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Title: Maine Peat Resource Evaluation Program:
1980 Field Season

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ABSTRACT

The second year of the Maine Peat Resource Evaluation Program, which is funded by the U.S. Department of Energy to assess the fuel potential of Maine's peat deposits, was completed in 1980. During the 1980 field season, 56 peat deposits in Piscataquis, Somerset, Aroostook, Kennebec, and Waldo Counties were investigated. These deposits range in size from 44 to 1,344 acres and contain from 50,000 to 3,200,000 short tons of air-dried peat. A total of 14,262 acres containing an estimated 23,908,000 short tons of air-dried peat were evaluated. This report provides details on each deposit investigated.

A third year of field work has been completed, but the report for that work has not yet been published. Combining the preliminary results of that work with the data in this report and the data from the report covering the first year, a total of 44,340 acres in 163 deposits containing 83,757,000 short tons of air-dried peat have been surveyed under Maine Peat Resource Evaluation Program.

When the findings of the Maine Resource Evaluation Program are added to those obtained during earlier surveys of Maine peat deposits beginning in 1909, a total of 343 deposits have been surveyed throughout the State. These deposits cover about 93,742 acres and contain an estimated 142,500,100 short tons air-dried peat.

INTRODUCTION

Peat is the residuum formed by the partial decay and disintegration of plants. It accumulates in environments where moist soil conditions or standing water bodies inhibit the chemical and biological breakdown of plant material, such as swamps and marshes. Peat has been used for many years in agriculture and horticulture primarily because of its ability to retain many times its own weight in water. It has also been used as a domestic fuel for hundreds of years because, in a geologic sense, peat may be thought of as young coal. More recently, peat has been used by nations such as Ireland and the Soviet Union to generate electricity. At the present time, virtually all of the peat harvested in the United States is used in agriculture and horticulture. However, in light of the increasing costs of traditional energy sources, peat is being more closely scrutinized as an alternate fuel source.

The State of Maine is known to have significant peat resources. While current estimates vary, it has been suggested that there are perhaps 6,000 to 8,000 individual peat deposits in Maine comprising a total land area of 500,000 to 750,000 acres. The current resource inventory has been developed to provide a more comprehensive analysis of available peat resources.

This report summarizes the second year of a program to document the fuel potential of Maine's peat resources. It

includes the results of laboratory analyses and estimates of peat resources, as well as maps and sections of individual peat deposits. These data may be utilized to assess more accurately the energy potential of Maine's peatlands.

THE MAINE PEAT RESOURCE EVALUATION PROGRAM

In July 1979, the Maine Office of Energy Resources, in conjunction with the Maine Geological Survey, began the Maine Peat Resource Evaluation Program. The Program, which is funded by the U.S. Department of Energy (DOE), was undertaken to determine the amount and location of fuel-grade peat deposits that may be harvested and utilized in an environmentally acceptable manner in Maine. Similar DOE/State Peat Resource Evaluation Programs are also being carried out in twelve other states, including Alaska, Michigan, Minnesota, North Carolina and South Carolina, whose programs began in 1979. Georgia, Florida, Louisiana, Massachusetts, New York, and Rhode Island initiated programs in 1980 and 1981.

Research on the fuel potential of Maine's peat resources began earlier in the twentieth century. The first investigations were conducted by Bastin and Davis (1909), and Soper and Osbon (1922) of the U.S. Geological Survey. They were followed by Trefethen and Bradford (1944) of the Maine Geological Survey. The Maine Peat

Resource Evaluation Program was designed to build upon the peat research and inventory conducted in Maine by the Maine and U.S. Geological Surveys in the 1970's (Cameron, 1975; Cameron and Massey, 1978; Cameron and Anderson, 1979).

During the first field season of the Program, 1979, 57 deposits in Aroostook, Penobscot, Piscataquis, and Washington Counties were investigated (Cameron and Anderson, 1980a, 1980b; Davis et.al., 1980). Fifty deposits in Piscataquis, Somerset, Aroostook, Kennebec, and Waldo Counties (Figure 1) were evaluated during the 1980 field season (Cameron and Mullen, 1981). In 1981, research efforts were concentrated in the western and southern counties where 56 deposits were surveyed.

GEOLOGIC SETTING OF MAINE PEAT DEPOSITS

Maine is part of the Northern Appalachian Province. Its bedrock consists primarily of metamorphosed sedimentary rocks which range in age from approximately 350 to 600 million years. The metasediments were intruded by numerous bodies of granitic rock. Both the granite bodies and the metamorphic rocks have been subjected to several episodes of folding and faulting, as well as millions of years of weathering resulting in rounded mountains and well established drainage patterns.

Much of Maine's bedrock is covered by glacial sediments deposited during several episodes of glaciation

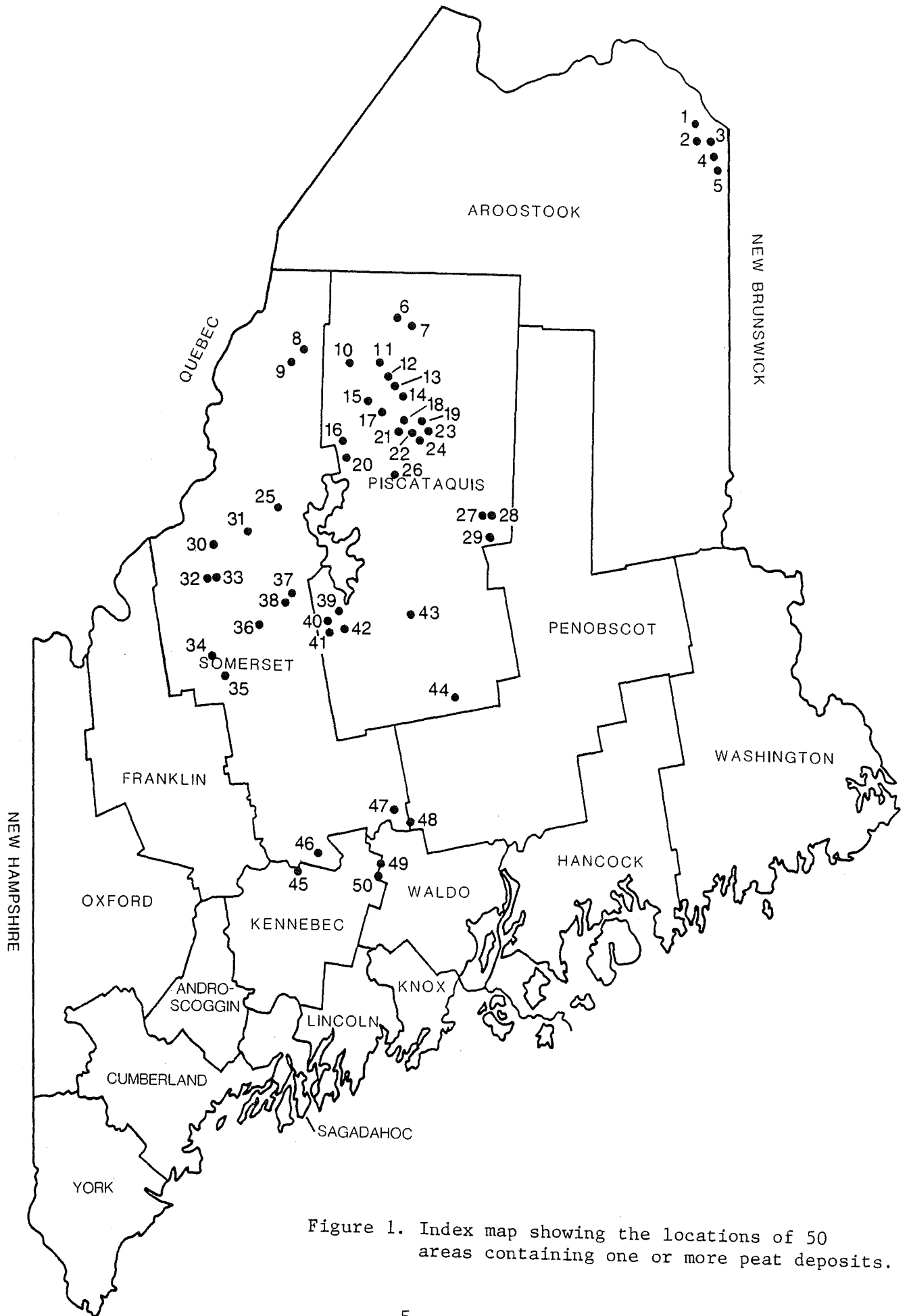


Figure 1. Index map showing the locations of 50 areas containing one or more peat deposits.

in the last several hundred thousand years. Large continental glaciers (as opposed to small alpine glaciers found in mountain valleys) spread southward from Canada until much of northern North America was covered by a sheet of ice hundreds to thousands of feet thick. These ice sheets eroded the bedrock and deposited a blanket of sand, gravel, boulders, silt, and clay. As the last ice sheet retreated, between about 13,500 and 12,500 years ago, much of southern Maine was submerged as the ocean inundated land that had been depressed by the great thickness of ice. Fossiliferous marine sand, silt, and clay were deposited on top of the bedrock and glacial sediments. The ocean gradually receded as the land surface slowly rebounded.

Erosion by glaciers and deposition of glacial and marine sediments significantly altered preglacial morphology and drainage, creating environments favorable for the formation of peat. Streams and rivers were slowed or dammed. Ponds and lakes formed in bedrock basins or in poorly drained depressions, particularly those underlain by glacial or marine silt and clay deposits. Where drainage was impaired, the accumulation of undecayed organic material was enhanced.

FORMATION OF PEAT DEPOSITS IN MAINE

The typical peat deposit in Maine is a composite deposit and consists of a filled-basin (the most common

type of deposit in the United States) overlain by a built-up deposit (a more common type in northern Europe). Its formation begins in a clay-bottomed basin or depression with the accumulation of floating plant remains. Aquatic plants, such as pond lilies and bulrushes, are able to root when a sufficient depth of organic material is attained. Continued accumulation of aquatic plant material gradually displaces the ponded water. Plants, such as mosses, reeds, sedges, and grasses grow upward and then outward as the basin is filled. This growth is accompanied by a rise of the water table. A dome with a perched water table develops when sphagnum moss dominates the vegetation assemblage. (Cameron, 1975).

Cameron (1975) suggests five physiographic forms for Maine peat deposits:

1. Valley occupied by a stream.
2. Closed basin (remnant of initial pond may be present).
3. Plateaulike dome on gentle clay, sand, or gravel surface.
4. Domes with secondary ponds developed on moss peat.
5. Coalesced domes occupying several basins.

CLASSIFICATION OF PEAT

In its natural environment, peat contains varying amounts of water and inorganic matter (sediment). The

amount and proportion of the decayed vegetation, water, and inorganic material will differ not only between individual peat deposits, but also within a single deposit, depending on factors such as the type of plant material accumulated, climatic conditions, age, water table fluctuations, and amount of sediment washed in.

Because of the wide range of physical characteristics exhibited by peat, a number of peat classification schemes have been derived. The U.S. Bureau of Mines divides peat into three categories: 1) moss peat, formed primarily of sphagnum, hypnum, and other mosses; 2) reed-sedge peat, formed primarily from reeds, sedges, marsh grasses, cattails, and associated plants; 3) peat humus, derived from peat so decomposed the original plant remains are not identifiable.

The American Society for Testing Materials (ASTM) developed a more specific classification to address industry needs:

"Sphagnum moss peat (peat moss).- The oven-dried peat contains a minimum of $66 \frac{2}{3}$ percent sphagnum moss fiber of the total content of weight. These fibers are stems and leaves of sphagnum in which the fibrous and cellular structure is recognizable.

Hypnum moss peat.- The oven-dried peat contains a minimum of $33 \frac{1}{3}$ percent fiber content by weight, of hypnum moss fibers compose more than 50 percent. These fibers are stems and leaves of various hypnum mosses in which the fibrous and cellular structure is recognizable.

Reed-sedge peat.- The oven-dried peat contains a minimum of $33 \frac{1}{3}$ percent fiber by weight, of which reed-sedge and other nonmoss fibers compose more than 50 percent.

Peat humus.- The oven-dried peat contains less than 33 1/3 percent fiber by weight.

Other peat.- This covers all forms of peat not herein classified." (Cameron, 1975, p. c9-cl0.)

Most of the peat resources surveyed under the Maine Peat Resource Evaluation Program may be classified as moss peat and reed-sedge peat.

METHODS OF INVESTIGATION

Prior to the field season, all aerial photographs, topographic, soils, and geologic maps, and previously published information available for the region selected for investigation were assembled. Potential sites were selected utilizing these materials. These potential sites were ranked based on factors such as accessibility and the likelihood of a deposit containing significant peat resources.

In the field, the extent of the deposits was determined by pace and compass traverses, with the bearing and spacing of the traverses dependent on the size and configuration of the deposit. At regular intervals along the traverses (generally 500 feet), cores were obtained with a Macauley or Davis peat sampler. Samples were taken for subsequent laboratory analysis, and factors such as surface vegetation, type and distribution of peat (both horizontally and vertically), and geomorphic characteristics were noted.

Estimates of commercial-quality resources were made in

accordance with ASTM (1969) standards based on acre-feet of peat where the peat is five or more feet thick and has an ash content not greater than 25 percent. The formula used for converting acre-feet of peat to short tons of air dried peat was developed by Bastin and Davis, who summarized the procedure:

"the quantity of peat in a deposit may readily be calculated with enough accuracy for practical purposes, by obtaining its average depth and its area, and that it will yield at least 200 tons of dry machine-made fuel per acre, for each foot in depth." (Bastin and Davis, 1909, p. 24.)

A total of 471 samples were collected during the 1980 field season. Proximate and ultimate analyses and heating values of 302 samples were determined by the DOE laboratory in Grand Forks, North Dakota (Table 5). The U.S. Geological Survey lab in Denver analyzed 129 samples for trace elements. The Plant and Soil Science Department at the University of Maine at Orono determined the bulk density of 40 samples (Table 4).

State and county maps showing the location of surveyed peat deposits have been compiled. Maps of individual deposits showing the type, distribution, and depth of peat, sample sites, and the surficial geology of the area adjacent to the deposits (Figures 2-5l), as well as sections showing the vertical distribution of peat type and actual sample depth (Figures 2a-5la) have also been prepared.

RESULTS OF THE MAINE PEAT
RESOURCE EVALUATION PROGRAM

During the 1980 field season, fifty peat deposits in Aroostook, Piscataquis, Somerset, Kennebec and Waldo Counties were investigated. The deposits range in size from 44 to 1,344 acres and contain from 50,000 to 3,204,800 short tons air-dried peat (Tables 1 and 3). The total resources of commercial-quality peat are estimated to be 23,908,000 short tons air-dried peat occupying 14,262 acres. Virtually all of the deposits studied may be classed as reed-sedge (hemic) and moss (fibric) peat.

Table 1 summarizes the results of the first three field seasons of the Maine Peat Resource Evaluation Program. The figure given for the total estimated resources in 1981 is preliminary; it may be revised when all the laboratory analyses for samples collected that year are received.

To date, nearly 350 Maine peat deposits have been surveyed in some detail for their economic potential. The results of these surveys, which began in 1909, are shown in Table 2. Several earlier investigations were incomplete and estimates of fuel grade peat or areal extent were sometimes not made. In addition, complete laboratory analyses were not performed for most of the earlier surveys.

Table 1. Results of the Maine Peat Resource Evaluation Program

FIELD SEASON	# OF DEPOSITS SURVEYED	RANGE IN SIZE (ACREAGE)	RANGE IN RESOURCES	TOTAL ACREAGE	TOTAL RESOURCE
1979	57	30 - 2,645	30,000 - 6,953,000	18,268	32,113,000
1980	50	44 - 1,344	50,000 - 3,204,800	14,262	23,908,000
1981	56	27 - 751	*37,800 - 2,010,800	13,810	*27,736,400
TOTAL	163			44,340	*83,757,400

*Preliminary estimate

Table 2. Results of peat resource surveys conducted in Maine.

COUNTY	TOTAL NUMBER OF DEPOSITS SURVEYED	ACREAGE (# OF DEPOSITS)	ESTIMATED RESOURCES (# OF DEPOSITS)
Androscoggin	12	1,722 (11)	3,791,00 (10)
Aroostook	59	12,436 (58)	19,384,400 (53)
Cumberland	9	552 (5)	926,500 (5)
Franklin	3	1,185 (3)	2,414,000 (3)
Hancock	19	3,177 (15)	6,864,600 (17)
Kennebec	17	2,185 (14)	5,109,000 (14)
Knox	3	227 (2)	447,000 (2)
Lincoln	4	402 (4)	776,200 (2)
Oxford	10	1,466 (8)	1,096,800 (6)
Penobscot	55	34,722 (54)	41,999,000 (52)
Piscataquis	32	6,876 (29)	10,194,200 (29)
Sagadahoc	0	-	-
Somerset	25	10,421 (24)	17,875,200 (23)
Waldo	9	3,037 (9)	5,309,400 (9)
Washington	75	13,409 (72)	26,669,800 (73)
York	11	1,925 (7)	3,003,000 (7)
TOTAL	343	93,742	142,500,100

Sources: Bastin and Davis, 1909; Soper and Osbon, 1922; Trefethen and Bradford, 1944; Cameron, 1975; Cameron and Massey, 1978; Cameron and Anderson, 1979, 1980b; Davis et. al., 1980; Cameron and Mullen, 1981, 1982a, 1982b.

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Table 3. Location, areal extent, and estimated resources of the 50 areas containing peat deposits surveyed during the 1980 field season.

Deposit Number	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not exceeding 25 per cent)	Estimated resources (short tons air-dried peat)
1	Orchard Bog, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County	262 with average thickness of 6 feet	314,400
2	Bog at Little Black Brook Lake, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County	50 of which 35 have average thickness 10 feet and 15 have average thickness of 6 feet	88,000
3	Bogs between Deer and Mud Lakes, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County	309 of which 235 have average thickness of 8 feet and 74 have average thickness of 5 feet	450,000
4	Bog northwest of Pierce Lake and west of Route 165, Caswell Plantation, Fort Fairfield 15 minute Quadrangle, Aroostook County	45 with average thickness of 6 feet	54,000
5	Bog 2 miles northeast of Limestone on U.S. - Canada boundary, Limestone Twp., Fort Fairfield 15 minute Quadrangle, Aroostook County	44 of which 27 have average thickness of 10 feet and 17 have average thickness of 5 feet	71,000
6	Bog south of Churchill Lake and east of Thoroughfare, T9 R12 WELS, Churchill Lake 15 minute Quadrangle, Piscataquis County	115 of which 95 have average thickness of 7 feet and 20 have average thickness of 5 feet	153,000
7	Bog along Soper Brook at Soper Pond, T8 R12 WELS (Soper Mtn. Twp.), Spider Lake 15 minute Quadrangle, Piscataquis County	235 of which 35 have average thickness of 12 feet, 180 have average thickness of 8 feet, and 20 have average thickness of 5 feet	392,000

Deposit Number	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not exceeding 25 per cent)	Estimated resources (short tons air-dried peat)
8	Marsh along Baker Branch, St. John River, T7 R16 WELS, Baker Lake and Saint John Pond 15 minute Quadrangles, Somerset County	235 with average thickness of 4 feet	188,000
9	Sweeney Bog, T6 R17 WELS, Saint John Pond 15 minute Quadrangle, Somerset County	362 of which 180 have average thickness of 10 feet, 140 have average thickness of 8 feet, and 42 have average thickness of 5 feet	626,000
10	Bogs along Ciss Stream, T6 R14 WELS and T7 R14 WELS, Caucomogoc Lake 15 minute Quadrangle, Piscataquis County	200 of which 120 have average thickness of 6 feet and 80 have average thickness of 5 feet	224,000
11	Ellis Bog complex, T6 R13 WELS and T7 R13 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	947 of which 120 have average thickness of 10 feet, 155 have average thickness of 8 feet, and 672 have average thickness of 5 feet	1,160,000
12	Carry Bog, T6 R13 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	202 with average thickness of 8 feet	323,200
13	Bog along Dottle Brook, T6 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	185 with average thickness of 6 feet	222,000
14	Bog along Cuxabexis Stream at southeast end of Cuxabexis Lake, T5 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	100 with average thickness of 5 feet	100,000
15	Bogs at mouth of the West Branch, Penobscot River, and east of Brandy Pond, T5 R13 WELS (Chesuncook Twp.), Chesuncook 15 minute Quadrangle, Piscataquis County	50 with average thickness of 5 feet	50,000

Deposit Number	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not exceeding 25 per cent)	Estimated resources (short tons air-dried peat)
16	Bogs at Cassidy Deadwater, T4 R15 WELS, Caucongomic Lake and North East Carry 15 minute Quadrangles, Piscataquis County	250 with average thickness of 5 feet	250,000
17	Bog south of Duck Pond, T4 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	210 of which 120 have average thickness of 10 feet and 90 have average thickness of 6 feet	348,000
18	Bog on Ripogenus Stream north of Ripogenus Pond, T4 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County	55 with average thickness of 10 feet	110,000
19	Bog on Ripogenus Stream, T4 R12 WELS, Telos Lake 15 minute Quadrangle, Piscataquis County	87 with average thickness of 7 feet	121, 800
20	Bogs along the West Branch of the Penobscot River and Lobster Stream, T3 R15 WELS (North East Carry Twp.), North East Carry 15 minute Quadrangle, Piscataquis County	117 with average thickness of 5 feet	117,000
21	Bog at Ripogenus Pond, T4 R12 WELS, Ragged Lake 15 minute Quadrangle, Piscataquis County	56 of which 45 have average thickness of 10 feet and 11 have average thickness of 5 feet	101,000
22	Bog west of Soubunge Mountain, T4 R12 WELS, Harrington Lake 15 minute Quadrangle, Piscataquis County	Not recommended for peat resources on basis of insufficient thickness	-

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Deposit	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not ex- ceeding 25 per cent)	Estimated re- sources (short tons air-dried peat)
23	Bog along Soper Brook, T4 R11 WELS, Harrington Lake 15 minute Quadrangle, Pis- cataquis County	170 with average thickness of 7 feet	238,000
24	Bog at Brighton Deadwater, T4 R12 WELS and T3 R12 WELS, Harrington Lake 15 minute Quadrangle, Pis- cataquis County	Not recommended for peat re- sources on basis of poor quality and quantity	-
25	Bog southwest of Tomhegan Pond, T2 R3 NBKP (Soldier Town Twp.), Sebomook Lake 15 minute Quadrangle, Somer- set County	85 with average thickness of 5 feet	85,000
26	Bog along Ragged Stream, T2 R12 WELS, Ragged Lake 15 minute Quadrangle, Piscata- quis County	167 with average thickness of 6 feet	200,400
27	Bogs west of Millinocket Road, T2 R9 WELS and T1 R9 WELS, Katahdin 15 minute Quadrangle, Pis- cataquis County	214 of which 34 have average thickness of 10 feet, 85 have average thickness of 7 feet, and 95 have average thickness of 5 feet	282,000
28	Bogs east of Millinocket Road, T2 R9 WELS and T1 R9 WELS, Katahdin 15 minute Quadrangle, Pis- cataquis County	348 of which 100 have average thickness of 7 feet, 88 have average thickness of 6 feet, and 160 have average thickness of 5 feet	405,600
29	Bog between Millinocket Lake and Millinocket Road, T1 R9 WELS, Norcross 15 minute Quadrangle, Pis- cataquis County	170 of which 115 have average thickness of 7 feet, and 55 have average thickness of 5 feet	216,000

Deposit	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not ex- ceeding 25 per cent)	Estimated re- sources (short tons air-dried peat)
30	Bog north of Moose River and south of Jackman Mill, Jackman Twp., Long Pond 15 minute Quadrangle, Somerset County	125 with average thickness of 5 feet	125,000
31	Twelve Mile Bog, T3 R1 NBKP (Long Pond Twp.), Long Pond 15 minute Quadrangle, Somerset County	153 with average thickness of 12 feet	367,200
32	No. 5 Bog south of Attean Pond, T5 R1 NBKP (Attean Twp.), T4 R7 BKP WKR (Bradstreet Twp.), and T5 R7 BKP WKR, Attean 15 minute Quadrangle, Somer- set County	1,344 of which 982 have average thickness of 13 feet, and 362 have average thickness of 9 feet	3,204,800
33	Moose River area east of No. 5 Bog, T4 R7 BKP WKR (Bradstreet Twp.), Attean and Long Pond 15 minute Quadrangles, Somerset County	170 which 70 have average thick- ness of 10 feet, and 100 have average thickness of 5 feet	240,000
34	Dead River area south of Spencer Rips, T3 R4 BKP WKR, Pierce Pond 15 minute Quadrangle, Somerset County	345 with average thickness of 5 feet	345,000
35	Bog at Black Brook Pond, T2 R4 BKP WKR (Pierce Pond Twp.), Little Bigelow Moun- tain 15 minute Quadrangle, Somerset County	510 of which 235 have average thickness of 13 feet, and 275 have average thickness of 5 feet	886,000
36	Johnson Bog, West Forks Plantation, Pierce Pond 15 minute Quadrangle, Somerset County	430 of which 135 have average thickness of 15 feet, 110 have average thickness of 10 feet, and 185 have average thickness of 5 feet	810,000

Deposit	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not ex- ceeding 25 per cent)	Estimated re- sources (short tons air-dried peat)
37	Little Indian Bog along Little Indian Stream, T1 R6 BKP EKR (Indian Stream Twp.), The Forks 15 minute Quadrangle, Somerset County	360 of which 95 have average thickness of 12 feet, 160 have average thickness of 7 feet, and 105 have average thickness of 5 feet	557,000
38	Bog southeast of Harris Dam at outlet of Indian Pond, T1 R6 BKP EKR (Indian Stream Twp.) and T2 R5 BKP EKR (Squaretown Twp.), The Forks 15 minute Quad- rangle, Somerset County	175 of which 110 have average thickness of 12 feet and 65 have thickness of 5 feet	329,000
39	Bog one mile south of Greenville Junction, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County	283 of which 105 have average thickness of 12 feet, 138 have average thickness of 7 feet, and 40 have average thickness of 5 feet	485,200
40	Ira Bog, T3 R5 BKP EKR (Little Squaw Twp.), Green- ville 15 minute Quadrangle, Piscataquis County	100 with average thickness of 10 feet	200,000
41	West Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County	515 of which 135 have average thickness of 9 feet, 190 have average thickness of 10 feet, and 190 have average thickness of 5 feet	813,000
42	East Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County	115 of which 55 have average thickness of 10 feet, and 60 have average thickness of 5 feet	170,000
43	Caribou Bog south of Indian Pond, T7 R9 NWP, Sebec Lake 15 minute Quadrangle, Pis- cataquis County	235 of which 130 have average thickness of 14 feet, and 105 have average thickness of 5 feet	469,000

Deposit	Location	Acres of commercial quality peat (peat generally at least 5 feet thick with ash content not ex- ceeding 25 per cent)	Estimated re- sources (short tons air-dried peat)
44	Bog along Alder Stream 2 miles northeast of Atkinson Mills, Atkinson Twp., Dover-Foxcroft 15 minute Quadrangle, Piscataquis County	710 of which 235 have average thickness of 10 feet, and 475 have average thickness of 6 feet	1,040,000
45	Bogs adjacent to North Bay and west of Varney Hill and Bickford Hill, Smithfield and Belgrade Twps., Norridgewock 15 minute Quadrangle, Somerset and Kennebec Counties	460 of which 70 have average thickness of 15 feet, 250 have average thickness of 11 feet, and 140 have average thickness of 5 feet	900,000
46	Bog northwest of Toulouse Corner, Fairfield Twp., Waterville 15 minute Quadrangle, Somerset County	130 with average thickness of 13 feet	338,000
47	Big Meadow Bog south of Pittsfield, Pittsfield and Detroit Twps., Pittsfield 15 minute Quadrangle, Somerset County	805 of which 260 have average thickness of 13 feet, and 545 have average thickness of 5 feet	1,221,000
48	Bogs south of Detroit and north of Carlton Pond, Detroit and Plymouth Twps., Pittsfield and Burnham 15 minute Quadrangles, Somerset and Penobscot Counties	665 of which 150 have average thickness of 25 feet, 318 have average thickness of 15 feet, 102 have average thickness of 11 feet, and 95 have average thickness of 5 feet	2,023,400
49	Bogs north and east of Fowler Bog, Unity Twp., Burnham 15 minute Quadrangle, Kennebec and Waldo Counties.	630 of which 302 have average thickness of 10 feet, 213 have average thickness of 8 feet, and 115 have average thickness of 5 feet	1,059,800
50	Fowler Bog, Albion and Unity Twps., Burnham 15 minute Quadrangle, Kennebec and Waldo Counties.	732 with average thickness 8 feet	1,171,200

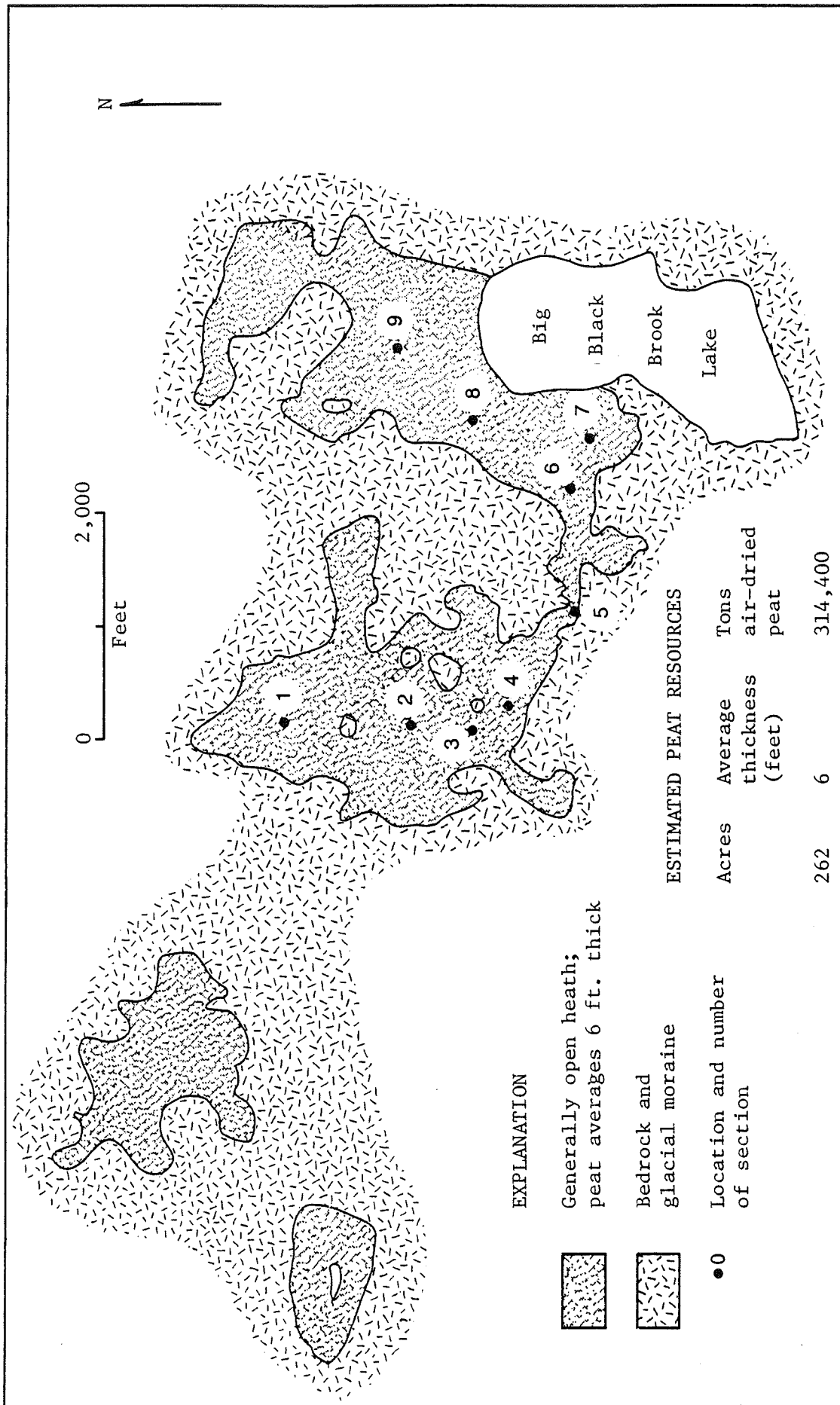


Figure 2. Sketch map of Orchard Bog, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County, Maine. (Number 1 on Index Map).

EXPLANATION OF SECTIONS

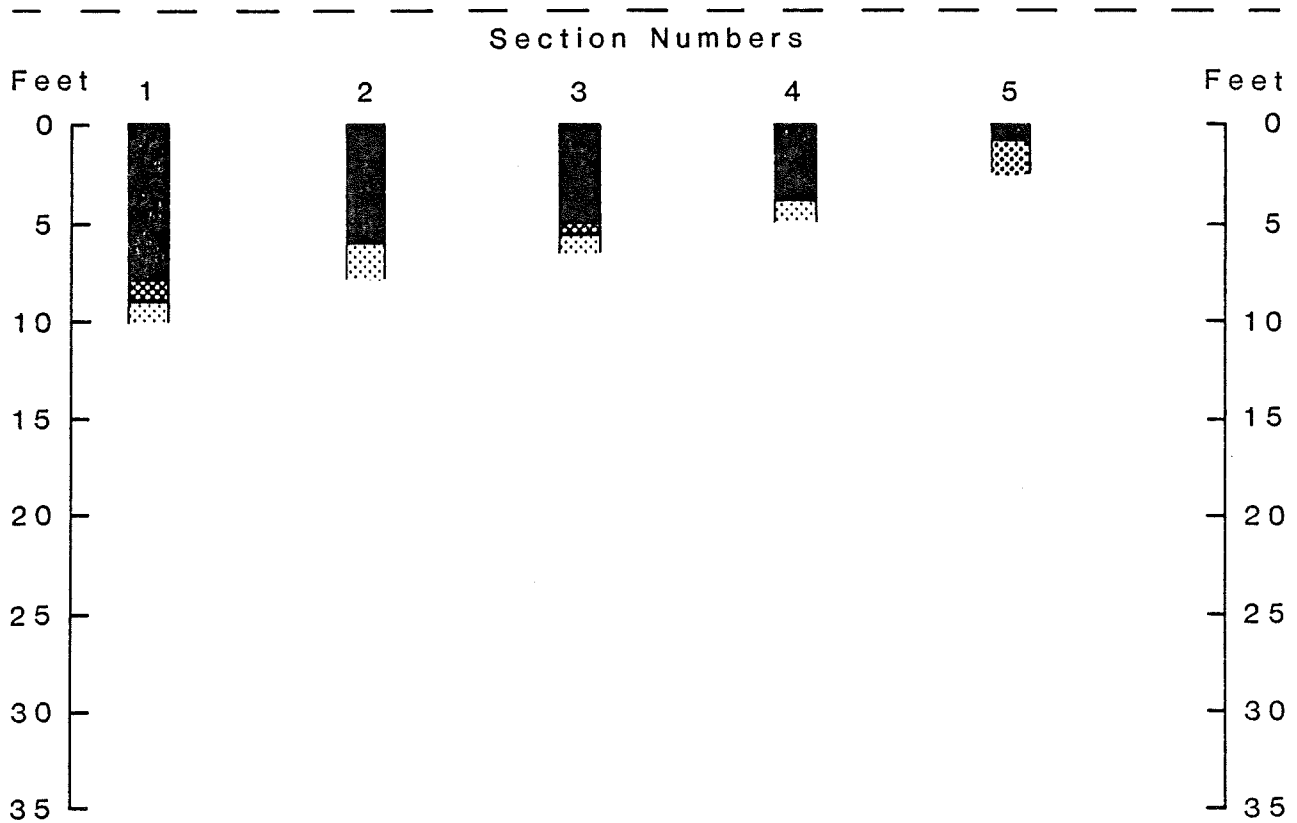
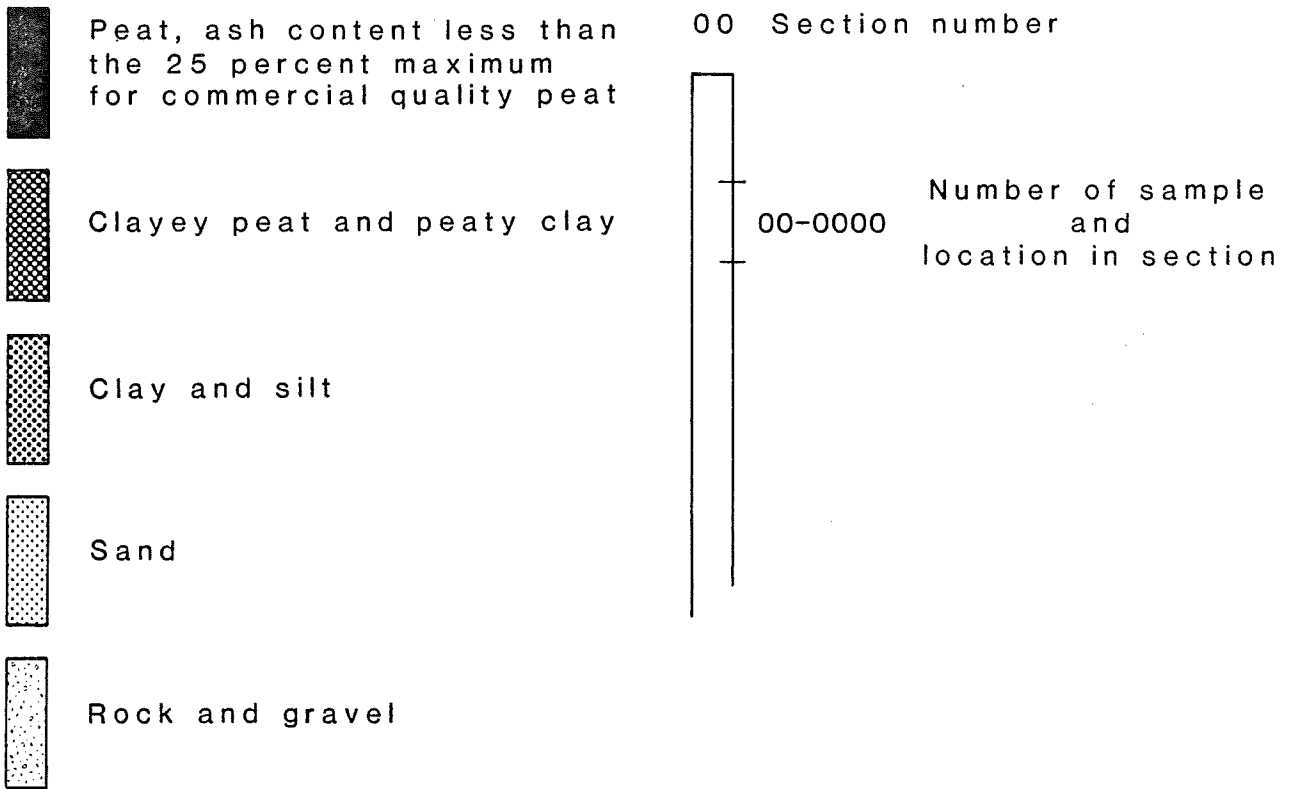


Figure 2a
SECTIONS AND SAMPLE LOCATIONS

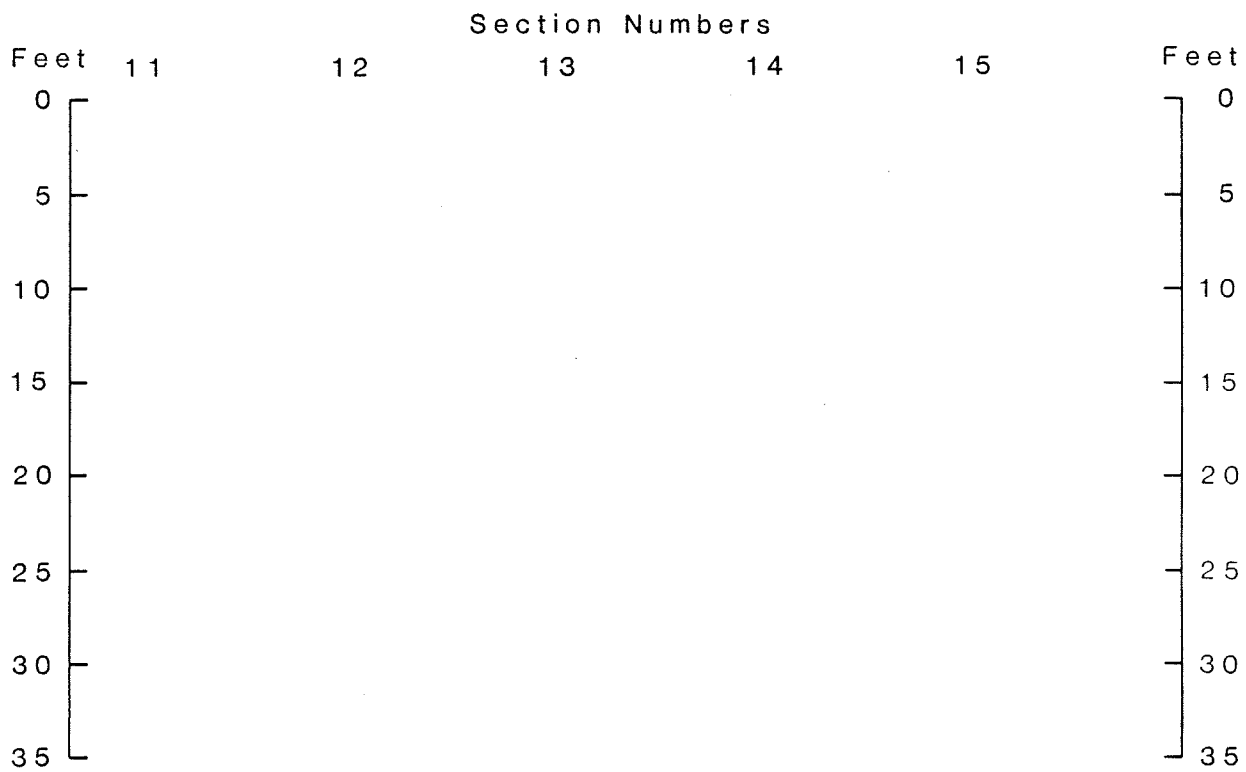
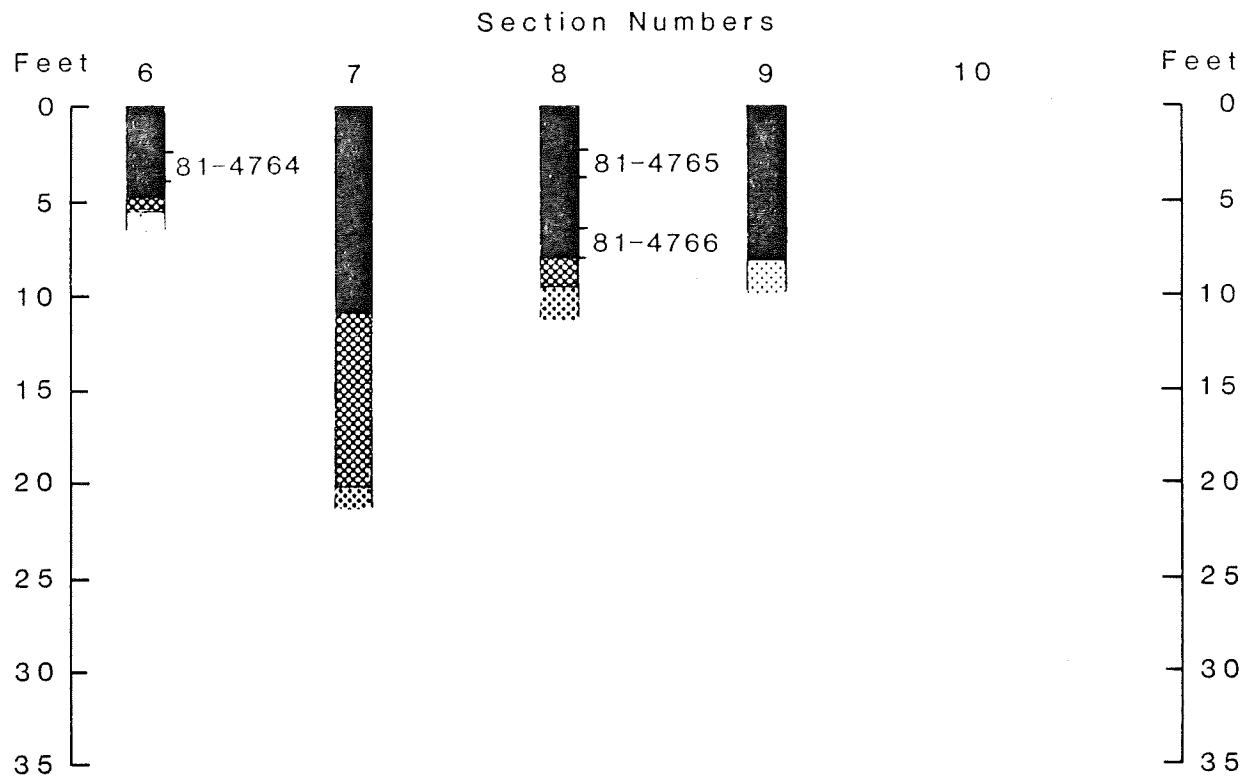


Figure 2a - Continued
SECTIONS AND SAMPLE LOCATIONS

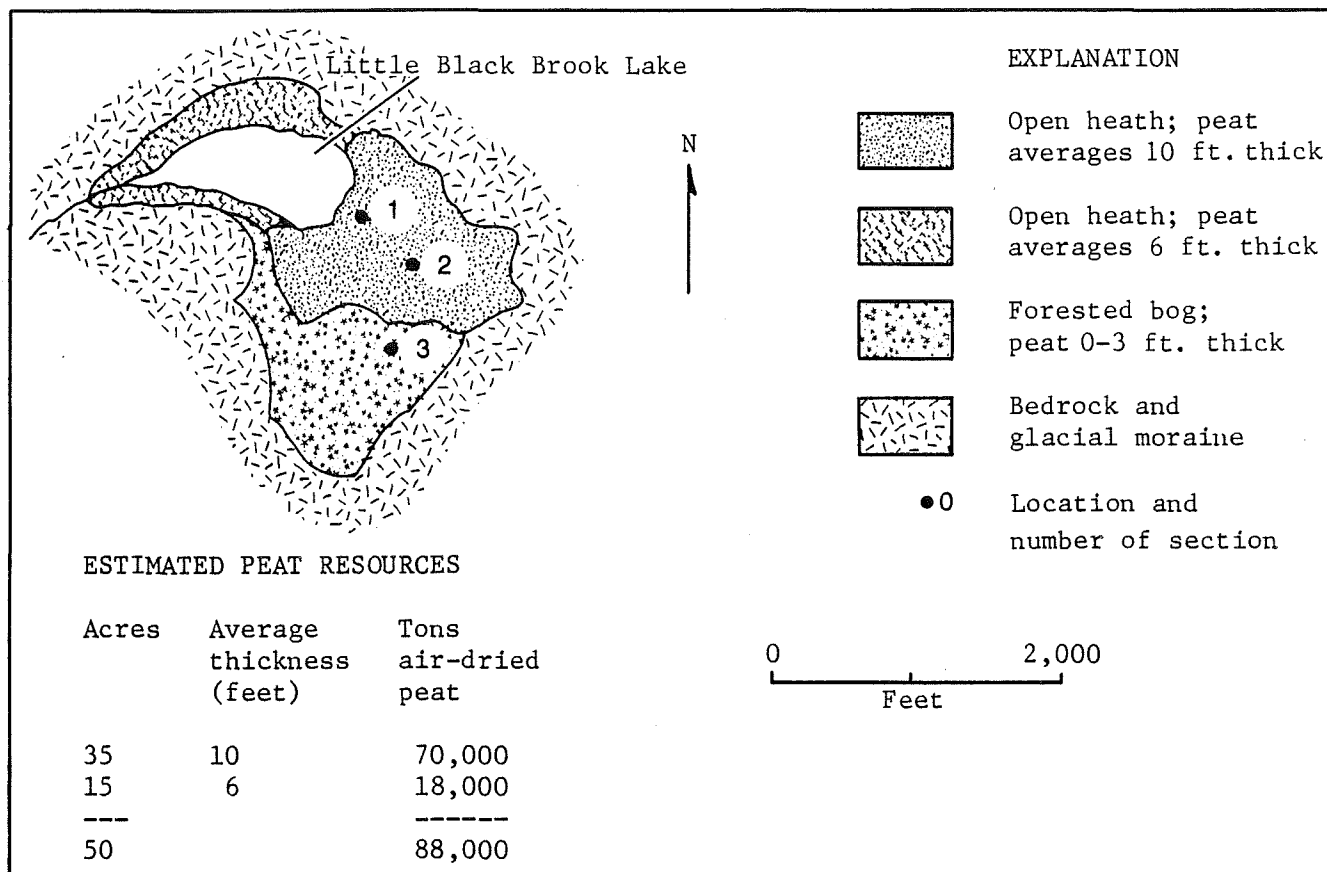


Figure 3. Sketch map of bog at Little Black Brook Lake, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County, Maine. (Number 2 on Index Map).

EXPLANATION OF SECTIONS

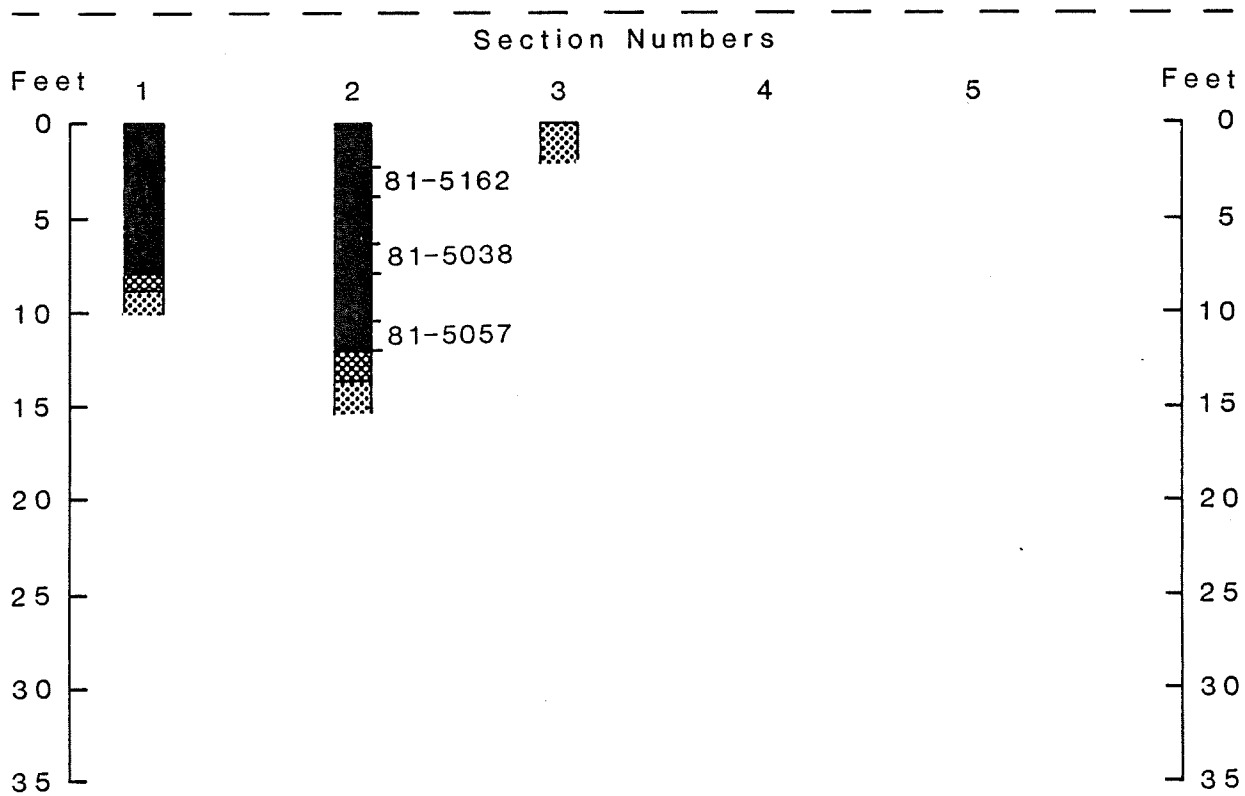
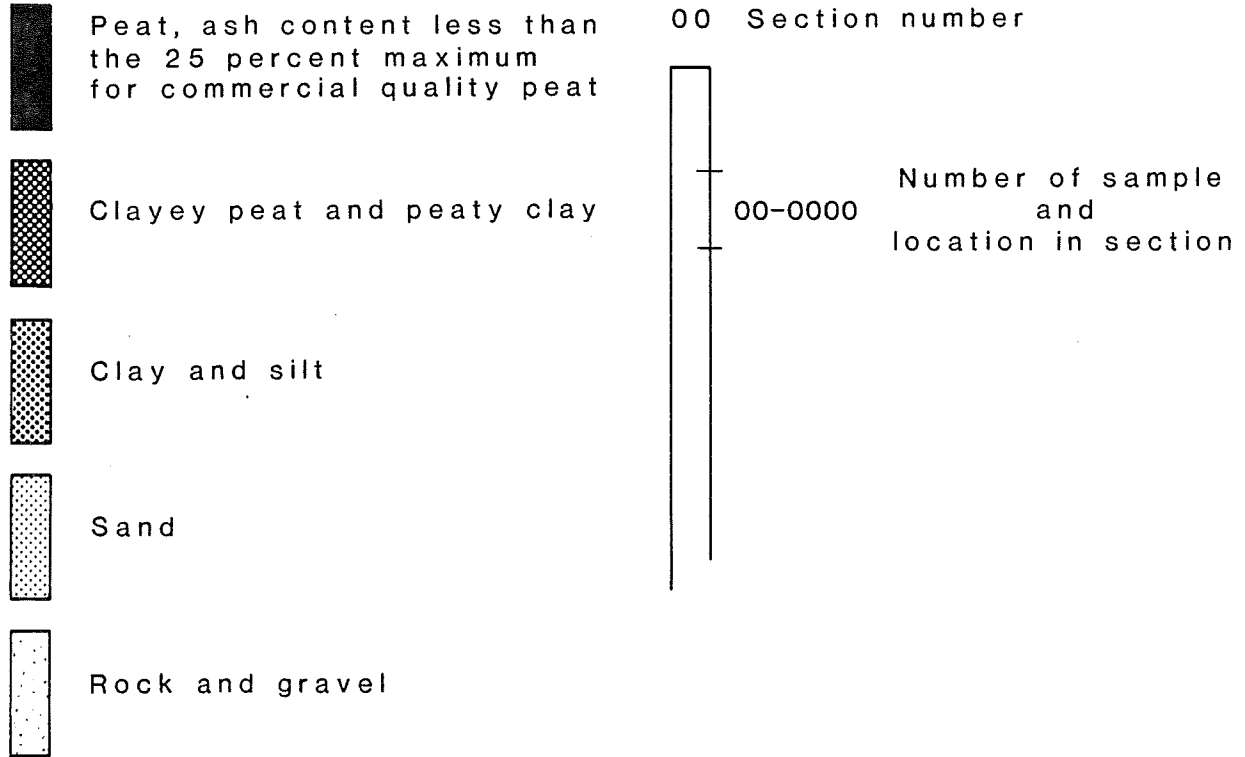


Figure 3a
SECTIONS AND SAMPLE LOCATIONS

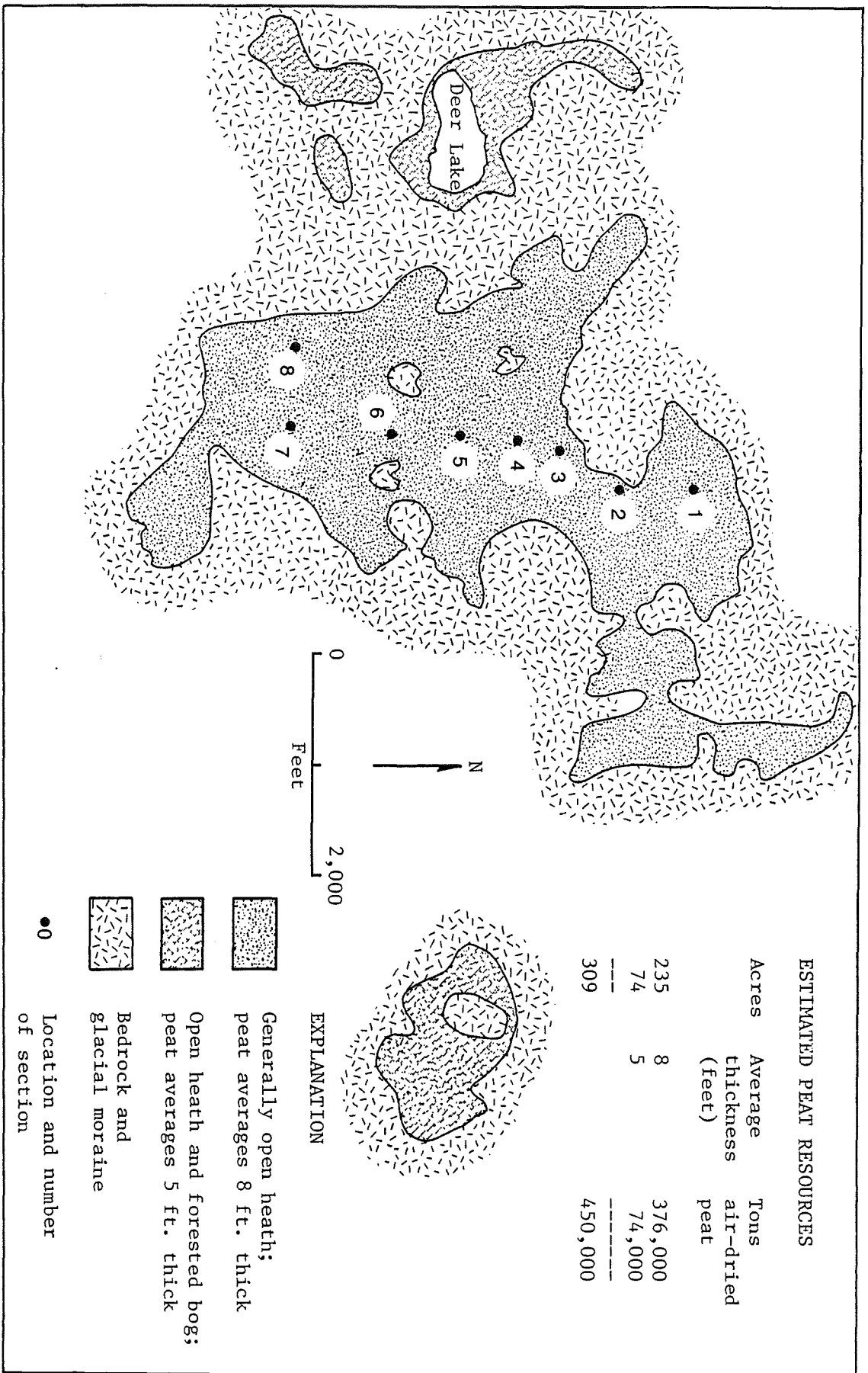


Figure 4. Sketch map of bogs between Deer and Mud Lakes, Caswell Plantation, Van Buren 15 minute Quadrangle, Aroostook County, Maine. (Number 3 on Index Map).

EXPLANATION OF SECTIONS

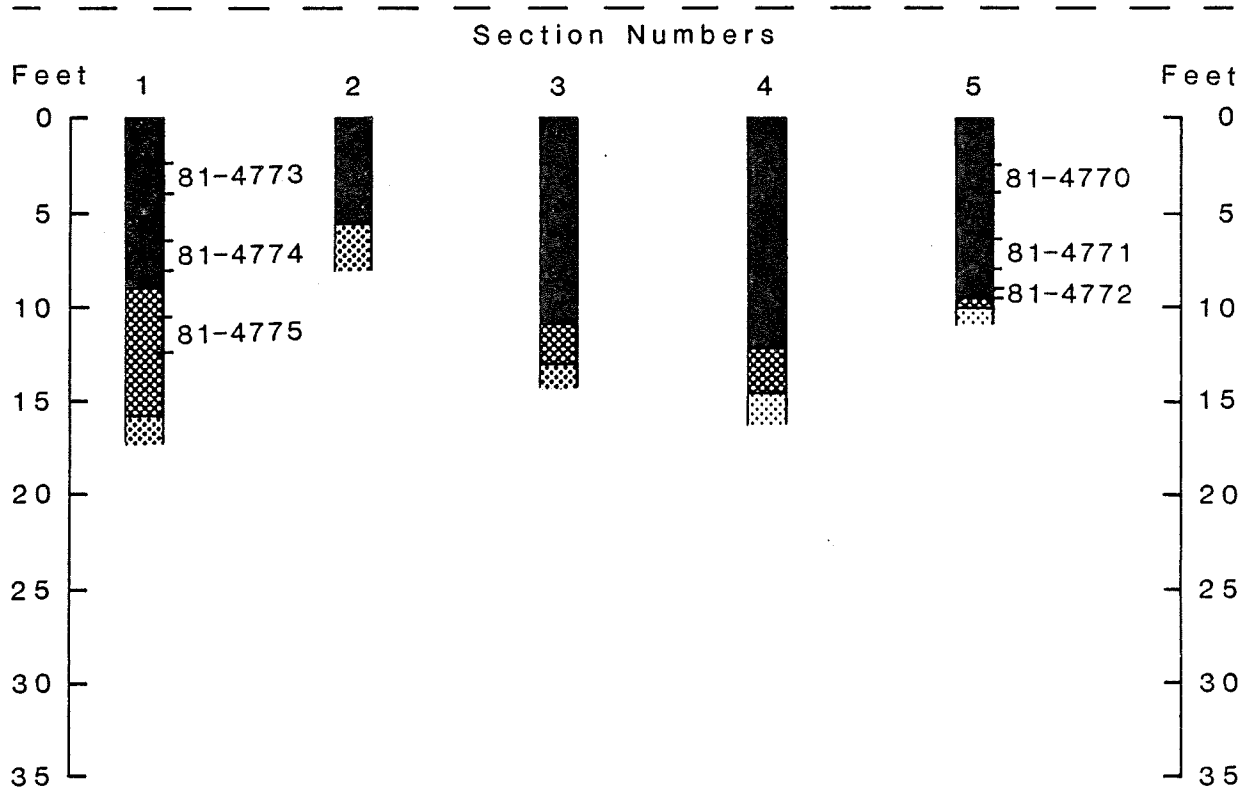
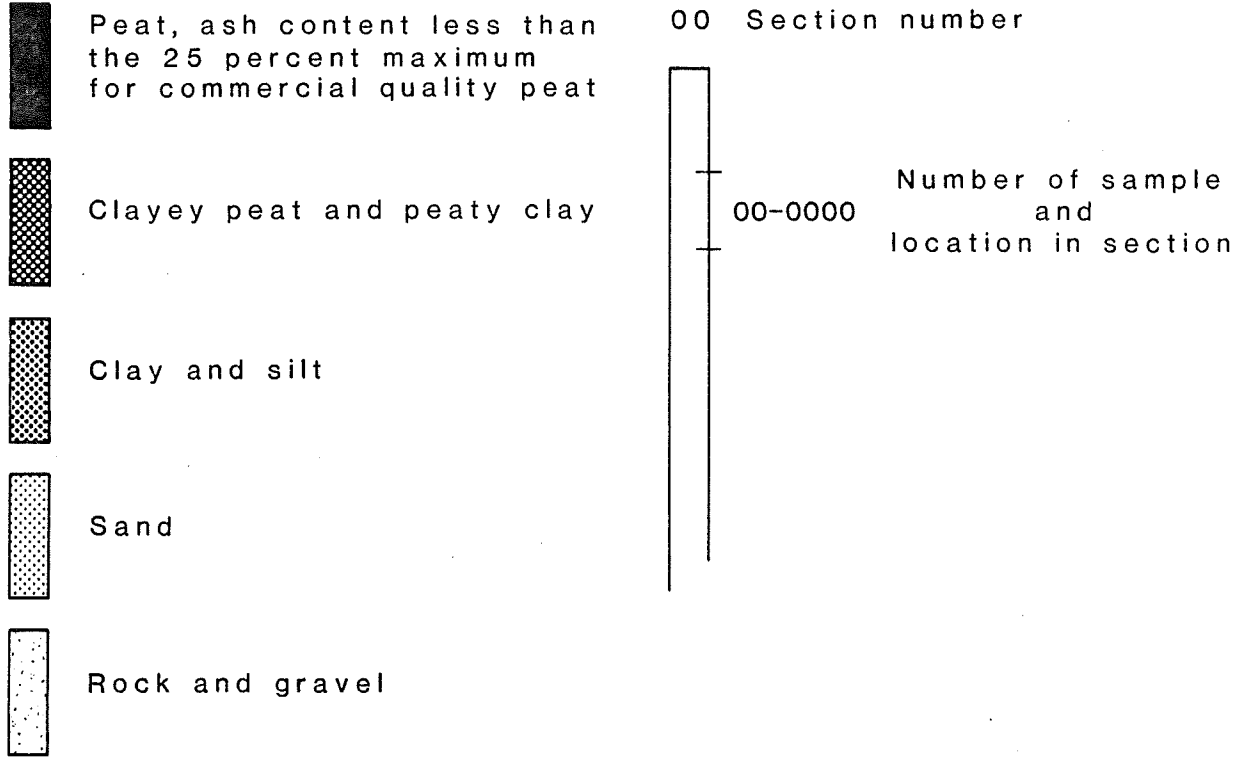


Figure 4a
SECTIONS AND SAMPLE LOCATIONS

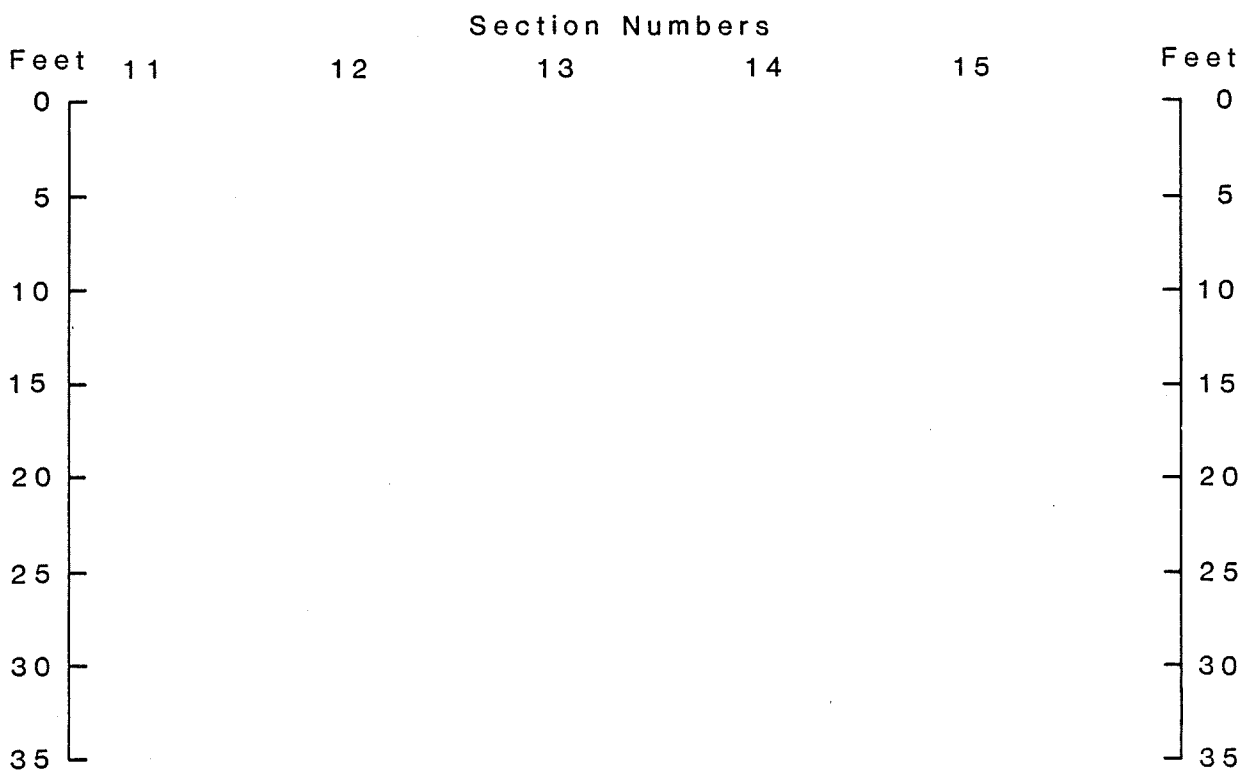
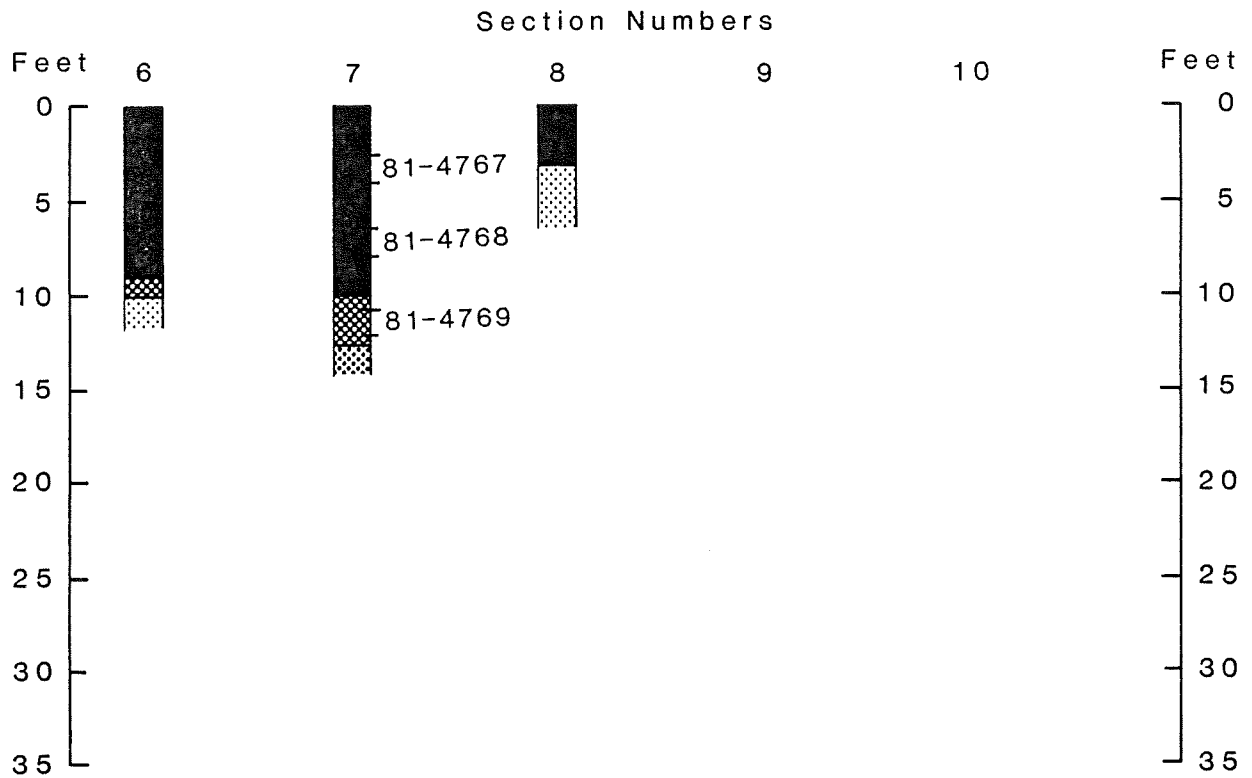


Figure 4a - Continued
SECTIONS AND SAMPLE LOCATIONS

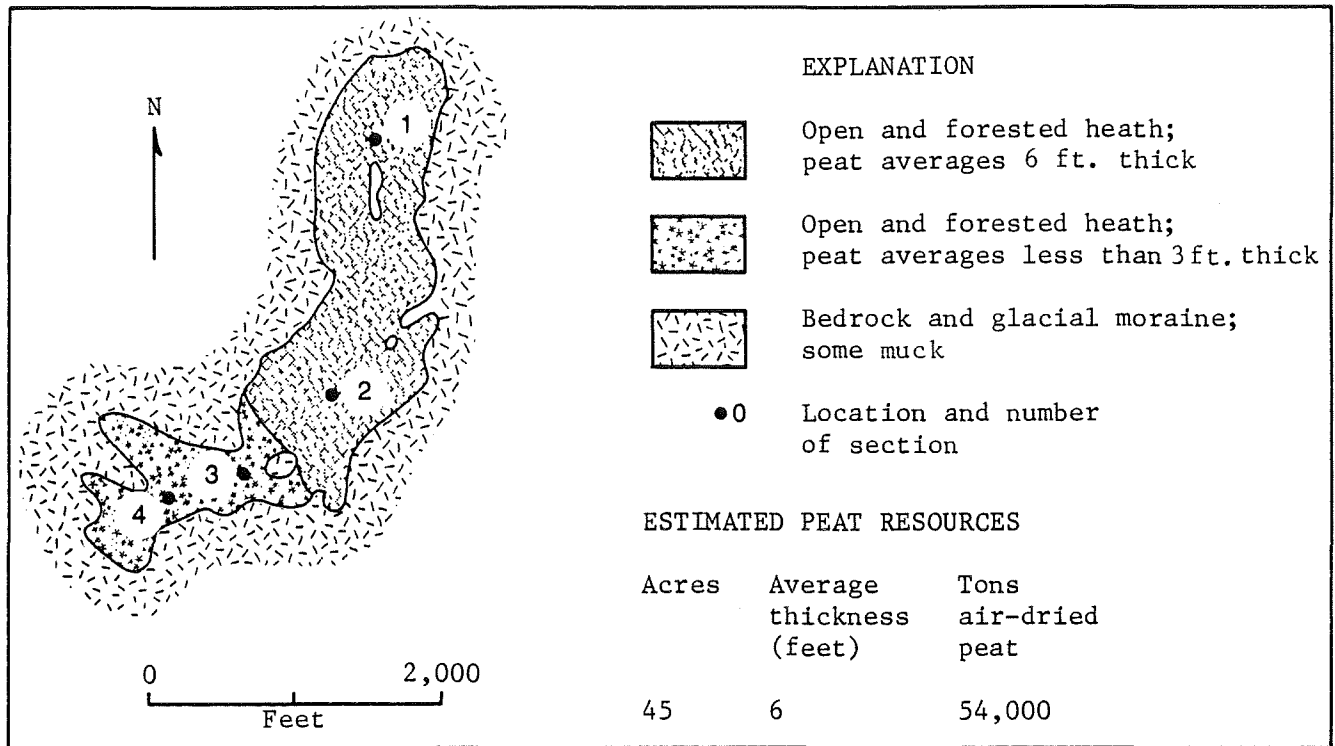


Figure 5. Sketch map of bog northwest of Pierce Lake and west of Route 165, Caswell Plantation, northeast corner of Fort Fairfield 15 minute Quadrangle, Aroostook County, Maine. (Number 4 on Index Map).

