	0.40	45.072498580215500	-63.690882267405600
38	0.40	45.071629222622000	-63.689926223110600
38	0.40	45.070842826077500	-63.688816828097700
38	0.40	45.068971481882800	-63.688485607263000
38	0.40	45.067991208428000	-63.687779178591500
38	0.40	45.071011693169100	-63.685750612069300
38	0.40	45.070339048426200	-63.686186397163500

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.40	45.069573937688100	-63.686080758770700
38	0.40	45.068739418288400	-63.686147960411300
38	0.40	45.068041281381000	-63.686274680537800
38	0.40	45.072912915639800	-63.683380425229400
38	0.40	45.072373658282300	-63.684377473235200
38	0.40	45.071739607317100	-63.685218990491000
38	0.40	45.076455964577100	-63.683133171209400
38	0.40	45.075746351626600	-63.682893131363000
38	0.40	45.074870123097500	-63.683075679334100
38	0.40	45.073953105945700	-63.683219139580200
38	0.40	45.062596785970100	-63.695683040952500
38	0.40	45.064159313695400	-63.690569567984100
38	0.40	45.067037427225800	-63.682654353978300
38	0.40	45.062892021265900	-63.694355307885000
38	0.40	45.063308659113600	-63.693299151597300
38	0.40	45.063686138871600	-63.691933792686600
38	0.40	45.064871828330500	-63.690327310811100
38	0.40	45.065155307043100	-63.688671338620400
38	0.40	45.065370280504200	-63.687033824730400
38	0.40	45.065731811148500	-63.686034796801500
38	0.40	45.066370033511800	-63.684498785131100
38	0.40	45.067502004784500	-63.684994694364500
38	0.40	45.067344866071500	-63.683835063432300
38	0.40	45.067254119616900	-63.683004258960400
38	0.40	45.067359857952300	-63.681326774386400
38	0.40	45.067681698842200	-63.680095652966100
38	0.40	45.067276444617100	-63.679261124477900
38	0.40	45.067579432011200	-63.678898089455400
38	0.40	45.067392021537300	-63.678220513852000
38	0.40	45.067612328762600	-63.675656752369000

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.40	45.068374950392000	-63.673871186139900
38	0.40	45.069115231793400	-63.673551844480000
38	0.40	45.069530541965000	-63.672688373768300
38	0.40	45.069759073628900	-63.671031537159800
38	0.40	45.069575918110800	-63.669620738395000
38	0.40	45.069703724817900	-63.668811769587000
38	0.40	45.070159454320400	-63.668045210772300
38	0.40	45.067977987508100	-63.701891715580300
38	0.40	45.067881027983800	-63.703759836813300
38	0.40	45.068574693953900	-63.705607529273000
38	0.40	45.067256979192800	-63.701008547216600
38	0.40	45.066535778997300	-63.700155548250900
38	0.40	45.065707567179800	-63.699331415066500
38	0.40	45.065287847559700	-63.698090198032800
38	0.40	45.064117058479800	-63.697382540841200
38	0.40	45.063051245758600	-63.696977663742800
38	0.40	45.070863154720700	-63.708681009338600
38	0.40	45.071415624741600	-63.709170268941100
38	0.40	45.072198785429200	-63.710355898258900
38	0.40	45.073221068405500	-63.710881162888000
38	0.40	45.074216534480000	-63.712280564063200
38	0.40	45.074981875445300	-63.712893149152900
38	0.40	45.075812058330100	-63.713385940480400
38	0.40	45.076442795037400	-63.715022138746600
38	0.40	45.076754940322000	-63.716352842676800
38	0.40	45.078055116035400	-63.716851576481300
38	0.40	45.079009485302500	-63.717979281674900
38	0.40	45.079859680782700	-63.718683527841000
38	0.40	45.080453124510400	-63.719444886427300
38	0.40	45.081130497123300	-63.720448572115900

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.40	45.079046521085900	-63.718884425520900
38	0.40	45.075342030240100	-63.696071666737800
38	0.40	45.076216302418100	-63.696353671711300
38	0.40	45.076057735618100	-63.697829312745700
38	0.40	45.076522029295500	-63.698769758790200
38	0.40	45.077482119640000	-63.698992547001300
38	0.40	45.078330956064700	-63.699937720907900
38	0.40	45.078730029290000	-63.701058359176500
38	0.40	45.079407009070300	-63.702152260910300
38	0.40	45.080104413613200	-63.703397221929600
38	0.40	45.080633310337900	-63.704248103145200
38	0.40	45.081184495375700	-63.704948488658600
38	0.40	45.077810032318100	-63.683647472289700
38	0.40	45.078640885256700	-63.684049405522300
38	0.40	45.079557012265300	-63.684482524957400
38	0.40	45.055452753052700	-63.729487917117800
38	0.40	45.053756093707600	-63.737230236304500
38	0.40	45.054639959019800	-63.732928775262500
38	0.40	45.054700513223400	-63.731834373773900
38	0.40	45.054896093343400	-63.730552865760200
38	0.40	45.053705629655900	-63.736693240361300
38	0.40	45.053751985603800	-63.735730852740300
38	0.40	45.054051756832400	-63.734903883590400
38	0.40	45.054363448359700	-63.734303644931600
38	0.40	45.054474879438300	-63.733625309901000
38	0.40	45.067255190955900	-63.733441738193400
38	0.40	45.070434869018800	-63.736940811917800
38	0.40	45.067602140702900	-63.735382787067900
38	0.40	45.067314612138500	-63.734364689577000
38	0.40	45.063992011123900	-63.725583203070200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.40	45.065173219521100	-63.729652638167100
38	0.40	45.066907536846700	-63.732289809232600
38	0.40	45.066249282733500	-63.731537667099000
38	0.40	45.065728102155000	-63.730619349723000
38	0.40	45.064906878469100	-63.728761584135400
38	0.40	45.064540208673800	-63.727605366248000
38	0.40	45.064054065403900	-63.726519621819600
38	0.40	45.063977496477300	-63.717114345855400
38	0.40	45.064057676531600	-63.717883047847100
38	0.40	45.063577436052700	-63.718548768672900
38	0.40	45.063401842276200	-63.719434211372100
38	0.40	45.063429189294800	-63.720490129666700
38	0.40	45.064188157223100	-63.721459290023800
38	0.40	45.064537737205200	-63.722639236988800
38	0.40	45.064499483835400	-63.723310497291500
38	0.40	45.064410224852200	-63.723981112878100
38	0.40	45.064302895740700	-63.724819433068100
38	0.40	45.063639291991100	-63.716822232230500
38	0.40	45.063080530556900	-63.716455396261600
38	0.40	45.055335556164500	-63.718127298485000
38	0.40	45.059503299257400	-63.717539483154400
38	0.40	45.058701507283000	-63.717739646411800
38	0.40	45.057905924607900	-63.717699397797100
38	0.40	45.057232341287800	-63.718317704932900
38	0.40	45.056496559316100	-63.718903973386800
38	0.40	45.055703473840800	-63.718785167629600
38	0.40	45.062459400795100	-63.716330435988900
38	0.40	45.061819501205200	-63.716501376396300
38	0.40	45.061157586200400	-63.716866152015300
38	0.40	45.060395599740000	-63.717351804403600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.40	45.055030649328000	-63.717462683403800
38	0.40	45.054628414794500	-63.716548851718400
38	0.40	45.054398316709800	-63.715576593324400
38	0.40	45.056442492183600	-63.723545824473000
38	0.40	45.056292256955500	-63.724871846444900
38	0.40	45.056028982282300	-63.725723476239000
38	0.40	45.055949122275000	-63.728141806588000
38	0.40	45.056523301728100	-63.723001122231600
38	0.40	45.056475416118500	-63.722418416474200
38	0.40	45.056220561321700	-63.721942251396600
38	0.40	45.055980320087300	-63.721193416228400
38	0.50	45.055713141735000	-63.720626153647600
38	0.50	45.055666161299200	-63.719897945946900
38	0.50	45.055901660798900	-63.719355185440500
38	0.50	45.048747073328700	-63.710669276891700
38	0.50	45.052541052300400	-63.712847840900000
38	0.50	45.052898783804700	-63.713103091419300
38	0.50	45.053202424640700	-63.713394775562000
38	0.50	45.053418523952000	-63.713758721754900
38	0.50	45.053662328115700	-63.714058844162500
38	0.50	45.053864981461400	-63.714391466870100
38	0.50	45.054037923622000	-63.714797994719200
38	0.50	45.049734790260700	-63.713807667469600
38	0.50	45.049499094423100	-63.712838472447000
38	0.50	45.049263213160300	-63.711897702490000
38	0.50	45.048904335188300	-63.711296447071900
38	0.50	45.051934062521500	-63.713266610954000
38	0.50	45.051264863537300	-63.713968802342700
38	0.50	45.050418805935400	-63.713958275739300
38	0.50	45.049306168413000	-63.721106125068300

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.50	45.049695600152500	-63.716848077788500
38	0.50	45.049619480477400	-63.716136637728500
38	0.50	45.049176705215200	-63.720414908224500
38	0.50	45.049406138928000	-63.719770577305800
38	0.50	45.049877018789700	-63.719129266922300
38	0.50	45.049825325292900	-63.718390565909800
38	0.50	45.049749910092300	-63.717583441671700
38	0.50	45.051263170976200	-63.701236450158100
38	0.50	45.051348979856900	-63.700384886037900
38	0.50	45.048863044244800	-63.704914192556800
38	0.50	45.048671976649000	-63.705989658905200
38	0.50	45.048770916373100	-63.707031525179900
38	0.50	45.048764469385800	-63.708072094745700
38	0.50	45.048796837025400	-63.709224641860700
38	0.50	45.049026497516600	-63.704042794501300
38	0.50	45.049282034875200	-63.703191102995300
38	0.50	45.049904328927200	-63.702678393586000
38	0.50	45.050356296501100	-63.702014920734400
38	0.50	45.050754316099500	-63.701555198400700
38	0.50	45.052808376138400	-63.705984797594400
38	0.50	45.050435803762800	-63.704078668440700
38	0.50	45.050867963717800	-63.704492812263200
38	0.50	45.051733885360500	-63.705060962720700
38	0.50	45.052231787493100	-63.705494515847200
38	0.50	45.114084293576900	-63.721675984035800
38	0.50	45.113939524315200	-63.727286643514900
38	0.50	45.113908630063900	-63.735519945996900
38	0.50	45.114031654325600	-63.723093862797200
38	0.50	45.113977432246400	-63.724758421689000
38	0.50	45.113990843464200	-63.726084619120300

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.50	45.114611807358300	-63.731427500239000
38	0.50	45.114487910716100	-63.730315745143400
38	0.50	45.114188547644800	-63.729325111994600
38	0.50	45.114151767816800	-63.728245315612500
38	0.50	45.114582858810300	-63.732537304612500
38	0.50	45.114379033618700	-63.733675705144200
38	0.50	45.114198022506700	-63.734660200548000
38	0.50	45.113854103814600	-63.743937959331900
38	0.50	45.111121911599000	-63.744365007124400
38	0.50	45.108361708597000	-63.742386535502600
38	0.50	45.112935693740700	-63.744141887711700
38	0.50	45.112038513678600	-63.744438596121300
38	0.50	45.110315481131200	-63.744138673268500
38	0.50	45.109642460241100	-63.743544052876000
38	0.50	45.108925568605200	-63.742979712533200
38	0.50	45.107906812390100	-63.741825616192500
38	0.50	45.107565081436200	-63.740649482740800
38	0.50	45.106915473161400	-63.739808562537700
38	0.50	45.106264461806900	-63.739183479250300
38	0.50	45.124078020178100	-63.756469836163400
38	0.50	45.117623250222100	-63.751881928050000
38	0.50	45.115405173829200	-63.747165329165500
38	0.50	45.114909255498000	-63.746202868690700
38	0.50	45.114412523958500	-63.745363766683700
38	0.50	45.114068821076400	-63.744495831281300
38	0.50	45.116937356050400	-63.749930035274200
38	0.50	45.116442068138300	-63.748875015638900
38	0.50	45.115880058453500	-63.748004176039100
38	0.50	45.119664610329500	-63.753574148808200
38	0.50	45.118946957585200	-63.753132934483400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.50	45.118296835098900	-63.752384217495100
38	0.50	45.123228154549600	-63.756211861414300
38	0.50	45.122294015997000	-63.755490146616200
38	0.50	45.121532296796900	-63.755109990129600
38	0.50	45.120925447196600	-63.754423469919600
38	0.50	45.120253907329500	-63.753612747658400
38	0.50	45.118606616782700	-63.771409068582500
38	0.50	45.118695776953600	-63.770330856437500
38	0.50	45.118815073905500	-63.768828989677600
38	0.50	45.118580596114800	-63.767168173104300
38	0.50	45.118096850875400	-63.766043738150200
38	0.50	45.117497210820500	-63.765920065390500
38	0.50	45.116841436227500	-63.766026939857000
38	0.50	45.116182040027700	-63.766673446605400
38	0.50	45.115193845641200	-63.767508272615700
38	0.50	45.114455158161400	-63.767768203860400
38	0.50	45.113776493892800	-63.767219443037400
38	0.50	45.113262094135300	-63.766595801146600
38	0.50	45.112612266567300	-63.765816173310300
38	0.50	45.112236124567400	-63.764924581507900
38	0.50	45.111755448129300	-63.763337782035400
38	0.50	45.108170395175100	-63.755829782220100
38	0.50	45.105690957589200	-63.754585749017500
38	0.50	45.106116025035600	-63.755166726667600
38	0.50	45.106961541810400	-63.755405001472100
38	0.50	45.107388108031600	-63.755758890367500
38	0.50	45.107891830026100	-63.755795821768300
38	0.50	45.109819382907700	-63.759410030716400
38	0.50	45.110232796316000	-63.760127215160800
38	0.50	45.110645700718800	-63.760920116758800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.50	45.111217102138900	-63.762063423864100
38	0.50	45.109322302859700	-63.758373758766800
38	0.50	45.109297371711500	-63.757283179593300
38	0.50	45.108799169121700	-63.756413485163500
38	0.50	45.097875147211800	-63.739054874147300
38	0.50	45.101531905274600	-63.749954568105800
38	0.50	45.099893379520800	-63.744314808940900
38	0.50	45.099731051722900	-63.743514310945300
38	0.50	45.099589659295800	-63.742714088923100
38	0.50	45.099072283163600	-63.741761153413700
38	0.50	45.098427718152200	-63.741043144729300
38	0.50	45.098120121292900	-63.740033815592600
38	0.50	45.101436899415700	-63.748474782356100
38	0.50	45.100982007927200	-63.747581720469400
38	0.50	45.100442378640800	-63.746835419886500
38	0.50	45.100134640414300	-63.745855592324500
38	0.50	45.100056087487300	-63.745056176175100
38	0.50	45.103380481974200	-63.752285375291700
38	0.50	45.102524628813600	-63.751860135187200
38	0.50	45.101774256857100	-63.751318007655400
38	0.50	45.105019013923400	-63.754702284364100
38	0.50	45.104606639508900	-63.753720958926400
38	0.50	45.104109518129400	-63.752886394983400
38	0.50	45.098241100584200	-63.734269386729300
38	0.50	45.098443662553900	-63.735336477529200
38	0.50	45.098392252008700	-63.736814280928900
38	0.50	45.097945426723400	-63.737902588412400
38	0.50	45.114239534677300	-63.789347815955900
38	0.50	45.103804635146600	-63.778940906569600
38	0.50	45.109525946412100	-63.787111585644600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.50	45.111411204935100	-63.786180795662500
38	0.50	45.111031415639500	-63.786423945258800
38	0.50	45.110545944218500	-63.786690476008900
38	0.60	45.109990388488500	-63.786918785244400
38	0.60	45.111849635260000	-63.786360672484500
38	0.60	45.112375819626700	-63.786566594511800
38	0.60	45.112857613088900	-63.786834003391900
38	0.60	45.113550769127900	-63.787054647410200
38	0.60	45.113958110203100	-63.787917146153500
38	0.60	45.106727606222900	-63.783465413463600
38	0.60	45.107038131610100	-63.784664829572300
38	0.60	45.107105994656500	-63.785985102324900
38	0.60	45.107618603305500	-63.786566444933300
38	0.60	45.108483017746400	-63.787137111575300
38	0.60	45.106271530624900	-63.782652058723900
38	0.60	45.106137472286100	-63.781361948946300
38	0.60	45.105242389614200	-63.780449509369800
38	0.60	45.104532552135900	-63.779772434523900
38	0.60	45.100731444433400	-63.776247129829900
38	0.60	45.101261334907900	-63.776618062830400
38	0.60	45.101706018915800	-63.776890845610500
38	0.60	45.102389143696900	-63.777457875372600
38	0.60	45.102798158278600	-63.777924192271800
38	0.60	45.103207005601700	-63.778414764575100
38	0.60	45.103495143611000	-63.778976455708900
38	0.60	45.114796662815300	-63.808534400565100
38	0.60	45.114676017018100	-63.807380544677700
38	0.60	45.114314736605700	-63.806860016862300
38	0.60	45.114323297910800	-63.805647353240000
38	0.60	45.114159049958500	-63.804583858903600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.60	45.113654959867900	-63.803000174140100
38	0.60	45.112696016190800	-63.801986207130300
38	0.60	45.112085196399700	-63.800310138715000
38	0.60	45.111535144855100	-63.799150361917800
38	0.60	45.111416733223800	-63.797663124035500
38	0.60	45.111572710139800	-63.796846706792500
38	0.60	45.111600307119600	-63.795967864062000
38	0.60	45.111669985291500	-63.795210877605100
38	0.60	45.112060384879800	-63.794640249594900
38	0.60	45.112600833744400	-63.794102013423500
38	0.60	45.113228408422600	-63.793383060523000
38	0.60	45.113577550140800	-63.792569279691400
38	0.60	45.114055062531700	-63.791817903044300
38	0.60	45.114253300244400	-63.791092974906900
38	0.60	45.114195198437600	-63.790182585963900
38	0.60	45.109972095488200	-63.816773218556600
38	0.60	45.109326380221700	-63.817006544365400
38	0.60	45.108252645421900	-63.817051858545500
38	0.60	45.107774317304200	-63.817893886068600
38	0.60	45.106847803867600	-63.818365704507600
38	0.60	45.105926068008700	-63.818170642667600
38	0.60	45.104637671986100	-63.818212866624500
38	0.60	45.103536820616900	-63.819045929642000
38	0.60	45.110316819741200	-63.815391665146300
38	0.60	45.110058706585200	-63.814580513110100
38	0.60	45.109957501296200	-63.813352332187200
38	0.60	45.110690010269900	-63.812399965322700
38	0.60	45.111266046088800	-63.811802517535300
38	0.60	45.112490551449400	-63.811245302937100
38	0.60	45.112969942235300	-63.810320343777900

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.60	45.101695640717500	-63.814939245276100
38	0.60	45.102348778610100	-63.816707377243200
38	0.60	45.102871956785200	-63.818625318069800
38	0.60	45.102858465202400	-63.820505280777300
38	0.60	45.102933022610000	-63.822083255500800
38	0.60	45.102689161950500	-63.823141130497100
38	0.60	45.103177601862100	-63.823906281343500
38	0.60	45.103212450596900	-63.825028817862800
38	0.60	45.103012607656500	-63.825935694451200
38	0.60	45.103004488118900	-63.827057608534200
38	0.60	45.102501132294000	-63.828354311178100
38	0.60	45.103052638456300	-63.829302368016300
38	0.60	45.091699919191100	-63.819223672572800
38	0.60	45.093003538156400	-63.820121587283100
38	0.60	45.096334177150500	-63.831752128461100
38	0.60	45.096090602787100	-63.829808015868600
38	0.60	45.095892360709500	-63.827531039456700
38	0.60	45.095260644099800	-63.825793614230100
38	0.60	45.095208923319900	-63.824034248461200
38	0.60	45.094984290031100	-63.822424008855000
38	0.60	45.094438609835600	-63.820657579375500
38	0.60	45.091479965269300	-63.815533187206300
38	0.60	45.088664194849500	-63.808479719444500
38	0.60	45.090804318478600	-63.813222769559900
38	0.60	45.090378934685400	-63.812276975276000
38	0.60	45.089425477760200	-63.811686425901400
38	0.60	45.091029055872700	-63.814462495929300
38	0.60	45.089198949412900	-63.810694019364100
38	0.60	45.089006512653800	-63.809833994998800
38	0.60	45.088986160999800	-63.800920654842200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.60	45.089307182129800	-63.801981318405400
38	0.60	45.089008545460800	-63.802930269338000
38	0.60	45.088926316902600	-63.804242889485400
38	0.60	45.088717258018300	-63.805424922289400
38	0.60	45.088637911413200	-63.806325410986700
38	0.60	45.088521883199800	-63.807251140554400
38	0.60	45.095798134581800	-63.772985373653400
38	0.60	45.088310863712200	-63.763642989488700
38	0.60	45.085105381444700	-63.758609565432100
38	0.60	45.081876249187000	-63.757117993203700
38	0.60	45.079774692900500	-63.754128281918200
38	0.60	45.080340216486100	-63.754844022128200
38	0.60	45.080883140325500	-63.755527282872900
38	0.60	45.081492565266400	-63.756501199051200
38	0.60	45.082211535878400	-63.758152710725700
38	0.60	45.082933908172300	-63.759289158116800
38	0.60	45.084120783746700	-63.759176090495800
38	0.60	45.085671303802200	-63.759261025479300
38	0.60	45.085869507664700	-63.760326204435700
38	0.60	45.086562389902400	-63.762460528693100
38	0.60	45.087423933534100	-63.763244777712300
38	0.60	45.089165497407500	-63.765457602305700
38	0.60	45.088848558587300	-63.765099166061400
38	0.70	45.088715807295000	-63.764485590257200
38	0.70	45.088558736915300	-63.764097093797800
38	0.70	45.090681100985000	-63.767345522145800
38	0.70	45.090183866314300	-63.766662642620100
38	0.70	45.089708787524300	-63.766076673375900
38	0.70	45.092162139238700	-63.770971992801700
38	0.70	45.091848259164800	-63.770162721023500

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.70	45.091580423056300	-63.769289672759200
38	0.70	45.091334521509800	-63.768545733431700
38	0.70	45.090974358629400	-63.767832470955800
38	0.70	45.095022228526300	-63.773039312917000
38	0.70	45.094432272509300	-63.772580505577900
38	0.70	45.093727621586000	-63.772216771161300
38	0.70	45.093205433040600	-63.771855503730000
38	0.70	45.092592446434200	-63.771428615693800
38	0.70	45.070030218044300	-63.797930376744500
38	0.70	45.081561059057500	-63.813355114537800
38	0.70	45.078516234678500	-63.812983346530000
38	0.70	45.077017262006900	-63.809497292130700
38	0.70	45.075539173985800	-63.809028399835100
38	0.70	45.074630898045200	-63.805789871711600
38	0.70	45.072993395261300	-63.803915114535600
38	0.70	45.070793316444100	-63.800778236957700
38	0.70	45.081025020328300	-63.813604150494400
38	0.70	45.080064132954900	-63.814415223603800
38	0.70	45.079430609190100	-63.813438784177400
38	0.70	45.078047462091100	-63.812007682959600
38	0.70	45.077557724749000	-63.811350521688000
38	0.70	45.077205284569200	-63.810346414341100
38	0.70	45.076236797130100	-63.809064023576300
38	0.70	45.075288185382200	-63.808146702112500
38	0.70	45.075072334584100	-63.806890842115300
38	0.70	45.073833709187000	-63.805668194795700
38	0.70	45.073017659273400	-63.805069986679000
38	0.70	45.072051119054300	-63.803502369979700
38	0.70	45.071608502029200	-63.802528860747200
38	0.70	45.071110144412400	-63.801491158012000

