STEPHENVILLE PEAT MOSS LTD
REGISTRATION OF AN UNDERTAKING
TO DEVELOP PEATLAND #69

Prepared for: Stephenville Peat Moss Ltd.
Stephenville, NL

Prepared by: Three-D GeoConsultants Ltd.
Fredericton, NB

Don Gemmell, P.Geo.

November 16, 2006

File #: 0611

THREE - D GEOCONSULTANTS LIMITED

PO Box 3133, Station B, Fredericton, NB E3A 5G9
391 Brunswick Street
Tel: (506) 453-7700 Fax: (506) 453-9861
threedge@nbnet.nb.ca www.3d-geocon.com

November 16, 2006

File #: 0611

Stephenville Peat Moss Ltd.
PO Box 255
3 Neptune Drive
Stephenville, NL A2N 2Z4

Attention: Mr. Sergio Monticchio

Dear Mr. Monticchio

Re: *Registration of an Undertaking to Develop Peatland 69*

Please find attached our Peatland #69 Undertaking Registration application to the Newfoundland, Department of Environment and Conservation, Environment Assessment Division, on your behalf.

Yours truly
THREE-D GEOCONSULTANTS LTD.

Donald E. Gemmell, P.Geo.
Senior Geologist

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

1.0 NAME OF UNDERTAKING

1.1 PROPONENT INFORMATION

Name Of Undertaking:	Horticultural Peat Moss Development
Proponent:	Stephenville Peat Moss Ltd. P.O. Box 255 #3 Neptune Drive Stephenville, NL A2N 2Z4
Chief Executive Officer:	Sergio Monticchio, President Telephone: 416-676-5373 Fax: 709-643-2007 Email: monticchio@sympatico.ca
Contact Person for Purposes of Environmental Assessment:	Sergio Monticchio, President Telephone: 416-676-5373 Fax: 709-643-2007 Email: monticchio@sympatico.ca

2.0 THE UNDERTAKING

The accompanying registration package is for the proposed development of horticultural peat moss harvesting on lands designated by Newfoundland and Labrador, Department of Forest Resources and Lands, as Peatland 69, on Newfoundland Peatland Inventory NTS Map Sheet 12B/7-34.

Peat is administered under the Quarry Materials Act, Chapter Q-1.1, SNL, 1998, thus the right to the material is vested in the landowner. The bog is located entirely on crown lands and the proposed lease boundaries are within crown lands. Stephenville Peat Moss Ltd. is committed to meeting all requirements and obligations under the Acts and Regulations governing peatland development

2.1 NATURE OF THE UNDERTAKING

Stephenville Peat Moss Ltd. has recognised a potential market for horticultural peat and wishes to develop a horticultural peat operation on Peatland 69. They will develop the bog in accordance with standard practices of peatland development, harvest the peat, process it and bag it for sale and export within Canada and the United States of America.

2.2 PROJECT PURPOSE/RATIONALE/NEED

A 1999 report indicates that peat shipments in Canada were valued at almost $170 million (Paquette and Gauthier 2000). An International Peat Society (IPS) survey done in 1999 indicated that Canada ranked second in the global production of horticultural peat, after Germany. Ten percent of total global peat production occurs in North America. Canada

currently accounts for about 75 percent of this production with about 7.3 million cubic metres of peat harvested (Hood and Sopo 1999).

Canadian sphagnum production has undergone a steady growth over the past decade in the range of 3% to 5% and continues to be a major exporter of peat The United States continues to represent 85 to 90 percent of the export market for peat produced in Canada, while Japan consumes up to about 10 percent of Canadian exports with the remainder being sold to a variety of other markets (Canadian Sphagnum Peat Moss Association).

Peatlands are very common in Newfoundland and Labrador, covering approximately 5,400,000ha of land (approximately 13% of all lands in the province). Sphagnum peat moss is a significant economic resource which is virtually untouched in Newfoundland.

3.0 DESCRIPTION OF THE UNDERTAKING

3.1 GEOGRAPHIC LOCATION

Peatland 69 development submission is located approximately 3 kilometres southwest of St. George's, Newfoundland and 1.5 kilometres southeast of Shallop Cove, Newfoundland. The geographic location of the proposed undertaking (on Newfoundland Department of Forest Resources and Lands, Peatland Inventory NTS map 12B/7-34 and Forestry Inventory map 94-34) is depicted herein on Figure 1.

Peatland 69 is located in a wooded area and proposed access to the bog incorporates the usage of an existing all-season haulage road, extending southwesterly from Highway #461, gaining entry to the northwestern region of the bog. The existing access road was previously built and utilized as access to a surface mining quarry located approximately 3.5 kilometres southwest of the bog.

3.2 PHYSICAL FEATURES

The total area of Peatland #69 under application is 168.3 hectares, as defined by Peatland Inventory NTS map 12B/7-34, of which the total proposed development area is 109.3 hectares, as depicted on Figure 2. The development area outer perimeter boundary is dictated by a 1 meter peat depth limit as all area less than 1 meter depth around the perimeter of the bog is considered conservation buffer and borrow zones, and is left undisturbed to ensure reserves for the future restoration of the land is available while eliminating potential negative impacts to the local environment.