EXPLANATION OF SECTIONS

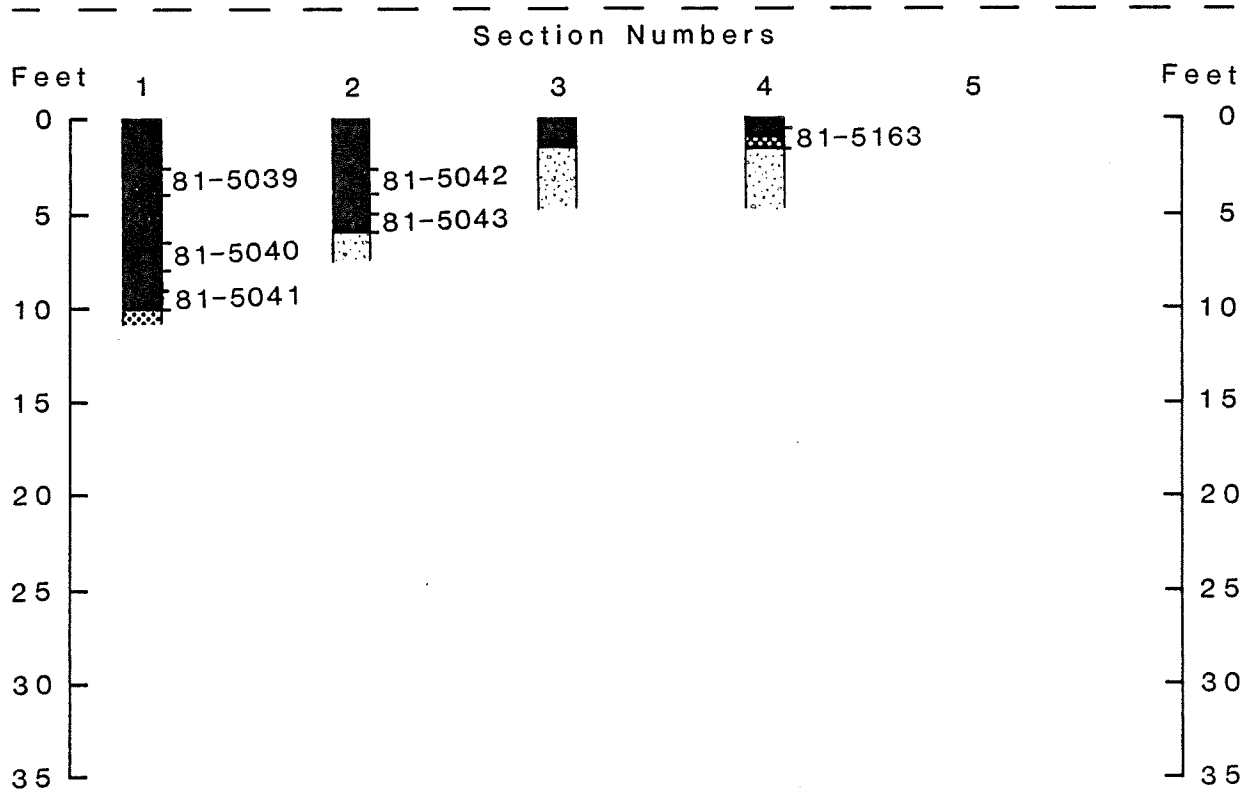
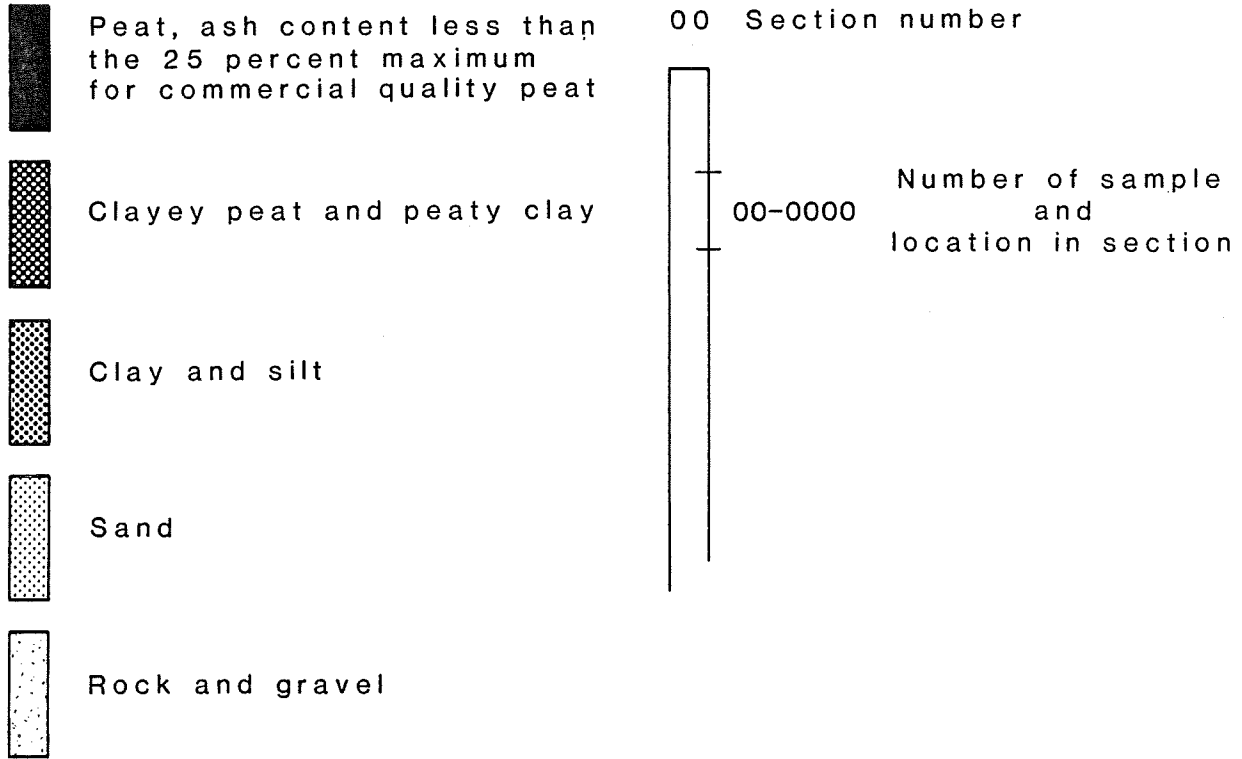


Figure 5a
SECTIONS AND SAMPLE LOCATIONS

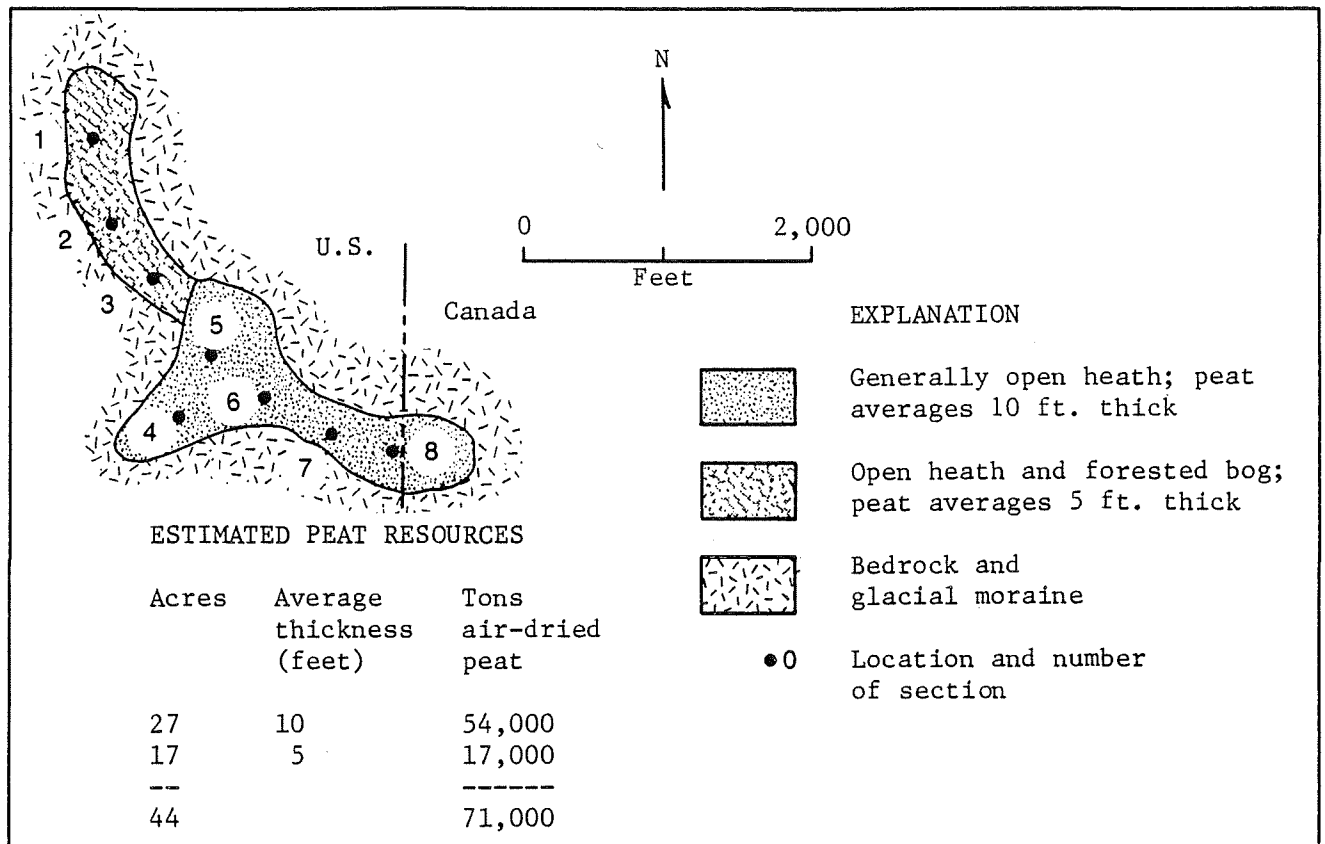


Figure 6. Sketch map of bog 2 miles northeast of Limestone on U.S.-Canada boundary, Limestone Twp., Fort Fairfield 15 minute Quadrangle, Aroostook County, Maine. (Number 5 on Index Map).

EXPLANATION OF SECTIONS

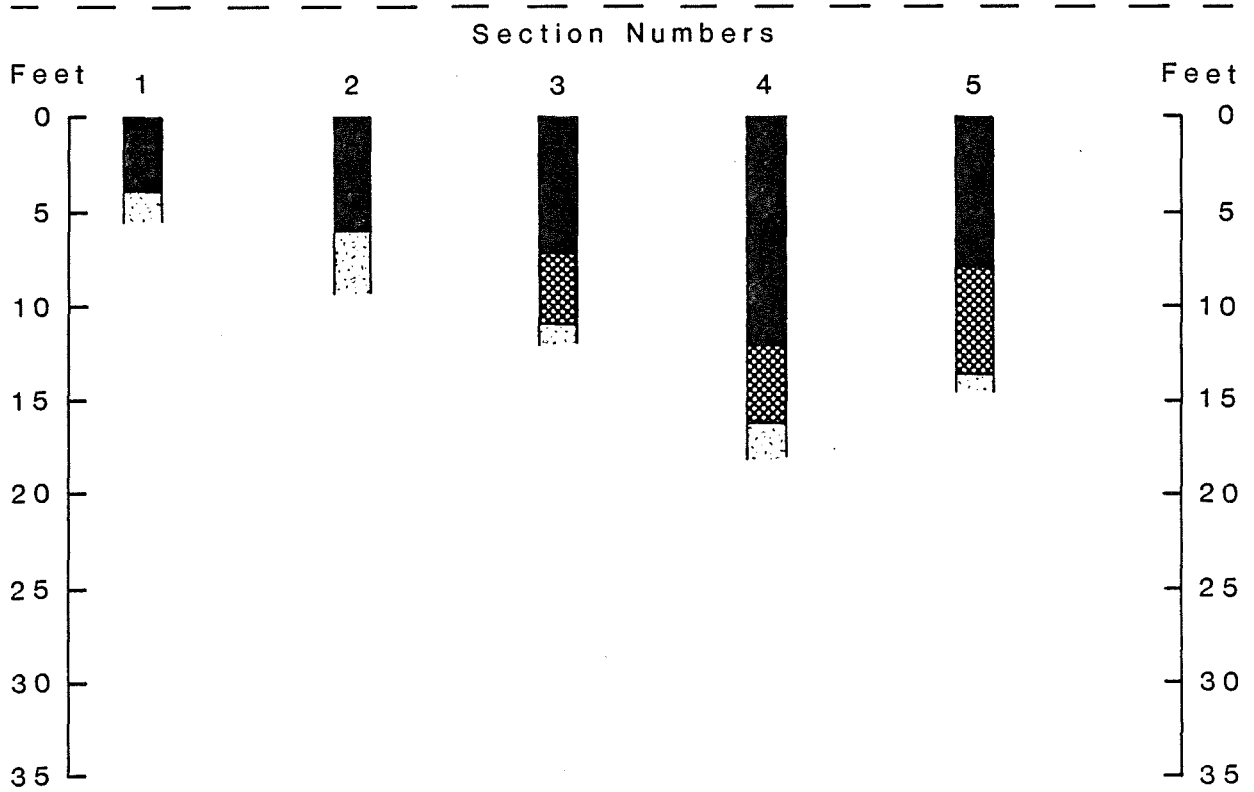
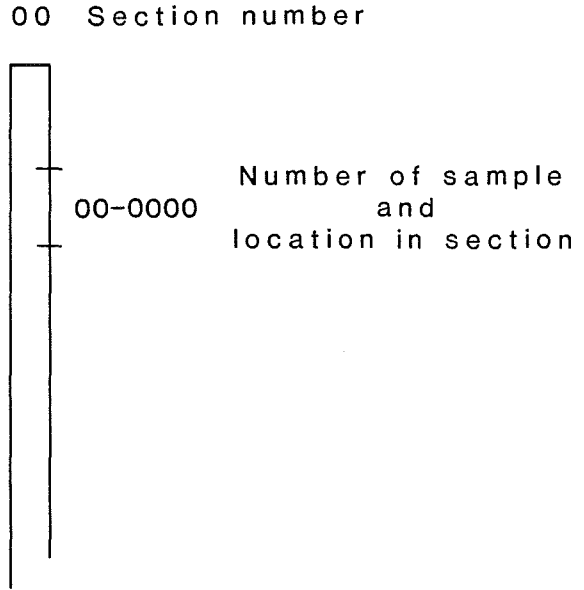
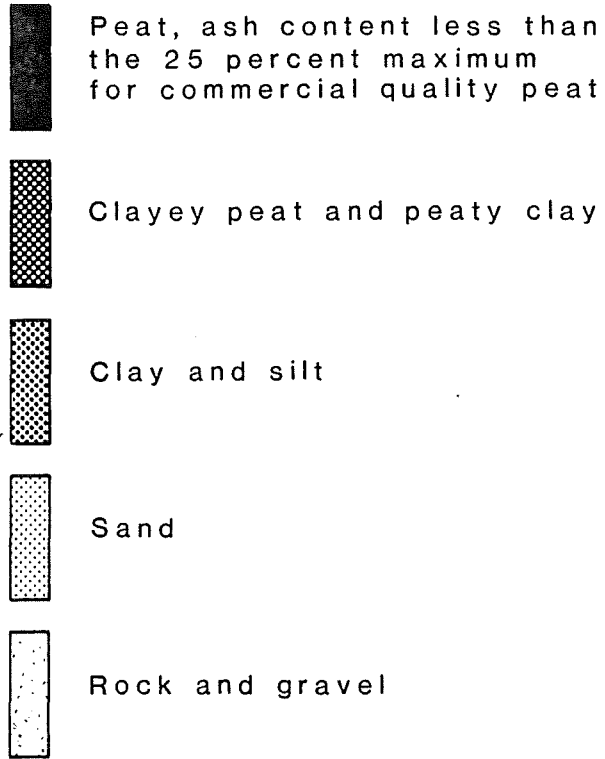


Figure 6a
SECTIONS AND SAMPLE LOCATIONS

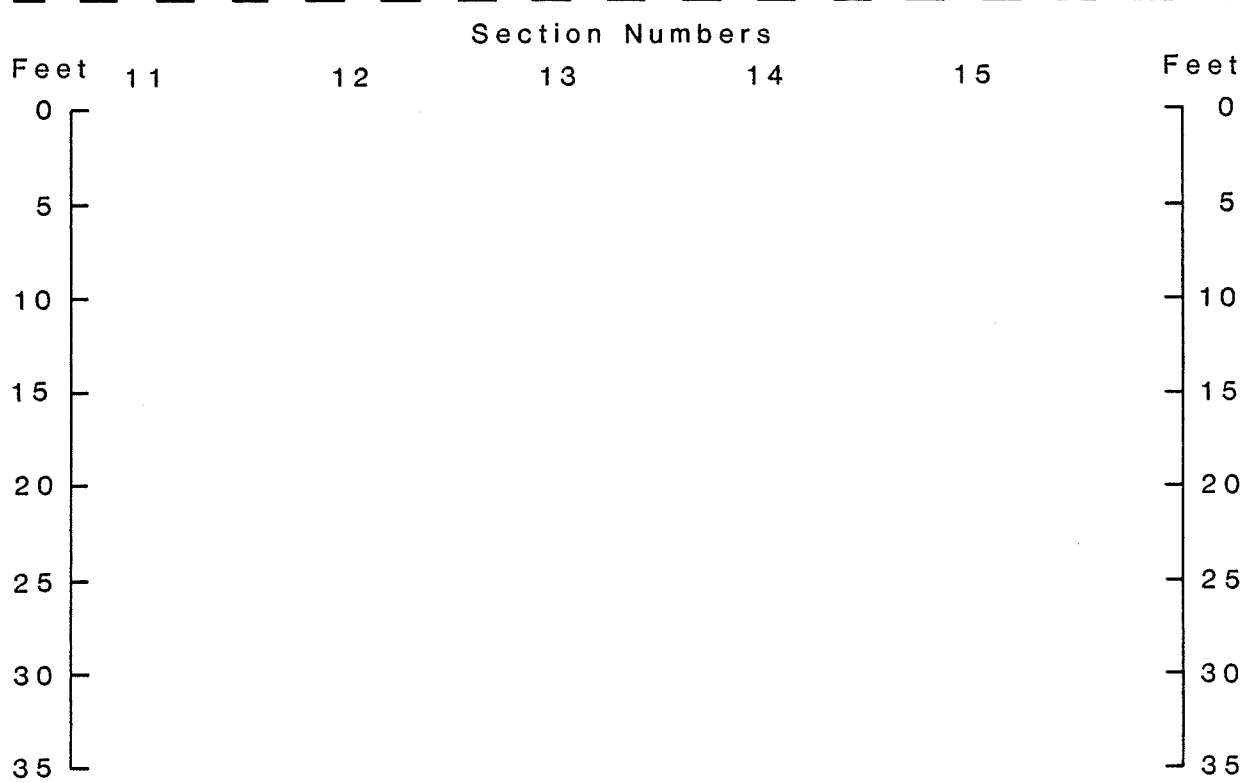
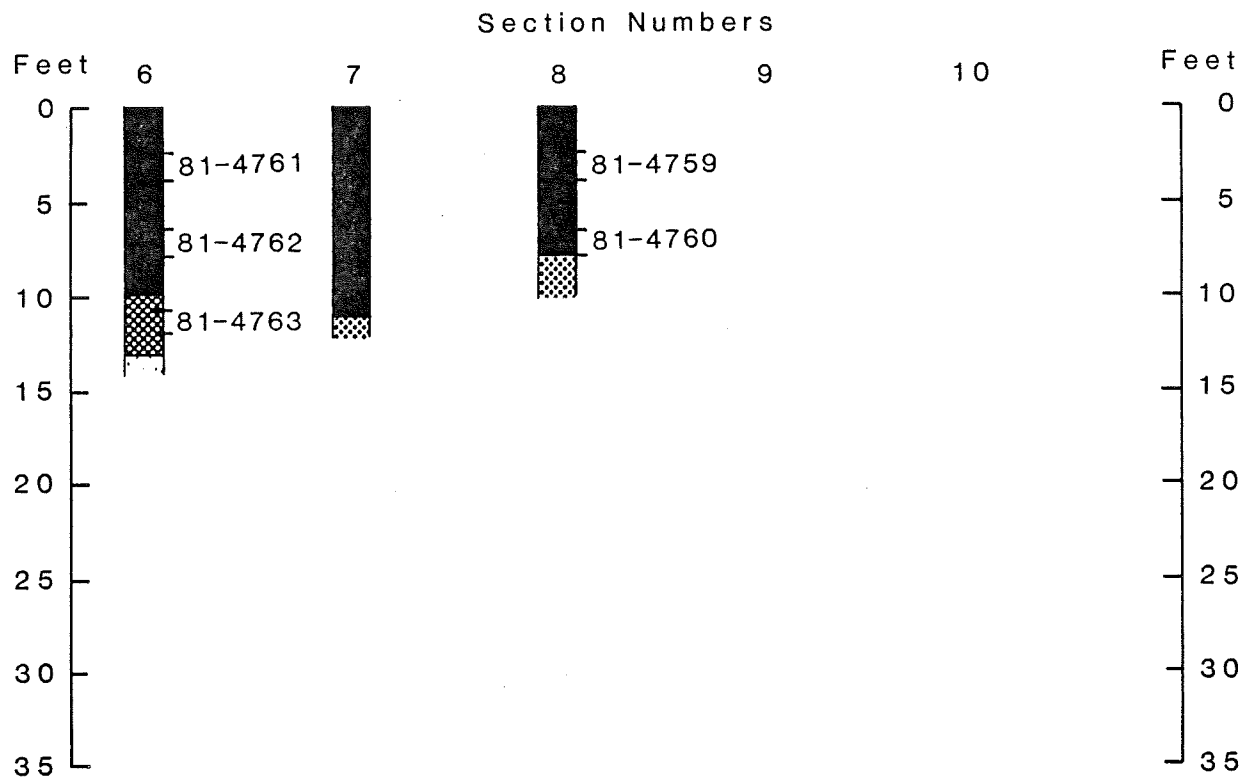


Figure 6a - Continued
SECTIONS AND SAMPLE LOCATIONS

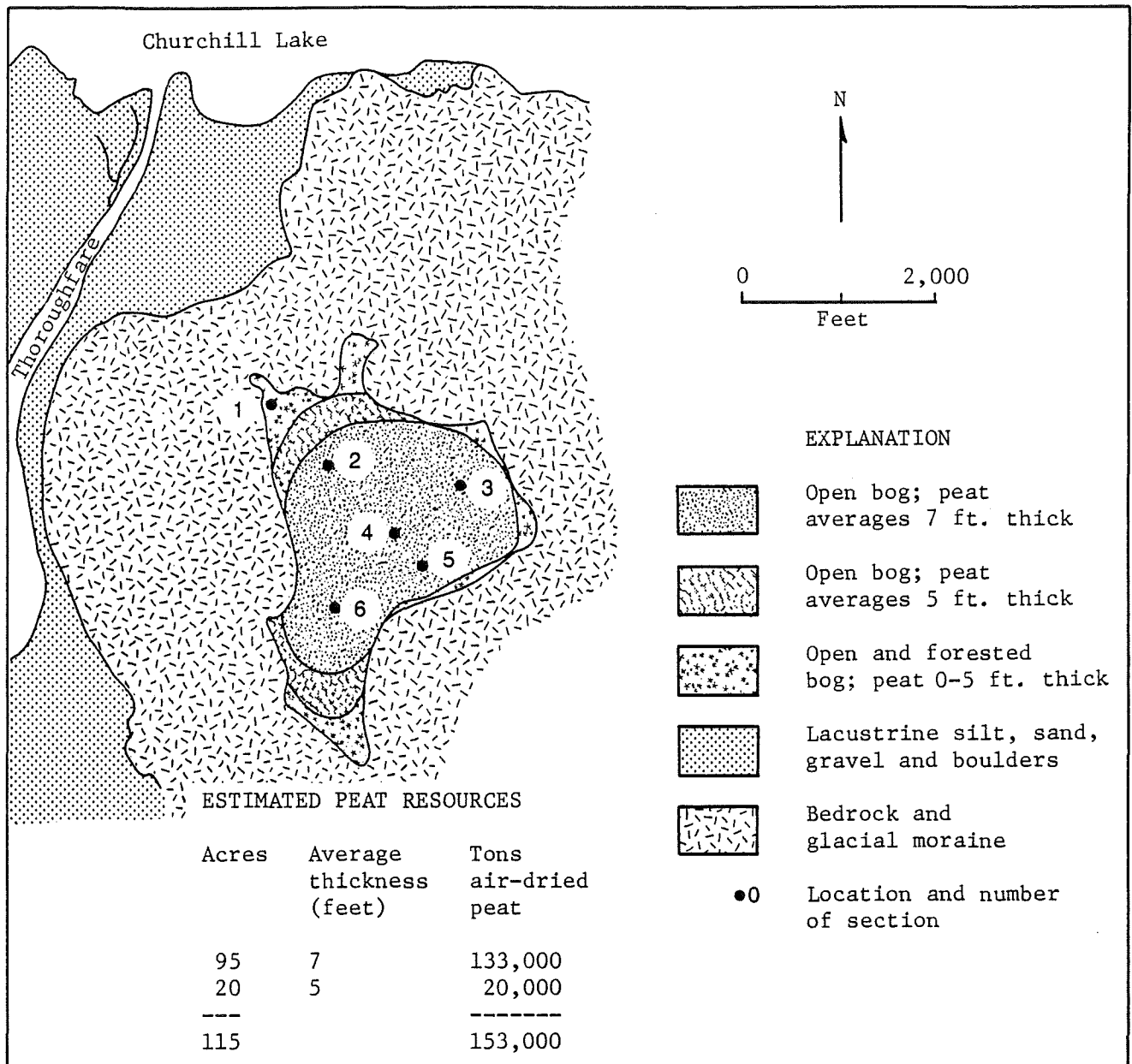


Figure 7. Sketch map of bog south of Churchill Lake and east of Thoroughfare, T9 R12 WELS, Churchill Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 6 on Index Map).

EXPLANATION OF SECTIONS

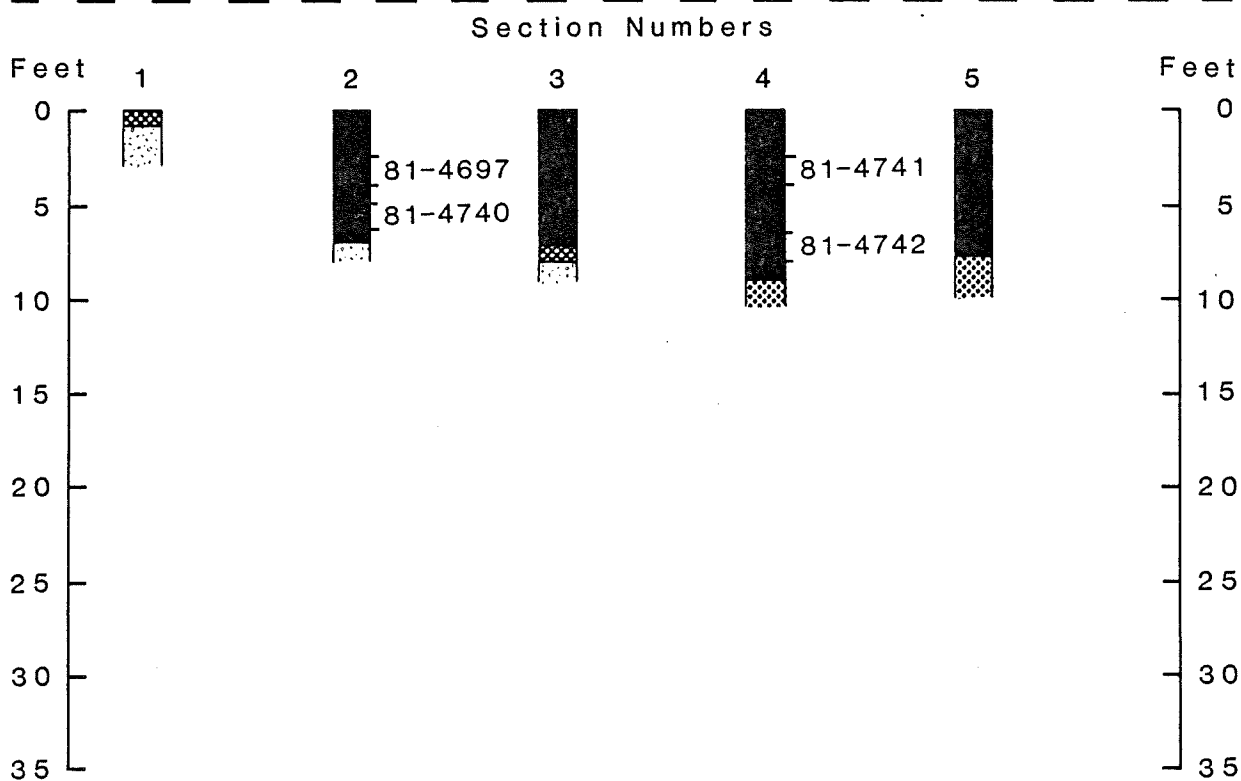
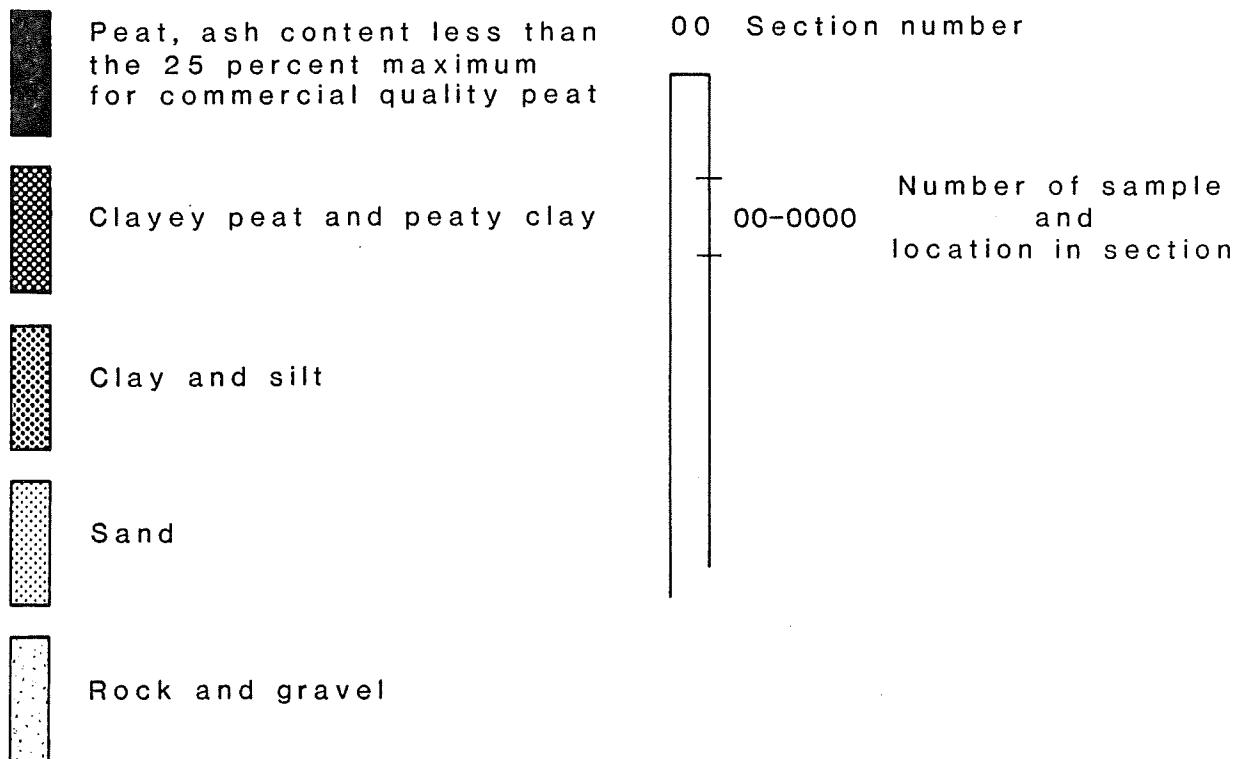


Figure 7a
SECTIONS AND SAMPLE LOCATIONS

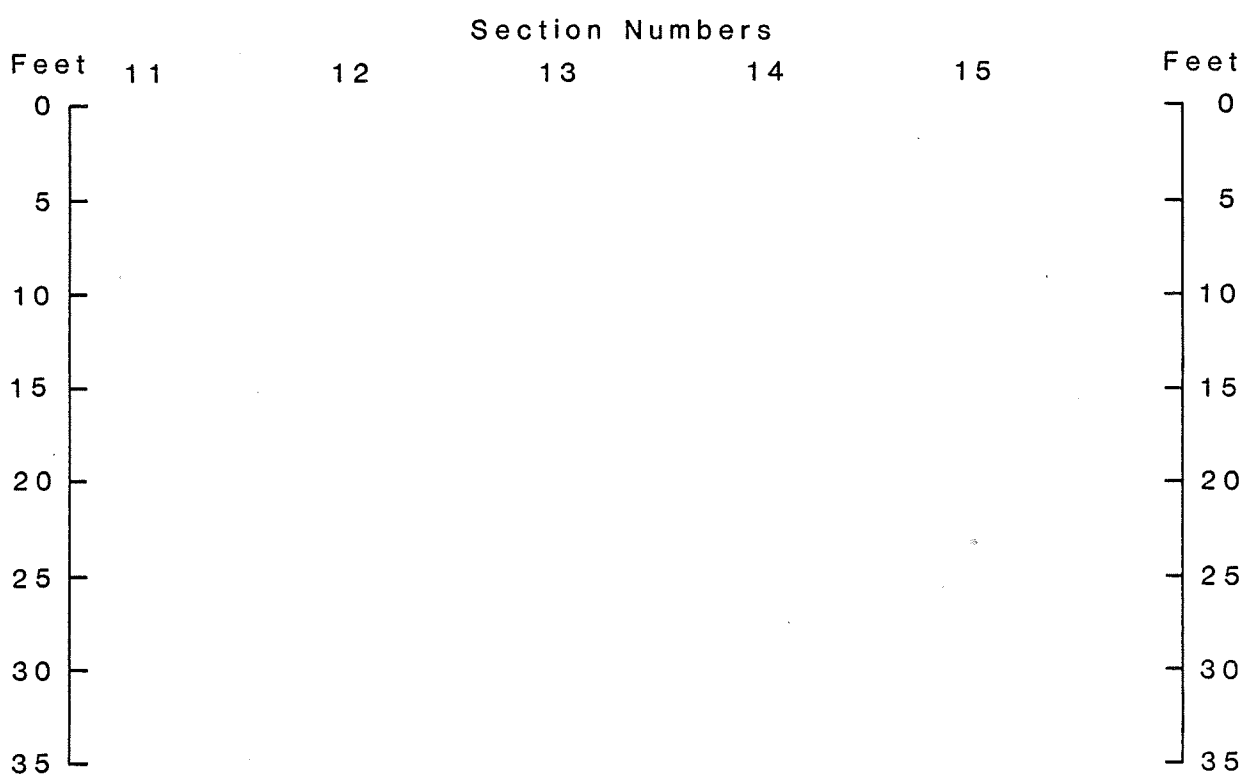
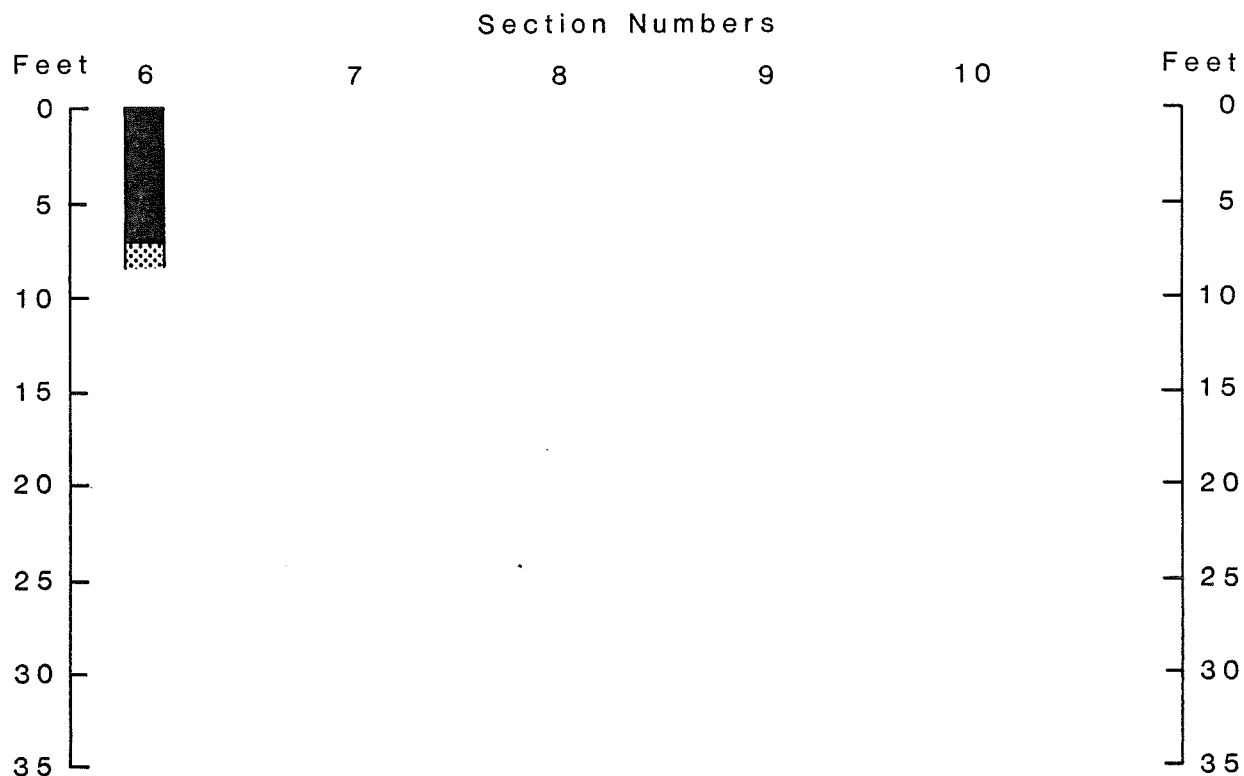


Figure 7a - Continued
SECTIONS AND SAMPLE LOCATIONS

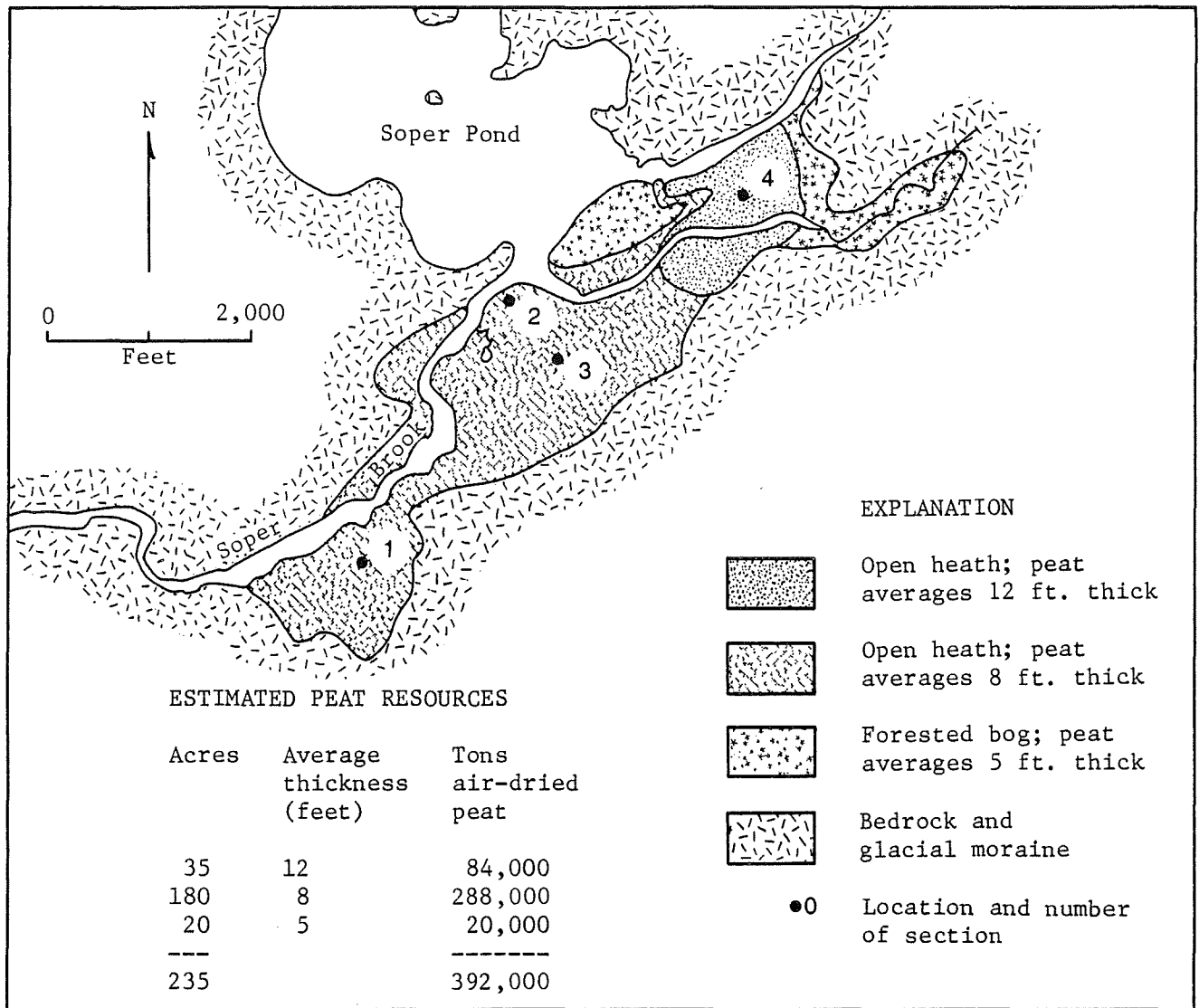


Figure 8. Sketch map of bog along Soper Brook at Soper Pond, T8 R12 WELS (Soper Mtn. Twp.), Spider Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 7 on Index Map).

EXPLANATION OF SECTIONS

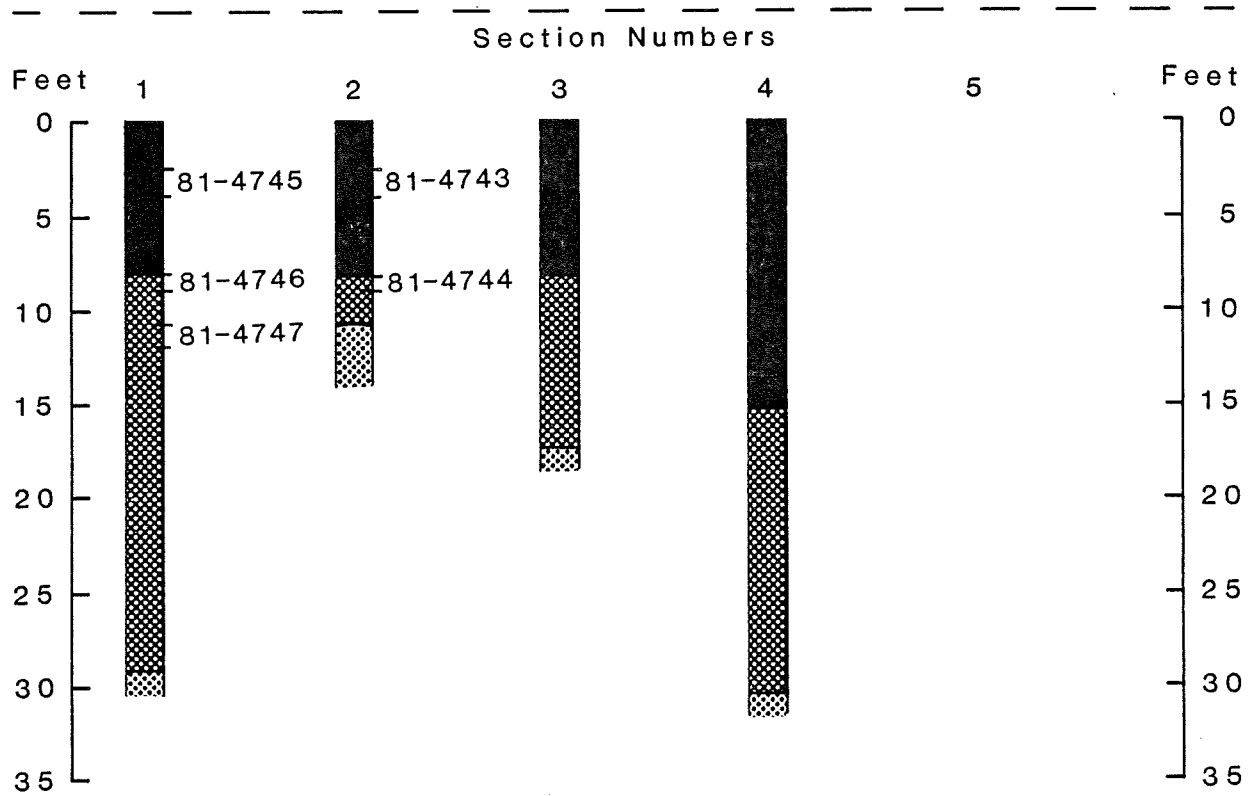
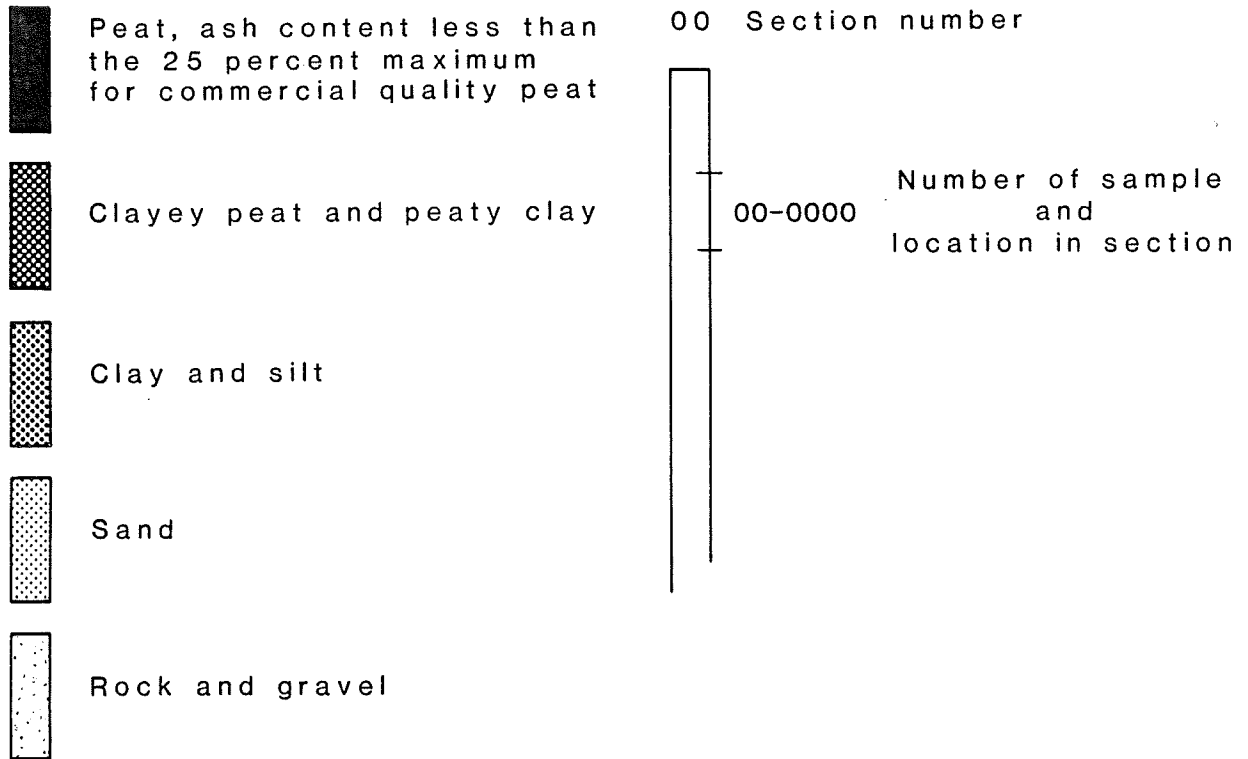


Figure 8a
SECTIONS AND SAMPLE LOCATIONS

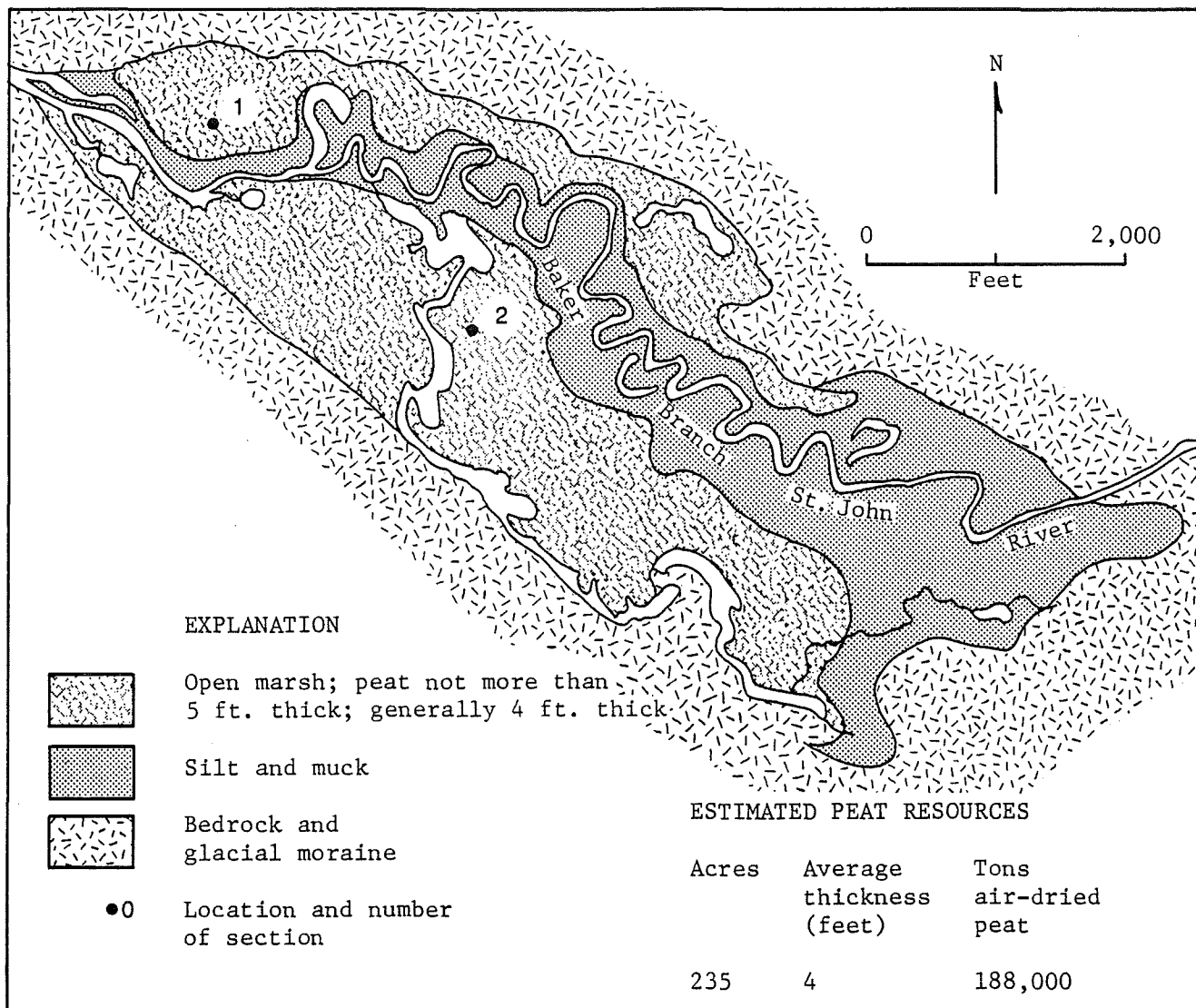


Figure 9. Sketch map of marsh along Baker Branch, St. John River, T7 R16 WELS, Baker Lake and Saint John Pond 15 minute Quadrangles, Somerset County, Maine. (Number 8 on Index Map).

EXPLANATION OF SECTIONS

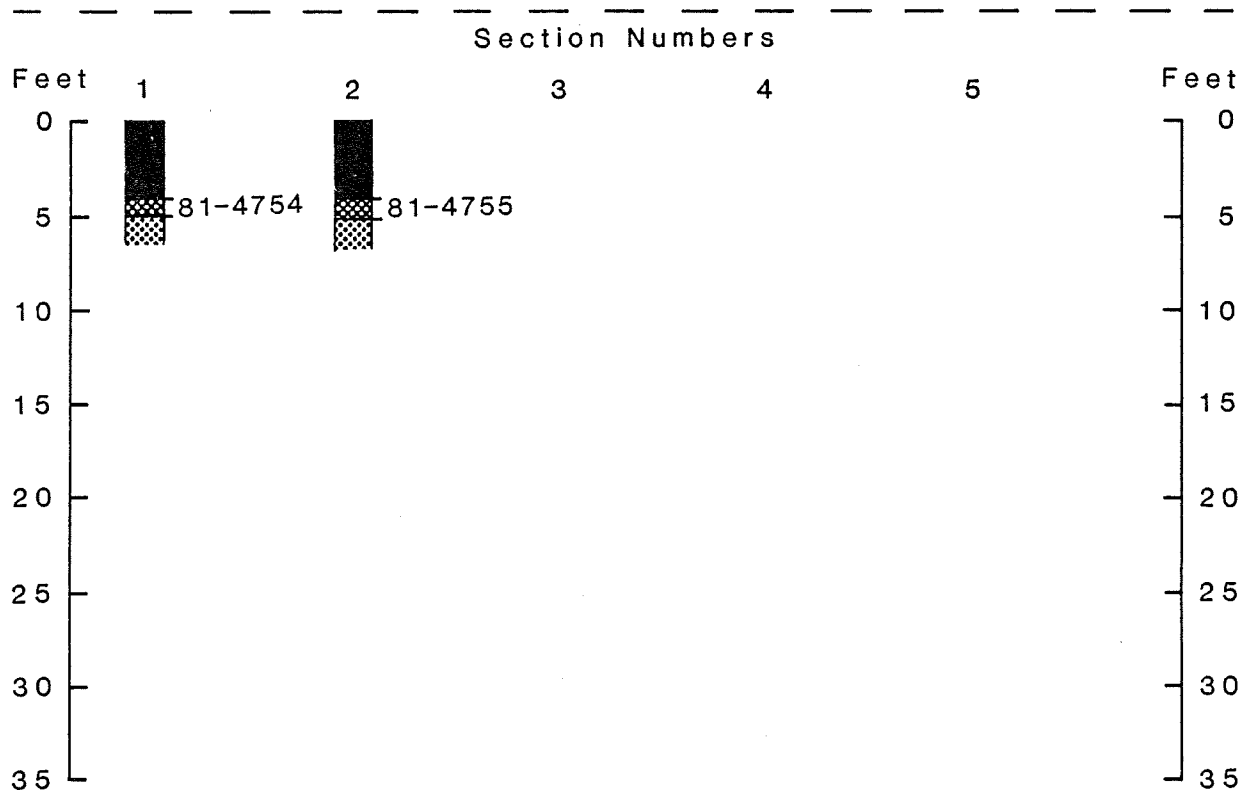
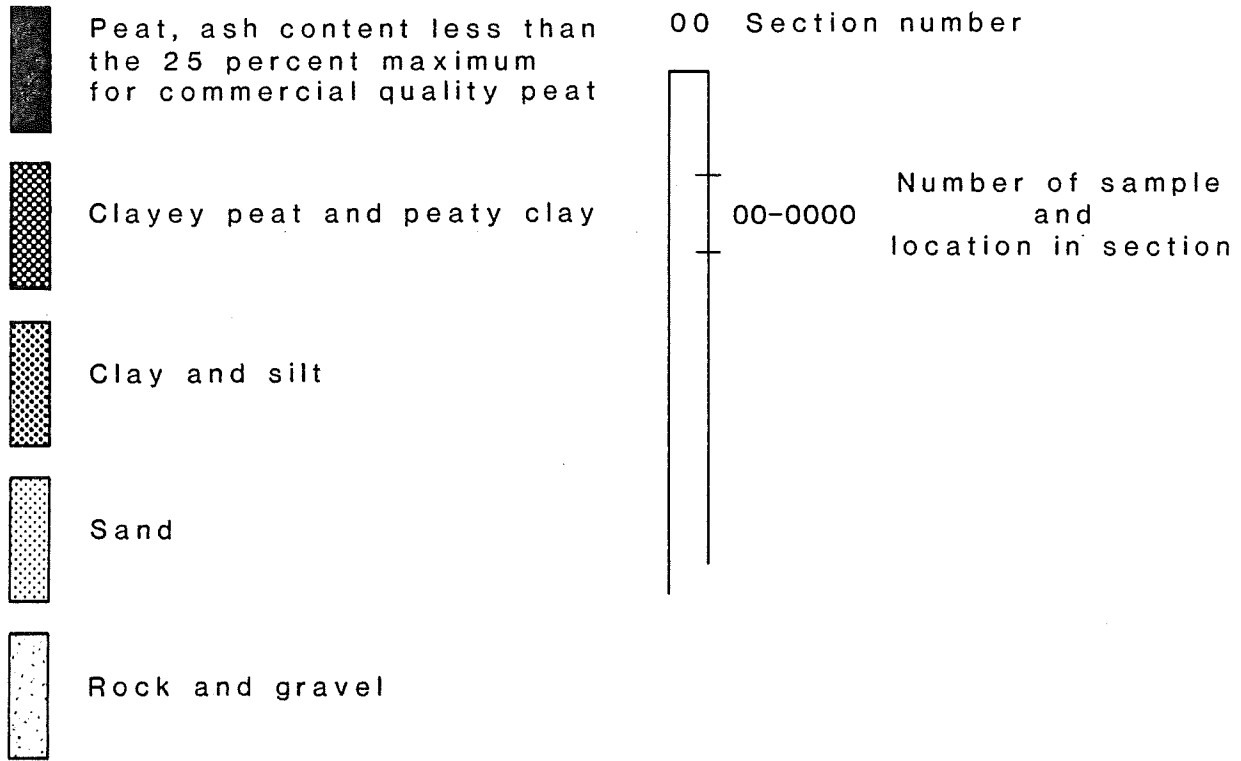


Figure 9a
SECTIONS AND SAMPLE LOCATIONS

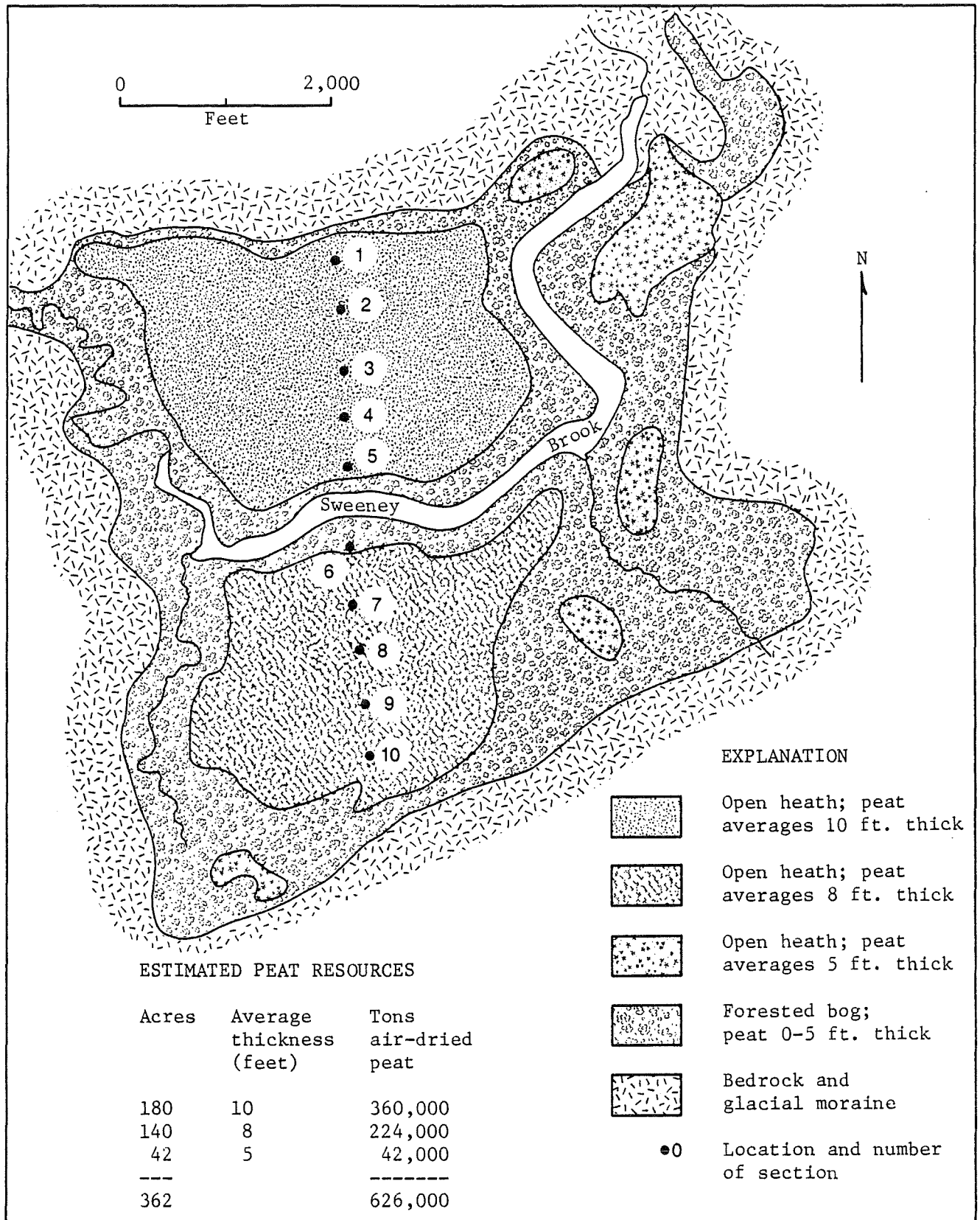


Figure 10. Sketch map of Sweeney Bog, T6 R17 WELS, Saint John Pond 15 minute Quadrangle, Somerset County, Maine. (Number 9 on Index Map).