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.70	45.070626234661200	-63.799993815693200
38	0.70	45.070485280569100	-63.799262418949900
38	0.70	45.070097474045600	-63.798480017101800
38	0.70	45.060026522022800	-63.774639085591600
38	0.70	45.060517120549800	-63.775110195696800
38	0.70	45.061227161343700	-63.775584280943000
38	0.70	45.062945023033400	-63.777117149333700
38	0.70	45.066305154360100	-63.783201593191500
38	0.70	45.067927569374100	-63.786630414071700
38	0.70	45.068601154845000	-63.792369110543400
38	0.70	45.061613915809000	-63.776197545742400
38	0.70	45.062422990279000	-63.776563320917600
38	0.70	45.063372849718200	-63.778076155314700
38	0.70	45.063856065571100	-63.779292377359800
38	0.70	45.064592698132200	-63.780221744708500
38	0.70	45.065151701088700	-63.782051955216600
38	0.70	45.067132919201400	-63.784837169815500
38	0.70	45.067901333278300	-63.787783351425300
38	0.70	45.068019373790600	-63.788897947359600
38	0.70	45.068252477725500	-63.789901222063800
38	0.70	45.068391568408200	-63.791274202250600
38	0.70	45.068750938790700	-63.793843873785900
38	0.70	45.068685601662300	-63.795020477714100
38	0.70	45.068551114246000	-63.796276769963800
38	0.70	45.068750428086700	-63.797198962874700
38	0.70	45.069597548383800	-63.797017173153000
38	0.70	45.081673344546000	-63.814093397066300
38	0.70	45.082492453594000	-63.814637457175100
38	0.70	45.083526721435300	-63.813861569923700
38	0.70	45.084956410941100	-63.813736657788600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
38	0.70	45.086144016748900	-63.813898736222300
38	0.70	45.086662167573200	-63.814971025251500
39	0.70	45.047542705620900	-63.846106814134900
39	0.70	45.050855068459500	-63.849436782070600
39	0.70	45.055019867506600	-63.851448238292600
39	0.70	45.056876340302000	-63.856610627631700
39	0.70	45.056455700195700	-63.855756381200800
39	0.70	45.056116298140100	-63.854613266035000
39	0.70	45.055997623445000	-63.853562706824900
39	0.70	45.055609922310900	-63.852530469002400
39	0.70	45.054199742129600	-63.850746708259000
39	0.70	45.053317938951500	-63.850220419083600
39	0.70	45.051993652432000	-63.849642967581000
39	0.70	45.041840086126700	-63.843156846291600
39	0.70	45.044723477008100	-63.844649374908500
39	0.70	45.045558359354700	-63.845107874757100
39	0.70	45.046534911818500	-63.845657719535100
39	0.70	45.042738069580300	-63.843638537749000
39	0.70	45.043745599903600	-63.844278025196200
39	0.70	45.048189016013300	-63.846552249134400
39	0.70	45.048910869517100	-63.847321504194500
39	0.70	45.049601419456400	-63.848045691663300
39	0.70	45.050228539785300	-63.848791270957400
39	0.70	45.057676694009900	-63.857448246684100
39	0.70	45.058369356355800	-63.857882596667300
39	0.70	45.057921203953700	-63.845870177722100
39	0.70	45.057582262334500	-63.853162292363400
39	0.70	45.058291400383400	-63.849267607913300
39	0.70	45.058188491495400	-63.848217252966500
39	0.70	45.058070420251500	-63.847077415814400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.70	45.057777037764200	-63.852495726886000
39	0.70	45.058114141743600	-63.851831270266200
39	0.70	45.058309907230100	-63.851030815140200
39	0.70	45.058443072732400	-63.850140164122800
39	0.70	45.054554227483900	-63.836482065737900
39	0.70	45.056480790635200	-63.840666304883100
39	0.80	45.057085805649900	-63.841735139278200
39	0.80	45.057431967910600	-63.843051240308400
39	0.80	45.057856363638900	-63.844480085893800
39	0.80	45.056073039873300	-63.839656166797100
39	0.80	45.055705636190000	-63.838535059900000
39	0.80	45.055220019544200	-63.837356455963500
39	0.80	45.053779401262600	-63.834295169403300
39	0.80	45.053173908259000	-63.833282252680200
39	0.80	45.061276422127400	-63.863025453783800
39	0.80	45.062560525600300	-63.870967403322900
39	0.80	45.059027048739200	-63.859811598657900
39	0.80	45.058403485058500	-63.858602786659200
39	0.80	45.058794866536300	-63.859138644695100
39	0.80	45.059120848531400	-63.860482482343200
39	0.80	45.059672049845300	-63.860797597403300
39	0.80	45.060103167775200	-63.861306183668800
39	0.80	45.060676239074900	-63.861342684042500
39	0.80	45.060868239663400	-63.862098752556700
39	0.80	45.061161605321500	-63.862521600111000
39	0.80	45.061148530822400	-63.864250948948700
39	0.80	45.061236809340800	-63.865647075873600
39	0.80	45.061425394505500	-63.866849451088900
39	0.80	45.062148558903200	-63.867948338741200
39	0.80	45.062374957626700	-63.869374485592400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.80	45.062001769044900	-63.861223107066800
39	0.80	45.062267166085800	-63.860111234344400
39	0.80	45.063765319189900	-63.858069309908500
39	0.80	45.063889376277900	-63.857345837940600
39	0.80	45.063737090419200	-63.856562441324100
39	0.80	45.063504680514300	-63.855917338602500
39	0.80	45.063292453068100	-63.855216748197000
39	0.80	45.063001147838900	-63.854514984888800
39	0.80	45.063092107229100	-63.852926220153400
39	0.80	45.063354926660400	-63.852149013300500
39	0.80	45.063558851614300	-63.851315131012300
39	0.80	45.063803138164300	-63.850370252546400
39	0.80	45.066425459036600	-63.837966420412100
39	0.80	45.065521124676400	-63.839961864870200
39	0.80	45.064440896224800	-63.841675689567300
39	0.80	45.064158996545300	-63.842368986730400
39	0.80	45.063836938057600	-63.843145378421400
39	0.80	45.063494693645000	-63.843977258484000
39	0.80	45.063249634252900	-63.845033735398000
39	0.80	45.062476344892900	-63.871635642034700
39	0.80	45.063088314418800	-63.869162123249800
39	0.80	45.065235079233700	-63.865037871464300
39	0.80	45.062776487299800	-63.871165959436300
39	0.80	45.062998405323700	-63.870583497314400
39	0.80	45.063024337402200	-63.869774883525700
39	0.80	45.064388521068700	-63.867173208629800
39	0.80	45.064889926194900	-63.866232267402500
39	0.80	45.067023739426300	-63.858564441163700
39	0.80	45.066626714375600	-63.861404150509900
39	0.80	45.066243747851700	-63.862374841458200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.80	45.065801889994500	-63.863288836648600
39	0.80	45.065301986427400	-63.864034555679300
39	0.80	45.066850054784600	-63.860626342405700
39	0.80	45.067056771392500	-63.859429797490100
39	0.80	45.066705479497400	-63.856188295866400
39	0.80	45.067361652838500	-63.850395117453900
39	0.80	45.066791450814400	-63.855268924250100
39	0.80	45.066977299864900	-63.854211544123300
39	0.80	45.067105501104300	-63.852930109226000
39	0.80	45.067253872418500	-63.851593170404600
39	0.80	45.071190944939900	-63.855360698822600
39	0.80	45.073795738908000	-63.837350420164000
39	0.80	45.071844413202500	-63.833834286893200
39	0.80	45.071707867121700	-63.845670188751800
39	0.80	45.072446274726900	-63.842054161670500
39	0.80	45.071575893357500	-63.850132073070900
39	0.80	45.071267304449000	-63.854396013101900
39	0.80	45.071312679307300	-63.853615522411200
39	0.80	45.071477900088800	-63.852669419596600
39	0.80	45.071684103092500	-63.851528627116100
39	0.80	45.071471397206900	-63.848233399230300
39	0.80	45.071520455069400	-63.846950774852300
39	0.80	45.071911937105800	-63.844808326173100
39	0.80	45.072202073770800	-63.842999149852800
39	0.80	45.072811123978400	-63.840831939841500
39	0.80	45.073559526382200	-63.838527222643900
39	0.80	45.062321748915600	-63.872538842094600
39	0.80	45.061635268034700	-63.873443674969100
39	0.80	45.060887676006600	-63.874260386867000
39	0.80	45.061160974646900	-63.874874730797800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.90	45.061965003379100	-63.874756239719900
39	0.90	45.062669696082200	-63.875507937282800
39	0.90	45.063219286575900	-63.876344455404700
39	0.90	45.063675209541700	-63.877310315404100
39	0.90	45.064252320030200	-63.878583152260700
39	0.90	45.064706880925600	-63.879723374196900
39	0.90	45.065505204620500	-63.880345844234200
39	0.90	45.066155817652200	-63.880094303273300
39	0.90	45.069761364039100	-63.881195815289000
39	0.90	45.069115793277800	-63.880793583041300
39	0.90	45.068377228208100	-63.880433521973800
39	0.90	45.067607776251100	-63.880072996336100
39	0.90	45.066742979777800	-63.880059725392400
39	0.90	45.070408279017900	-63.881423712537000
39	0.90	45.071054856919700	-63.881695201559100
39	0.90	45.071732992822700	-63.881879997789200
39	0.90	45.072380579428200	-63.882020735854500
39	0.90	45.060043553503400	-63.874884538848100
39	0.90	45.059162972997600	-63.875131307797400
39	0.90	45.058773310722700	-63.875018223424200
39	0.90	45.058153872944100	-63.875161830625000
39	0.90	45.057956750091500	-63.876111590448300
39	0.90	45.057848270774000	-63.876994780965000
39	0.90	45.058817652416900	-63.880979522512100
39	0.90	45.058416698798300	-63.884608449009200
39	0.90	45.056252807842100	-63.886057758894400
39	0.90	45.055102433425900	-63.887953084215700
39	0.90	45.054630134251500	-63.889834936994700
39	0.90	45.057903564307600	-63.878621833464400
39	0.90	45.058625703554200	-63.879493837723400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.90	45.058084458552500	-63.881542220243000
39	0.90	45.057868703805500	-63.883141196278600
39	0.90	45.057853152851100	-63.885149799325900
39	0.90	45.057022700222200	-63.885136986254200
39	0.90	45.056611683892600	-63.885680673169200
39	0.90	45.055871412196700	-63.887151910936900
39	0.90	45.053111072167400	-63.875846294921000
39	0.90	45.053821423762100	-63.876048443254700
39	0.90	45.054547255038500	-63.876442140444900
39	0.90	45.055271799524600	-63.877003224077000
39	0.90	45.056009429321200	-63.878066716647100
39	0.90	45.056862896286800	-63.877290604672900
39	0.90	45.057459383730300	-63.876869262905500
39	0.90	45.053061592602300	-63.873454260288000
39	0.90	45.050738279248000	-63.869162590002900
39	0.90	45.051137204268100	-63.870196848156700
39	0.90	45.051605735977600	-63.870993055733300
39	0.90	45.052443833648700	-63.872225317021800
39	0.90	45.047380871396800	-63.867103264511600
39	0.90	45.045065871799000	-63.866159729333700
39	0.90	45.045826361538300	-63.866458123849800
39	0.90	45.046687631769700	-63.866877599178600
39	0.90	45.048140994979700	-63.867449499990500
39	0.90	45.048951234935300	-63.867892146982100
39	0.90	45.049878655224500	-63.868527871553100
39	0.90	45.054091076474300	-63.891443708390800
39	0.90	45.050398939382300	-63.902931208857600
39	0.90	45.057152959037800	-63.906213648318000
39	0.90	45.062068360037200	-63.910887764713200
39	0.90	45.052533655626400	-63.897547108616500

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	0.90	45.052127329483200	-63.898699009768200
39	0.90	45.051877523573500	-63.900152253004400
39	0.90	45.051126326276800	-63.901373430554600
39	0.90	45.050536069692200	-63.902335573123800
39	0.90	45.052782842250200	-63.896168554906100
39	0.90	45.053002896083700	-63.895125808232300
39	0.90	45.053543639505600	-63.893714410245500
39	0.90	45.053843114780500	-63.892672876037700
39	0.90	45.055828902935900	-63.906192733985900
39	0.90	45.055223097368200	-63.905772148749600
39	0.90	45.054057631155700	-63.905791113974600
39	1.00	45.053269417030800	-63.904994029217000
39	1.00	45.052452349128300	-63.904495418588900
39	1.00	45.051210397236400	-63.904139578721200
39	1.00	45.059972191415400	-63.908051860374300
39	1.00	45.060675584460600	-63.909520374456500
39	1.00	45.061519406930700	-63.909982185236600
39	1.00	45.057687027328300	-63.905661583394900
39	1.00	45.062979925868500	-63.911156825609100
39	1.00	45.063111963280600	-63.9111797554633000
39	1.00	45.063715507388400	-63.911787796572900
39	1.00	45.064067883094700	-63.912315923762200
39	1.00	45.064559091489400	-63.912633384579100
39	1.00	45.065494230758500	-63.912319259452100
39	1.00	45.066260016059200	-63.912602390727100
39	1.00	45.066716732124000	-63.912087108834800
39	1.00	45.067276043922100	-63.912463727856900
39	1.00	45.069923663397200	-63.915815522112800
39	1.00	45.069530630023600	-63.915228606040400
39	1.00	45.069027421538100	-63.914698004189400

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.00	45.068492599863800	-63.914689473501700
39	1.00	45.067963975462800	-63.913906877583500
39	1.00	45.067460450931500	-63.913415004893600
39	1.00	45.067427389146300	-63.910685574629300
39	1.00	45.068530283127100	-63.932919405019400
39	1.00	45.064340946594600	-63.944462990331400
39	1.00	45.061926730808200	-63.952927565342800
39	1.00	45.064120508782300	-63.946821764021700
39	1.00	45.063536064537200	-63.948654772125000
39	1.00	45.062982317901100	-63.950818981618500
39	1.00	45.068340855464500	-63.934464284177000
39	1.00	45.067523024465600	-63.936199240259300
39	1.00	45.066677118120500	-63.937272185362300
39	1.00	45.065586744355000	-63.939569580534400
39	1.00	45.065073657826400	-63.940884143009600
39	1.00	45.064688626200700	-63.942909513827100
39	1.00	45.061118095675700	-63.953528324248400
39	1.00	45.060314586618100	-63.953514967477400
39	1.00	45.059445300062400	-63.953358785251100
39	1.00	45.058509053892000	-63.953201495364700
39	1.00	45.039643520735000	-63.934286630462500
39	1.00	45.040041058307900	-63.933343393346000
39	1.00	45.040367312314900	-63.932448970217100
39	1.00	45.041147657835100	-63.928012931429400
39	1.00	45.040908550235600	-63.926909387976100
39	1.00	45.040776544069000	-63.925707610642900
39	1.00	45.040786261076100	-63.924508121415700
39	1.00	45.040939721576700	-63.923061017003900
39	1.00	45.040950621083500	-63.921711586738400
39	1.00	45.040850367471900	-63.920960197397600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.00	45.041319066445300	-63.919968003133300
39	1.00	45.041045251088600	-63.918763963351800
39	1.00	45.039681179021800	-63.907645619622400
39	1.00	45.037536895498300	-63.900964055695200
39	1.00	45.036430153078000	-63.897497966791100
39	1.00	45.037653746022700	-63.895117934794200
39	1.00	45.040648404193800	-63.911512206366900
39	1.00	45.040613958213300	-63.910257677855800
39	1.00	45.040180972456300	-63.908808743974000
39	1.00	45.039514956801200	-63.905914097483900
39	1.00	45.039081418839800	-63.904527912948200
39	1.00	45.038454541906900	-63.902292302037900
39	1.00	45.040976746946800	-63.917693318371000
39	1.00	45.041097681508900	-63.916472609495100
39	1.00	45.041137744049000	-63.914247411607600
39	1.00	45.040859872449000	-63.912863600294600
39	1.00	45.039323656940500	-63.890675545472200
39	1.00	45.038607613240000	-63.888438696405200
39	1.00	45.037792163469600	-63.887548332643200
39	1.00	45.035881661470800	-63.887424756312800
39	1.10	45.035036432341100	-63.887505731270300
39	1.10	45.034207505137500	-63.885486771401700
39	1.10	45.033588401201600	-63.885069729334800
39	1.10	45.032305255636500	-63.884297670475100
39	1.10	45.028533821854600	-63.880509783349100
39	1.10	45.028139350344900	-63.879782852381800
39	1.10	45.027766856587100	-63.879087610380600
39	1.10	45.027619728744400	-63.877988372720500
39	1.10	45.014659873323300	-63.883994709283500
39	1.10	45.015902159891200	-63.881428599600700

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.10	45.021274212254000	-63.880139948457800
39	1.10	45.022742864031300	-63.877028474423600
39	1.10	45.023581066333000	-63.876414468425800
39	1.10	45.024723339740700	-63.876000961744600
39	1.10	45.025942941027600	-63.876372156066600
39	1.10	45.026770617180700	-63.877129158083500
39	1.10	45.017028201156100	-63.882092077848700
39	1.10	45.019455223176600	-63.881473438968400
39	1.10	45.020018174981900	-63.881278518362700
39	1.10	45.020519236540200	-63.880788612475700
39	1.10	45.020907148113500	-63.880410054180000
39	1.10	45.017621835816500	-63.882078575980100
39	1.10	45.018248597286700	-63.881929880738800
39	1.10	45.019003150288700	-63.881850995726300
39	1.10	45.012350715867200	-63.881831678153900
39	1.10	45.013610836622400	-63.882905045206200
39	1.10	45.014002754007000	-63.883565295929400
39	1.10	45.012764778221100	-63.882295982795600
39	1.10	45.017943718319500	-63.929513851138400
39	1.10	45.017274045013500	-63.930230964856000
39	1.10	45.017059288669200	-63.932445990313800
39	1.10	45.017364139566100	-63.934253481425500
39	1.20	45.017772690421500	-63.935404055233900
39	1.20	45.015891474187000	-63.948857488942300
39	1.20	45.016991921425900	-63.940660280560600
39	1.20	45.017003617932200	-63.939239245077700
39	1.20	45.016792625085200	-63.937987893532700
39	1.20	45.016972674238000	-63.937020239695000
39	1.20	45.017372827229500	-63.936194823282600
39	1.20	45.016733232216800	-63.942215920836600

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.20	45.016692331899600	-63.944191091504400
39	1.20	45.016185467158200	-63.946019930998300
39	1.20	45.016565290345100	-63.947655384437400
39	1.20	45.015313959183600	-63.950303799220000
39	1.20	45.014319380426900	-63.951639184374200
39	1.20	45.012846490879200	-63.960176195830600
39	1.20	45.012877862029200	-63.962291076656600
39	1.20	45.012965588290500	-63.961088647826800
39	1.20	45.012528622166500	-63.959371055675300
39	1.20	45.012458348274300	-63.957659601312100
39	1.20	45.013194033917400	-63.954032497718200
39	1.20	45.013171470910900	-63.953355957071000
39	1.20	45.013176615356700	-63.952739538076700
39	1.20	45.013349850714200	-63.952265115508200
39	1.20	45.013661311877200	-63.952131065755600
39	1.20	45.013875366927000	-63.951836300795900
39	1.20	45.013849643507800	-63.951537562596800
39	1.20	45.013509150419000	-63.953460996832800
39	1.20	45.013528400029100	-63.952844808142400
39	1.20	45.013686867905000	-63.952449687878700
39	1.20	45.013716546824600	-63.950580761998200
39	1.20	45.013532313336900	-63.948986725129300
39	1.30	45.012467797100600	-63.948074228732500
39	1.30	45.012562653092800	-63.946842798343900
39	1.30	45.012581207857600	-63.946306154263300
39	1.30	45.013059995108300	-63.944703176777100
39	1.30	45.013249932068300	-63.943910809196500
39	1.30	45.013064784724000	-63.942416227693100
39	1.30	45.012973925158700	-63.941460153395200
39	1.30	45.012483049896800	-63.941114031398200

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.30	45.011843081179900	-63.940029663632300
39	1.30	45.011181964045400	-63.939800096079600
39	1.30	45.010727630536000	-63.938440390873900
39	1.30	45.010708076582700	-63.937386093241500
39	1.30	45.010747539536800	-63.936014575650000
39	1.30	45.009674996631600	-63.934346565119800
39	1.30	45.008183156125200	-63.933924599140500
39	1.30	45.007095633849200	-63.934085892056000
39	1.30	45.006887101754900	-63.935434686779600
39	1.30	45.006635750538500	-63.936842428680400
39	1.30	45.005969079610300	-63.937288910335500
39	1.40	45.008426511828600	-63.933491070992700
39	1.40	45.007896221152100	-63.932786467727800
39	1.40	45.007848567435100	-63.931711883011800
39	1.40	45.007122745022000	-63.930765514010200
39	1.40	45.005984964312900	-63.930170429551700
39	1.40	45.005595699247400	-63.929468167953000
39	1.40	45.004949472517700	-63.929139566859300
39	1.40	45.004591642388200	-63.928040147488000
39	1.40	45.004319236567400	-63.926842698681300
39	1.40	45.004185930992300	-63.925886110972400
39	1.40	45.011891012669800	-63.968166529913200
39	1.40	45.012349933555700	-63.966030200728100
39	1.40	45.012787825322200	-63.963769190301600
39	1.50	45.009857165572200	-63.968877990591200
39	1.50	45.008901079842200	-63.969856158524800
39	1.50	45.008267368608100	-63.971802946046900
39	1.50	45.007609466713200	-63.973997847227000
39	1.50	45.006540493725400	-63.975284679403000
39	1.50	45.005820391091400	-63.974433573881800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
39	1.50	45.004772620320500	-63.973235177363700
39	1.50	45.004146736571000	-63.971671132855200
39	1.50	45.003631550380800	-63.970046853643400
39	1.60	45.002462200189700	-63.970182458705200
39	1.60	45.001923774514900	-63.971291808721400
39	1.60	45.001159133944000	-63.973080791976400
39	1.60	45.000222400979000	-63.974369740376700
40	1.60	44.994704907403000	-64.001708129123100
40	1.70	44.995201448538500	-64.000893801661000
40	1.70	44.963026734362000	-64.004062701514700
40	1.70	44.963121236700600	-64.002879665864600
40	1.70	44.962542754097600	-64.008082144602700
40	1.70	44.963066117373500	-64.005958881442100
40	1.70	44.964837381055500	-64.002198737652500
40	1.70	44.965572082002100	-64.001540181788600
40	1.70	44.966145510646800	-64.000088973574600
40	1.80	44.962771382054700	-64.001215022235500
40	1.80	44.963033350849500	-64.000113875616200
40	1.80	44.955406078817900	-64.000297244652900
40	1.80	44.948567477289700	-64.000060010411300
40	1.80	44.948308624859700	-64.000805622102600
40	1.90	44.947852163499300	-64.001705706356600
40	1.90	44.947153803995300	-64.001417209435600
40	1.90	44.946542651465000	-64.000774932709300
40	1.90	44.945679904465200	-64.000049345589400
40	1.90	44.929698371248300	-64.005462320150300
40	2.00	44.930372147595500	-64.004047888034900
40	2.00	44.930805520963900	-64.002767898216300
40	2.00	44.931100276887300	-64.001247778851900
40	2.00	44.931253284921800	-63.999844035519800

Map #	U Stream Sediment (ppm)	Latitude	Longitude
13	2.00	45.022766121604100	-64.175015152013600
13	2.00	45.021998961753600	-64.174454540436200
13	2.00	45.026751698713300	-64.186677147027400
13	2.00	45.040968967521200	-64.189900942845600
13	2.00	45.065752502660500	-64.190003395137300
13	2.00	45.066347551143800	-64.190728940861600
13	2.00	45.072651091245500	-64.191154758661600
13	2.00	45.068206373372500	-64.199592630596700
13	2.00	45.069873298752600	-64.201919867956000
13	2.00	45.069291566875300	-64.234473100610500
13	2.10	45.048280100763600	-64.221044928005900
13	2.10	45.043076348226600	-64.224394406239800
13	2.10	45.040640167545100	-64.225864857939000
13	2.20	45.040763540881900	-64.226559503573300
13	2.20	45.040012911651300	-64.226405063082000
13	2.30	45.037078258281600	-64.228602788942700
13	2.30	45.037007397370500	-64.229108713676800
13	2.30	45.032574558062600	-64.236763227470100
13	2.30	45.031825768337700	-64.242466829184000
13	2.40	45.031045025434400	-64.245079129854600
13	2.40	45.029982510126800	-64.246532102362000
31	2.40	45.003401024849900	-64.308269210715600
31	2.40	45.001516193463100	-64.304903193499700
31	2.50	44.999954346013600	-64.300407888252500
31	3.00	45.000236579154500	-64.302862829178900
31	3.00	44.998488244005400	-64.287432748660100
31	3.00	44.998878014858600	-64.291376564146700
31	3.00	45.000607441266500	-64.297536847830100
31	3.00	45.003454984371000	-64.276087619400900
31	3.00	45.006824028782300	-64.274413261738900

Map #	U Stream Sediment (ppm)	Latitude	Longitude
31	3.00	45.008621866250900	-64.274540595407500
31	3.00	45.014256112147200	-64.264431622768300
31	3.00	45.017895329324800	-64.260750287697200
31	4.00	45.047829720508200	-64.279856863341200
31	4.00	45.048050376397300	-64.278736461958900
31	4.00	44.982514680741800	-64.204512012351200
31	4.00	44.974975789548000	-64.209861126707700
31	4.00	44.968652327612900	-64.213979885815500
31	4.40	44.935672594995000	-64.297730158466500
31	5.00	44.941997908905800	-64.281684089858300
31	5.00	44.931636050420400	-64.203396048364000
31	5.00	44.931932732004700	-64.202202359045600
31	5.00	44.931597253882900	-64.201084360411100
31	6.00	44.931260830831800	-64.200055234551300
31	6.00	44.931122157077300	-64.198230323207300
31	10.00	44.931816560847000	-64.189178978605400
31	10.00	44.932198129650300	-64.191942159889900
31	16.00	44.932279354898400	-64.193232614196400
31	21.00	44.931726097472100	-64.194820998525700
31	32.00	44.931327362662800	-64.196723639214300

U Soil (ppm): 49 Data Points

Map #	U Soil (ppm)	Latitude	Longitude
32	0	45.150872983531000	-64.175810153919900
32	0	45.151073799500100	-64.175987301836800
32	0	45.150562530280500	-64.179305867417700
32	0	45.150704587403700	-64.179040322429400
32	0	45.150821011426200	-64.178804078287000
32	0	45.150958722162300	-64.178550373542300
32	0	45.150751231536400	-64.179429081688900
32	0	45.150880318667600	-64.179193099302300
32	0	45.151001025359700	-64.178950976917000
32	0	45.150964394647700	-64.179636327339600
32	0	45.151063628785500	-64.179429559507000
32	0	45.151166898534600	-64.179240772664200
32	0	45.151309078688400	-64.178963294929000
32	0	45.151110827541300	-64.179764637615400
32	0	45.151214344295500	-64.179551991668300
32	0	45.151343924487700	-64.179268288428100
32	0	45.151344325531100	-64.179638199634800
32	0	45.151464909955900	-64.179408006100000
32	0	45.150876749299400	-64.174872096109200
32	0	45.150920146542800	-64.172406305490900
32	0	45.150831983695900	-64.171613459469600
32	0	45.150712594337900	-64.170930551494300
32	0	45.150988228368200	-64.173981276564200
32	0	45.150914808546400	-64.173511950079200
32	0	45.150852919645100	-64.175432988673300
32	0	45.154554135754100	-64.179549596211800
32	0	45.154459801372900	-64.179780465825500
32	0	45.154365245790900	-64.179987494517800
32	0	45.154279794559300	-64.180207771699400

Map #	U Soil (ppm)	Latitude	Longitude
32	1	45.154166421391400	-64.180447063515400
32	1	45.154057465045600	-64.180706037366700
32	1	45.153958017887400	-64.180939084353800
32	1	45.153835133388900	-64.181204299131400
32	1	45.153435773502700	-64.180947888542200
32	1	45.153568234607600	-64.180650220155900
32	1	45.153902820554900	-64.180467743110400
32	1	45.154002266758200	-64.180234695506700
32	1	45.154036292556900	-64.180072133281000
32	1	45.154075342736700	-64.179870491014100
32	1	45.154114257664100	-64.179681906870900
32	1	45.154195020606400	-64.179468063419000
32	2	45.154187871313500	-64.179265467226600
32	2	45.153328242418600	-64.180175067816000
32	2	45.153446369769800	-64.179922816015900
32	2	45.153574140939500	-64.179631578966400
32	2	45.153659186441100	-64.179450478508200
32	2	45.153753808468000	-64.179236922277800
32	2	45.152998852313700	-64.179854806093700
32	4	45.153112021888700	-64.179635105183600

Ra Well Water (>0.30 Bq/L): 5 Data Points

Map #	Ra Well Water (>0.30 Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	True	Drilled	-994	44.956315881484200	-64.027079842801800
101	True	Drilled	-994	44.957592218347600	-64.027740017041600
101	True	Drilled	-994	44.962389484489600	-64.047919342969200
101	True	Drilled	-994	44.964854134984600	-64.069991168384000
101	True	Drilled	-994	44.965426285992400	-64.078639450924400

Ra Stream Water (Bq/L): 183 Data Points

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
2	0.000	44.992886400743400	-64.223162710803600
2	0.000	44.994458965381100	-64.226018157119500
2	0.000	44.993796832902100	-64.226845822718300
2	0.000	44.995783230339200	-64.231232450392000
2	0.007	44.994252048981400	-64.236777809904000
2	0.007	44.991479369225400	-64.233425764228800
2	0.007	44.991189686265900	-64.239219423420500
2	0.007	44.992058735144600	-64.230446168073100
2	0.007	44.991231069545800	-64.229080519835100
2	0.007	44.990124303255700	-64.229298031371000
2	0.015	44.985275866294300	-64.231185918329400
2	0.015	44.987292472818100	-64.230585227024500
2	0.022	44.988880014124000	-64.229855816154200
2	0.022	44.983001820639900	-64.231572077025500
2	0.022	44.981757531508200	-64.232773459635400
2	0.022	44.975879338024100	-64.232473113982900
2	0.022	44.977552692373600	-64.231958235721500
2	0.022	44.981285559768600	-64.236205981377900
2	0.030	44.980384522811200	-64.235605290073000
2	0.030	44.981414279333900	-64.241526390078900
2	0.030	44.981414279333900	-64.238737466163100
2	0.030	44.989223266298300	-64.247018424867000
2	0.030	44.986691781513100	-64.253797655308500
2	0.030	44.985619118468600	-64.255985887919400
2	0.030	44.982572755422100	-64.268729124888700
2	0.030	44.982272409769600	-64.266154733581800
2	0.030	44.982658568465600	-64.261392109664000
2	0.030	44.978668261939900	-64.265082070537200
2	0.037	44.977000270905600	-64.256361319985000

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
2	0.037	44.973018009352700	-64.254602152592000
2	0.037	44.969891196577900	-64.253408814954900
2	0.037	44.971728132041700	-64.258066854225800
2	0.037	44.970609880817700	-64.224548815741300
7	0.037	45.035346113742300	-64.179256786306400
7	0.037	45.044782335083500	-64.179442950637300
7	0.037	45.045904964409500	-64.182724158137200
7	0.037	45.048306852020300	-64.184513871584200
7	0.037	45.043118031695000	-64.190338548285800
7	0.037	45.039563284671700	-64.191202130896000
7	0.037	45.042143976793200	-64.198857487892900
7	0.044	45.049512236102500	-64.193265836936000
7	0.044	45.049711462028600	-64.194760031381600
7	0.044	45.049749262917900	-64.202572902803600
103	0.044	44.949407311512300	-64.149874575441500
103	0.044	44.949789283672600	-64.147710066533300
103	0.044	44.947964305573500	-64.148410348827100
103	0.044	44.952038675283100	-64.138394189957600
103	0.052	44.954118301489100	-64.127465542038600
103	0.052	44.951550599745000	-64.123200186248900
103	0.052	44.954882245809600	-64.120823470584900
103	0.052	44.966702162102600	-64.108515478753800
103	0.052	44.954532104662700	-64.102271294967100
103	0.052	44.962144940027300	-64.096845242840400
103	0.052	44.961718886587400	-64.097377809640300
103	0.052	44.961292833147400	-64.098016889800300
103	0.052	44.960405221814100	-64.099135280080200
103	0.052	44.958665503600800	-64.101727105173400
103	0.059	44.957121059880900	-64.103591088973300
103	0.059	44.957351838827600	-64.103502327840000

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
103	0.059	44.957973166760900	-64.102952008813400
103	0.059	44.958132936800900	-64.102650220960100
103	0.059	44.958310459067500	-64.102383937560100
103	0.059	44.957387343280900	-64.102188663066700
103	0.059	44.959530924650800	-64.096130715717100
103	0.059	44.957888843684200	-64.093534452567200
103	0.059	44.944829861943200	-64.085407261296800
103	0.067	44.944302842714100	-64.086627726880000
103	0.067	44.946993414568100	-64.087404386796700
103	0.067	44.947048890276500	-64.086378086192600
103	0.067	44.952879927402800	-64.080950812761100
103	0.067	44.952879927402800	-64.080657828997000
103	0.067	44.951173727835400	-64.083277448534700
103	0.067	44.952069913466800	-64.082053810461200
103	0.067	44.952673115334000	-64.081226562186100
103	0.067	44.952018210449600	-64.080399313911000
103	0.067	44.951742461024500	-64.079985689773500
103	0.074	44.950294776543200	-64.084001290775400
103	0.074	44.949071138469600	-64.084587258303600
103	0.074	44.947778563039800	-64.085414506578600
103	0.074	44.954138034154400	-64.091222478843200
103	0.074	44.951001384444800	-64.091601634302600
103	0.074	44.950622228985400	-64.091601634302600
103	0.074	44.949002201113400	-64.091584399963600
103	0.074	44.947881969074200	-64.089343935885200
103	0.074	44.947588985310100	-64.089326701546200
103	0.081	44.952724818351200	-64.092049727118300
103	0.081	44.961189652441400	-64.086687036600800
103	0.081	44.960338090962400	-64.089028830668300
103	0.081	44.959815541873000	-64.088680464608600