Figure 1.
Stephenville Peat Moss Ltd.
Shallop Cove, NL
Peatland #69 Location Map

N

0 500 1000
Meters

Prepared by:
THREE - D GEOCONSULTANTS LIMITED

Date: November 15, 2006

Flat Bay

St. Georges

Shallop Cove

C.N. Railroad

Existing Access Road

Peatland #69

Flat Bay Brook

Dribble Brook

Lake

5364000m

5362000m

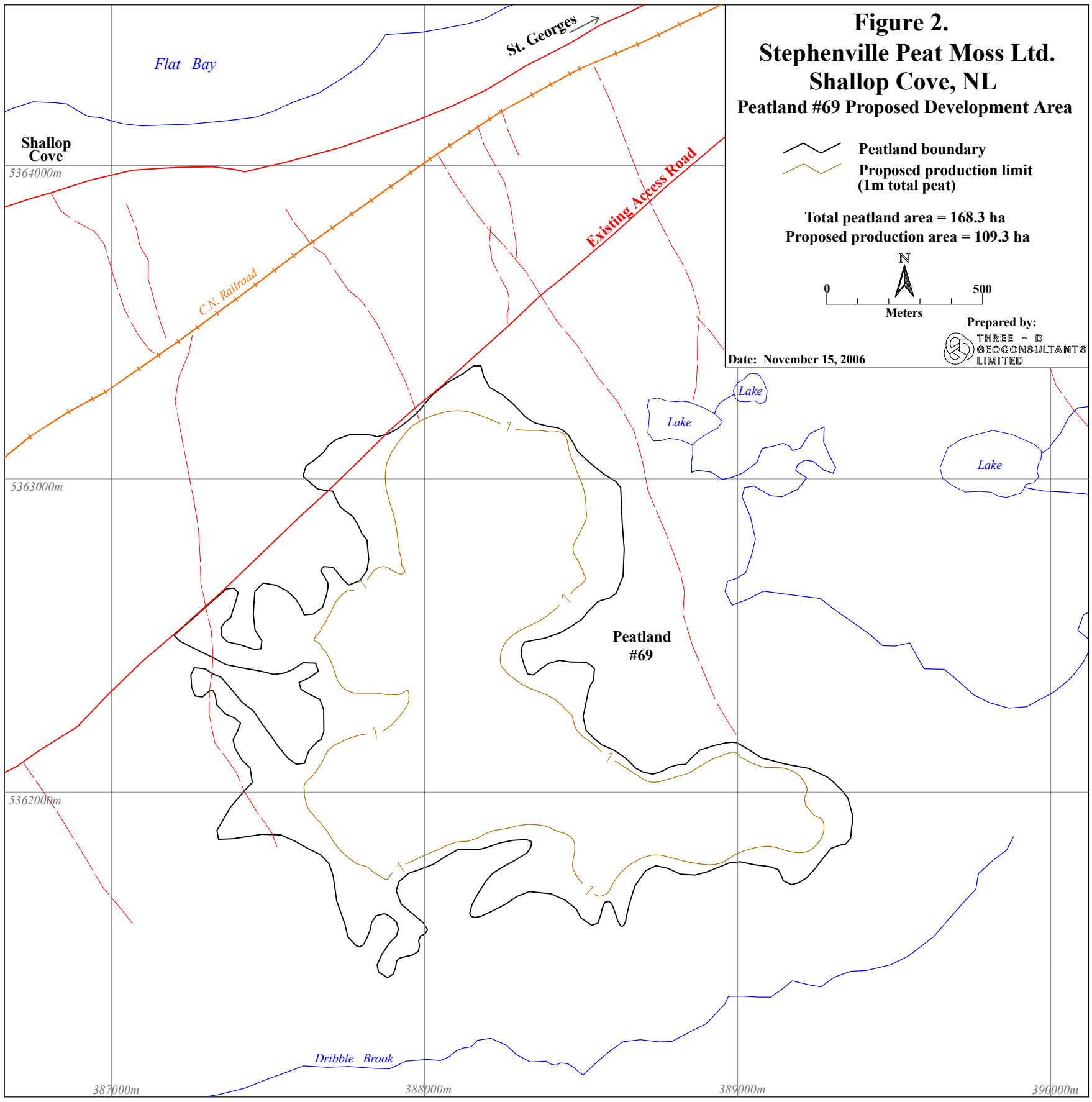
5360000m

384000m

386000m

388000m

390000m


Flat Bay
St. Georges
Shallop Cove
5364000m
C.N. Railroad
Existing Access Road
Lake
Lake
Lake
5363000m
Peatland #69
5362000m
Dribble Brook
387000m
388000m
389000m
390000m
Figure 2.
Stephenville Peat Moss Ltd.
Shallop Cove, NL
Peatland #69 Proposed Development Area
Peatland boundary
Proposed production limit (1m total peat)
Total peatland area = 168.3 ha
Proposed production area = 109.3 ha
N
0
500
Meters
Prepared by:
THREE - D GEOCONSULTANTS LIMITED
Date: November 15, 2006

Peatland #69 development will entail the construction of primary (main) and secondary (production field) drainage ditches within the proposed lease area, depicted in Figure 3, which allow for surficial water to be evacuated which creates a more stable working surface and enables the peat drying process to allow vacuum harvesting techniques to be utilized.

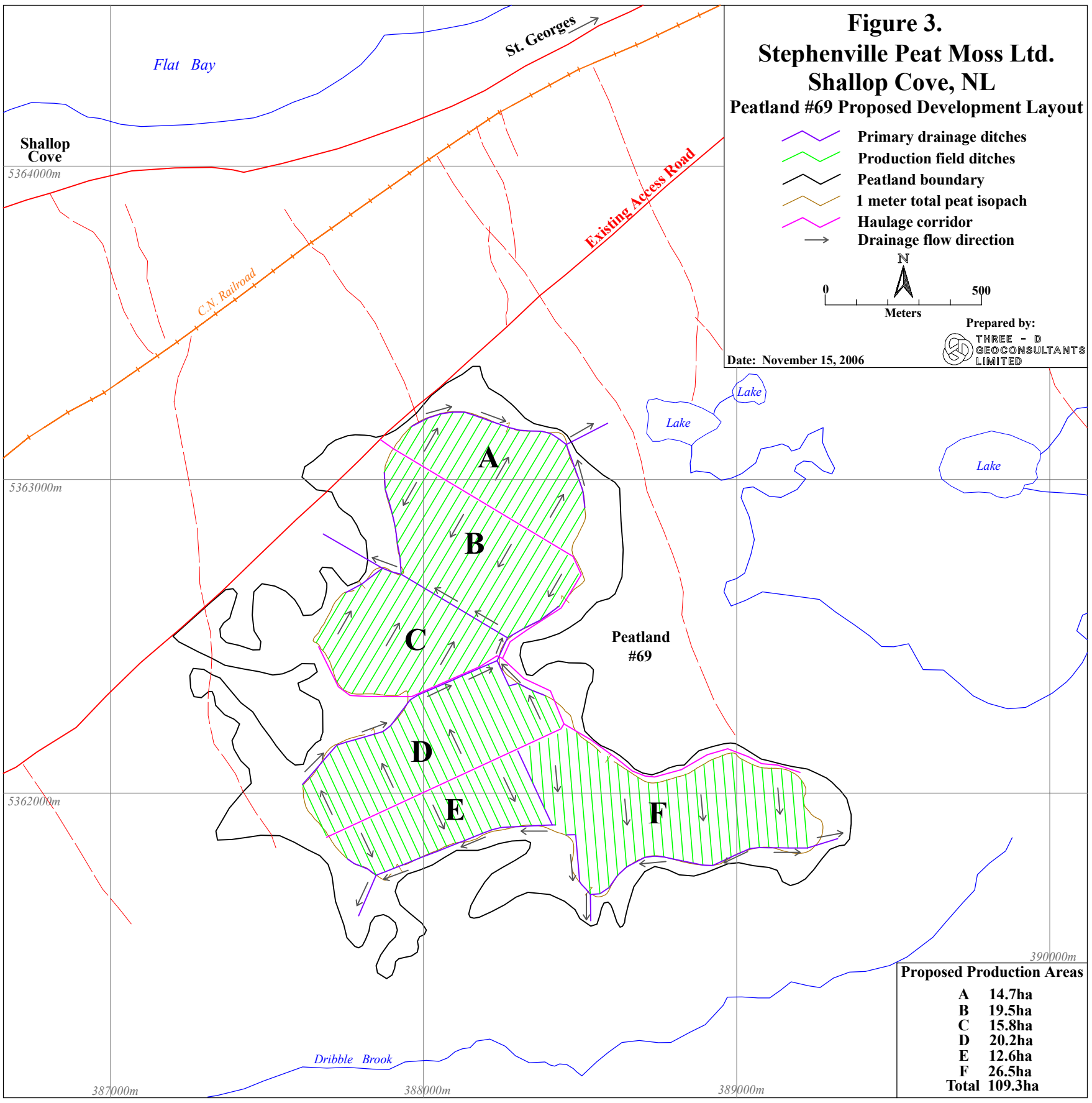
3.2.1 Drainage Network

One of the principal environmental concerns relative to peatland development is the impact of the drainage waters. In order to understand the potential impacts of the proposed development, a brief review of hydrology is provided. A typical sphagnum bog contains 90 - 95 % water by weight. At 90 % moisture, there is 1 part peat to 9 parts water. Drainage of peatlands reduces the moisture content to approximately 85%. Capillary action, interstitial and chemically-bound water and other factors combine to permit the peatland to retain such a high level of moisture.