EXPLANATION OF SECTIONS

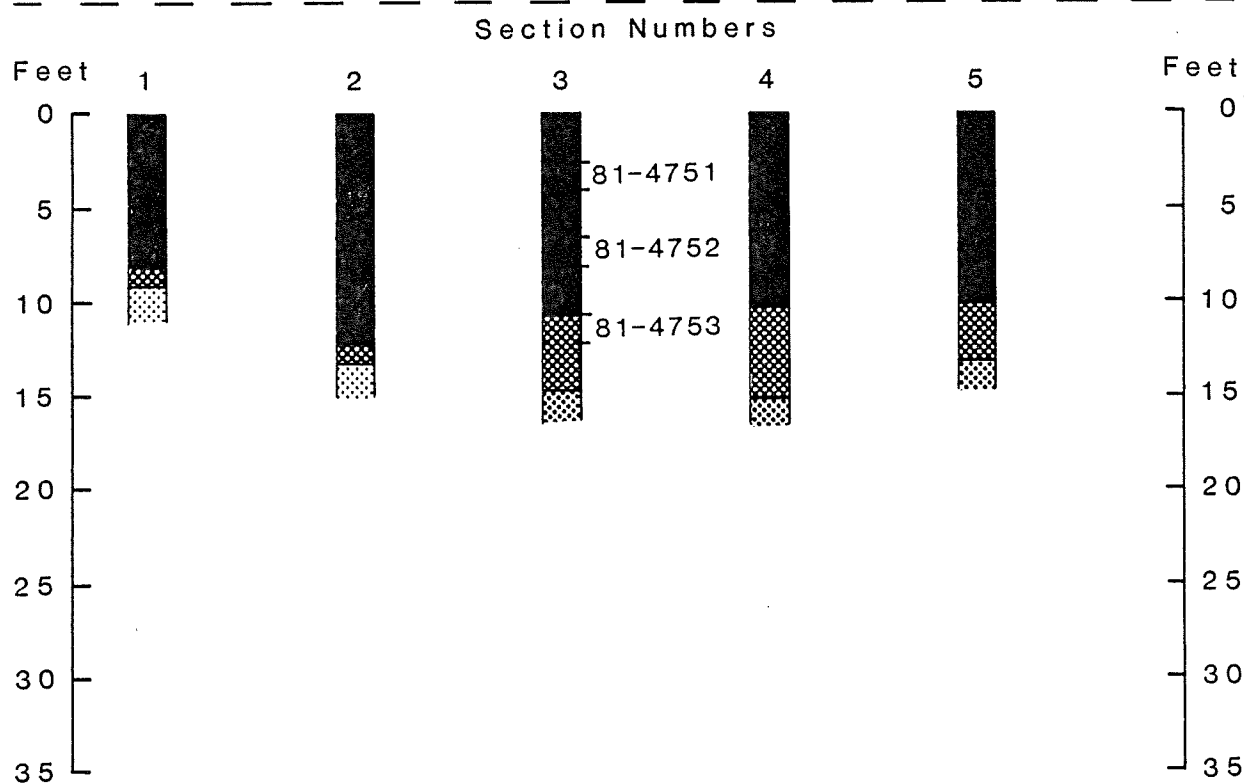
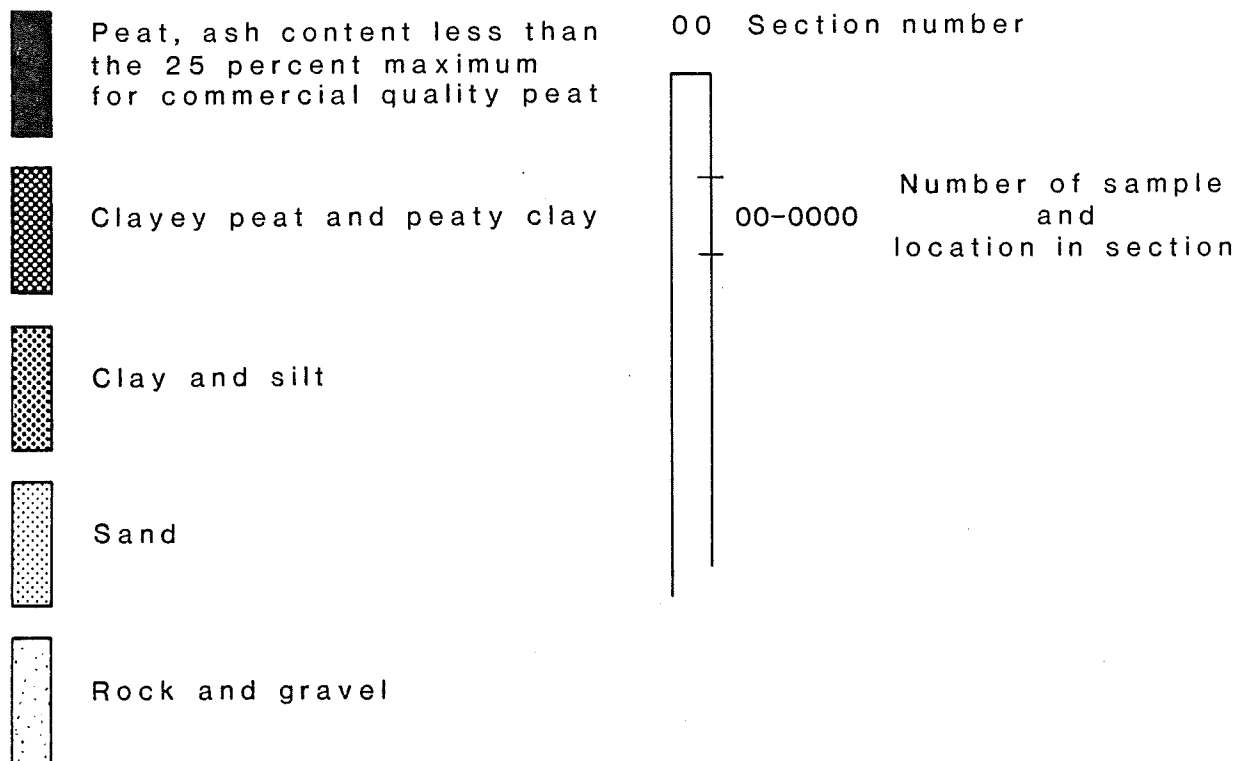


Figure 10a
SECTIONS AND SAMPLE LOCATIONS

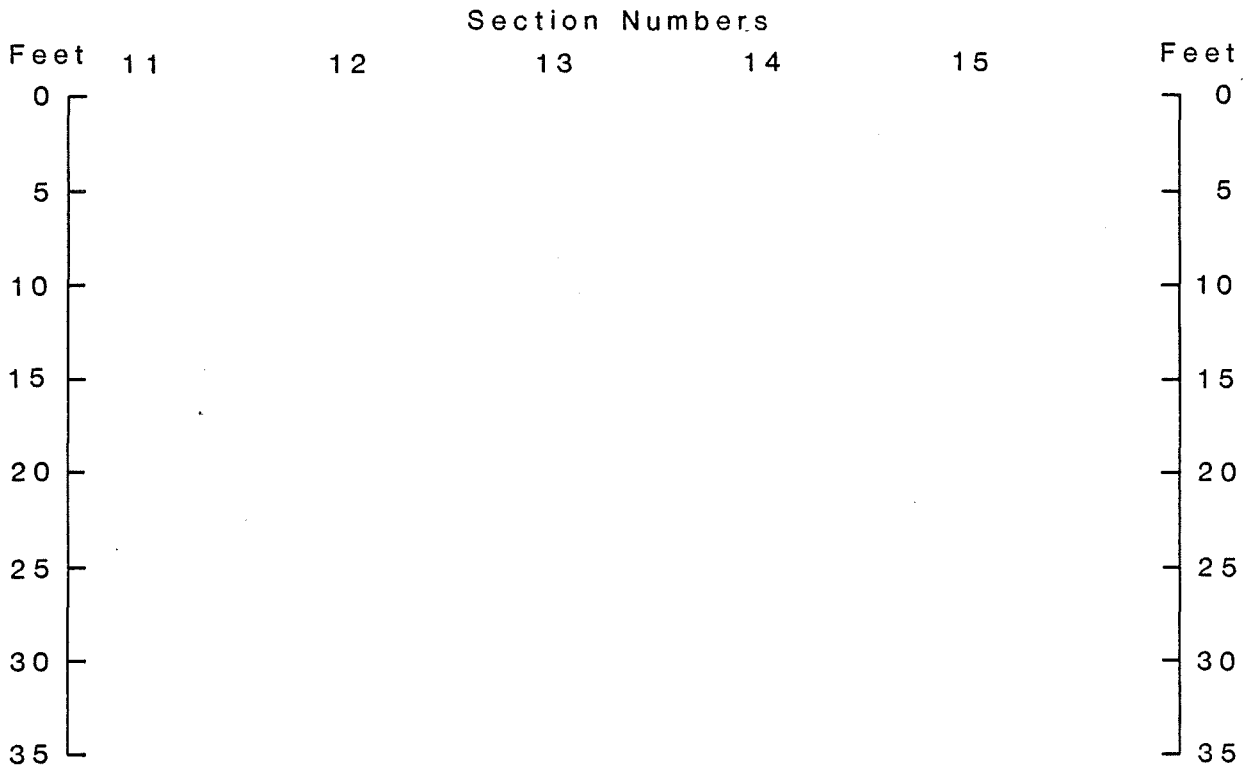
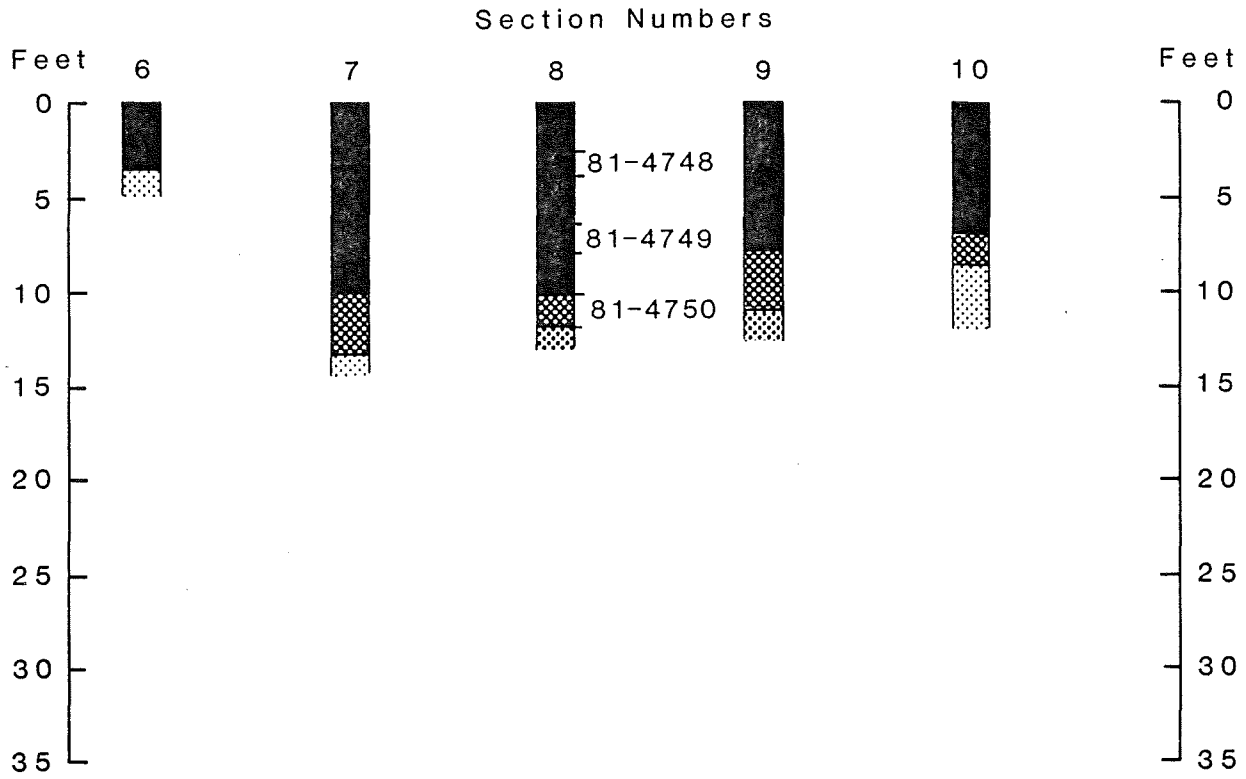


Figure 10a - Continued
SECTIONS AND SAMPLE LOCATIONS

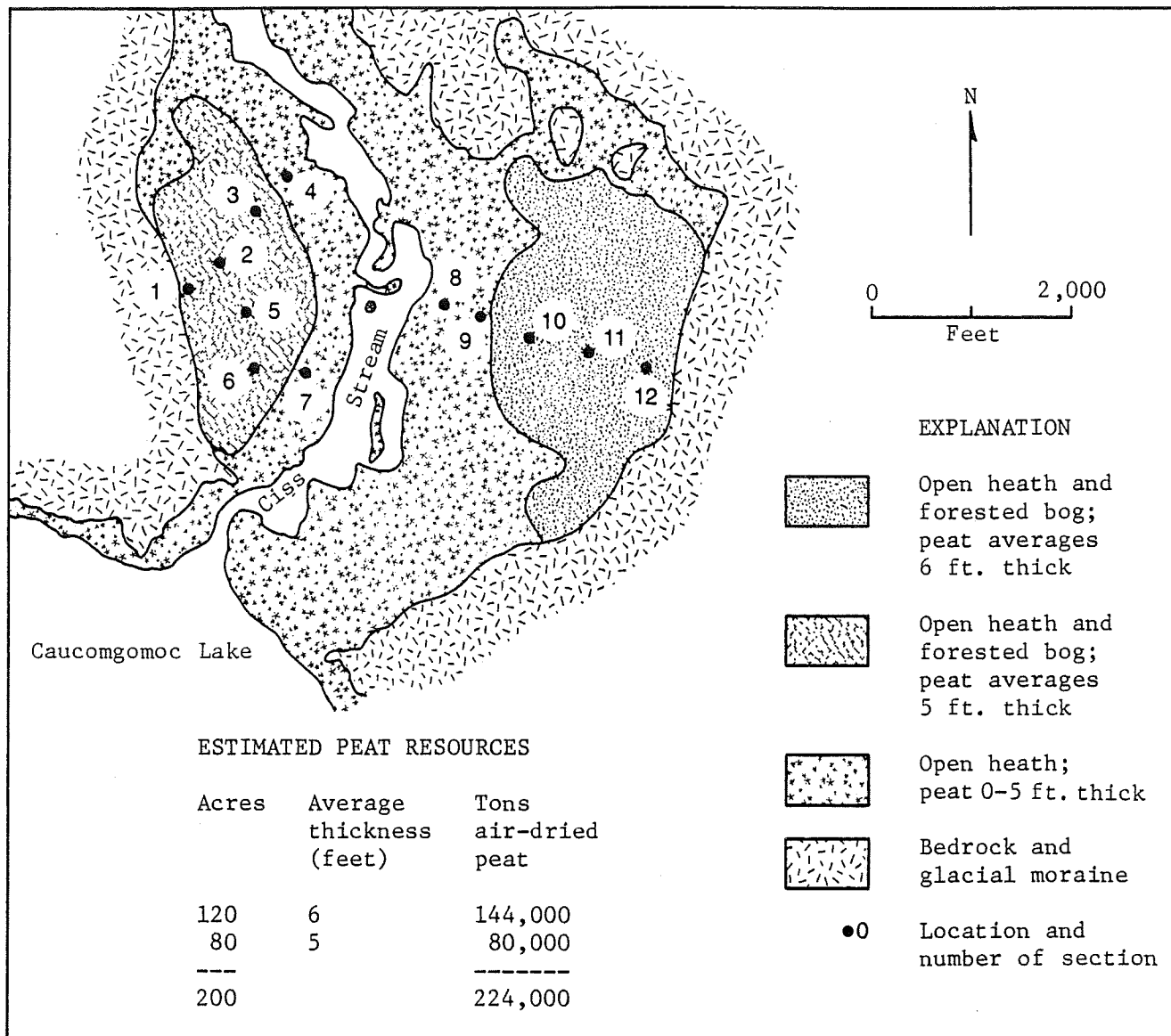


Figure 11. Sketch map of bogs along Ciss Stream, T6 R14 WELS and T7 R14 WELS, Caucomgomoc Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 10 on Index Map).

EXPLANATION OF SECTIONS

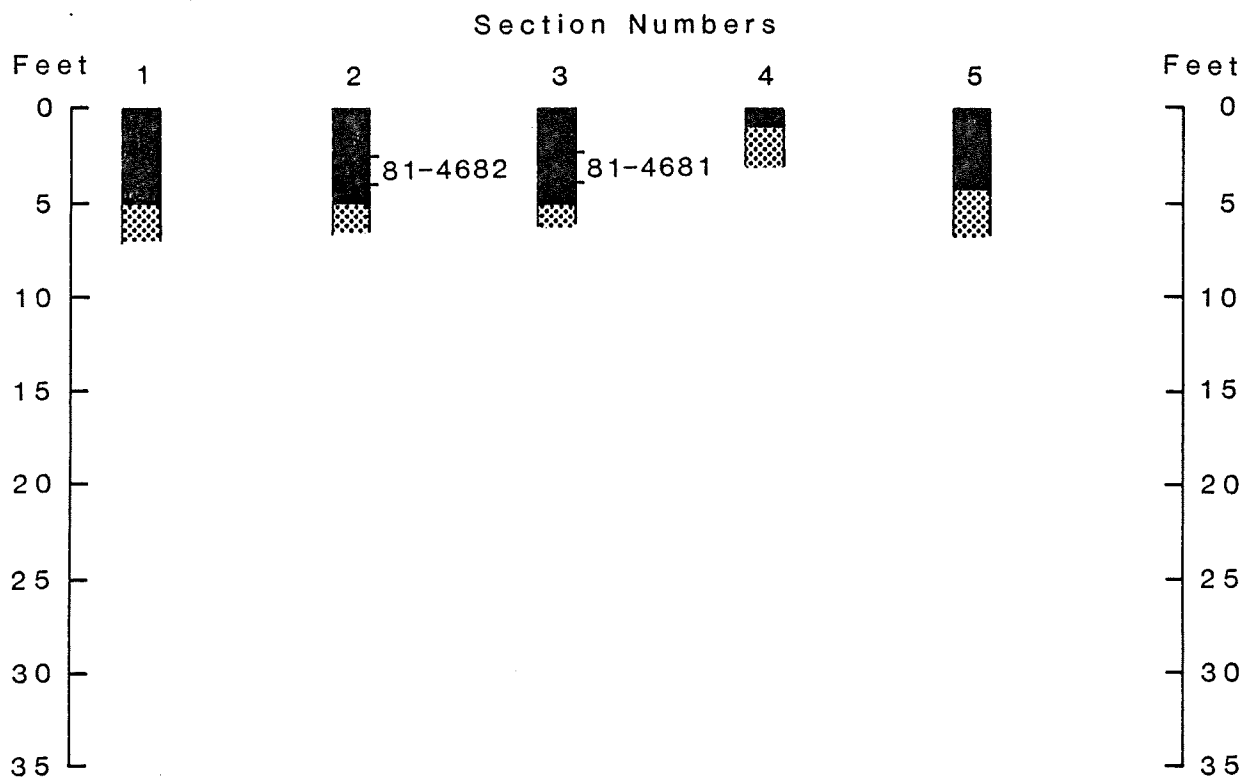
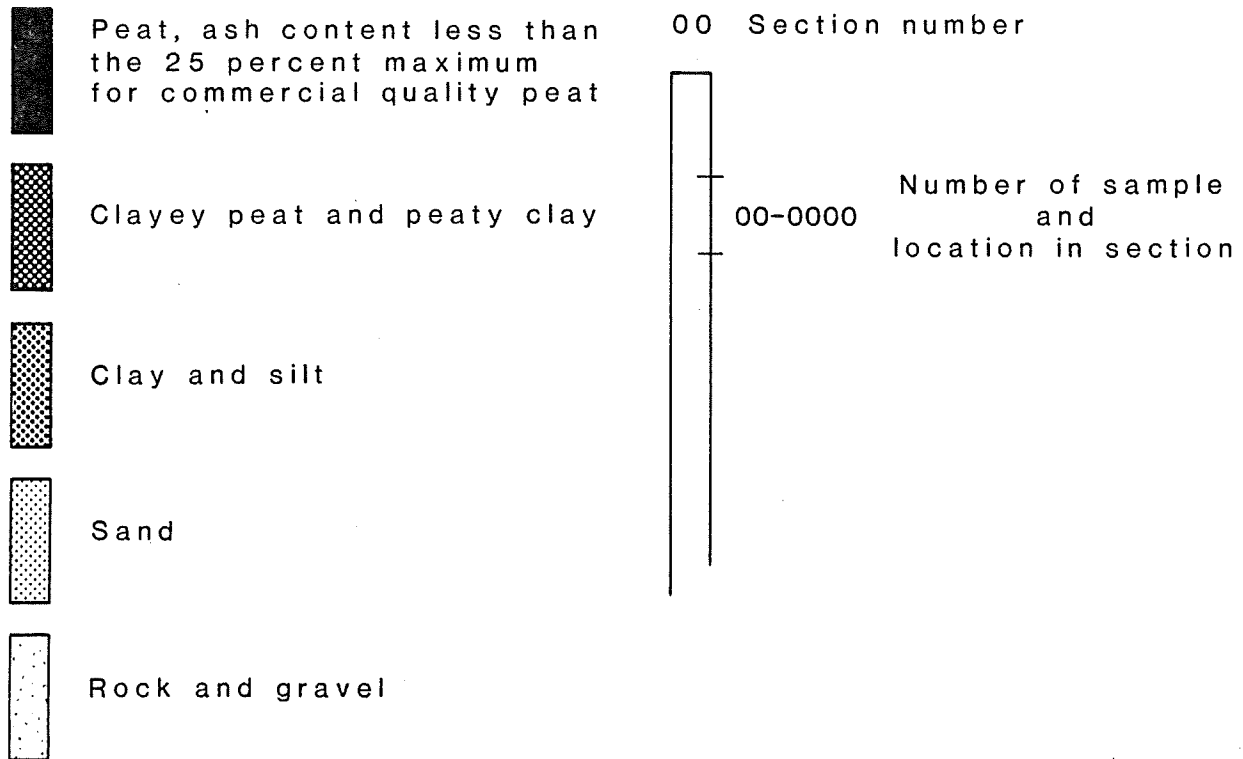


Figure 11a
SECTIONS AND SAMPLE LOCATIONS

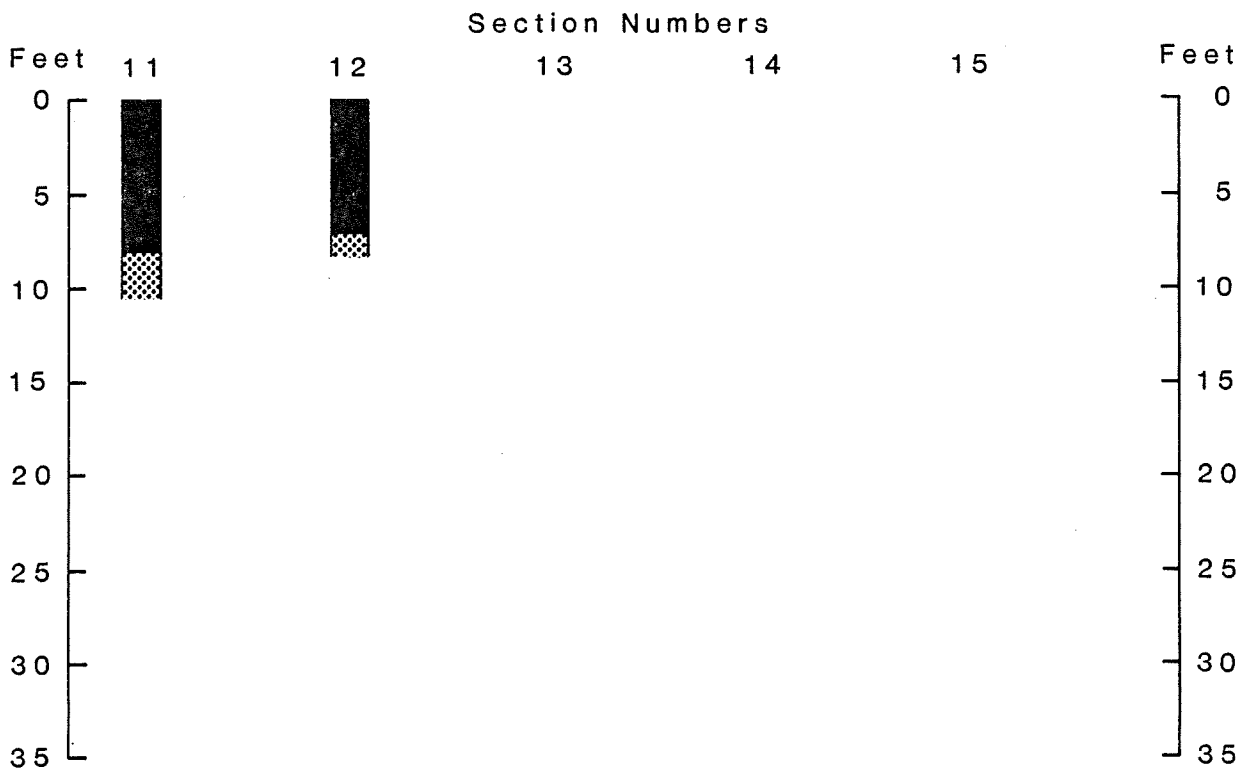
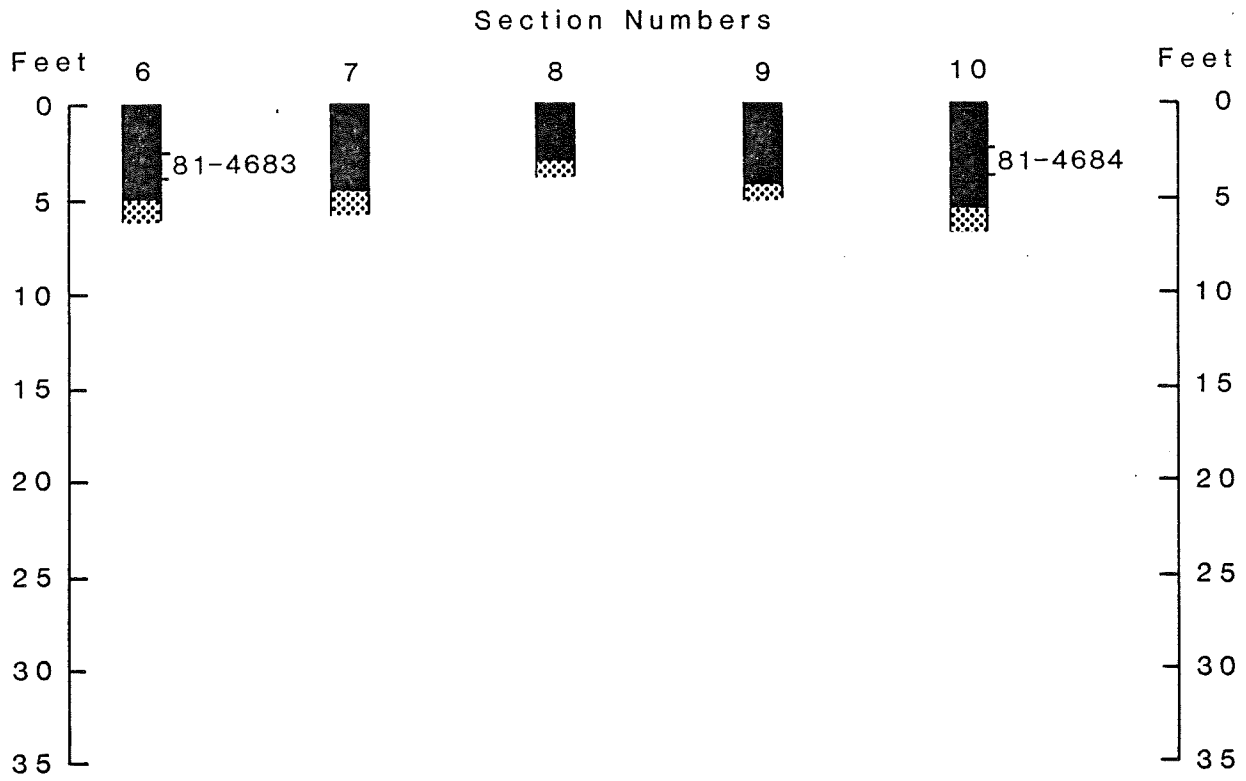


Figure 11a - Continued
SECTIONS AND SAMPLE LOCATIONS

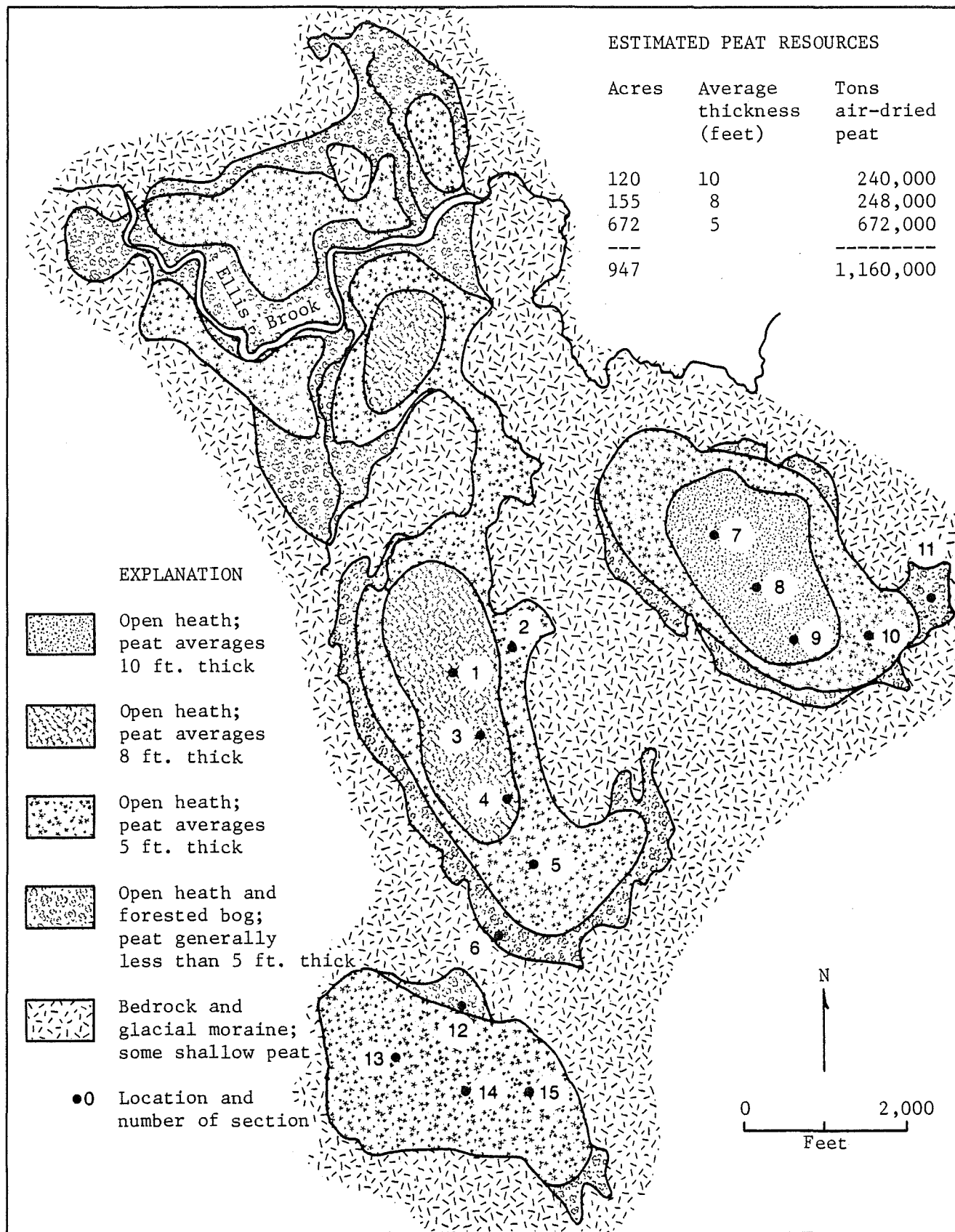


Figure 12. Sketch map of Ellis Bog complex, T6 R13 WELS and T7 R13 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 11 on Index Map).

EXPLANATION OF SECTIONS

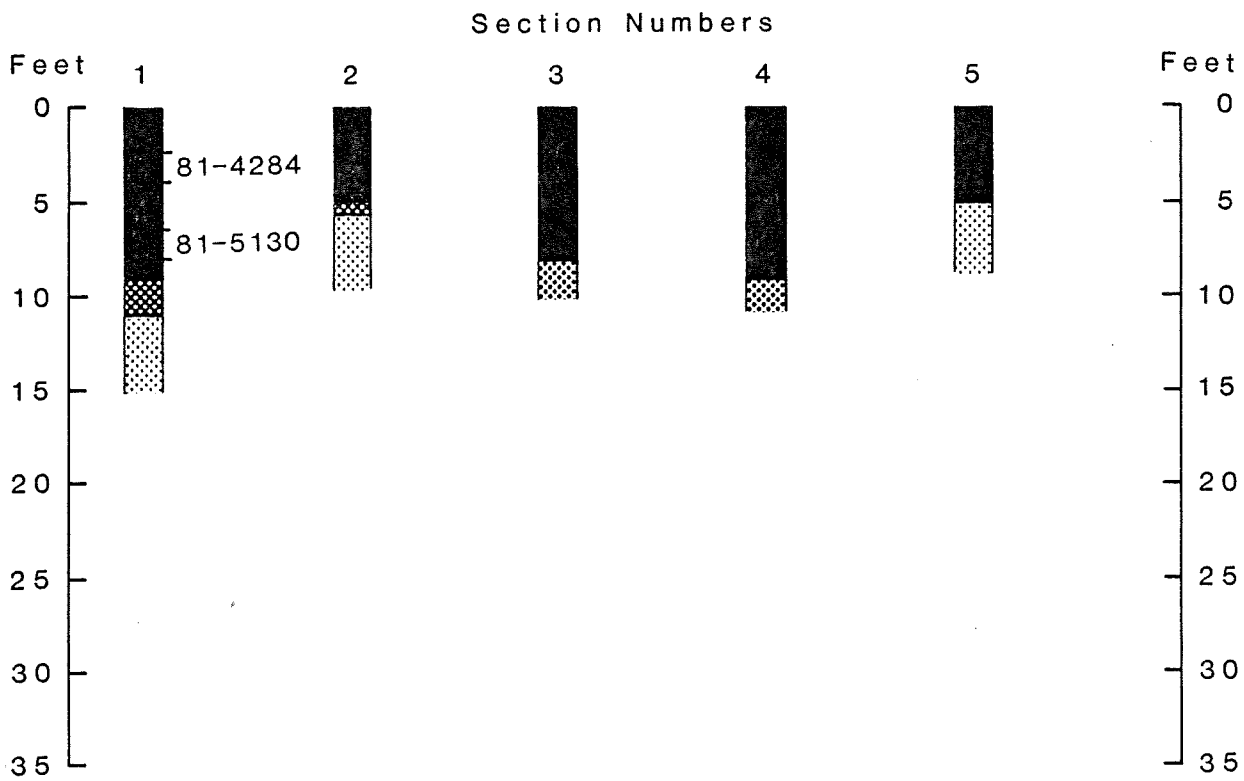
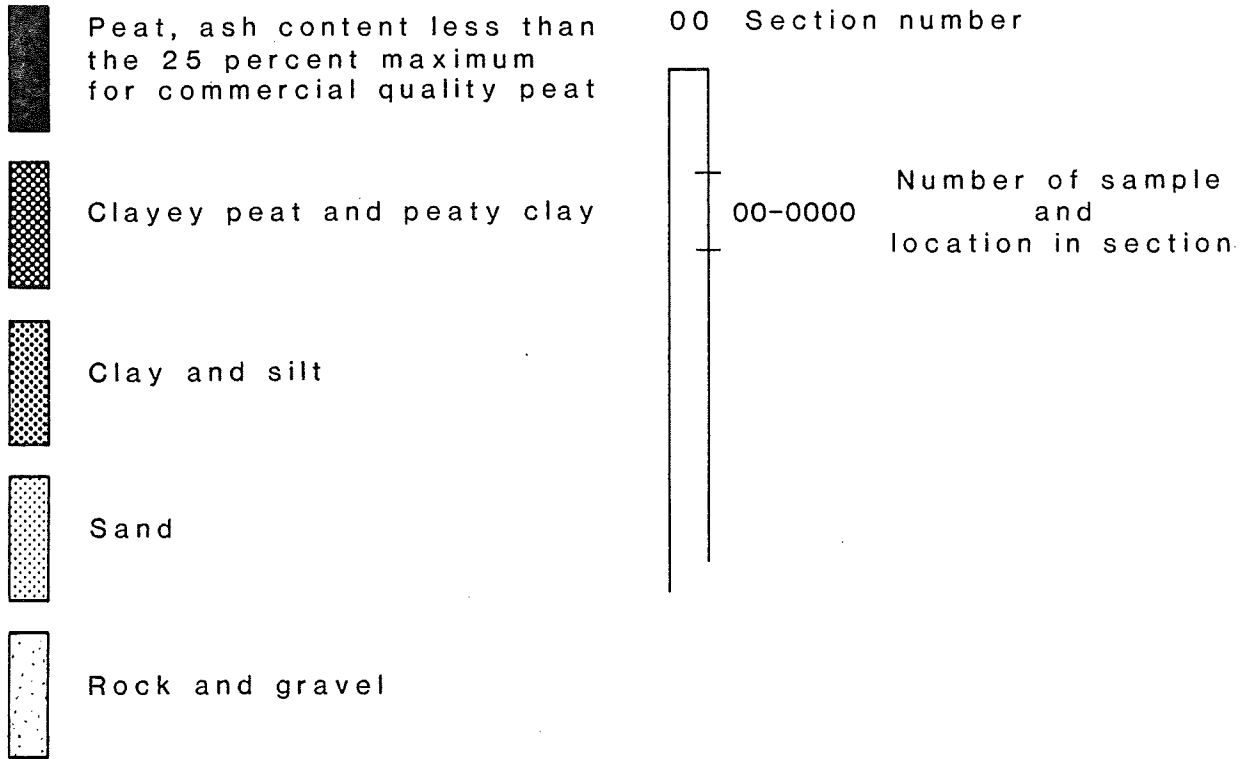


Figure 12a
SECTIONS AND SAMPLE LOCATIONS

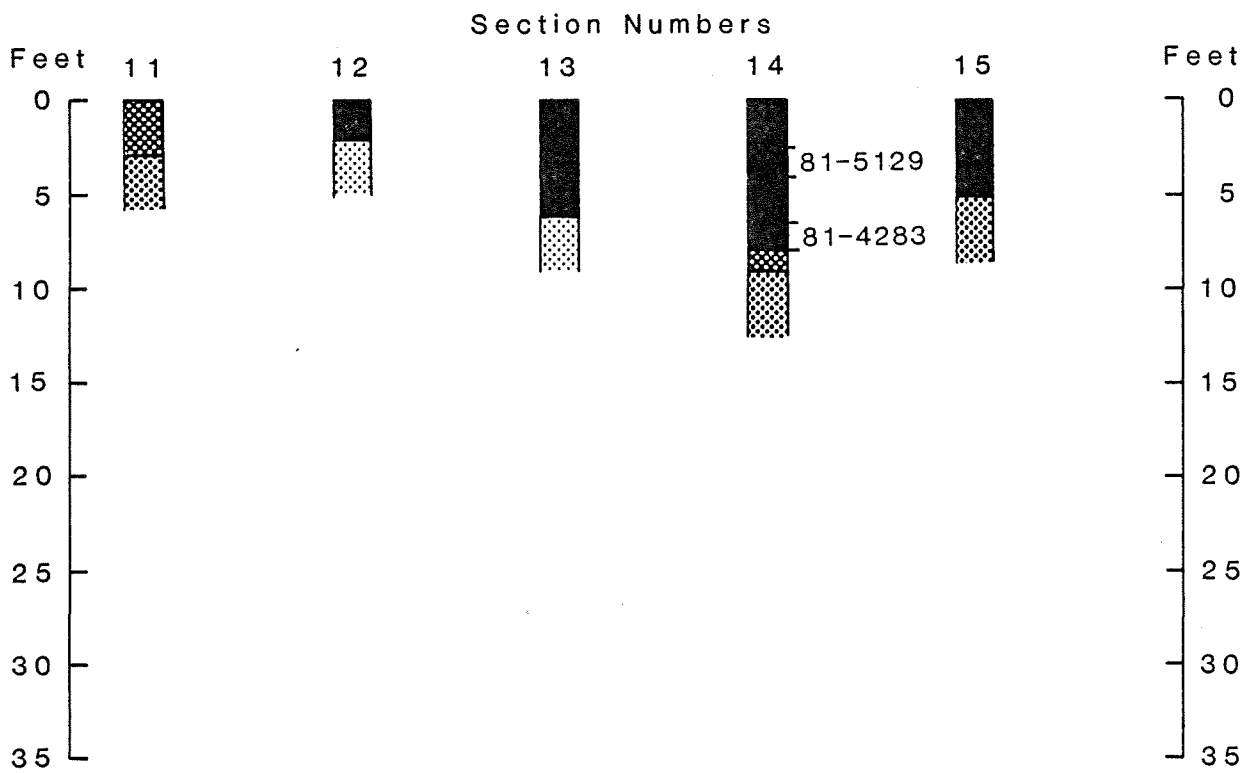
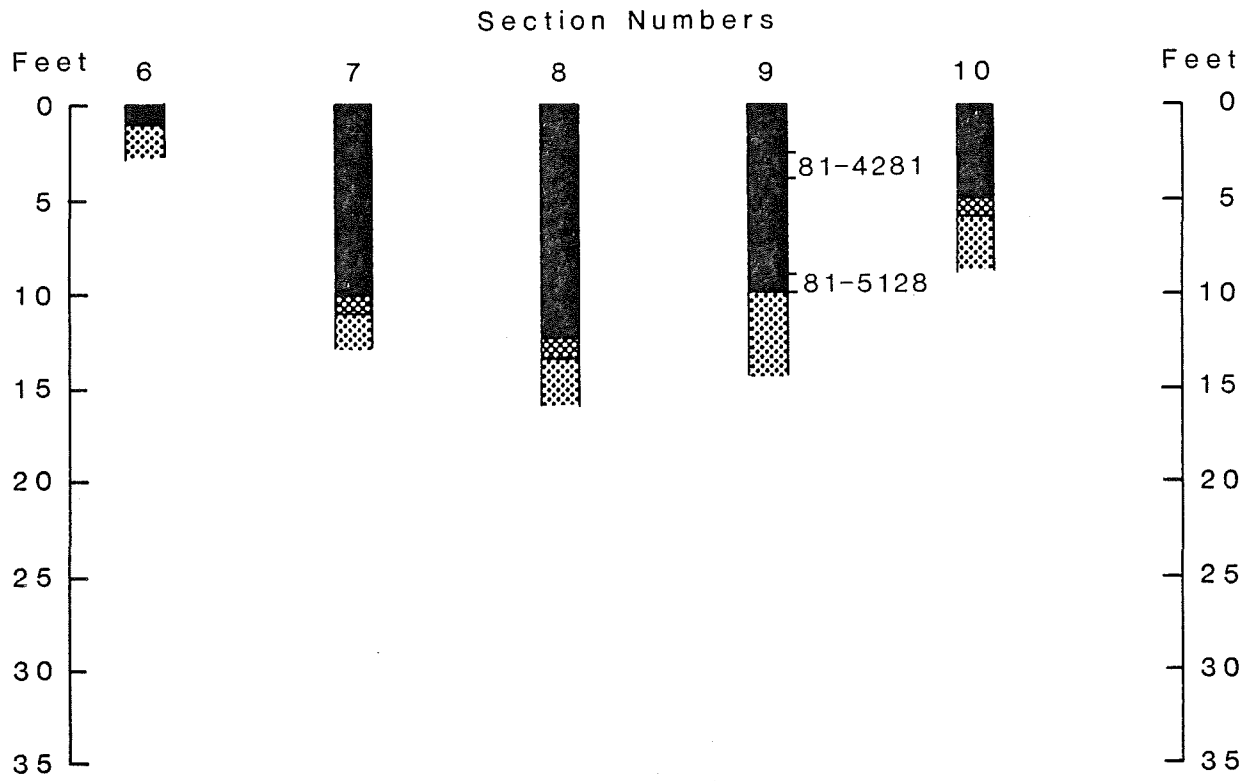


Figure 12a - Continued
SECTIONS AND SAMPLE LOCATIONS

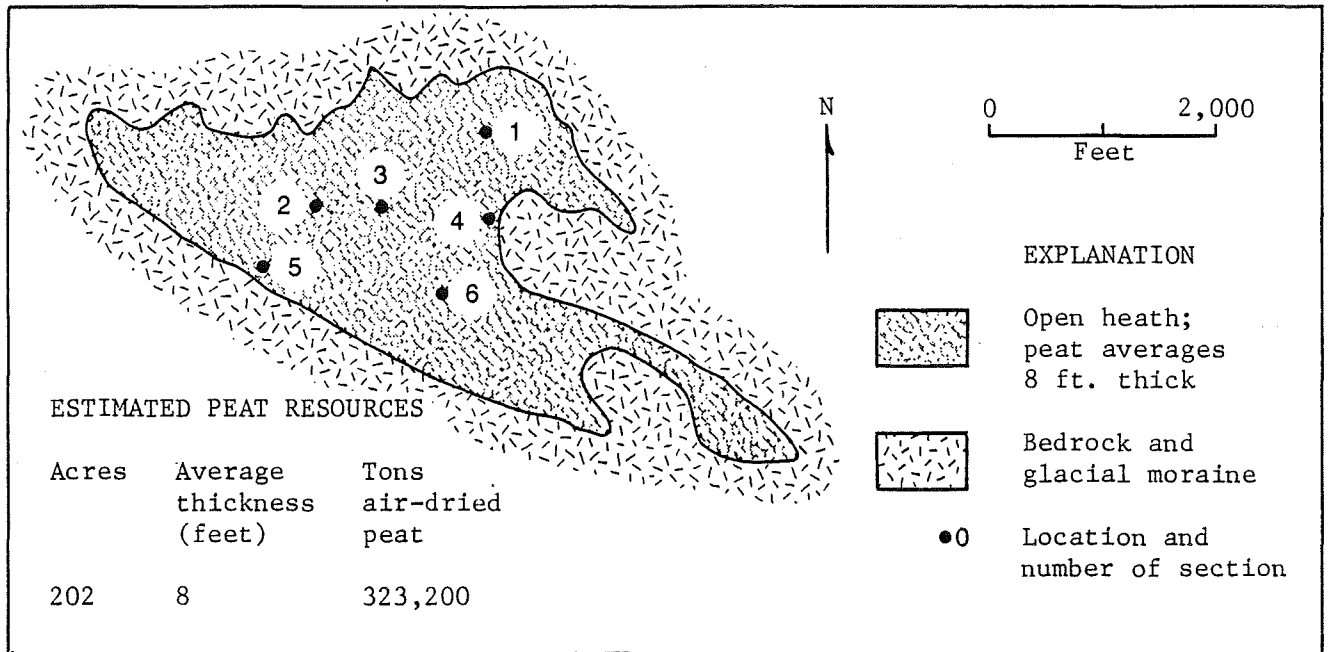


Figure 13. Sketch map of Carry Bog, T6 R13 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 12 on Index Map).

EXPLANATION OF SECTIONS

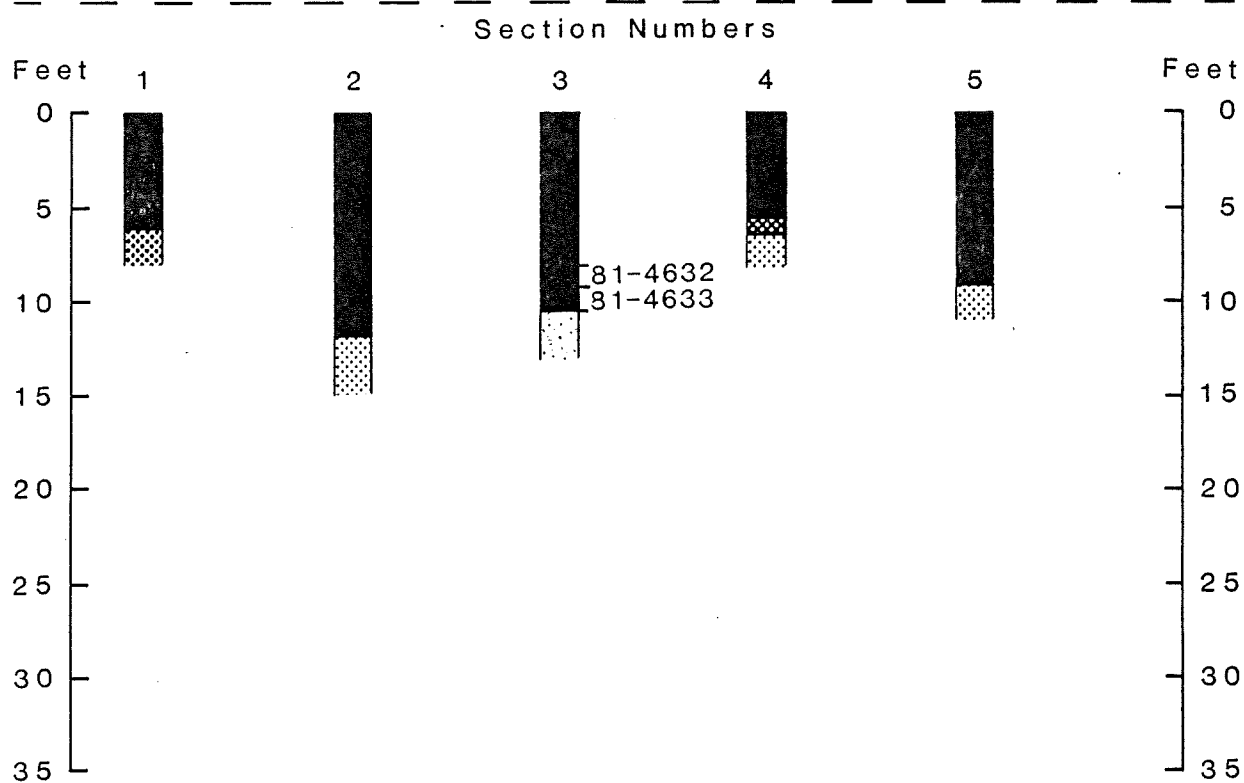
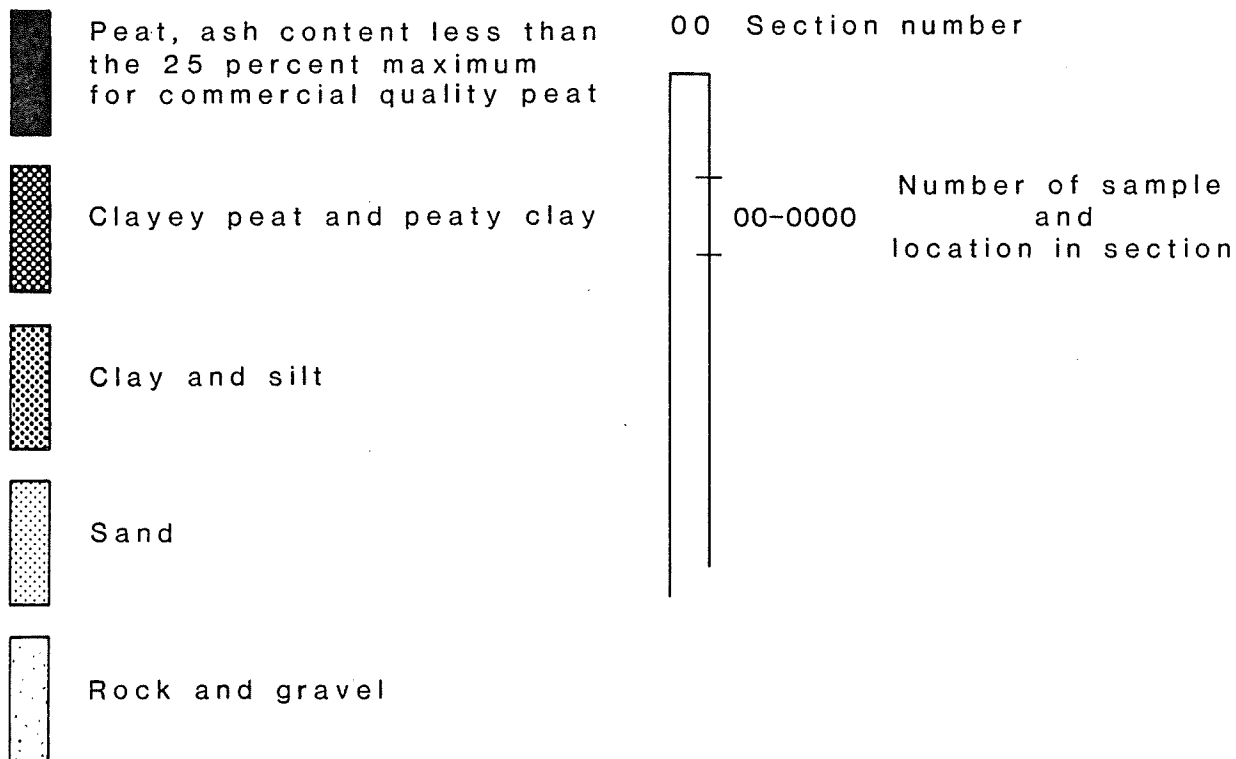


Figure 13a
SECTIONS AND SAMPLE LOCATIONS

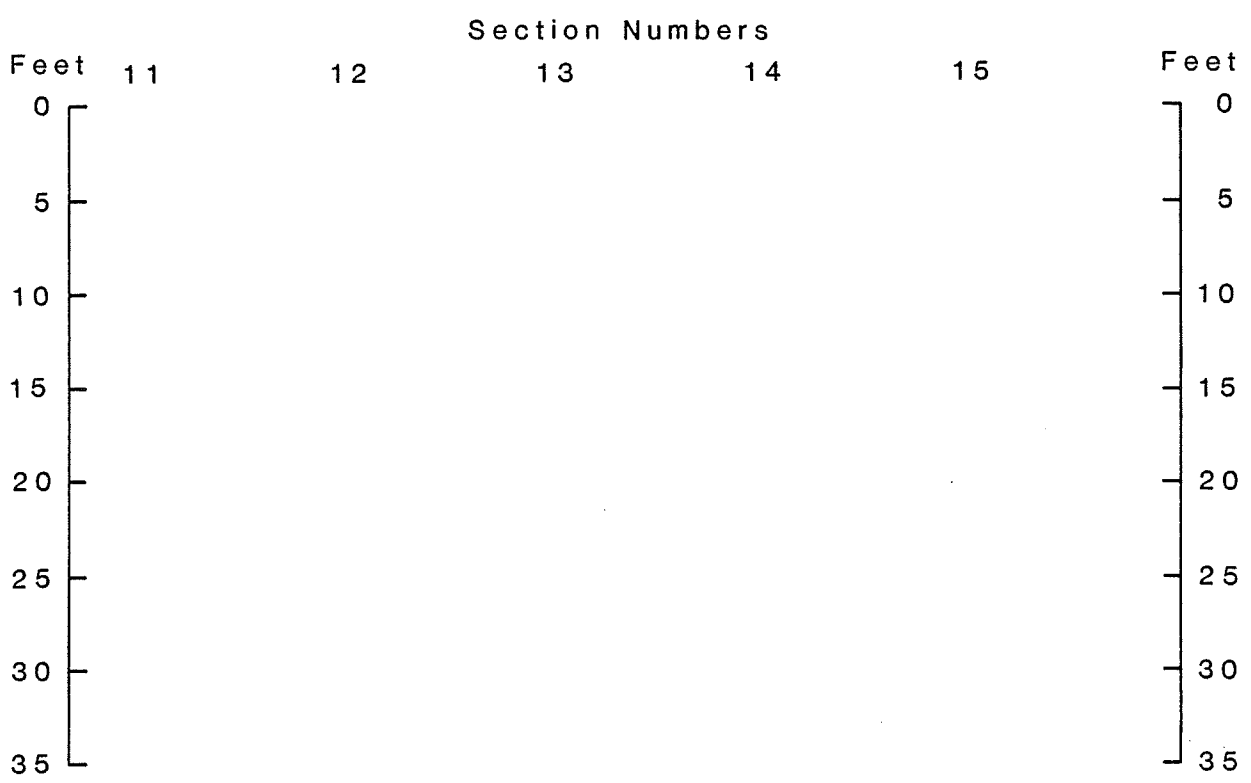
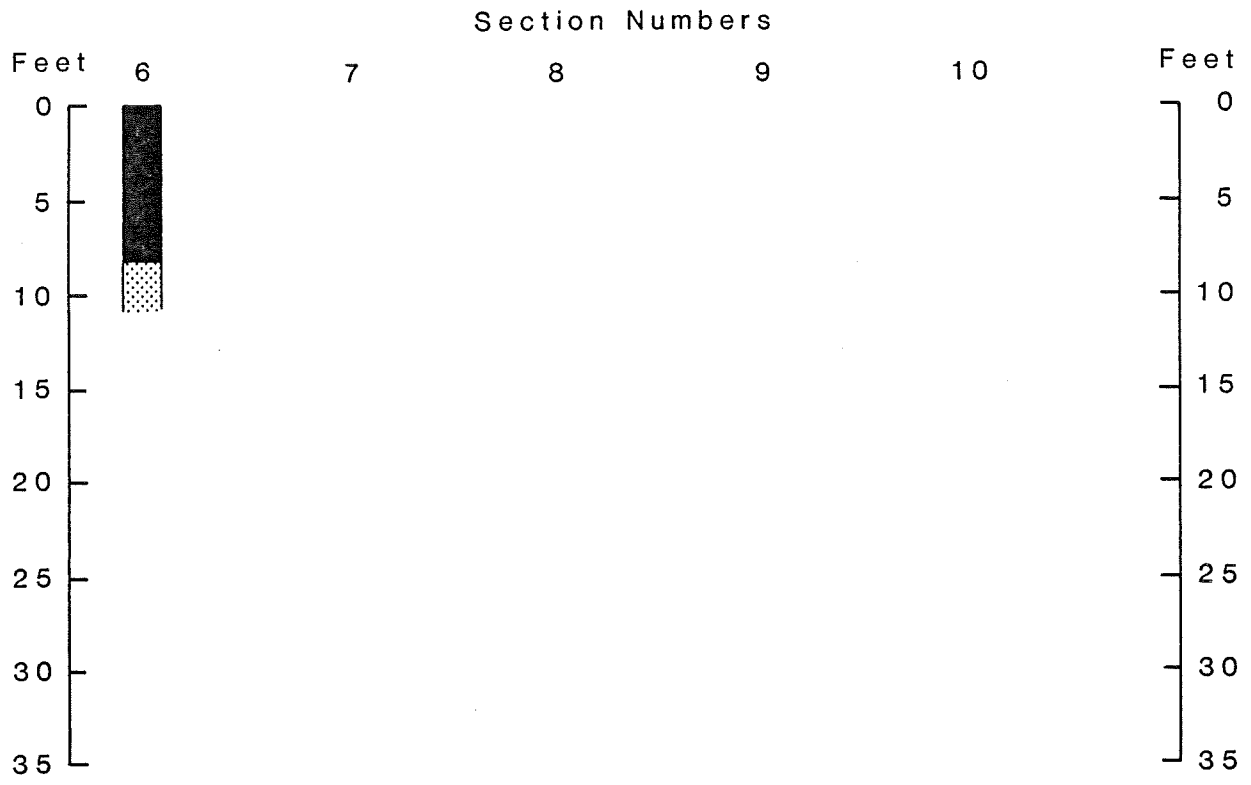


Figure 13a - Continued
SECTIONS AND SAMPLE LOCATIONS

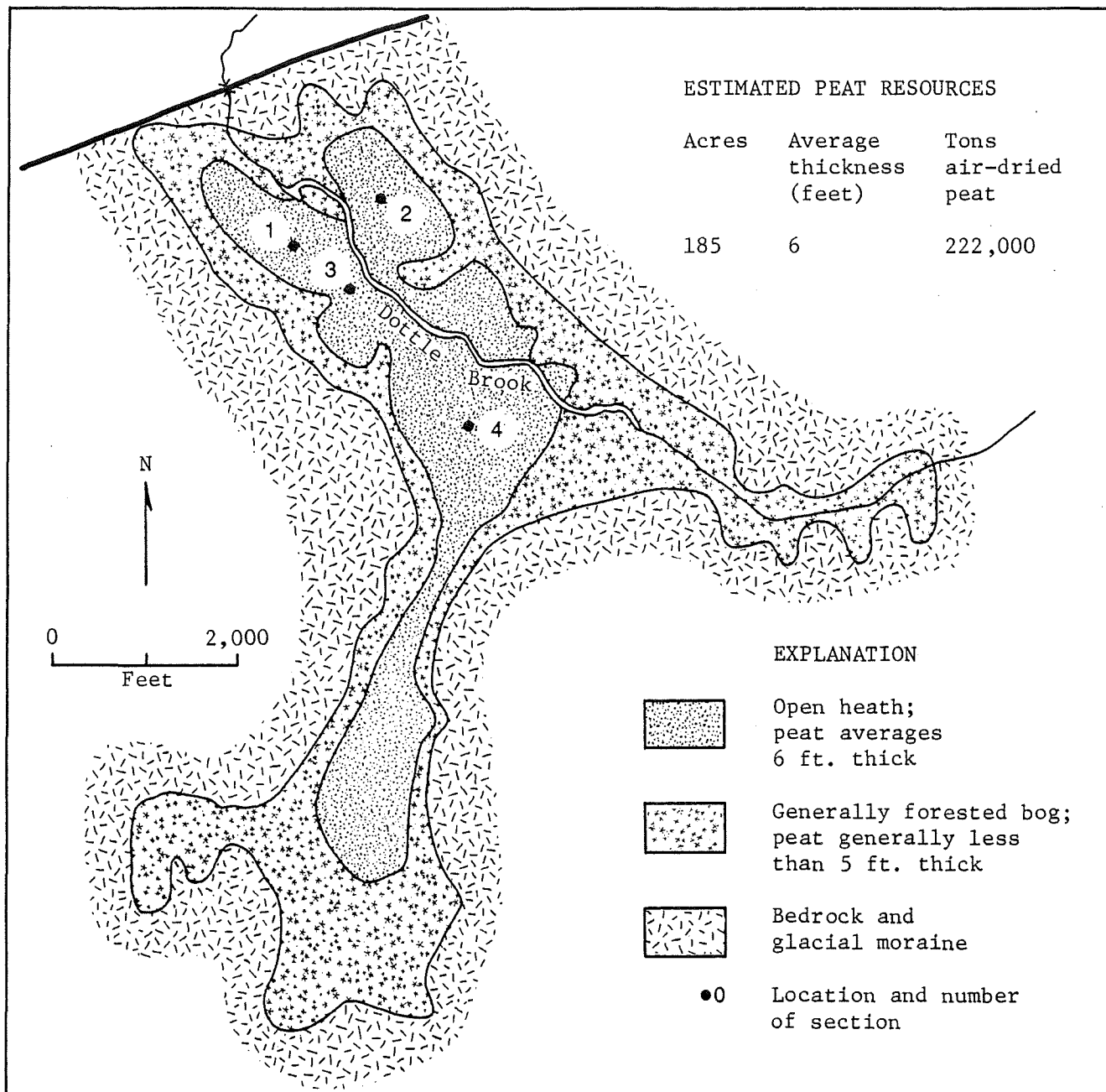


Figure 14. Sketch map of bog along Dottle Brook, T6 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 13 on Index Map).