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
103	0.081	44.960860640051800	-64.089454611407800
103	0.081	44.957338272115700	-64.085100035662600
103	0.081	44.957241503765800	-64.087151524680300
103	0.081	44.959505883153300	-64.088467574238900
103	0.081	44.960512273992200	-64.084403303543400
103	0.081	44.956041576227100	-64.086938634310600
103	0.081	44.958267248274700	-64.079274580999000
103	0.089	44.957047967066000	-64.079855191098400
103	0.089	44.955519027137700	-64.080571276887600
103	0.089	44.962254104290300	-64.078171421810200
103	0.089	44.957705991845300	-64.075500615353200
103	0.089	44.957376979455600	-64.074803883233900
103	0.089	44.956157698247000	-64.072771747886200
103	0.089	44.955712563837500	-64.075481261683200
103	0.089	44.954977124378300	-64.075481261683200
103	0.096	44.953390123440000	-64.075307078653400
103	0.096	44.957783406525200	-64.066501158813100
103	0.096	44.959873602882900	-64.067526903322000
103	0.096	44.956912491376200	-64.065610889994100
103	0.096	44.955112600068100	-64.065610889994100
103	0.104	44.960144554262600	-64.055372798575400
103	0.104	44.956970552386100	-64.056108238034500
14	0.104	44.952280746099600	-64.139861988016800
14	0.104	44.957296610990100	-64.109424034103500
14	0.104	44.957644787089700	-64.103358574449700
14	0.111	44.957644787089700	-64.102477067587400
14	0.111	44.958319983835300	-64.102158224679800
14	0.111	44.958882647790000	-64.101426761538700
14	0.111	44.957475987903300	-64.099026061998800
14	0.111	44.957194655926000	-64.096625362458900

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
14	0.111	44.956406926389400	-64.094468483966000
14	0.111	44.955056532898200	-64.091186277563800
14	0.111	44.961658456633000	-64.078207495676300
22	0.111	45.176007129022600	-64.157838842907200
22	0.111	45.175835610074200	-64.159143419557300
22	0.119	45.175967005596100	-64.160425525807500
22	0.119	45.170904138199700	-64.141317030107300
22	0.119	45.167716197712600	-64.159579374897600
22	0.126	45.150803034878400	-64.179276292907100
22	0.126	45.151002281158900	-64.178678554065800
22	0.126	45.150888426141500	-64.177596931400600
22	0.126	45.149721412213200	-64.178166206487500
22	0.126	45.146647326743500	-64.156021405604000
22	0.133	45.145309530289100	-64.154398971606000
22	0.133	45.145081820254300	-64.153545058975600
22	0.133	45.153535555295900	-64.189580171981500
13	0.141	45.022766121604100	-64.175015152013600
13	0.141	45.021998961753600	-64.174454540436200
13	0.141	45.024931624074000	-64.180508906999000
13	0.141	45.026751698713300	-64.186677147027400
13	0.141	45.040968967521200	-64.189900942845600
13	0.141	45.069873298752600	-64.201919867956000
13	0.141	45.048280100763600	-64.221044928005900
13	0.148	45.043076348226600	-64.224394406239800
13	0.156	45.040640167545100	-64.225864857939000
13	0.156	45.040763540881900	-64.226559503573300
13	0.156	45.040012911651300	-64.226405063082000
13	0.163	45.037078258281600	-64.228602788942700
13	0.170	45.037007397370500	-64.229108713676800
13	0.170	45.032574558062600	-64.236763227470100

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
13	0.170	45.031825768337700	-64.242466829184000
13	0.170	45.031045025434400	-64.245079129854600
13	0.178	45.029982510126800	-64.246532102362000
31	0.178	45.003401024849900	-64.308269210715600
31	0.193	45.001516193463100	-64.304903193499700
31	0.193	44.999954346013600	-64.300407888252500
31	0.193	45.000236579154500	-64.302862829178900
31	0.207	44.998488244005400	-64.287432748660100
31	0.215	44.998878014858600	-64.291376564146700
31	0.215	44.999828872469700	-64.295070734057200
31	0.222	45.000607441266500	-64.297536847830100
31	0.222	45.003454984371000	-64.276087619400900
31	0.237	45.006824028782300	-64.274413261738900
31	0.237	45.008621866250900	-64.274540595407500
31	0.237	45.014256112147200	-64.264431622768300
31	0.252	45.017895329324800	-64.260750287697200
31	0.274	45.047829720508200	-64.279856863341200
31	0.281	45.048050376397300	-64.278736461958900
31	0.289	44.982514680741800	-64.204512012351200
31	0.304	44.974975789548000	-64.209861126707700
31	0.311	44.968652327612900	-64.213979885815500
31	0.311	44.935672594995000	-64.297730158466500
31	0.319	44.940332799964900	-64.289098708651500
31	0.333	44.941997908905800	-64.281684089858300
31	0.333	44.931636050420400	-64.203396048364000
31	0.333	44.931932732004700	-64.202202359045600
31	0.356	44.931597253882900	-64.201084360411100
31	0.437	44.931260830831800	-64.200055234551300
31	0.444	44.931122157077300	-64.198230323207300
31	0.444	44.931816560847000	-64.189178978605400

Map #	Ra Stream Water (Bq/L)	Latitude	Longitude
31	0.489	44.932198129650300	-64.191942159889900
31	0.652	44.932279354898400	-64.193232614196400
31	0.837	44.931726097472100	-64.194820998525700
31	1.259	44.931327362662800	-64.196723639214300

Ra Soil (Bq/L): 47 Data Points

Map #	Ra Soil (Bq/L)	Latitude	Longitude
32	0.011	45.150872983531000	-64.175810153919900
32	0.011	45.151073799500100	-64.175987301836800
32	0.015	45.150562530280500	-64.179305867417700
32	0.019	45.150704587403700	-64.179040322429400
32	0.022	45.150821011426200	-64.178804078287000
32	0.022	45.150958722162300	-64.178550373542300
32	0.022	45.150751231536400	-64.179429081688900
32	0.022	45.150880318667600	-64.179193099302300
32	0.026	45.151001025359700	-64.178950976917000
32	0.026	45.150964394647700	-64.179636327339600
32	0.026	45.151063628785500	-64.179429559507000
32	0.026	45.151166898534600	-64.179240772664200
32	0.026	45.151309078688400	-64.178963294929000
32	0.030	45.151110827541300	-64.179764637615400
32	0.030	45.151214344295500	-64.179551991668300
32	0.033	45.151343924487700	-64.179268288428100
32	0.037	45.151344325531100	-64.179638199634800
32	0.037	45.151464909955900	-64.179408006100000
32	0.037	45.150876749299400	-64.174872096109200
32	0.041	45.150920146542800	-64.172406305490900
32	0.041	45.150831983695900	-64.171613459469600
32	0.041	45.150712594337900	-64.170930551494300
32	0.041	45.150988228368200	-64.173981276564200
32	0.044	45.150914808546400	-64.173511950079200
32	0.048	45.150852919645100	-64.175432988673300
32	0.048	45.154554135754100	-64.179549596211800
32	0.052	45.154459801372900	-64.179780465825500
32	0.052	45.154365245790900	-64.179987494517800
32	0.052	45.154279794559300	-64.180207771699400

Map #	Ra Soil (Bq/L)	Latitude	Longitude
32	0.056	45.154057465045600	-64.180706037366700
32	0.056	45.153958017887400	-64.180939084353800
32	0.056	45.153835133388900	-64.181204299131400
32	0.056	45.153435773502700	-64.180947888542200
32	0.056	45.153902820554900	-64.180467743110400
32	0.056	45.154002266758200	-64.180234695506700
32	0.059	45.154036292556900	-64.180072133281000
32	0.059	45.154075342736700	-64.179870491014100
32	0.063	45.154114257664100	-64.179681906870900
32	0.067	45.154195020606400	-64.179468063419000
32	0.070	45.154187871313500	-64.179265467226600
32	0.070	45.153328242418600	-64.180175067816000
32	0.070	45.153446369769800	-64.179922816015900
32	0.070	45.153574140939500	-64.179631578966400
32	0.074	45.153659186441100	-64.179450478508200
32	0.081	45.153753808468000	-64.179236922277800
32	0.085	45.152998852313700	-64.179854806093700
32	0.089	45.153112021888700	-64.179635105183600

Rn Well Water (Bq/L): 1184 Data Points

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
20	0.00		-994	45.231906594967100	-64.004418987945800
20	0.00		-994	45.235591111083300	-64.001398514678900
20	0.00		-994	45.237549570327000	-63.999809576047200
20	0.00		-994	45.237919090939000	-63.997777212681100
20	0.00		-994	45.234039124512800	-64.002876597127000
20	0.00		-994	45.234925973981700	-64.002137555902900
20	0.00		-994	45.233558747717200	-64.003948206901800
20	0.00		-994	45.232450185881100	-64.003948206901800
20	0.00		-994	45.232265425575100	-64.006682659430800
20	0.00		-994	45.230713439004600	-64.006387042941200
20	0.03		-994	45.231119911677800	-64.007680365083200
20	0.15		-994	45.230048301903000	-64.006830467675600
20	0.22		-994	45.230306966331400	-64.005204576982700
20	0.22		-994	45.230196110147800	-64.004465535758700
20	0.22		-994	45.229678781291000	-64.004761152248300
20	0.22		-994	45.229420116862600	-64.005278481105100
20	0.22		-994	45.228791931822100	-64.003393925983800
20	0.30		-994	45.228422411210100	-64.002470124453800
20	0.30		-994	45.229457068923800	-64.002322316208900
20	0.37		-994	45.230233062209000	-64.001028994066900
20	0.37		-994	45.228089842659300	-64.001324610556500
20	0.37		-994	45.227905082353300	-64.000733377577300
20	0.37		-994	45.227646417924900	-64.000179096659200
20	0.41		-994	45.227018232884400	-64.000437761087600
20	0.41		-994	45.224641833086400	-64.004210693957300
20	0.41		-994	45.225482811031000	-64.005331997883400
20	0.44		-994	45.224947643248100	-64.004618440839500
20	0.48		-994	45.225253453409800	-64.005077156082000
20	0.52		-994	45.226349273155800	-64.007982352617900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
20	0.52		-994	45.226935409299000	-64.006606206890400
20	0.52		-994	45.227164766920200	-64.007319763934300
20	0.52		-994	45.225967010453700	-64.011244327675700
20	0.52		-994	45.225635716111900	-64.012059821440200
20	0.56		-994	45.224552638455900	-64.011333522306200
20	0.59		-994	45.224839335482500	-64.012671441763600
20	0.59		-994	45.224488928005600	-64.015112348392500
20	0.63		-994	45.223194809482900	-64.011130445245700
20	0.67		-994	45.223941416322900	-64.010184743248400
20	0.67		-994	45.224240059058900	-64.009139493672300
20	0.67		-994	45.223095261904200	-64.009487910197700
20	0.67		-994	45.221801143381500	-64.008243565464300
20	0.67		-994	45.221850917170800	-64.009587457776400
20	0.67		-994	45.223450744207400	-64.031656555249200
20	0.70		-994	45.222375351452900	-64.036297723979100
20	0.74		-994	45.227412717513400	-64.048127044278500
20	0.74		-994	45.224186539249900	-64.042636881268700
20	0.74		-994	45.223224345732800	-64.052994611483000
20	0.74		-994	45.224865734673800	-64.052372015677700
20	0.74		-994	45.223733742300700	-64.050957025211300
20	0.81		-994	45.224752535436500	-64.053334209194900
20	0.81		-994	45.221186759461100	-64.067880311189800
20	0.81		-994	45.222941347639500	-64.060239362671100
20	0.89		-994	45.222373245659500	-64.063875811128600
20	0.89		-994	45.223141192572500	-64.063071295314900
20	0.89		-994	45.222190401156400	-64.062595899606900
20	0.89		-994	45.221824712150200	-64.065265429352100
20	0.89		-994	45.221422454243300	-64.066837892078800
20	0.89		-994	45.225774153417200	-64.061645108190700
20	0.89		-994	45.224274828491700	-64.056927720010700

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
20	0.89		-994	45.223909139485500	-64.057805373625600
20	0.96		-994	45.224421104094200	-64.055135843880300
20	0.96		-994	45.223982277286800	-64.056050066395800
20	0.96		-994	45.222885210268200	-64.054733585973400
20	0.96		-994	45.222994916970000	-64.053819363457900
20	0.96		-994	45.216814772765100	-64.073968827699800
20	0.96		-994	45.217436444075700	-64.075139032519700
20	0.96		-994	45.215498292342800	-64.077954837867500
20	1.00		-994	45.219849991516600	-64.070677626644000
20	1.04		-994	45.218314097690600	-64.069288008420400
20	1.04		-994	45.212755624796300	-64.082123692538200
20	1.11		-994	45.212316797988800	-64.081611727929500
11	1.11		-994	45.122924699679500	-63.676431227893200
11	1.11		-994	45.112165485855400	-63.679487099275200
11	1.11		-994	45.111210526048500	-63.679041451365400
11	1.11		-994	45.115980387555100	-63.682012232925800
11	1.11		-994	45.116035622322000	-63.684276858368200
11	1.11		-994	45.119404943102200	-63.687701413915300
11	1.11		-994	45.118963064967100	-63.688971813553800
11	1.19		-994	45.120454403673000	-63.689634630756400
11	1.19		-994	45.117692665328600	-63.685381553706000
11	1.19		-994	45.116698439524600	-63.684553032202700
11	1.19		-994	45.106921885785400	-63.670633870946800
11	1.19		-994	45.099851835623700	-63.670412931879300
11	1.19		-994	45.098912844586600	-63.672290913953500
11	1.19		-994	45.100404183292500	-63.672511853021000
11	1.19		-994	45.103552565005200	-63.672788026855500
11	1.22		-994	45.102724043501900	-63.672622322554800
11	1.26		-994	45.104933434177400	-63.674168896027700
11	1.26		-994	45.107363763920500	-63.675604999966800

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	1.26		-994	45.120178229838600	-63.701068227502300
11	1.26		-994	45.124541776422800	-63.693059186303500
11	1.30		-994	45.124320837355200	-63.694274351175100
11	1.33		-994	45.122884733416100	-63.695489516046600
11	1.33		-994	45.121614333777700	-63.696704680918100
11	1.33		-994	45.119957290771000	-63.717417718501300
11	1.33		-994	45.119184004034600	-63.718356709538400
11	1.33		-994	45.124486541655900	-63.716920605599300
11	1.33		-994	45.118742125899500	-63.725095351098800
11	1.33		-994	45.113218649210700	-63.735921365408900
11	1.33		-994	45.112555832008000	-63.736363243544000
11	1.37		-994	45.115428039886200	-63.736142304476500
11	1.37		-994	45.106203833815800	-63.734706200537400
11	1.41		-994	45.111009258535100	-63.733767209500300
11	1.41		-994	45.110125502264900	-63.734098618101600
11	1.41		-994	45.108247520190700	-63.740837259662000
11	1.41		-994	45.109352215528500	-63.741223903030200
11	1.44		-994	45.107750407288700	-63.748514892259500
11	1.48		-994	45.105485781846300	-63.752767969309900
11	1.48		-994	45.106203833815800	-63.753983134181400
11	1.48		-994	45.107916111589400	-63.754756420917900
11	1.48		-994	45.108799867859600	-63.753375551745700
11	1.48		-994	45.104878199410500	-63.755640177188100
11	1.48		-994	45.106093364282100	-63.756137290090100
11	1.48		-994	45.104822964643600	-63.760003723772300
11	1.52		-994	45.097808149248800	-63.765582435228000
11	1.52		-994	45.097918618782600	-63.769283164609500
11	1.52		-994	45.102613573968100	-63.764422505123400
11	1.56		-994	45.103994443140300	-63.763814922687600
11	1.56		-994	45.102116461066100	-63.766024313363100

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	1.56		-994	45.094494063235500	-63.776518919071900
11	1.56		-994	45.094825471836800	-63.778396901146100
11	1.56		-994	45.096758688677900	-63.778949248815000
11	1.56		-994	45.095874932407700	-63.778894014048100
11	1.59		-994	45.095874932407700	-63.777292205808400
11	1.63		-994	45.093996950333500	-63.779722535551500
11	1.63		-994	45.091621855357300	-63.782870917264100
11	1.63		-994	45.089578168982400	-63.778396901146100
11	1.63		-994	45.091069507688400	-63.777513144875900
11	1.63		-994	45.091834573686200	-63.778603547949100
11	1.63		-994	45.091097393723500	-63.778445580814200
11	1.67		-994	45.090465525183900	-63.779472367190900
11	1.70		-994	45.090096935202600	-63.783316234139600
11	1.70		-994	45.091097393723500	-63.784474659795300
11	1.70		-994	45.090439197328100	-63.781762890646600
11	1.70		-994	45.089623033797900	-63.782263119907100
11	1.70		-994	45.088280313151500	-63.784579971218600
11	1.70		-994	45.088727886700300	-63.783579512697700
11	1.70		-994	45.087569461044600	-63.776392008060900
11	1.74		-994	45.086016117551600	-63.788160559609100
11	1.74		-994	45.086253068253900	-63.790661705911300
11	1.78		-994	45.092327398237200	-63.808467152522800
11	1.78		-994	45.071830670567300	-63.705068238714900
11	1.78		-994	45.072481146252700	-63.703984112572600
11	1.78		-994	45.073023209323900	-63.702141098130600
11	1.78		-994	45.070529719196500	-63.713795454160600
11	1.78		-994	45.068307260604800	-63.712548709096900
11	1.78		-994	45.066789484005500	-63.712711328018300
11	1.78		-994	45.065922183091700	-63.712223471254200
11	1.78		-994	45.066518452469900	-63.710434663119400

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	1.78		-994	45.064512819106600	-63.708049585606300
11	1.78		-994	45.064350200185300	-63.705827127014500
11	1.78		-994	45.060230520844500	-63.710651488347900
11	1.81		-994	45.060555758687200	-63.709567362205500
11	1.85		-994	45.061910916365100	-63.726533936332900
11	1.85		-994	45.063049248814500	-63.720571242550100
11	1.85		-994	45.062933875857300	-63.717644101965800
11	1.85		-994	45.062533445219000	-63.718273591162700
11	1.93		-994	45.062267686670500	-63.718945053336600
11	1.93		-994	45.062316619990500	-63.719803601091900
11	1.93		-994	45.062009481675900	-63.720854467868300
11	1.93		-994	45.061156905578500	-63.731872374358500
11	1.93		-994	45.059746875878900	-63.734233354320600
11	1.93		-994	45.055536947896200	-63.739951553654600
11	1.93		-994	45.053899111359600	-63.754487352917500
11	1.93		-994	45.053284922658300	-63.751092254263300
11	1.96		-994	45.054148768784300	-63.759376237346000
11	2.00		-994	45.054301038855800	-63.760670532953600
11	2.00		-994	45.046814427007700	-63.764959473300500
11	2.00		-994	45.045932529510300	-63.773746725342600
11	2.00		-994	45.046122867099700	-63.770701323912800
11	2.00		-994	45.054688058620800	-63.764927750368900
11	2.00		-994	45.055385963115100	-63.764102954148400
11	2.00		-994	45.050817860970500	-63.766196667631300
11	2.00		-994	45.052277115822300	-63.765562209000100
11	2.04		-994	45.053165357906000	-63.766196667631300
11	2.07		-994	45.052118501164500	-63.766260113494500
11	2.07		-994	45.048660701624500	-63.768575887498300
11	2.07		-994	45.050310294065600	-63.767148355578100
11	2.11		-994	45.047804182472400	-63.769559298376700

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
11	2.11		-994	45.045583577263200	-63.775999053483300
11	2.15		-994	45.044060876548300	-63.775364594852100
11	2.15		-994	45.058272749887100	-63.765879438315700
11	2.15		-994	45.060747138548700	-63.766767680399400
11	2.15		-994	45.064173215157200	-63.768131766456500
11	2.19		-994	45.065029734309300	-63.767306970235900
11	2.22		-994	45.074324553256300	-63.773492941890100
11	2.22		-994	45.074387999119400	-63.774539798631500
11	2.22		-994	45.074546613777200	-63.772224024627700
11	2.22		-994	45.069883342837900	-63.770035142350100
11	2.22		-994	45.070486078537500	-63.770415817528800
11	2.22		-994	45.071469489415900	-63.771018553228400
11	2.22		-994	45.067631014697200	-63.769242069061100
11	2.22		-994	45.066140036913900	-63.768512441635200
11	2.26		-994	45.070582238673800	-63.790919736074100
11	2.30		-994	45.042019208499900	-63.789463703082600
11	2.30		-994	45.045272048161800	-63.790702880096600
11	2.30		-994	45.041690052105600	-63.814324691927000
11	2.30		-994	45.043916698302700	-63.827975001222400
11	2.30		-994	45.044497562528000	-63.829814404602700
11	2.37		-994	45.044691183936500	-63.833009157842000
21	2.37		-994	45.201306794689200	-64.093078653457300
21	2.37		-994	45.203057443551800	-64.088702031300600
21	2.44		-994	45.203620152114800	-64.088326892258700
21	2.44		-994	45.204745569240800	-64.088889600821700
21	2.44		-994	45.207996774271400	-64.085013164054400
21	2.44		-994	45.208747052355400	-64.086076058006700
21	2.44		-994	45.210810317086400	-64.083575131060100
21	2.52		-994	45.211873211038700	-64.083012422497100
21	2.52		-994	45.211247979302100	-64.082324667586700

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
21	2.52		-994	45.203615239365400	-64.119872413504000
21	2.52		-994	45.204086263274500	-64.121874265117700
21	2.52		-994	45.202790947524500	-64.120932217299500
21	2.52		-994	45.202016040867900	-64.127642386841400
21	2.52		-994	45.202732747593300	-64.125799426690300
21	2.56		-994	45.203108165401900	-64.124843817723100
21	2.56		-994	45.203449454318700	-64.126243102282200
21	2.59		-994	45.203176423185200	-64.127096324574400
21	2.59		-994	45.201196947467500	-64.129826635909200
21	2.59		-994	45.201947783084600	-64.130236182609500
21	2.59		-994	45.201367591925900	-64.131191791576700
21	2.59		-994	45.202146690531400	-64.105446875439000
21	2.59		-994	45.201546768607200	-64.111579410663800
21	2.59		-994	45.201680084590400	-64.098581102306900
21	2.63		-994	45.200346924758900	-64.095514834694500
21	2.67		-994	45.201146820657800	-64.108446485059900
21	2.67		-994	45.201346794632500	-64.110379566815500
21	2.67		-994	45.202679954464000	-64.110646198781800
21	2.67		-994	45.203679824337600	-64.109379696941900
21	2.67		-994	45.200946846683100	-64.106980009245200
21	2.67		-994	45.200946846683100	-64.105913481380000
21	2.70		-994	45.202413322497700	-64.102580581801300
21	2.70		-994	45.202546638480900	-64.101647369919300
21	2.74		-994	45.202080032539800	-64.104447005565400
21	2.74		-994	45.199321016607300	-64.094702488400600
21	2.74		-994	45.201384087843700	-64.095024843281300
21	2.81		-994	45.200320316737400	-64.097184620981800
21	2.81		-994	45.200803849058500	-64.097926037207400
21	2.81		-994	45.200449258689700	-64.096378733780100
21	2.81		-994	45.201513029795900	-64.096249791827800

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
21	2.81		-994	45.201577500772100	-64.097087914517600
21	2.81		-994	45.201964326628900	-64.098087214647700
21	2.81		-994	45.200900555522700	-64.100279227836300
21	2.85		-994	45.202028797605000	-64.099731224539200
21	2.85		-994	45.202899155782900	-64.100601582717000
21	2.89		-994	45.190180814428800	-64.139153147680500
21	2.89		-994	45.194981207562300	-64.136685655882900
21	2.89		-994	45.196596293102500	-64.133904119674800
21	2.96		-994	45.195519569409000	-64.134891116393800
21	2.96		-994	45.195519569409000	-64.136371611472300
21	2.96		-994	45.192513715764700	-64.137493198653000
21	2.96		-994	45.194487709202800	-64.137134290755200
21	2.96		-994	45.195743886845200	-64.154866584082200
21	2.96		-994	45.186574525660000	-64.172703338670200
21	2.96		-994	45.190525173883800	-64.165643383974000
21	3.00		-994	45.180648553324300	-64.166082344887700
21	3.00		-994	45.181380154847200	-64.165533643745500
21	3.04		-994	45.180694278419500	-64.160492833775400
21	3.04		-994	45.179770385757300	-64.162065654180000
21	3.04		-994	45.168966800792200	-64.155952226506900
21	3.11		-994	45.169641004594900	-64.155717720836400
21	3.11		-994	45.170461774441600	-64.155776347254000
21	3.11		-994	45.172630951893700	-64.158824920970400
21	3.11		-994	45.171575676376500	-64.157417886947500
21	3.11		-994	45.171282544288300	-64.156421237847800
21	3.11		-994	45.172777517937700	-64.161873494686900
21	3.11		-994	45.172601638684900	-64.160525087081500
21	3.11		-994	45.170901472573800	-64.157359260529800
21	3.11		-994	45.170813532947300	-64.156655743518400
21	3.11		-994	45.170051389518200	-64.156567803891900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
21	3.15		-994	45.169171993253900	-64.156597117100700
21	3.19		-994	45.167530453560400	-64.156743683144800
21	3.19		-994	45.168292596989500	-64.156685056727200
21	3.19		-994	45.179607495591000	-64.148521328073000
21	3.19		-994	45.183711344824600	-64.143684648619000
21	3.19		-994	45.181952552295900	-64.145406799636700
21	3.22		-994	45.181109797542600	-64.146432761945100
21	3.26		-994	45.182428891939100	-64.144197629773200
21	3.26		-994	45.182355608917100	-64.144893818482500
21	3.26		-994	45.181769344740900	-64.144380837328300
21	3.26		-994	45.176492967154700	-64.150206837579700
21	3.26		-994	45.177812061551200	-64.150060271535600
21	3.26		-994	45.175760136934400	-64.150426686645800
21	3.33		-994	45.174954023692000	-64.150426686645800
21	3.37		-994	45.173744853828600	-64.152478611262600
21	3.37		-994	45.179057872925700	-64.149327441315300
21	3.37		-994	45.180010552212100	-64.149657214914500
21	3.37		-994	45.180780023943400	-64.148484686562000
21	3.41		-994	45.181512854163700	-64.147312158209500
21	3.41		-994	45.181842627762900	-64.147019026121400
21	3.41		-994	45.182428891939100	-64.147715214830700
21	3.41		-994	45.183051797626400	-64.145663290213800
21	3.44		-994	45.183747986335700	-64.145846497768900
21	3.48		-994	45.183967835401800	-64.146725894033300
21	3.48		-994	45.186202967573700	-64.141779290046200
21	3.52		-994	45.187485420459200	-64.140973176803900
21	3.56		-994	45.185506778864400	-64.147055667632400
21	3.56		-994	45.185799910952500	-64.143061742931800
21	3.63		-994	45.178471608749500	-64.150903026289000
21	3.63		-994	45.178105193639300	-64.151452648954200

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
21	3.67		-994	45.177335721908000	-64.151159516866100
21	3.70		-994	45.176602891687700	-64.151342724421100
21	3.70		-994	45.176602891687700	-64.152551894284600
21	3.70		-994	45.180376967322300	-64.153504573571000
21	3.70		-994	45.177848703062200	-64.153064875438900
21	3.70		-994	45.178398325727500	-64.153797705659200
21	3.70		-994	45.178215118172400	-64.152478611262600
21	3.74		-994	45.172169268854900	-64.152148837663500
21	3.74		-994	45.171583004678700	-64.153321366016000
21	3.78		-994	45.171729570722700	-64.152735101839700
21	3.81		-994	45.171802853744800	-64.152112196152500
21	3.85		-994	45.171509721656600	-64.151745781042300
21	3.85		-994	45.172169268854900	-64.151086233844000
21	3.85		-994	45.171583004678700	-64.150609894200900
21	3.85		-994	45.170996740502400	-64.144857176971500
21	3.85		-994	45.171436438634600	-64.148228195984900
21	3.85		-994	45.170886815969400	-64.149217516782300
21	3.93		-994	45.171876136766800	-64.149107592249200
21	3.93		-994	45.171253231079500	-64.146029705324000
17	3.93		-994	45.051858383574400	-63.845993499712100
17	3.93		-994	45.051962097869900	-63.843271197717800
17	3.93		-994	45.050234994902100	-63.840655870366600
17	3.93		-994	45.049889574308500	-63.839372879590500
17	3.93		-994	45.049346770518700	-63.838879421599700
17	3.93		-994	45.045744527185800	-63.835523907262200
17	4.00		-994	45.045941910382100	-63.836806898038300
17	4.00		-994	45.044954994400500	-63.835869327855700
17	4.00		-994	45.046928826363700	-63.836560169042900
17	4.00		-994	45.047871416368400	-63.837906807375500
17	4.04		-994	45.047563833868400	-63.837579287657300