Another important concept in peatland drainage is that a bog functions in a sponge-like manner rather than a lake. Perched water tables are a common feature of sphagnum bogs such as the one presently under consideration. Thus, ditching of one section of the bog does not adversely affect other portions of the bog. This can be likened to the squeezing of one end of the sponge while the other end remains saturated.

The cone of depression of the water table in proximity to the peatland drainage ditch typically affects a distance of 10 to 15 metres on either side and minimal effect beyond this distance. The cone of depression effect explains the need for closely spaced ditches in the production field layout for effective operations. Similarly, the limited distance which drainage impacts suggests limited affect on the water table in lands peripheral to the

Figure 3.
Stephenville Peat Moss Ltd.
Shallop Cove, NL
Peatland #69 Proposed Development Layout



- Primary drainage ditches
- Production field ditches
- Peatland boundary
- 1 meter total peat isopach
- Haulage corridor
- Drainage flow direction

N

0 500

Meters

Prepared by:

THREE - D GEOCONSULTANTS LIMITED

Date: November 15, 2006

Proposed Production Areas

A	14.7ha
B	19.5ha
C	15.8ha
D	20.2ha
E	12.6ha
F	26.5ha
Total	109.3ha

development area and narrow setbacks requirements from adjoining properties.

There are two types of ditches associated with peatland development. The primary ditches (main ditches) are typically 1 to 1.5 meters wide and 1.5 to 2 meters deep and are usually along the peripheral edge of the bog or where there is a division of flow regime or production unit groups due to access. The main ditches are usually constructed with low gradients, thus low flow regime which is conducive to settlement of suspended solids. The primary ditches are mainly constructed with track mounted excavators or similar equipment depending on the local conditions. The secondary ditches (field ditches) used in the operation are distributed evenly throughout each production unit, running parallel to each other and typically spaced at 30 metre intervals and connecting to the peripheral primary ditches, are typically V-shaped, with depths of approximately 1 metre and top width of 80 to 100 cm. The V-shaped ditching is typically constructed with a double wheel ditcher attached to a specially modified tractor with wooden half tracts for floatation on virgin peatlands.

Discharge of drainage waters from the production field flows from the secondary ditches into the primary ditches, along the primary ditches into distribution outlet ditches. The outlet ditches lead to and exit into the undisturbed peatland buffer zone of lowlands surrounding the operational area, using it as a filtering system prior to any water discharged entering the surrounding receiving bodies.

The volumes of water exiting the peatland will show an initial increase during construction, however, this is over a significant time span and with low gradient main ditches and outlet ditches within peripheral undeveloped peatlands will minimize any effect on the ultimate receiving bodies. It must also be noted that the development proceeds in stages and phases, thus only smaller areas will be under development at any particular time. Thus, the influence of the initial drainage is additionally mitigated by staged development.

Similarly, once each peatland production area is fully developed, rain events will runoff the peat fields more rapidly than in the virgin state, however the construction of secondary ditches, primary ditches and outlet ditches, which have been designed appropriately, will mitigate any surging effect from rainfall dewatering. Because of the secondary ditches, the upper 1 metre of peat would not be saturated and thus, would absorb a great deal of the rainfall. The infiltrated water would be retained for a period of time and be expected to gradually migrate to the ditches once the water levels in the ditches receded after the rainfall.

3.2.2 Topography

The natural topography of the peatland is kept intact as the development plan honours the natural regime of topography to assist in the drainage network design pattern to assist in productive and efficient dewatering.

3.2.3 Vegetation

The existing terrain of the proposed peat moss development consists of typical vegetation for peatlands with some small trees (spruce, fir, juniper, birch) scattered throughout the outer perimeter with the majority of ground cover being moss, ferns, grasses and shrubs.

3.2.4 Wildlife

Wildlife in the general area outlying the peatland area includes snow shoe hare, moose, spruce grouse and a variety of other bird species. With the peatland development area being located prominently within the open peatland region and little to no activity within the

59 hectares of peripheral undeveloped peatlands and surrounding wood lands, there is minimal negative effect on wildlife.

3.3 CONSTRUCTION/OPERATION

The proposed development layout (Figure 3) depicts the location and flow direction of the primary and secondary production field drainage ditches and the production field layout. The design of the proposed production fields is such to optimize equipment capabilities, efficient water drainage, and maximize harvesting volumes while minimizing impacts to the environment. Also illustrated is the proposed haulage corridor routes throughout the peatland development areas for harvesting equipment access throughout the development and between drainage patterns.

Peatland #69 will have approximately 137 production fields with secondary ditches being spaced every 30 metres. The production fields length is designed in accordance with the proposed harvesting equipment and any variation in length is due to the local topography and bog configuration. The proposed production area totals 109 hectares when completed, equivalent to 65% of the total bog area. The remaining 59 hectares (35 %) of undeveloped area of the peatland is considered conservation buffer and borrow zones, and is left undisturbed to ensure reserves for the future restoration of the land is available while eliminating potential negative impacts to the local environment.

3.3.1 Development Schedule

The development and operation of the undertaking is conducted in a staged development format with each stage being a predetermined area of production field development. The development sequence within each development area will commence with

the establishment of the outlet ditches followed by construction of the primary ditches then the secondary ditching. Once the drainage network is established in each unit, the individual fields will be contoured and prepared for production. The years following will consist of development and production of additional production fields until full production is attained.

The proposed development layout, shown on Figure 3, indicates the proposed sequence of peatland development by production areas identified as A through F. Stephenville Peat Moss Ltd intends to have an initial horticultural peat production rate of 16,000 jumbo bales (equivalent to ten - 6 cuft bales). Using the industry average for new development (2950 bales per hectare per year) requires development of productions units A, B and C initially with a proposed start date of initial development being May 1, 2007.

In year 2007, Stephenville Peat Moss Ltd wishes to complete the construction of the outlet, primary and secondary ditching and commence initial production of Area A (14.7 ha), Area B (19.5 ha) and Area C (15.8 ha). Development areas A, B and C comprise 50 ha of production area in total with 60 production fields of various lengths due to natural physiographic features. This requires a total of 2.3 km of primary and 16.3 km of secondary ditches to be constructed. It will take approximately 9.5 days to construct the primary ditches at a rate of 250 metres per day. While the secondary, at a rate of 475 metres per day, would take approximately 34.5 days to construct. Once the ditching is completed then the field development commences, with the removal of surface vegetation, rotovating of the surface layer of moss and the crowning of fields to facilitate drainage.