EXPLANATION OF SECTIONS

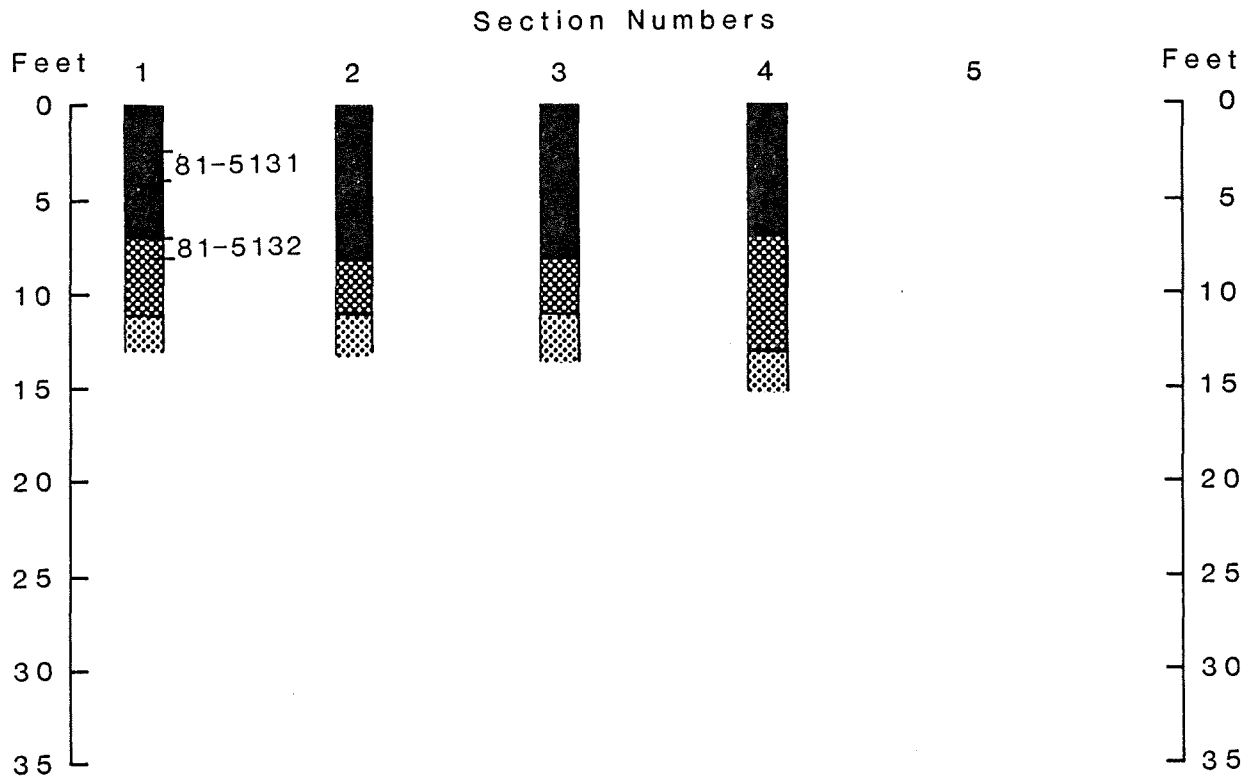
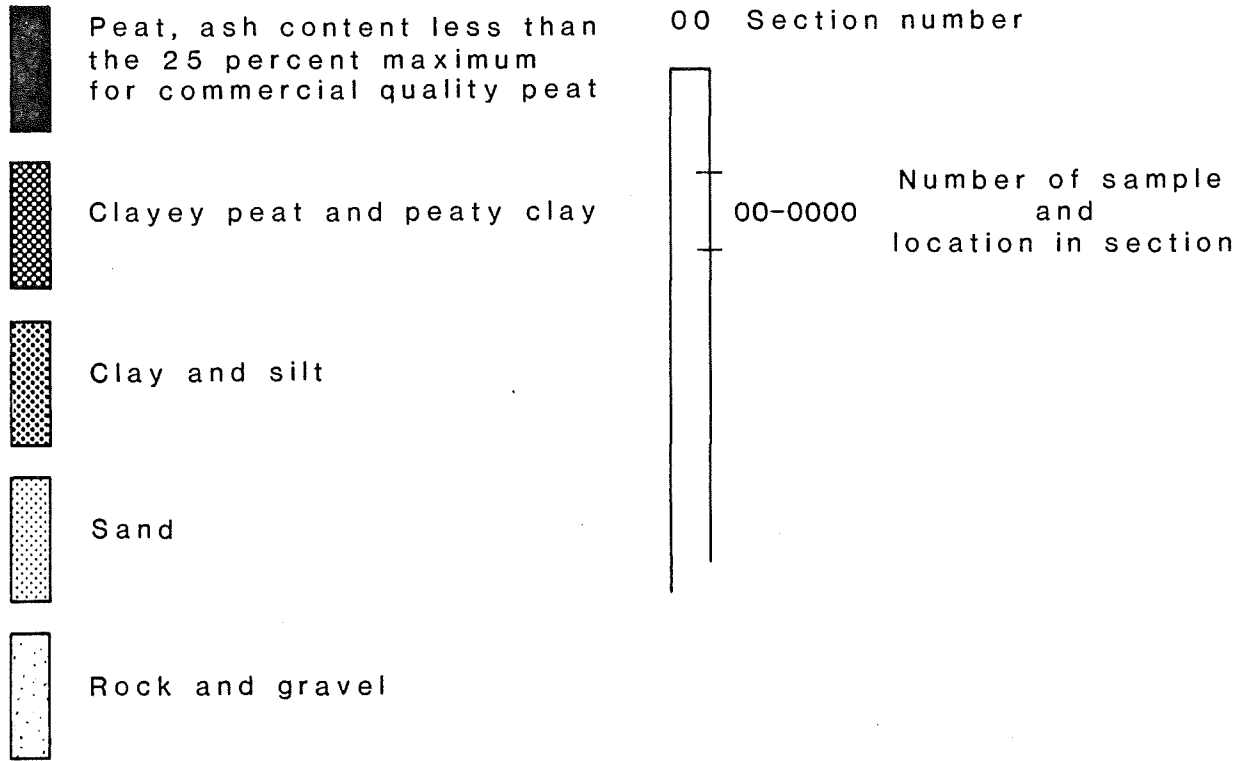


Figure 14a
SECTIONS AND SAMPLE LOCATIONS

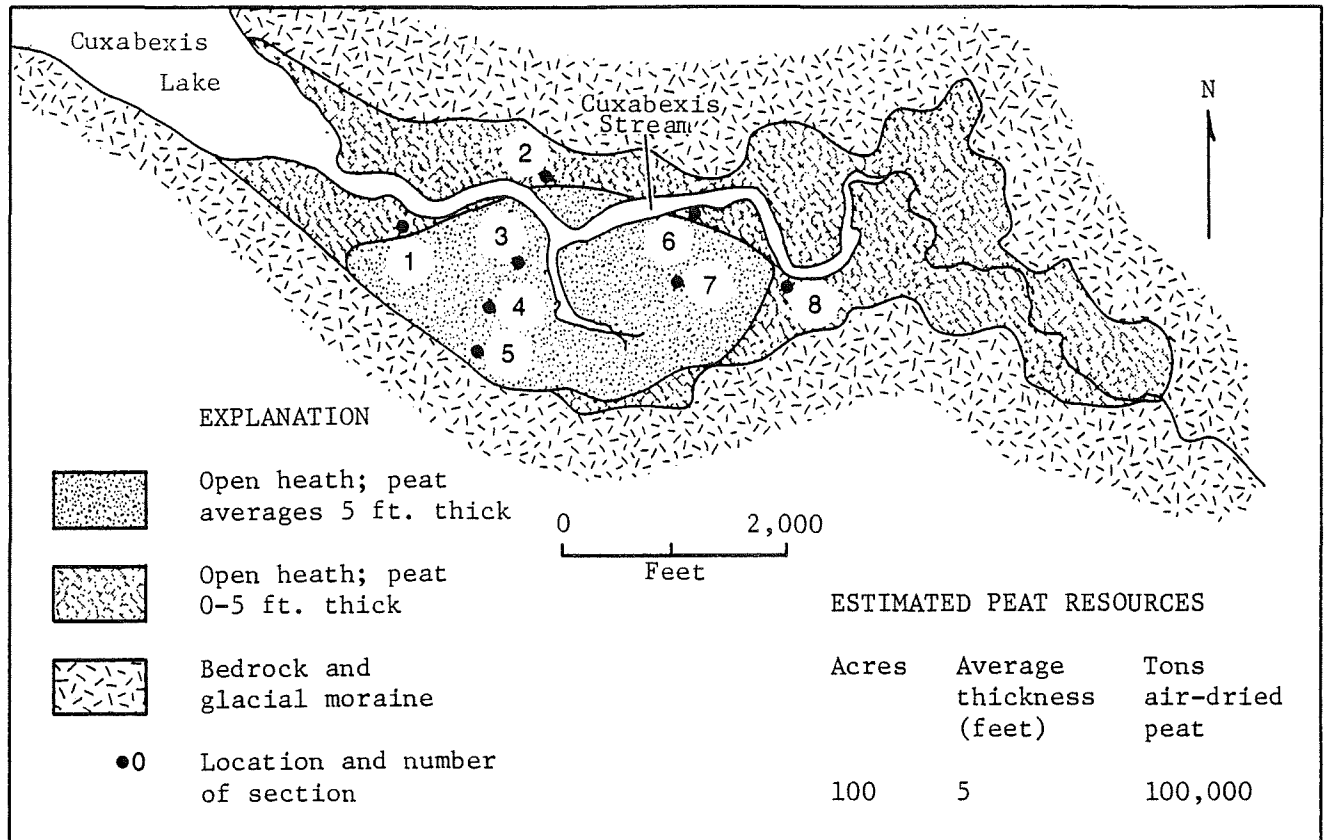


Figure 15. Sketch map of bog along Cuxabexis Stream at southeast end of Cuxabexis Lake, T5 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 14 on Index Map).

EXPLANATION OF SECTIONS

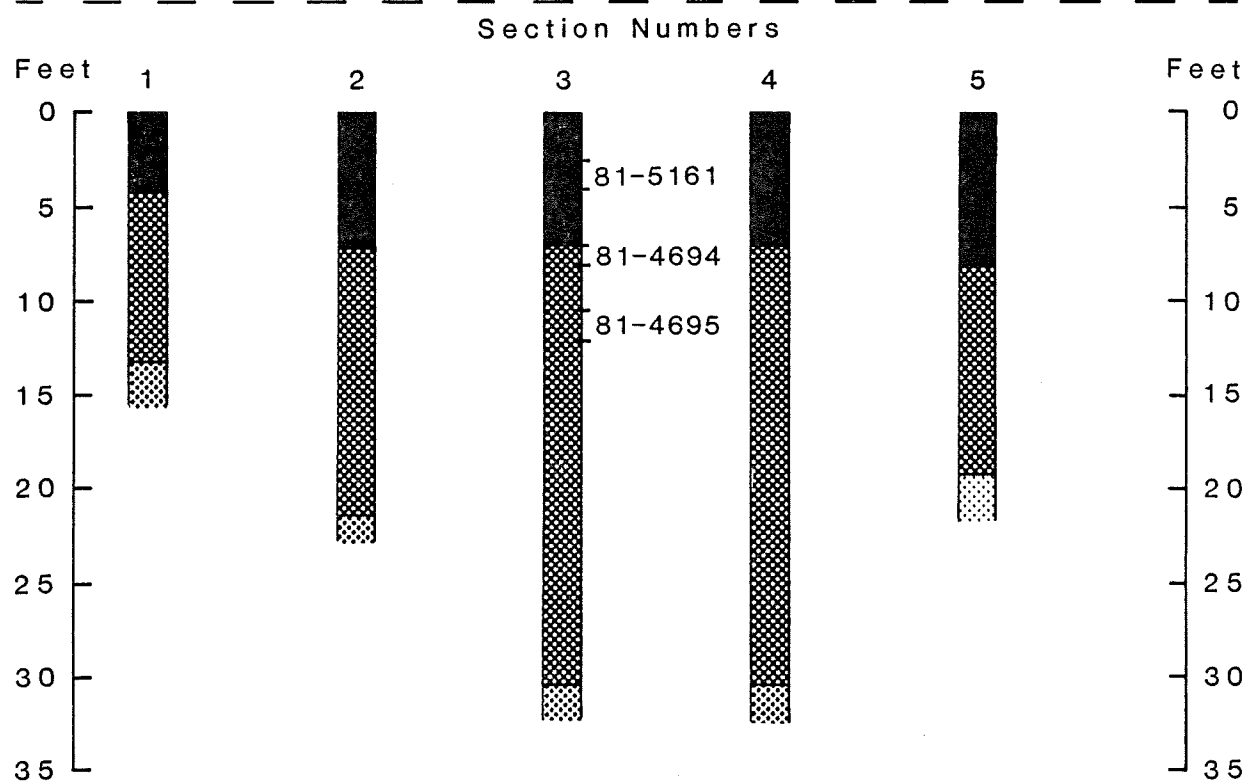
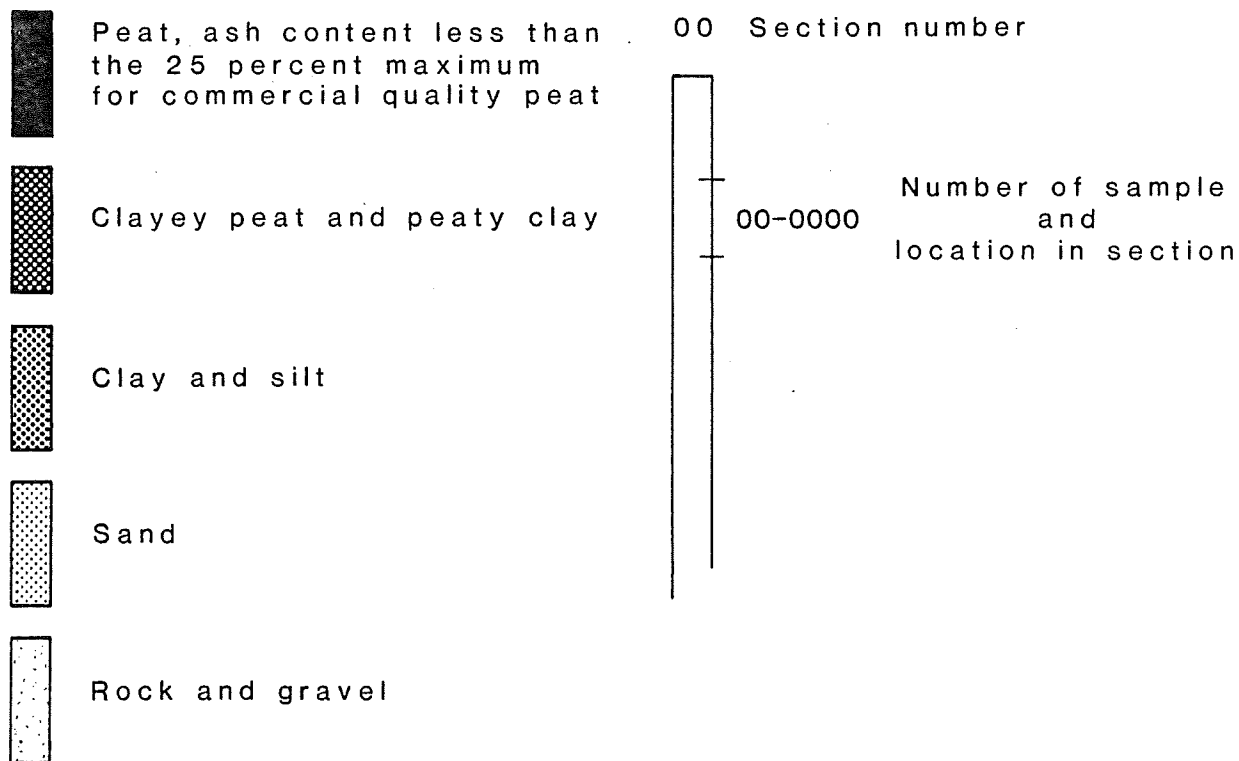


Figure 15a
SECTIONS AND SAMPLE LOCATIONS

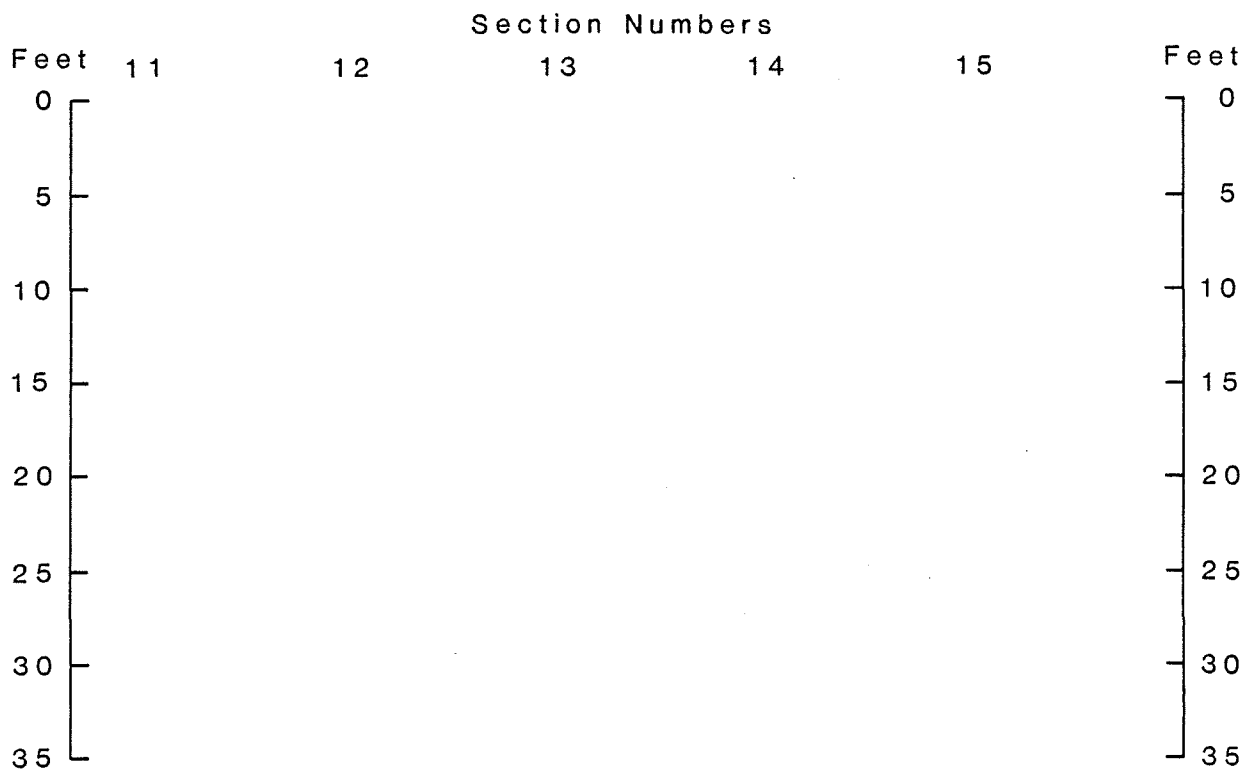
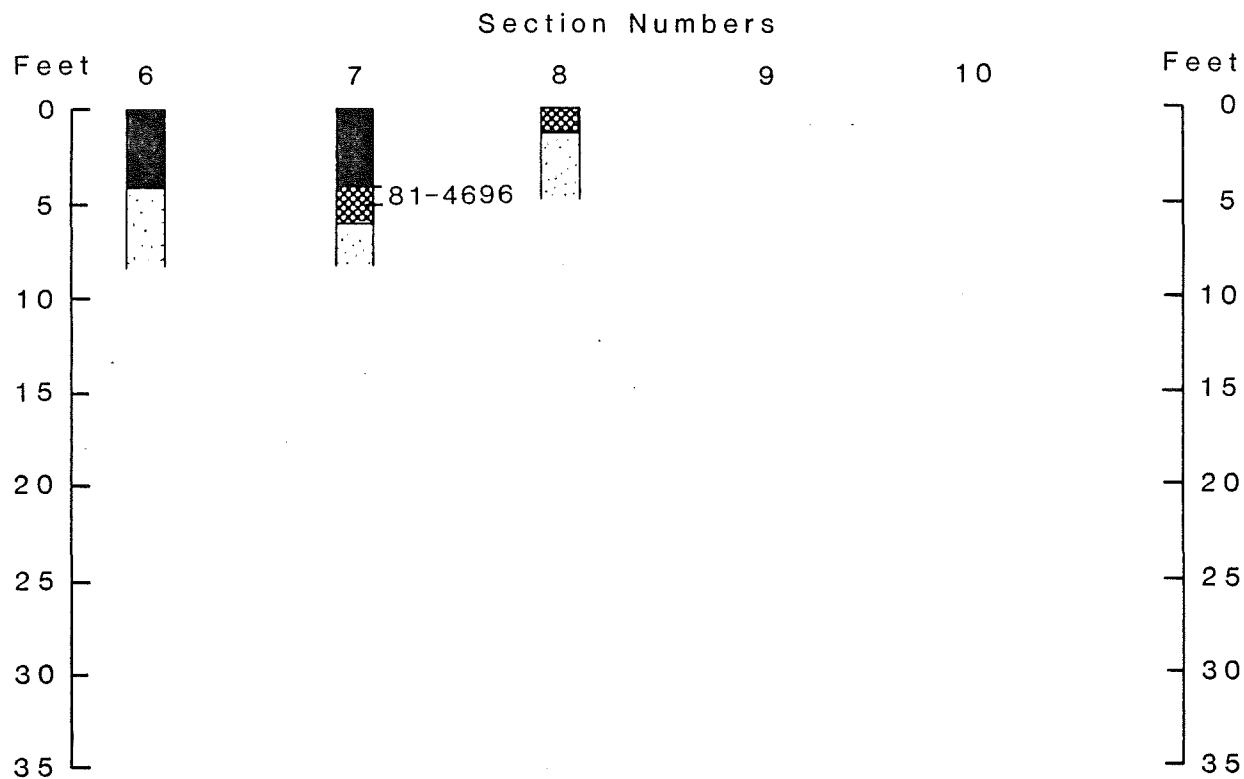


Figure 15a - Continued
SECTIONS AND SAMPLE LOCATIONS

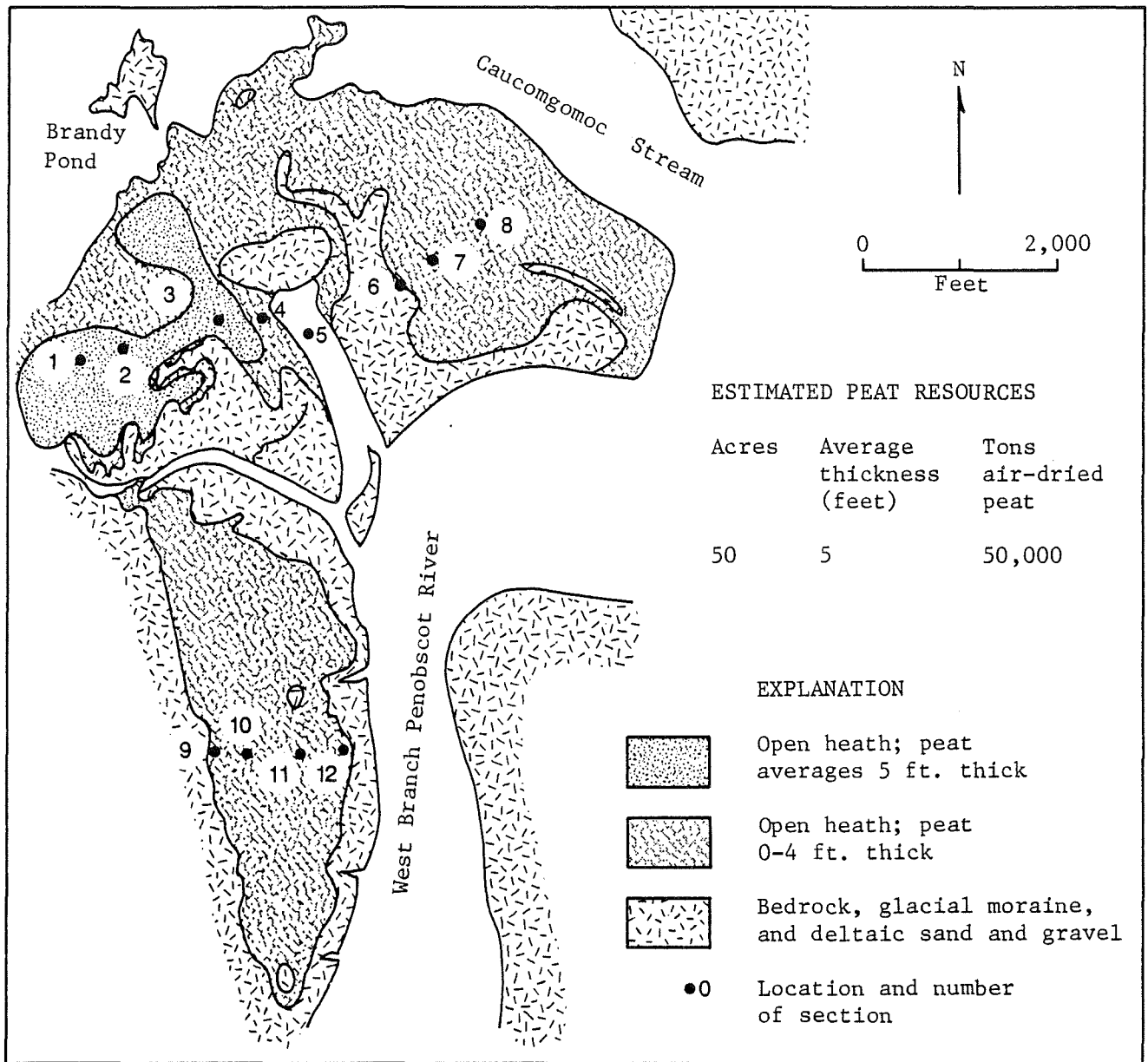


Figure 16. Sketch map of bogs at mouth of the West Branch, Penobscot River and east of Brandy Pond, T5 R13 WELS (Chesuncook Twp.), Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 15 on Index Map).

EXPLANATION OF SECTIONS

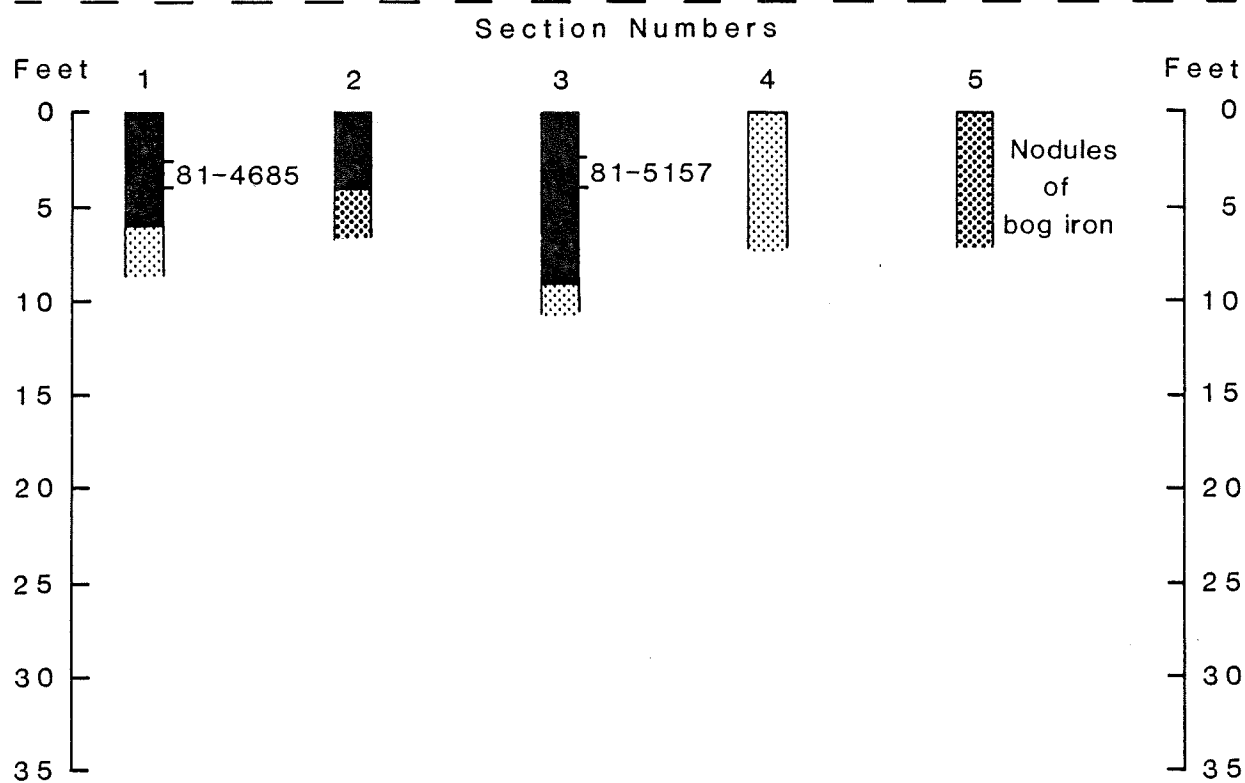
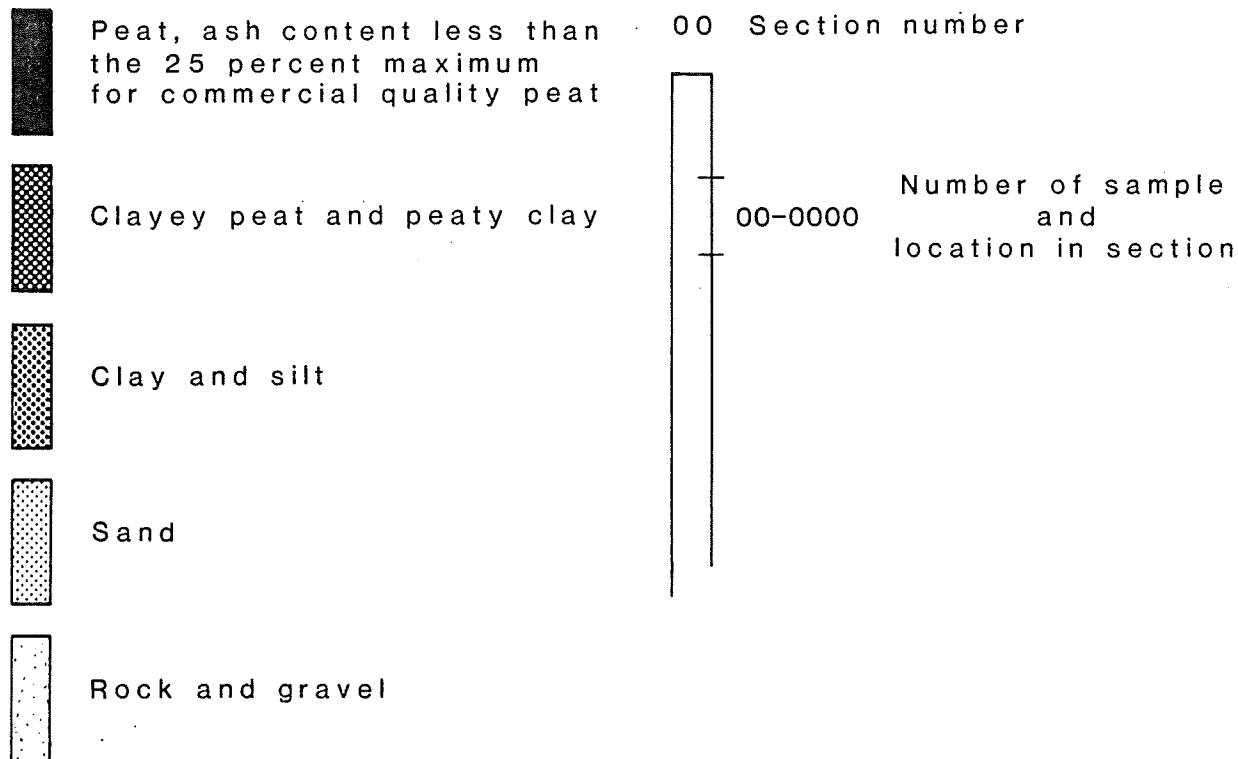


Figure 16a
SECTIONS AND SAMPLE LOCATIONS

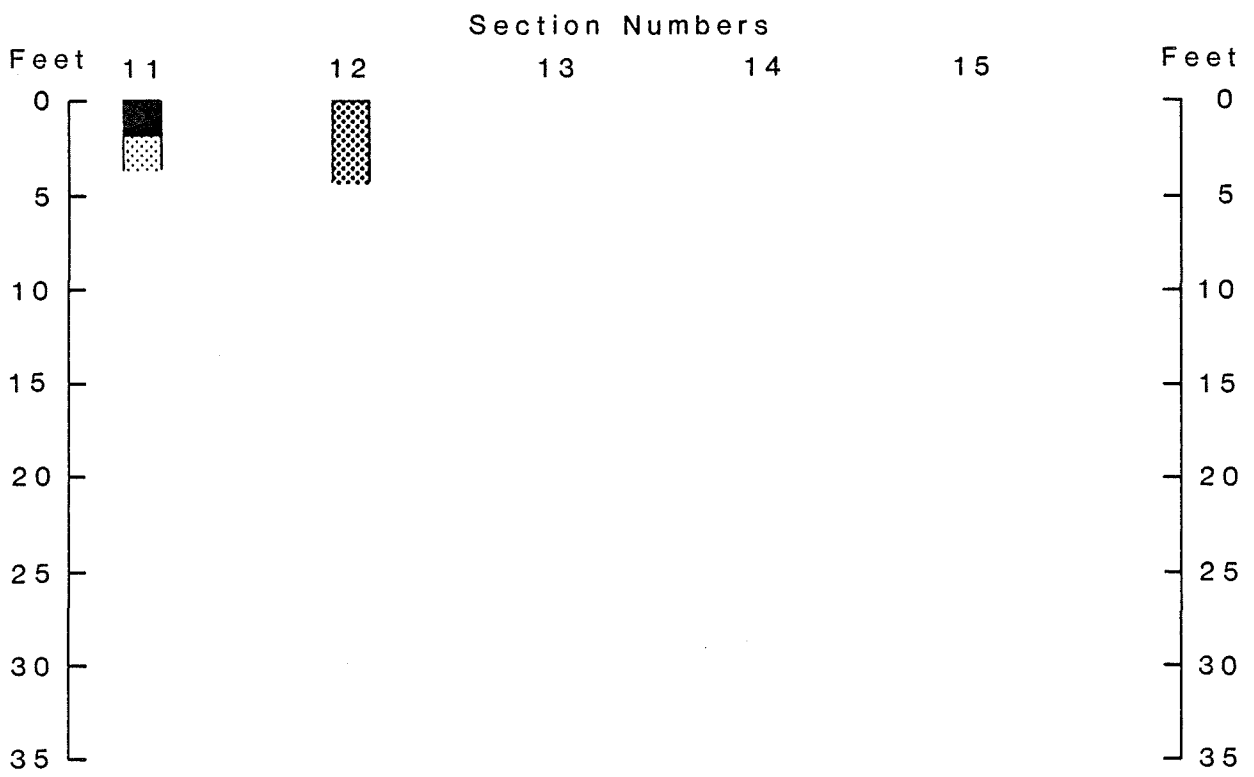
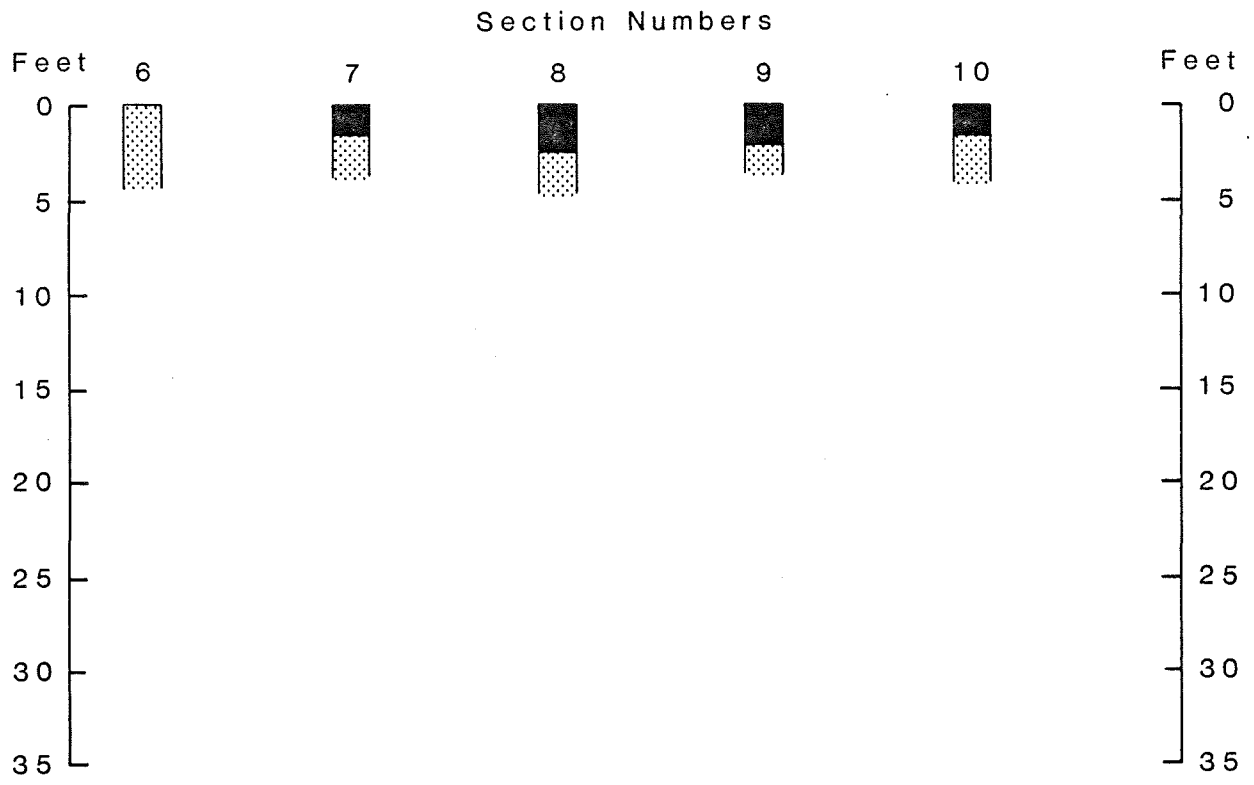


Figure 16a - Continued
SECTIONS AND SAMPLE LOCATIONS

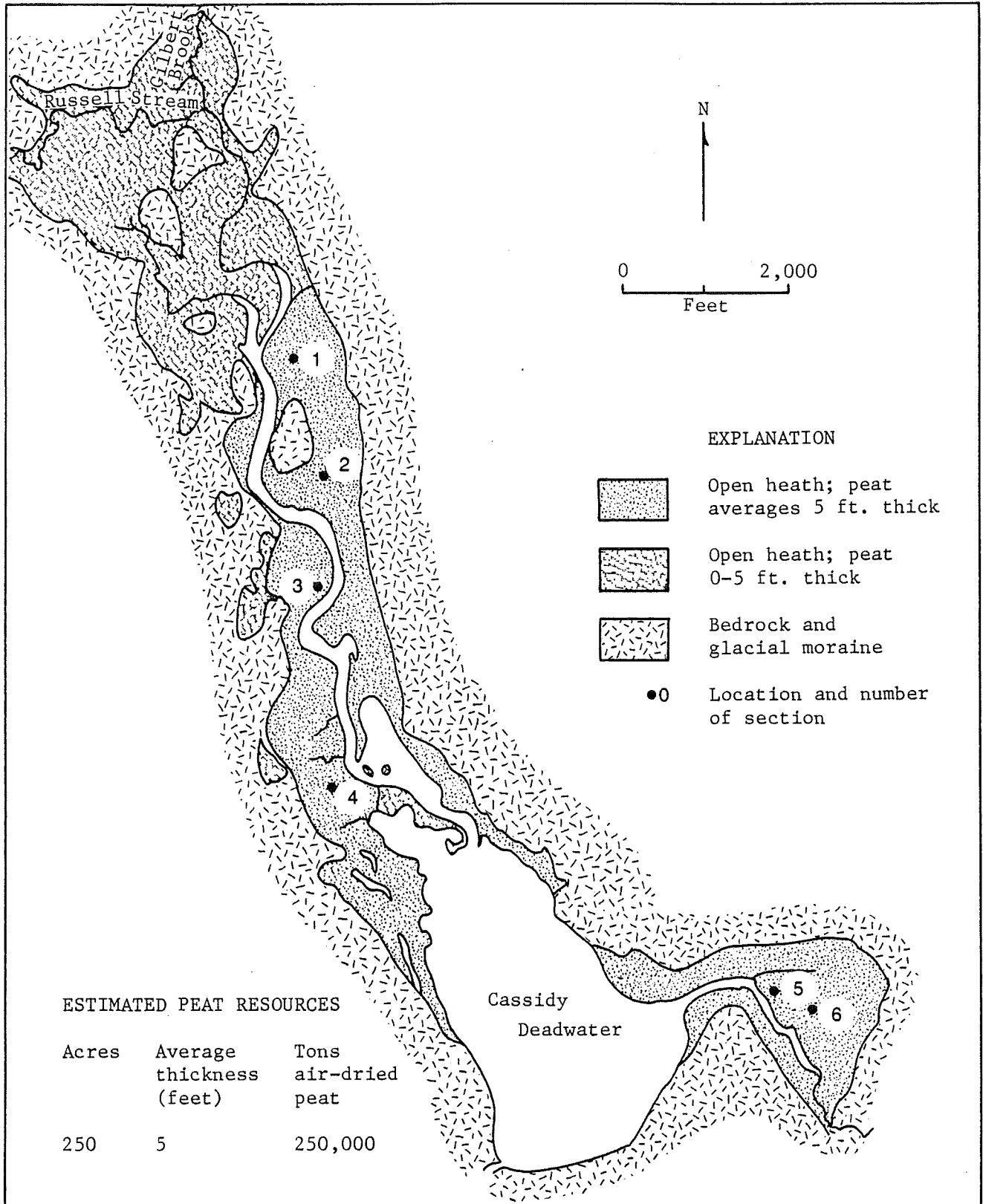


Figure 17. Sketch map of bogs at Cassidy Deadwater, T4 R15 WELS, Caucomgomoc Lake and North East Carry 15 minute Quadrangles, Piscataquis County, Maine. (Number 16 on Index Map).

EXPLANATION OF SECTIONS

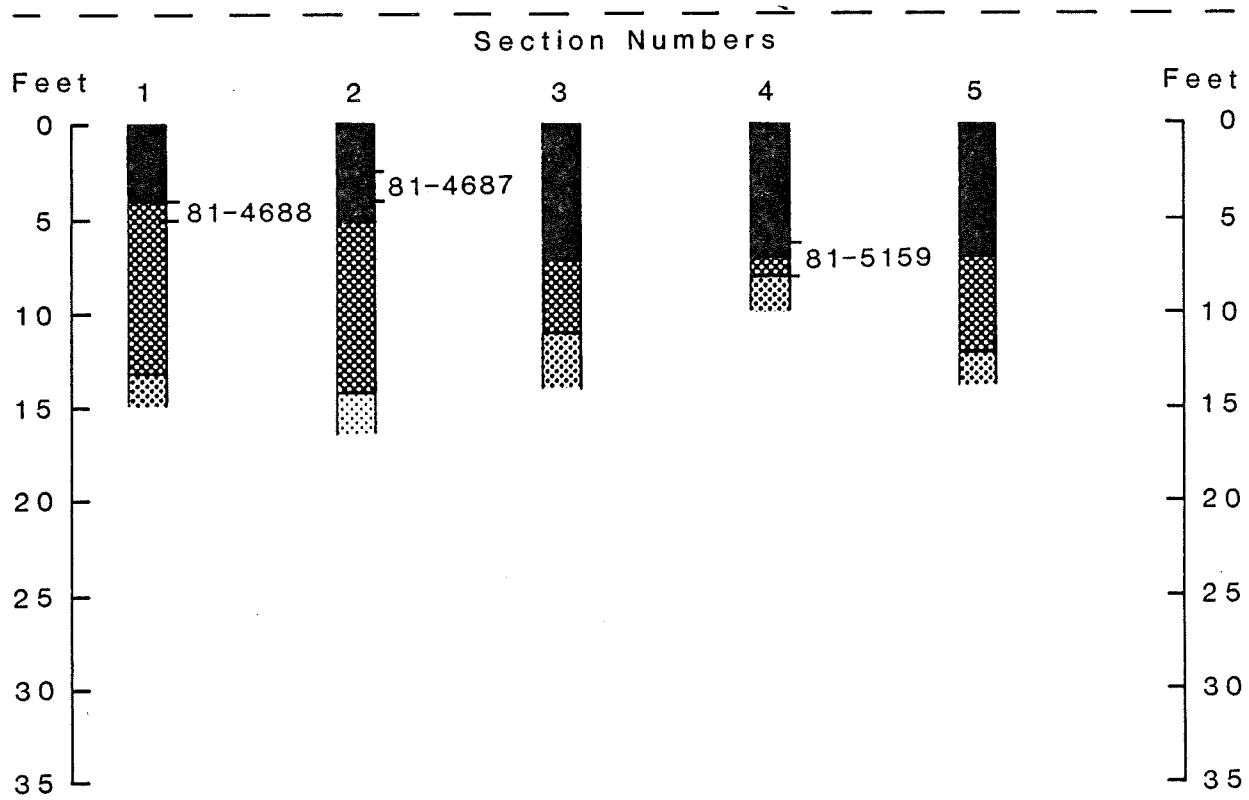
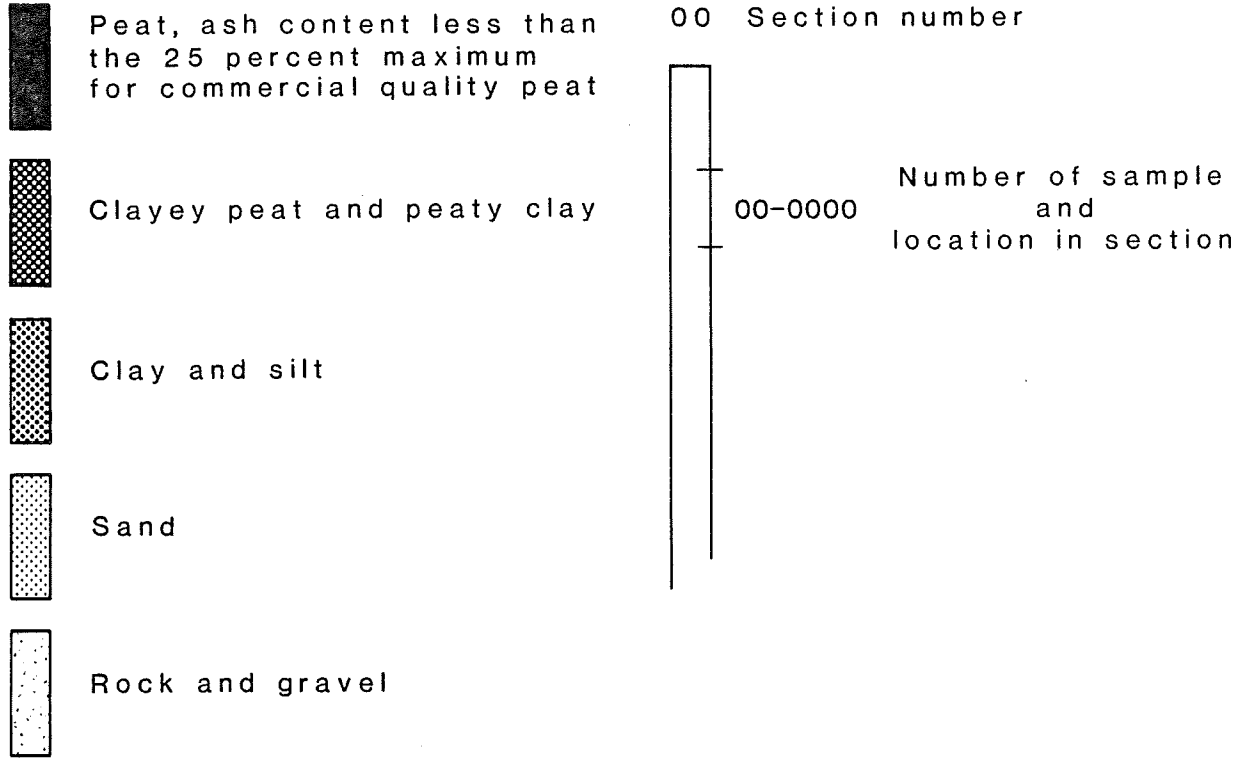


Figure 17a
SECTIONS AND SAMPLE LOCATIONS

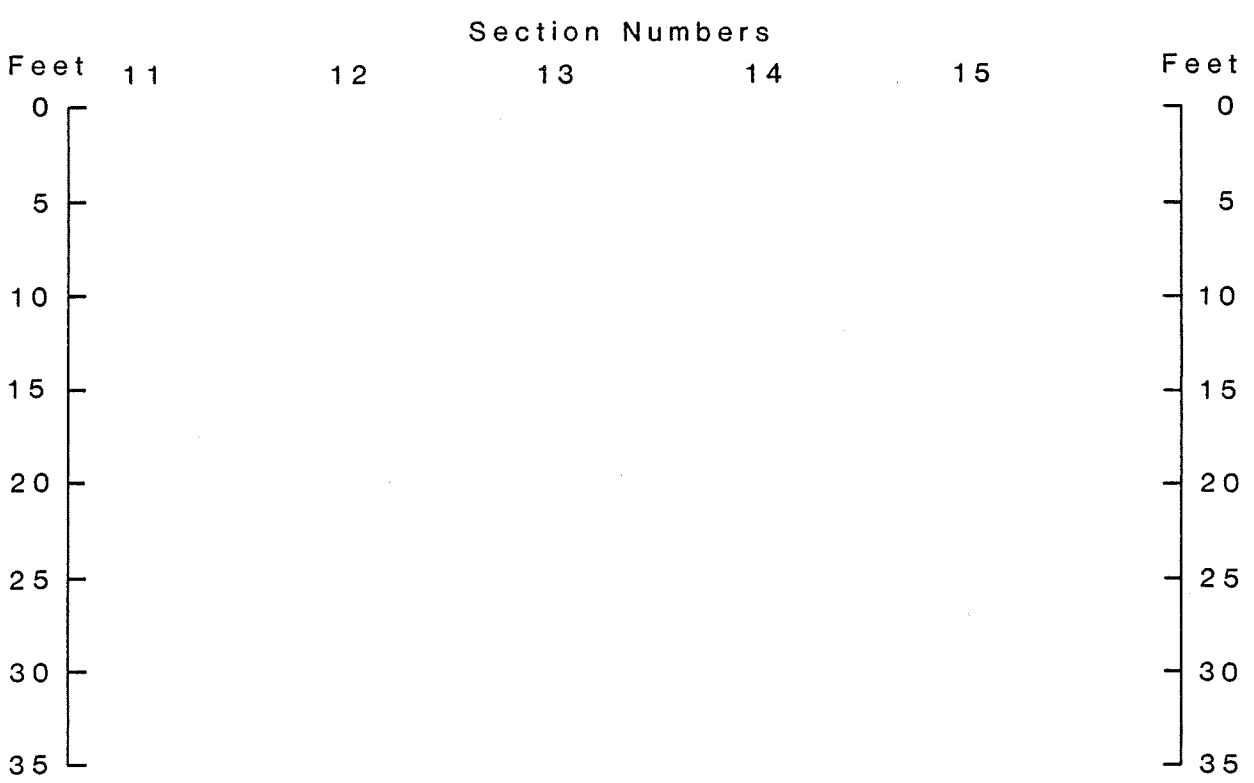
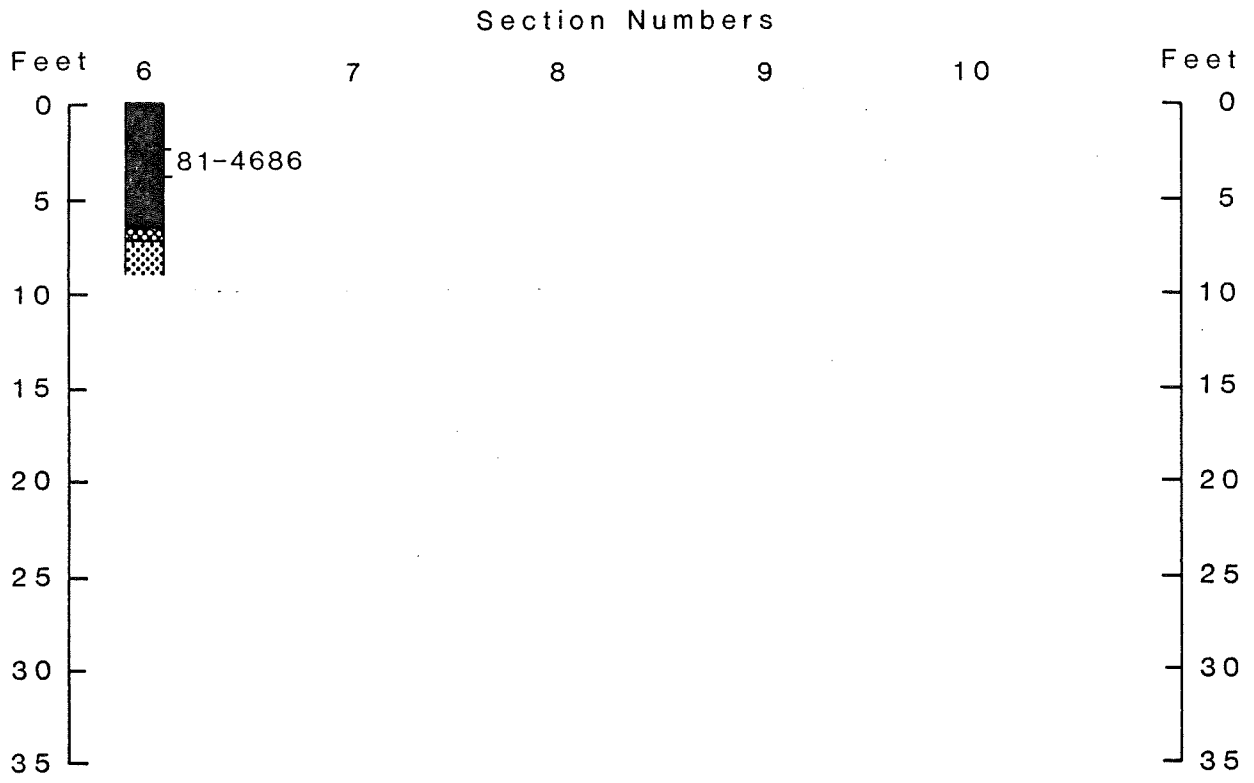


Figure 17a - Continued
SECTIONS AND SAMPLE LOCATIONS

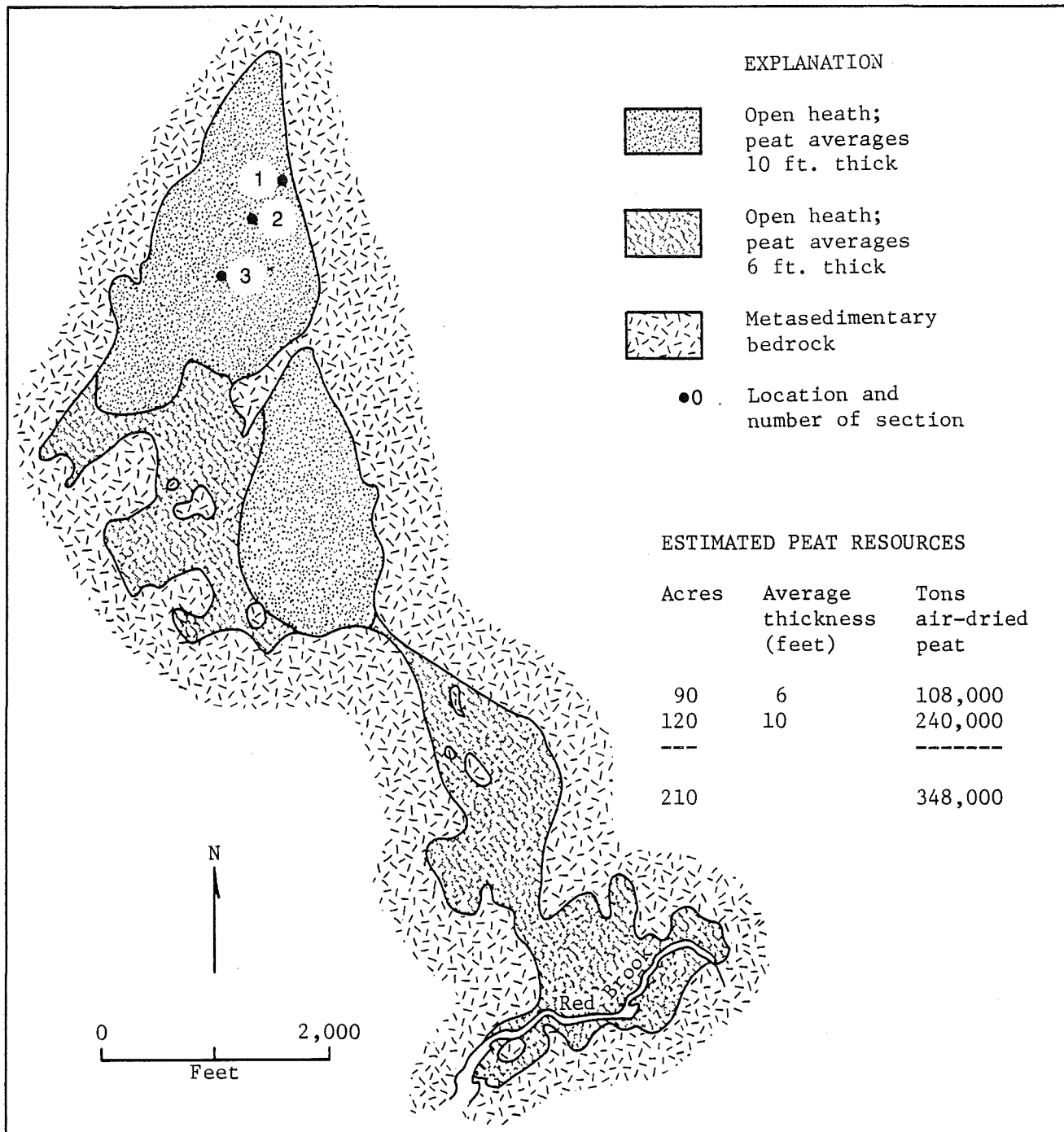


Figure 18. Sketch map of bog south of Duck Pond, T4 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 17 on Index Map).

EXPLANATION OF SECTIONS

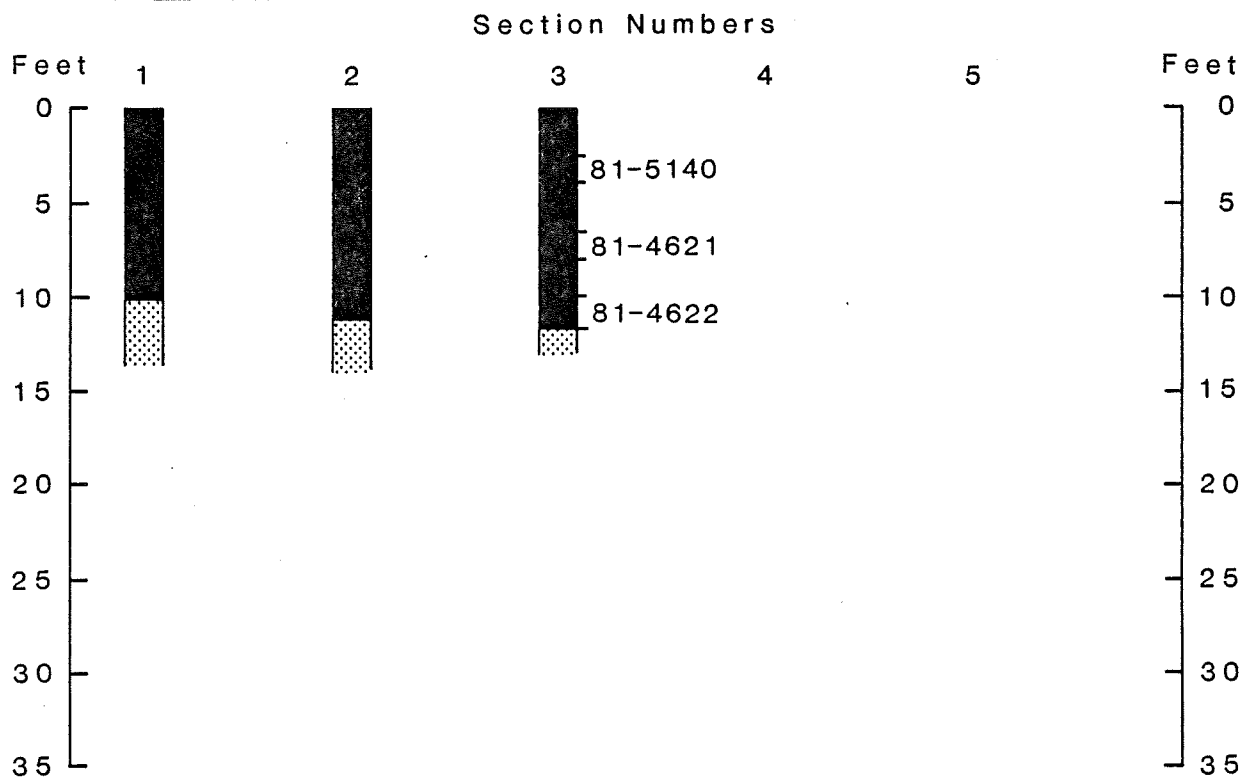
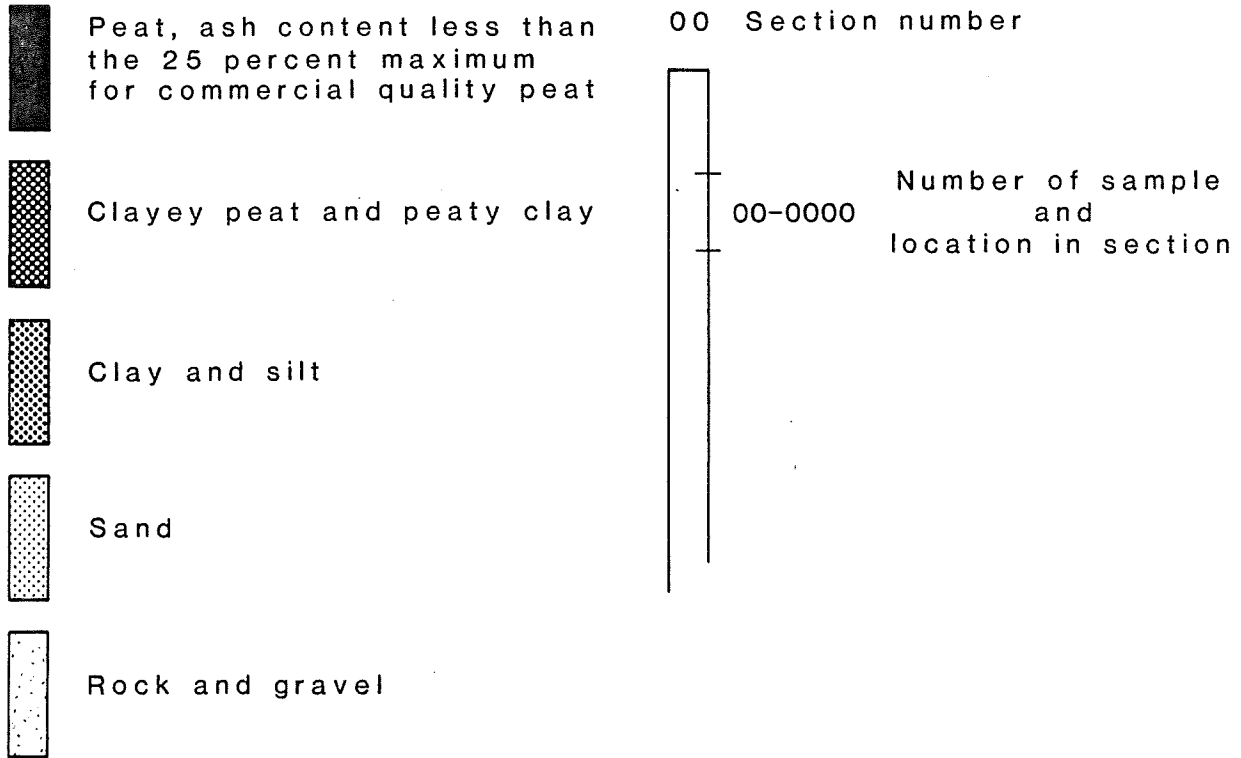


Figure 18a
SECTIONS AND SAMPLE LOCATIONS

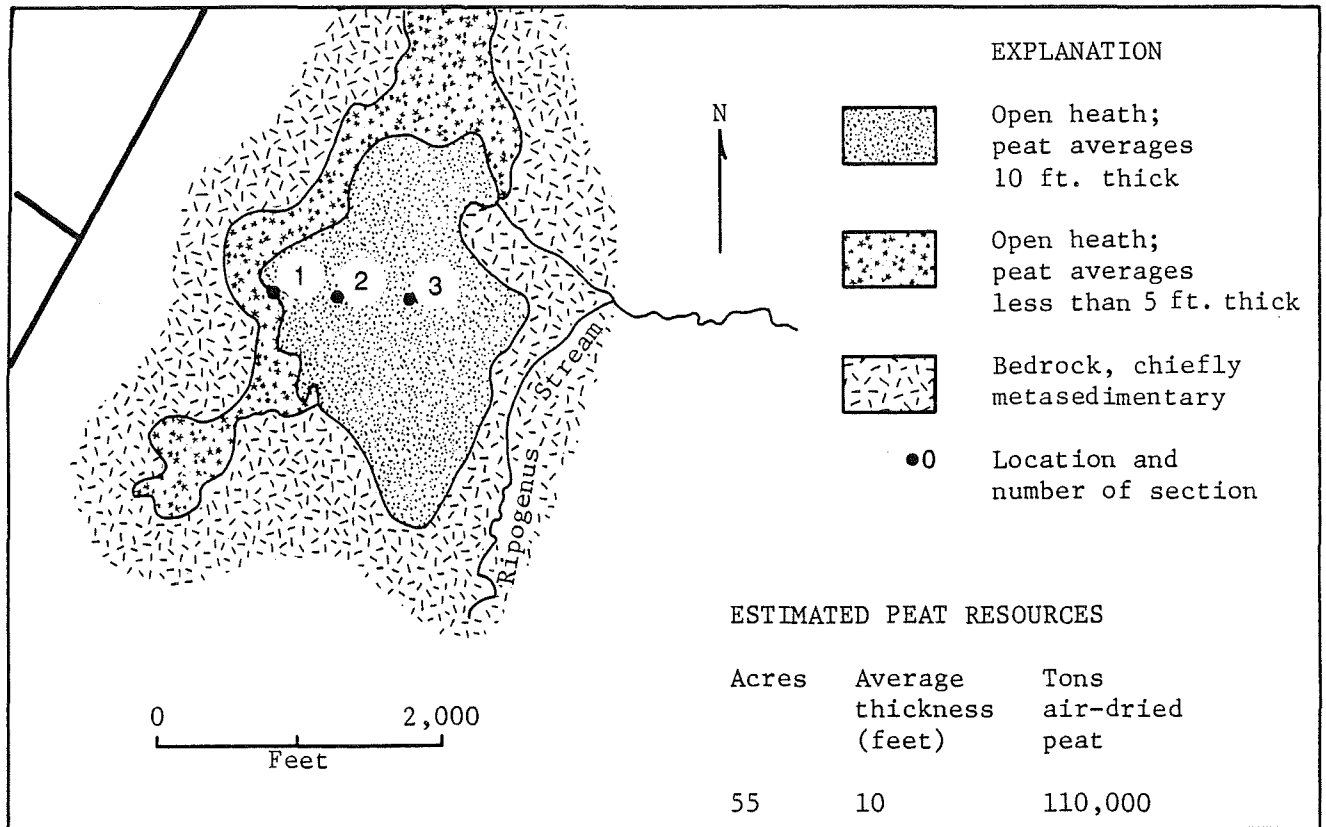


Figure 19. Sketch map of bog on Ripogenus Stream north of Ripogenus Pond, T4 R12 WELS, Chesuncook 15 minute Quadrangle, Piscataquis County, Maine. (Number 18 on Index Map).