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	4.04		-994	45.047106935337200	-63.836951052176900
17	4.07		-994	45.056849039547200	-63.851663510204000
17	4.07		-994	45.057965584990300	-63.857299406250100
17	4.07		-994	45.057194636946200	-63.853923185505500
17	4.11		-994	45.057354143438100	-63.853125653046100
17	4.11		-994	45.057646572006500	-63.861845341268400
17	4.15		-994	45.057114883700300	-63.858256445201300
17	4.15		-994	45.046254319282400	-63.840808345745400
17	4.15		-994	45.060479341415100	-63.873555316184300
17	4.22		-994	45.060069341547900	-63.875791679096700
17	4.22		-994	45.061262068434500	-63.879966223199800
17	4.22		-994	45.061634795586500	-63.887048039089000
17	4.30		-994	45.062007522738600	-63.891371674052900
17	4.30		-994	45.063386613201200	-63.909001668345400
17	4.30		-994	45.063237522340400	-63.909709849934300
17	4.37		-994	45.062529340751500	-63.909038941060600
17	4.37		-994	45.061672068301700	-63.913698030461300
17	4.37		-994	45.061187523004100	-63.913064394302800
17	4.41		-994	45.083467281811600	-63.935446994013400
17	4.44		-994	45.074160351111600	-63.954104345743800
17	4.44		-994	45.073725447807800	-63.955452545985400
17	4.44		-994	45.080335978024700	-63.939709046390100
17	4.44		-994	45.080770881328400	-63.943318743811100
17	4.44		-994	45.078248442166700	-63.947493815527000
17	4.44		-994	45.081075313641000	-63.941448659605000
17	4.48		-994	45.081510216944800	-63.939230652756000
17	4.52		-994	45.064679459090000	-63.971283026241500
17	4.52		-994	45.065201343054500	-63.967542857829400
17	4.52		-994	45.069419905100800	-63.960410443648100
17	4.52		-994	45.070028769726000	-63.959671108031700

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	4.59		-994	45.062200510258700	-63.975588568948600
17	4.59		-994	45.063026826535800	-63.976023472252300
17	4.59		-994	45.060808819686800	-63.982634002469100
17	4.59		-994	45.058242890194700	-63.993941488366400
17	4.59		-994	45.059634580766700	-63.993724036714500
17	4.59		-994	45.060678348695700	-63.991810462178000
17	4.63		-994	45.061287213320900	-63.988331235748100
17	4.67		-994	45.059982503409700	-63.986852564515400
17	4.67		-994	45.018085495968200	-63.978500518136400
17	4.67		-994	45.017977843226100	-63.998568224849400
17	4.67		-994	45.019073035890000	-63.988255160597700
17	4.67		-994	45.018949318708500	-63.993800142776700
17	4.67		-994	45.018676921940700	-63.995570721767500
17	4.74		-994	45.018104888728300	-63.997450259465400
17	4.74		-994	45.019466872567300	-63.996714788192300
17	4.74		-994	45.019085517092400	-63.992601596998300
17	4.74		-994	45.018186607758600	-63.991185133805700
17	4.74		-994	45.020910575436700	-63.989033199340000
17	4.82		-994	45.021700526063400	-63.989196637400700
17	4.82		-994	45.018676921940700	-63.983013230771400
17	4.82		-994	45.017641814223000	-63.981569527902000
17	4.82		-994	45.018377285496100	-63.979581031496900
17	4.89		-994	45.018377285496100	-63.976748105111700
17	4.89		-994	45.016353888255200	-63.968857536864100
17	4.89		-994	45.018905479853600	-63.969444892394700
17	4.96		-994	45.016362400654200	-63.971881566606800
17	4.96		-994	45.018767153370000	-63.971551711145800
17	4.96		-994	45.020097215712800	-63.974956670743400
17	4.96		-994	45.018660748382600	-63.960538794947100
17	5.00		-994	45.019352380800800	-63.986554814372900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	5.00		-994	45.019299178307100	-63.987565661753400
17	5.04		-994	45.018075520951700	-63.987512459259700
17	5.04		-994	45.016160231178000	-63.953835280739300
17	5.04		-994	45.018128723445400	-63.957133835349500
17	5.11		-994	45.031642156848600	-63.942130732122300
17	5.11		-994	45.030046082037200	-63.952026395953000
17	5.11		-994	45.030578106974300	-63.950483523635300
17	5.11		-994	45.036430381282800	-63.918402419926200
17	5.11		-994	45.037175216194800	-63.913401385517200
17	5.15		-994	45.034461889015400	-63.916221117684000
17	5.18		-994	45.037600836144500	-63.906963883777900
17	5.22		-994	45.037175216194800	-63.905687023928800
17	5.26		-994	45.035738748864500	-63.903133304230500
17	5.26		-994	45.035951558839400	-63.901218014456900
17	5.26		-994	45.035708216147400	-63.906277357165200
17	5.26		-994	45.015250933356000	-63.941900660260100
17	5.33		-994	45.017938805680300	-63.930386484264200
17	5.33		-994	45.012922293750100	-63.925445408603600
17	5.33		-994	45.014129274064100	-63.926350643839100
17	5.33		-994	45.013789810850800	-63.926954133996100
17	5.33		-994	45.013412629502700	-63.926124335030200
17	5.33		-994	45.011262695818300	-63.925973462491000
17	5.33		-994	45.012507394267100	-63.924125273885100
17	5.41		-994	45.012922293750100	-63.928500577523500
17	5.41		-994	45.012658266806400	-63.926576952648000
17	5.41		-994	45.004699740360700	-63.925671717412500
17	5.41		-994	45.003756786990300	-63.925633999277700
17	5.41		-994	45.005039203574000	-63.937402057339600
17	5.44		-994	45.003379605642200	-63.933290780644900
17	5.48		-994	45.003605914451100	-63.931932927791600

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
17	5.48		-994	45.002662961080700	-63.927783932962000
17	5.52		-994	45.003002424294100	-63.926690107052400
17	5.52		-994	45.003191014968100	-63.927670778557600
17	5.56		-994	45.002285779732600	-63.928840040736800
17	5.56		-994	45.001984034654100	-63.930424202399000
17	5.56		-994	45.037034698688400	-63.896996746425900
17	5.56		-994	45.040282685074900	-63.891713877002200
104	5.63	Dug	-994	45.030522569198400	-64.177979921167200
104	5.63	Drilled	800	45.045297655385300	-64.197567124635300
104	5.63	Dug	-994	45.047756293733000	-64.191256236030900
104	5.70	Dug	15	45.052226192715300	-64.190931336451400
104	5.70	Drilled	200	45.053548519992900	-64.189225107706200
104	5.70	Dug	18	45.054956158707600	-64.187988091865900
104	5.70	Dug	18	45.053932421460500	-64.188627927645400
104	5.74	Dug	285	45.055212093019400	-64.184447667219600
104	5.78	Dug	-994	45.053761798586000	-64.170371280071700
104	5.78	Dug	10	45.055126781582200	-64.173698426124800
104	5.78	Drilled	185	45.059093763414800	-64.173143901782600
104	5.82	Drilled	200	45.056363797422400	-64.171309705881500
104	5.85	Drilled	210	45.055766617361600	-64.170072690041300
104	5.85	Drilled	200	45.054956158707600	-64.168665051326500
104	5.85	Dug	20	45.054273667209600	-64.173911704718000
104	5.85	Dug	10	45.054614912958600	-64.174338261904300
104	5.93	Dug	13	45.055254748738100	-64.174551540497400
104	5.93	Drilled	140	45.055979895954800	-64.174466229060200
104	5.93	Drilled	140	45.059520320601100	-64.173741081843500
104	5.93	Dug	15	45.060074844943300	-64.173911704718000
104	5.93	Dug	18	45.062079663718900	-64.173911704718000
104	5.93	Dug	10	45.060927959315900	-64.173698426124800
104	6.00	Dug	10	45.059733599194200	-64.173101246064000

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
104	6.00	Dug	10	45.058752517665700	-64.172248131691400
104	6.00	Dug	10	45.059477664882400	-64.172802656033600
104	6.00	Dug	13	45.059179074852000	-64.172589377440500
104	6.00	Drilled	200	45.057117749657300	-64.174395404616400
104	6.00	Drilled	300	45.057822954795700	-64.174264811072200
104	6.00	Drilled	250	45.053435011712300	-64.171287278265700
104	6.00	Dug	-994	45.053957385888900	-64.172619332416000
104	6.00	Dug	-994	45.053722317509500	-64.172645451124800
104	6.00	Dug	15	45.051998482726700	-64.167264997105900
104	6.07	Dug	20	45.051920126600200	-64.166559791967500
104	6.07	Dug	13	45.052233551106200	-64.166194130043900
104	6.07	Dug	16	45.053435011712300	-64.165227737817200
104	6.07	Dug	10	45.053539486547700	-64.164418057843500
104	6.07	Dug	-994	45.049752273767400	-64.166298604879200
104	6.15	Dug	10	45.051397752423600	-64.168179151914900
104	6.15	Dug	15	45.052024601435500	-64.168335864167900
104	6.15	Dug	20	45.050588072449900	-64.167761252573700
104	6.18	Dug	20	45.081419269725200	-64.202891426080400
104	6.18	Dug	380	45.081036671451400	-64.201743631258800
104	6.18	Dug	-994	45.083470793318500	-64.208030372886100
104	6.22	Dug	-994	45.088589464478900	-64.212520149306100
24	6.22		-994	45.090219030024300	-64.213604177748800
24	6.26		20	45.089517599855500	-64.211882485516300
105	6.26		20	45.092387086909500	-64.214433140675500
104	6.30	Dug	15	45.020982102009400	-64.257615116873800
104	6.30	Dug	18	45.022710015781800	-64.256079193520500
104	6.30	Dug	-994	45.025205891230900	-64.249935500107500
104	6.30	Drilled	200	45.017142293626300	-64.253583318071500
104	6.30	Dug	15	45.017814260093400	-64.251759409089500
102	6.30	Dug	-994	45.051428620608500	-64.192267751065400

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	6.30	Dug	-994	45.050752775375000	-64.192219476405800
102	6.30	Dug	-994	45.051245121971400	-64.204482172791800
102	6.33	Dug	-994	45.054264775119900	-64.201893898664500
102	6.37	Dug	-994	45.032926728386600	-64.239783163324600
102	6.37	Dug	-994	45.032048541264700	-64.235931777913900
102	6.37	Dug	-994	45.032486343308500	-64.234459958851200
102	6.37	Dug	-994	45.029754285422700	-64.245545065614700
102	6.44	Dug	-994	45.029303150791600	-64.245708542972400
102	6.52	Dug	-994	45.029897328110600	-64.246925191768500
102	6.52	Dug	-994	45.039715154752500	-64.224779228879700
102	6.52	Dug	-994	45.039175336625600	-64.225333126422300
102	6.59	Dug	-994	45.046221998223100	-64.218307477742100
102	6.59	Dug	-994	45.047970707796700	-64.215821586920000
102	6.59	Dug	-994	45.067328074310000	-64.224843357087900
102	6.67	Dug	-994	45.070798352518000	-64.224747935358900
102	6.67	Dug	-994	45.072428335368500	-64.226751750267800
102	6.67	Dug	-994	45.070550365731500	-64.230136241584200
102	6.74	Dug	-994	45.069926642845000	-64.229769345768700
102	6.82	Dug	-994	45.071724432341400	-64.228778727066600
102	6.82	Dug	-994	45.071687742759800	-64.229145622882200
102	6.82	Dug	-994	45.068862644979900	-64.231457066520300
102	6.82	Dug	-994	45.068605817909000	-64.232667822711700
102	6.89	Dug	-994	45.068495749164300	-64.234905887186700
102	6.96	Dug	-994	45.067688578370000	-64.235896505888800
102	6.96	Drilled	180	45.071406126021500	-64.225334615736100
102	6.96	Drilled	415	45.069779884518800	-64.224669493932200
102	7.04	Drilled	90	45.060465317000900	-64.209037439089900
102	7.11	Drilled	67	45.059605404933200	-64.208292181964500
102	7.11	Dug	-994	45.062483745459500	-64.215241912656000
102	7.11	Dug	-994	45.061894514791500	-64.213313521378800

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	7.11	Dug	-994	45.061064235213800	-64.214009884895600
102	7.11	Dug	-994	45.055436239701300	-64.198889478699700
102	7.11	Drilled	100	45.055920786879900	-64.198330385801300
102	7.15	Drilled	110	45.056218969759100	-64.197901747912400
102	7.26	Dug	-994	45.063962853035600	-64.189021872139000
102	7.26	Dug	-994	45.063693657585600	-64.189335933497300
102	7.26	Dug	-994	45.062818772373100	-64.190704343701400
102	7.26	Dug	-994	45.062650525216900	-64.191085703922200
102	7.26	Dug	-994	45.063009452483500	-64.191007188582600
102	7.33	Dug	-994	45.065673526005600	-64.194208351879400
102	7.37	Dug	-994	45.065405053350600	-64.194257165089400
102	7.41	Dug	-994	45.064599635385700	-64.193939879224500
102	7.41	Dug	-994	45.066820636440600	-64.195233429289400
102	7.41	Dug	-994	45.067601647800600	-64.196356133119400
102	7.41	Dug	-994	45.067943340270600	-64.197405617134300
102	7.41	Drilled	-994	45.066405724155600	-64.189986009214600
102	7.41	Drilled	250	45.066600976995600	-64.192548702739500
102	7.41	Dug	-994	45.067015889280600	-64.193402933914500
102	7.41	Dug	-994	45.070847726265500	-64.195013769844400
102	7.41	Dug	-994	45.070524530561100	-64.195415068630500
102	7.41	Dug	-994	45.070386274550600	-64.195816994480900
102	7.41	Drilled	73	45.069837135032300	-64.195960807196900
102	7.41	Dug	-994	45.069378611520600	-64.196141293916900
102	7.41	Drilled	134	45.072556188615400	-64.192036164034500
102	7.41	Dug	-994	45.071872803675400	-64.192743955579500
102	7.41	Dug	-994	45.071970430095400	-64.191865317799500
102	7.44	Dug	-994	45.071384671575400	-64.191059899834500
102	7.56	Dug	-994	45.070994165895500	-64.191352779094500
102	7.63	Drilled	180	45.073410419790400	-64.190913460204600
102	7.70	Dug	-994	45.073800925470400	-64.190986680019600

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	7.78	Dug	-994	45.075802267080300	-64.194989363239400
102	7.85	Dug	-994	45.075192101955300	-64.193524966939500
102	7.85	Dug	-994	45.074411090595300	-64.192329043294500
102	7.93	Dug	-994	45.077876828505200	-64.198894420039300
102	7.93	Dug	-994	45.077657169060200	-64.198211035099300
102	8.00	Dug	-994	45.076241585970300	-64.194501231139400
102	8.00	Drilled	211	45.076485652020300	-64.194745297189400
102	8.00	Dug	-994	45.075948706710300	-64.193866659409500
102	8.00	Dug	-994	45.076265992575300	-64.193036834839500
102	8.07	Dug	-994	45.075899893500300	-64.192353449899500
102	8.15	Drilled	196	45.075021255720300	-64.191670064959500
102	8.15	Dug	-994	45.074801596275300	-64.190742613969600
102	8.15	Dug	-994	45.082343237220100	-64.207339105369000
102	8.15	Dug	-994	45.081318159810100	-64.205215730734100
102	8.15	Dug	-994	45.081196126785100	-64.205435390179100
102	8.15	Dug	-994	45.089616405509800	-64.212854998098800
102	8.15	Dug	-994	45.0888353594149900	-64.214343801003800
102	8.15	Dug	-994	45.089372339459800	-64.213587196248800
102	8.15	Dug	-994	45.089299119644800	-64.216906494528700
102	8.15	Dug	-994	45.074035532826800	-64.219588572871200
102	8.15	Dug	-994	45.079868960931500	-64.228132018756900
102	8.15	Drilled	75	45.080075657202900	-64.227902356233100
102	8.15	Dug	-994	45.077181909402900	-64.218601024018900
102	8.15	Dug	-994	45.075735035503000	-64.218440260252200
102	8.15	Dug	-994	45.073782904050600	-64.216488128799800
102	8.15	Dug	-994	45.074219262845800	-64.216281432528400
102	8.19	Dug	-994	45.076952246879100	-64.216097702509400
102	8.19	Dug	-994	45.078766580817200	-64.215477613695100
102	8.19	Dug	-994	45.078307255769600	-64.214076672299900
102	8.22	Dug	-994	45.082487113702900	-64.224962675928300

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	8.22	Dug	-994	45.079891927183900	-64.219864167899800
102	8.26	Dug	-994	45.080603881007700	-64.221747400595000
102	8.30	Dug	-994	45.079639298407700	-64.222068928128400
102	8.30	Dug	-994	45.080167522212400	-64.220736885490300
102	8.37	Dug	-994	45.078812513322000	-64.222482320671200
102	8.59	Dug	-994	45.078192424507700	-64.216855588837900
102	8.78	Dug	-994	45.079157007107700	-64.217774238933100
102	8.78	Dug	-994	45.079593365902900	-64.219221112833100
102	8.81	Dug	-994	45.078720648312500	-64.219818235395000
102	8.89	Dug	-994	45.080305319726700	-64.219129247823600
102	8.89	Drilled	294	45.077572335693400	-64.217016352604600
102	8.89	Dug	-994	45.074357060360100	-64.224204789599800
102	8.89	Dug	-994	45.075229777950600	-64.223584700785500
102	8.89	Dug	-994	45.075275710455300	-64.224365553366400
102	8.89	Drilled	-994	45.076860381869600	-64.226593279847400
102	8.89	Drilled	300	45.075758001755300	-64.226639212352100
102	8.89	Dug	-994	45.076309191812500	-64.227351166175900
102	8.89	Dug	-994	45.076538854336300	-64.227052604895000
102	8.89	Dug	-994	45.076194360550600	-64.225146405947400
102	8.89	Dug	-994	45.071183651480400	-64.201347714962200
102	8.93	Dug	-994	45.071256755025400	-64.201804612118400
102	8.93	Dug	-994	45.070964340845400	-64.201219783758500
102	9.11	Dug	-994	45.066806576724400	-64.207570654229100
102	9.30	Drilled	-994	45.067788905610100	-64.206245652476200
102	9.33	Dug	-994	45.068953993358300	-64.205286168448300
102	9.41	Dug	-994	45.069045372789600	-64.204326684420400
102	9.44	Dug	-994	45.069730718523800	-64.203230131245600
102	9.48	Dug	-994	45.068652763950700	-64.199391855433400
102	9.48	Drilled	-994	45.069855048902400	-64.200673630299200
102	9.56	Drilled	-994	45.069248938306900	-64.200166882096400

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	9.59	Dug	-994	45.068851488736100	-64.199560771501000
102	9.63	Dug	-994	45.069547025485000	-64.199332237997800
102	9.63	Dug	-994	45.070173008559000	-64.199719751329300
102	9.63	Dug	-994	45.070331988387300	-64.199600516458000
102	9.63	Dug	-994	45.070103454884100	-64.201538083115600
102	9.63	Drilled	-994	45.069745750270400	-64.201587764312000
102	9.63	Drilled	-994	45.070093518644800	-64.202750304306500
102	9.63	Drilled	250	45.070242562233900	-64.203296797466300
102	9.63	Dug	-994	45.070699629240300	-64.201110824827000
102	9.63	Dug	-994	45.071087142571800	-64.200683566538400
102	9.74	Dug	-994	45.071251711534700	-64.200197311829200
102	9.78	Dug	-994	45.071422490647100	-64.200694123792600
102	9.81	Dug	-994	45.072043505601500	-64.200305989446200
102	9.85	Dug	-994	45.071748523498200	-64.201221986503800
102	10.00	Dug	-994	45.071562219011900	-64.205724344922900
102	10.11	Dug	-994	45.071092576452600	-64.205720463579400
102	10.37	Drilled	160	45.070898509279400	-64.204245553062800
102	10.37	Dug	-994	45.068045721832900	-64.199083366254800
102	10.37	Dug	-994	45.066784285206800	-64.199529720753200
102	10.37	Dug	-994	45.067094792684000	-64.200034295403600
102	10.37	Dug	-994	45.073440789248800	-64.214899840873400
102	10.37	Dug	-994	45.073673669856600	-64.215695516283700
102	10.37	Dug	-994	45.072548080251900	-64.214531113244200
102	10.37	Dug	-994	45.072664520555800	-64.210513922758300
102	10.37	Dug	-994	45.073499009400700	-64.213657810964700
102	10.37	Dug	-994	45.072412233230600	-64.213890691572600
102	10.37	Drilled	137	45.072198759340100	-64.209892907803900
102	10.37	Dug	-994	45.071888251862900	-64.209465960022800
102	10.44	Dug	-994	45.071713591407000	-64.208883758503100
102	10.44	Dug	-994	45.071480710799100	-64.209349519718900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
102	10.56	Dug	-994	45.076118916239400	-64.209660027196100
102	10.59	Drilled	217	45.073954931525700	-64.206913023284700
102	10.74	Drilled	131	45.077923740950500	-64.211717139232300
102	10.74	Dug	-994	45.077593826756000	-64.210863243670100
102	10.82	Dug	-994	45.077205692409500	-64.209970534673200
102	10.85	Dug	-994	45.076933998367000	-64.211329004885900
102	10.89	Dug	-994	45.077943147667800	-64.212532221359900
102	10.89	Dug	-994	45.078176028275700	-64.213657810964700
102	10.96	Drilled	250	45.076836964780400	-64.214259419201700
102	11.04	Dug	-994	45.084463804688500	-64.232035972270000
102	11.11	Dug	-994	45.084619058427100	-64.232734614093600
102	11.11	Dug	-994	45.085802868183800	-64.231220890142400
102	11.11	Dug	-994	45.084638465144400	-64.228930897498200
102	11.11	Dug	-994	45.083920416603400	-64.226194550355600
102	11.11	Dug	-994	45.084444397971200	-64.227087259352500
102	11.11	Dug	-994	45.084522024840500	-64.228096408653300
102	11.11	Dug	-994	45.083435248670300	-64.225418281662700
102	11.11	Dug	-994	45.087064304809800	-64.225942263030400
102	11.33	Dug	-994	45.088733282499600	-64.223322356191800
102	11.33	Dug	-994	45.088480995174400	-64.224098624884700
102	11.37	Dug	-994	45.087471845873600	-64.225010740598900
102	11.44	Dug	-994	45.080204030236000	-64.229716869549900
102	11.48	Dug	-994	45.080689198169100	-64.229183184823500
101	11.67	Dug	-994	44.960751877437300	-64.004006308802000
101	11.74	Dug	-994	44.960962119369500	-64.002569655599100
101	11.78	Dug	-994	44.960366433895100	-64.000502276599800
101	11.85	Drilled	-994	44.960681796793300	-64.003095260429400
101	11.85	Drilled	-994	44.960471554861200	-64.002464534633000
101	11.85	Dug	-994	44.959875869386800	-64.001728687870600
101	11.85	Dug	-994	44.960546192988500	-64.010202394059700

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	11.85	Dug	-994	44.960326985515500	-64.006987351123200
101	11.85	Dug	-994	44.960619262146100	-64.008741010906800
101	11.85	Dug	-994	44.961240349986100	-64.007900715593800
101	11.85	Dug	-994	44.961167280828500	-64.009362098746800
101	11.85	Drilled	-994	44.961057677092000	-64.005708640864400
101	11.85	Drilled	-994	44.960838469619000	-64.006512401598500
101	11.85	Drilled	-994	44.961459557459100	-64.004904880130200
101	11.85	Dug	-994	44.962847871454400	-64.015426838831600
101	12.00	Dug	-994	44.963688166767300	-64.016742083669300
101	12.07	Drilled	-994	44.960875004197900	-64.014440405203300
101	12.15	Dug	-994	44.961605695774400	-64.015280700516300
101	12.19	Dug	-994	44.962190249035500	-64.015828719198700
101	12.22	Dug	-994	44.959888570569600	-64.013380902417400
101	12.26	Drilled	-994	44.962628663981400	-64.020870491076400
101	12.26	Drilled	-994	44.962592129402600	-64.026387212478800
101	12.37	Dug	-994	44.953275811802500	-64.026460281636500
101	12.41	Dug	-994	44.954700660376600	-64.027556319001200
101	12.52	Dug	-994	44.957915703313100	-64.026935231161200
101	12.59	Dug	-994	44.958536791153100	-64.027921664789400
101	12.59	Dug	-994	44.957879168734300	-64.028067803104700
101	12.59	Dug	-994	44.958573325732000	-64.029017702154200
101	12.59	Dug	-994	44.956594148665500	-64.027390004873700
101	12.59	Drilled	-994	44.955528491867400	-64.027567614340100
101	12.59	Drilled	-994	44.955062267018200	-64.027589815523400
101	12.59	Dug	-994	44.955595095417200	-64.026945981207800
101	12.59	Dug	-994	44.955883710800100	-64.026990383574400
101	12.59	Drilled	-994	44.956727355765200	-64.029321507820300
101	12.59	Drilled	-994	44.956971568781500	-64.029277105453700
101	12.59	Dug	-994	44.957571000730400	-64.029388111370200
101	12.59	Dug	-994	44.957282385347600	-64.026746170558200

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	12.59	Drilled	-994	44.956172326182900	-64.028255851022200
101	12.59	Dug	-994	44.956527545115600	-64.027856229722900
101	12.67	Dug	-994	44.956838361681700	-64.027789626173000
101	12.67	Dug	-994	44.957126977064500	-64.027789626173000
101	12.78	Dug	-994	44.957970622029700	-64.034849602460500
101	12.89	Dug	-994	44.960545959291800	-64.032007850998900
101	12.89	Drilled	-994	44.962832681171100	-64.029743330302900
101	12.96	Dug	-994	44.962100042122400	-64.031763637982600
101	13.00	Dug	-994	44.962743876437900	-64.030120750418900
101	13.04	Dug	-994	44.962721675254600	-64.030764584734400
101	13.04	Dug	-994	44.962455261055100	-64.031230809583600
101	13.33	Dug	-994	44.962055639755800	-64.030653578817900
101	13.33	Dug	-994	44.962122243305700	-64.029920939769200
101	13.33	Drilled	-994	44.963232302470400	-64.029476916103400
101	13.33	Drilled	-994	44.963254503653700	-64.029055093620800
101	13.33	Drilled	-994	44.963143497737200	-64.028189247472300
101	13.33	Drilled	-994	44.963609722586400	-64.028522265221700
101	13.33	Dug	-994	44.963987142702400	-64.028278052205500
101	13.33	Drilled	-994	44.964386764001700	-64.028366856938700
101	13.33	Drilled	-994	44.963387710753400	-64.027345602507100
101	13.33	Drilled	-994	44.960790172308000	-64.028056040372500
101	13.33	Drilled	-994	44.960212941542400	-64.030431566985000
101	13.33	Dug	-994	44.961833627922800	-64.035937460441900
101	13.33	Dug	-994	44.960812373491300	-64.035804253342100
101	13.33	Dug	-994	44.961656018456500	-64.035249223759800
101	13.33	Dug	-994	44.961300799523800	-64.035227022576500
101	13.48	Dug	-994	44.962521864605000	-64.033362123179800
101	13.85	Drilled	-994	44.962544065788300	-64.033606336196000
101	13.93	Drilled	-994	44.963476515486600	-64.033917152762200
101	13.96	Dug	-994	44.966701237360000	-64.038041022559000

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	14.00	Dug	-994	44.963634698917600	-64.048732279889000
101	14.00	Dug	-994	44.961969610170500	-64.046234646768500
101	14.00	Dug	-994	44.962316503659500	-64.046928433746400
101	14.07	Dug	-994	44.962108367566100	-64.047448773979800
101	14.07	Dug	-994	44.960235142725700	-64.044257353881300
101	14.07	Dug	-994	44.960339210772400	-64.043945149741300
101	14.07	Dug	-994	44.961102376448100	-64.045263344999300
101	14.07	Dug	-994	44.959506666398800	-64.044569558021400
101	14.07	Dug	-994	44.959402598352200	-64.044049217788000
101	14.07	Dug	-994	44.959055704863200	-64.043945149741300
101	14.07	Dug	-994	44.959957627934500	-64.044187975183500
101	14.07	Dug	-994	44.960720793610200	-64.044534868672500
101	14.07	Dug	-994	44.960373900121300	-64.044916451510400
101	14.07	Dug	-994	44.960209255151900	-64.044833389380700
101	14.07	Dug	-994	44.960064876454500	-64.044761569854500
101	14.07	Dug	-994	44.959762435628000	-64.044641377547600
101	14.26	Drilled	-994	44.962316503659500	-64.040649661596100
101	14.30	Drilled	-994	44.962316503659500	-64.038256096522200
101	14.44	Dug	-994	44.962212435612800	-64.037666377590900
101	14.44	Dug	-994	44.962455261055100	-64.038949883500100
101	14.56	Dug	-994	44.962455261055100	-64.043008537321100
101	14.74	Dug	-994	44.962073678217200	-64.041794410109700
101	14.74	Drilled	-994	44.961830852774900	-64.042488197087600
101	14.74	Dug	-994	44.962698974071300	-64.035258685298200
101	14.82	Dug	-994	44.962485956321200	-64.035322590623200
101	14.82	Dug	-994	44.962549861646200	-64.037069336174500
101	14.82	Dug	-994	44.962975897146500	-64.037069336174500
101	14.82	Drilled	-994	44.963316725546800	-64.037474069899800
101	14.82	Dug	-994	44.963231518446700	-64.038752176400800
101	14.82	Dug	-994	44.963401932646800	-64.039093004801000