After the completion of the initial development areas (A, B & C), development of areas D, E and F will be developed as market conditions arise. This incremental volume in jumbo bales for each of the sections would be 6000, 3900, and 7900 respectively. Once fully

developed a production potential in the order of 32,500 jumbo bales/year could be realized for the entire peatland.

The ensuing years will facilitate the harvesting phase and according to resource based calculations, for 35+ years when developed. A gradual abandonment and restoration, upon depletion, will take place and will be done in accordance with all applicable Governmental Regulations. It is the intention of the company when it abandons the peatlands, to prepare a plan for submission to Government for approval prior to abandonment and restoration.

3.3.2 Operation Method

In Canada, peat moss is usually harvested from May to September with peat moss inventory being stocked during that period for the entire year. There are several steps in the process of peat moss harvesting and production. Following is a brief overview of the peat harvesting process;

The peat bog must initially be ditched starting with the primary (main) ditches which enables some surficial water to be evacuated assisting in the initial drainage of the area, thus creating a more stable working surface making it easier for heavy machinery to prepare the peat for harvesting.

The bog surface layer is then cleared of all vegetation such as trees, bushes, shrubs, plants and grasses. Then the secondary (field) ditches are established, typically using a V-ditcher with wooden half-tracks, parallel to each other throughout the bog spaced at approximately 30m intervals. The field ditching enables the additional water drainage required to sufficiently assist in drying the peat moss to enable the harvesting process.

The peat moss production fields are then crowned and the uppermost layer is raked (milled) using specialized equipment, such as; rototillers, harrows and machinery specifically designed for the peat moss industry.

Sufficient drying of the peat moss for harvesting is dependent on good drying weather (sun and wind). To facilitate the drying of the milled peat, hockey stick harrows are used to roll the peat to allow drying once dry enough, the peat moss is harvested by specially designed vacuum harvesters. The field length determines the type of vacuum harvesters to be utilized to maximize efficient production while minimizing dead time. Bog #69 configuration and field lengths are such that it lends itself to single-mouth vacuums as larger equipment would experience a high percentage of dead time and thus be inefficient. The vacuum harvesters dump the harvested peat moss into stockpiles on the field adjacent to haulage roads and then hauled to a plant where the peat moss is then screened and bagged for consumers.

Guidelines require that vegetated and/or treed buffer zones be maintained in the development of peatlands around the peat mining operation. The vegetated buffer zones should be a minimum of 50 metres and kept in their natural state except for access roads and drainage ditching, the buffer zone offers a natural wind break and natural filtration for airborne particles.

Peatland #69 is located within a remote wooded area with no private lands or dwellings in close proximity to the bog development area. The nearest permanent residential dwellings in proximity to the proposed operation are located a distance of 1km north from the development along Route 461 and 1.7km to the northeast. With prevailing winds from the southwest (Canadian Climate Normals, 1971 - 2000) during harvest season, 1.5 to 2 km

vegetated/forested buffer area separates the bog from the nearest private lands located to the northeast.

Stephenville Peat Moss Ltd's layout and harvesting methods and equipment selection will reduce dust movement, utilizing the vacuum harvesting method to recover the peat from the bog. The harvesting equipment used are standard one-mouth vacuum harvesters complete with dust collection systems. An example of vacuum harvester specifications are provided in Figure 4.

3.3.3 Peatland Resource Assessment and Vegetation Survey

Three-D GeoConsultants Ltd conducted a peatland resource assessment and vegetation survey of Peatland #69, on behalf of Stephenville Peat Moss Ltd. The resource assessment and vegetation survey was carried out between September 17th - 22nd, 2006 and involved the layout of a predetermined grid across the entire peatland area with stations located at 150m intervals along the grid lines (Figure 5). Each station was drilled from surface to total depth of peat, followed by in-fill drilling and probing in order to assess the quality and quantity of the peatland resource. Relative elevations for each station, as well as, visual observations were also taken to establish the natural peatland elevation contour gradient.

Each station was drilled using a Hiller Auger that collects 1 inch diameter, 50cm length sample. The station is sampled from surface to total depth in continuous 50cm samples with each station being identified and recorded for peat type, quality, wetness and depth. The survey utilized the standard system of rating the peat on the von Post scale (degree of decomposition) ranging from 1 to 10. Horticultural grade peat is within the 1 to 4 and 5-6 is sometimes used in mixes and for septic field systems, beyond 7 it is more of a dark brown to black organic soil. Each station is also probed in various locations in close proximity to

Figure 4. Example of Vacuum Harvester Specifications

SA

2 HEAD SUPER VACUUM HARVESTER

BENEFITS

- Easy to operate
- All aluminum piping
- All stainless steel elbows
- Loading capacity: 169 m3/h (6,000 cu. ft./h)
- Unloading time: 1 minute

SPECIFICATIONS

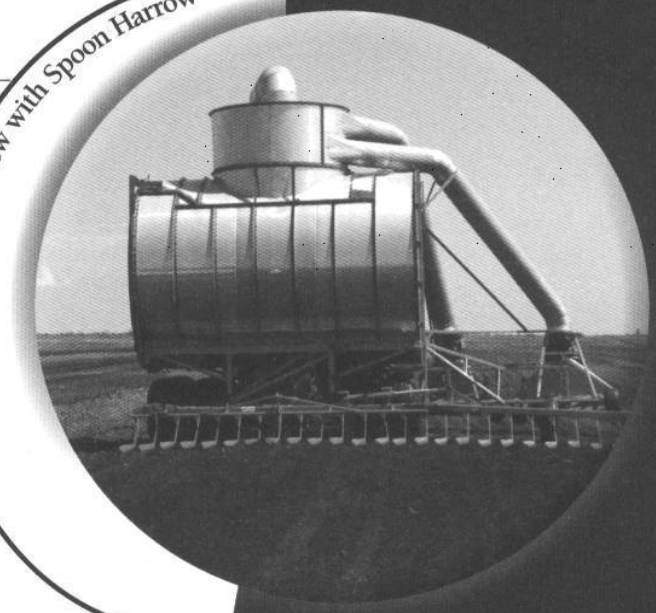
Length:	6.09 m (20')
Width:	3.65 m (12')
Height:	6.09 m (20')
Weight:	4,070 kg when empty (8,975 lbs.)
Working capacity:	3.03 ha/h (7,5 acres/h)
Working surface:	1 vacuum harvester per 24.28 ha (60 acres)
Working speed:	8 km/h (5 MPH)
Tank capacity:	30,8 m3 (1,100 cu. ft.)
Recommended tractor:	85 HP or more
PTO shaft:	540 RPM/minute
Tires:	(8) 16.5L16.1
Ground pressure:	32.6 kPa per square inch at 76 mm deep when full with peat moss weighing 96 kg/m^3 (4.75 lbs. / square inch at 3" deep when full with peat moss weighing 6 lbs./ft^3)
Nozzle:	(2), 1,83 m (6') wide each
Fan:	58,43 cm (23")