EXPLANATION OF SECTIONS

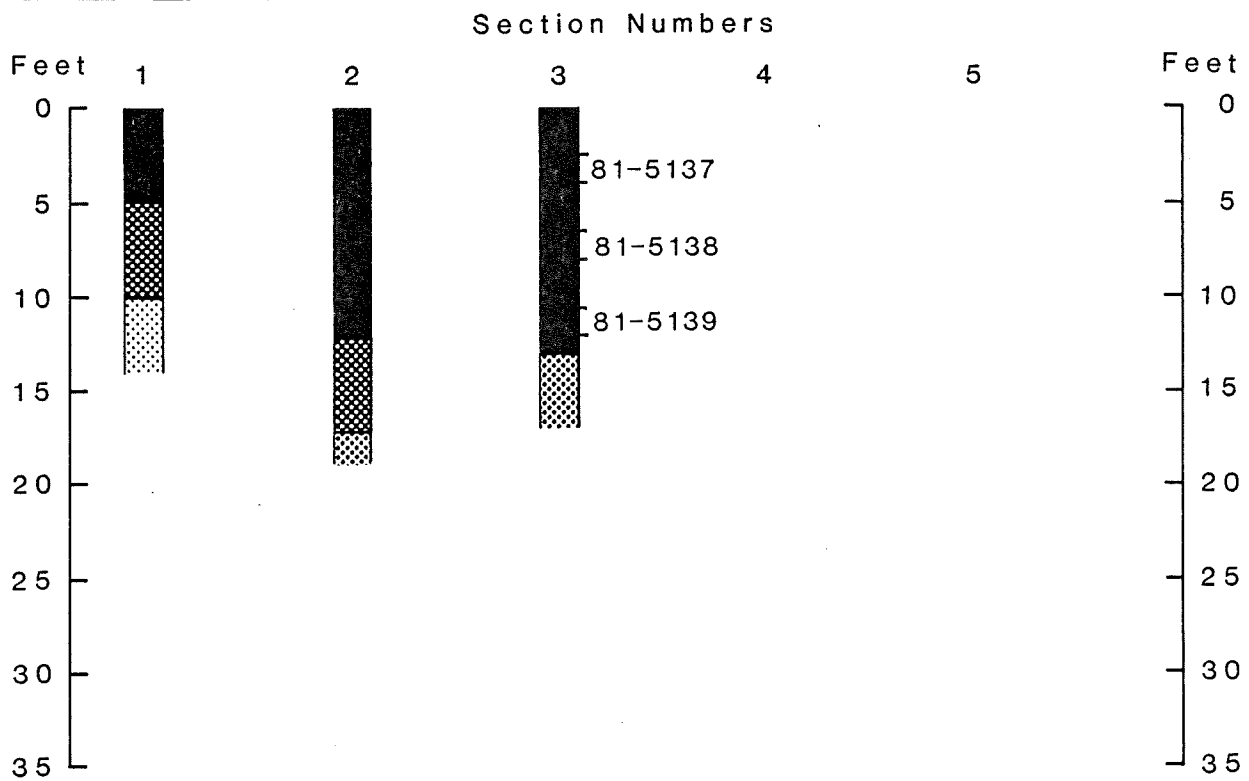
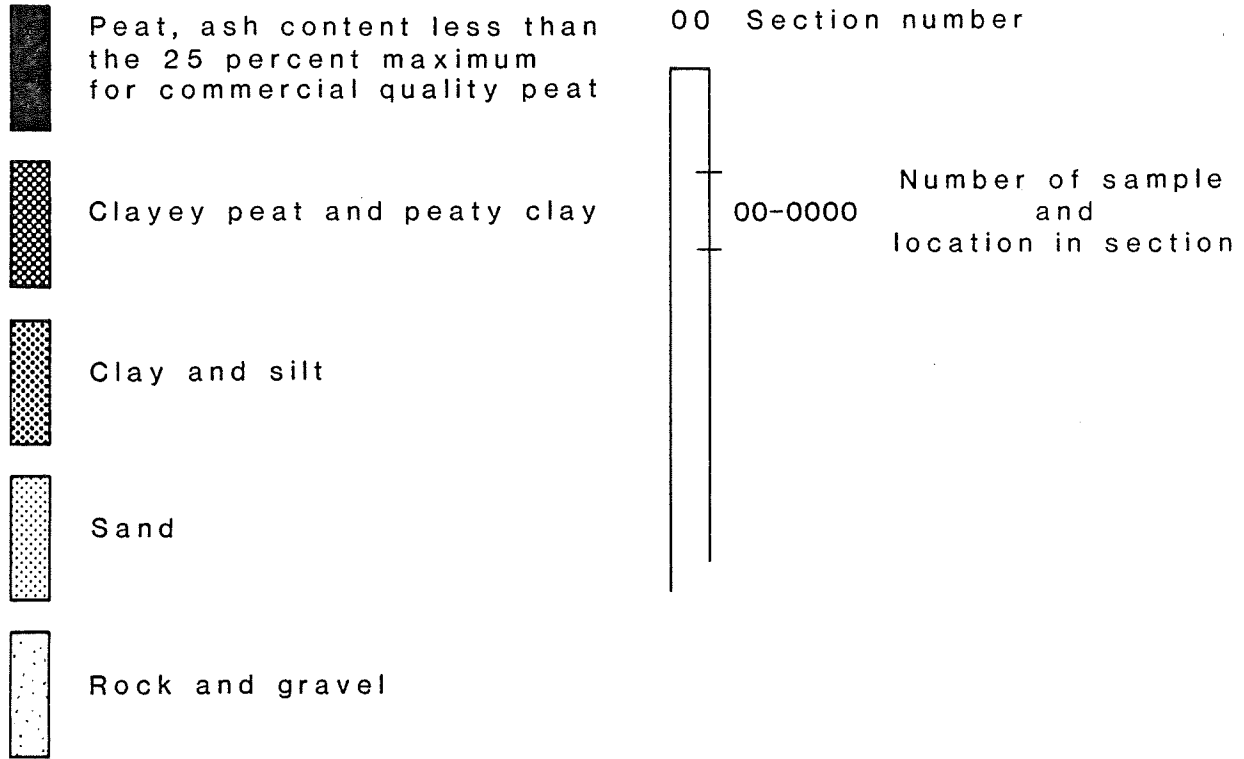


Figure 19a
SECTIONS AND SAMPLE LOCATIONS

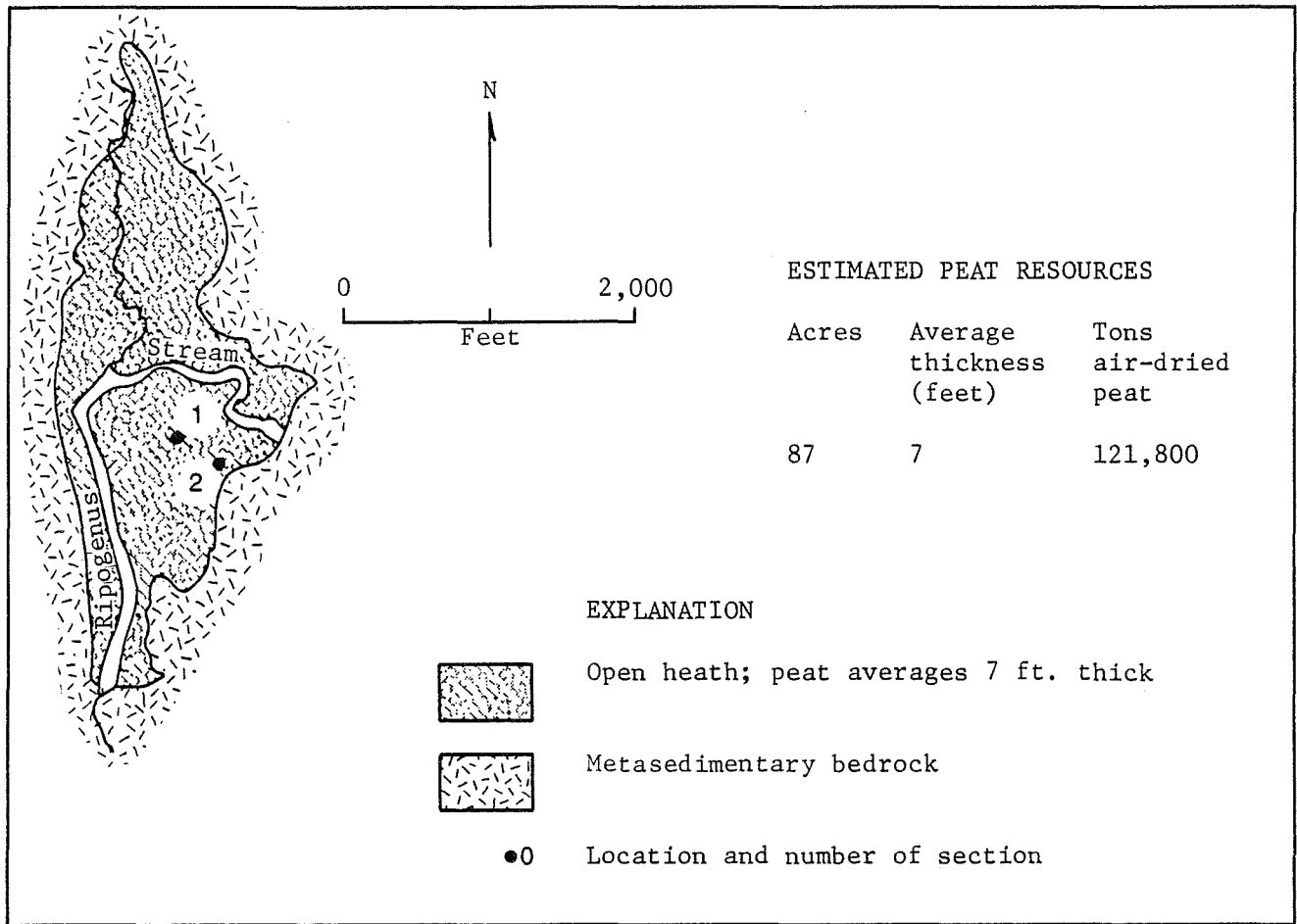


Figure 20. Sketch map of bog on Ripogenus Stream, T4 R12 WELS, Telos Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 19 on Index Map).

EXPLANATION OF SECTIONS

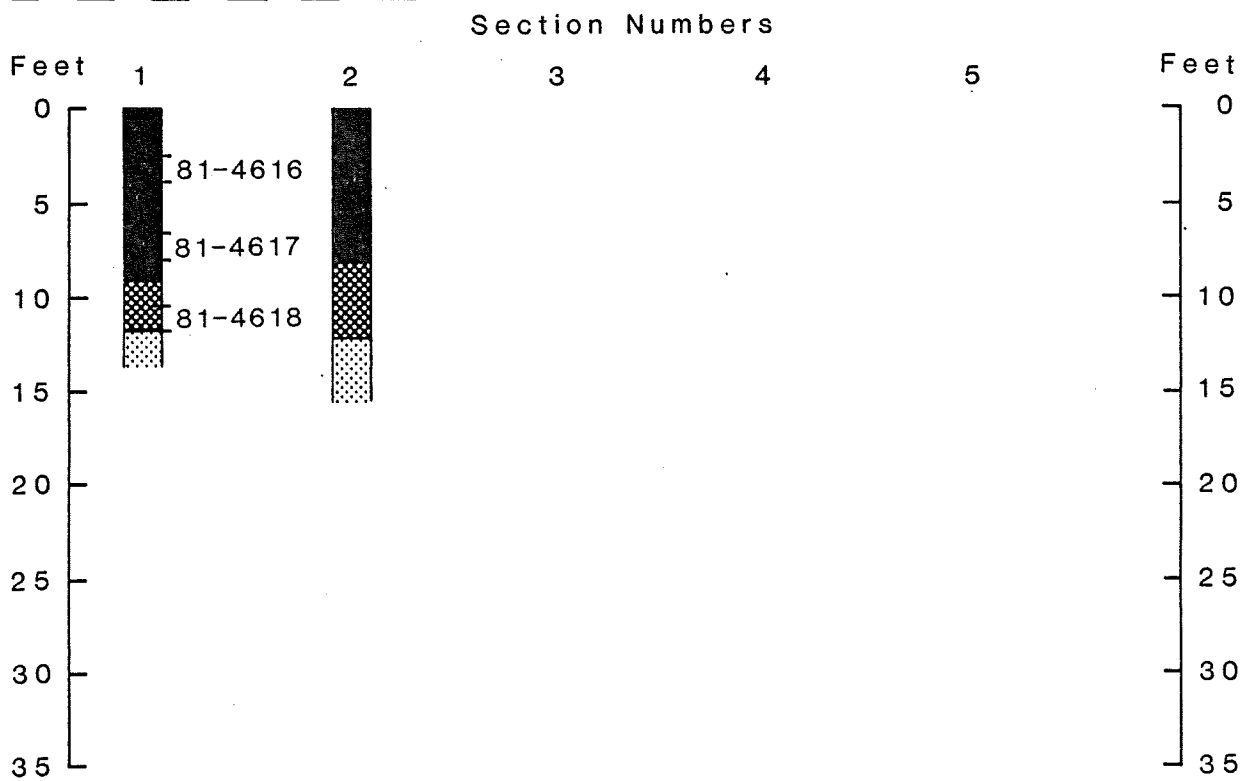
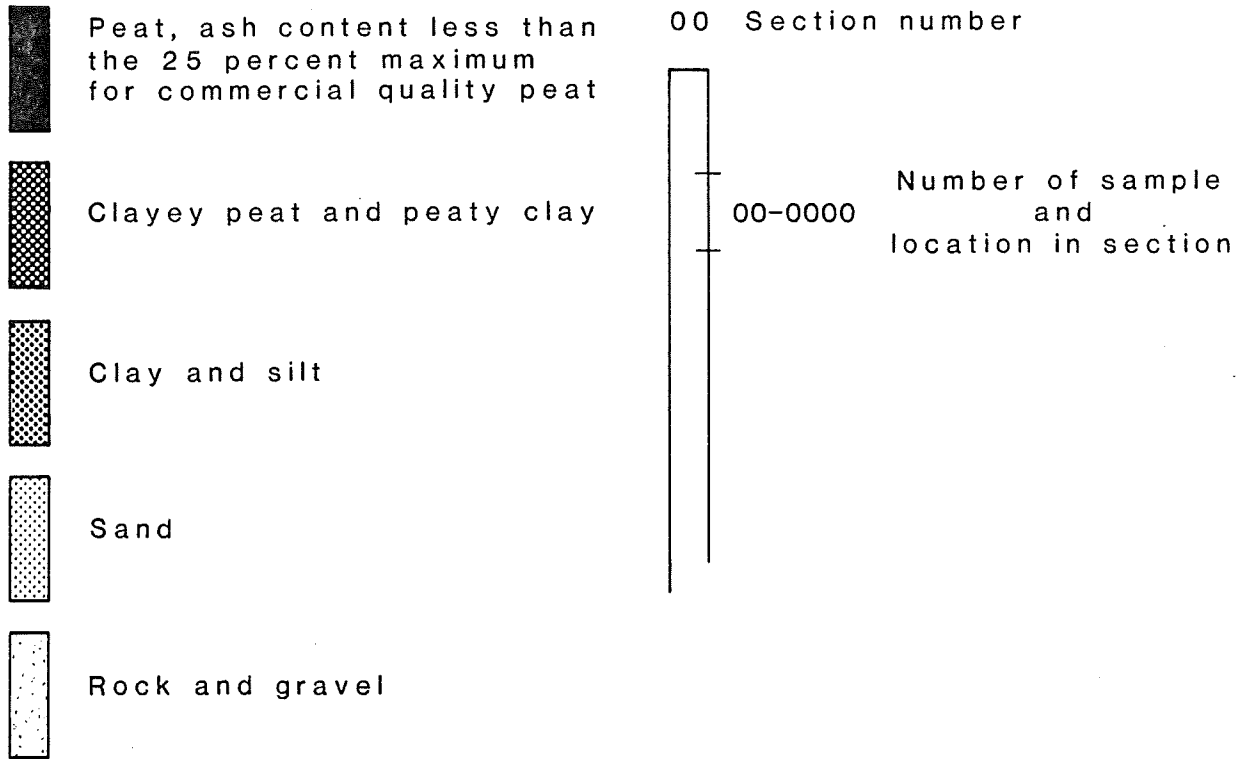


Figure 20a
SECTIONS AND SAMPLE LOCATIONS

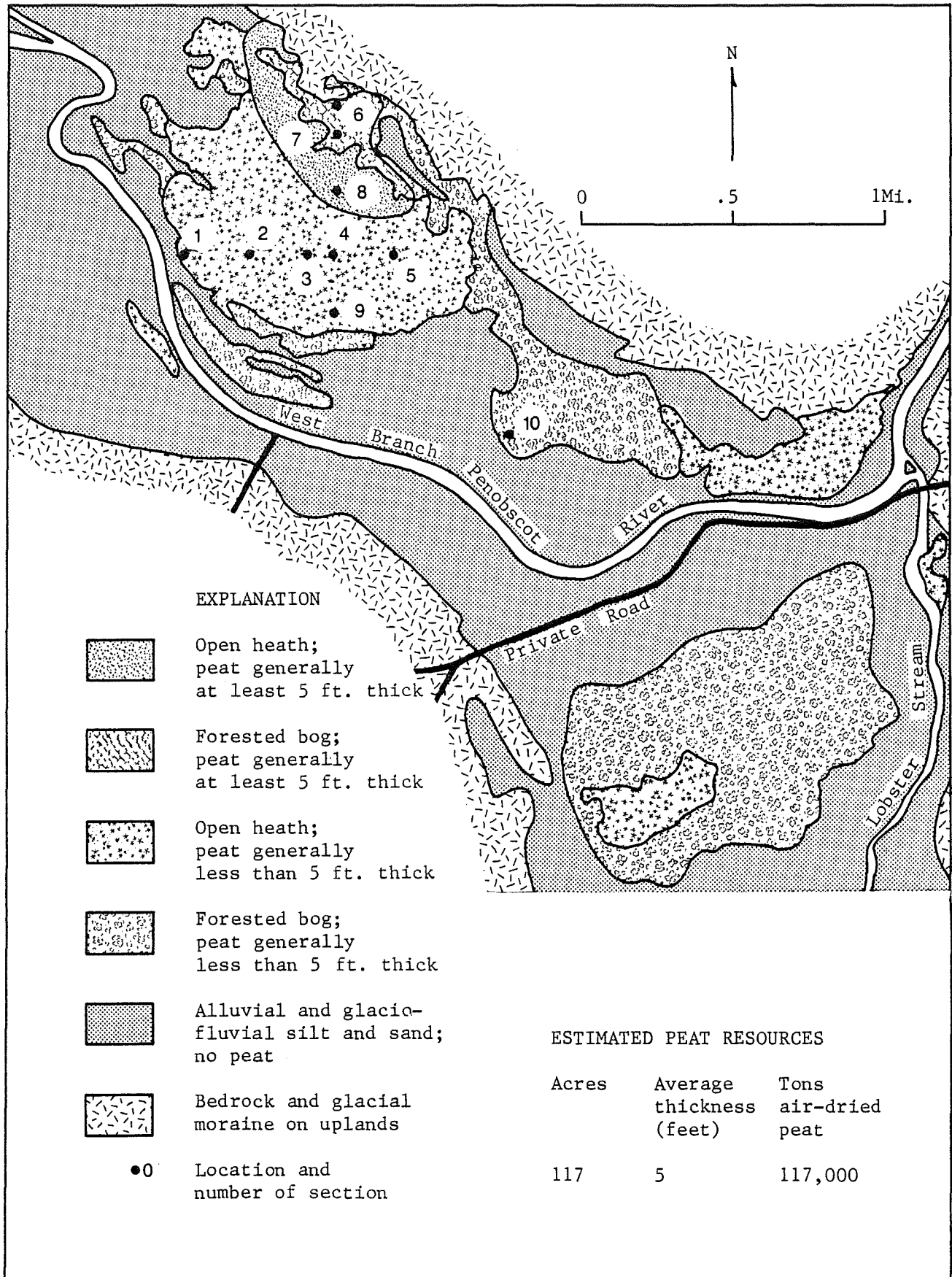


Figure 21. Sketch map of bogs along the West Branch of the Penobscot River and Lobster Stream, T3 R15 WELS (North East Carry Twp.), North East Carry 15 minute Quadrangle, Piscataquis County, Maine. (Number 20 on Index Map).

EXPLANATION OF SECTIONS

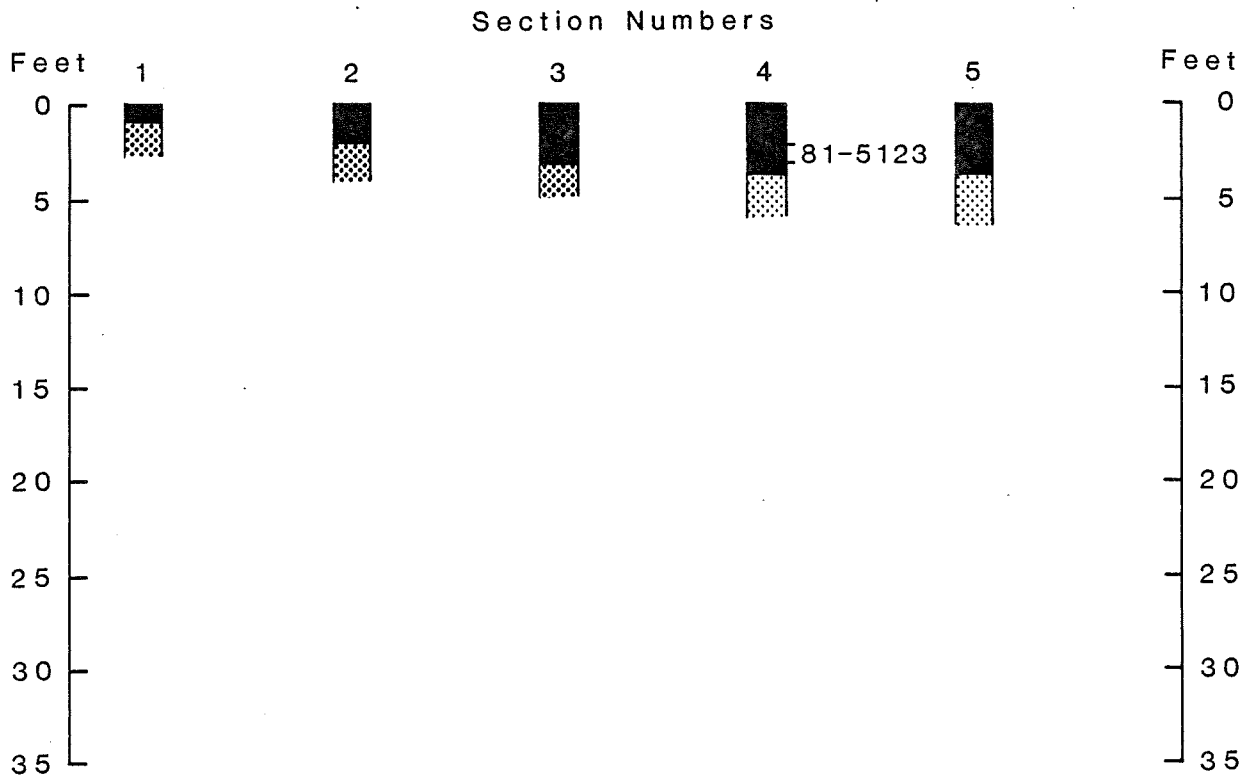
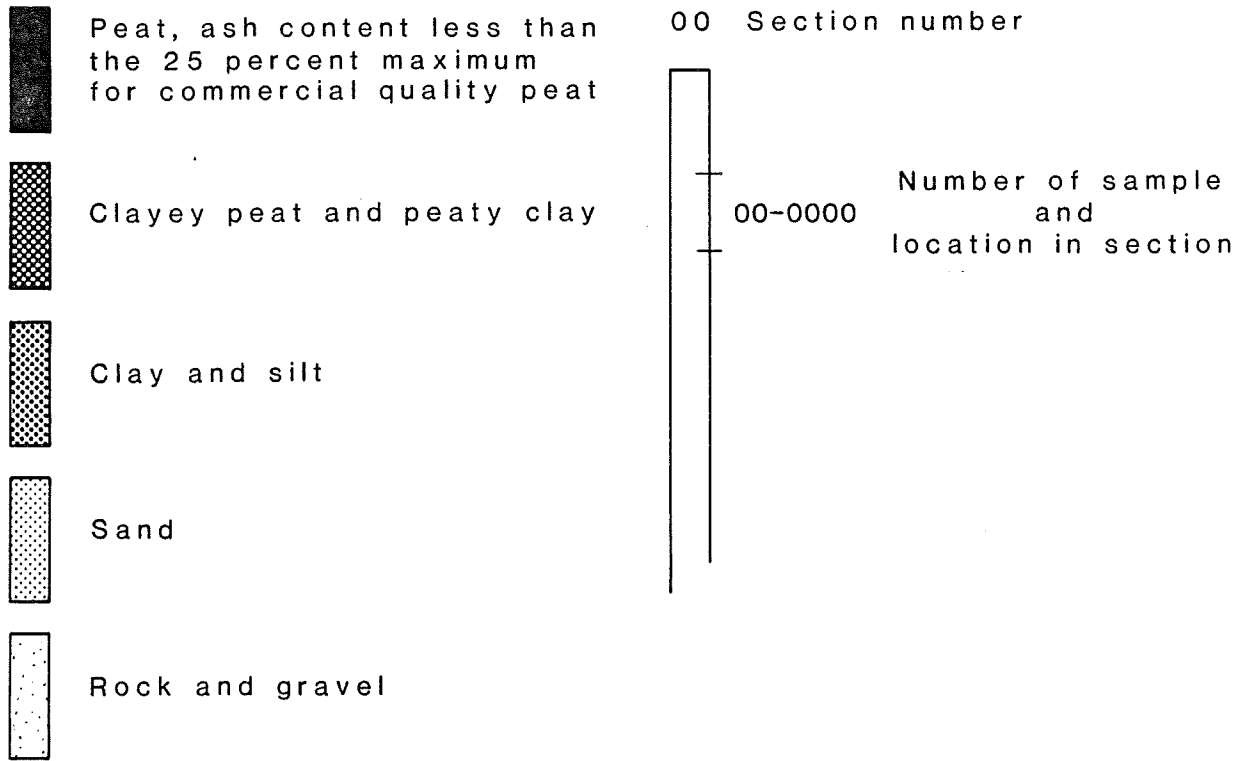


Figure 21a
SECTIONS AND SAMPLE LOCATIONS

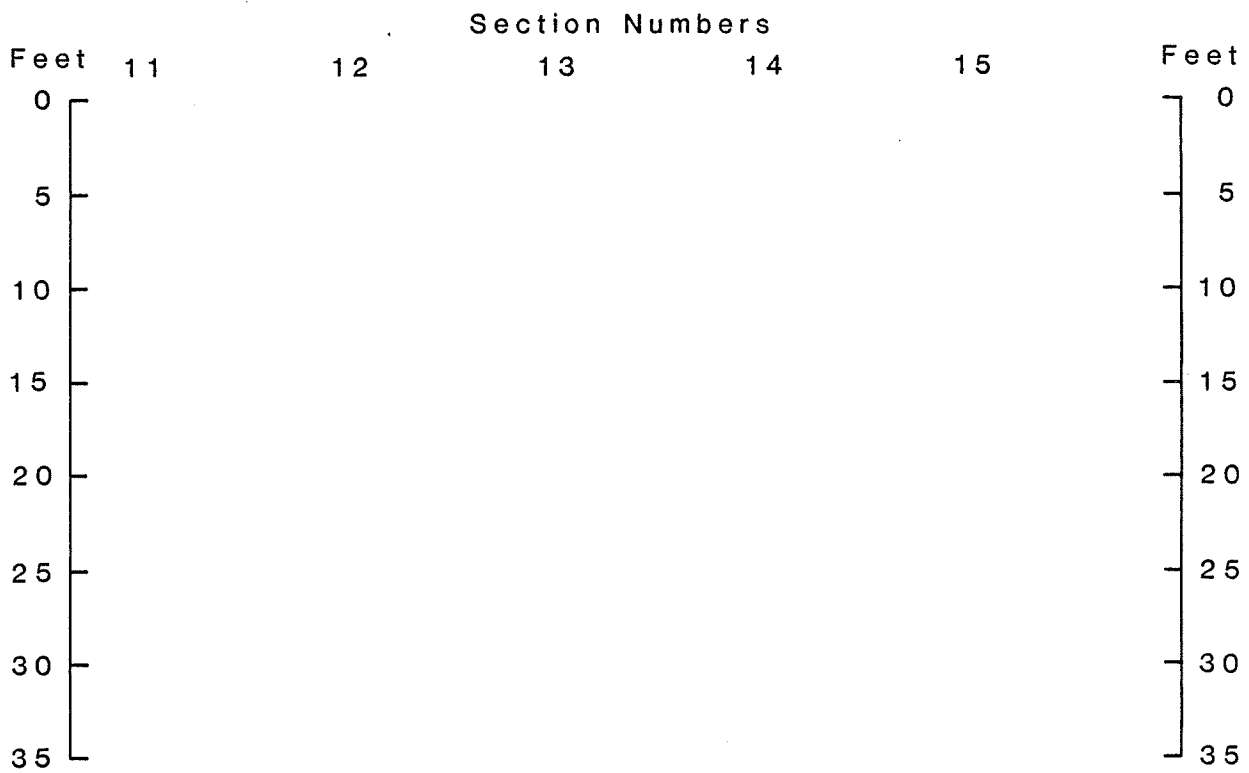
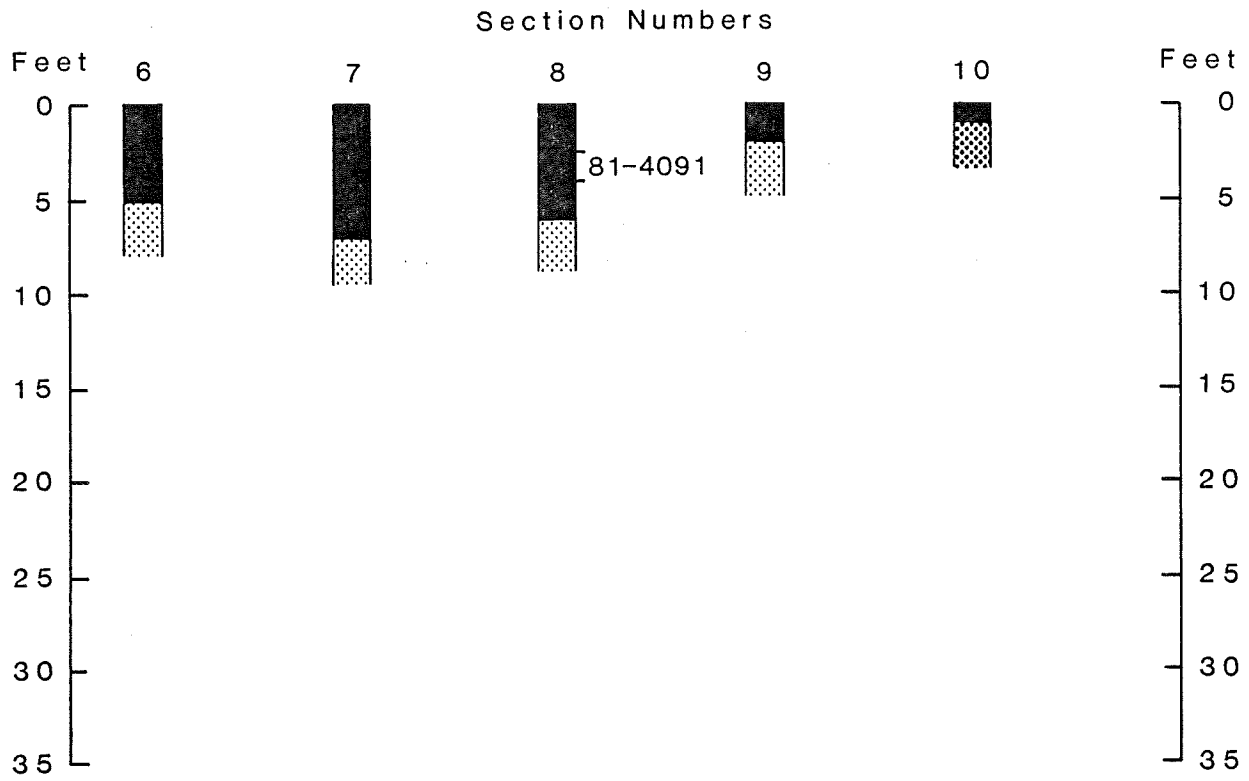


Figure 21a - Continued
SECTIONS AND SAMPLE LOCATIONS

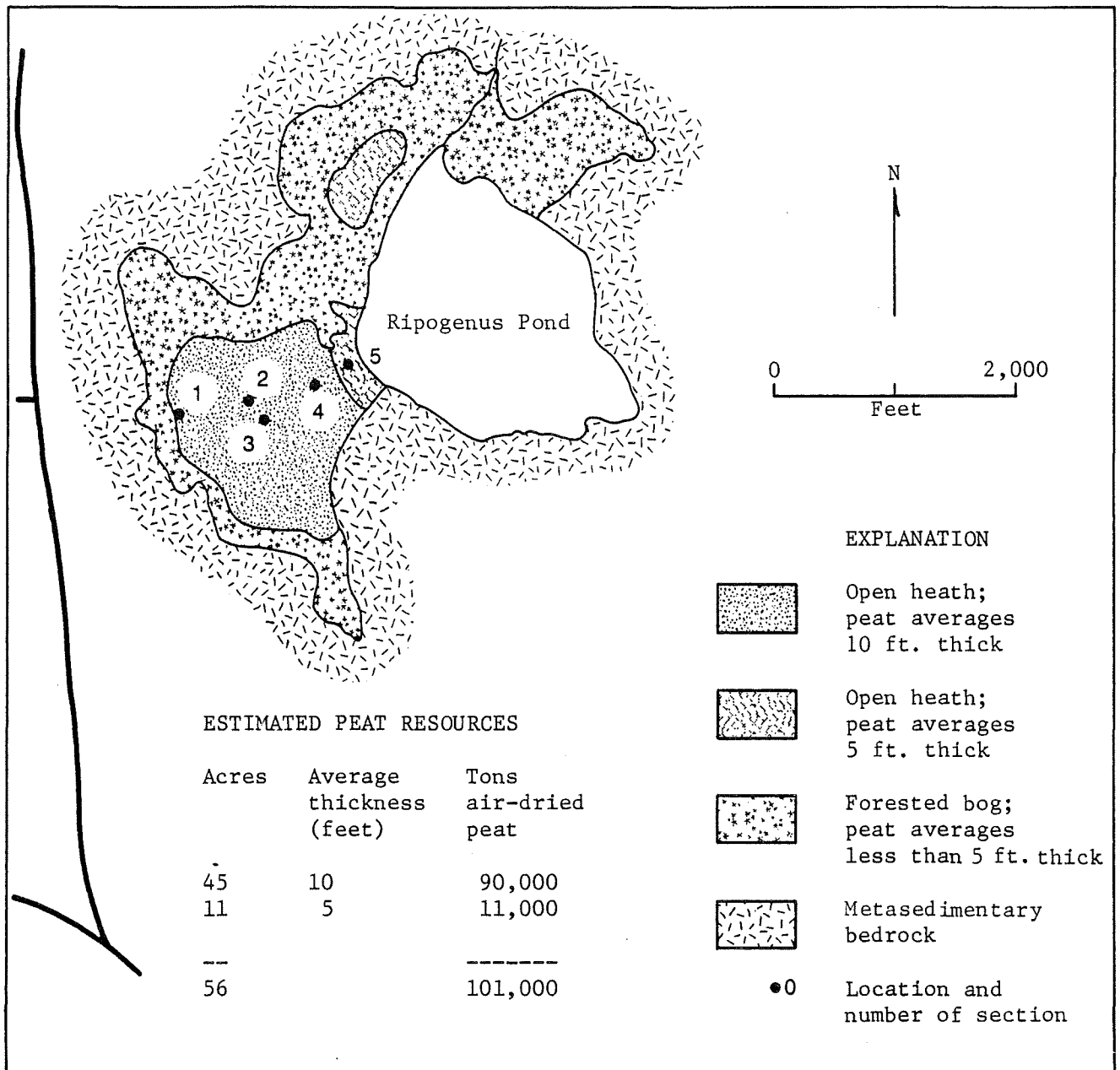


Figure 22. Sketch map of bog at Ripogenus Pond, T4 R12 WELS, Ragged Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 21 on Index Map).

EXPLANATION OF SECTIONS

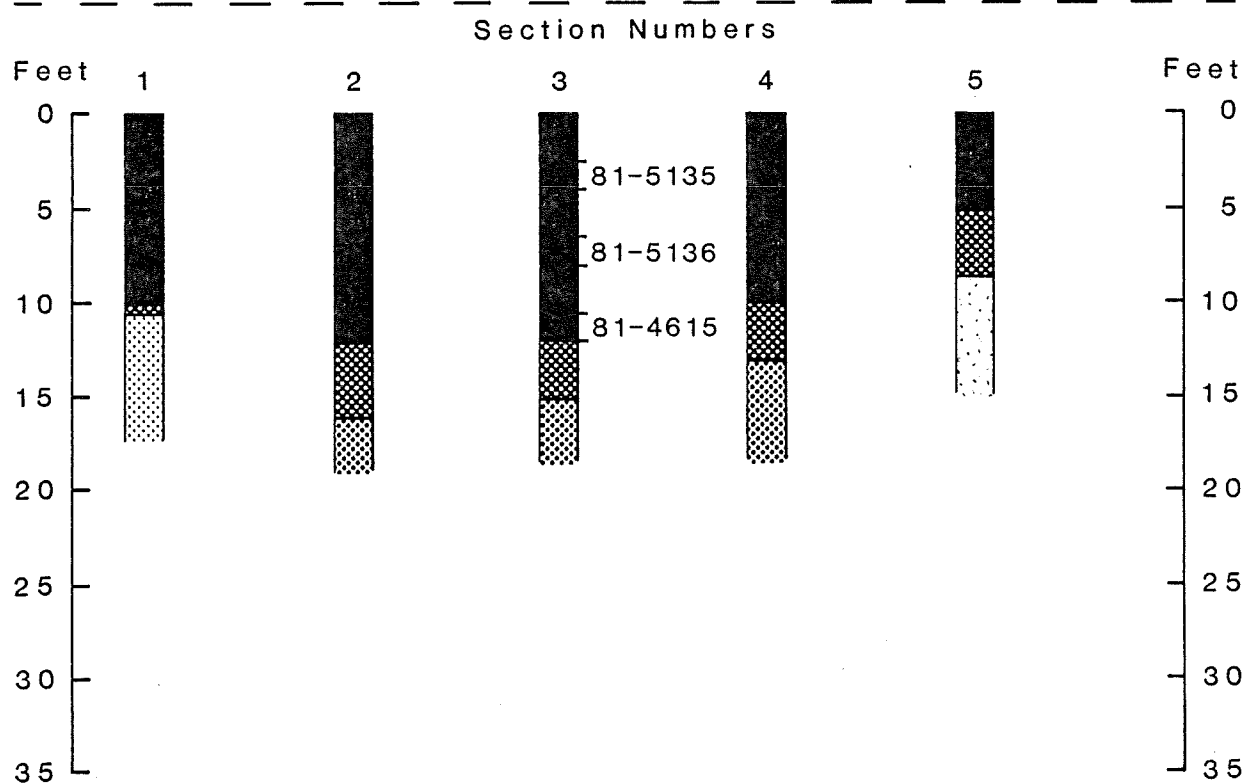
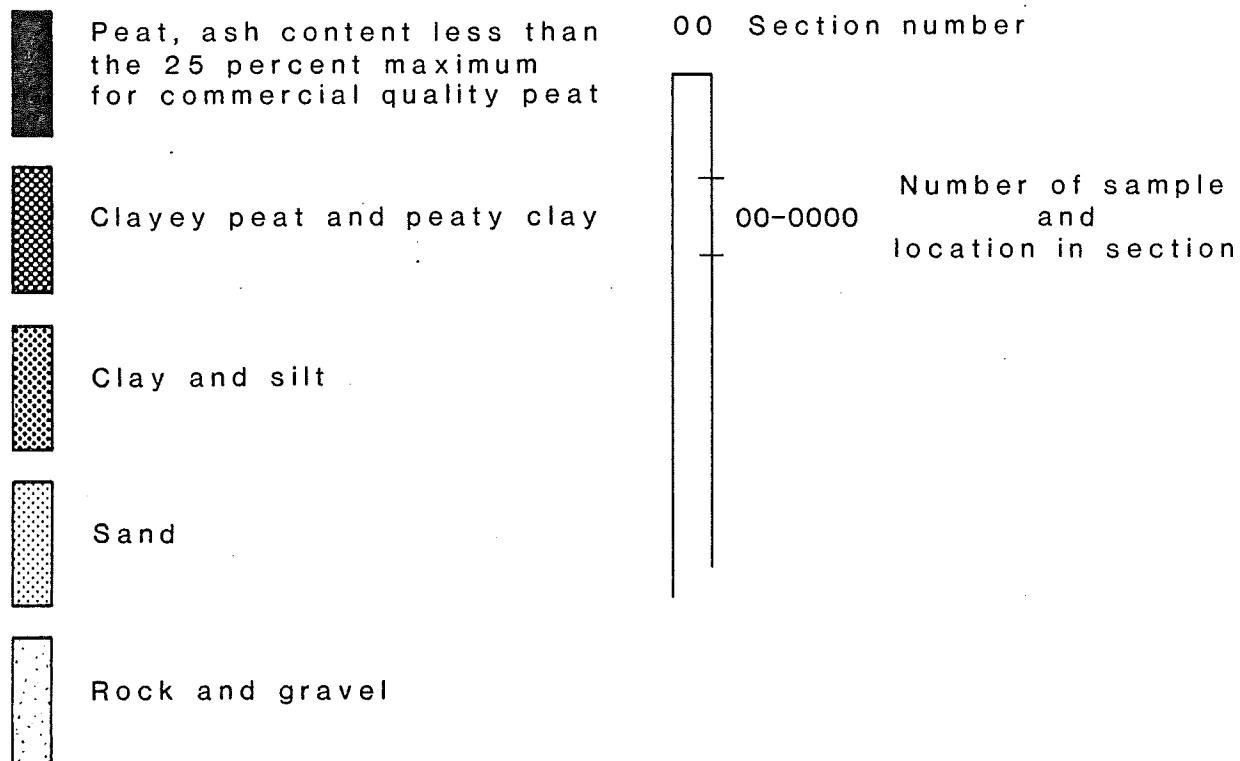


Figure 22a
SECTIONS AND SAMPLE LOCATIONS

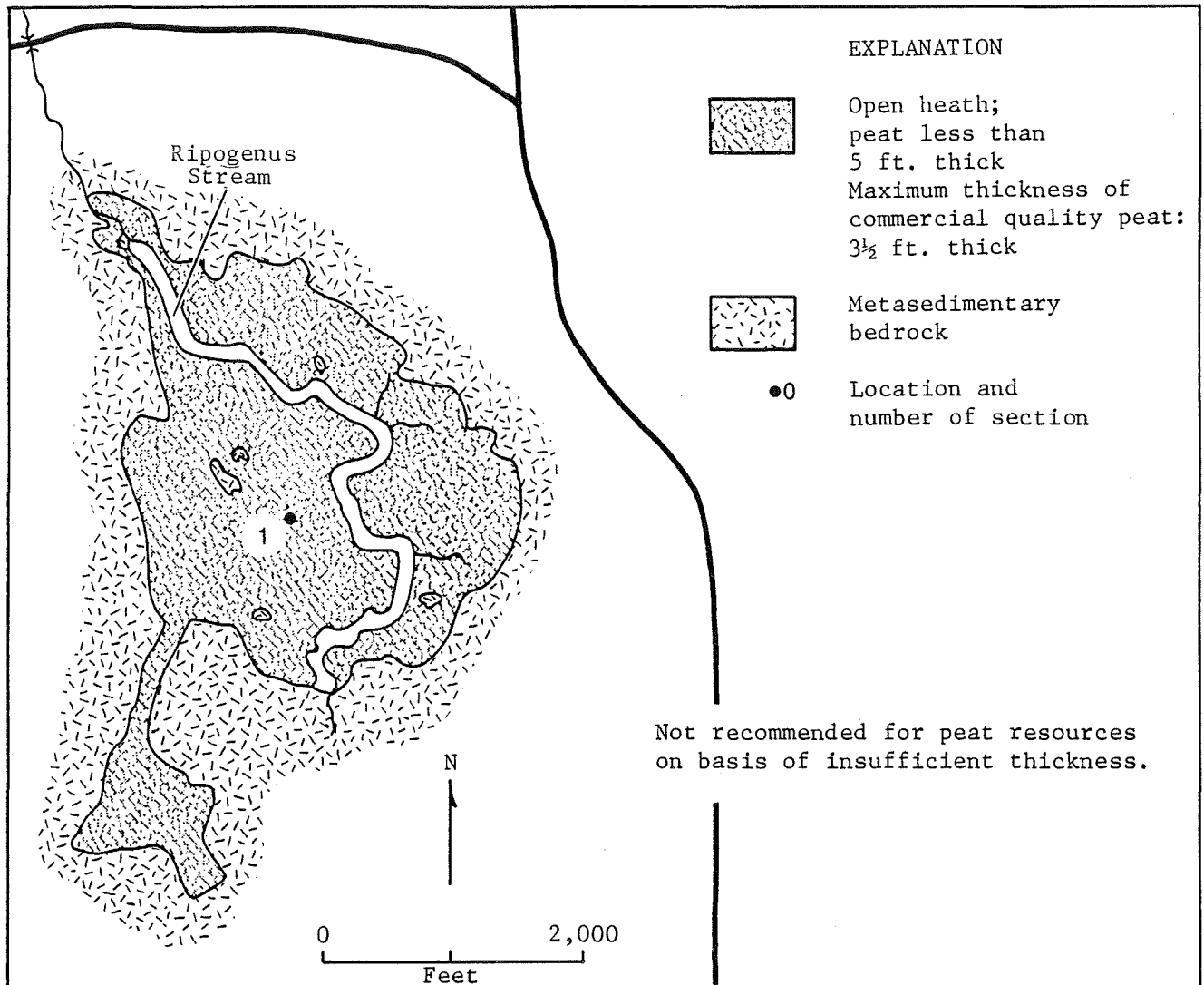


Figure 23. Sketch map of bog west of Soubunge Mountain, T4 R12 WELS, Harrington Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 22 on Index Map).

EXPLANATION OF SECTIONS

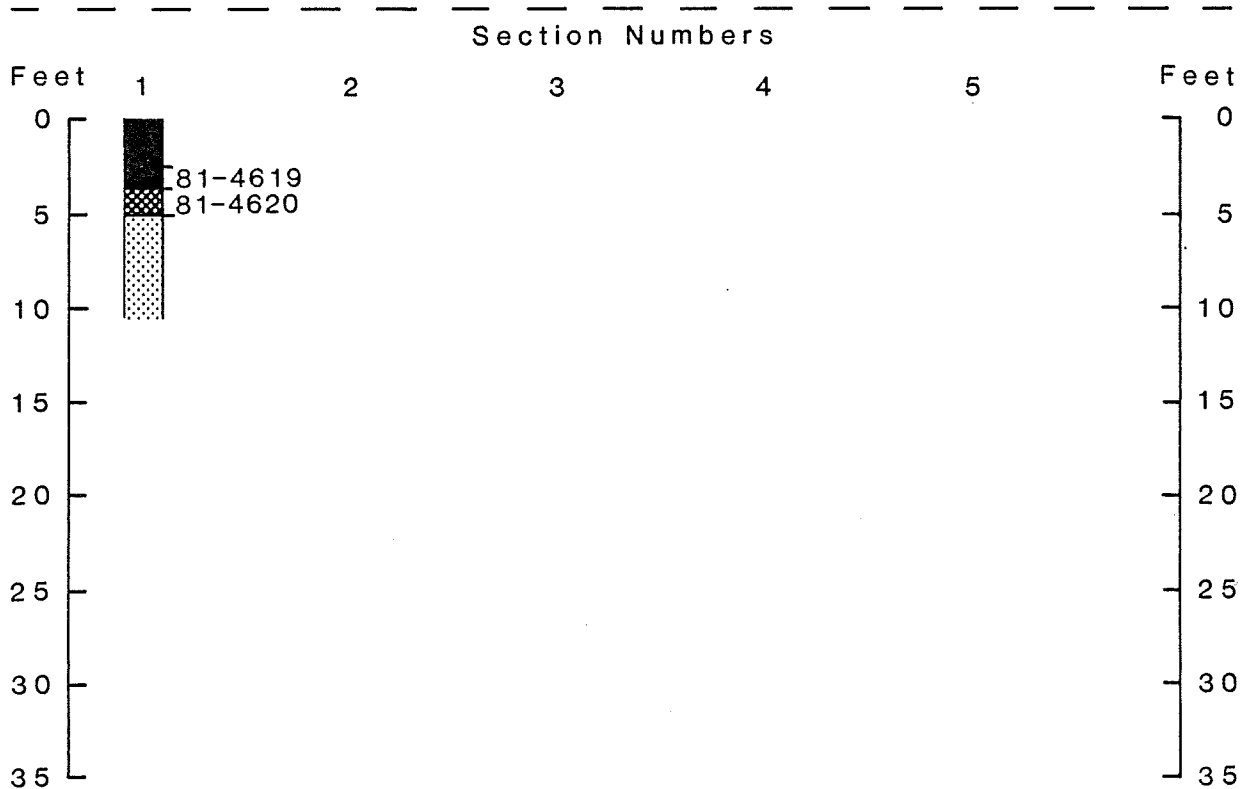
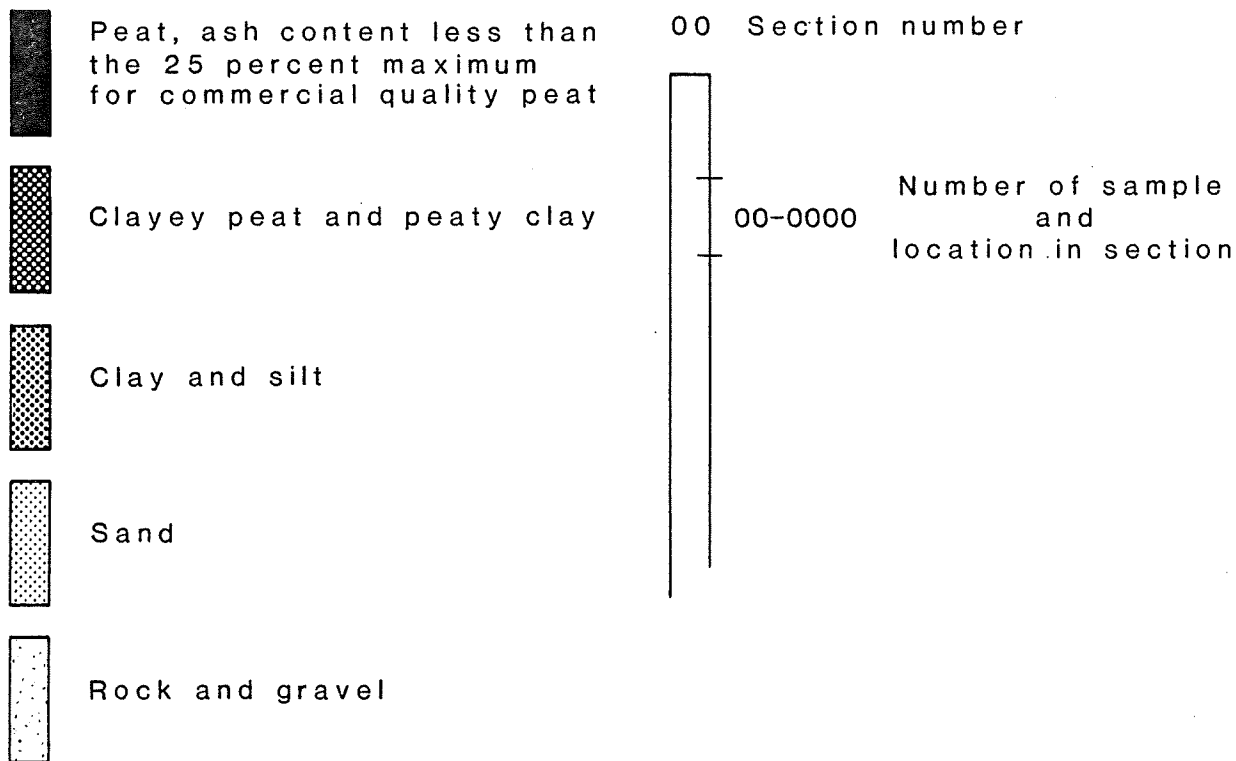


Figure 23a
SECTIONS AND SAMPLE LOCATIONS

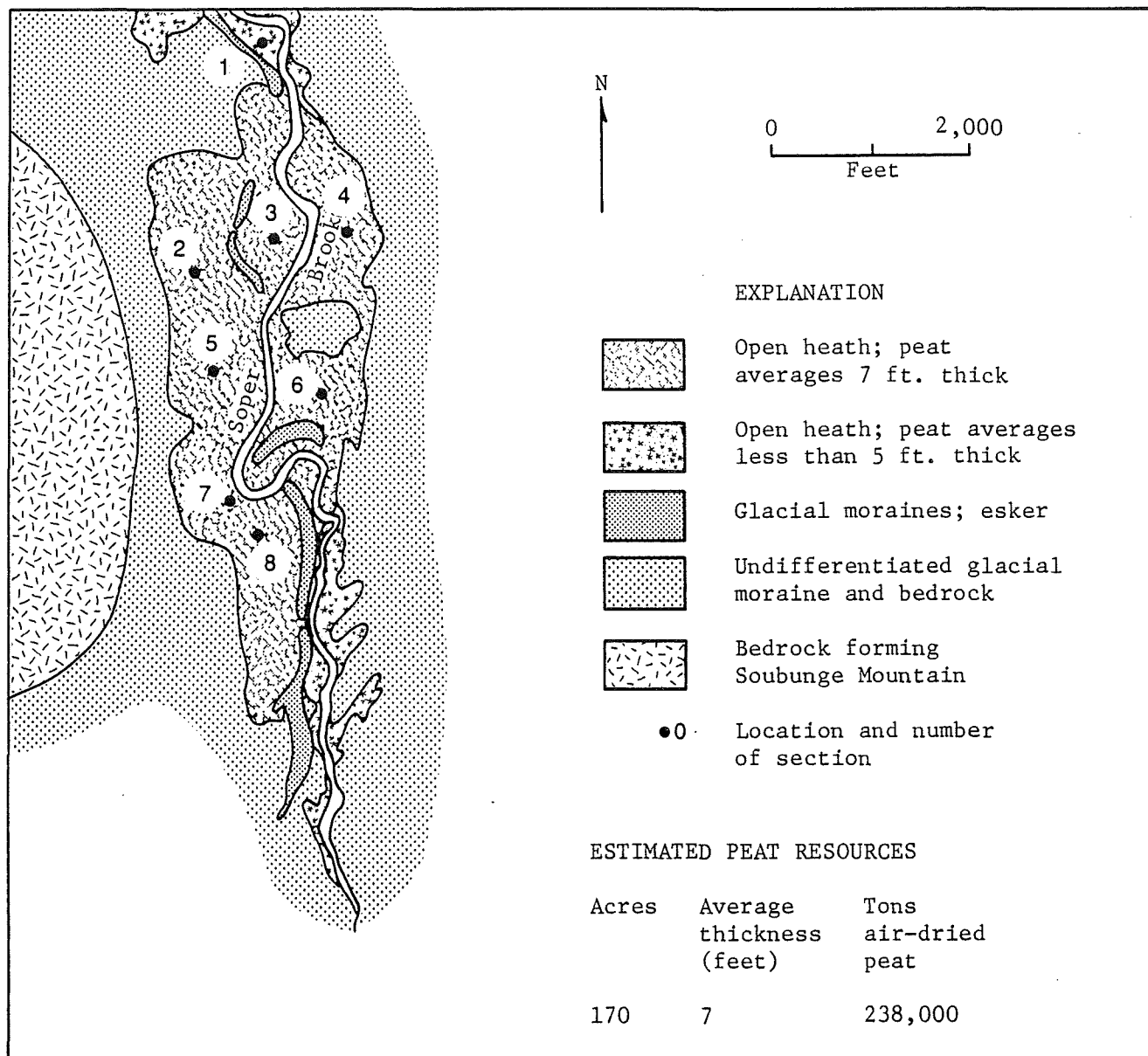


Figure 24. Sketch map of bog along Soper Brook, T4 R11 WELS, Harrington Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 23 on Index Map).

EXPLANATION OF SECTIONS

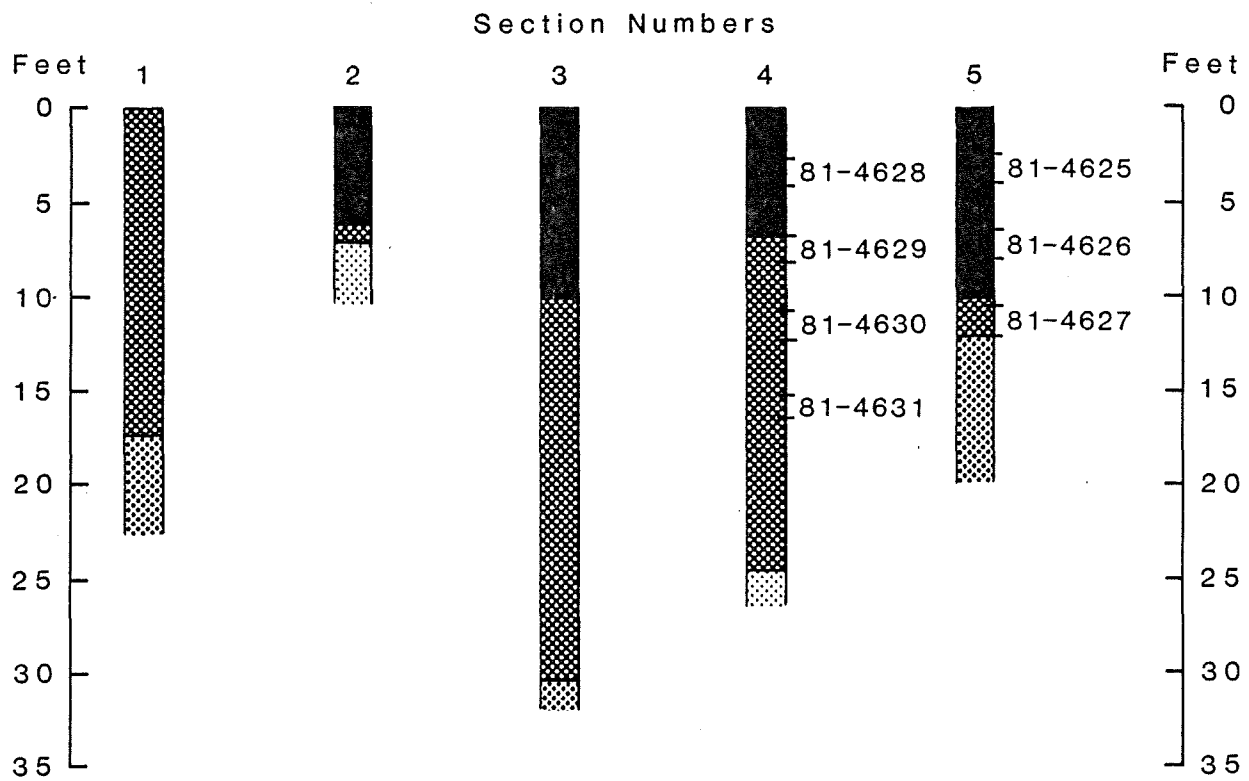
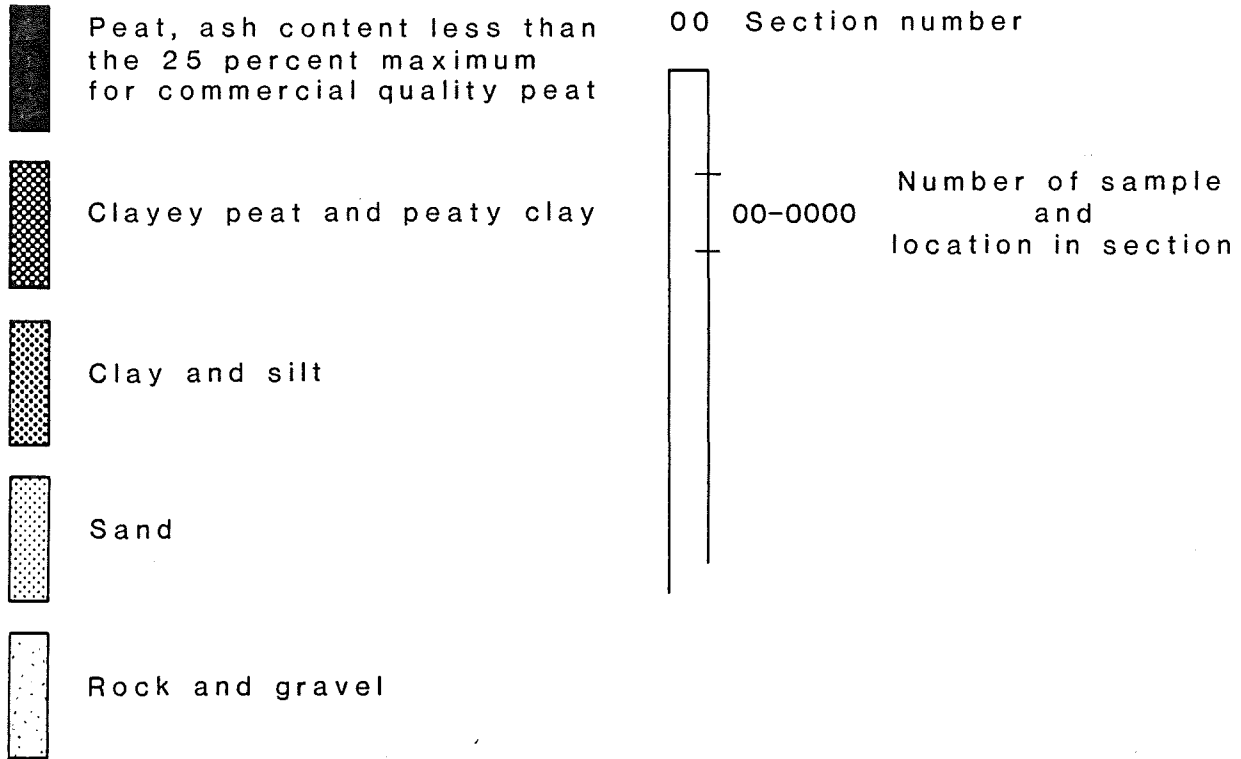


Figure 24a
SECTIONS AND SAMPLE LOCATIONS

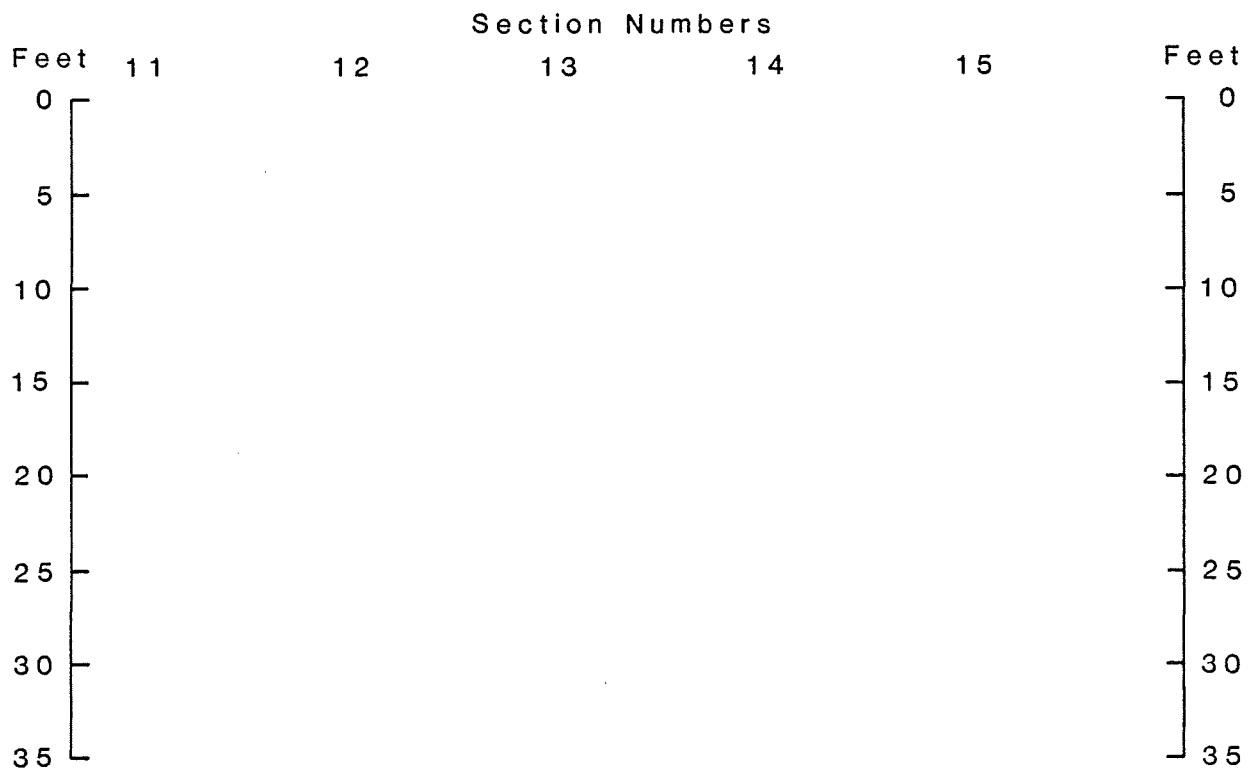
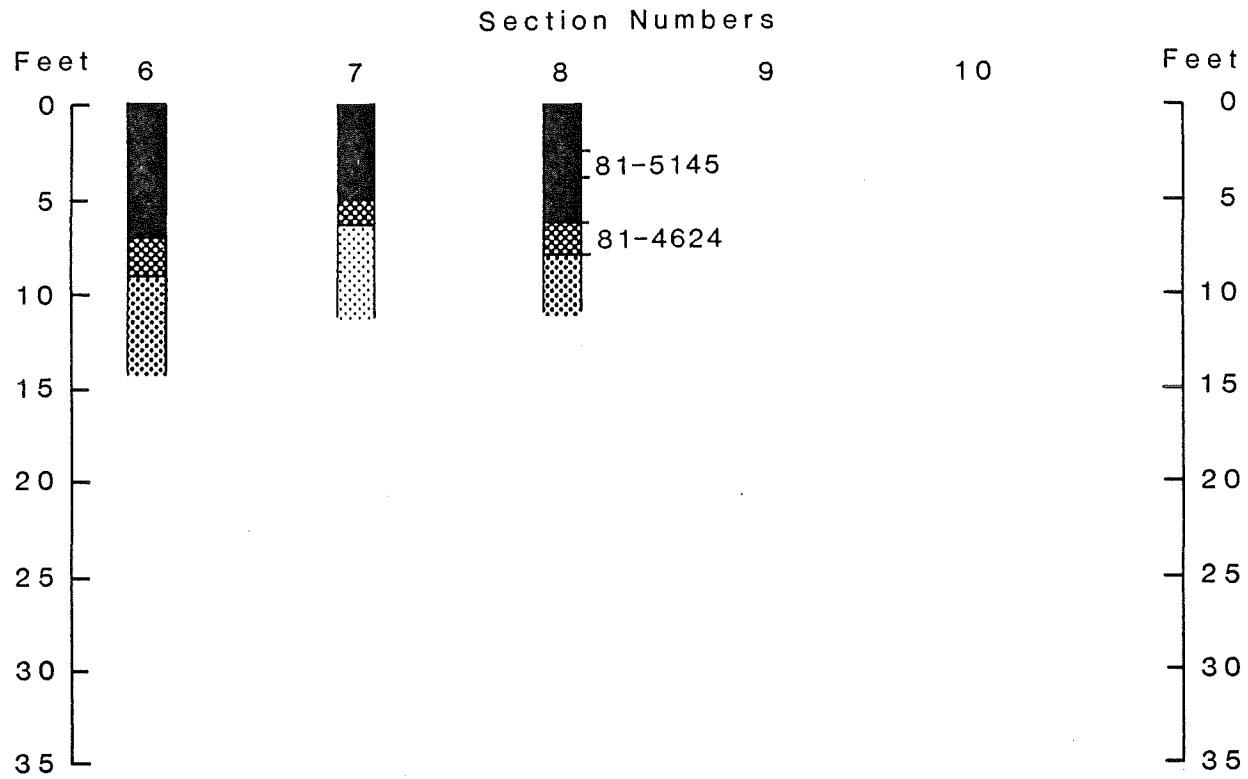


Figure 24a - Continued
SECTIONS AND SAMPLE LOCATIONS

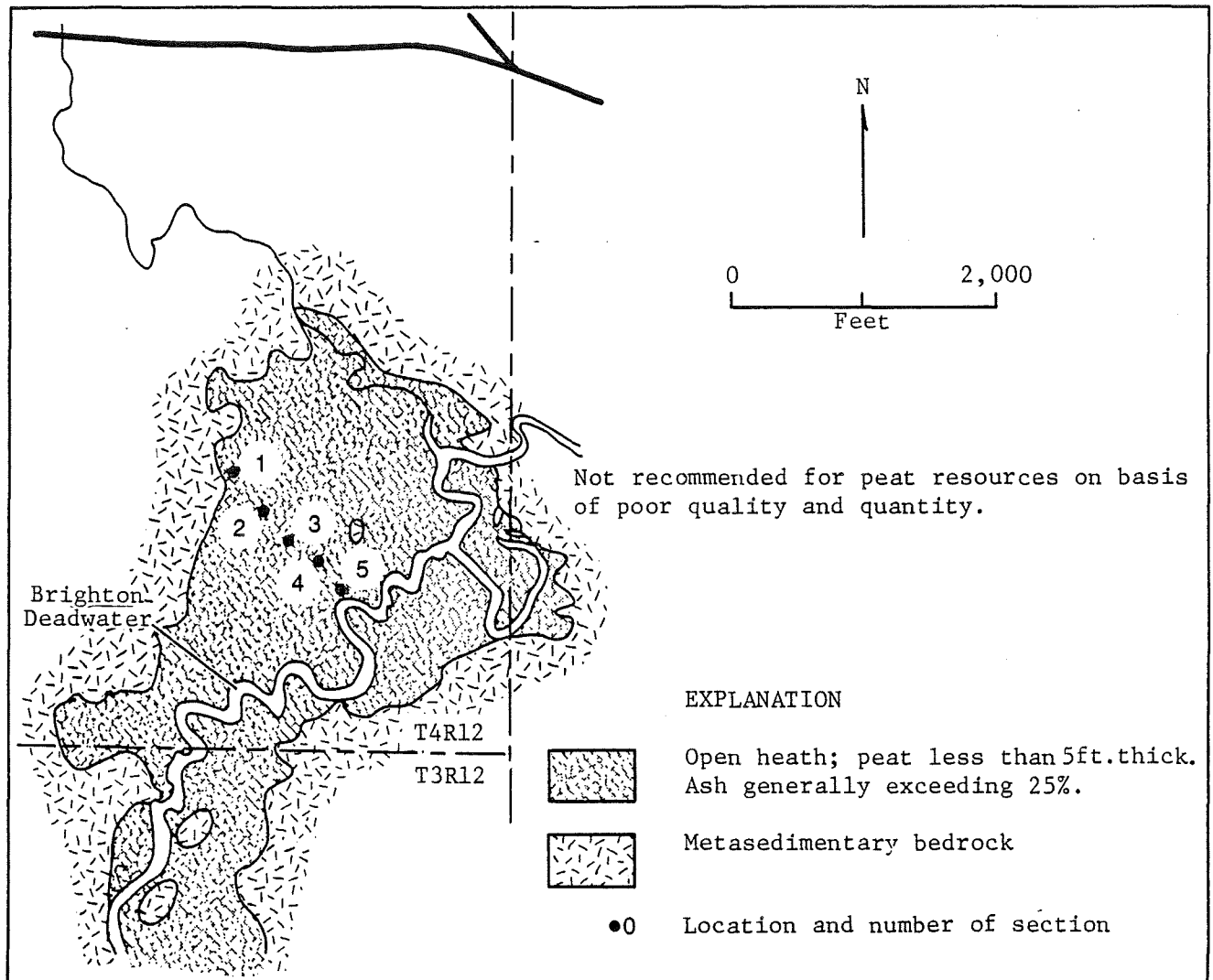


Figure 25. Sketch map of bog at Brighton Deadwater, southeast corner T4 R12 WELS, Harrington Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 24 on Index Map).