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	14.82	Dug	-994	44.963742761047100	-64.038603063975700
101	14.82	Dug	-994	44.964893056897900	-64.037133241499600
101	14.82	Dug	-994	44.965127376423100	-64.037687087650000
101	14.82	Dug	-994	44.965809033223600	-64.037772294750000
101	14.82	Dug	-994	44.965872938548600	-64.036536791799100
101	15.04	Dug	-994	44.963295423771700	-64.041904839103100
101	15.07	Dug	-994	44.963423234421800	-64.041201880527500
101	15.07	Dug	-994	44.963977080572200	-64.043843300629500
101	15.11	Dug	-994	44.961953411945800	-64.014233833357900
101	15.19	Dug	-994	44.962836769928500	-64.051378470701000
101	15.22	Dug	-994	44.963128005133700	-64.050255134909200
101	15.30	Dug	-994	44.962795164899100	-64.048050068354800
101	15.48	Dug	-994	44.963169610163100	-64.053625142284700
101	15.52	Dug	-994	44.963128005133700	-64.054831688135200
101	15.56	Dug	-994	44.963211215192400	-64.055788603809700
101	15.56	Dug	-994	44.962046274371200	-64.055871813868400
101	15.56	Dug	-994	44.962420719635200	-64.056745519484200
101	15.56	Dug	-994	44.962919979987100	-64.059200216214500
101	15.56	Dug	-994	44.962462324664500	-64.058035275393400
101	15.56	Dug	-994	44.962295904547200	-64.057785645217400
101	15.56	Dug	-994	44.962670349811100	-64.057327989894800
101	15.63	Dug	-994	44.962046274371200	-64.057036754689500
101	15.67	Dug	-994	44.961297383843300	-64.056870334572200
101	15.85	Dug	-994	44.958240966614300	-64.055128866916100
101	15.89	Dug	-994	44.960306847047000	-64.055914483418700
101	15.93	Dug	-994	44.961063366642100	-64.056147258678700
101	15.93	Dug	-994	44.960306847047000	-64.055478029806100
101	15.96	Dug	-994	44.959608521266900	-64.055507126713600
101	15.96	Dug	-994	44.959375746006900	-64.055448932898600
101	16.07	Dug	-994	44.959084776931900	-64.055303448361100

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	16.07	Dug	-994	44.959172067654400	-64.054663316396000
101	16.30	Dug	-994	44.956262376904000	-64.054488734951000
101	16.30	Dug	-994	44.958211869706800	-64.056554615383800
101	16.30	Dug	-994	44.958590129504300	-64.057805782406400
101	16.30	Dug	-994	44.965825299182000	-64.056438839157700
101	16.30	Dug	-994	44.963873581907300	-64.058860849751600
101	16.30	Dug	-994	44.963756008577500	-64.058320012434600
101	16.30	Dug	-994	44.963991155237100	-64.067232070833500
101	16.30	Dug	-994	44.963708979245600	-64.066103366867400
101	16.44	Dug	-994	44.962909480602900	-64.065092236231100
101	16.52	Dug	-994	44.963426803254000	-64.061094743017900
101	16.63	Dug	-994	44.964132243232900	-64.059754407058100
101	16.67	Dug	-994	44.963473832586000	-64.062223446984000
101	16.67	Dug	-994	44.963756008577500	-64.062482108309500
101	16.85	Dug	-994	44.963661949913700	-64.062787798967000
101	17.04	Dug	-994	44.963285715258300	-64.063634326941600
101	17.04	Dug	-994	44.963356259256200	-64.063892988267100
101	17.04	Dug	-994	44.963614920581700	-64.064034076262900
101	17.04	Dug	-994	44.959029560719500	-64.069936257418900
101	17.04	Dug	-994	44.958183032744900	-64.070312492074300
101	17.04	Dug	-994	44.958065459415100	-64.070853329391400
101	17.11	Dug	-994	44.960746131334600	-64.068948641448600
101	17.48	Dug	-994	44.960369896679200	-64.069254332106100
101	17.52	Dug	-994	44.960134750019600	-64.068995670780500
101	17.63	Dug	-994	44.960628558004800	-64.069630566761500
101	17.70	Dug	-994	44.961357512649500	-64.069207302774200
101	17.78	Dug	-994	44.961921864632600	-64.069136758776300
101	17.78	Dug	-994	44.961992408630500	-64.068878097450700
101	17.78	Dug	-994	44.959993662023800	-64.070241948076400
101	17.78	Dug	-994	44.959640942034400	-64.070312492074300

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	17.78	Dug	-994	44.960793160666500	-64.070124374746600
101	17.82	Dug	-994	44.961051821992100	-64.070100860080700
101	17.82	Dug	-994	44.962321613953900	-64.065962278871600
101	17.85	Dug	-994	44.962133496626200	-64.065609558882200
101	17.89	Dug	-994	44.961710232639000	-64.065515500218400
101	17.89	Dug	-994	44.959405795374800	-64.064998177567300
101	18.00	Dug	-994	44.958465208736400	-64.064292737588500
101	18.11	Dug	-994	44.959311736711000	-64.066409057524900
101	18.26	Drilled	-994	44.958606296732200	-64.066832321512200
101	18.52	Dug	-994	44.957971400751300	-64.066573660186600
101	18.52	Dug	-994	44.960299352681300	-64.065186294895000
101	18.52	Dug	-994	44.960699102002700	-64.065515500218400
101	18.52	Dug	-994	44.961592659309100	-64.064998177567300
101	18.52	Dug	-994	44.961310483317600	-64.064951148235400
101	18.52	Dug	-994	44.963708979245600	-64.068478348129400
101	18.52	Dug	-994	44.964155757898800	-64.086631670250700
101	18.52	Dug	-994	44.964249816562700	-64.085738112944200
101	18.52	Dug	-994	44.963920611239200	-64.084656438310100
101	18.67	Dug	-994	44.963779523243500	-64.087101963569900
101	18.74	Dug	-994	44.963826552575400	-64.081129238416000
101	18.74	Dug	-994	44.963873581907300	-64.081975766390600
101	19.04	Dug	-994	44.964602536552100	-64.082751750367300
101	19.04	Dug	-994	44.963003539266800	-64.080658945096800
101	19.18	Dug	-994	44.963215171260400	-64.080447313103200
101	19.18	Dug	-994	44.963591405915800	-64.080682459762800
101	19.26	Dug	-994	44.963920611239200	-64.080682459762800
101	19.26	Dug	-994	44.964132243232900	-64.079788902456300
101	19.26	Dug	-994	44.964296845894600	-64.079036433145600
101	19.26	Dug	-994	44.962227555290100	-64.080047563781800
101	19.26	Dug	-994	44.963826552575400	-64.070853329391400

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	19.26	Dug	-994	44.963967640571100	-64.071417681374400
101	19.41	Dug	-994	44.964579021886100	-64.072193665351100
101	19.96	Dug	-994	44.964155757898800	-64.074404043951400
101	20.00	Dug	-994	44.963191656594400	-64.078566139826300
101	20.00	Dug	-994	44.962439187283700	-64.077860699847500
101	20.00	Dug	-994	44.961874835300700	-64.077672582519800
101	20.00	Dug	-994	44.964531992554200	-64.076026555902600
101	20.00	Dug	-994	44.965025800539300	-64.076661451883600
101	20.00	Dug	-994	44.964814168545700	-64.079459697132800
101	20.07	Drilled	-994	44.965402035194700	-64.079106977143400
101	20.30	Dug	-994	44.966130989839500	-64.076590907885700
101	20.52	Dug	-994	44.965942872511800	-64.077225803866600
101	20.52	Dug	-994	44.965425549860700	-64.077649067853900
101	20.63	Dug	-994	44.964531992554200	-64.078448566496500
101	20.74	Dug	-994	44.964508477888200	-64.078001787843300
101	20.74	Drilled	-994	44.965096344537200	-64.077319862530500
101	20.74	Dug	-994	44.965543123190500	-64.076920113209100
101	20.74	Dug	-994	44.965260947198900	-64.075791409243000
101	20.74	Dug	-994	44.965848813848000	-64.074944881268500
101	20.82	Dug	-994	44.965213917867000	-64.072005548023400
101	20.96	Drilled	-994	44.965143373869100	-64.073910235966200
101	21.11	Dug	-994	44.965378520528800	-64.069277846772000
101	21.15	Dug	-994	44.965566637856400	-64.070406550738100
101	21.22	Dug	-994	44.965754755184100	-64.071535254704200
101	21.37	Dug	-994	44.965825299182000	-64.072381782678800
101	21.41	Dug	-994	44.965895843179900	-64.073439942647000
101	21.48	Dug	-994	44.966178019171400	-64.073345883983200
101	21.48	Drilled	-994	44.965778269850100	-64.074192411957700
101	21.48	Dug	-994	44.944803187813500	-64.085879200940000
101	21.48	Dug	-994	44.946613817092500	-64.087078448903900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	21.48	Dug	-994	44.949702561143900	-64.086233465555800
101	21.48	Dug	-994	44.949493436896700	-64.086248403002000
101	21.48	Dug	-994	44.950389683670400	-64.085874966846300
101	21.59	Dug	-994	44.950150684530800	-64.086069153647300
101	21.82	Dug	-994	44.951002118965800	-64.086323090233200
101	22.15	Dug	-994	44.950658557702500	-64.086263340448300
101	22.22	Dug	-994	44.950075997299600	-64.086621839157700
101	22.22	Dug	-994	44.949209625418400	-64.086950462974800
101	22.22	Dug	-994	44.948806314370200	-64.086816025958700
101	22.22	Dug	-994	44.948104254397500	-64.087084899990800
101	22.26	Dug	-994	44.947506756548400	-64.087294024238000
101	22.26	Dug	-994	44.951091743643200	-64.086905650636100
101	22.70	Dug	-994	44.951853553400800	-64.085770404722700
101	22.96	Dug	-994	44.952092552540400	-64.085680780045400
101	22.96	Dug	-994	44.956021100898500	-64.084799470717900
101	22.96	Dug	-994	44.956080850683400	-64.085157969427400
101	22.96	Dug	-994	44.954004545657700	-64.085053407303800
101	22.96	Dug	-994	44.953899983534100	-64.084709846040500
101	22.96	Dug	-994	44.952929049529200	-64.084933907733900
101	22.96	Dug	-994	44.953257673346200	-64.084933907733900
101	23.59	Dug	-994	44.953556422270800	-64.085053407303800
101	23.67	Dug	-994	44.952690050389600	-64.084874157949000
101	23.70	Dug	-994	44.954497481383200	-64.084933907733900
101	23.70	Dug	-994	44.954990417108700	-64.084844283056600
101	23.70	Dug	-994	44.954706605630400	-64.085531405583100
101	23.70	Dug	-994	44.953825296302900	-64.085591155368000
101	23.85	Drilled	-994	44.952361426572600	-64.085740529830300
101	24.11	Dug	-994	44.952510801034800	-64.085770404722700
101	24.11	Dug	-994	44.952675112943300	-64.085725592384000
101	24.44	Dug	-994	44.952884237190500	-64.085471655798200

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	24.44	Dug	-994	44.952451051249900	-64.086293215340700
101	24.44	Dug	-994	44.955707414527700	-64.085187844319800
101	24.44	Dug	-994	44.955378790710700	-64.085411906013200
101	24.44	Drilled	-994	44.954900792431400	-64.085561280475500
101	24.44	Drilled	-994	44.957634345091100	-64.083574600127200
101	24.44	Dug	-994	44.957380408505200	-64.083709037143200
101	24.44	Dug	-994	44.956648473640100	-64.084724783486700
101	24.48	Dug	-994	44.957738907214700	-64.084082473298900
101	24.56	Dug	-994	44.959143027160200	-64.084440972008400
101	25.18	Dug	-994	44.958784528450700	-64.084366284777300
101	25.18	Dug	-994	44.958545529311000	-64.084396159669700
101	25.18	Dug	-994	44.957933094015700	-64.084440972008400
101	25.67	Dug	-994	44.959785337348000	-64.084485784347100
101	25.67	Dug	-994	44.959561275654600	-64.084455909454600
101	25.74	Dug	-994	44.959352151407400	-64.084963782626400
101	25.78	Dug	-994	44.959471650977200	-64.084157160530100
101	25.93	Dug	-994	44.959023527590300	-64.083783724374400
101	25.93	Dug	-994	44.958724778665800	-64.083589537573400
101	26.00	Dug	-994	44.960248398181100	-64.084261722653700
101	26.22	Dug	-994	44.960143836057500	-64.084172097976300
101	26.22	Dug	-994	44.960352960304700	-64.084620221363100
101	26.67	Dug	-994	44.961562893449100	-64.085411906013200
101	26.67	Dug	-994	44.961264144524600	-64.085531405583100
101	26.67	Dug	-994	44.960801083691500	-64.084933907733900
101	26.67	Dug	-994	44.960651709229200	-64.084904032841500
101	26.82	Dug	-994	44.960666646675400	-64.085471655798200
101	26.93	Dug	-994	44.960771208799100	-64.084635158809400
101	27.33	Dug	-994	44.961129707508500	-64.084859220502800
101	27.41	Dug	-994	44.961383644094400	-64.084978720072600
101	27.41	Dug	-994	44.961772017696300	-64.085217719212300

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	27.63	Dug	-994	44.962772826593600	-64.085770404722700
101	28.04	Dug	-994	44.962892326163500	-64.086472464695500
101	28.15	Drilled	-994	44.962668264470000	-64.086248403002000
101	28.15	Dug	-994	44.961936329604900	-64.085860029400100
101	28.15	Dug	-994	44.962190266190700	-64.086591964265300
101	28.70	Dug	-994	44.961592768341600	-64.086816025958700
101	28.89	Dug	-994	44.963771944711100	-64.092033227745100
101	28.89	Dug	-994	44.964176287109700	-64.091667394146400
101	28.89	Dug	-994	44.964041506310200	-64.093689106139400
101	28.89	Dug	-994	44.963656418311500	-64.092514587743500
101	28.89	Dug	-994	44.964426594308800	-64.092495333343500
101	28.89	Dug	-994	44.963769385393700	-64.089594272608000
101	29.59	Dug	-994	44.963722246337200	-64.090124586992600
101	29.59	Dug	-994	44.964181852137200	-64.090560623264300
101	29.63	Dug	-994	44.964134713080800	-64.090324927982300
101	29.63	Dug	-994	44.964441116947400	-64.091255924346300
101	29.78	Dug	-994	44.964205421665400	-64.091149861469400
101	29.89	Dug	-994	44.964158282609000	-64.090867027131000
101	30.26	Dug	-994	44.963816524450100	-64.091597682505200
101	30.37	Dug	-994	44.963840093978300	-64.091385556751400
101	30.37	Dug	-994	44.963451196762900	-64.090878811895100
101	30.37	Dug	-994	44.964771090342300	-64.096535498663700
101	31.11	Dug	-994	44.964099358788500	-64.096390398755700
101	31.63	Dug	-994	44.965756591240200	-64.107107168610300
101	31.85	Dug	-994	44.966198519894000	-64.107107168610300
101	31.89	Dug	-994	44.965333076280300	-64.107199237079800
101	31.96	Dug	-994	44.968058302978800	-64.106923031671200
101	32.04	Dug	-994	44.963178674093100	-64.108285645020400
101	32.15	Dug	-994	44.962957709766200	-64.101896093234300
101	32.44	Dug	-994	44.963473293195600	-64.101214786559600

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	32.59	Dug	-994	44.963602189053000	-64.101914506928200
101	32.59	Dug	-994	44.964375564197100	-64.098268595534300
101	32.59	Dug	-994	44.964320323115400	-64.097771425798800
101	32.96	Dug	-994	44.964246668339800	-64.097219014981600
101	33.33	Dug	-994	44.965001629790000	-64.097587288859700
101	33.33	Dug	-994	44.963565361665100	-64.105026421198700
101	33.33	Dug	-994	44.964173013564100	-64.105560418322000
101	33.33	Dug	-994	44.961852888131700	-64.107107168610300
101	34.07	Dug	-994	44.961595096417000	-64.106996686446800
101	34.30	Dug	-994	44.960361378925100	-64.106978272752900
101	34.81	Dug	-994	44.959330212066200	-64.106425861935700
101	35.11	Dug	-994	44.962239575703800	-64.105357867689000
101	35.52	Dug	-994	44.961816060743900	-64.105063248586500
101	35.56	Dug	-994	44.962607849581900	-64.102540572521000
101	35.63	Dug	-994	44.963215501480900	-64.099944241680000
101	35.81	Dug	-994	44.955725731483700	-64.105353264265500
101	36.30	Dug	-994	44.956163056714000	-64.104087322809300
101	36.30	Dug	-994	44.955748748601100	-64.103511894874700
101	36.67	Dug	-994	44.953447036862600	-64.101601474131700
101	37.04	Dug	-994	44.953216865688700	-64.101279234488300
101	37.04	Dug	-994	44.953216865688700	-64.100864926375400
101	37.04	Dug	-994	44.953147814336500	-64.100289498440800
101	37.04	Dug	-994	44.952641437754100	-64.100381566910300
101	37.07	Dug	-994	44.954528841379700	-64.103143620996500
101	37.15	Dug	-994	44.955196337783800	-64.103488877757300
101	37.48	Dug	-994	44.959237442500300	-64.117783933987100
101	37.78	Dug	-994	44.960582734753800	-64.115686860768400
101	38.26	Dug	-994	44.959751818950200	-64.115469239962700
101	38.52	Dug	-994	44.959494630725200	-64.115390105124200
101	38.52	Dug	-994	44.956388588316400	-64.123976235095200

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	38.96	Dug	-994	44.958287824439000	-64.120929543815200
101	39.93	Dug	-994	44.958742849760100	-64.120019493173100
101	39.93	Dug	-994	44.959217658790700	-64.120929543815200
101	40.00	Dug	-994	44.957911933956400	-64.128704541692100
101	40.00	Dug	-994	44.958782417179300	-64.130623561524300
101	40.00	Dug	-994	44.956625992831700	-64.129713510882200
101	40.44	Dug	-994	44.954899864168200	-64.132532689501700
101	40.52	Dug	-994	44.955171890175400	-64.131469315110100
101	40.59	Dug	-994	44.954578378887100	-64.135178760662100
101	40.74	Dug	-994	44.954627838161100	-64.134659438284800
101	40.74	Dug	-994	44.954702027072100	-64.134065926996500
101	40.96	Dug	-994	44.954850404894200	-64.133719712078300
101	41.04	Dug	-994	44.954949323442300	-64.133175660064000
101	41.48	Dug	-994	44.955913779285800	-64.133719712078300
101	41.48	Dug	-994	44.964583062661100	-64.136356509624800
101	41.48	Dug	-994	44.968331148270900	-64.142229798415400
101	41.48	Dug	-994	44.975093158391700	-64.150305570502500
101	42.22	Dug	-994	44.962148739017700	-64.152314853509800
101	42.37	Dug	-994	44.957898332656100	-64.153860455823100
101	44.26	Dug	-994	44.959134814506700	-64.150421490676000
101	44.30	Dug	-994	44.954996910159700	-64.136169947499400
101	44.59	Dug	-994	44.954031899484500	-64.138003467782100
101	45.19	Dug	-994	44.953710229259500	-64.138019551293400
101	45.26	Dug	-994	44.953428767812600	-64.145144546777900
101	45.48	Dug	-994	44.953694145748300	-64.141783092926300
101	47.11	Dug	-994	44.953549394147000	-64.144119222935600
101	47.44	Dug	-994	44.953686103992600	-64.143218546305500
101	47.70	Dug	-994	44.953259890944500	-64.141702675370000
101	48.15	Dug	-994	44.953340308500700	-64.148968401578000
101	48.15	Dug	-994	44.953601665558600	-64.148341144639200

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
101	48.41	Dug	-994	44.953271953577900	-64.146841357215000
101	48.89	Dug	-994	44.952725114195300	-64.154927342496800
101	49.48	Dug	-994	44.952885949307800	-64.153801496709200
101	49.52	Dug	-994	44.953549394147000	-64.149981662786900
101	49.93	Dug	-994	44.953308141478200	-64.150685316404200
101	50.00	Dug	-994	44.952326364041600	-64.151455980907700
101	50.44	Dug	-994	44.953468976590700	-64.155952666339100
101	50.56	Dug	-994	44.954393778487700	-64.155711413670300
101	50.78	Dug	-994	44.952604487860900	-64.155610891725000
101	51.11	Dug	-994	44.952584383471900	-64.157500704297100
101	51.19	Dug	-994	44.951961147410900	-64.158003314023700
101	51.85	Dug	-994	44.951317806960800	-64.158144044747200
101	51.85	Dug	-994	44.949749664613700	-64.157601226242400
101	51.85	Dug	-994	44.949729560224700	-64.153138051870100
101	52.04	Dug	-994	44.952001356189000	-64.155027864442100
101	52.74	Dug	-994	44.949206846109000	-64.162567010341400
101	53.33	Dug	-994	44.947759330096300	-64.152595233365300
101	53.33	Dug	-994	44.946532962363400	-64.156274336564100
101	53.33	Dug	-994	44.944663254180400	-64.157581121853300
101	53.74	Dug	-994	44.944100331286600	-64.158445610583100
101	53.96	Dug	-994	44.943818869839700	-64.159209577367600
101	54.07	Dug	-994	44.942873963553600	-64.161561790888200
22	54.81		20	45.176002306504700	-64.150965878994200
22	56.52		-994	45.176541292863000	-64.150319095364200
22	57.78		20	45.176649090134700	-64.150965878994200
22	58.04		-994	45.178104353302200	-64.150022652867100
22	58.52		-994	45.178885883521800	-64.149564514462500
22	58.59		12	45.180017754874300	-64.153930303965000
22	59.07		13	45.178239099891800	-64.154199797144200
22	59.11		15	45.177376721718500	-64.153741658739600

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
22	59.26		15	45.176918583313900	-64.154065050554600
22	60.00		-994	45.176190951730100	-64.153014027155900
22	60.37		20	45.179802160331000	-64.149780109005800
22	62.22		16	45.180637589186400	-64.148675186971200
22	62.22		15	45.179909957602700	-64.147516366300800
22	62.30		150	45.175139928331300	-64.150346044682100
22	62.59		15	45.173981107660900	-64.152151648982500
22	63.15		-994	45.173199577441300	-64.153364368288800
22	63.26		10	45.172983982898000	-64.152232496936300
22	63.70		10	45.172579743129200	-64.151370118762900
22	64.44		18	45.172310249950100	-64.146061103133300
22	64.81		25	45.172121604724600	-64.144578890647800
22	65.04		9	45.171447871776700	-64.148378744474100
22	65.19		12	45.171954077434600	-64.154098018692400
22	65.19		20	45.171360151122100	-64.153891962624800
22	65.59		15	45.171360151122100	-64.153261673476900
22	66.04		15	45.172063165941000	-64.152837440396500
22	66.33		25	45.172075286886100	-64.151128387130000
22	68.07		15	45.171651053805800	-64.157188859706400
22	68.59		-994	45.171432876793000	-64.156376756381100
22	68.81		11	45.171057127493300	-64.155528290220400
22	68.89		10	45.173275260456300	-64.160825143252200
22	68.89		15	45.167386753789200	-64.156775990012100
22	69.07		-994	45.168163251838000	-64.156681295128100
22	69.78		12	45.168996566817300	-64.156605539220900
22	70.37		8	45.168826116026100	-64.155999491963300
22	71.19		10	45.166036086904600	-64.156555014930600
22	71.78		10	45.165358211820900	-64.157723826616700
22	71.85		12	45.165062290308300	-64.158389650019900
22	71.93		15	45.165804303254500	-64.158666563591100

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
22	74.07		6	45.169020240538300	-64.164123129325000
22	74.07		-994	45.166689858627200	-64.160646051552900
22	74.07		10	45.166393937114700	-64.159647316448100
22	74.07		-994	45.164988309930200	-64.160831002498200
22	74.07		-994	45.162472977073800	-64.165713707454800
22	74.07		-994	45.163932688831500	-64.162346714086100
22	74.07		18	45.163805215873000	-64.161040513334100
22	74.15		18	45.163088260558700	-64.162829244527700
22	75.19		2	45.164246333618500	-64.164325088896700
22	78.00		20	45.163474284911900	-64.165169517169400
22	78.56		160	45.162123199675500	-64.164614607161600
22	79.85		-994	45.159421029202600	-64.170742743769800
22	80.19		15	45.156935997428400	-64.174434101648000
22	80.63		-994	45.158045817444100	-64.174072203816800
22	80.89		15	45.156212201766000	-64.175929946016900
22	81.48		5	45.156984250472600	-64.176122958193500
22	83.48		15	45.156188075243900	-64.177184525165000
22	84.44		-994	45.152351958233300	-64.166665361538400
22	84.67		-994	45.150952619952700	-64.164349215418700
22	86.15		20	45.148805359487600	-64.157207764883200
22	88.70		20	45.146923490765400	-64.149125379986600
22	88.89		-994	45.153654790425600	-64.182516486544600
22	88.89		-995	45.153871929124300	-64.184350102222600
22	88.89		-994	45.150059938635700	-64.180345099557400
22	89.11		70	45.149215510363000	-64.179283532585900
22	91.04		-994	45.149094877752600	-64.180224466947000
22	92.52		-994	45.150325330378600	-64.178994014321000
22	92.59		10	45.152496717365800	-64.179187026497600
22	93.15		23	45.153823676080100	-64.177691182128700
22	96.48		24	45.149866926459100	-64.181961576536800

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
22	97.04		70	45.150759607776000	-64.182082209147200
22	97.22		-994	45.150880240386400	-64.181020642175700
22	99.48		40	45.148515841222700	-64.181575552183500
22	100.33		-994	45.148129816869400	-64.183240282207000
22	101.96		20	45.147092376420000	-64.184157090046000
22	104.22		18	45.145958429882200	-64.184760253098000
22	109.00		70	45.144727977256200	-64.185411669194100
22	110.74		-994	45.145765417705600	-64.185604681370800
22	111.11		11	45.142568561616500	-64.187525314549700
22	111.26		-994	45.141357734513100	-64.188044240451200
22	112.52		-994	45.144730752872500	-64.189082092254100
22	115.85		-994	45.144125339320800	-64.187914508975800
22	117.70		12	45.142914512217400	-64.189773993456000
22	117.70		20	45.141833416589400	-64.171654830730500
22	118.19		129	45.133222147370400	-64.191592406327900
22	118.48		130	45.135313691450000	-64.190426627660600
22	118.52		15	45.135862293175800	-64.191249530249300
22	118.52		20	45.135416554273600	-64.192449596524500
22	120.59		-994	45.134936527763500	-64.193478224760300
22	124.07		15	45.136650908156600	-64.190735216131400
22	127.78		15	45.137816686823900	-64.190015176366300
22	128.48		90	45.139613874977300	-64.189090168513600
22	130.85		14	45.140456832629300	-64.188540809228200
22	140.37		10	45.139967808453400	-64.187621010249600
22	140.74		100	45.138771156651700	-64.184849880597000
22	145.19		-994	45.127496116857400	-64.194472565388300
22	146.15		130	45.129416222897700	-64.193752525623200
22	149.70		-994	45.131336328938000	-64.192689609779500
22	150.52		19	45.129727249127300	-64.193618660866700
22	150.89		70	45.130367796756700	-64.193292107173300

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
22	154.26		80	45.130945545598900	-64.192978113237300
22	154.78		20	45.131900087164300	-64.193555862079500
22	165.15		13	45.131372577351900	-64.193405144990200
22	170.37		20	45.179853142567100	-64.165499835802200
12	178.11		-994	45.075701167155800	-64.217953760593900
12	178.15		-994	45.070483058811200	-64.203996233436500
12	179.41	Drilled	125	45.070607269634000	-64.199917156523200
31	183.30	Dug	-994	44.972765606196100	-64.215954844573000
31	186.82	Drilled	-994	44.976071204016400	-64.211229825479500
31	201.00	Dug	-994	44.987640708067600	-64.201603766386400
31	202.30	Dug	-994	44.990150781093200	-64.209128342442700
31	203.78	Dug	-994	44.990633787472600	-64.210094244089900
31	204.85	Dug	-994	44.991554719920000	-64.210461175090400
31	206.04	Dug	-994	44.991223210434400	-64.200983537542400
31	210.67	Drilled	-994	44.994675117878400	-64.201055645349700
31	214.82	Drilled	-994	44.995601562968100	-64.200901213538200
31	215.82	Dug	-994	45.002353488405600	-64.192004305550200
31	220.11	Dug	-994	45.006074540844800	-64.195818581937500
31	236.04	Dug	-994	44.978824402388800	-64.213233640826900
31	240.07	Dug	-994	44.954381847699600	-64.209983263994400
31	242.00	Dug	-994	44.947284780979500	-64.217865024231500
31	244.44	Dug	-994	44.936122905475200	-64.194734585047200
31	248.89	Dug	-994	44.937518926642300	-64.193895480506600
31	251.56	Dug	-994	44.938618061292100	-64.191965094963500
31	251.85	Dug	-994	44.936475302702400	-64.190510191529000
31	264.19	Dug	-994	44.936357336691700	-64.187035595214600
31	280.78	Dug	-994	44.935131257968600	-64.186359316703100
31	281.48	Dug	-994	44.933995736434600	-64.184382925133400
31	348.22	Dug	-994	44.937208795922900	-64.171753715251100
31	367.37	Dug	-994	44.944509745485700	-64.181234994819900