While unloading

OPTIONS

Tires
- (8), 21.5L16.1 for more flotation
- 24.1 KPa/square inch at 76 mm deep when full with peat moss weighing 96 kg/m3 (3.5 lbs./square inch at 3" deep when full with peat moss weighing 6 lbs./ft3)

Spoon Harrow
- Completely integrated at the rear of the SA
- Less manpower required
- Simultaneous field preparation and harvesting
- Reduces time between each harvest
- Preserves the peat fiber quality by limiting circulation on the field



Rear view with Spoon Harrow

Dust Collecting System
- Reduces peat dust nuisance
- Respects new environmental policies

High level detector
- Prevents peat overload in the tank

4 Head Motorized Vacuum Harvester
- Model SAM

Erin

1, Avenue Premier
Rivière-du-Loup, Québec G5R 6C1 CANADA
Phone: (418) 867-8883 / Fax: (418) 862-6642
E-mail: esl@erinsystems.com

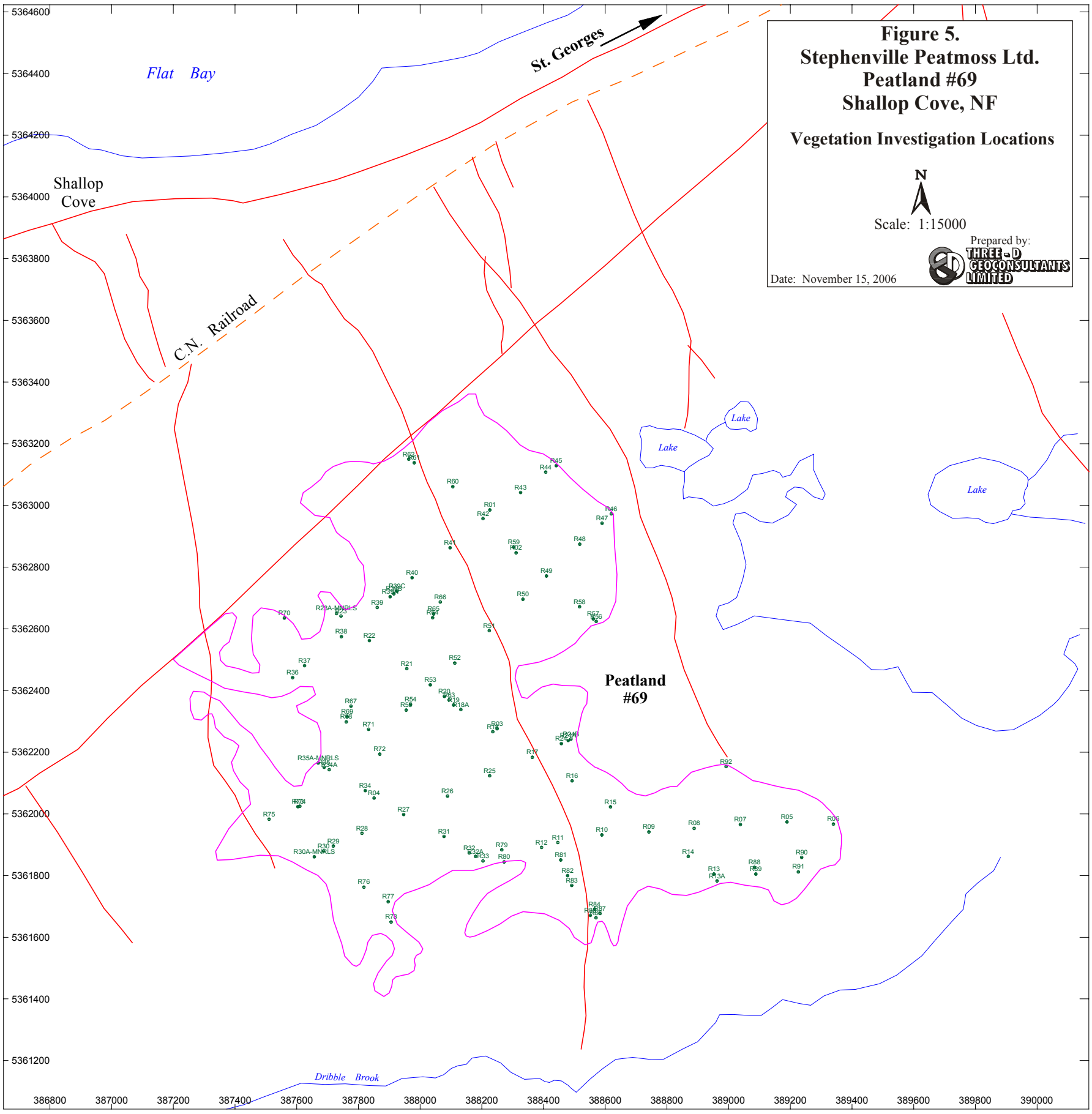


Figure 5.
Stephenville Peatmoss Ltd.
Peatland #69
Shallop Cove, NF
Vegetation Investigation Locations
N
Scale: 1:15000
Prepared by:
THREE - D GEOCONSULTANTS LIMITED
Date: November 15, 2006
Flat Bay
St. Georges
Shallop Cove
C.N. Railroad
Peatland #69
Lake
Lake
Lake
Dribble Brook
5364600
5364400
5364200
5364000
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5363600
5363400
5363200
5363000
5362800
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5362400
5362200
5362000
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it involving the driving a 1/4" diameter pointed steel rod to depth to check for stumpage fragmentation volumes throughout peat depth.

A surface vegetation survey was also completed at each station which notes and identifies tree, shrub and plant species formations, sub-formations and physiognomic groups. An example of the peatland resource assessment and vegetation survey field reports for each station is provided in Appendix 1.

The vegetation survey involved the collection of peat moss hummocks and hollows samples at various locations throughout the peatland for potential future detailed botanical observation and identification.

Every field station location and relative elevation was established in the field using a Garmin GPS76 hand-held global positional system that utilized an established base station as a reference point enabling a topographic elevation contour map to be established, as depicted in Figure 6**.**

The natural watershed and any/all watercourses within the peatland and the peripheral area were noted for location and directional flow to allow for production field and drainage planning to optimize the existing conditions.