EXPLANATION OF SECTIONS

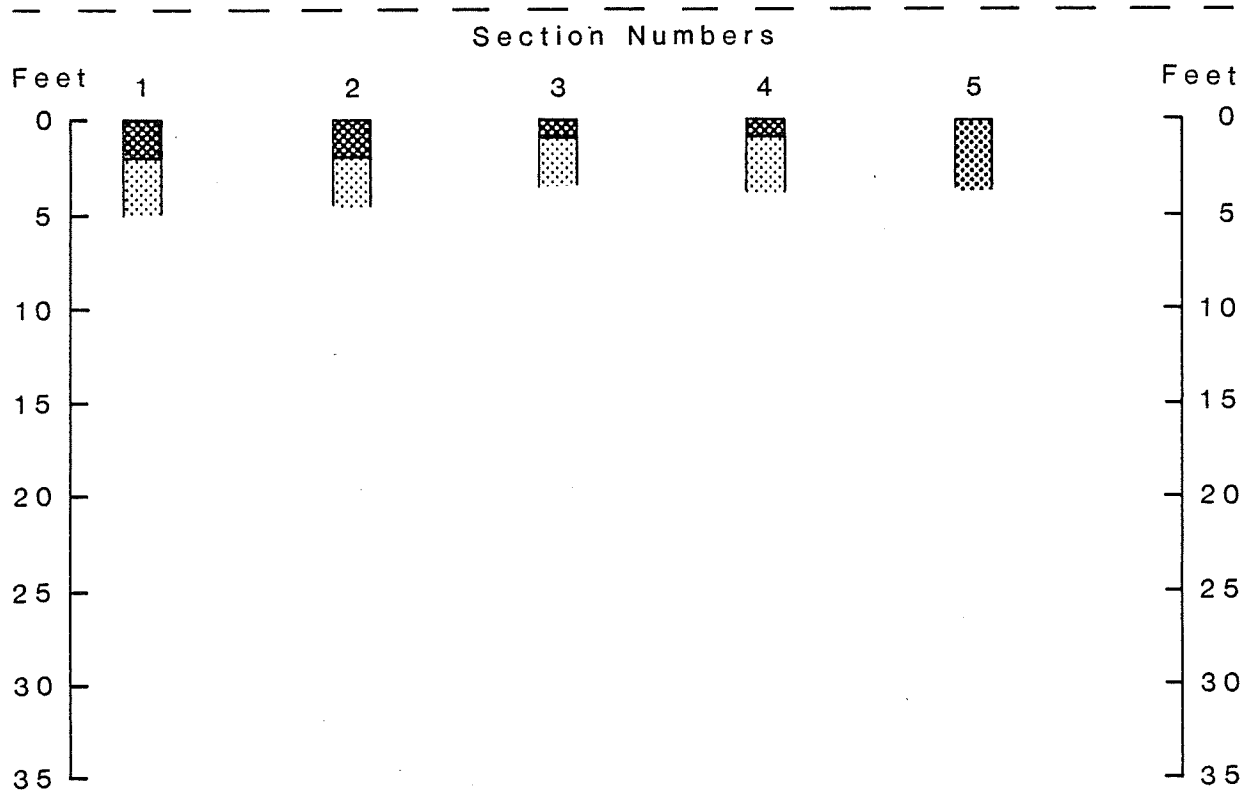
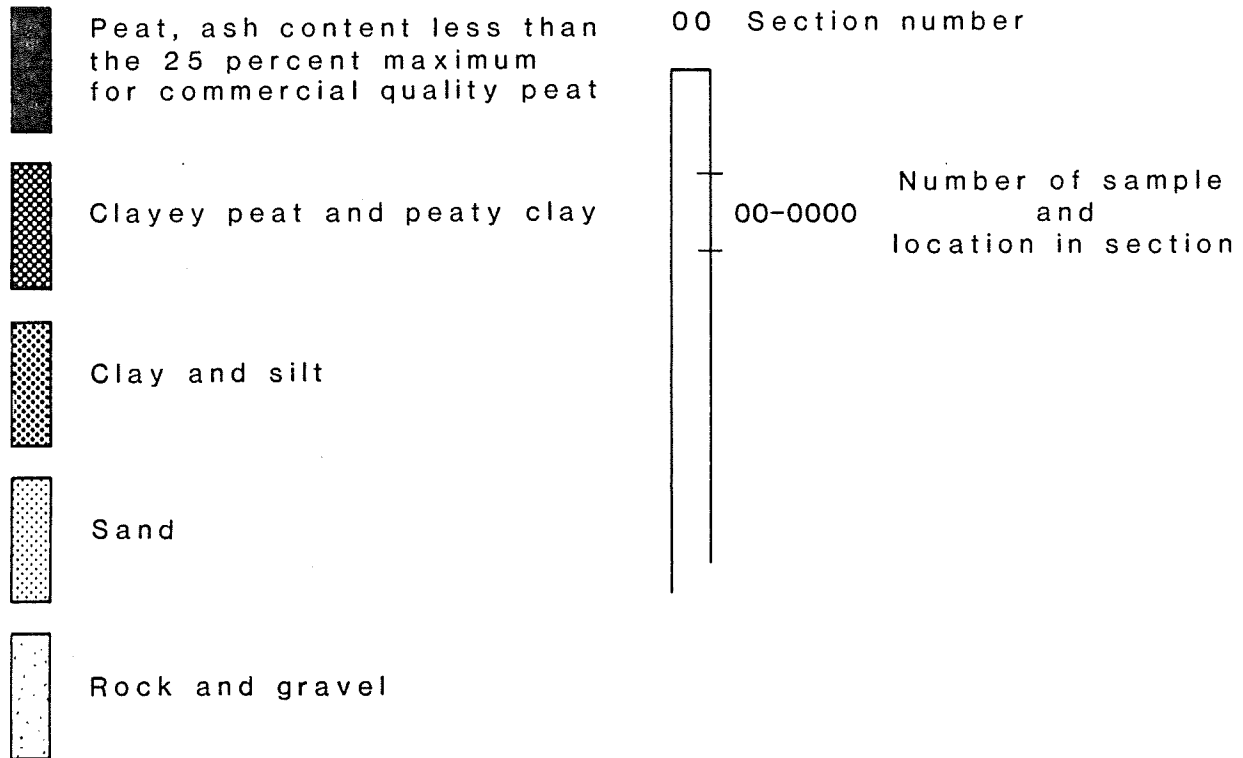


Figure 25a
SECTIONS AND SAMPLE LOCATIONS

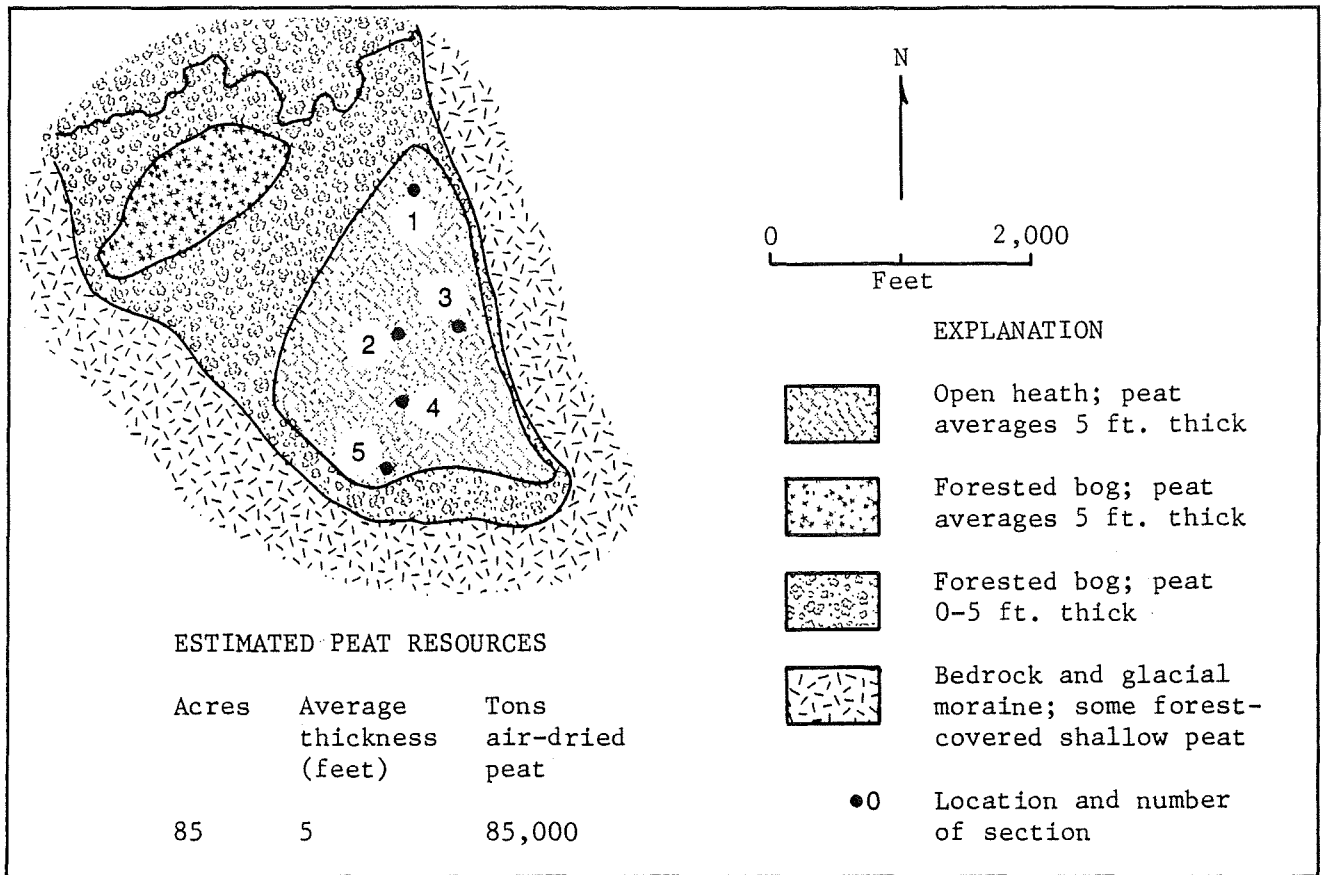


Figure 26. Sketch map of bog southwest of Tomhegan Pond, T2 R3 NBKP (Soldier Town Twp.), Seboomook Lake 15 minute Quadrangle, Somerset County, Maine. (Number 25 on Index Map).

EXPLANATION OF SECTIONS

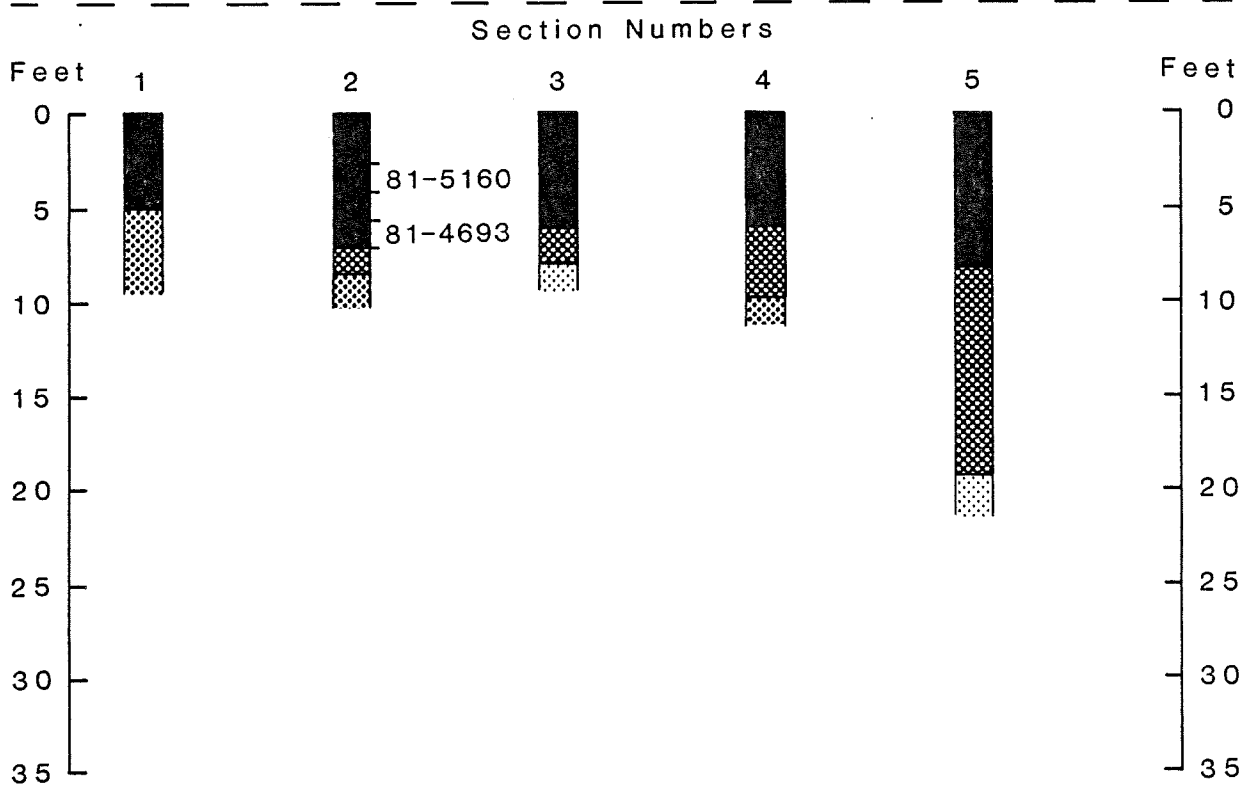
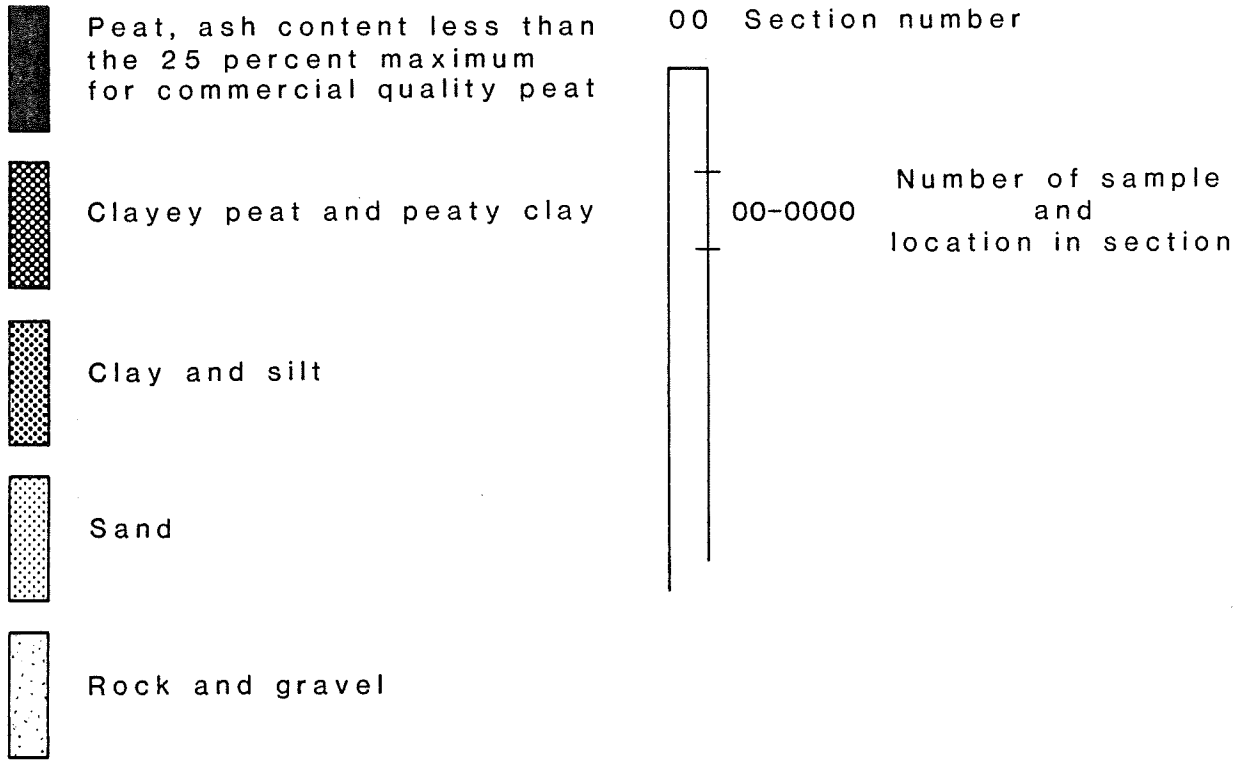


Figure 26a
SECTIONS AND SAMPLE LOCATIONS

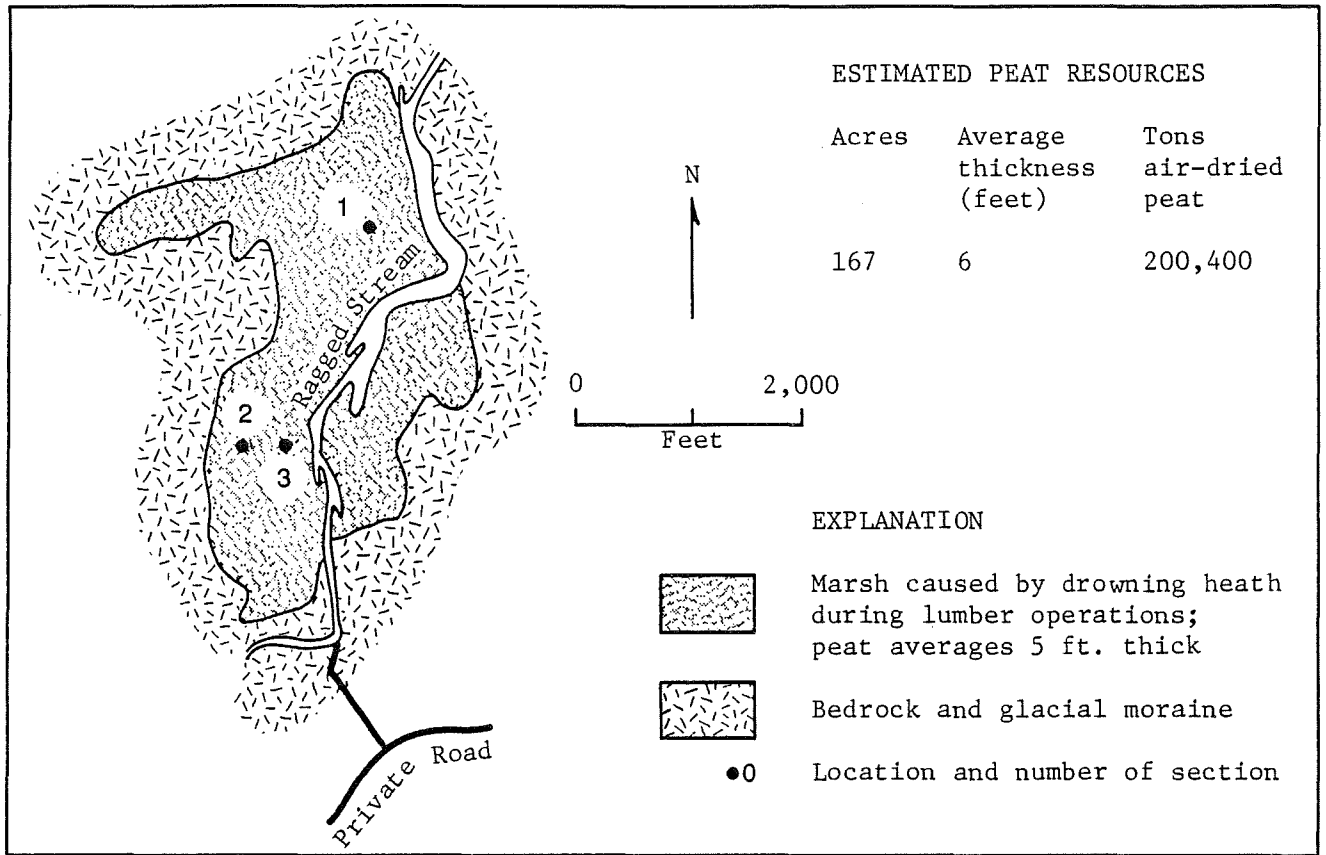


Figure 27. Sketch map of bog along Ragged Stream, T2 R12 WELS, Ragged Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 26 on Index Map).

EXPLANATION OF SECTIONS

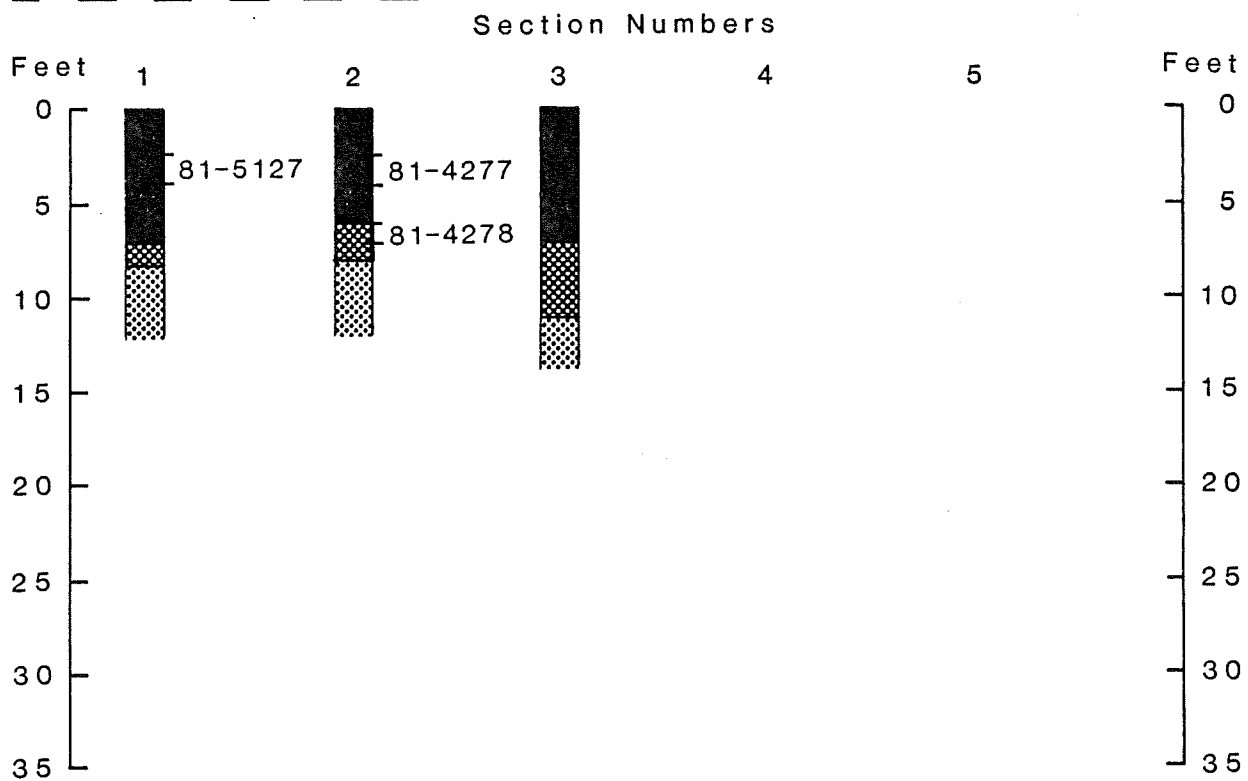
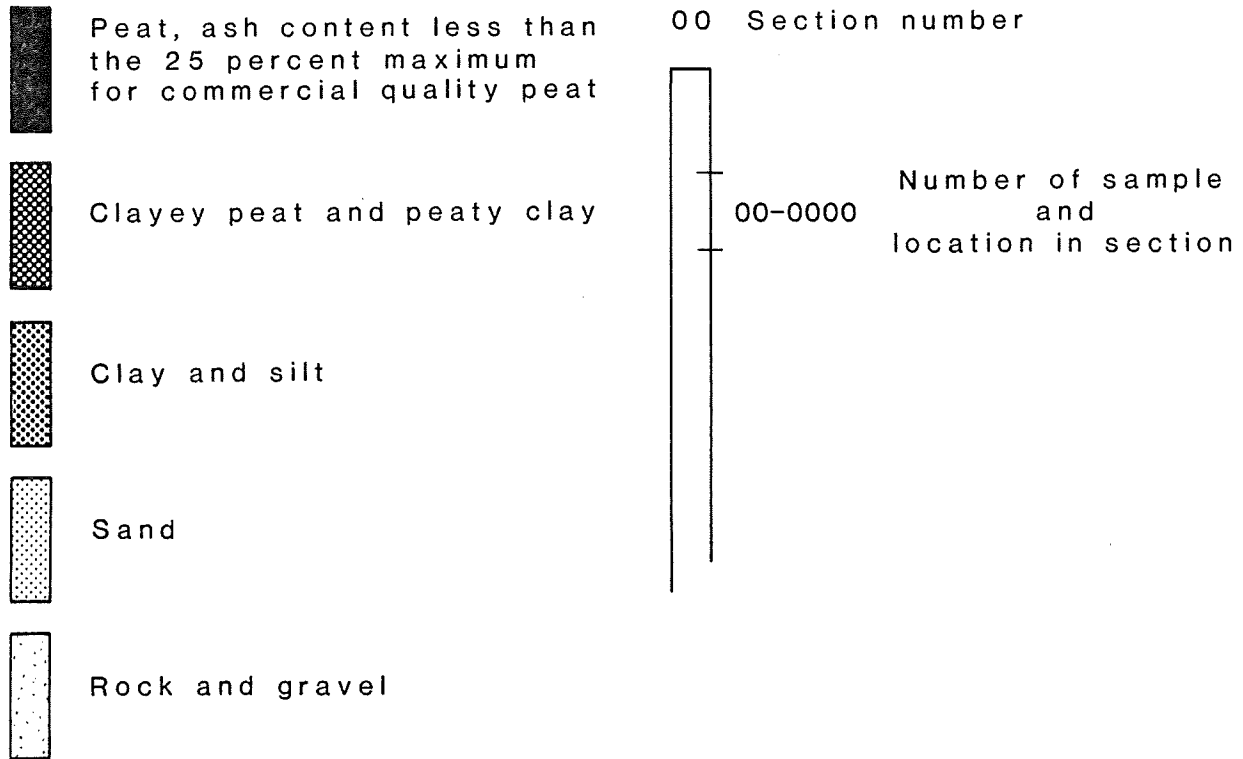


Figure 27a
SECTIONS AND SAMPLE LOCATIONS

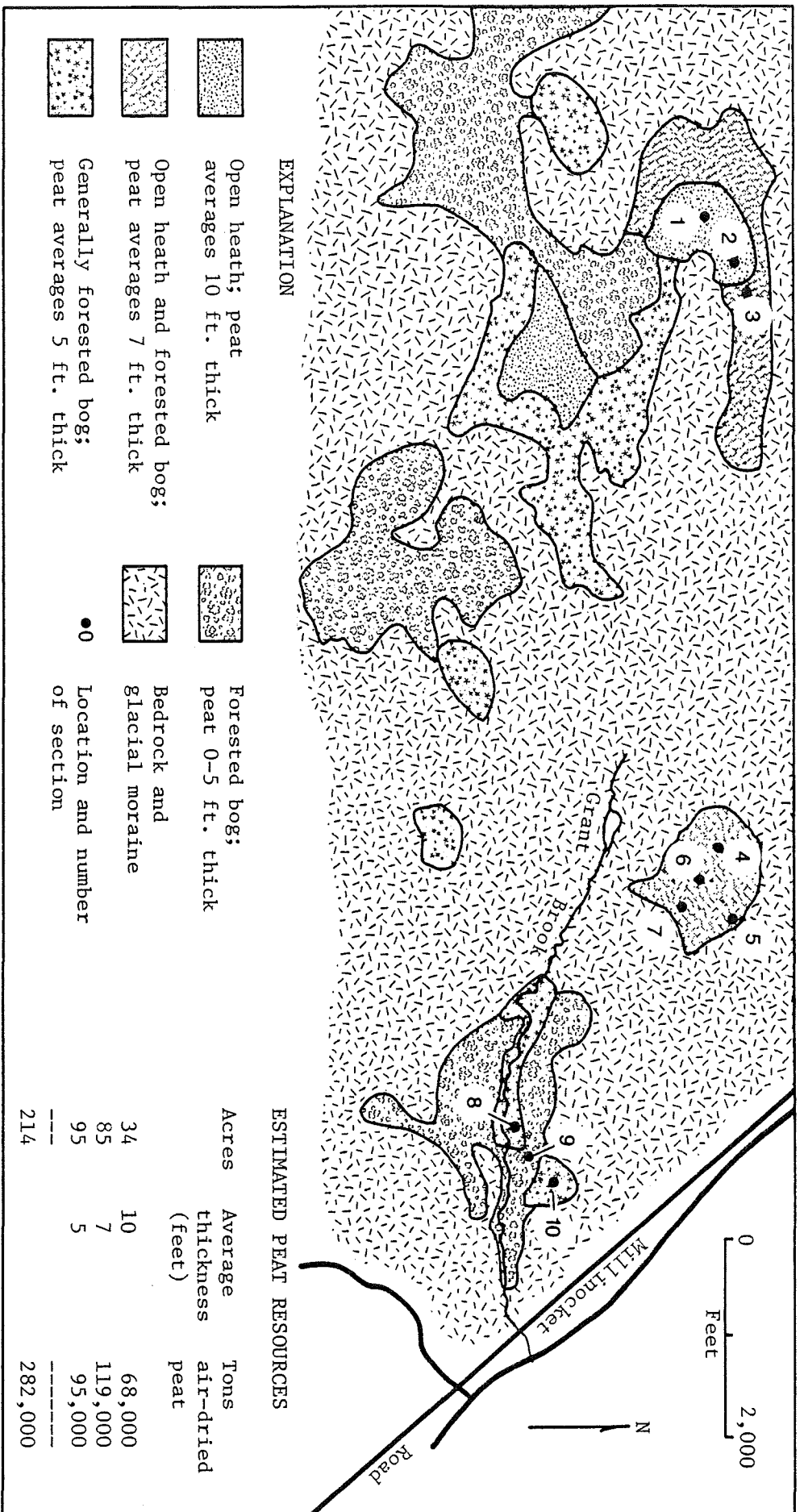


Figure 28. Sketch map of bogs west of Millinocket Road, T2 R9 WELS and T1 R9 WELS, Katahdin 15 minute Quadrangle, Piscataquis County, Maine. (Number 27 on Index Map).

EXPLANATION OF SECTIONS

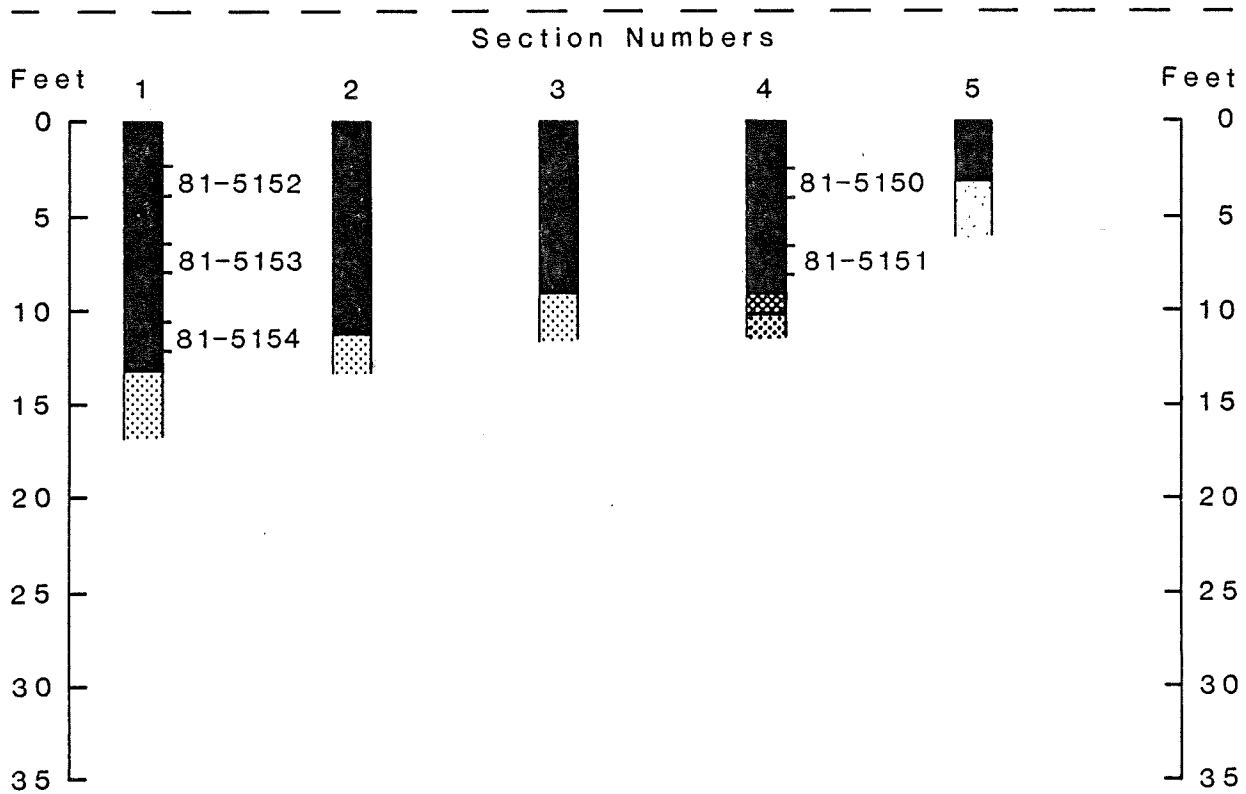
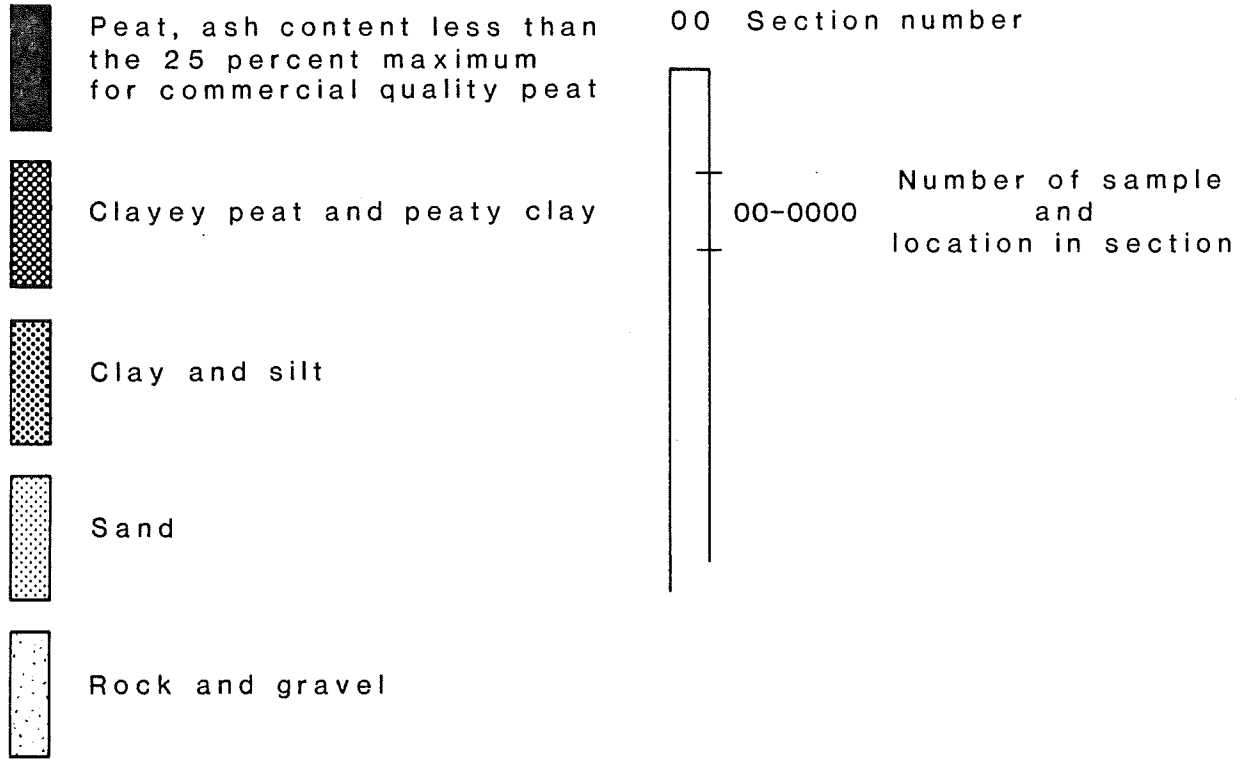


Figure 28a
SECTIONS AND SAMPLE LOCATIONS

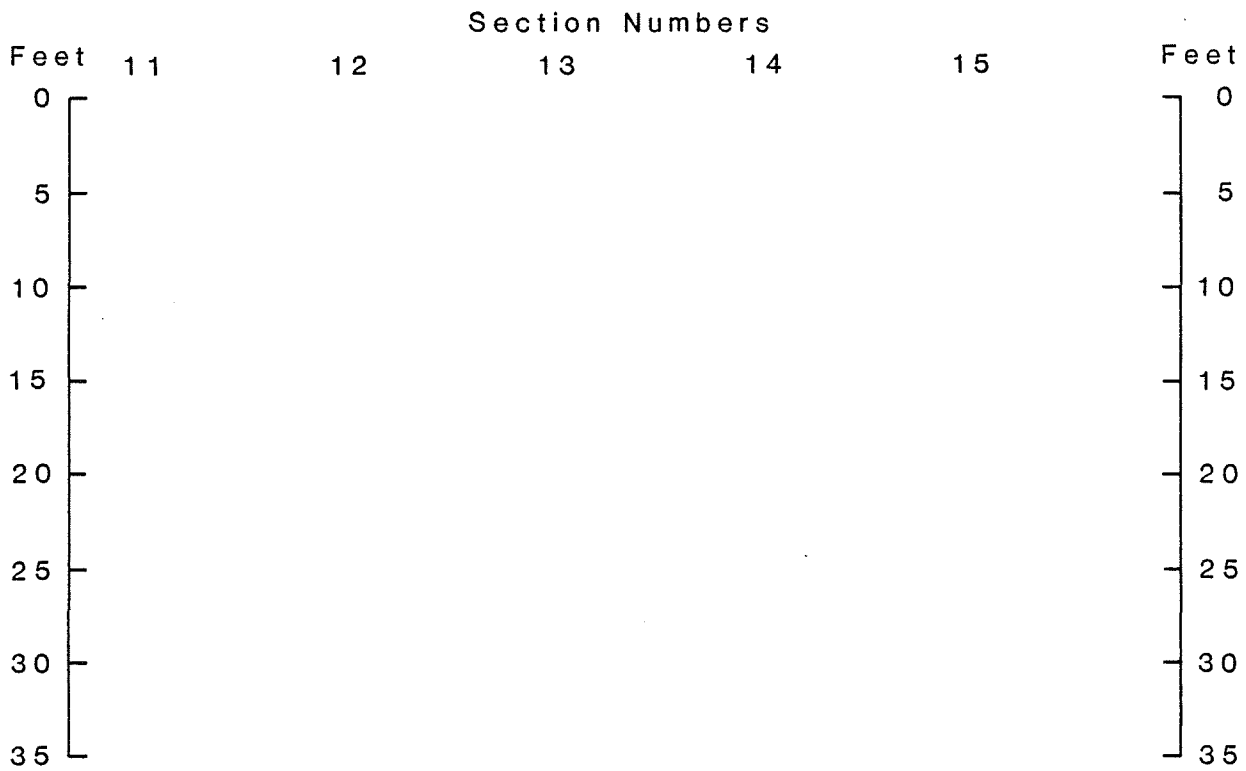
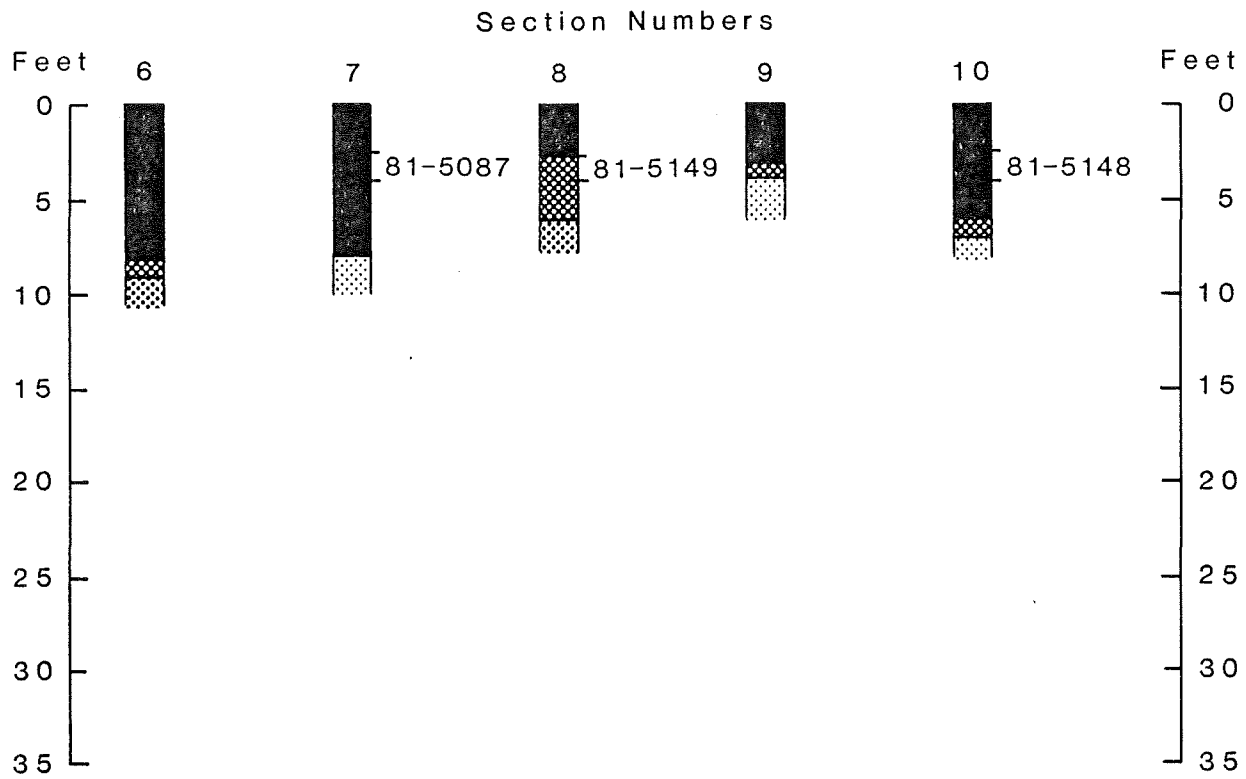


Figure 28a - Continued
SECTIONS AND SAMPLE LOCATIONS

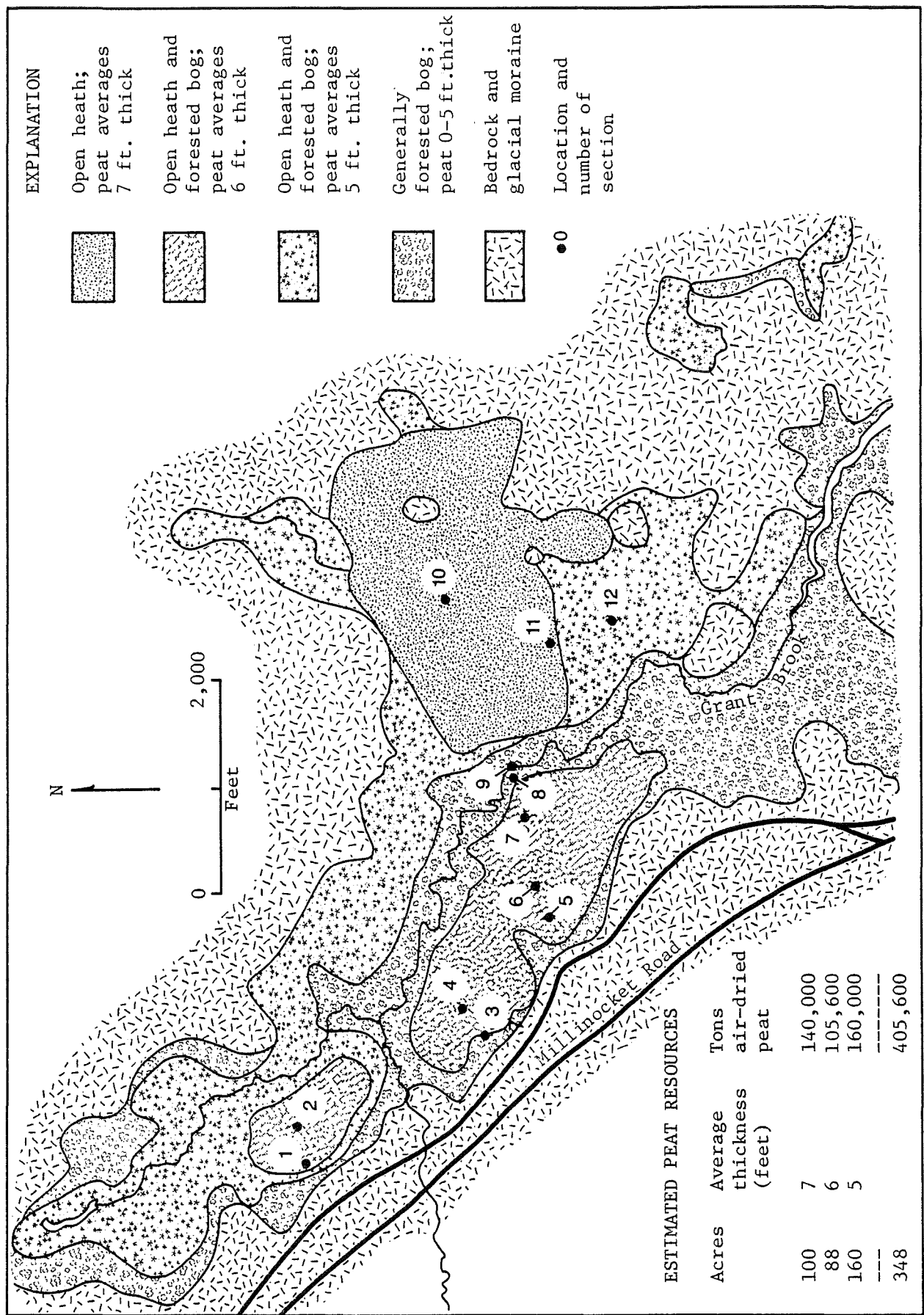


Figure 29. Sketch map of bogs east of Millinocket Road, T2 R9 WELS and T1 R9 WELS, Katahdin 15 minute Quadrangle, Piscataquis County, Maine. (Number 28 on Index Map).

EXPLANATION OF SECTIONS

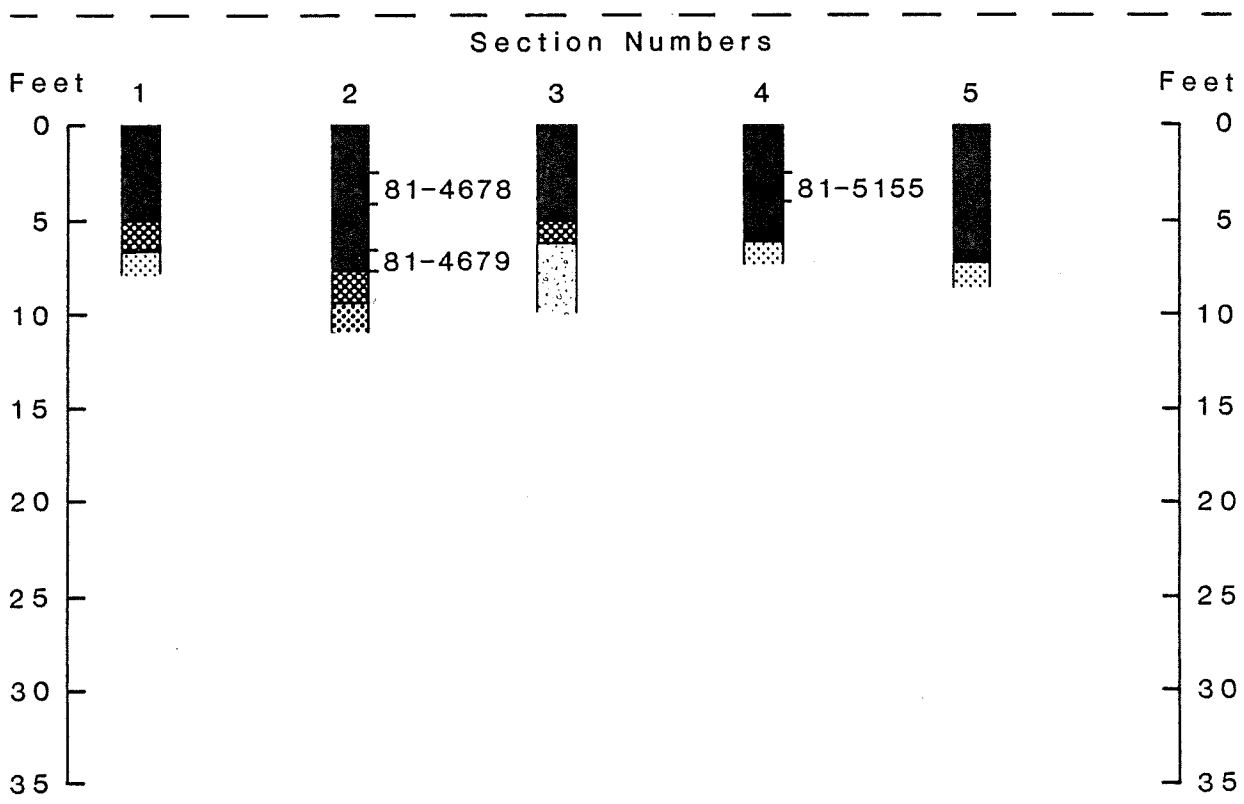
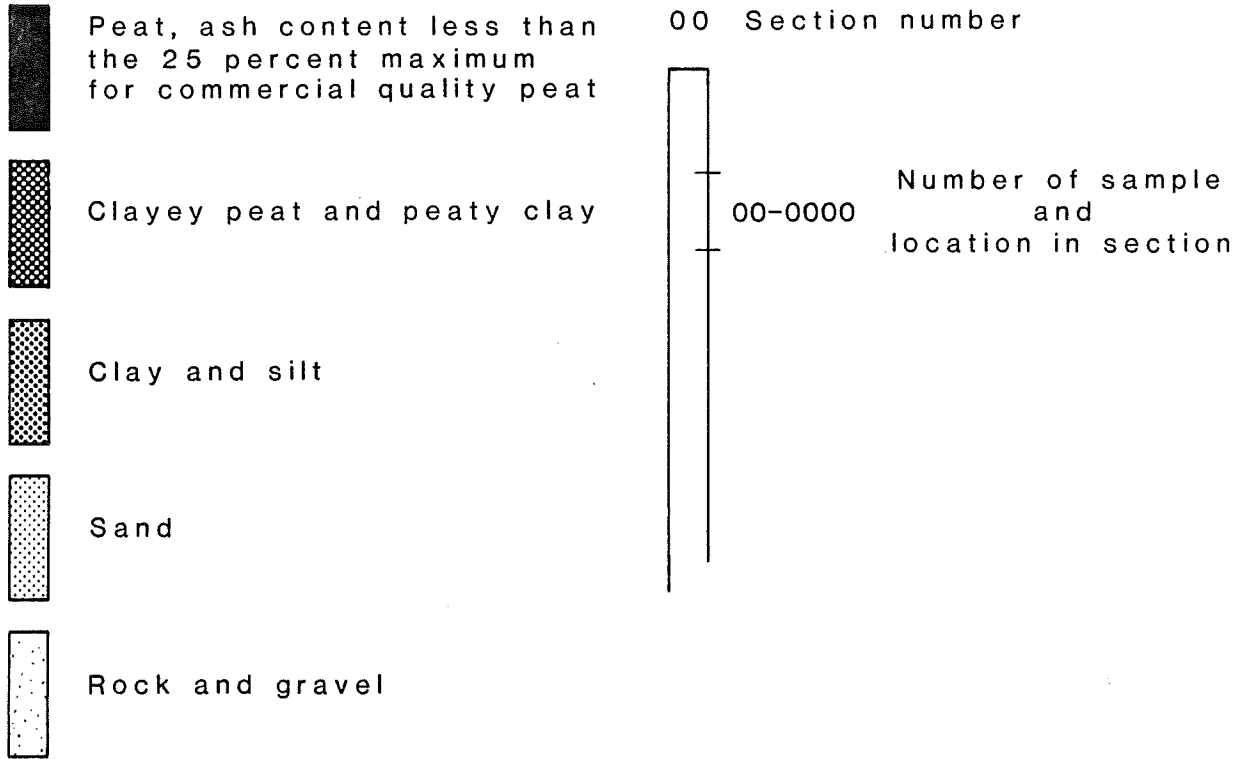


Figure 29a
SECTIONS AND SAMPLE LOCATIONS

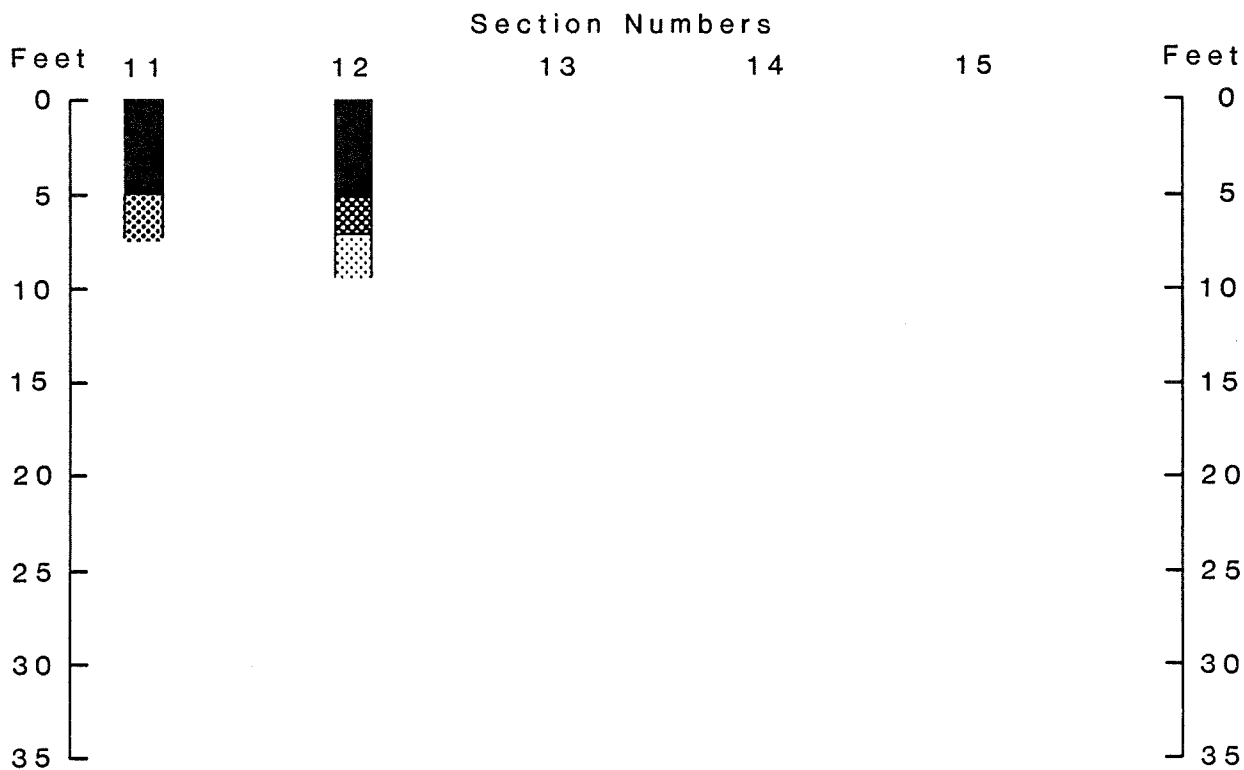
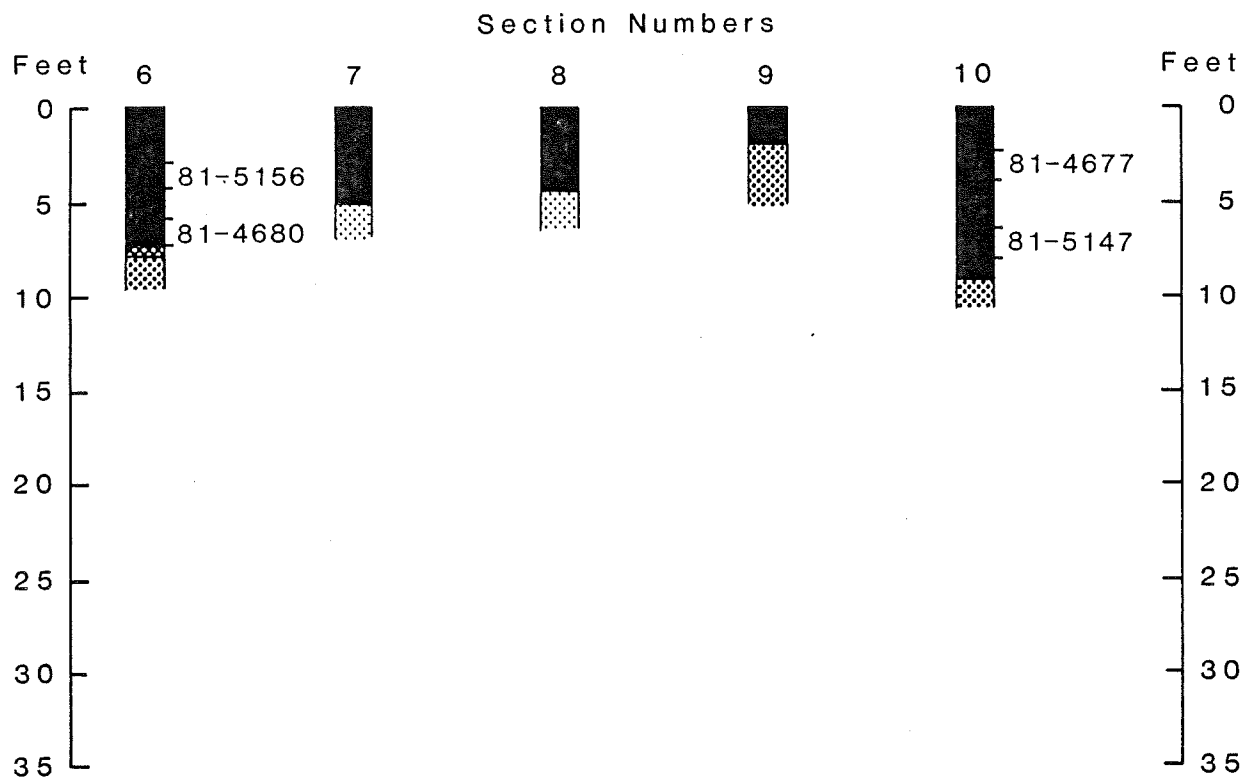


Figure 29a - Continued
SECTIONS AND SAMPLE LOCATIONS

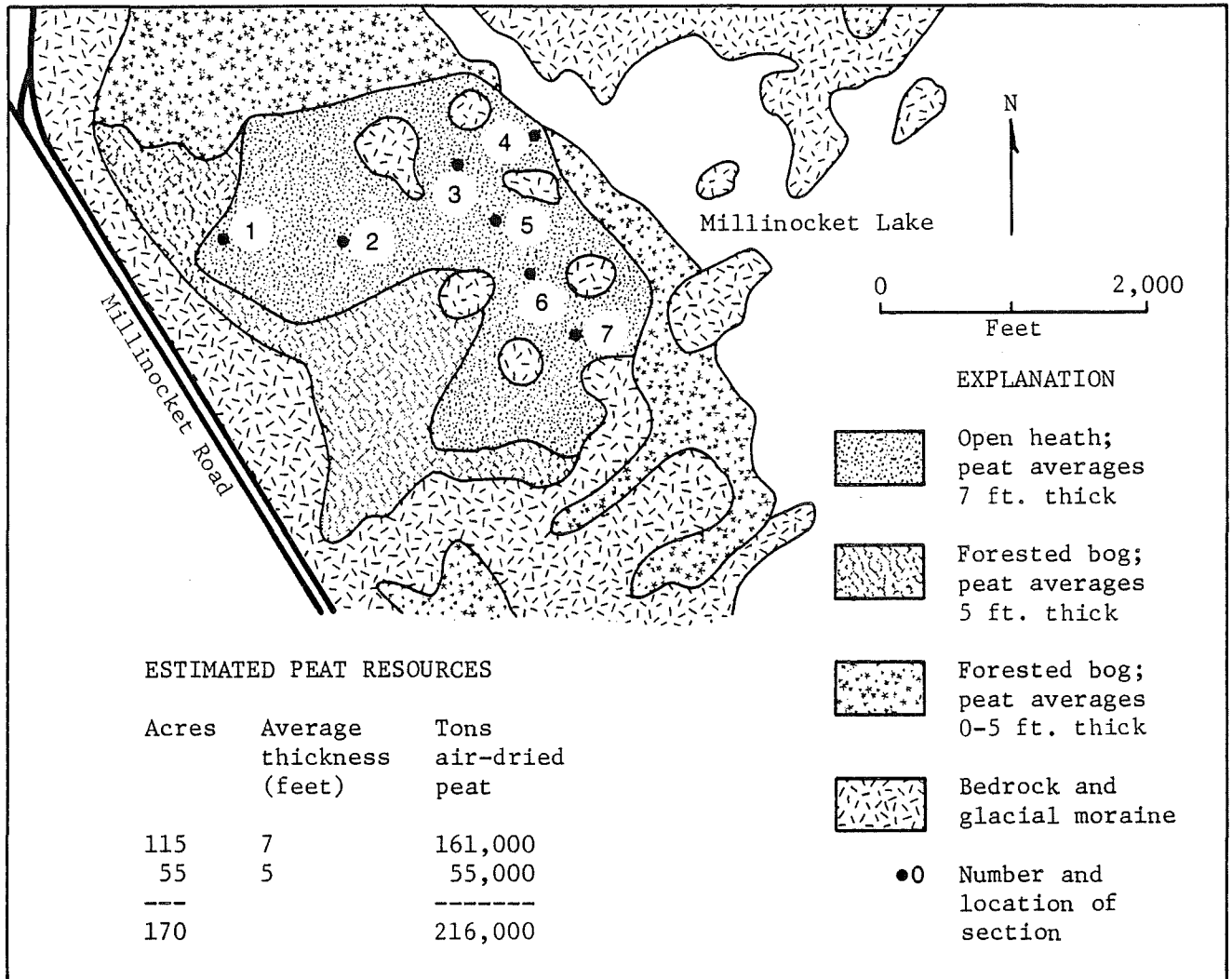


Figure 30. Sketch map of bog between Millinocket Lake and Millinocket Road in northeast corner of T1 R9 WELS, Norcross 15 minute Quadrangle, Piscataquis County, Maine. (Number 29 on Index Map).