Map #	Rn Well Water (Bq/L)	Well Drilled/Dug	Well Depth (feet)	Latitude	Longitude
31	374.63	Dug	-994	44.947254760060200	-64.176624703624600
31	385.19	Dug	-994	44.948563539489000	-64.176759973636900
31	420.07	Dug	-994	44.949914740474500	-64.172771958222000
31	473.70	Dug	-994	44.931042348797800	-64.199096017703200
31	540.52	Dug	-994	44.928727061406800	-64.197113415185600
31	551.33	Dug	-994	44.929638970477800	-64.199260258941400
31	551.59	Dug	-994	44.930100803954100	-64.199772832882200
31	559.67	Dug	-994	44.929589944055900	-64.201309757518600
31	596.07	Dug	-994	44.934408885695800	-64.195180779442800
31	633.96	Dug	-994	44.934110606062700	-64.197418731899900
31	790.74	Dug	-994	44.933064030875700	-64.197629128968300
31	814.82	Dug	-994	44.931955194345900	-64.198534655666800
31	1077.85	Dug	-994	45.048451895353200	-64.279522570014800
31	1117.41	Dug	-994	45.048626691943800	-64.280035858680400
31	1777.78	Dug	-994	45.049047908372000	-64.281114983942100

Rn Stream Water (Bq/L): 185 Data Points

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
2	0.00	44.992886400743400	-64.223162710803600
2	0.00	44.994458965381100	-64.226018157119500
2	0.00	44.993796832902100	-64.226845822718300
2	0.00	44.995783230339200	-64.231232450392000
2	0.00	44.994252048981400	-64.236777809904000
2	0.00	44.991479369225400	-64.233425764228800
2	0.00	44.991189686265900	-64.239219423420500
2	0.00	44.992058735144600	-64.230446168073100
2	0.00	44.991231069545800	-64.229080519835100
2	0.00	44.990124303255700	-64.229298031371000
2	0.07	44.985275866294300	-64.231185918329400
2	0.07	44.987292472818100	-64.230585227024500
2	0.07	44.988880014124000	-64.229855816154200
2	0.07	44.983001820639900	-64.231572077025500
2	0.07	44.981757531508200	-64.232773459635400
2	0.07	44.975879338024100	-64.232473113982900
2	0.07	44.977552692373600	-64.231958235721500
2	0.15	44.981285559768600	-64.236205981377900
2	0.15	44.980384522811200	-64.235605290073000
2	0.15	44.981414279333900	-64.241526390078900
2	0.22	44.981414279333900	-64.238737466163100
2	0.22	44.989223266298300	-64.247018424867000
2	0.22	44.986691781513100	-64.253797655308500
2	0.22	44.982272409769600	-64.266154733581800
2	0.22	44.978668261939900	-64.265082070537200
2	0.22	44.977000270905600	-64.256361319985000
2	0.30	44.973018009352700	-64.254602152592000
2	0.37	44.969891196577900	-64.253408814954900
2	0.37	44.971728132041700	-64.258066854225800

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
2	0.37	44.970542839377400	-64.245935035192000
2	0.37	44.970609880817700	-64.224548815741300
7	0.37	45.035346113742300	-64.179256786306400
7	0.44	45.037836430769700	-64.177982444390000
7	0.44	45.044782335083500	-64.179442950637300
7	0.44	45.045904964409500	-64.182724158137200
7	0.52	45.048306852020300	-64.184513871584200
7	0.52	45.043118031695000	-64.190338548285800
7	0.52	45.039563284671700	-64.191202130896000
7	0.52	45.042143976793200	-64.198857487892900
7	0.52	45.049512236102500	-64.193265836936000
7	0.59	45.049711462028600	-64.194760031381600
7	0.59	45.049749262917900	-64.202572902803600
103	0.59	44.949407311512300	-64.149874575441500
103	0.59	44.949789283672600	-64.147710066533300
103	0.59	44.947964305573500	-64.148410348827100
103	0.59	44.952038675283100	-64.138394189957600
103	0.59	44.954118301489100	-64.127465542038600
103	0.59	44.951550599745000	-64.123200186248900
103	0.67	44.954882245809600	-64.120823470584900
103	0.67	44.966702162102600	-64.108515478753800
103	0.67	44.954532104662700	-64.102271294967100
103	0.67	44.962144940027300	-64.096845242840400
103	0.67	44.961718886587400	-64.097377809640300
103	0.67	44.961292833147400	-64.098016889800300
103	0.74	44.960405221814100	-64.099135280080200
103	0.74	44.958665503600800	-64.101727105173400
103	0.74	44.957121059880900	-64.103591088973300
103	0.74	44.957351838827600	-64.103502327840000
103	0.74	44.957973166760900	-64.102952008813400

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
103	0.74	44.958132936800900	-64.102650220960100
103	0.81	44.958310459067500	-64.102383937560100
103	0.81	44.957387343280900	-64.102188663066700
103	0.81	44.959530924650800	-64.096130715717100
103	0.81	44.957888843684200	-64.093534452567200
103	0.81	44.944829861943200	-64.085407261296800
103	0.89	44.944302842714100	-64.086627726880000
103	0.96	44.946993414568100	-64.087404386796700
103	0.96	44.947048890276500	-64.086378086192600
103	0.96	44.952879927402800	-64.080950812761100
103	0.96	44.952879927402800	-64.080657828997000
103	0.96	44.951173727835400	-64.083277448534700
103	0.96	44.952069913466800	-64.082053810461200
103	1.04	44.952673115334000	-64.081226562186100
103	1.04	44.952018210449600	-64.080399313911000
103	1.04	44.951742461024500	-64.079985689773500
103	1.04	44.950294776543200	-64.084001290775400
103	1.04	44.949071138469600	-64.084587258303600
103	1.11	44.947778563039800	-64.085414506578600
103	1.19	44.954138034154400	-64.091222478843200
103	1.19	44.951001384444800	-64.091601634302600
103	1.19	44.950622228985400	-64.091601634302600
103	1.19	44.949002201113400	-64.091584399963600
103	1.19	44.947881969074200	-64.089343935885200
103	1.26	44.947588985310100	-64.089326701546200
103	1.26	44.952724818351200	-64.092049727118300
103	1.26	44.961189652441400	-64.086687036600800
103	1.26	44.960338090962400	-64.089028830668300
103	1.26	44.959815541873000	-64.088680464608600
103	1.26	44.960860640051800	-64.089454611407800

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
103	1.26	44.957338272115700	-64.085100035662600
103	1.26	44.957241503765800	-64.087151524680300
103	1.33	44.959505883153300	-64.088467574238900
103	1.33	44.960512273992200	-64.084403303543400
103	1.33	44.956041576227100	-64.086938634310600
103	1.41	44.958267248274700	-64.079274580999000
103	1.41	44.957047967066000	-64.079855191098400
103	1.41	44.955519027137700	-64.080571276887600
103	1.41	44.962254104290300	-64.078171421810200
103	1.48	44.957705991845300	-64.075500615353200
103	1.48	44.957376979455600	-64.074803883233900
103	1.48	44.956157698247000	-64.072771747886200
103	1.48	44.955712563837500	-64.075481261683200
103	1.48	44.954977124378300	-64.075481261683200
103	1.48	44.953390123440000	-64.075307078653400
103	1.48	44.957783406525200	-64.066501158813100
103	1.56	44.959873602882900	-64.067526903322000
103	1.56	44.956912491376200	-64.065610889994100
103	1.56	44.955112600068100	-64.065610889994100
103	1.56	44.960144554262600	-64.055372798575400
103	1.56	44.956970552386100	-64.056108238034500
14	1.63	44.952280746099600	-64.139861988016800
14	1.63	44.957296610990100	-64.109424034103500
14	1.63	44.957644787089700	-64.103358574449700
14	1.70	44.957644787089700	-64.102477067587400
14	1.70	44.958319983835300	-64.102158224679800
14	1.70	44.958882647790000	-64.101426761538700
14	1.78	44.957475987903300	-64.099026061998800
14	1.78	44.957194655926000	-64.096625362458900
14	1.85	44.956406926389400	-64.094468483966000

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
14	1.85	44.955056532898200	-64.091186277563800
14	2.00	44.961658456633000	-64.078207495676300
22	2.07	45.176007129022600	-64.157838842907200
22	2.15	45.170904138199700	-64.141317030107300
22	2.15	45.167716197712600	-64.159579374897600
22	2.22	45.150803034878400	-64.179276292907100
22	2.22	45.151002281158900	-64.178678554065800
22	2.22	45.150888426141500	-64.177596931400600
22	2.22	45.149721412213200	-64.178166206487500
22	2.30	45.146647326743500	-64.156021405604000
22	2.30	45.145309530289100	-64.154398971606000
22	2.30	45.145081820254300	-64.153545058975600
22	2.44	45.140408537912800	-64.183678078049400
13	2.59	45.022766121604100	-64.175015152013600
13	2.59	45.021998961753600	-64.174454540436200
13	2.59	45.024931624074000	-64.180508906999000
13	2.67	45.026751698713300	-64.186677147027400
13	2.67	45.040968967521200	-64.189900942845600
13	2.74	45.065752502660500	-64.190003395137300
13	2.74	45.066347551143800	-64.190728940861600
13	2.81	45.072651091245500	-64.191154758661600
13	2.89	45.068206373372500	-64.199592630596700
13	2.96	45.069873298752600	-64.201919867956000
13	3.19	45.069291566875300	-64.234473100610500
13	3.33	45.048280100763600	-64.221044928005900
13	3.33	45.043076348226600	-64.224394406239800
13	3.33	45.040640167545100	-64.225864857939000
13	3.41	45.040763540881900	-64.226559503573300
13	3.41	45.040012911651300	-64.226405063082000
13	3.41	45.037078258281600	-64.228602788942700

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
13	3.85	45.037007397370500	-64.229108713676800
13	3.93	45.032574558062600	-64.236763227470100
13	4.07	45.031825768337700	-64.242466829184000
13	4.30	45.031045025434400	-64.245079129854600
13	4.30	45.029982510126800	-64.246532102362000
31	4.37	45.003401024849900	-64.308269210715600
31	4.37	45.001516193463100	-64.304903193499700
31	4.44	44.999954346013600	-64.300407888252500
31	4.89	45.000236579154500	-64.302862829178900
31	4.89	44.998488244005400	-64.287432748660100
31	4.96	44.998878014858600	-64.291376564146700
31	5.04	44.999828872469700	-64.295070734057200
31	5.19	45.000607441266500	-64.297536847830100
31	5.33	45.003454984371000	-64.276087619400900
31	5.48	45.006824028782300	-64.274413261738900
31	5.85	45.008621866250900	-64.274540595407500
31	6.15	45.014256112147200	-64.264431622768300
31	6.67	45.017895329324800	-64.260750287697200
31	6.89	45.047829720508200	-64.279856863341200
31	7.11	45.048050376397300	-64.278736461958900
31	7.41	44.982514680741800	-64.204512012351200
31	7.63	44.974975789548000	-64.209861126707700
31	8.15	44.968652327612900	-64.213979885815500
31	8.15	44.935672594995000	-64.297730158466500
31	8.15	44.940332799964900	-64.289098708651500
31	9.33	44.941997908905800	-64.281684089858300
31	9.63	44.931636050420400	-64.203396048364000
31	12.59	44.931932732004700	-64.202202359045600
31	14.81	44.931597253882900	-64.201084360411100
31	17.78	44.931260830831800	-64.200055234551300

Map #	Rn Stream Water (Bq/L)	Latitude	Longitude
31	19.26	44.931122157077300	-64.198230323207300
31	20.00	44.931816560847000	-64.189178978605400
31	22.96	44.932198129650300	-64.191942159889900
31	31.11	44.932279354898400	-64.193232614196400
31	40.74	44.931726097472100	-64.194820998525700
31	51.11	44.931327362662800	-64.196723639214300

Rn Soil Gas (Bq/L): 1136 Data Points

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
24	-999.00000	45.089150908433300	-64.211586610466700
24	-999.00000	45.089123429625900	-64.206722861546700
24	-999.00000	45.089150407380200	-64.209382187747900
24	-999.00000	45.089150407380200	-64.209934137306500
24	-999.00000	45.089134637392800	-64.211164196322900
24	-999.00000	45.089134637392800	-64.208041738819800
24	-999.00000	45.089118867405400	-64.207757879046800
24	-999.00000	45.089134637392800	-64.207442479299000
24	-999.00000	45.089150407380200	-64.207142849538600
24	-999.00000	45.089134637392800	-64.206922069715200
24	-999.00000	45.089118867405400	-64.208372908555000
24	-999.00000	45.089134637392800	-64.208640998340600
24	-999.00000	45.089150407380200	-64.208924858113600
24	-999.00000	45.089150407380200	-64.209177177911900
7	-999.00000	45.046330269558600	-64.184164788168800
7	-999.00000	45.047172749209400	-64.186845405239400
7	-999.00000	45.048627941333400	-64.191364159729900
7	-999.00000	45.048321585096800	-64.191823694084800
7	-999.00000	45.047785461682700	-64.188568659070500
7	-999.00000	45.048168406978500	-64.189832378546700
7	-999.00000	45.047909903874600	-64.189033183136600
7	-999.00000	45.048015529445200	-64.189334970481100
7	-999.00000	45.048090976281300	-64.189591489724000
7	-999.00000	45.048377674258600	-64.190481762390500
7	-999.00000	45.048287138055300	-64.190164885678700
7	-999.00000	45.048528567930900	-64.190904264672900
7	-999.00000	45.046894113492900	-64.185984935529000
7	-999.00000	45.046795067312800	-64.185613512353600
7	-999.00000	45.046646498042600	-64.185217327633200

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	-999.00000	45.046489674924100	-64.184705589036000
7	-999.00000	45.044550020563800	-64.178789643237100
7	-999.00000	45.045447626571000	-64.181461826637700
7	-999.00000	45.045519847743900	-64.181740394019200
7	-999.00000	45.045034934153900	-64.180275335938600
7	-999.00000	45.044973030291300	-64.180068989730000
7	-999.00000	45.044807953324500	-64.179553124208700
7	-999.00000	45.044900809118300	-64.179821374279800
7	-999.00000	45.044725414841100	-64.179284874137600
7	-999.00000	45.044653193668100	-64.179078527929000
7	-999.00000	45.044622241736800	-64.178934085583100
7	-999.00000	45.045880953608900	-64.182823711614100
7	-999.00000	45.046118251748700	-64.183535606033600
7	-999.00000	45.046035713265300	-64.183329259825000
7	-999.00000	45.045963492092300	-64.183050692443500
7	-999.00000	45.045726193952500	-64.182318163403200
7	-999.00000	45.045643655469100	-64.182132451815500
7	-999.00000	45.045581751606500	-64.181957057538200
7	0.00000	45.045819049746300	-64.182638000026400
7	0.00000	45.045757145883800	-64.182472923059600
7	0.00000	45.045251597672800	-64.180915009185100
7	0.00000	45.045169059189400	-64.180677711045200
7	0.00000	45.045096838016400	-64.180461047526300
7	0.00000	45.045334136156300	-64.181100720772800
7	0.00000	45.045375405398000	-64.181317384291700
7	0.00000	45.042714602438900	-64.181876763818900
7	0.00000	45.045285199001500	-64.190401315655200
7	0.00000	45.043565167478000	-64.184655276279900
7	0.00000	45.044491338298400	-64.187755113311300
7	0.00000	45.044888268649900	-64.189078214483200

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00000	45.044737057087400	-64.188605678350400
7	0.00000	45.044585845524900	-64.188189846553500
7	0.00000	45.045020578767100	-64.189569652061400
7	0.00000	45.045209593220300	-64.190079991084800
7	0.00000	45.044056605056200	-64.186280800576900
7	0.00000	45.044188915173400	-64.186791139600300
7	0.00000	45.044321225290500	-64.187131365616000
7	0.00000	45.044415732517100	-64.187452690186300
7	0.00000	45.043924294939000	-64.185883870225300
7	0.00000	45.043810886267100	-64.185505841319000
7	0.00000	45.043716379040500	-64.185184516748700
7	0.00000	45.043640773259300	-64.184919896514300
7	0.00000	45.043085005487300	-64.183086871735300
7	0.00000	45.042915960693100	-64.182517128169500
7	0.00000	45.042959787121200	-64.182636085617300
7	0.00000	45.042997352631100	-64.182767564901700
7	0.00000	45.043034918140900	-64.182880261431200
7	0.00000	45.043066222732400	-64.182999218879100
7	0.00000	45.042778220490300	-64.182060081133100
7	0.00000	45.042828307836800	-64.182197821335800
7	0.00000	45.042859612428300	-64.182335561538600
7	0.00000	45.042890917019900	-64.182429475313200
7	0.00000	45.043304137628100	-64.183825660095500
7	0.00000	45.043260311199900	-64.183675398056100
7	0.00000	45.043210223853500	-64.183500092343500
7	0.00000	45.043166397425300	-64.183356091222500
7	0.00000	45.043122570997200	-64.183205829183200
7	0.00000	45.043366746811100	-64.184013487644700
7	0.00000	45.043429355994200	-64.184220097948800
7	0.00000	45.043479443340600	-64.184376620906400

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00000	45.043529530687100	-64.184545665700700
7	0.00000	45.041335078820800	-64.177279870006300
7	0.00000	45.042047258278100	-64.179596409779600
7	0.00000	45.041687255475500	-64.178445966040800
7	0.00000	45.041765516954300	-64.178719881216700
7	0.00000	45.041859430728900	-64.178993796392600
7	0.00000	45.041953344503500	-64.179338146899500
7	0.00000	45.041593341700900	-64.178164224717000
7	0.00000	45.041515080222100	-64.177882483393300
7	0.00000	45.041436818743200	-64.177616394365200
7	0.00000	45.042375956489200	-64.180739027370500
7	0.00000	45.042469870263800	-64.181012942546400
7	0.00000	45.042297695010300	-64.180441633750900
7	0.00000	45.042211607383600	-64.180167718575000
7	0.00000	45.042133345904800	-64.179870324955500
7	0.00000	45.038463348753800	-64.179553333484700
7	0.00000	45.037567717205900	-64.176269351142400
7	0.00000	45.038015532979900	-64.178030759853300
7	0.00000	45.037813980731200	-64.177176043341600
7	0.00000	45.037721183742000	-64.176906932072700
7	0.00000	45.037646946150600	-64.176582142610300
7	0.00000	45.037878938623700	-64.177472993707200
7	0.00000	45.037971735613000	-64.177825622266400
7	0.00000	45.038203728086100	-64.178716473363300
7	0.00000	45.038110931096900	-64.178345285406300
7	0.00000	45.038315084473200	-64.179161898911800
7	0.00000	45.036798620666700	-64.180049688339200
7	0.00000	45.039377948715700	-64.190676060819500
7	0.00000	45.039787842991900	-64.191974059360900
7	0.00000	45.043271944340000	-64.202255574123400

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00000	45.036440373069200	-64.182068281018300
7	0.00000	45.037899829403900	-64.186270417372100
7	0.00000	45.038643410799600	-64.188443962990400
7	0.00000	45.037175314197800	-64.184135004133100
7	0.00000	45.039012492721700	-64.189578895138900
7	0.00037	45.039081364467900	-64.189801403857400
7	0.00037	45.039144938387500	-64.189976232136300
7	0.00037	45.039219107960400	-64.190209336508200
7	0.00037	45.039303873186500	-64.190447738706700
7	0.00037	45.038938323148800	-64.189361684246900
7	0.00037	45.038858855749300	-64.189128579875000
7	0.00037	45.038779388349800	-64.188884879849900
7	0.00037	45.038699920950300	-64.188667668958000
7	0.00037	45.038241433612200	-64.187316074453100
7	0.00037	45.038353593987200	-64.187609827816100
7	0.00037	45.038423026600300	-64.187839489536300
7	0.00037	45.038497800183600	-64.188069151256500
7	0.00037	45.038561891826400	-64.188272108125500
7	0.00037	45.038155978088400	-64.187049025941200
7	0.00037	45.038086545475400	-64.186851410042500
7	0.00037	45.038022453832500	-64.186664476084200
7	0.00037	45.037953021219400	-64.186466860185400
7	0.00037	45.037531084570700	-64.185222414120200
7	0.00037	45.037440288076700	-64.184976729489300
7	0.00037	45.037360173523100	-64.184704340007200
7	0.00037	45.037280058969600	-64.184496042168000
7	0.00037	45.037221308297000	-64.184282403358500
7	0.00037	45.037712677558800	-64.185751170173700
7	0.00037	45.037648585915900	-64.185574918155900
7	0.00037	45.037584494273100	-64.185382643227300

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00037	45.037771428231400	-64.185922081221300
7	0.00037	45.037835519874200	-64.186109015179500
7	0.00037	45.036842099410200	-64.183166140579000
7	0.00037	45.036922213963700	-64.183390461329000
7	0.00037	45.036991646576800	-64.183582736257500
7	0.00037	45.037055738219600	-64.183780352156300
7	0.00037	45.037114488892200	-64.183972627084800
7	0.00037	45.036778007767300	-64.182995229531400
7	0.00037	45.036724598065000	-64.182813636543400
7	0.00037	45.036526982166200	-64.182242152728000
7	0.00037	45.041298481883200	-64.196321555304300
7	0.00037	45.040532412543800	-64.194170041414900
7	0.00037	45.040320521024300	-64.193534366856700
7	0.00037	45.040124928852600	-64.192947590341400
7	0.00037	45.039961935376100	-64.192426011216700
7	0.00037	45.041086590363700	-64.195751078136700
7	0.00037	45.040907297539600	-64.195278397054900
7	0.00037	45.040776902758500	-64.194870913363800
7	0.00037	45.040646507977300	-64.194479729020200
7	0.00037	45.041950455789000	-64.198244878326600
7	0.00037	45.042341640132500	-64.199385832661900
7	0.00037	45.041787462312600	-64.197739598549600
7	0.00037	45.041575570793100	-64.197201720077300
7	0.00037	45.041428876664300	-64.196712739647800
7	0.00037	45.042586130347300	-64.200151902001300
7	0.00037	45.042814321214300	-64.200787576559500
7	0.00037	45.043026212733700	-64.201521047203700
7	0.00037	45.052061433137300	-64.201805771185400
7	0.00037	45.049396154658500	-64.193508206109900
7	0.00037	45.048214380238700	-64.197348972974400

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00037	45.044851351969400	-64.198700470316200
7	0.00037	45.050571643044200	-64.197254682462100
7	0.00037	45.049921255818000	-64.195230828575700
7	0.00037	45.049632342056200	-64.194338964354700
7	0.00037	45.049732833799500	-64.194627878116500
7	0.00037	45.049820764074800	-64.194904230410300
7	0.00037	45.049556973248800	-64.194087734996700
7	0.00037	45.049456481505600	-64.193786259767100
7	0.00037	45.050059431964900	-64.195620234080700
7	0.00037	45.050159923708100	-64.195946832246100
7	0.00037	45.050360907194500	-64.196524659769600
7	0.00037	45.050473960405600	-64.196939188210300
7	0.00037	45.051365824626600	-64.199627342341200
7	0.00037	45.051466316369800	-64.199953940506700
7	0.00037	45.051730107195800	-64.200757874452300
7	0.00037	45.051931090682200	-64.201348263443700
7	0.00037	45.052006459489600	-64.201612054269600
7	0.00037	45.050976419121700	-64.198408879954800
7	0.00037	45.050850804442700	-64.198069720321400
7	0.00037	45.050737751231600	-64.197730560688100
7	0.00037	45.050662382424200	-64.197441646926400
7	0.00037	45.051064349397000	-64.198697793716500
7	0.00037	45.051152279672300	-64.198961584542400
7	0.00037	45.051240209947600	-64.199237936836300
7	0.00037	45.051315578755000	-64.199451481790600
7	0.00037	45.047167153980600	-64.193811382702900
7	0.00037	45.049836465909600	-64.202902745096500
7	0.00037	45.047656153981000	-64.195511667108100
7	0.00037	45.047575401687400	-64.195255951511500
7	0.00037	45.047232204439400	-64.194091772611400

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00037	45.047757094348100	-64.195915428576300
7	0.00037	45.047884952146400	-64.196305731329000
7	0.00037	45.047992621871300	-64.196655657934800
7	0.00037	45.048107020953900	-64.197039231329600
7	0.00037	45.050051489920700	-64.203634001977900
7	0.00037	45.049985773535900	-64.203344849884700
7	0.00037	45.049880627320200	-64.203134557453300
7	0.00037	45.049552045396200	-64.201925375972900
7	0.00037	45.048838047987000	-64.199533294435900
7	0.00037	45.048508654202100	-64.198458430506400
7	0.00037	45.048751365412000	-64.199221237166100
7	0.00037	45.048647346322100	-64.198961189441200
7	0.00037	45.048612673292100	-64.198735814746300
7	0.00037	45.048456644657200	-64.198215719296500
7	0.00037	45.048369962082200	-64.197920998541600
7	0.00037	45.048300616022200	-64.197695623846700
7	0.00037	45.048265942992200	-64.197504922181800
7	0.00037	45.049219451316800	-64.200816196545300
7	0.00037	45.049167441771800	-64.200538812305500
7	0.00037	45.049063422681900	-64.200313437610600
7	0.00037	45.048976740106900	-64.200036053370700
7	0.00037	45.048907394046900	-64.199758669130800
7	0.00037	45.049479499041700	-64.201717695324900
7	0.00037	45.049410152981700	-64.201474984115000
7	0.00037	45.049340806921800	-64.201266945935100
7	0.00037	45.049288797376800	-64.201093580785200
7	0.00037	45.045115031392400	-64.199598306367100
7	0.00037	45.046545293879200	-64.204907614083500
7	0.00037	45.045786821348300	-64.202090430397300
7	0.00037	45.044924073775000	-64.198990299770500

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
7	0.00037	45.045010688095900	-64.199298261800600
7	0.00037	45.045376393006700	-64.200587852801600
7	0.00037	45.045309026312600	-64.200366505092500
7	0.00037	45.045251283432000	-64.200193276450600
7	0.00037	45.045203164364800	-64.199971928741400
7	0.00037	45.045155045297600	-64.199779452472600
7	0.00037	45.045549621648600	-64.201242272115600
7	0.00037	45.045482254954500	-64.200982429152700
7	0.00037	45.045414888260500	-64.200780329070400
7	0.00037	45.045607364529300	-64.201444372197800
7	0.00037	45.045665107409900	-64.201656096093500
7	0.00037	45.045722850290600	-64.201896691429500
7	0.00037	45.046078931387900	-64.203205530057500
7	0.00037	45.046030812320700	-64.202974558534900
7	0.00037	45.045934574186200	-64.202705091758600
7	0.00074	45.045896078932500	-64.202512615489700
7	0.00074	45.045828712238400	-64.202291267780600
7	0.00074	45.046271407656700	-64.203850325558000
7	0.00074	45.046194417149100	-64.203638601662300
7	0.00074	45.046127050455100	-64.203407630139700
7	0.00074	45.046483131552400	-64.204639478260100
7	0.00074	45.046396517231400	-64.204379635297200
7	0.00074	45.046329150537300	-64.204129416147800
7	0.00074	45.047120107704500	-64.207043627155200
7	0.00074	45.047044921662000	-64.206727845776700
7	0.00074	45.046834400743000	-64.206006059768700
7	0.00074	45.046759214700400	-64.205750427224200
7	0.00074	45.046684028657900	-64.205524869096600
7	0.00074	45.046638917032400	-64.205314348177600
7	0.00074	45.046608842615400	-64.205148938884100

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00074	45.177479612148300	-64.161402896716000
33	0.00074	45.177639411985100	-64.162607270556500
33	0.00074	45.177808865767400	-64.163918276940500
33	0.00074	45.177956957119800	-64.165213651161800
33	0.00074	45.177524480113200	-64.161718525017100
33	0.00074	45.177565632225100	-64.162023263688600
33	0.00074	45.177594142524400	-64.162327745573500
33	0.00074	45.177676988687500	-64.162883606183000
33	0.00074	45.177705223600300	-64.163214898413600
33	0.00074	45.177833892678500	-64.164236488072200
33	0.00074	45.177874673498600	-64.164576975989800
33	0.00074	45.177915726780500	-64.164890654923400
33	0.00074	45.179229385942100	-64.165015768512400
33	0.00074	45.178729156871800	-64.165094950924200
33	0.00074	45.178995073317800	-64.165055682180000
33	0.00074	45.178463330230600	-64.165125282725100
33	0.00074	45.178209963541900	-64.165173745200800
33	0.00074	45.177754067571400	-64.165244891007100
33	0.00074	45.177794936596200	-64.165576442644500
33	0.00074	45.177991783878500	-64.165491075653100
33	0.00074	45.178831311097200	-64.163756261654900
33	0.00074	45.178596906419600	-64.163805116812500
33	0.00074	45.178274105891600	-64.163843232169100
33	0.00074	45.178039792244200	-64.163883150032500
33	0.00074	45.176849262223200	-64.164082348337100
33	0.00074	45.177203938630500	-64.164018069962000
33	0.00074	45.177520509853000	-64.163970890974800
33	0.00074	45.176698494658400	-64.162747491454400
33	0.00074	45.177015156436800	-64.162691369426400
33	0.00074	45.177356827213900	-64.162662570571700