Peatland #69 has a reported 168 ha of total peat and varies from 0m at the peripheral edge to 5.5m at its thickest point, Figure 7, with 109 ha of horticultural grade peat up to 4.5m in thickness, Figure 8. The peatland basically has a 2 dome system referred to as the northern lobe (production areas A, B & C) adjacent to the existing access and a southern lobe (production areas D, E & F) that is a dome in a larger southern extension of the bog. The following criteria was used to evaluate the bog capability for horticulural peat production:

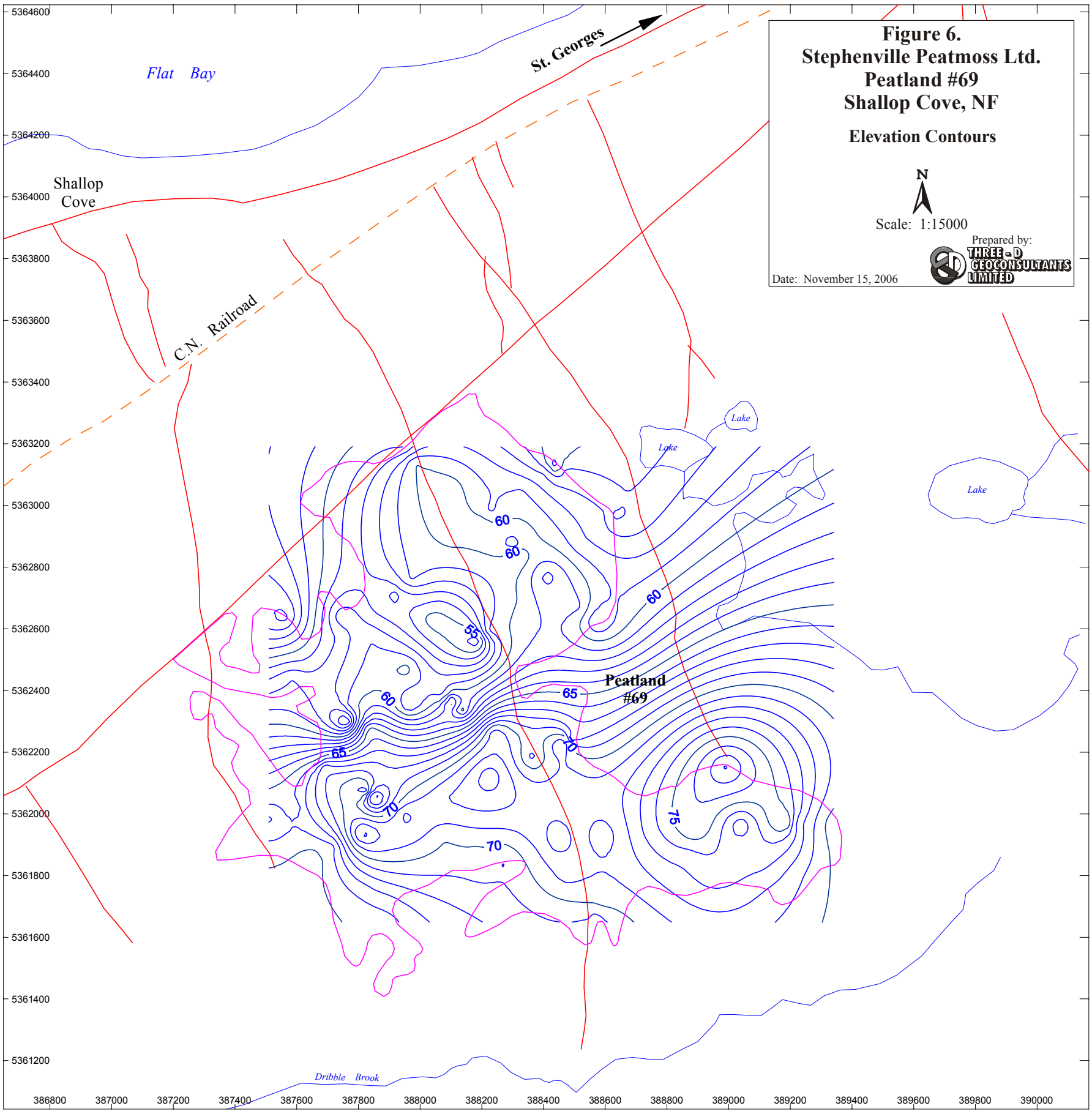
Figure 6.
Stephenville Peatmoss Ltd.
Peatland #69
Shallop Cove, NF
Elevation Contours
N
Scale: 1:15000
Prepared by:
THREE - D GEOCONSULTANTS LIMITED
Date: November 15, 2006
St. Georges
Flat Bay
Shallop Cove
C.N. Railroad
Lake
Lake
Lake
Peatland #69
Dribble Brook
60
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60