EXPLANATION OF SECTIONS

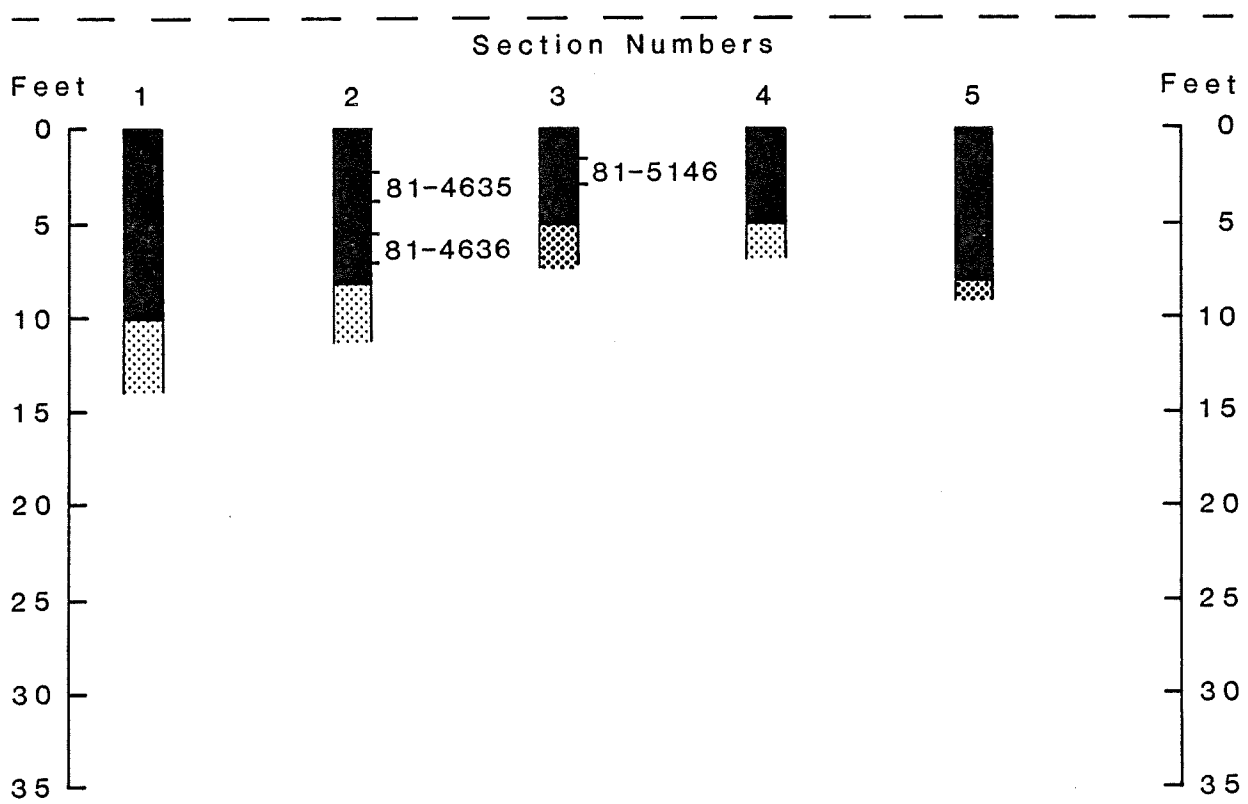
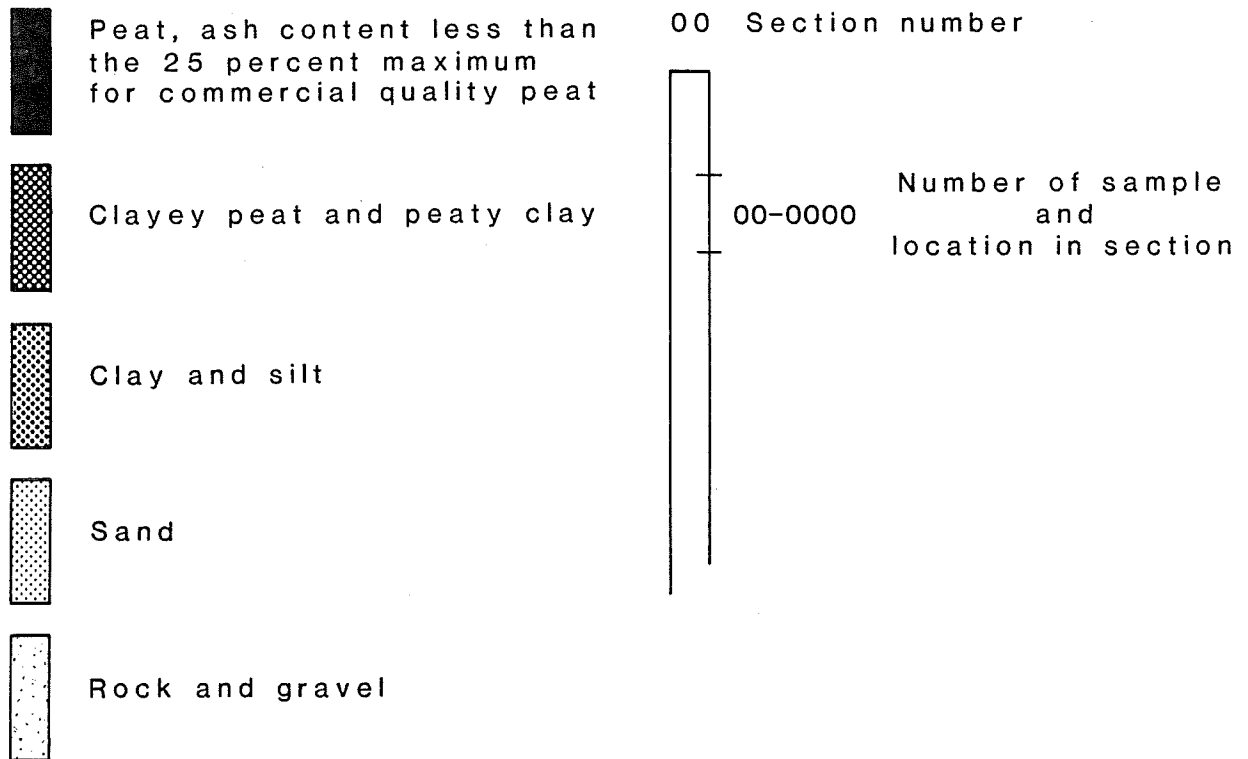


Figure 30a
SECTIONS AND SAMPLE LOCATIONS

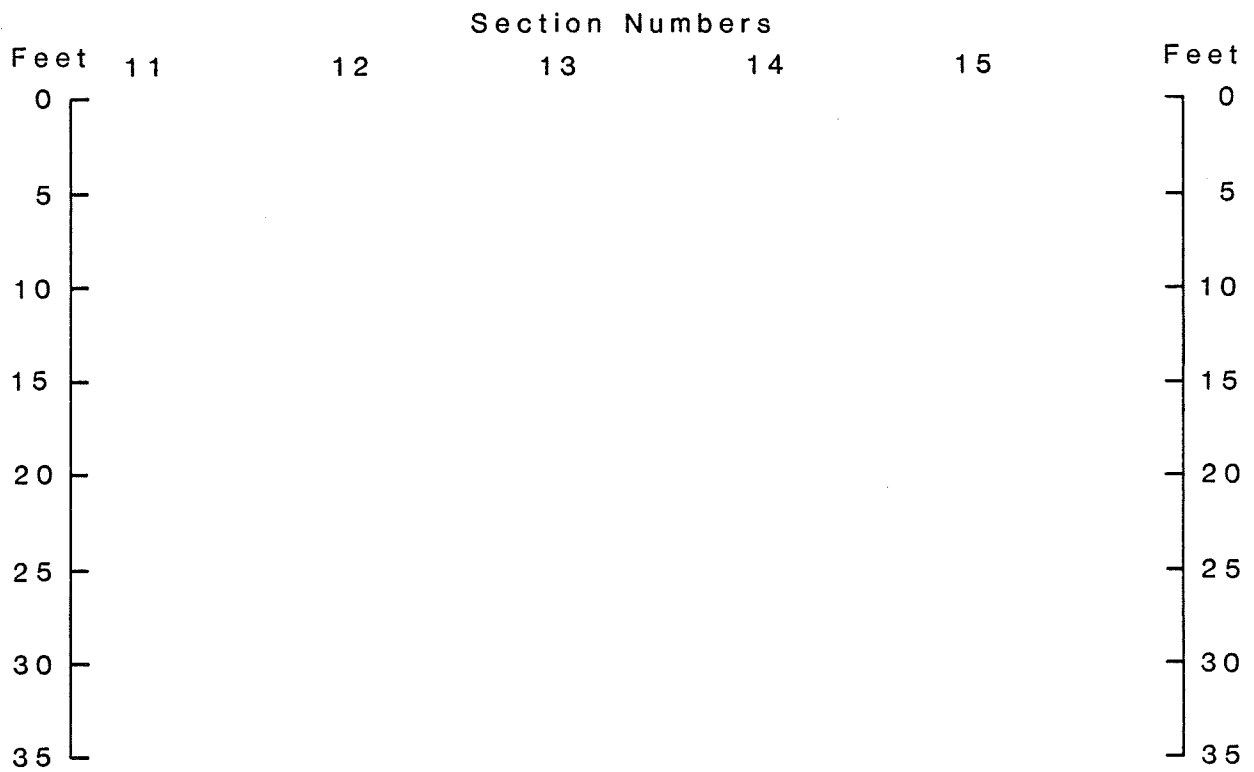
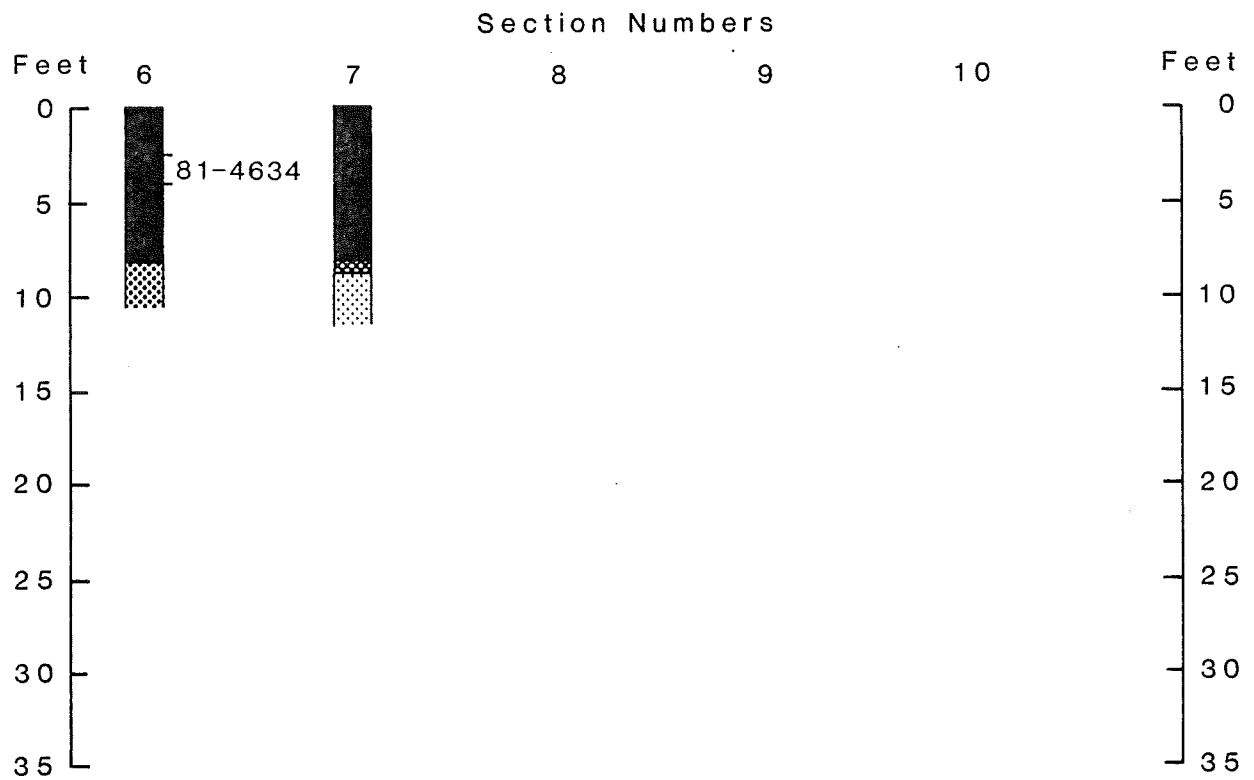


Figure 30a - Continued
SECTIONS AND SAMPLE LOCATIONS

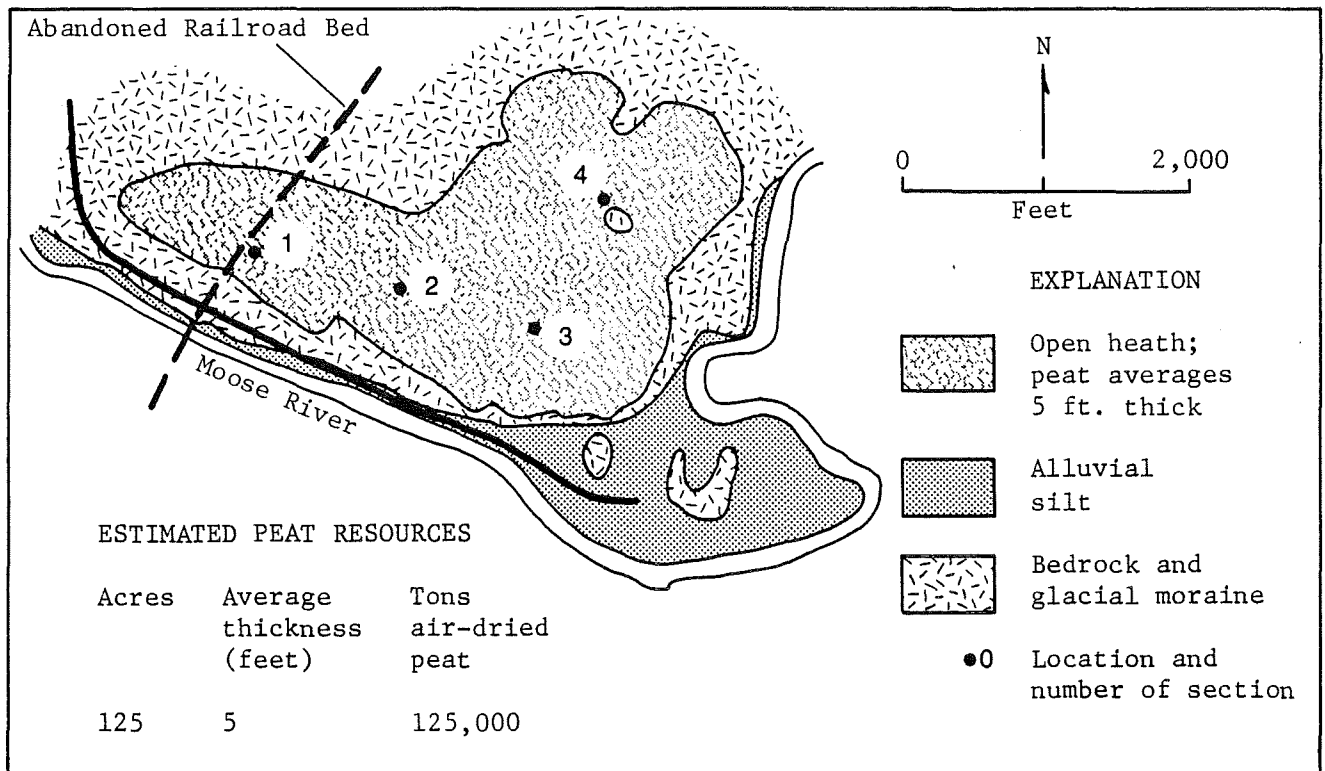


Figure 31. Sketch map of bog north of Moose River and south of Jackman Mill, Jackman Twp., Long Pond 15 minute Quadrangle, Somerset County, Maine. (Number 30 on Index Map).

EXPLANATION OF SECTIONS

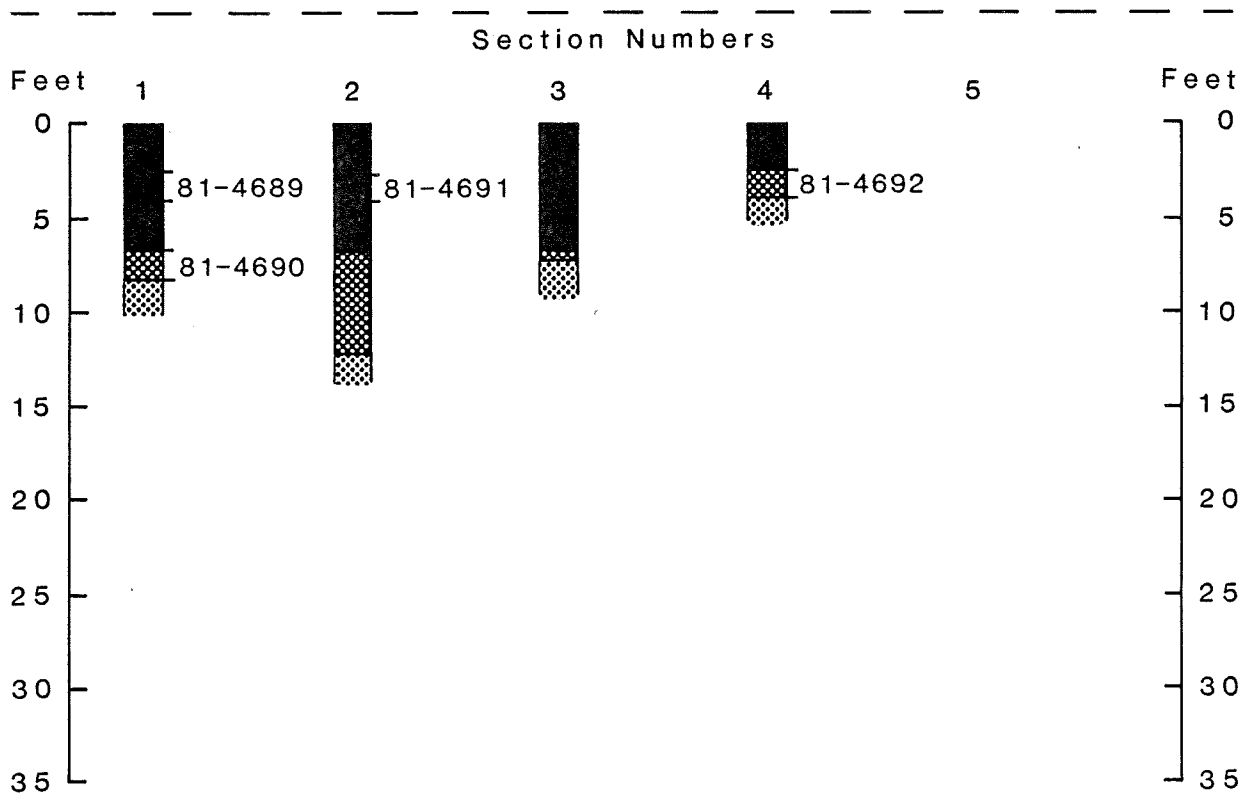
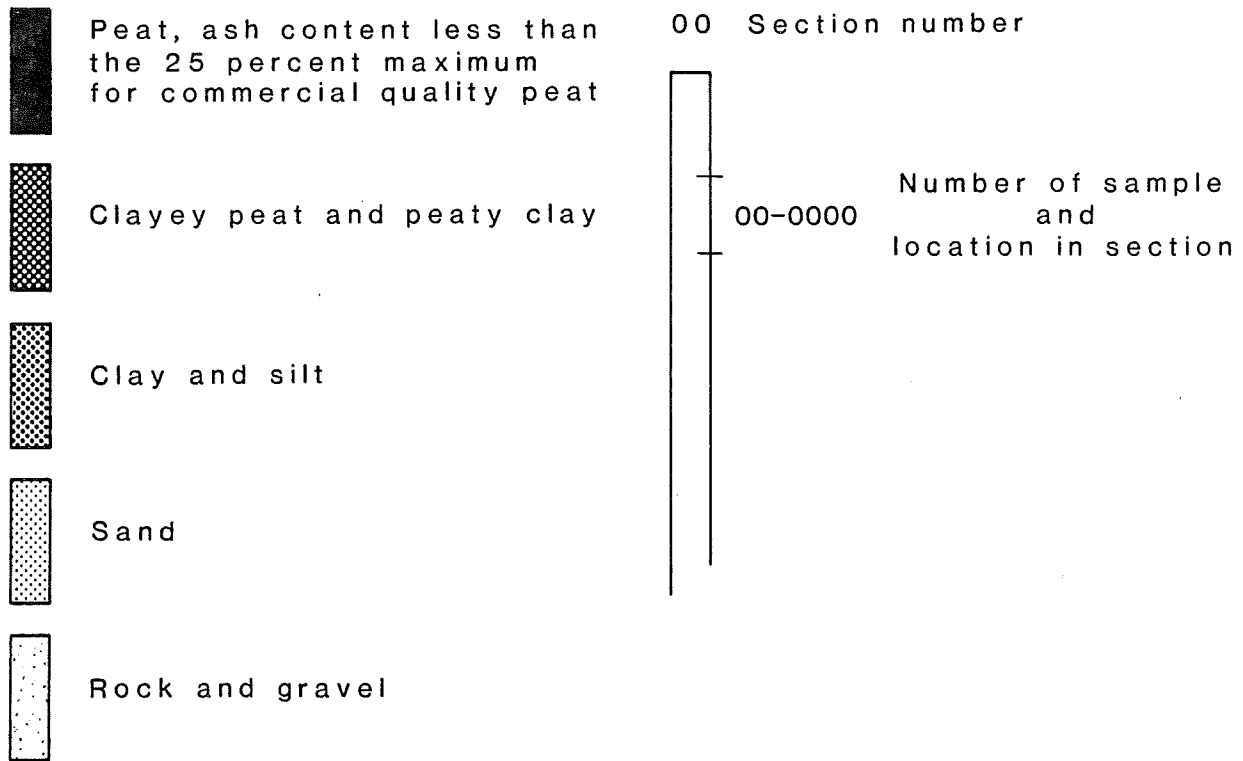


Figure 31a
SECTIONS AND SAMPLE LOCATIONS

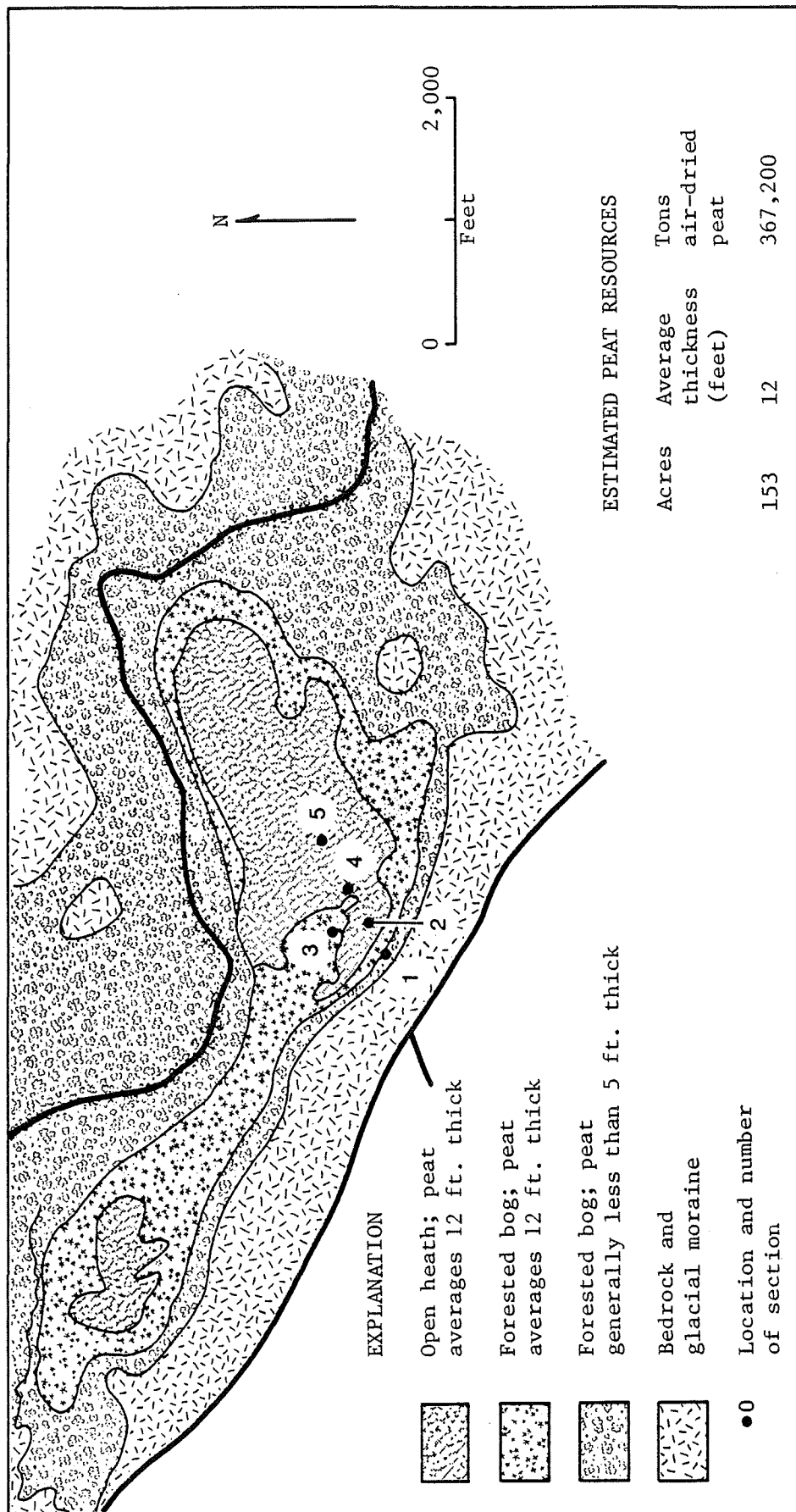


Figure 32. Sketch map of Twelve Mile Bog, T3 R1 NBKP (Long Pond Twp.), Long Pond 15 minute Quadrangle, Somerset County, Maine. (Number 31 on Index Map).

EXPLANATION OF SECTIONS

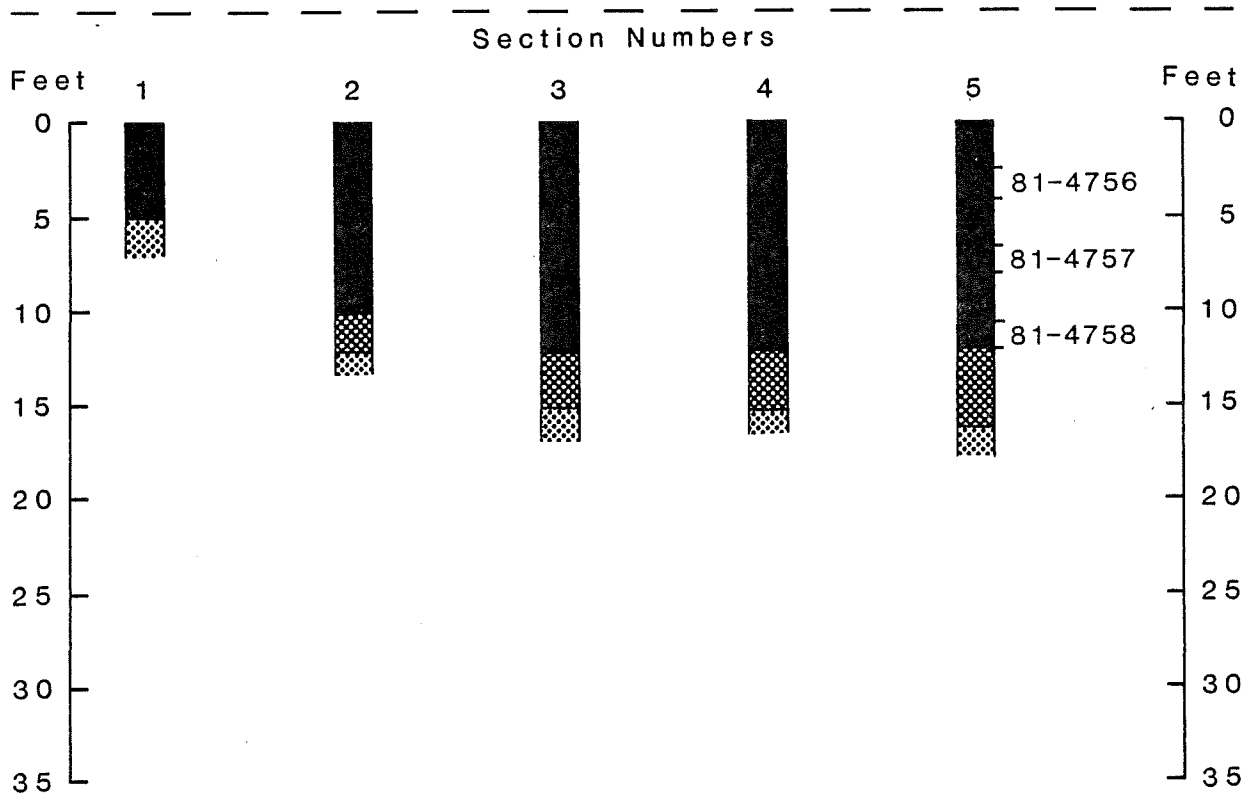
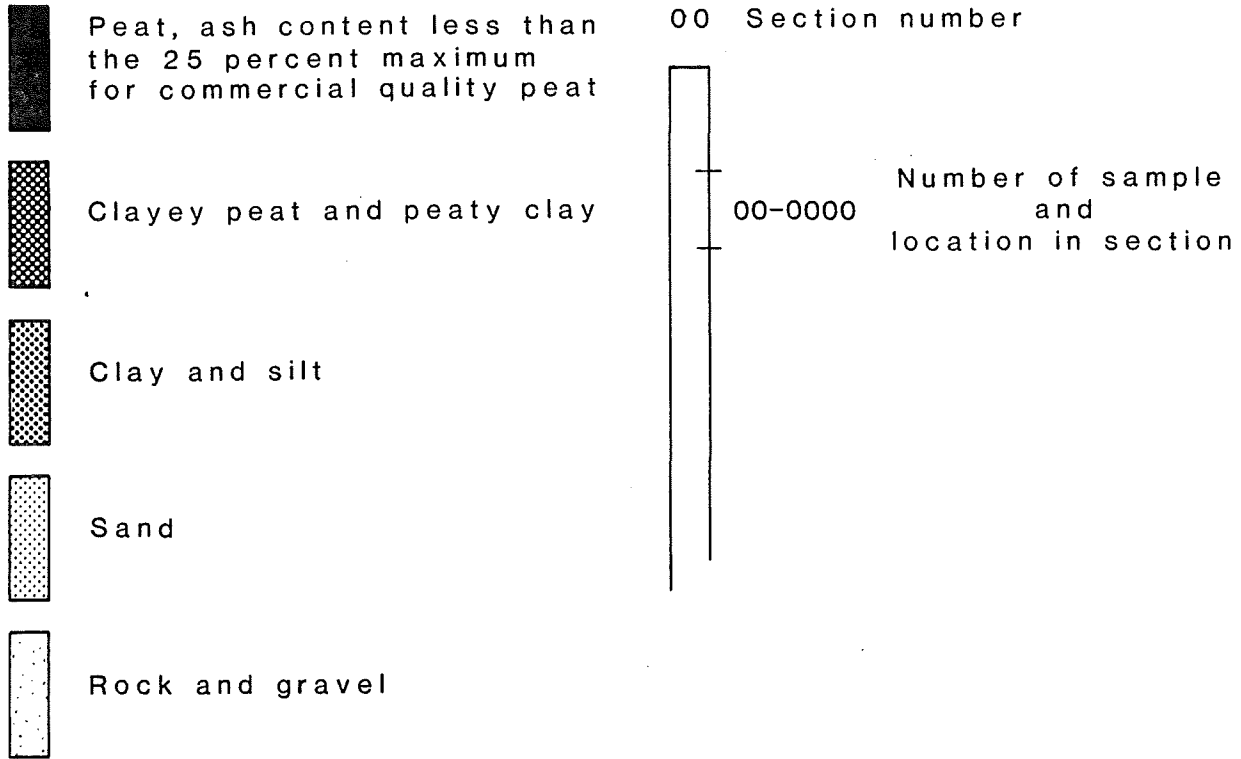


Figure 32a
SECTIONS AND SAMPLE LOCATIONS

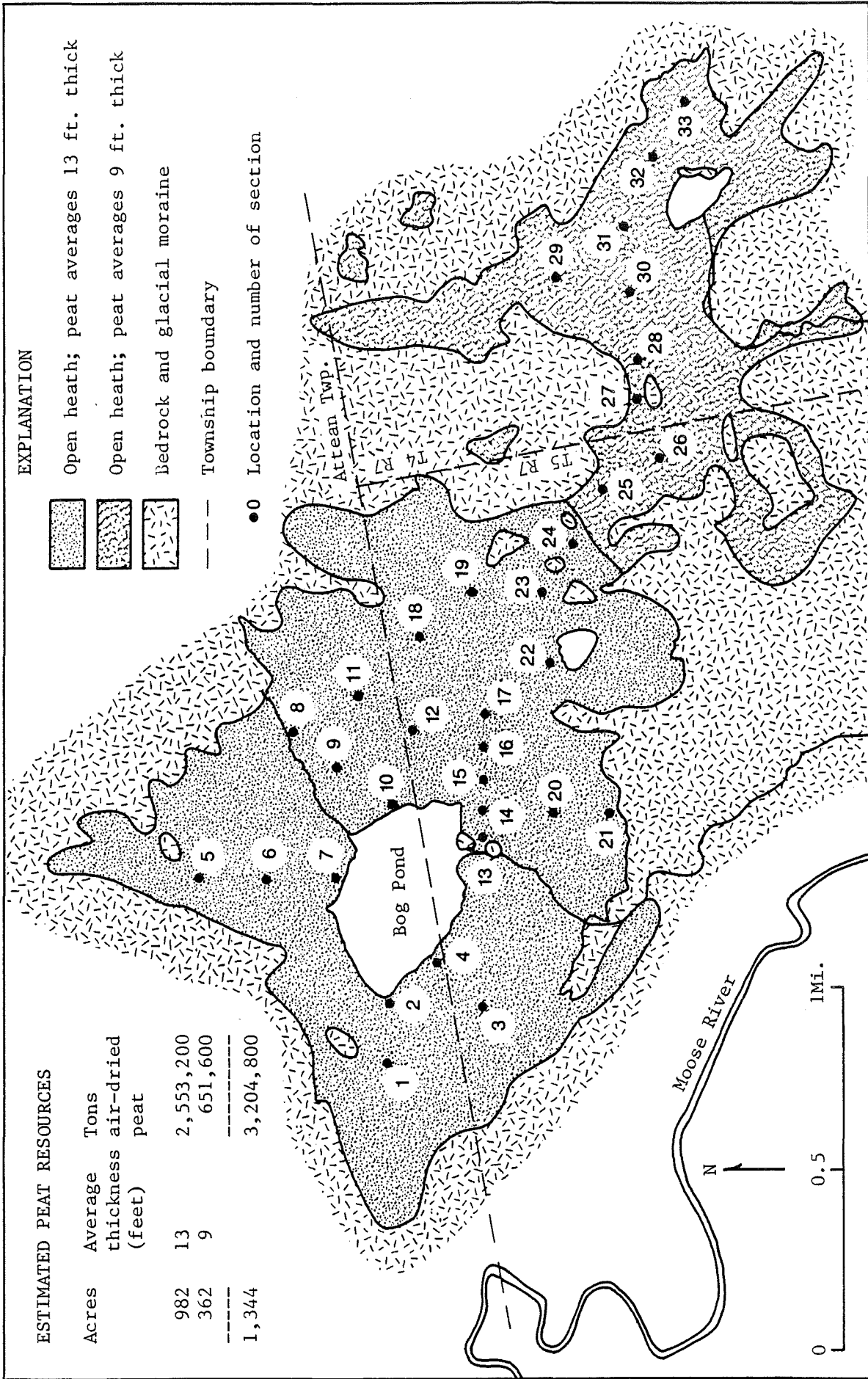


Figure 33. Sketch map of No. 5 Bog south of Attean Pond, T5 R1 NBKP (Attean Twp.), T4 R7 BKP WKR (Bradstreet Twp.), and T5 R7 BKP WKR, Attean 15 minute Quadrangle, Somerset County, Maine. (Number 32 on Index Map).

EXPLANATION OF SECTIONS

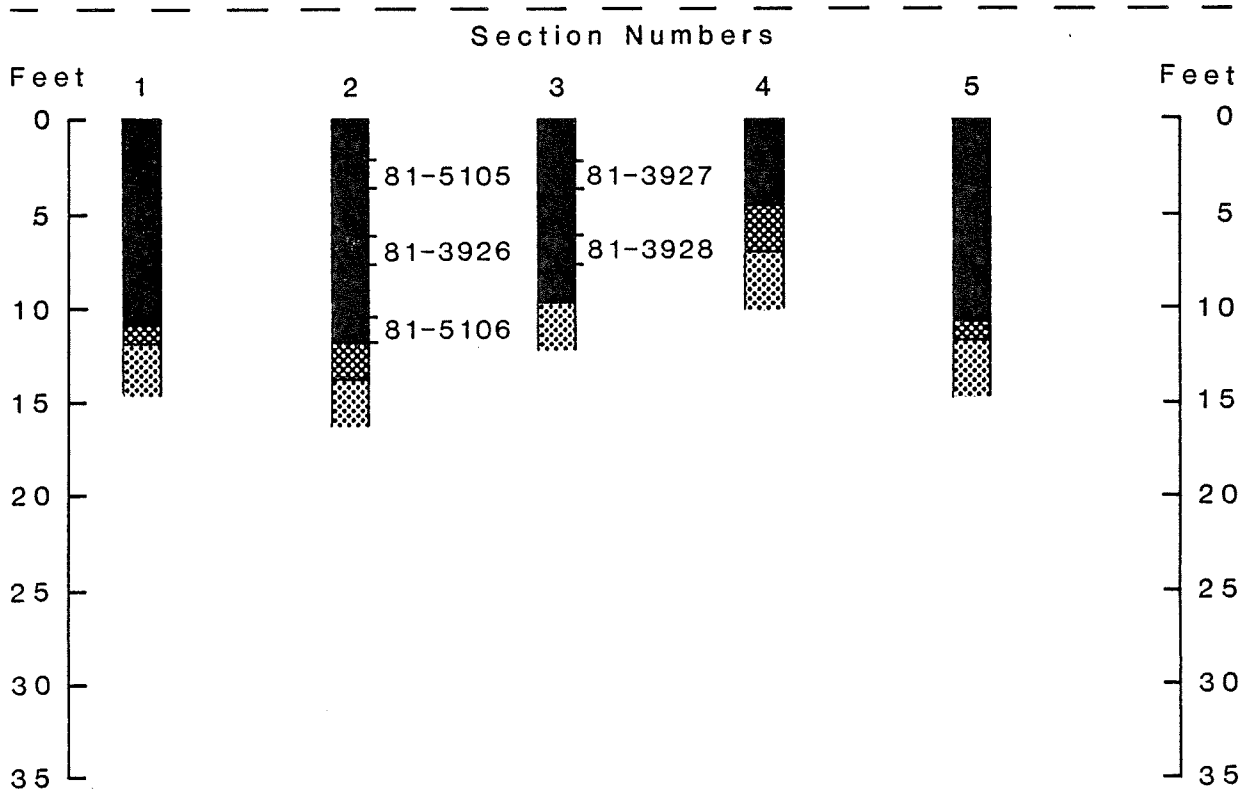
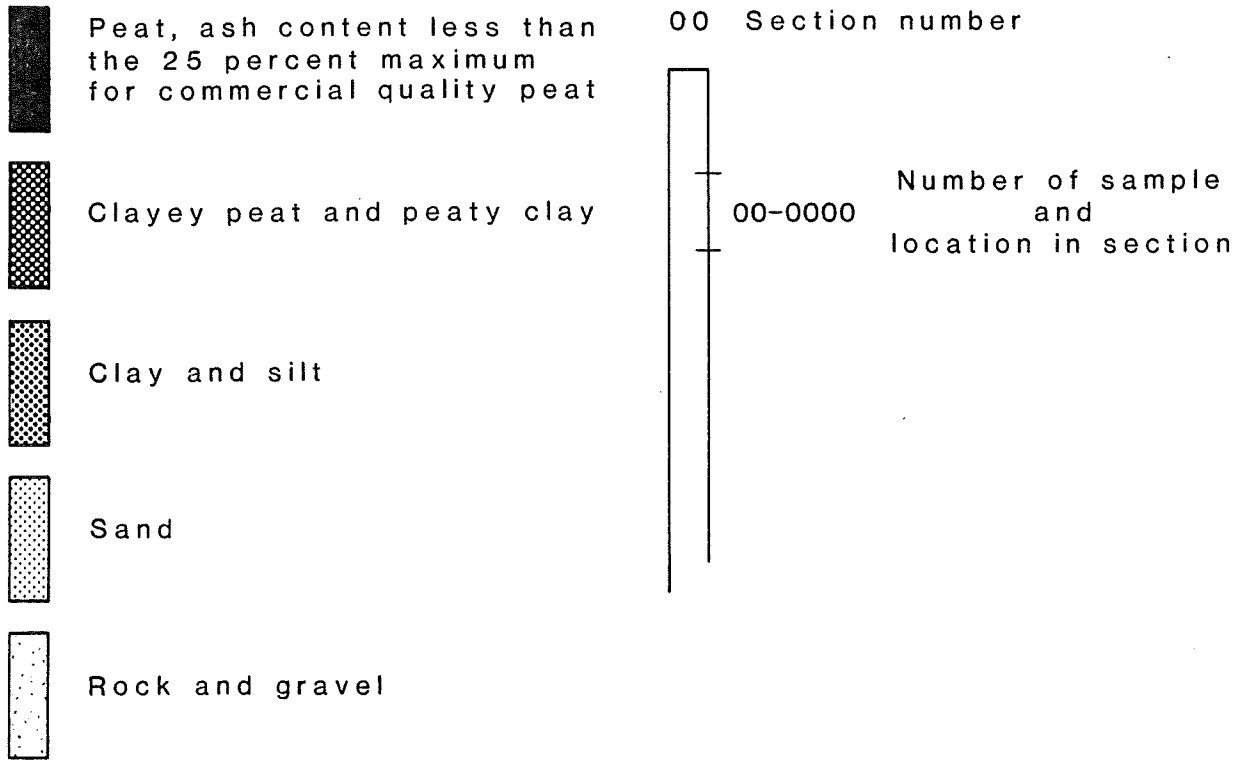


Figure 33a
SECTIONS AND SAMPLE LOCATIONS

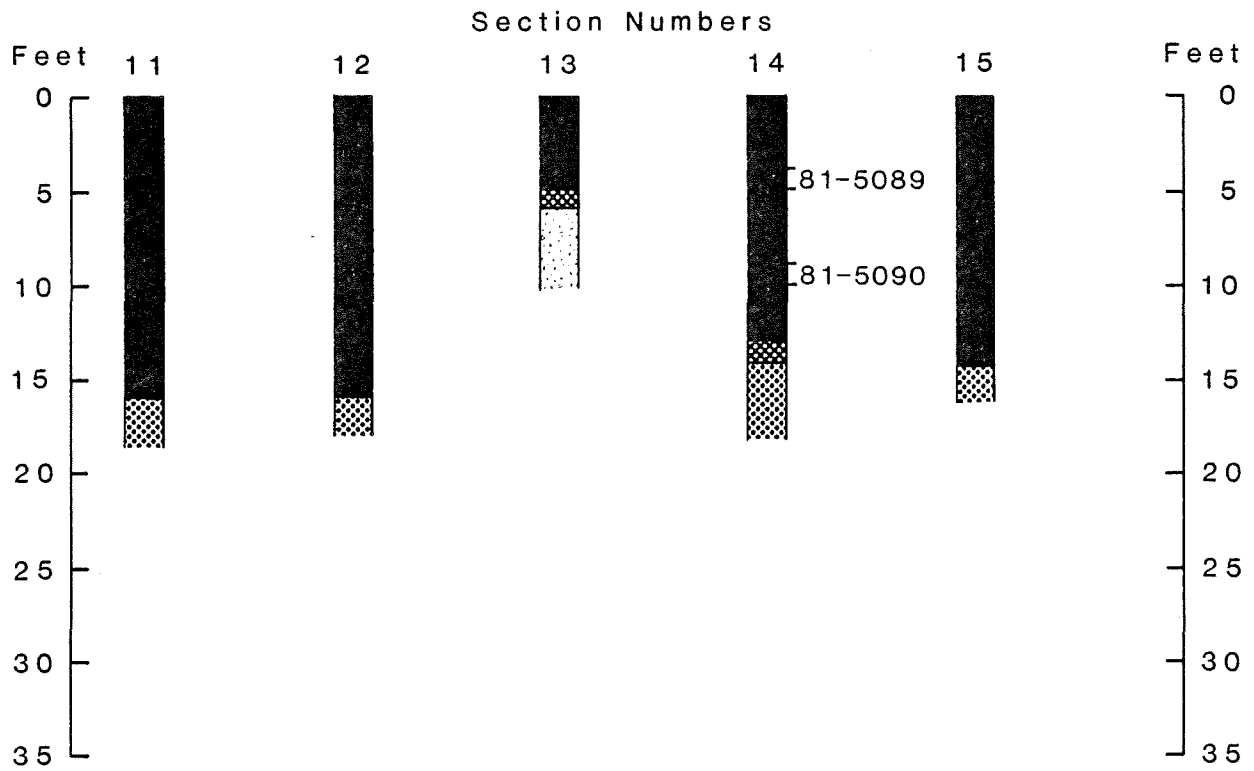
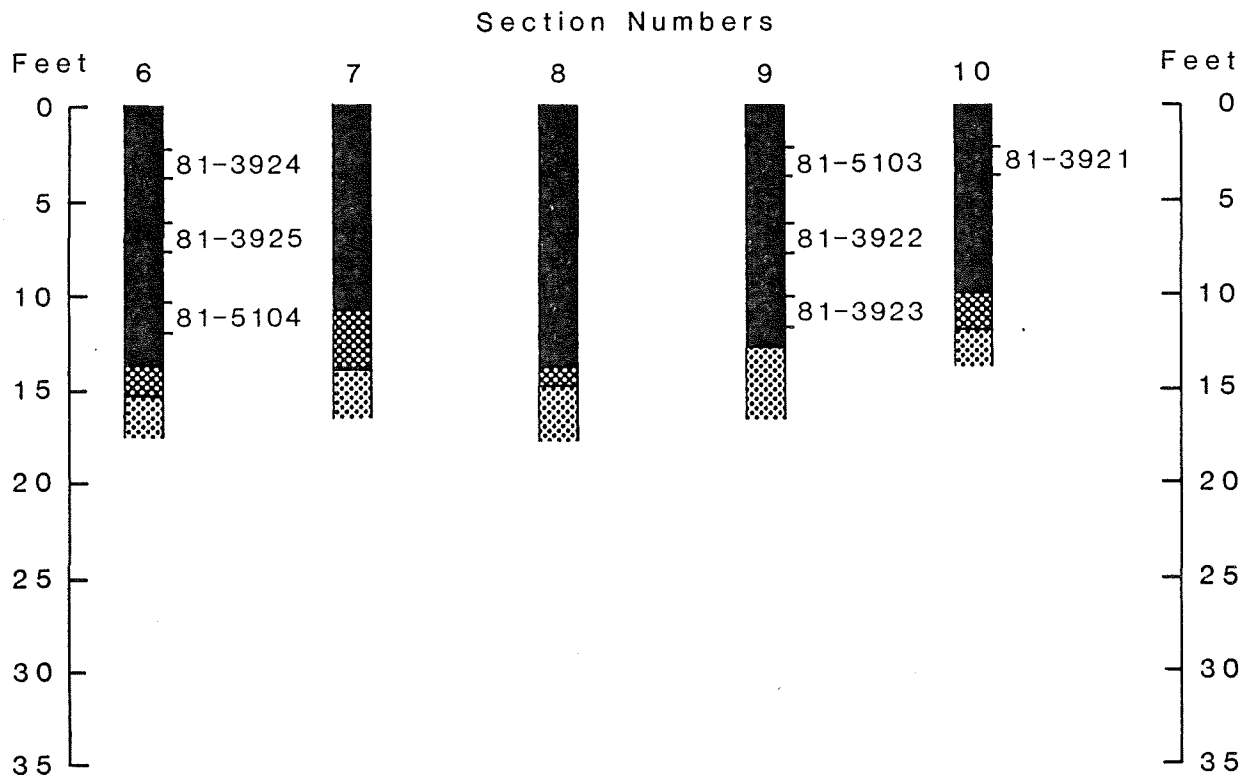


Figure 33a - Continued
SECTIONS AND SAMPLE LOCATIONS

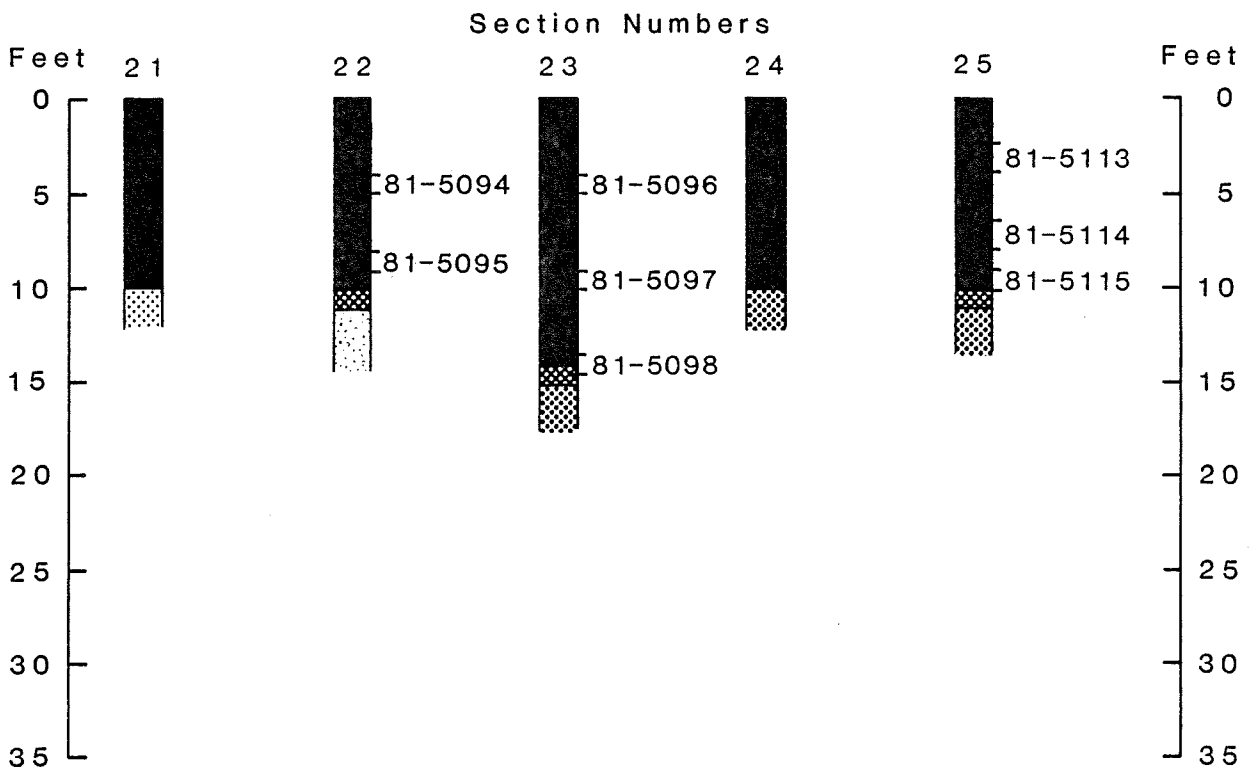
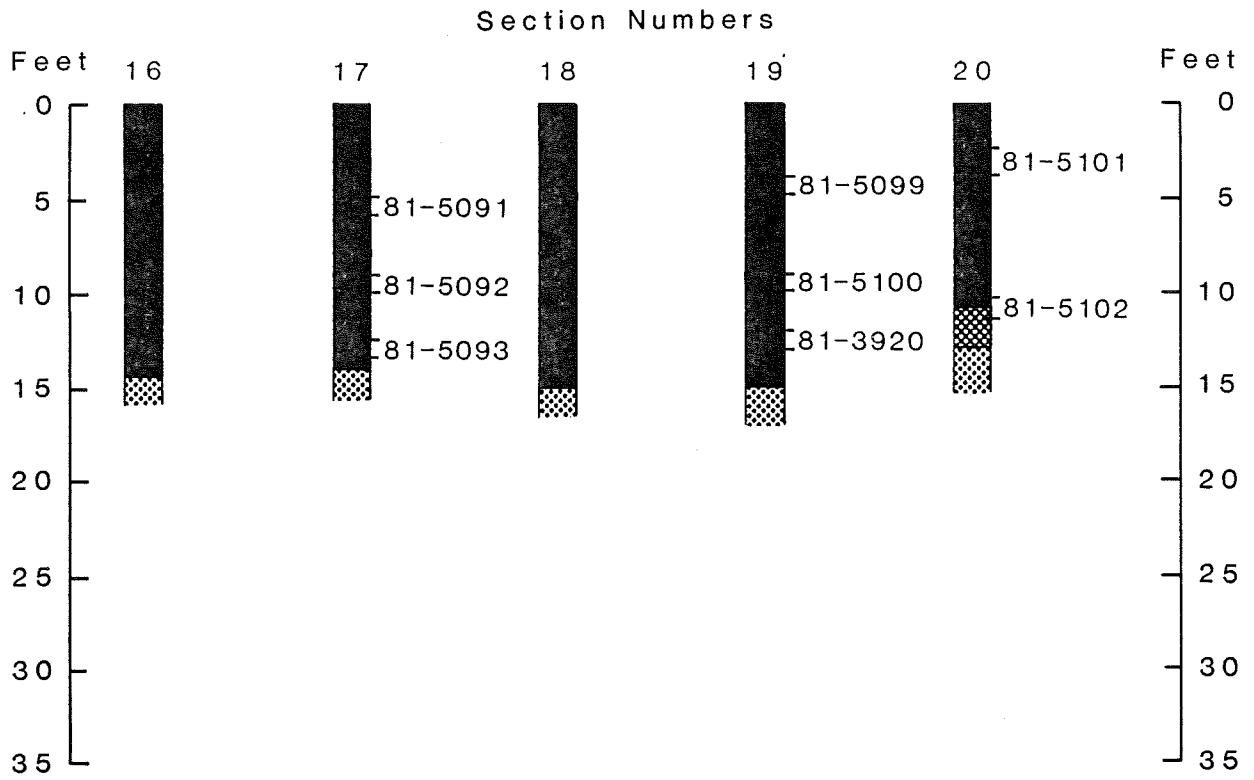


Figure 33a - Continued
SECTIONS AND SAMPLE LOCATIONS

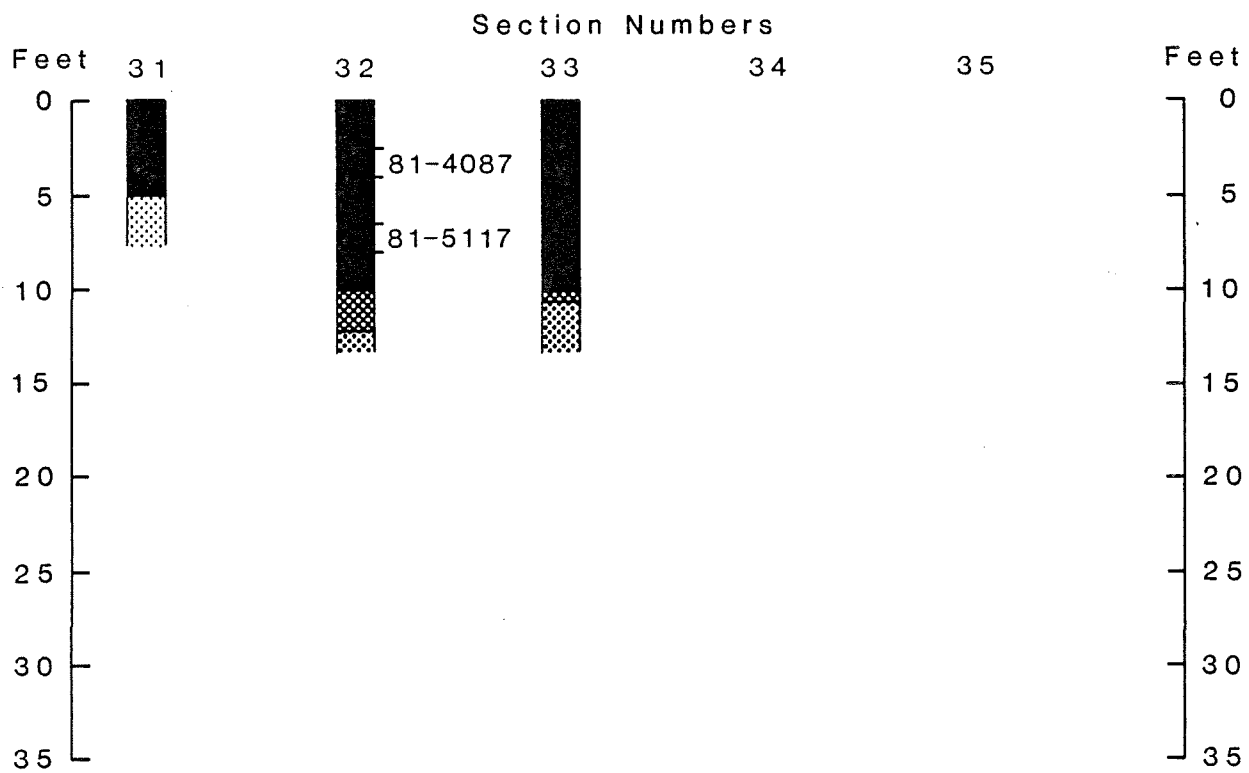
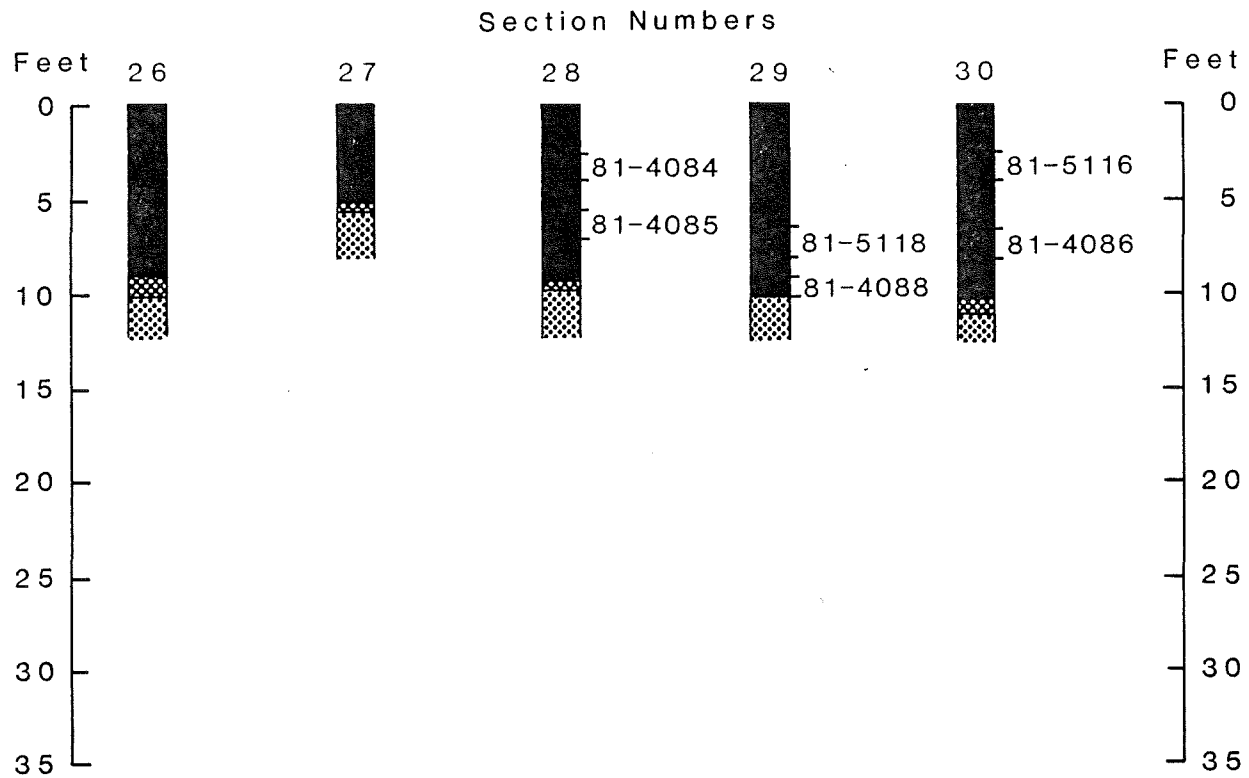


Figure 33a - Continued
SECTIONS AND SAMPLE LOCATIONS

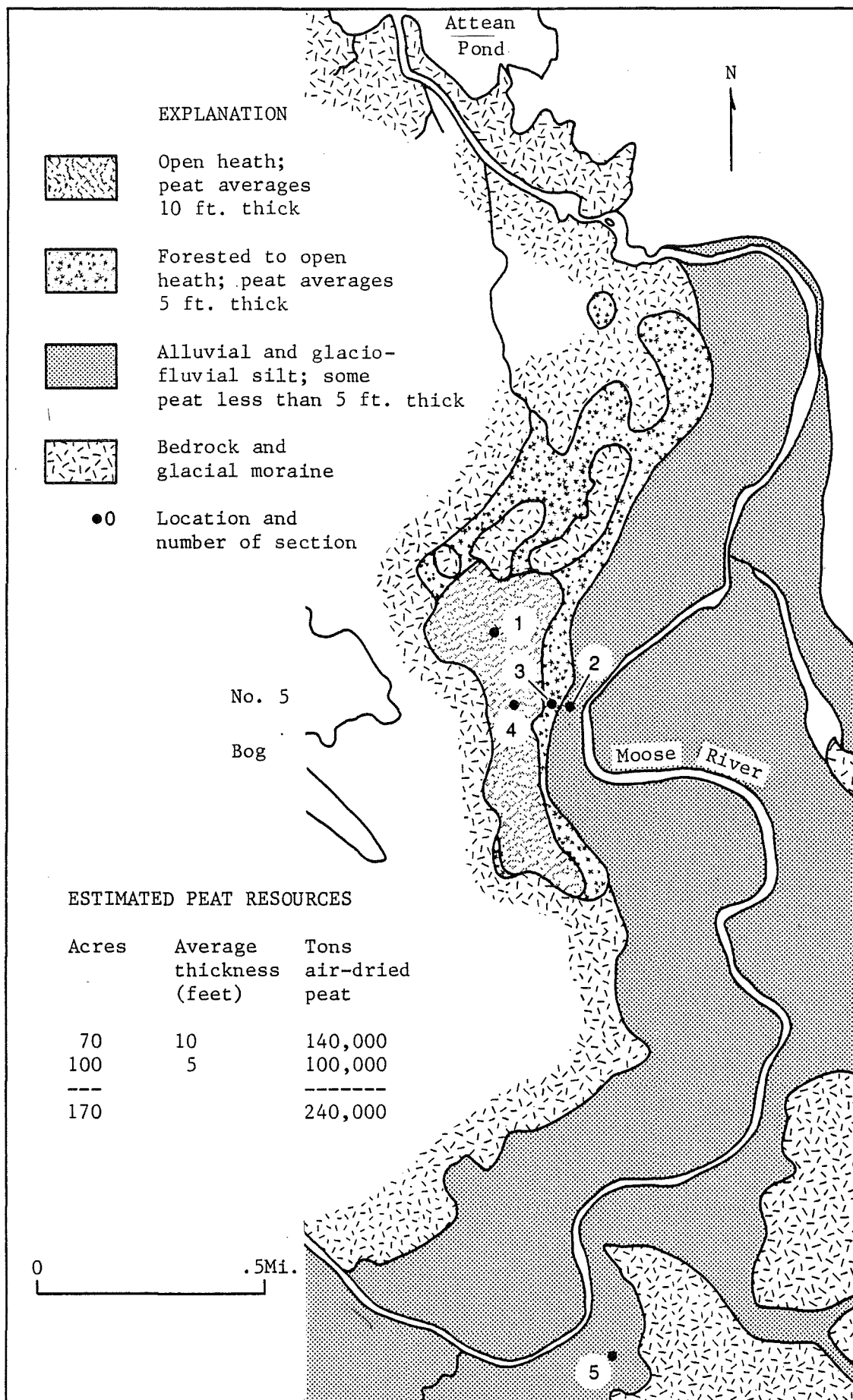


Figure 34. Sketch map of the Moose River area east of No. 5 Bog, T4 R7 BKP WKR (Bradstreet Twp.), Attean and Long Pond 15 minute Quadrangles, Somerset County, Maine. (Number 33 on Index Map).