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00074	45.176557752557100	-64.162755799477600
33	0.00074	45.176415200144200	-64.162786415875900
33	0.00074	45.176283937428900	-64.162794916718100
33	0.00074	45.178414260667400	-64.162496386247200
33	0.00074	45.178154665455000	-64.162535795209600
33	0.00074	45.177882520206400	-64.162566010084400
33	0.00074	45.178781301476400	-64.161216715083000
33	0.00074	45.178509156539500	-64.161246936521100
33	0.00074	45.178211638711300	-64.161285580272500
33	0.00074	45.177964684852000	-64.161325251616000
33	0.00074	45.177711501355800	-64.161355857676100
33	0.00074	45.177173531814800	-64.161416426538200
33	0.00074	45.176888565341300	-64.161464262020000
33	0.00074	45.176559443525500	-64.161502261132700
33	0.00074	45.177014506020000	-64.160269103626000
33	0.00074	45.177055754214000	-64.160564902274100
33	0.00074	45.177103320786000	-64.160860829741200
33	0.00074	45.177144566085400	-64.161156629213200
33	0.00074	45.176425609663800	-64.160364400157800
33	0.00074	45.176754820621900	-64.160317458204800
33	0.00074	45.176887823575700	-64.160293345155800
33	0.00074	45.178673291957600	-64.160025704094000
33	0.00074	45.178400874924700	-64.160082740890200
33	0.00074	45.178097036923000	-64.160121262288600
33	0.00074	45.177799428608700	-64.160168848155600
33	0.00074	45.177552565866600	-64.160199587643100
33	0.00074	45.177318344113000	-64.160230583629300
33	0.00074	45.179809835102800	-64.159539282980500
33	0.00074	45.179531460816500	-64.159560447804000
33	0.00074	45.179227804508500	-64.159581099214800

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00074	45.178949339442800	-64.159611200337600
33	0.00074	45.178814249222900	-64.159840858483600
33	0.00074	45.176286804531900	-64.159092372335800
33	0.00074	45.178546852565100	-64.158780693087100
33	0.00074	45.178262248505400	-64.158792796491400
33	0.00074	45.177945588481500	-64.158848941256900
33	0.00074	45.177648071314200	-64.158887597192700
33	0.00074	45.177388477153500	-64.158927022122300
33	0.00074	45.177122562465900	-64.158966318486200
33	0.00074	45.176844006745100	-64.159005358040800
33	0.00074	45.176571771507300	-64.159044525478700
33	0.00074	45.178819269004600	-64.158723649936100
33	0.00074	45.179085183554100	-64.158684351432300
33	0.00074	45.178694445765700	-64.157317779018200
33	0.00074	45.178428441036100	-64.157366020248800
33	0.00074	45.178092910693900	-64.157412852354800
33	0.00074	45.177795393944200	-64.157451515864700
33	0.00074	45.177485236153800	-64.157489922864200
33	0.00074	45.177200269789100	-64.157537778163600
33	0.00074	45.176908982886400	-64.157585504936500
33	0.00074	45.176643249756100	-64.157606934654600
33	0.00074	45.176351962804800	-64.157654660665900
33	0.00074	45.176117651001800	-64.157694602773500
33	0.00074	45.179080540100500	-64.157271970346800
33	0.00074	45.175960397402500	-64.156368586655200
33	0.00074	45.176213579850700	-64.156337959245600
33	0.00074	45.178530234671800	-64.156054132234100
33	0.00074	45.178296013907100	-64.156085145691500
33	0.00074	45.177985856525200	-64.156123560401600
33	0.00074	45.177663058096100	-64.156161718881900

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00074	45.177346670630300	-64.156191068471100
33	0.00074	45.176352380422900	-64.155116249400500
33	0.00074	45.176086557223400	-64.155146626686100
33	0.00074	45.175833375037000	-64.155177259325400
33	0.00074	45.174837153490600	-64.157883162894400
33	0.00074	45.175422819962400	-64.157794481103300
33	0.00074	45.175596973729600	-64.157764493158000
33	0.00074	45.175272481349100	-64.157813779121800
33	0.00074	45.175106228200100	-64.157843926888300
33	0.00074	45.174979704741900	-64.157852535000400
33	0.00074	45.175984671170500	-64.157716487544200
33	0.00074	45.175865935128500	-64.157736426374000
33	0.00074	45.175747199081400	-64.157756365125800
33	0.00074	45.176438418915100	-64.161528768642100
33	0.00074	45.176317742386900	-64.161540519134000
33	0.00074	45.176151721874200	-64.161565551710300
33	0.00074	45.176026023167300	-64.161577199961800
33	0.00074	45.175905346627500	-64.161588950284000
33	0.00074	45.175774553516400	-64.161607596858800
33	0.00074	45.176319536809700	-64.160375816544100
33	0.00074	45.176173677359900	-64.160394159979400
33	0.00074	45.176027817904500	-64.160412503328400
33	0.00074	45.175881814134000	-64.160445047686000
33	0.00074	45.175766159856400	-64.160456902395100
33	0.00074	45.175610256038400	-64.160475041438800
33	0.00074	45.175484485250500	-64.160493792503600
33	0.00074	45.176181851674700	-64.159094650797100
33	0.00074	45.176040942496700	-64.159120199940400
33	0.00074	45.175910149734500	-64.159138852213900
33	0.00074	45.175764290442800	-64.159157198701100

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00074	45.175633497670100	-64.159175850812100
33	0.00074	45.175487638367200	-64.159194197130100
33	0.00074	45.175351679252300	-64.159226948142200
33	0.00074	45.175847681982900	-64.156382005309500
33	0.00074	45.175596285382600	-64.156405324503100
33	0.00074	45.175450426453100	-64.156423677894100
33	0.00074	45.175299401525900	-64.156456130506900
33	0.00074	45.175128503589600	-64.156466874903300
33	0.00074	45.174972528373000	-64.156492125125800
33	0.00074	45.174836857596400	-64.156496480604100
33	0.00074	45.174695948908900	-64.156522035633000
33	0.00074	45.174550161854500	-64.156533288090700
33	0.00074	45.174429413788000	-64.156552149214200
33	0.00074	45.174293599174500	-64.156570705253900
33	0.00074	45.174152834288100	-64.156582059198800
33	0.00074	45.174390979484600	-64.155386671418600
33	0.00074	45.174235076300700	-64.155404823954200
33	0.00074	45.174104212184400	-64.155430584578700
33	0.00074	45.174003553000700	-64.155449854188400
33	0.00074	45.175419518034700	-64.152026941759600
33	0.00074	45.175571114838700	-64.151937673110000
33	0.00111	45.175712595577400	-64.151855302021900
33	0.00111	45.174378570561700	-64.152638013768600
33	0.00111	45.174883870664700	-64.152342827276500
33	0.00111	45.175308313571500	-64.152095718704400
33	0.00111	45.175212390547100	-64.152143497786700
33	0.00111	45.175005191296200	-64.152267153440300
33	0.00111	45.174782853696600	-64.152397604728100
33	0.00111	45.174656582449900	-64.152466076274600
33	0.00111	45.174555422100500	-64.152535054102000

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
33	0.00111	45.174474637120800	-64.152576035405700
34	0.00111	45.138079491524000	-64.183272564713400
34	0.00111	45.136958544263500	-64.183898690197400
34	0.00111	45.137611283913900	-64.183534200429700
34	0.00111	45.137678389693700	-64.183495903763300
34	0.00111	45.137759536422500	-64.183457897493100
34	0.00111	45.137932668935400	-64.183352344937200
34	0.00111	45.138010305376300	-64.183314265687700
34	0.00111	45.137296970496600	-64.183711239645900
34	0.00111	45.137371096815900	-64.183673088658000
34	0.00111	45.137438305454400	-64.183624873214000
34	0.00111	45.137505359859800	-64.183591536320300
34	0.00111	45.137565342371200	-64.183563013655500
34	0.00111	45.137212262032100	-64.183754132151800
34	0.00111	45.137134625445500	-64.183792210292200
34	0.00111	45.137060447671900	-64.183835320488500
34	0.00111	45.137007434157200	-64.183868947424500
34	0.00111	45.137938702314600	-64.184463656534500
34	0.00111	45.138344788963600	-64.185593181157400
34	0.00111	45.138418923885000	-64.184200761846000
34	0.00111	45.138341287163600	-64.184238840146700
34	0.00111	45.138256527080600	-64.184286692236500
34	0.00111	45.138192931286900	-64.184325061018400
34	0.00111	45.138118804763300	-64.184363211683200
34	0.00111	45.138058719183100	-64.184401652970100
34	0.00111	45.138002246712900	-64.184430247668100
34	0.00111	45.137415945638700	-64.184765350855200
34	0.00111	45.137638479922300	-64.184636022800200
34	0.00111	45.137560791604900	-64.184679059566400
34	0.00111	45.137486664964000	-64.184717209365100

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
34	0.00111	45.137726750389000	-64.184588244419700
34	0.00111	45.137790294823400	-64.184554835811400
34	0.00111	45.137864524300400	-64.184506766439500
34	0.00111	45.138641502497000	-64.185420745149400
34	0.00111	45.138584875324500	-64.185464218048500
34	0.00111	45.138528402601400	-64.185492811944300
34	0.00111	45.138464806417200	-64.185531179553000
34	0.00111	45.138408282186400	-64.185564732953600
34	0.00111	45.137775984293100	-64.185933597726200
34	0.00111	45.137843090847900	-64.185895303784900
34	0.00111	45.137938485300300	-64.185837753555500
34	0.00111	45.138019735774200	-64.185789831268900
34	0.00111	45.138111568438600	-64.185737167532100
34	0.00111	45.138192818870800	-64.185689244961800
34	0.00111	45.138288161726700	-64.185636653665000
34	0.00111	45.137705418996600	-64.185966859236400
35	0.00111	45.167757705823200	-64.164760414030000
35	0.00111	45.168634057114600	-64.164084056301000
35	0.00111	45.169250754997300	-64.163607245692700
35	0.00111	45.168772163094800	-64.163961682118200
35	0.00111	45.168910037015300	-64.163862064067700
35	0.00111	45.169023648390700	-64.163773332149500
35	0.00111	45.169121277979100	-64.163672893650300
35	0.00111	45.167947443178100	-64.164611971779500
35	0.00111	45.168061600126600	-64.164515842048100
35	0.00111	45.168201994715400	-64.164407939518800
35	0.00111	45.168346866699400	-64.164287820595100
35	0.00111	45.168487198356300	-64.164186069263400
35	0.00111	45.169253557650200	-64.164589362628000
35	0.00111	45.169128289560200	-64.164494505052200

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
35	0.00111	45.168994505497800	-64.164381013506600
35	0.00111	45.168869174493400	-64.164292309153300
35	0.00111	45.168731038171800	-64.164178729938300
35	0.00111	45.168657617922900	-64.164121851877200
35	0.00111	45.168894094873600	-64.164409735478300
35	0.00111	45.168072690070600	-64.165562166446600
35	0.00111	45.168761987295600	-64.164985481321500
35	0.00111	45.168889263431100	-64.164883464837500
35	0.00111	45.169003357846300	-64.164793486447700
35	0.00111	45.169135111351500	-64.164679253107600
35	0.00111	45.169407259372600	-64.164457114620700
35	0.00111	45.168630296260300	-64.165093560920500
35	0.00111	45.168498605124600	-64.165201640025300
35	0.00111	45.168344965339700	-64.165327731689800
35	0.00111	45.168195677459100	-64.165453911442900
35	0.00111	45.167267104713700	-64.163028981000600
35	0.00111	45.167815552894800	-64.163458580756900
35	0.00111	45.167625567185100	-64.163307029324800
35	0.00111	45.167457153488300	-64.163174378362800
35	0.00111	45.167953689990400	-64.163572156381000
35	0.00111	45.168135033928200	-64.163717380071500
35	0.00111	45.168325081752400	-64.163862781972400
35	0.00111	45.168493431872800	-64.164001589301700
35	0.00111	45.167385541959000	-64.163794418764600
35	0.00111	45.167208299358900	-64.163673894006300
35	0.00111	45.167009484449300	-64.163534470552800
35	0.00111	45.169582696652900	-64.163900704702900
35	0.00111	45.169453138646900	-64.163799607033100
35	0.00111	45.169340487140200	-64.163748083387700
35	0.00111	45.169068502664700	-64.163527167168600

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
35	0.00111	45.167078521639600	-64.161991369583000
35	0.00111	45.166978949126800	-64.161081718068100
35	0.00111	45.166438684664200	-64.161505321102700
35	0.00111	45.164903149339100	-64.160344427587000
35	0.00111	45.166666476051200	-64.161678207143700
35	0.00111	45.166843511100900	-64.161826025970600
35	0.00111	45.166169003483300	-64.161271494220200
35	0.00111	45.165915711141300	-64.161098093232500
35	0.00111	45.165637284669400	-64.160888128981400
35	0.00111	45.165375857974000	-64.160678512064600
35	0.00111	45.165131186851800	-64.160493273276500
35	0.00111	45.166733919247900	-64.160898387857700
35	0.00111	45.166421858463900	-64.160651683618900
35	0.00111	45.166109430801100	-64.160441029202200
35	0.00111	45.168100485000900	-64.162789032900400
35	0.00111	45.168254610940300	-64.162901870206500
35	0.00111	45.168401095706800	-64.163012347485800
35	0.00111	45.168551923670600	-64.163135560389700
35	0.00111	45.168716103386200	-64.163265369098300
35	0.00111	45.168902514616200	-64.163408277914300
35	0.00111	45.167975057358300	-64.162681190339600
35	0.00148	45.167837387721800	-64.162583540583300
35	0.00148	45.167690966859300	-64.162466743595600
35	0.00148	45.167539945069500	-64.162362500050800
35	0.00148	45.167375828582600	-64.162226374771700
35	0.00148	45.167224935222900	-64.162109488714200
35	0.00148	45.168285530839100	-64.162061501427400
35	0.00148	45.167743922439500	-64.161658446974500
35	0.00148	45.167903824768200	-64.161769192837800
35	0.00148	45.168032550915900	-64.161866658905900

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
35	0.00148	45.168174500291200	-64.161983364146000
35	0.00148	45.167588556398500	-64.161541470730800
35	0.00148	45.167411022604500	-64.161405075000100
35	0.00148	45.167246712075800	-64.161287918378400
35	0.00148	45.167109169750800	-64.161177629521000
35	0.00148	45.166539223895800	-64.162460703327000
35	0.00148	45.166760978644200	-64.162647004060300
35	0.00148	45.167016193350300	-64.162841891061200
35	0.00148	45.165690367829000	-64.161811135902600
35	0.00148	45.165912364946600	-64.161973724842300
35	0.00148	45.166123181555900	-64.162136087699100
35	0.00148	45.166367297384900	-64.162322840588700
35	0.00148	45.165479550717500	-64.161648775497200
35	0.00148	45.165241184560900	-64.161446337928200
35	0.00148	45.169578079641000	-64.162735939801600
35	0.00148	45.169422360806200	-64.162653728397500
35	0.00148	45.169228074193800	-64.162515403036300
35	0.00148	45.169067167264600	-64.162393566090500
35	0.00148	45.168923030568300	-64.162272070948700
35	0.00148	45.168789752285700	-64.162182414010600
35	0.00148	45.168628764553000	-64.162068481483800
36	0.00148	45.142865296500500	-64.153171198963500
36	0.00148	45.142902197166900	-64.154382507703200
36	0.00148	45.143166524194400	-64.155732953264800
36	0.00148	45.144932827909800	-64.152440872171000
36	0.00148	45.146269615845500	-64.151937037813800
36	0.00148	45.145344447073900	-64.152256161582100
36	0.00148	45.145629914973300	-64.152165410166200
36	0.00148	45.145995690138300	-64.152011939879600
36	0.00148	45.146590911883500	-64.151798752703700

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
36	0.00148	45.147093568191400	-64.151615865693800
36	0.00148	45.147439742384300	-64.151506843527700
36	0.00148	45.147797748354600	-64.151353207977500
36	0.00148	45.143927836912400	-64.152774455240400
36	0.00148	45.143699267386800	-64.152866348021700
36	0.00148	45.143402256773000	-64.152972943603000
36	0.00148	45.143104921318200	-64.153111697840900
36	0.00148	45.144224685021400	-64.152683937884100
36	0.00148	45.144464471868800	-64.152608353162100
36	0.00148	45.144727342798400	-64.152501065834800
36	0.00148	45.147723951819900	-64.152549707589800
36	0.00148	45.147095791997700	-64.152762226954500
36	0.00148	45.146809674305000	-64.152917301202300
36	0.00148	45.146501283976900	-64.153023672549300
36	0.00148	45.146215165929100	-64.153178743929100
36	0.00148	45.145929697294600	-64.153269491140500
36	0.00148	45.145164653968700	-64.153511402897400
36	0.00148	45.144889915024600	-64.153666697891300
36	0.00148	45.144627367990400	-64.153741819545500
36	0.00148	45.144124220855300	-64.153972920794600
36	0.00148	45.143564499439000	-64.154170709801900
36	0.00148	45.143301789521700	-64.154261907432600
36	0.00148	45.143118900477000	-64.154338632148100
36	0.00148	45.148253283302200	-64.153583914735700
36	0.00148	45.147658936037100	-64.153829275657600
36	0.00148	45.147350219935900	-64.153967805669600
36	0.00148	45.147018906655700	-64.154089793927800
36	0.00148	45.146744654602100	-64.154196848331600
36	0.00148	45.146412690850100	-64.154383157197500
36	0.00148	45.146115678987600	-64.154489749648100

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
36	0.00148	45.145749900655900	-64.154643204325500
36	0.00148	45.145383959498800	-64.154812737580900
36	0.00148	45.145052645295100	-64.154934716959500
36	0.00148	45.144812531731600	-64.155042453297200
36	0.00148	45.144537953439600	-64.155181659713100
36	0.00148	45.144252483258000	-64.155272394400500
36	0.00148	45.143760875617700	-64.155487630549000
36	0.00148	45.148536074262600	-64.154646103150100
36	0.00148	45.148158916058000	-64.154799333198400
36	0.00148	45.147664797725700	-64.155013765983700
36	0.00148	45.143916355125300	-64.156756253747900
36	0.00148	45.143573496241800	-64.156894068656300
36	0.00148	45.146615165591100	-64.155508028922800
36	0.00148	45.146260928472500	-64.155645627561600
36	0.00148	45.145860358339000	-64.155862707720500
36	0.00148	45.145483035693000	-64.156032003415300
36	0.00148	45.145151720261300	-64.156153975903500
36	0.00148	45.144797319526100	-64.156307647511000
36	0.00148	45.144476895016300	-64.156478087820700
36	0.00148	45.144202477902200	-64.156601206367700
36	0.00148	45.148812246613600	-64.155777611980400
36	0.00148	45.148300691143600	-64.155984109231800
36	0.00148	45.146468650001300	-64.156791795432000
36	0.00148	45.146743067253500	-64.156668673142800
36	0.00148	45.147040243882500	-64.156546009992400
36	0.00148	45.147326040622200	-64.156423115469100
36	0.00148	45.149036369124500	-64.156624138064700
36	0.00148	45.148596619432200	-64.156830990369300
36	0.00148	45.147870340673400	-64.157190254561600
36	0.00185	45.146908848372200	-64.157659810365900

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
36	0.00185	45.146387251995200	-64.157908137936600
36	0.00185	45.145926856457500	-64.158143318029000
36	0.00185	45.145425902602700	-64.158363290547000
36	0.00185	45.145057672991700	-64.158542801357500
36	0.00185	45.144331534772700	-64.158887643261400
36	0.00185	45.149363140639500	-64.157522514369400
36	0.00185	45.147624485275000	-64.158350293873200
36	0.00185	45.147358452610400	-64.158488733337000
36	0.00185	45.142875724580500	-64.155909896189400
36	0.00185	45.142589633904800	-64.156019167278500
36	0.00185	45.142272869735000	-64.156142198826700
36	0.00185	45.143250760568600	-64.157068019406000
36	0.00185	45.142862180975100	-64.157247120258000
36	0.00185	45.143461336748000	-64.175110655397700
36	0.00185	45.143346202589900	-64.175174894224500
36	0.00185	45.142273392798500	-64.172108134535000
36	0.00185	45.142788731331800	-64.173726701080400
36	0.00185	45.142547749147800	-64.172932028536900
36	0.00185	45.142743365127800	-64.173554503362800
36	0.00185	45.142684436327700	-64.173391542480400
36	0.00185	45.142625702758200	-64.173209556343500
36	0.00185	45.142586774898900	-64.173066035953300
36	0.00185	45.142502186337900	-64.172778857703600
36	0.00185	45.142450086390900	-64.172606523550500
36	0.00185	45.142397888511900	-64.172443702465400
36	0.00185	45.142339153409600	-64.172261718188900
36	0.00185	45.142601224665100	-64.172314663582200
36	0.00185	45.142206072046500	-64.170793722405500
36	0.00185	45.142296279633500	-64.174468259926000
36	0.00185	45.142009447449000	-64.173548959240600

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
36	0.00185	45.141625139379100	-64.172285142632000
36	0.00185	45.142230717661300	-64.174295648463500
36	0.00185	45.142178620006800	-64.174123313798400
36	0.00185	45.142106618589400	-64.173922026782500
36	0.00185	45.142054618139100	-64.173740180125900
36	0.00185	45.141957641885100	-64.173348087858100
36	0.00185	45.141892273648100	-64.173156453331900
36	0.00185	45.141827100504900	-64.172945793915800
36	0.00185	45.141775000784600	-64.172773461662500
36	0.00185	45.141723096160200	-64.172582104428000
36	0.00185	45.141670898218500	-64.172419285447600
36	0.00185	45.142621637522600	-64.175569142751900
36	0.00185	45.142517347947800	-64.175233981887700
36	0.00185	45.142393349861800	-64.174850843598900
36	0.00185	45.144771692291800	-64.174393018675200
36	0.00185	45.144187607783100	-64.174714051765800
36	0.00185	45.144373968902000	-64.174598941048700
36	0.00185	45.144594113648700	-64.174472629479700
36	0.00185	45.143891479855000	-64.174862588205600
36	0.00185	45.143595107020500	-64.175034905505800
36	0.00185	45.144360092693500	-64.173492527207600
36	0.00185	45.144140071200200	-64.173606950768200
36	0.00185	45.143953833267200	-64.173710173017300
36	0.00185	45.143682952675700	-64.173859232270100
36	0.00185	45.143536013633400	-64.170133492316300
36	0.00185	45.143366853179800	-64.170213286950900
36	0.00185	45.143180618191600	-64.170316518969600
36	0.00185	45.142977796111900	-64.170395623745700
36	0.00185	45.14275777576400	-64.170510056626400
36	0.00185	45.142563370735400	-64.170589332394800

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
36	0.00185	45.142368841936800	-64.170680498585800
36	0.00185	45.142193817241800	-64.169689763293900
36	0.00185	45.142379686327200	-64.169622203806900
36	0.00185	45.142557261778100	-64.169542580815400
32	0.00185	45.153895840774100	-64.187772649515100
32	0.00185	45.154814684172900	-64.185664660694000
32	0.00185	45.154866265060200	-64.185551918365000
32	0.00185	45.154916040216600	-64.185432897538400
32	0.00185	45.154943344569500	-64.185725021218800
32	0.00185	45.154449682835000	-64.186520846366400
32	0.00185	45.154586077144100	-64.186240696590300
32	0.00185	45.154704450438400	-64.185943021277400
32	0.00185	45.154325241918900	-64.186818393208000
32	0.00185	45.154182156202000	-64.187158427147400
32	0.00185	45.154057713647500	-64.187455971186400
32	0.00185	45.155137040911000	-64.188687499877300
32	0.00185	45.154938286380300	-64.188546163773500
32	0.00185	45.154691359480100	-64.188369526564400
32	0.00185	45.154432567627500	-64.188166918877500
32	0.00185	45.154149421661100	-64.187972382094700
32	0.00185	45.153323799488700	-64.189181448513200
32	0.00185	45.153473135782800	-64.188824404672500
32	0.00185	45.153616226391700	-64.188484379185900
32	0.00185	45.153771805068000	-64.188110311350200
32	0.00185	45.152354994553600	-64.186657446921600
32	0.00185	45.153131734223600	-64.187230940138000
32	0.00222	45.153354665939200	-64.187381344168400
32	0.00222	45.153529335811900	-64.187505021911900
32	0.00222	45.153746022665100	-64.187672448445700
32	0.00222	45.152945199112400	-64.187081292993200

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00222	45.152740376267400	-64.186939842074500
32	0.00222	45.152535731423800	-64.186781246160200
32	0.00222	45.153329363836400	-64.184559650644500
32	0.00222	45.154034032201600	-64.185063030723100
32	0.00222	45.154238857362200	-64.185204478261600
32	0.00222	45.154437527198600	-64.185354374352800
32	0.00222	45.154642173955200	-64.185512970616200
32	0.00222	45.153853382452600	-64.184930660322500
32	0.00222	45.153666399543300	-64.184823884614300
32	0.00222	45.153491993511900	-64.184674495217100
32	0.00222	45.152950699920000	-64.185383572640600
32	0.00222	45.152832595171000	-64.185655520909900
32	0.00222	45.152665248382400	-64.185995045695800
32	0.00222	45.152522254219700	-64.186326498948800
32	0.00222	45.151734144030900	-64.188160146643900
32	0.00222	45.151876850298000	-64.187710793547300
32	0.00222	45.151964005152800	-64.187498234670600
32	0.00222	45.152075602434100	-64.187269033131600
32	0.00222	45.152168555263300	-64.187082317639100
32	0.00222	45.152261686000200	-64.186878455598200
32	0.00222	45.151875717583400	-64.188694723841200
32	0.00222	45.152034369527900	-64.189191072374400
32	0.00222	45.152172189726200	-64.189648403585300
32	0.00222	45.152273748877200	-64.189946348054600
32	0.00222	45.152414734469600	-64.190390886664400
32	0.00222	45.152529426441600	-64.190738412664200
32	0.00222	45.152606895671800	-64.191018709362500
32	0.00222	45.153118607921300	-64.190240474053200
32	0.00222	45.153388466097900	-64.189963117454800
32	0.00222	45.152920569997000	-64.190030553262300

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00222	45.152697373858100	-64.189905859225200
32	0.00222	45.152510842317000	-64.189756204591200
32	0.00222	45.152251874203100	-64.189570744527800
32	0.00222	45.150965966006800	-64.185741145147300
32	0.00222	45.151325605397000	-64.186895466601500
32	0.00222	45.151252340101700	-64.186647424053100
32	0.00222	45.151178517586200	-64.186452962181700
32	0.00222	45.151097668639000	-64.186204763511400
32	0.00222	45.151024514457300	-64.185946006864300
32	0.00222	45.151619218466600	-64.187834062625800
32	0.00222	45.151531124223700	-64.187553554426800
32	0.00222	45.151449943447700	-64.187337500880900
32	0.00222	45.151398870146100	-64.187143509776500
32	0.00222	45.150430331614700	-64.184004410401000
32	0.00222	45.150518547183200	-64.184274192015200
32	0.00222	45.150606538442100	-64.184565406236900
32	0.00222	45.150694528947700	-64.184856621342500
32	0.00222	45.150782296269900	-64.185169269213300
32	0.00222	45.150885339327200	-64.185471516498400
32	0.00222	45.153468573875600	-64.187092730987300
32	0.00222	45.153576972048600	-64.186836860648100
32	0.00222	45.153715118569800	-64.186493301972200
32	0.00222	45.153843512460500	-64.186163124685400
32	0.00222	45.153991267509300	-64.185819762087600
32	0.00222	45.154119377464900	-64.185516746713500
32	0.00222	45.154316381415200	-64.185058925048400
32	0.00222	45.154385557864900	-64.184876954570600
32	0.00222	45.152834285035400	-64.188003350907100
32	0.00222	45.152972505638800	-64.187653008428100
32	0.00222	45.153263571214700	-64.186932244154800

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00222	45.153381791266200	-64.186656200375500
32	0.00222	45.152577690261300	-64.184017590394400
32	0.00222	45.152777962325300	-64.184171174251600
32	0.00222	45.152987915131100	-64.184318167142800
32	0.00222	45.153178787541400	-64.184451180613700
32	0.00222	45.152085821858000	-64.185100994089800
32	0.00222	45.152179447453100	-64.184878782442300
32	0.00222	45.152327128169700	-64.184542217403000
32	0.00222	45.152454953002500	-64.184266372109200
32	0.00259	45.152686222374300	-64.183748135843600
32	0.00259	45.152804223634400	-64.183492461417100
32	0.00259	45.152922083595300	-64.183250368178800
32	0.00259	45.153045311137100	-64.182954044241700
32	0.00259	45.153178078127300	-64.182664708973300
32	0.00259	45.153286325818800	-64.182422413664400
32	0.00259	45.153374789469000	-64.182234049443100
32	0.00259	45.153473144539600	-64.182018718559300
32	0.00259	45.151804446080200	-64.183498936461900
32	0.00259	45.151676763896000	-64.183761198448800
32	0.00259	45.151543923783400	-64.184057314547000
32	0.00259	45.151381828705000	-64.184393577681000
32	0.00259	45.151273436019500	-64.184649443026500
32	0.00259	45.151131124033600	-64.184931773957300
32	0.00259	45.151008173394600	-64.185200920117300
32	0.00259	45.151912554756200	-64.183270230547700
32	0.00259	45.152025608959600	-64.183028041152800
32	0.00259	45.152158587113800	-64.182718338064700
32	0.00259	45.152286337258600	-64.182449280459700
32	0.00259	45.152419102959700	-64.182159947797800
32	0.00259	45.152542046536400	-64.181890788371000