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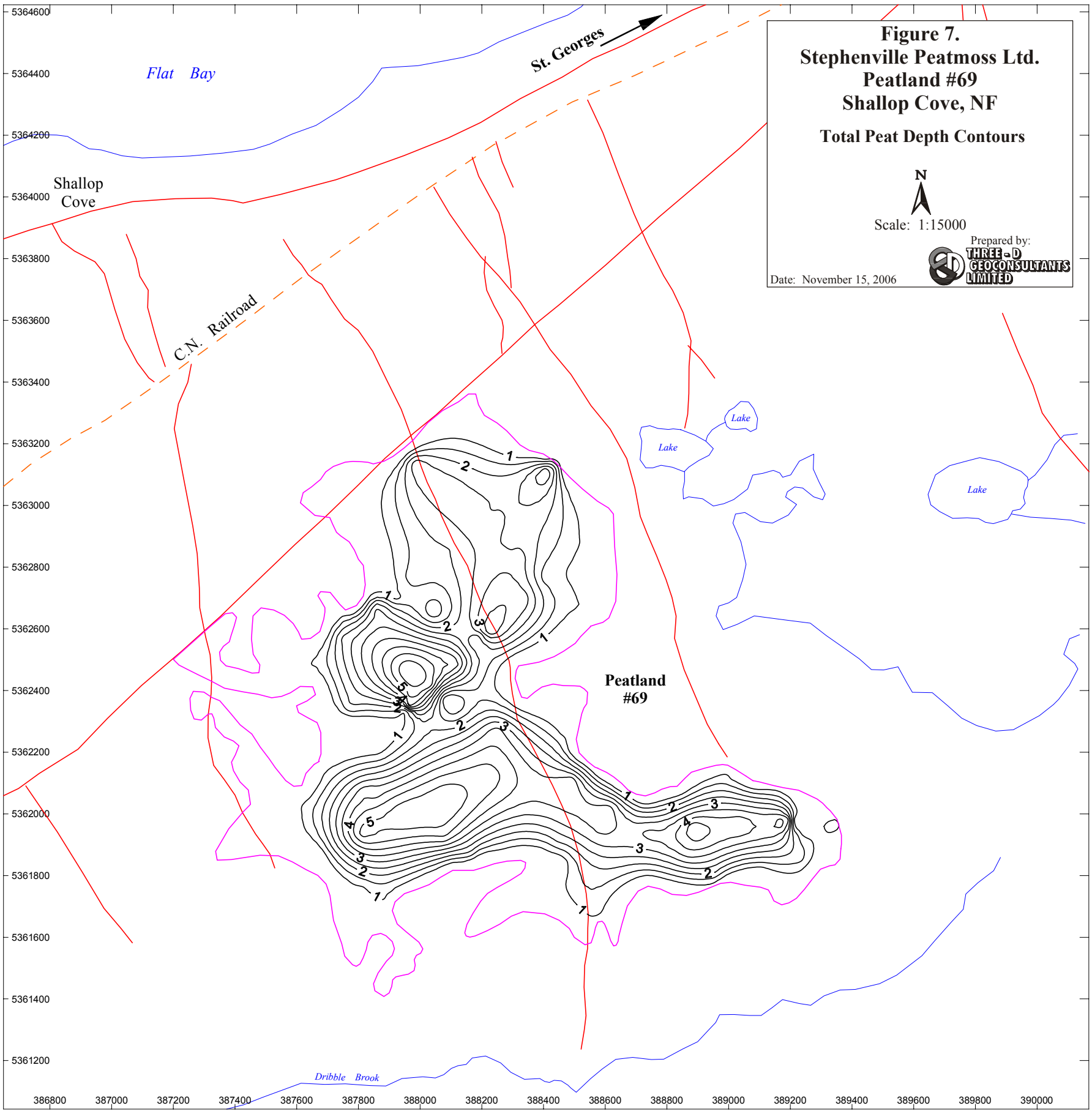
Figure 7.
Stephenville Peatmoss Ltd.
Peatland #69
Shallop Cove, NF
Total Peat Depth Contours
N
Scale: 1:15000
Prepared by:
THREE - D GEOCONSULTANTS LIMITED
Date: November 15, 2006
Flat Bay
St. Georges
Shallop Cove
C.N. Railroad
Lake
Lake
Lake
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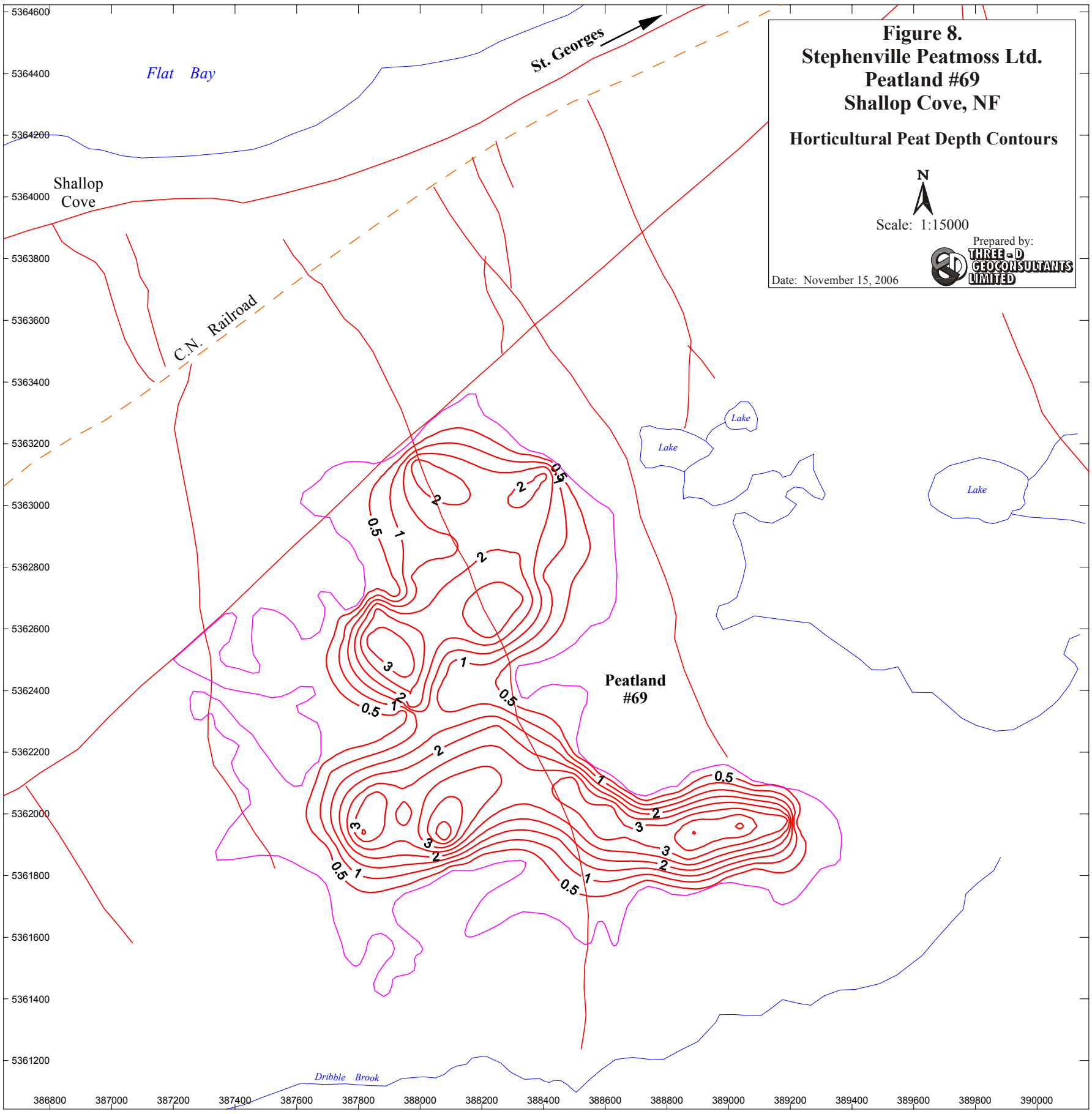
Figure 8.
Stephenville Peatmoss Ltd.
Peatland #69
Shallop Cove, NF
Horticultural Peat Depth Contours
N
Scale: 1:15000
Prepared by:
THREE - D GEOCONSULTANTS LIMITED
Date: November 15, 2006
Flat Bay
St. Georges
Shallop Cove
C.N. Railroad
Lake
Lake
Lake
Peatland #69
Dribble Brook
5364600
5364400
5364200
5364000
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5363400
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390000

1. 35% of the bog will be left undisturbed for rehabilitation purposed.
2. H-1 to H-4 von Post is considered horticultural grade referred to as surficial peat.
3. 0.5m of peat is left on the base of the production area for restoration and rehabilitation purposes.
4. Bog shrinkage (depth) upon initial drainage is 0.5m.
5. Average production rate per 5 year cycle is 0.35m.
6. Drainage ditches and haulage corridors encompass 3-5% of total peatland area.
7. 1 m^3 is equivalent to 2.94 standard bales (standard bale is 12 cuft of peat compressed 2:1)

Taking all the above into consideration our survey indicates that peatland 69 contains 2,223,460 m^3 (2.55 million standard bales) of horticultural peat available for harvesting over a period of 35+ years. If the bog is completely developed annual production would be in the range 350,000 to 400,00 bales per year.

3.4 OCCUPATIONS

When development has reached full harvesting stage, it is anticipated that the operation will employ approximately nine (9) people with seasonal work. The occupations anticipated for this undertaking, as per the 2001 National Occupational Classification, are as follows;

7217 - Supervisors, Heavy Equipment Operators (1 required)

7312 - Heavy Equipment Mechanics (1 required)

7411 - Truck Drivers (5 maximum required)

7421 - Heavy Equipment Operators (2 required)

3.5 PROJECT RELATED DOCUMENTS

- Stephenville Peat Moss Ltd. (2ha) Quarry Permit #111428 (NL Department of Natural Resources, Mines Branch, Mineral Lands Division)
- Stephenville Peat Moss Ltd Application for a (160ha) Quarry Permit #111731 (NL Department of Natural Resources, Mines Branch, Mineral Lands Division, File #7117029)
- NL Department of Environment and Conservation, Environmental Assessment Division, undertaking registration notice to Stephenville Peat Moss Ltd. (File Reference No. 200.20.1296)

3.6 CONCLUSIONS

Peatland 69 development plan meets all the guidelines and requirements necessary to allow development in an orderly manner while safeguarding the local environmental concerns. Care will be taken by Stephenville Peat Moss Ltd. to meet or exceed requirements necessary for its development.

Peatland 69, under normal operating conditions utilizing vacuum harvesting technology, has a potential harvesting rate of .35 to .4K standard bales per year over a 35+ year life span. The bog is situated in an area which is amenable to drainage without influencing the present watershed. There were no anomalous or rare species encountered in the vegetation survey.

4.0 APPROVAL OF THE UNDERTAKING

A Quarry Lease, under the Quarry Materials Act 1998, will be issued by the NL Department of Natural Resources, Mines and Energy Branch, once the submitted documentation has been approved.

The current submission is for registration under the Environmental Protection Act administered by the NL Department of Environment and Conservation**,** Environmental Assessment Branch.

5.0 FUNDING

This undertaking does not depend upon any grant or loan of capital funds from any government agency.

APPENDIX 1

Example Resource Assessment and Vegetation Survey Field Report

PEATLAND INVENTORY PROJECT **SITE DATA RECORD**

Location sketches, calculations, remarks on drainage, etc.

A27 → cross pt (site line)

THREE-D GEOCONSULTANTS LIMITED
P.O. Box 3133
Postal Station B,
Fredericton, New Brunswick
Canada E3A 5G9

Peatland: 27
Data Sheet No.: 19 09 06 (Day Mo Yr)
Investigator: A D

S 1 | N.T.S. | Peatland No. | Site Line: A | Sample Point Number: 27 + | 22

Latitude | Longitude | Surf. Wetness: 3 | Hummock Depth-to-water (cm) | Hollow Depth-to-water (cm) | % Hummocks: 45 | Ht. (cm): 10 | Av. Depth-to-water (cm) | Surf. Water pH | Stumps 0-1: 0 | 1-2: 0 | Tot:

Basal Sediment: C,I | Elevation (m) | Total Peat Depth (cm): 550 | Total Dep. Humified Peat (cm) | Total Dep. Unhumified Peat (cm): 210 | Phys. Samp. | Zone U.T.M. | East Ref. | North (to 1000m)

S 2

PEATLAND CLASSIFICATION

Tree species >150cm (%)	
Shrub species >150cm (%)	
Shrub species <150cm (%)	
Graminoid/herb cover (%)	
Moss, lichen cover (%)	
Plot size for calculation of canopy cover (m²)	8.0
Plot size for other calcul. (m²)	1.0

Species	Tree species >150 cm (=canopy cover %)	Shrub species >150 cm (%)	Shrub species <150 cm (%)	Graminoid/herb. cover (%)	Moss, lichen cover (%)	Other (%)

Sub-form.: 0 | Physiognomic Group: 15 | Form.: B | Other modifier: ( )

44 _ 72

(Dominant tree species if T; dom. shrub(s) if ls,ts,ds; dom. gram./herb if g; dom. moss(es).

Radforth Cover Type: (F)EH | Av. Tree Canopy Ht. (m): / | Calc. Flag: 9

PEAT STRATIGRAPHY

1 2	Depth (cm) from	Depth (cm) to	Peat Type Subdom.%	Peat Type Subdom.%	Peat Type Domin.%	Other Type %	H 1-10	B 1-5	F 0-3	Rel Dep	Interval remarks, minor types, seeds, charcoal, etc.
23	26		29	32	35	38	41	42	43	44	45
C 1	0	20			SSP		3	4	3		50 mc, 2H65, 100 S
C 2	20	210			SSP		3	3	3		" " "
C 3	210	220		C1	SS9		6	3	1		
C 4	220	259		C2	SS8		5	3	1		
C 5	259	350		C1	SS9		5	3	1		
C 6	350	370			SS0		3	3	2		
C 7	370	390		C1	SS9		6	4	1		
C 8	390	400			SS0		7	3	0		
C 9	400	410			SSP		6	3	0		
C 0	410	45P			SS0		4	3	2		5 mc, LN
D 1	45P	480			SS0		7	3	0		
D 2	480	509			SSP		8	3	0		
D 3	509	550		LNV	SS9		7	4	0		
D 4		Sandy Clay									
D 5											
D 6											
D 7											
D 8											
D 9											
D 0											
E 1											
E 2											

3.5

CODES

Peatland Classification

Formations: Swamp S; Bog B; Fen F; Palsa/Peat Plateau PP; Marsh M; Open Water W (Poor Fen PF)

Subformations: Open O; Treed T

Physiognomic Groups:

B,F, PF,PP	Tall shrub	ts
	Low shrub	ls
	Dwarf shrub	ds
	Graminoid	g
	Sphagnum	sp
	Pool	p
	Lichen-rich	lr
S	Conifer	c
	Deciduous	h
	Thicket	t
M	Meadow	m
	Lowshrub	ls
	Deep	d
	Shallow	s
	Shrub-rich	sr
(U	Upland)	

Peat Types

Mosses	S
Sphagnum	S_s
Brown moss	S_b
Sedge/graminoid	C
Wood	L
Shrub	L_n
Tree	L_1
Minor Types-Refer Guidelines	
Ooze	OZ
Marl	MA

Surface Wetness

Dry	1
Moist	2
Wet	3
Very wet	4
Water above surface	5

Other Modifiers

Flooded	(F)
Cutover	(C)
Post-fire	(P)
Grazed	(G)
Drained	(D)

Radforth Cover Classes

A. Woody; 5m, tree form.
B. Woody; 1.5 to 5m, trees or shrubs.
C. Non-woody; .5 to 1.5m, graminoid/herb.
D. Woody; .5 to 1.5m, shrubs or dwarf trees.
E. Woody, .5m, low shrubs.
F. Non-woody, .5m, gram/herbs clumped or matted.
G. Non-woody, .5m, gram/herbs singly or loose.
H. Non-woody, .1m, lichens.
I. Non woody, .1m, mosses.

Sample Wetness

Dry	1
Moist	2
Wet (average)	3
Very wet	4
Saturated	5

Sediment

Rock	RO
Gravel	GR
Sand	SA
Silt	SI
Clay	CL
Till	TI

Fiber

Amorphous/ Sapric	0
Sapric	1
Hemic	2
Fibric	3