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00259	45.152659973401600	-64.181641901762200
32	0.00259	45.152763343399100	-64.181406298466200
32	0.00259	45.150594240604900	-64.183867840552800
32	0.00259	45.150721993390500	-64.183598792862000
32	0.00259	45.150859356093400	-64.183329942858100
32	0.00259	45.151011767160300	-64.183000271744700
32	0.00259	45.151164106957800	-64.182677389780400
32	0.00259	45.151375374688100	-64.182233461512100
32	0.00259	45.151513015382100	-64.181937441277500
32	0.00259	45.151660265866300	-64.181641618226700
32	0.00259	45.151787943230500	-64.181379351481300
32	0.00259	45.151896188184800	-64.181137059520300
32	0.00259	45.149782220287100	-64.183844235933600
32	0.00259	45.149919865070000	-64.183548227832300
32	0.00259	45.150062173638500	-64.183265899306700
32	0.00259	45.150238892237200	-64.182909566407000
32	0.00259	45.150405928872400	-64.182559823358400
32	0.00259	45.150553462144300	-64.182236844227900
32	0.00259	45.150661497997300	-64.182014931690800
32	0.00259	45.150793981458900	-64.181752769647800
32	0.00259	45.150926604849000	-64.181477024598700
32	0.00259	45.151059227583300	-64.181201278263000
32	0.00259	45.151191849661800	-64.180925530640700
32	0.00259	45.151314579685600	-64.180676747045300
32	0.00259	45.151442395241200	-64.180400897756800
32	0.00259	45.151579890872300	-64.180118454616300
32	0.00259	45.151717526141500	-64.179822428128700
32	0.00259	45.151840253798500	-64.179573639851700
32	0.00259	45.148931405681100	-64.183853789609200
32	0.00259	45.149034780109600	-64.183618205631900

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00259	45.149147694232100	-64.183389610366600
32	0.00259	45.149265553892100	-64.183147532239600
32	0.00259	45.149427574930600	-64.182818068532100
32	0.00259	45.149599557168100	-64.182454848030800
32	0.00259	45.149756770964600	-64.182125281071100
32	0.00259	45.149923805204700	-64.181775538602100
32	0.00259	45.150041731757100	-64.181526663037300
32	0.00296	45.150179159861600	-64.181251020315800
32	0.00296	45.150297225749500	-64.180988560907000
32	0.00296	45.150434793002200	-64.180699333974300
32	0.00296	45.150562468192900	-64.180437070645600
32	0.00296	45.148944512119900	-64.180303828203000
32	0.00296	45.149027329022200	-64.180126713494300
32	0.00296	45.149161490284200	-64.179879127946900
32	0.00296	45.149275260984100	-64.179645426585700
32	0.00296	45.149394091784000	-64.179411828668900
32	0.00296	45.149492384436500	-64.179206418346500
32	0.00296	45.149595811132500	-64.178993960142600
32	0.00296	45.149719848833700	-64.178746160808900
32	0.00296	45.149828630483700	-64.178505199039300
32	0.00296	45.149273556225100	-64.180789870986800
32	0.00296	45.149402584412700	-64.180549332978000
32	0.00296	45.149506236683400	-64.180315423117800
32	0.00296	45.149635189983900	-64.180082034567100
32	0.00296	45.149748887216000	-64.179855483233500
32	0.00296	45.149862585351600	-64.179628931029000
32	0.00296	45.149961026125400	-64.179409216301600
32	0.00296	45.150069363384200	-64.179211164189400
32	0.00296	45.150275000382700	-64.179394233133500
32	0.00296	45.150156243475400	-64.179620683065600

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00296	45.150047533375600	-64.179854492463100
32	0.00296	45.149923788904400	-64.180073684535100
32	0.00296	45.149789405450000	-64.180342727489700
32	0.00296	45.149670498822000	-64.180583476551500
32	0.00296	45.149541396607200	-64.180831167100100
32	0.00296	45.149422710860100	-64.181050459626700
32	0.00296	45.150445508567900	-64.179547966137400
32	0.00296	45.150331664153200	-64.179788824037400
32	0.00296	45.150207845901400	-64.180015168919900
32	0.00296	45.150099282829100	-64.180234674610000
32	0.00296	45.149949643358500	-64.180510556116600
32	0.00296	45.150507454047400	-64.179921207913000
32	0.00296	45.150393756670300	-64.180147762088200
32	0.00296	45.150264729298600	-64.180388305144600
32	0.00296	45.150115015515800	-64.180671338606800
32	0.00296	45.150831921611100	-64.179870678065400
32	0.00296	45.150754535149200	-64.180012144843300
32	0.00296	45.150677000694600	-64.180167914531700
32	0.00296	45.151766670276000	-64.175124227315600
32	0.00296	45.150157349367200	-64.178336044163800
32	0.00296	45.150915624707700	-64.176820233125400
32	0.00296	45.150287058513500	-64.178099813348100
32	0.00296	45.150400997356100	-64.177858744942300
32	0.00333	45.150542293106700	-64.177584828890000
32	0.00333	45.150663131709500	-64.177329581810800
32	0.00333	45.150801000405300	-64.177060365554900
32	0.00333	45.151018448406400	-64.176606642216200
32	0.00333	45.151135662448300	-64.176375181011500
32	0.00333	45.151252826879800	-64.176148490775400
32	0.00333	45.151377088078700	-64.175888534963500

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00333	45.151487301802900	-64.175680791674800
32	0.00333	45.151604612236500	-64.175439782749100
32	0.00333	45.149760478366600	-64.178072259149700
32	0.00333	45.149881182680900	-64.177830139043400
32	0.00333	45.150002009508500	-64.177576088370600
32	0.00333	45.150135682587300	-64.177304402983100
32	0.00333	45.150273637284700	-64.177026838404200
32	0.00333	45.150402965368500	-64.176766993189600
32	0.00333	45.150532538682600	-64.176483287484600
32	0.00333	45.150653178239200	-64.176247125559100
32	0.00333	45.150769535111400	-64.176016840674200
32	0.00333	45.150872983531000	-64.175810153919900
32	0.00333	45.150985241570800	-64.175567850719000
32	0.00333	45.151097376318000	-64.175337476337800
32	0.00333	45.151310978154700	-64.175502953827700
32	0.00333	45.151198781658000	-64.175739293628000
32	0.00333	45.151073799500100	-64.175987301836800
32	0.00333	45.150957319801700	-64.176229517740000
32	0.00333	45.150832398047800	-64.176471558960400
32	0.00333	45.150724604743200	-64.176690087181800
32	0.00333	45.150612344350800	-64.176932387036500
32	0.00333	45.150405738172900	-64.178544941617300
32	0.00333	45.150543695862100	-64.178267378795600
32	0.00333	45.150651676753000	-64.178030959785300
32	0.00333	45.150780761025100	-64.177794974589300
32	0.00333	45.150914311624400	-64.177535215790400
32	0.00333	45.151056426176900	-64.177263699822300
32	0.00333	45.151159815352500	-64.177062979235000
32	0.00333	45.150259215127000	-64.178834258645900
32	0.00333	45.150464370275800	-64.178999572544900

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00333	45.150662404934300	-64.178627791334900
32	0.00333	45.150804645151500	-64.178344349616000
32	0.00333	45.150933976215900	-64.178084505054100
32	0.00333	45.151080374355800	-64.177807112449100
32	0.00333	45.151209642707800	-64.177553230302000
32	0.00333	45.151317314661400	-64.177346631720900
32	0.00333	45.151459613231800	-64.177057218613500
32	0.00333	45.150562530280500	-64.179305867417700
32	0.00333	45.150704587403700	-64.179040322429400
32	0.00333	45.150821011426200	-64.178804078287000
32	0.00333	45.150958722162300	-64.178550373542300
32	0.00333	45.150751231536400	-64.179429081688900
32	0.00333	45.150880318667600	-64.179193099302300
32	0.00370	45.151001025359700	-64.178950976917000
32	0.00370	45.150964394647700	-64.179636327339600
32	0.00370	45.151063628785500	-64.179429559507000
32	0.00370	45.151166898534600	-64.179240772664200
32	0.00370	45.151309078688400	-64.178963294929000
32	0.00370	45.151110827541300	-64.179764637615400
32	0.00370	45.151214344295500	-64.179551991668300
32	0.00370	45.151343924487700	-64.179268288428100
32	0.00370	45.151344325531100	-64.179638199634800
32	0.00370	45.151464909955900	-64.179408006100000
32	0.00370	45.151823807394600	-64.177357061204100
32	0.00370	45.152054227759200	-64.177528861026900
32	0.00370	45.152179090260800	-64.177292782041700
32	0.00370	45.152286884737100	-64.177074249476700
32	0.00370	45.151907707217300	-64.177818188967900
32	0.00370	45.151482461845300	-64.179036972774600
32	0.00370	45.151751955489100	-64.178490654790600

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00370	45.152047980206600	-64.177929962657900
32	0.00370	45.152188231389300	-64.177634538905900
32	0.00370	45.152322744601700	-64.177383742644200
32	0.00370	45.152435692238000	-64.177177248385700
32	0.00370	45.153534927510700	-64.170861974430400
32	0.00370	45.153409001920200	-64.171080804623900
32	0.00370	45.153311072654000	-64.171282236862600
32	0.00370	45.153181880637800	-64.171518968867800
32	0.00370	45.153063719328400	-64.171784567557400
32	0.00370	45.152953075977500	-64.171985736763600
32	0.00370	45.152819749178100	-64.172257339905200
32	0.00370	45.153908542565400	-64.171245590557300
32	0.00370	45.153796836845800	-64.171462064235000
32	0.00370	45.153696618601800	-64.171662765537200
32	0.00370	45.153588686662700	-64.171879314957900
32	0.00370	45.153469102116700	-64.172127638460500
32	0.00370	45.153361169309400	-64.172344186132500
32	0.00370	45.153241364659400	-64.172613845608400
32	0.00370	45.154262911931700	-64.171663699673300
32	0.00370	45.154143601559200	-64.171885353677900
32	0.00370	45.153993437222600	-64.172170402366300
32	0.00370	45.153873687731800	-64.172434730624700
32	0.00370	45.153742723528000	-64.172688156434500
32	0.00370	45.153607819832200	-64.172957507198700
32	0.00370	45.153499940268200	-64.173168719282700
32	0.00407	45.153380681834600	-64.173385032663400
32	0.00407	45.154606120279100	-64.172065577989800
32	0.00407	45.154482870279000	-64.172303158866400
32	0.00407	45.154351687244600	-64.172577926015200
32	0.00407	45.154209234676400	-64.172847125017200

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00407	45.154070501238800	-64.173121734685600
32	0.00407	45.153954907815100	-64.173348796869000
32	0.00407	45.153827825806800	-64.173591629304300
32	0.00407	45.149284314911300	-64.178131027466400
32	0.00407	45.149425787128700	-64.177836247049500
32	0.00407	45.149567346285300	-64.177532961371400
32	0.00407	45.149690238537600	-64.177288829209800
32	0.00407	45.149831358013900	-64.177028059932200
32	0.00407	45.149960529579000	-64.176758537825600
32	0.00407	45.150114033265200	-64.176463998107300
32	0.00407	45.150249308588200	-64.176186093262000
32	0.00407	45.150372198005700	-64.175941955264700
32	0.00407	45.150483051948900	-64.175697568751500
32	0.00407	45.150593642768400	-64.175478693143500
32	0.00407	45.150747144551200	-64.175184146729300
32	0.00407	45.150876749299400	-64.174872096109200
32	0.00407	45.148394781058700	-64.178010635228200
32	0.00407	45.150195130064100	-64.174432805994200
32	0.00407	45.148720372488800	-64.177370926719200
32	0.00407	45.148898561179700	-64.177017364600200
32	0.00407	45.149009329735600	-64.176781490172800
32	0.00407	45.149150710885200	-64.176495211484700
32	0.00407	45.149285723485100	-64.176242822619100
32	0.00444	45.149433120786100	-64.175956664954800
32	0.00444	45.149586797509000	-64.175645118124000
32	0.00444	45.149703668285200	-64.175400858044300
32	0.00444	45.149857080991300	-64.175114819763200
32	0.00444	45.149955635727600	-64.174895698088900
32	0.00444	45.150072242498300	-64.174676946518100
32	0.00444	45.150913946029200	-64.173010090165400

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00444	45.151061422687700	-64.172715411907500
32	0.00444	45.151208723975700	-64.172437740229100
32	0.00444	45.151325849873200	-64.172167954376100
32	0.00444	45.151466870547100	-64.171915668936900
32	0.00444	45.150920146542800	-64.172406305490900
32	0.00444	45.150831983695900	-64.171613459469600
32	0.00444	45.150712594337900	-64.170930551494300
32	0.00444	45.151066964020600	-64.174518760030400
32	0.00444	45.151238951682600	-64.174182059013700
32	0.00481	45.150988228368200	-64.173981276564200
32	0.00481	45.150914808546400	-64.173511950079200
32	0.00481	45.150741803595000	-64.175702889200500
32	0.00481	45.150852919645100	-64.175432988673300
32	0.00481	45.150988455040800	-64.175129565743500
32	0.00481	45.152765248308600	-64.169730702238700
32	0.00481	45.152642371982200	-64.169974863970900
32	0.00481	45.152531181523400	-64.170253288002400
32	0.00481	45.152930601576900	-64.170040304841900
32	0.00481	45.152789149190700	-64.170335122853200
32	0.00481	45.152660079743700	-64.170596168710200
32	0.00481	45.152531184099400	-64.170840204872000
32	0.00481	45.152420340406300	-64.171084609688800
32	0.00481	45.152279059831800	-64.171362414023500
32	0.00481	45.153251798565000	-64.170412642443700
32	0.00481	45.153147234792000	-64.170631661329800
32	0.00481	45.153030199641100	-64.170892954593900
32	0.00481	45.152907320848900	-64.171137114897600
32	0.00481	45.152766040135700	-64.171414921441900
32	0.00481	45.152636880988300	-64.171684468974900
32	0.00519	45.152519843463700	-64.171945757723500

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00519	45.152415276794000	-64.172164770968700
32	0.00519	45.154891948424800	-64.172462234968500
32	0.00519	45.154769066269900	-64.172706399701000
32	0.00519	45.154621764249600	-64.172984087780100
32	0.00519	45.154492688763100	-64.173245135817300
32	0.00519	45.154333175696500	-64.173539583147100
32	0.00519	45.155266508320500	-64.172912251967800
32	0.00519	45.155119293166100	-64.173181437263600
32	0.00519	45.154965797726600	-64.173476011482400
32	0.00519	45.154824598744600	-64.173745317442800
32	0.00519	45.152559259381700	-64.177475494941700
32	0.00519	45.152405665339200	-64.177778548569600
32	0.00519	45.152203228833300	-64.178148642124700
32	0.00519	45.152018668033100	-64.178536113462200
32	0.00519	45.151810387226300	-64.178889069486700
32	0.00519	45.151621387162500	-64.179123337936400
32	0.00519	45.152744573369500	-64.177598396417500
32	0.00556	45.152560628468800	-64.177926343537600
32	0.00556	45.152370401927400	-64.178279677158600
32	0.00556	45.152161770792300	-64.178666652984900
32	0.00556	45.151990033418200	-64.178977833168600
32	0.00556	45.151891734319500	-64.179171442967100
32	0.00556	45.151811926443900	-64.179322903851700
32	0.00556	45.152316820548300	-64.178805945493600
32	0.00556	45.152507048698600	-64.178452613984400
32	0.00556	45.152709222983200	-64.178108032359800
32	0.00556	45.152194188439600	-64.179024572887800
32	0.00556	45.152894360769100	-64.178247944777700
32	0.00556	45.152740589149300	-64.178568006572100
32	0.00556	45.154554135754100	-64.179549596211800

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00556	45.154459801372900	-64.179780465825500
32	0.00556	45.154365245790900	-64.179987494517800
32	0.00556	45.154279794559300	-64.180207771699400
32	0.00556	45.154166421391400	-64.180447063515400
32	0.00593	45.154057465045600	-64.180706037366700
32	0.00593	45.153958017887400	-64.180939084353800
32	0.00593	45.153835133388900	-64.181204299131400
32	0.00593	45.153435773502700	-64.180947888542200
32	0.00593	45.153568234607600	-64.180650220155900
32	0.00630	45.153672166028300	-64.180430327915400
32	0.00630	45.153785741583900	-64.180171450621400
32	0.00630	45.153908556242200	-64.179912762980400
32	0.00630	45.153756230344600	-64.180791244054800
32	0.00630	45.153902820554900	-64.180467743110400
32	0.00630	45.154002266758200	-64.180234695506700
32	0.00630	45.154036292556900	-64.180072133281000
32	0.00630	45.154075342736700	-64.179870491014100
32	0.00667	45.154114257664100	-64.179681906870900
32	0.00667	45.154088561944500	-64.179485458905900
32	0.00667	45.154195020606400	-64.179468063419000
32	0.00667	45.154187871313500	-64.179265467226600
32	0.00667	45.154169679801400	-64.181472435170800
32	0.00667	45.154264845896400	-64.181206646742700
32	0.00667	45.154355391541600	-64.180940761991200
32	0.00667	45.154459796091800	-64.180675162611500
32	0.00704	45.154549935555900	-64.180448451598500
32	0.00704	45.154667793613200	-64.180222312096600
32	0.00704	45.154762282153400	-64.180021811992100
32	0.00704	45.154042755969400	-64.18123471110800
32	0.00741	45.153228728862000	-64.180414641902500

Map #	Rn Soil Gas (Bq/L)	Latitude	Longitude
32	0.00741	45.153328242418600	-64.180175067816000
32	0.00741	45.153446369769800	-64.179922816015900
32	0.00741	45.153574140939500	-64.179631578966400
32	0.00741	45.153659186441100	-64.179450478508200
32	0.00741	45.153753808468000	-64.179236922277800
32	0.00741	45.153867381344500	-64.178978042191000
32	0.00741	45.153971242185500	-64.178764674893900
32	0.00741	45.154061243105500	-64.178551021112000
32	0.00778	45.152861773439800	-64.180152378067200
32	0.00778	45.152979833268500	-64.179906657330700
32	0.00778	45.152998852313700	-64.179854806093700
32	0.00778	45.153112021888700	-64.179635105183600
32	0.00778	45.153221043231600	-64.179369604385800
32	0.00778	45.153329592045000	-64.179149806370200
32	0.00778	45.153419391443900	-64.178955742962900
32	0.00815	45.153523387024700	-64.178729319004300
32	0.00815	45.153636823993600	-64.178483497222300
32	0.00815	45.153736198808200	-64.178256976322100
32	0.00852	45.153854321972800	-64.178004718689200
32	0.00889	45.152513768935100	-64.179844795848500
32	0.00926	45.152637737789100	-64.179586137018700
32	0.00926	45.152779199044500	-64.179311511782900
32	0.00963	45.152891364302300	-64.179077096396700
32	0.01074	45.152029865939400	-64.179720528974800
32	0.01074	45.152221446148800	-64.179626526257800
32	0.04444	45.152396966292900	-64.179409746626300
32	0.05556	45.152626060392000	-64.179038973025000

Rn Soil (point): 2 Data Points

Map #	Rn Soil (point)	Easting	Northing
31	True	399471.650390173000000	4977579.180843370000000
31	True	406693.429377333000000	4996866.462642010000000

Rn Soil (polygon): Data Points

<u>Map #</u>	<u>Rn Soil (polygon)</u>
9	True
9	True
9	True

Appendix D

MAP#	ASSESSMENT REPORT	YEAR	SOURCE	SCALE	REF.MAP#	TITLE	DIGITIZED
1	NOT MY AREA	Oct-80	Saarberg	10K	11D/03	Geochemistry Well Water	No
2	54-I-57(04) (433240)	Jul-79	Saarberg	10K	21A/16D	Geochemistry and Geology	Yes
3	NOT IN MY AREA		Saarberg				No
4	NOT IN MY AREA		Saarberg				No
5	AR 80-005 (434123)	Oct-80	Saarberg	10K	21H/01	Geochemistry Stream and Soil	Yes
6	SAME AS MAP 14		Saarberg				Yes
7	54-I-57(02) (433134)	Nov-78	Saarberg	2.5K	21A/16D	Radon and Geochemistry	Yes
8	NOT IN MY AREA		Saarberg				No
9	54-I-57(04) (433240)	Jul-79	Saarberg	10K	21A/16D	Radon Well Water Geochemistry	Yes
10	54-I-57(04) (433240)	Jul-79	Saarberg	10K	21A/16D	Uranium Well Water Geochemistry	Yes
11	AR 80-002 (434102)	Oct-80	Saarberg	10K	11E/04	Geochemistry of Well Water	Yes
12	54-I-57(04) (433240)	Nov-79	Saarberg	10K	21H/1A	Radon in Wells	Yes
13	54-I-57(04) (433240)	Nov-79	Saarberg	10K	21H/1A	Geochemistry	Yes
14	54-I-57(04) (433240)	Jul-79	Saarberg	10K	21A/16D	Stream Geochemistry	Yes
15	NOT IN MY AREA		Saarberg				No
16	NOT IN MY AREA		Saarberg				No
17	AR 80-002 (434102)	Oct-80	Saarberg	10K	11E/04	Geochemistry Well Water	Yes
18	NOT IN MY AREA		Saarberg				No
19	NOT IN MY AREA		Saarberg				No
20	AR 80-005 (434123)	Oct-80	Saarberg	10K	21H/01	Geochemistry Well Water	Yes
21	AR 80-005 (434123)	Oct-80	Saarberg	10K	21H/01	Geochemistry Well Water	Yes
22	54-I-05(04) (433135)	Nov-78	Saarberg	10K	21H/1D	Geochemistry	Yes
23	54-I-57(02) (433134)	Nov-78	Saarberg	2.5K	21A/16D	Geochemistry and Radon	No
24	54-I-57(02) (433134)	Nov-78	Saarberg	10K	21A/16D	Geochemistry and Radon	Yes
25	54-I-57(02) (433134)	Nov-78	Saarberg	2.5K	21A/16D	Radon and Geochemistry	No
26	AR 80-005 (434123)	Oct-80	Saarberg	10K	21H/01	Geochemistry Stream and Soil	Yes
27	54-I-57(04) (433240)	Oct-79	Saarberg	2.5K	21A/16D	Geochemistry and Radon	No
28	54-I-57(04) (433240)	Oct-79	Saarberg	2.5K	21A/16D	Radon and Gamma Survey	No
29	54-I-57(04) (433240)	Oct-79	Saarberg	2.5K	21A/16D		No
30	54-I-57(04) (433240)	Oct-79	Saarberg	2.5K	21A/16D	Radon and Gamma Survey	No
31	54-I-57(04) (433240)	Nov-79	Saarberg	50K	?21A/16	Index Compilation and Miscellaneous	Yes
32	54-I-05(04) (433135)	Nov-78	Saarberg	2.5K	21H/1D	Radon in Soil Gas	Yes
33	54-I-05(04) (433135)	Nov-78	Saarberg	2.5K	21H/1D	Radon in Soil Gas	Yes
34	54-I-05(04) (433135)	Nov-78	Saarberg	2.5K	21H/1D	Radon in Soil Gas	Yes
35	54-I-05(04) (433135)	Nov-78	Saarberg	2.5K	21H/1D	Radon in Soil Gas	Yes
36	54-I-05(04) (433135)	Nov-78	Saarberg	2.5K	21H/1D	Radon in Soil Gas	Yes

Appendix D

37	54-I-57(04) (433240)	Oct-79	Saarberg	2.5K	21A/16D	Radon and Gamma Survey	No
38	AR 80-002 (434102)	Oct-80	Saarberg	10K	11E/04	Geochemistry Stream and Soil	Yes
39	AR 80-002 (434102)	Oct-80	Saarberg	10K	11E/04	Geochemistry Stream and Soil	Yes
40	AR 80-002 (434102)	Oct-80	Saarberg	10K	21A/16	Geochemistry Stream and Soil	Yes

APPENDIX E
Components of Metadata for the Radiogenic Element Database

NAME: Radiogenic Element Database

General Description - See 6.3.1. Generation of the Radiogenic Element Database,
Appendix C, and Enclosure #1.

Source Data	Company	Saarberg-Interplan Canada
	Authors	R.H. Morse, D.G. Harder, H. Quarch, K. Rikeit, R.J. Ryan, C. Adams
	Year of Collection	1978-1981
	Time of Collection	Quarch et al. 1980a,b - October to August; Morse and Harder 1979 - April to August; Morse and Harder 1978a,b - September to November
	Method of Collection	See "Appendix -- Analytical Techniques" in Appendix A
	Aerial Coverage	See Figure 1.1
	Map Scale	1:2500-1:50 000, mainly 1:10 000
	Projection	M.T.M.
	Data Type	Primary; Non-digital; Units vary (see 6.3.1. Generation of the Radiogenic Element Database)
	Agency Obtained From	NSDNR
	Coordinate System	Latitude/Longitude
	Datum	-----
	Informal Information	Available through Dr. Bob Ryan at NSDNR
Input	File Formats	Shape
	Input Procedures	Head-up Digitizing onto 50K NTDB maps
	Media Specifications	PC??
	Data Model	Vector
	Software	ArcView v.3.1®.
	Hardware	PC??
	Known Input Errors	Data were taken from 10K maps and digitized onto 50K, therefore error at the 50K scale is eliminated (see 5.3.1. Quantitative Error Analysis)
Conversions	Transfer Formats	None - digitized directly from paper map to shape files
	Coordinate Transformations	Input as lat/long and transferred to UTM by Brian Fisher at NSDNR

	Data Model Conversions	None - digitized in as vector and will stay as vector
	Attribute Transformations	Units were changed (see 6.3.1. Generation of the Radiogenic Element Database)
Data Quality (Qualitative Only)	Positional Error	Eliminated through scale transformation (see above)
	Attribute Error	Any questionable values from the paper base maps were not entered; visual checks and histogram plots for outliers were done on the data
	Generalization	All legible values were included, no indication of generalization is present for the source maps
	Precision	Attribute data are entered directly off the source map, when data are transformed into Bq/L, data precision increases through increased significant figures (see Appendix C)
	Completeness	The area is complete for Rn in well water and Rn in stream water values only (see 6.2.0. U, Ra, and Rn Data Available in the Study Area)
	Consistency	All data were entered by the author, therefore if any bias exists, it is in one direction; however scale transformation eliminated the error (see above)
	Final Scale	1: 50 000

APPENDIX F

- I.** The following digital layers were obtained from Geomatics Canada, in Sherbrooke Quebec: NTDB water bodies, roads, streams, and railroads.

	NTDB Maps
Scale	50K
File Format	CCOGIF Interchange Format
Projection	UTM
Datum	NAD83
Data Type	Digital

NOTE: Statement on data quality can be obtained from the NTDB web site at <http://www.ctis.NRcan.gc.ca>. Data quality information provided with purchase of NTDB maps states:

The data are free of spatial inconsistencies such as gaps or overshoots and undershoots. The data offer the precision normally associated with maps from which original information is drawn. There are two types of accuracy required to qualify a NTDB data set, namely: Planimetric (X,Y) and Altimetric (Z). It is important to notice that these accuracies vary in accordance with the data source and the digitizing means used to produce the NTDB data set. In some cases, the data source is digital (Stereodigitized topographic map), otherwise it is analogical (Topographic paper map). In the first case, the digital data will be processed and structured to become subsequently processed and structured to become NTDB. Planimetric accuracy then falls into one of the two following categories: (1) Stereodigitized 1:50 000 NTDB data set that meet 10 meters for 90% of all data (generally urban areas). (2) Scanned 1:50 000 NTDB data set that meet 25 to 100 meters for 90% of all data (generally covers suburban areas). Altimetric accuracy is qualified in amore general manner as follows: It is estimated that for 1:50 000 NTDB data, altimetric accuracy varies between 5 (stereodigitized) and 20 meters (scanned) for 90% of the data.

- II.** The following digital layers were obtained from NSDNR: geology (500K), geology (25K), faults, and unconformities.

	GEOLOGY	GEOLOGY	STRUCTURAL
Scale	500K	25K	500K
Data Model	Vector	Vector	Vector
File Format	eoo	eoo	eoo
Projection	UTM	UTM	UTM
Datum	NAD27	NAD27	NAD27
Informal Information	Brian Fisher, NSDNR	Brian Fisher, NSDNR	Brian Fisher, NSDNR
Data Type	Digital	Digital	Digital

Explanation of geology maps:

The geology map generated at a scale of 1: 500 000 is polygon data and covers all of Nova Scotia. The geology map generated at a scale of 1: 25 000 is line data and only covers parts of Nova Scotia (see Appendix B for definition of polygon and line).