EXPLANATION OF SECTIONS

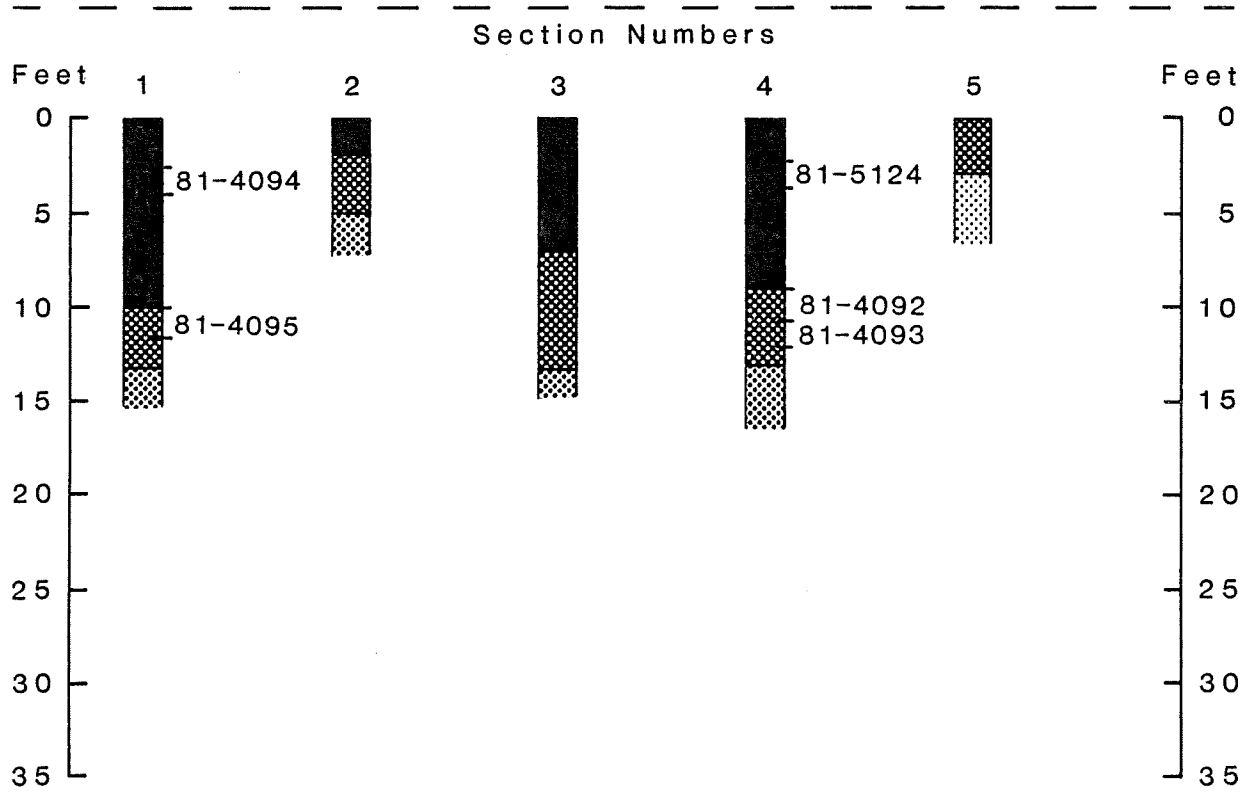
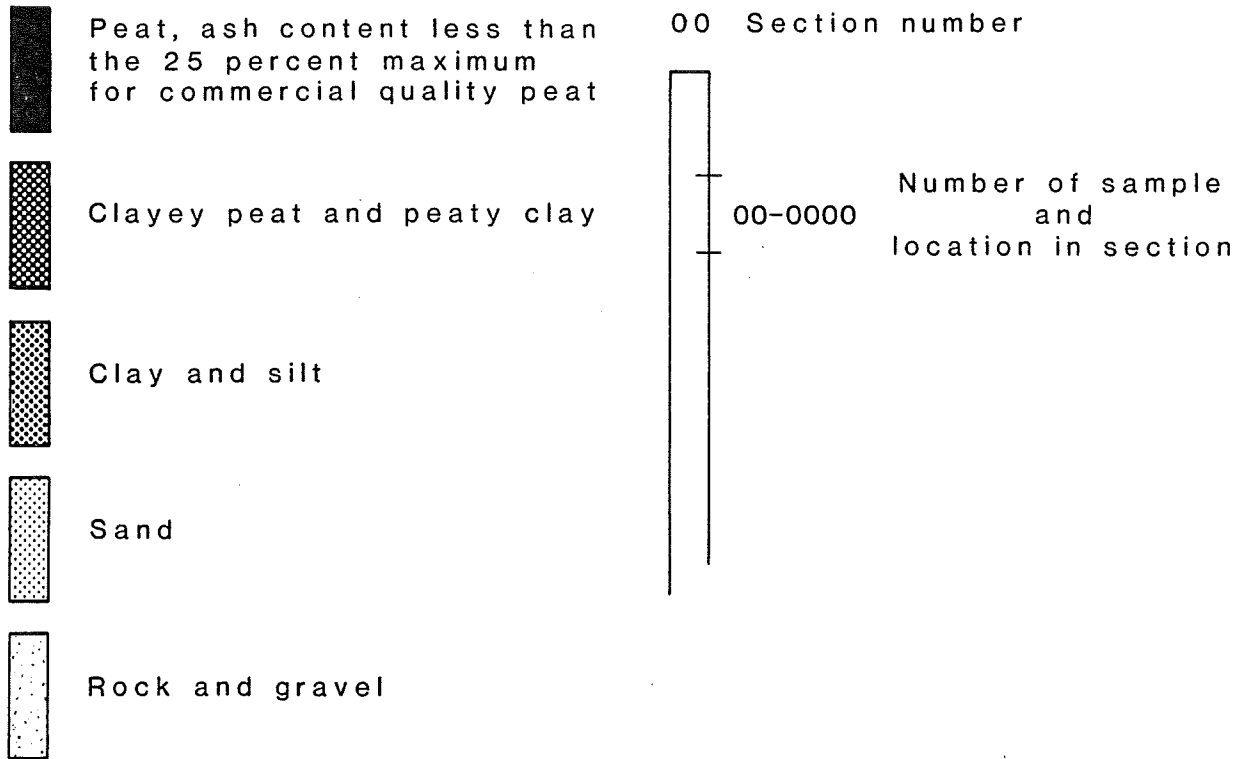
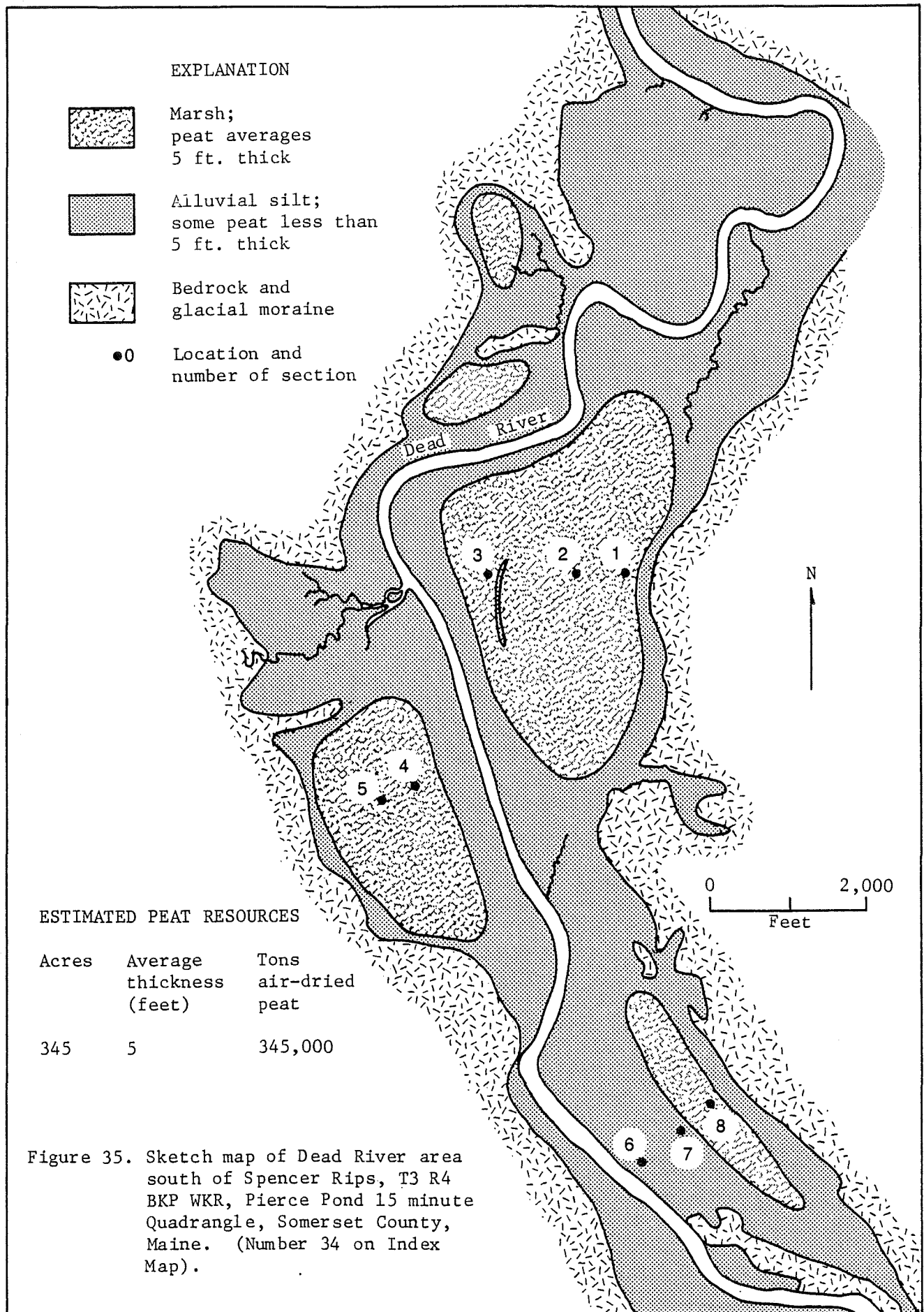





Figure 34a
SECTIONS AND SAMPLE LOCATIONS



EXPLANATION

 Marsh;
peat averages
5 ft. thick

 Alluvial silt;
some peat less than
5 ft. thick

 Bedrock and
glacial moraine

●0 Location and
number of section

ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
345	5	345,000

Figure 35. Sketch map of Dead River area south of Spencer Rips, T3 R4 BKP WKR, Pierce Pond 15 minute Quadrangle, Somerset County, Maine. (Number 34 on Index Map).

EXPLANATION OF SECTIONS

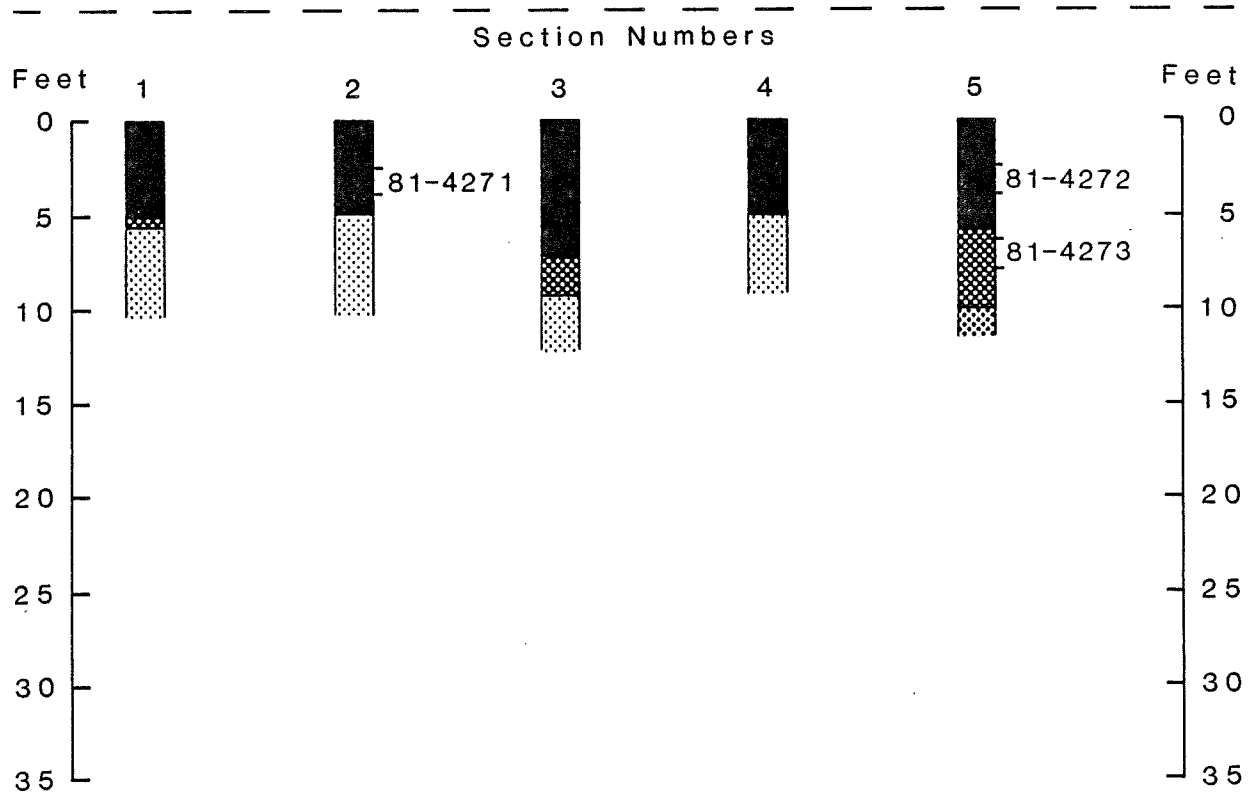
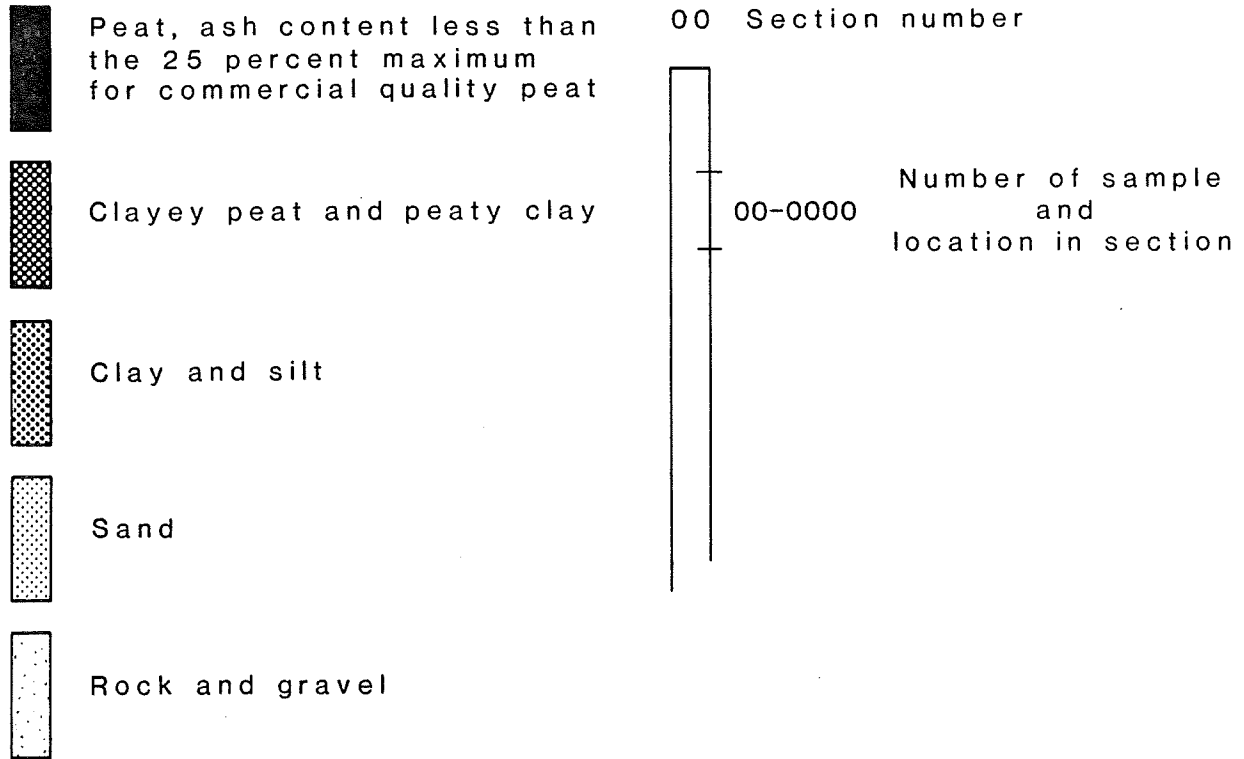


Figure 35a
SECTIONS AND SAMPLE LOCATIONS

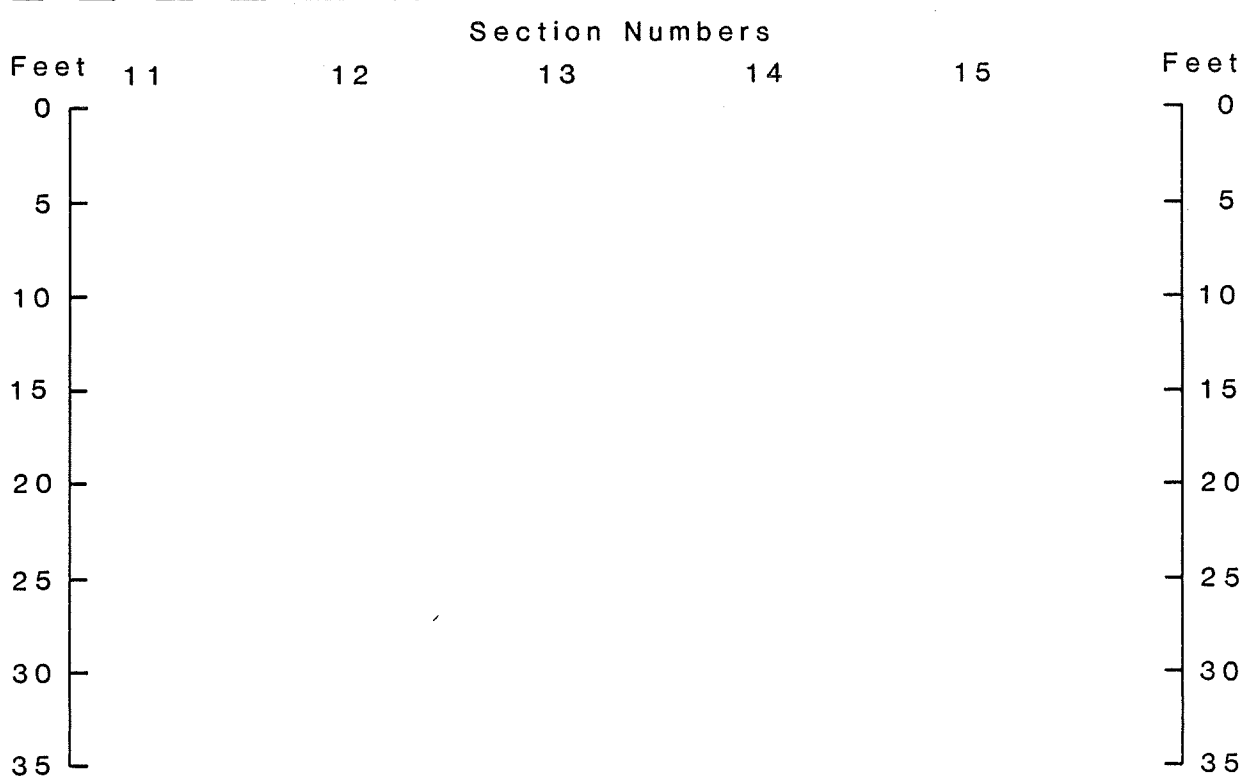
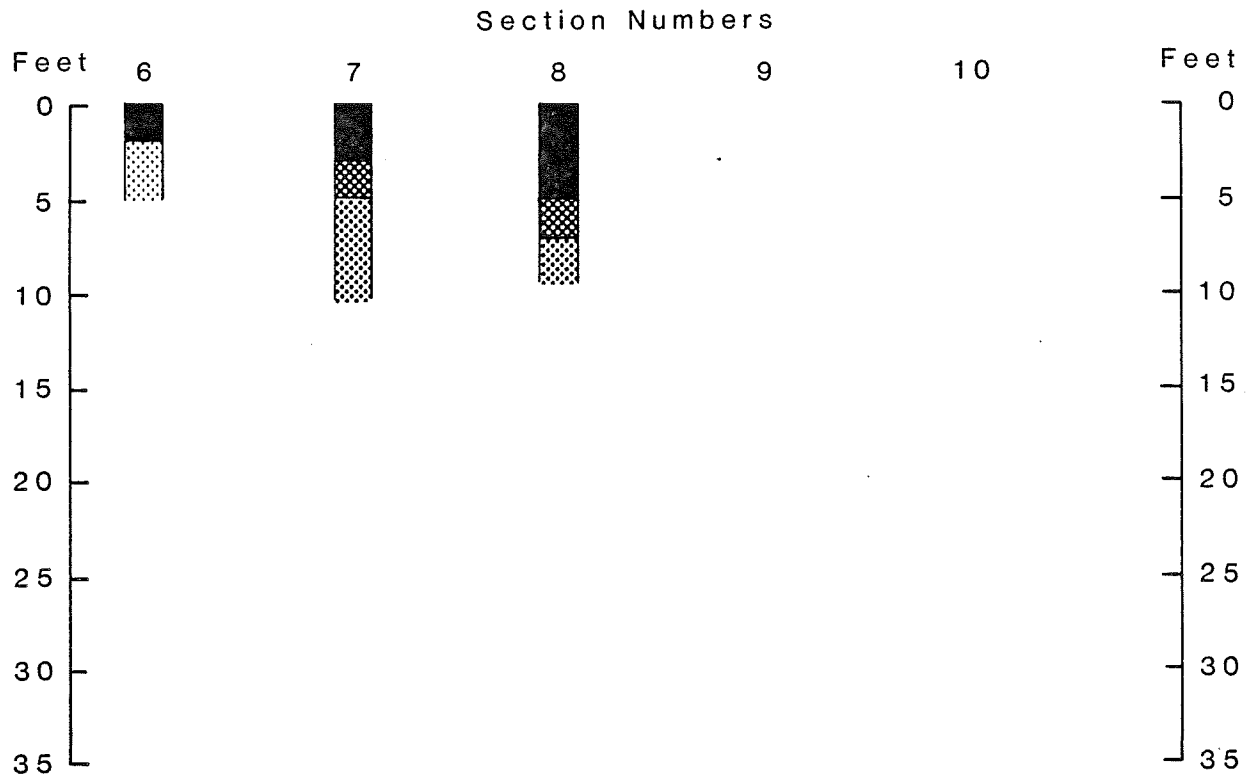


Figure 35a - Continued
SECTIONS AND SAMPLE LOCATIONS

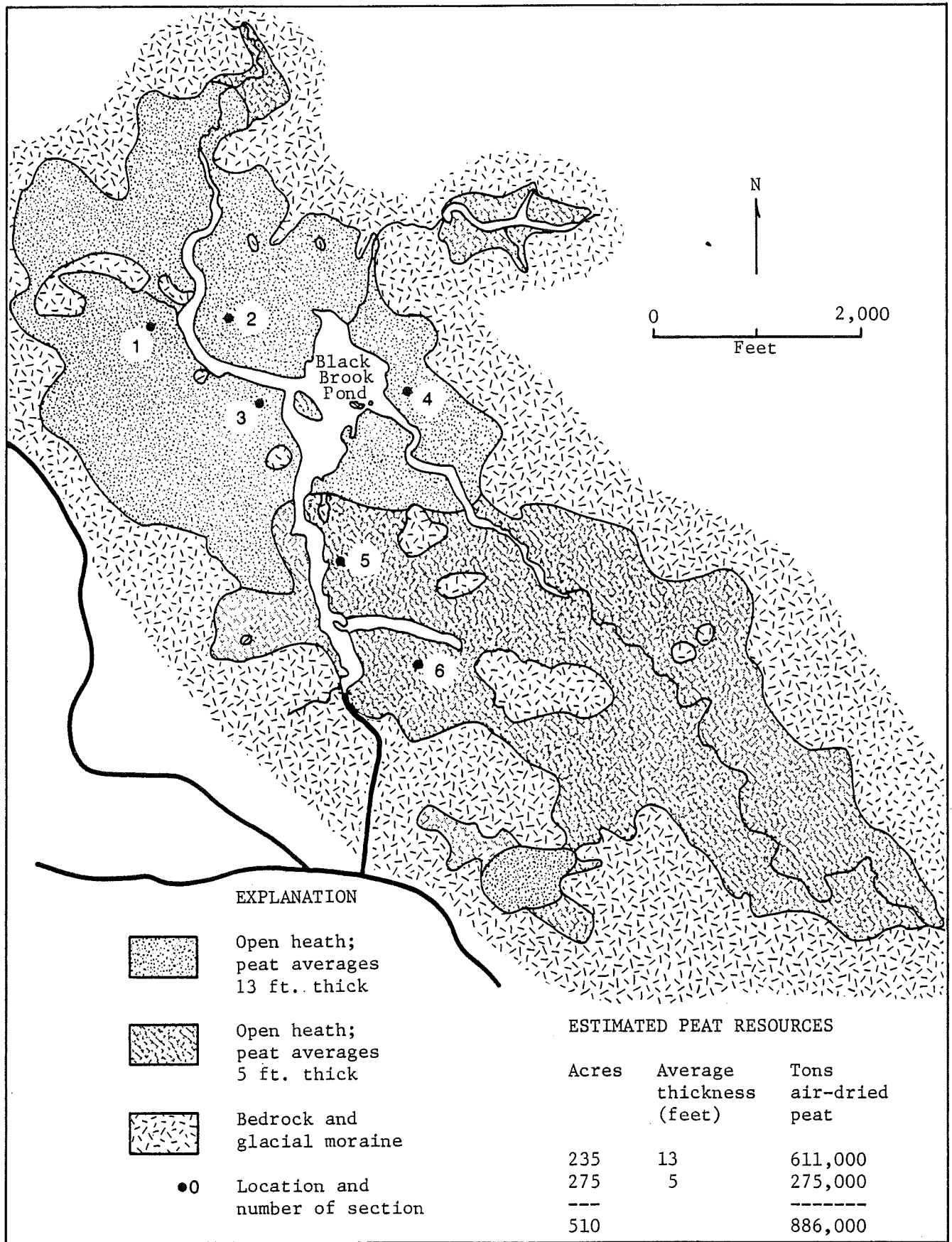


Figure 36. Sketch map of bog at Black Brook Pond, T2 R4 BKP WKR (Pierce Pond Twp.), Little Bigelow Mountain 15 minute Quadrangle, Somerset County, Maine. (Number 35 on Index Map).

EXPLANATION OF SECTIONS

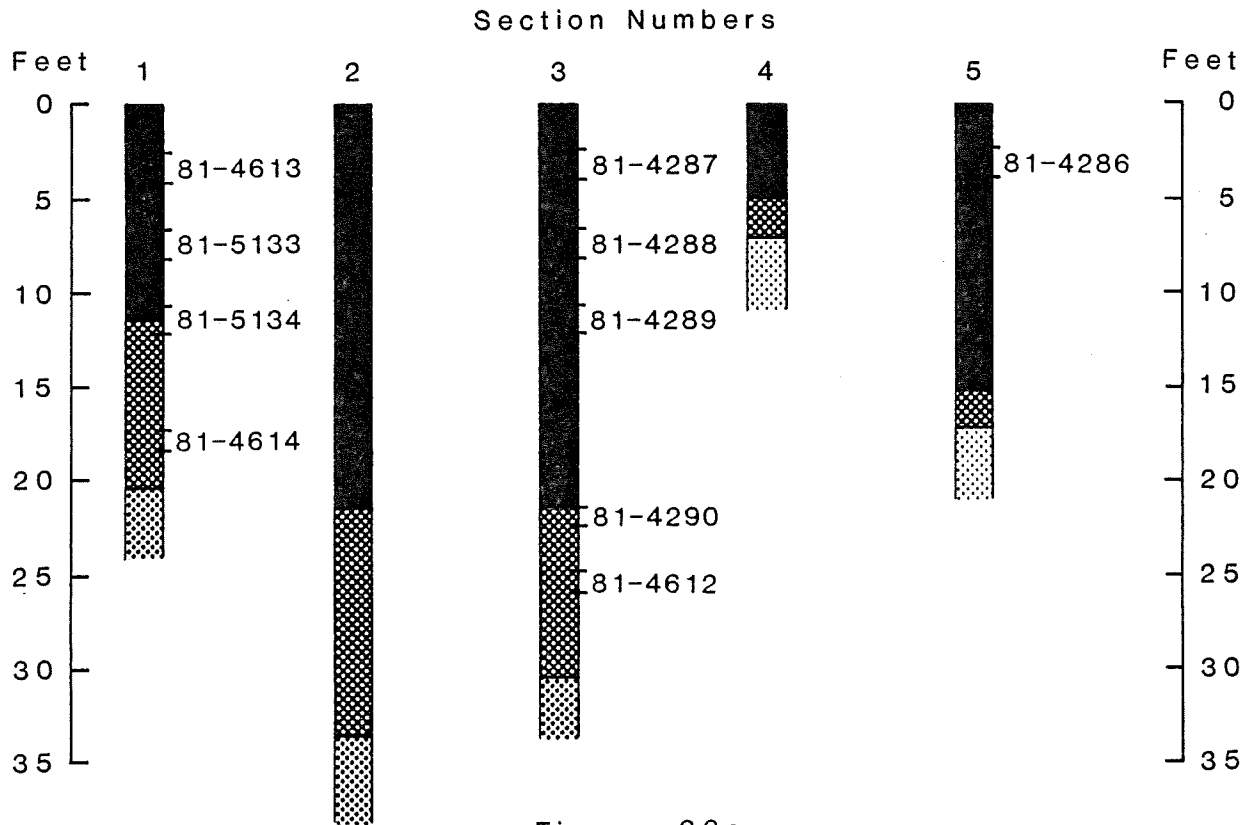
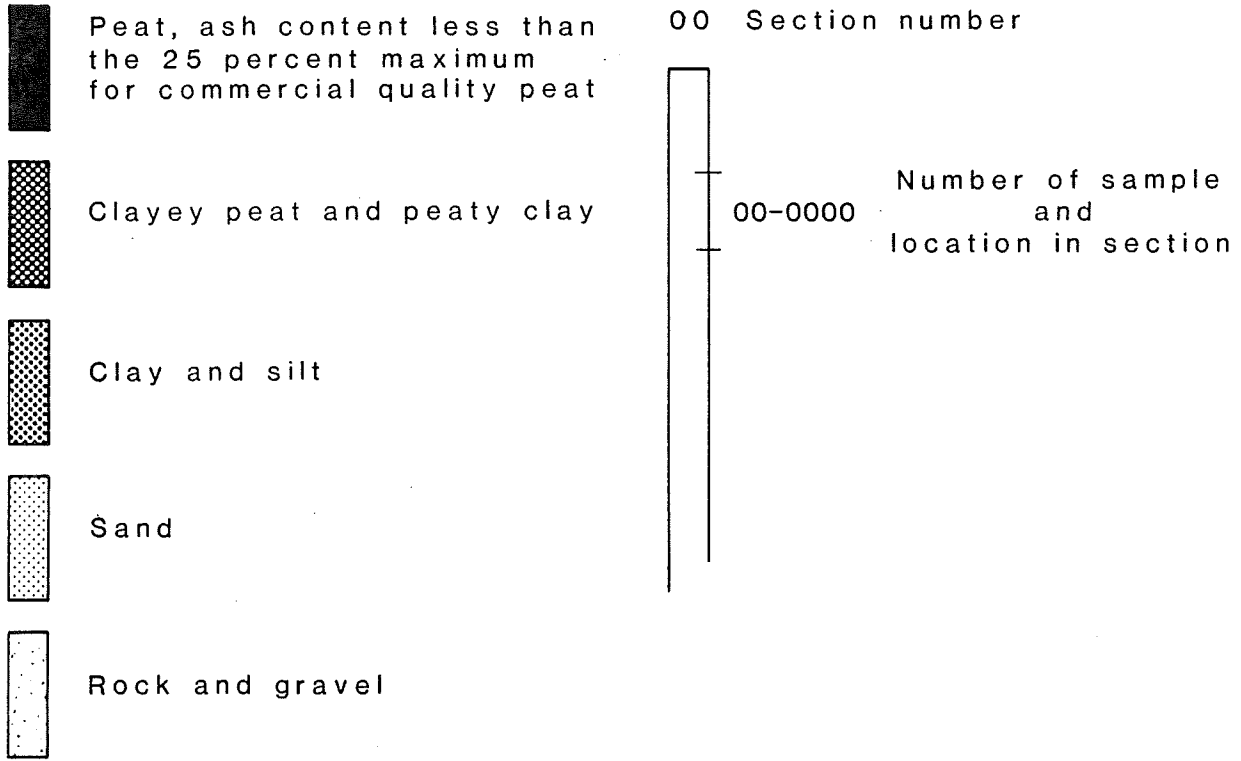


Figure 36a
SECTIONS AND SAMPLE LOCATIONS

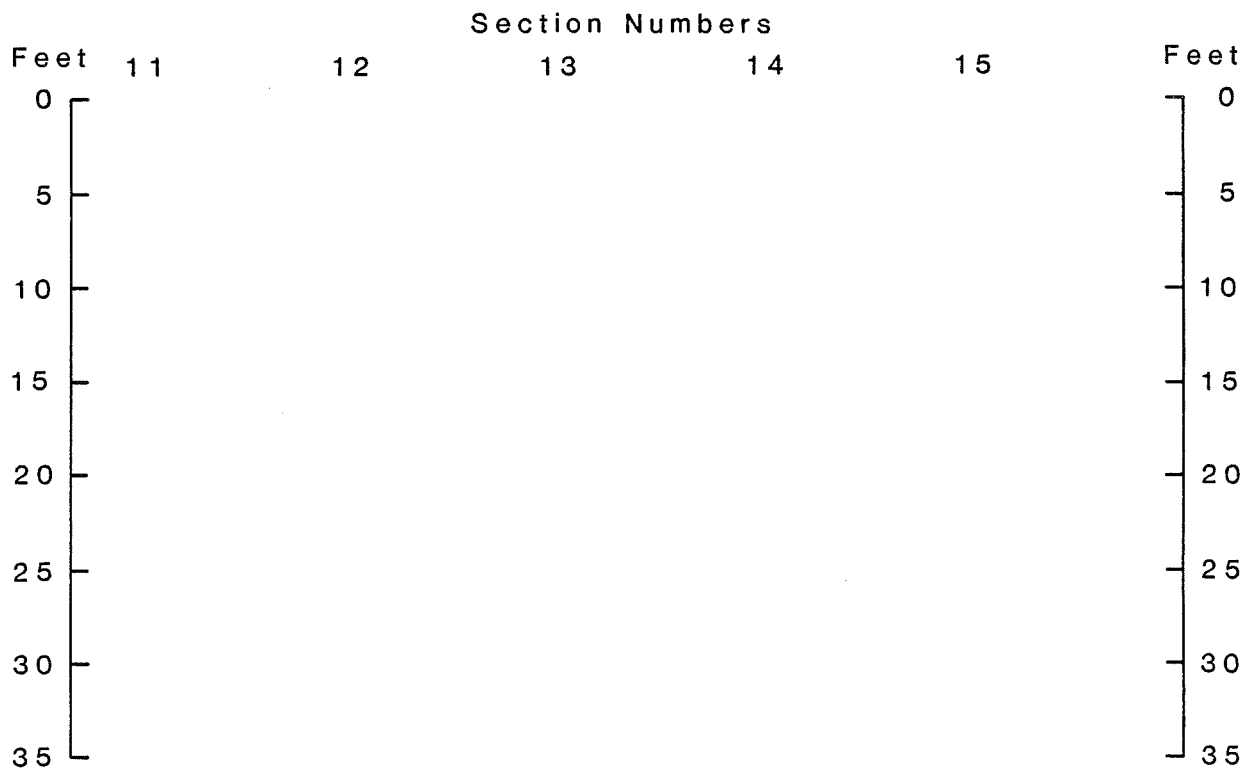
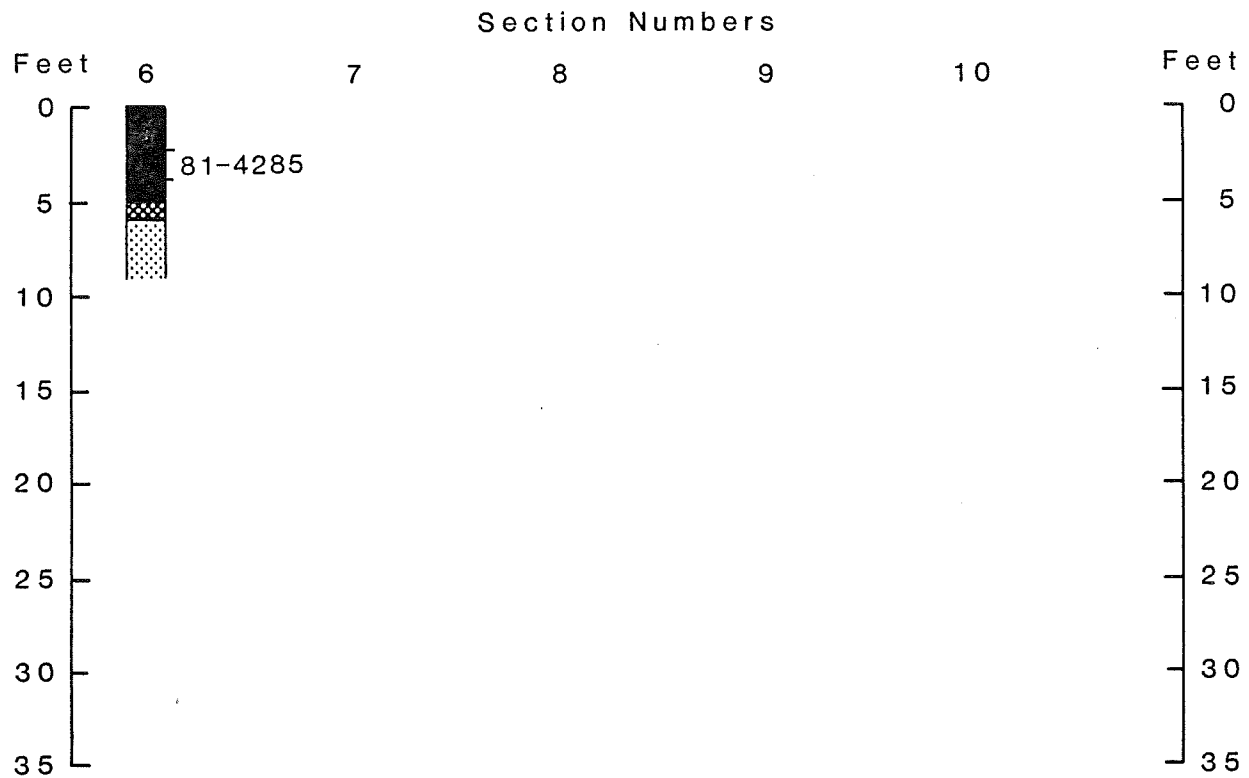


Figure 36a - Continued
SECTIONS AND SAMPLE LOCATIONS

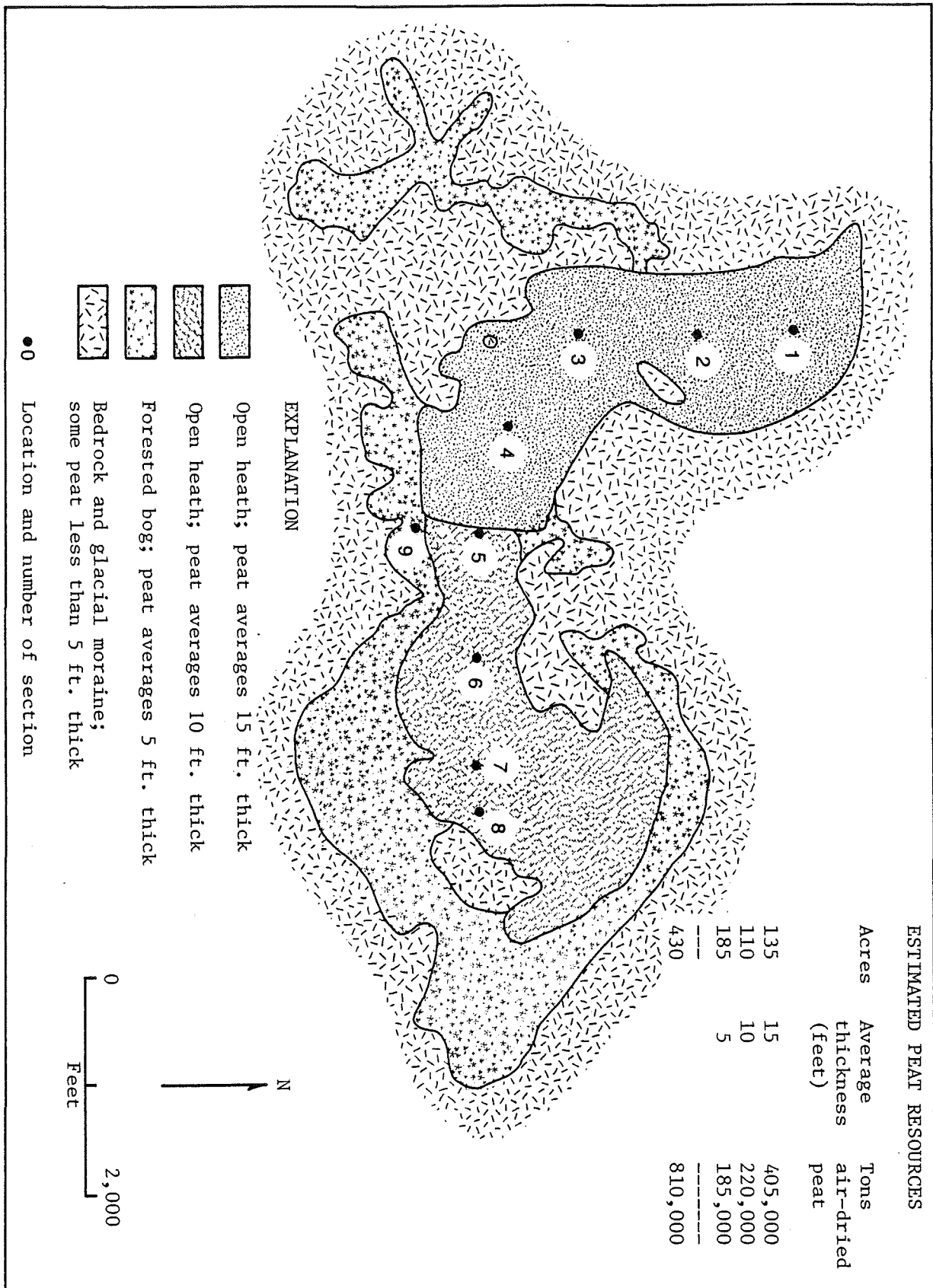


Figure 37. Sketch map of Johnson Bog, West Forks Plantation, Pierce Pond 15 minute Quadrangle, Somerset County, Maine. (Number 36 on Index Map).

EXPLANATION OF SECTIONS

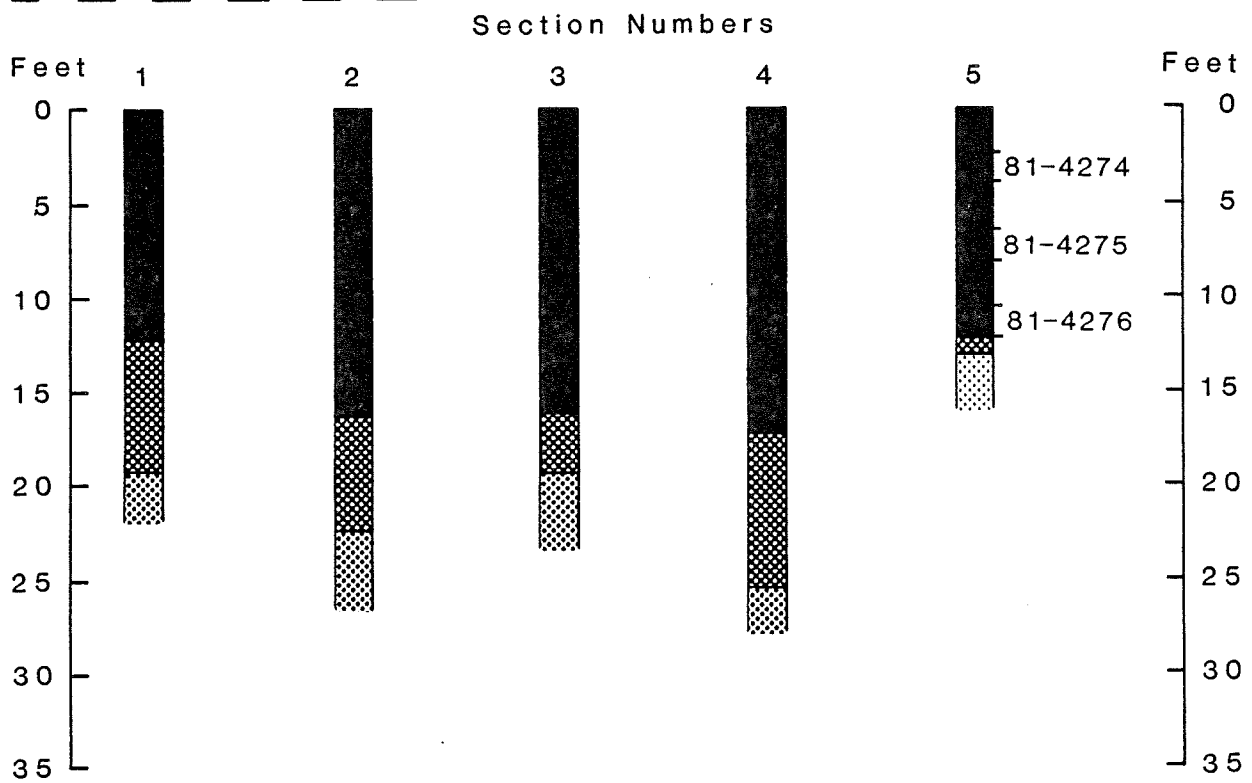
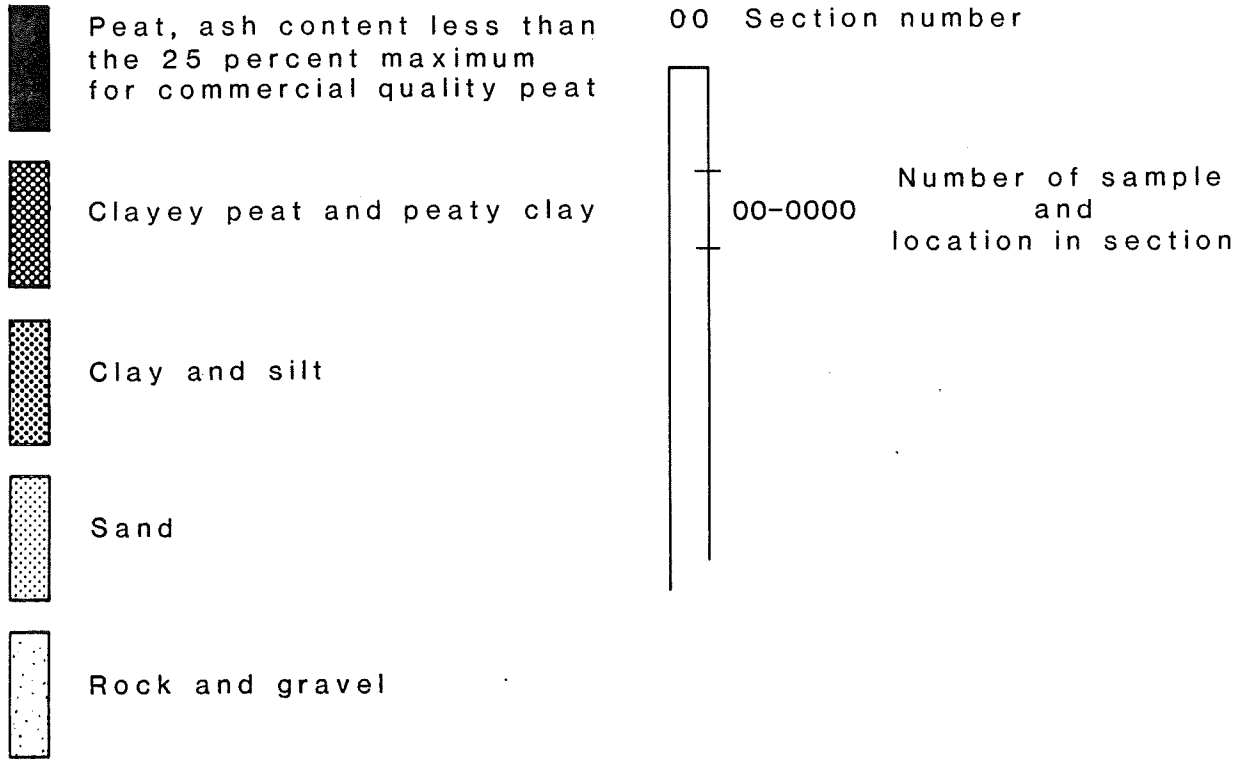


Figure 37a
 SECTIONS AND SAMPLE LOCATIONS

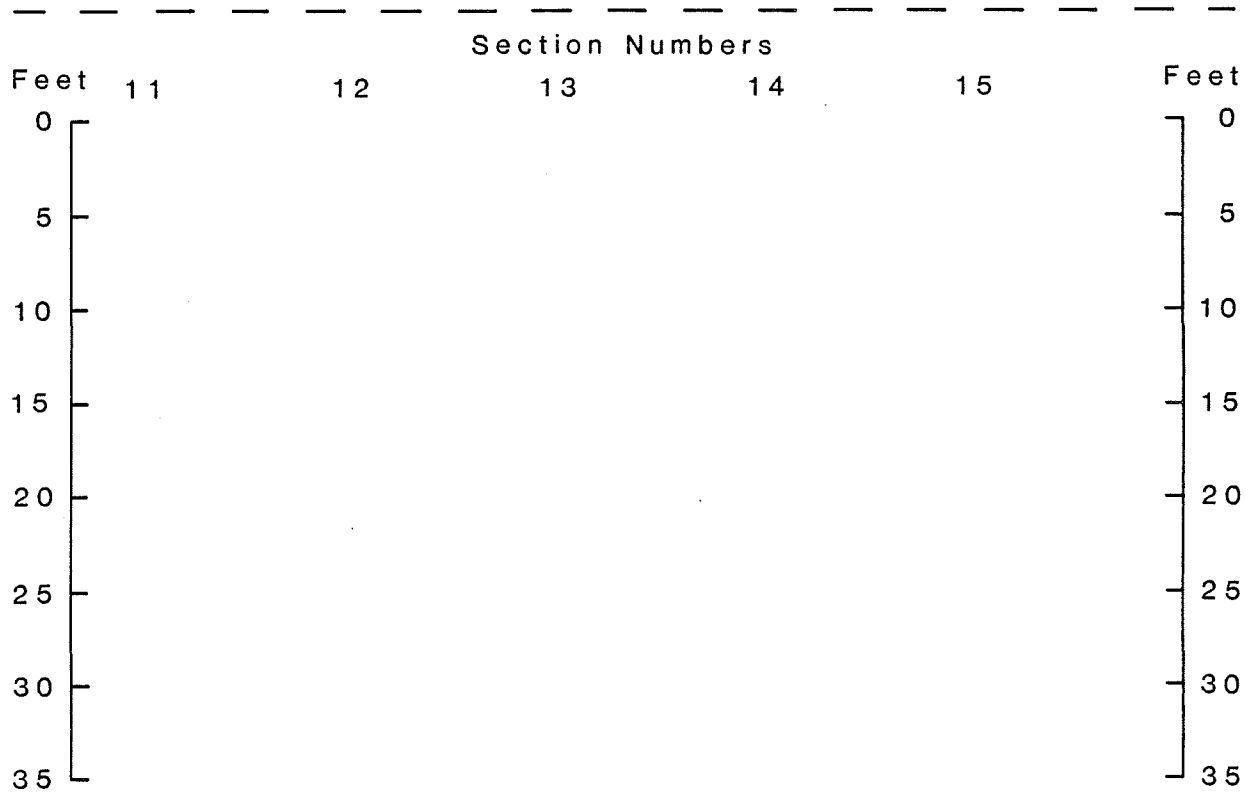
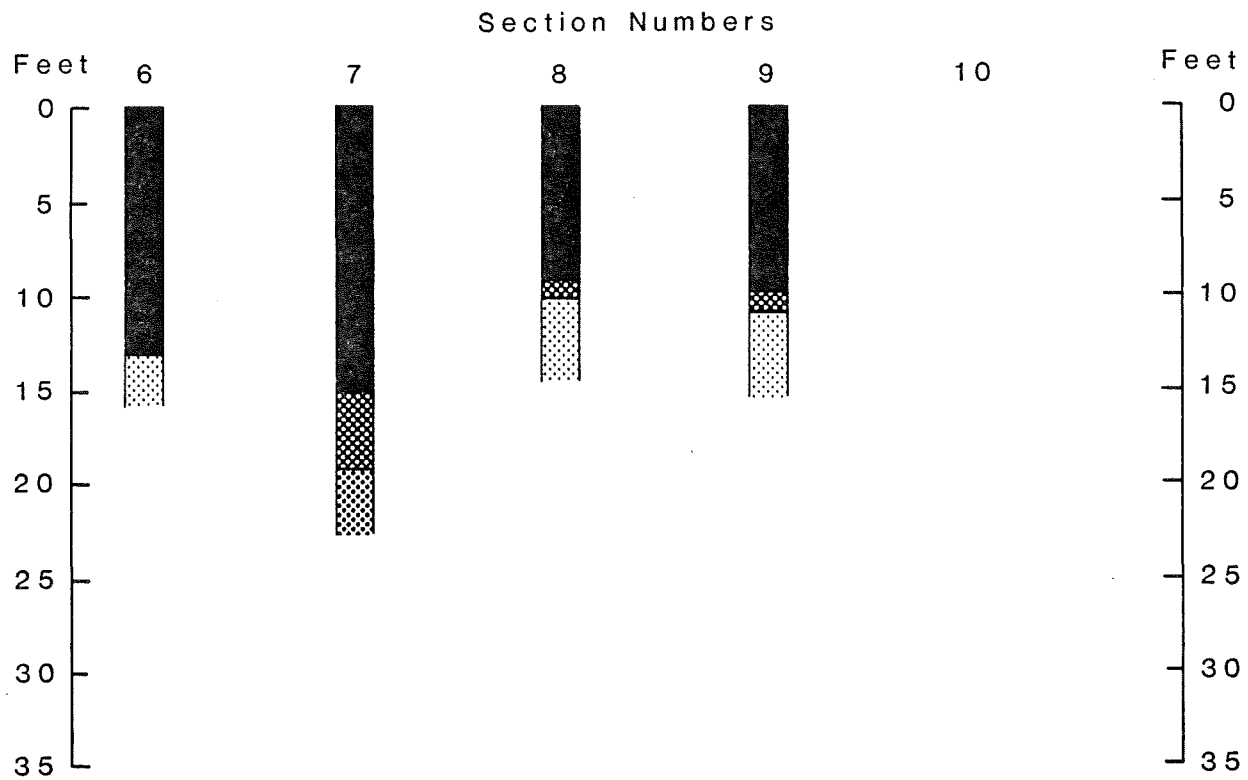


Figure 37a - Continued
SECTIONS AND SAMPLE LOCATIONS

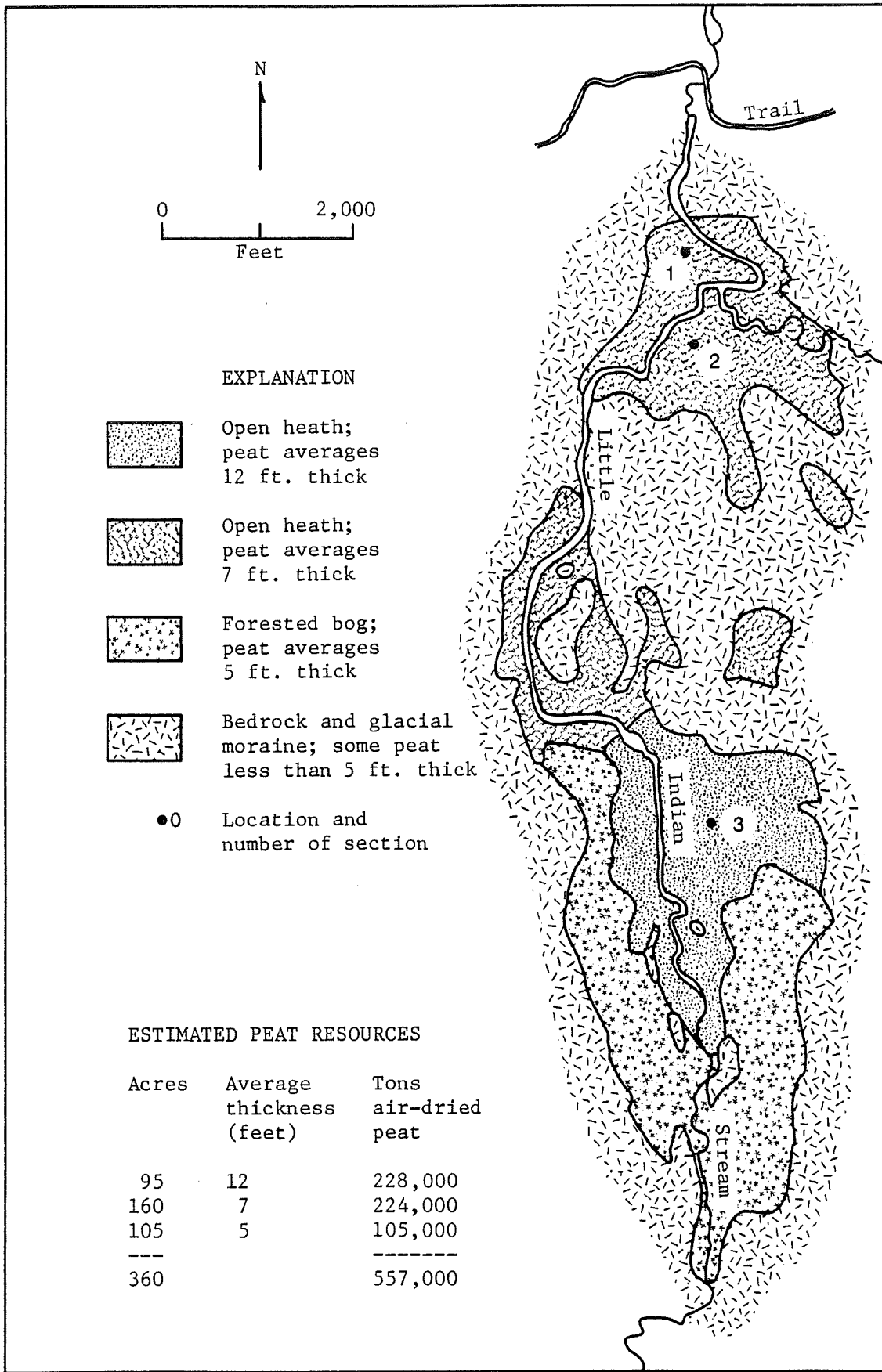


Figure 38. Sketch map of Little Indian Bog along Little Indian Stream, T1 R6 BKP EKR (Indian Stream Twp.), The Forks 15 minute Quad-angle, Somerset County, Maine. (Number 37 on Index Map).

EXPLANATION OF SECTIONS

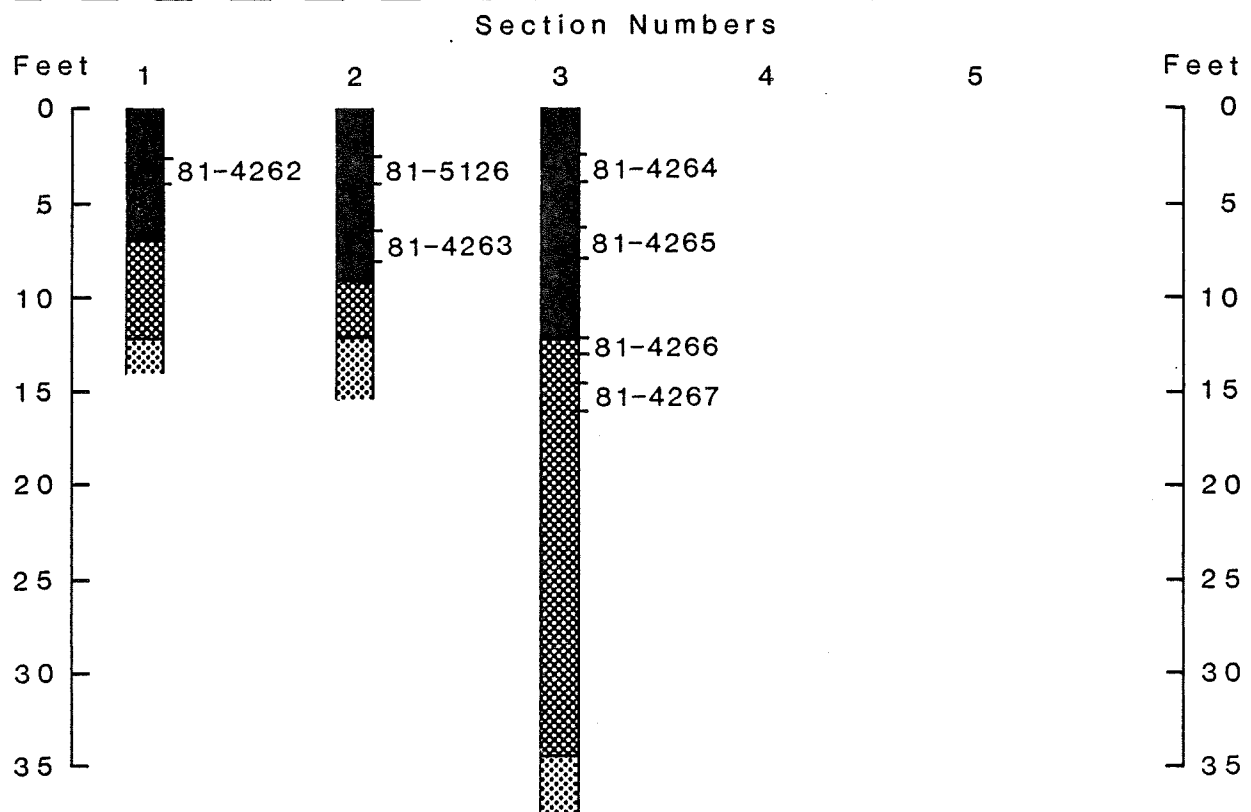
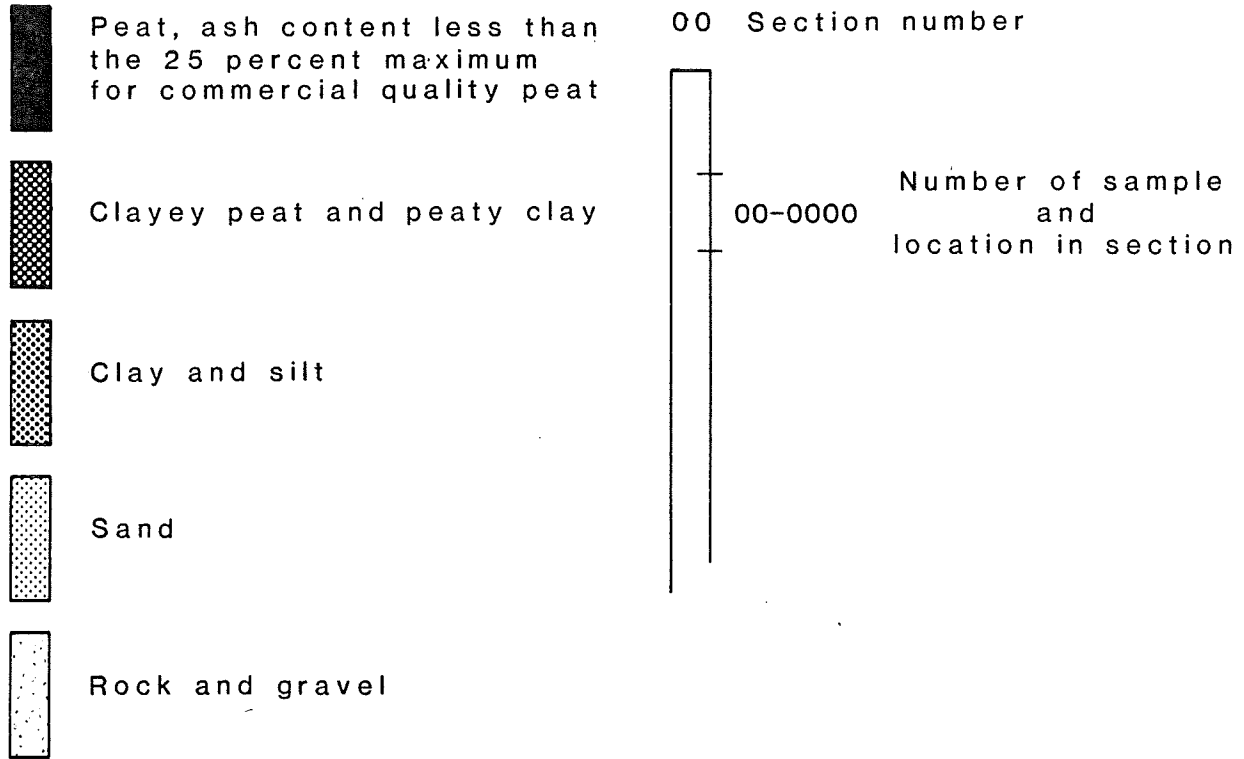


Figure 38a

SECTIONS AND SAMPLE LOCATIONS

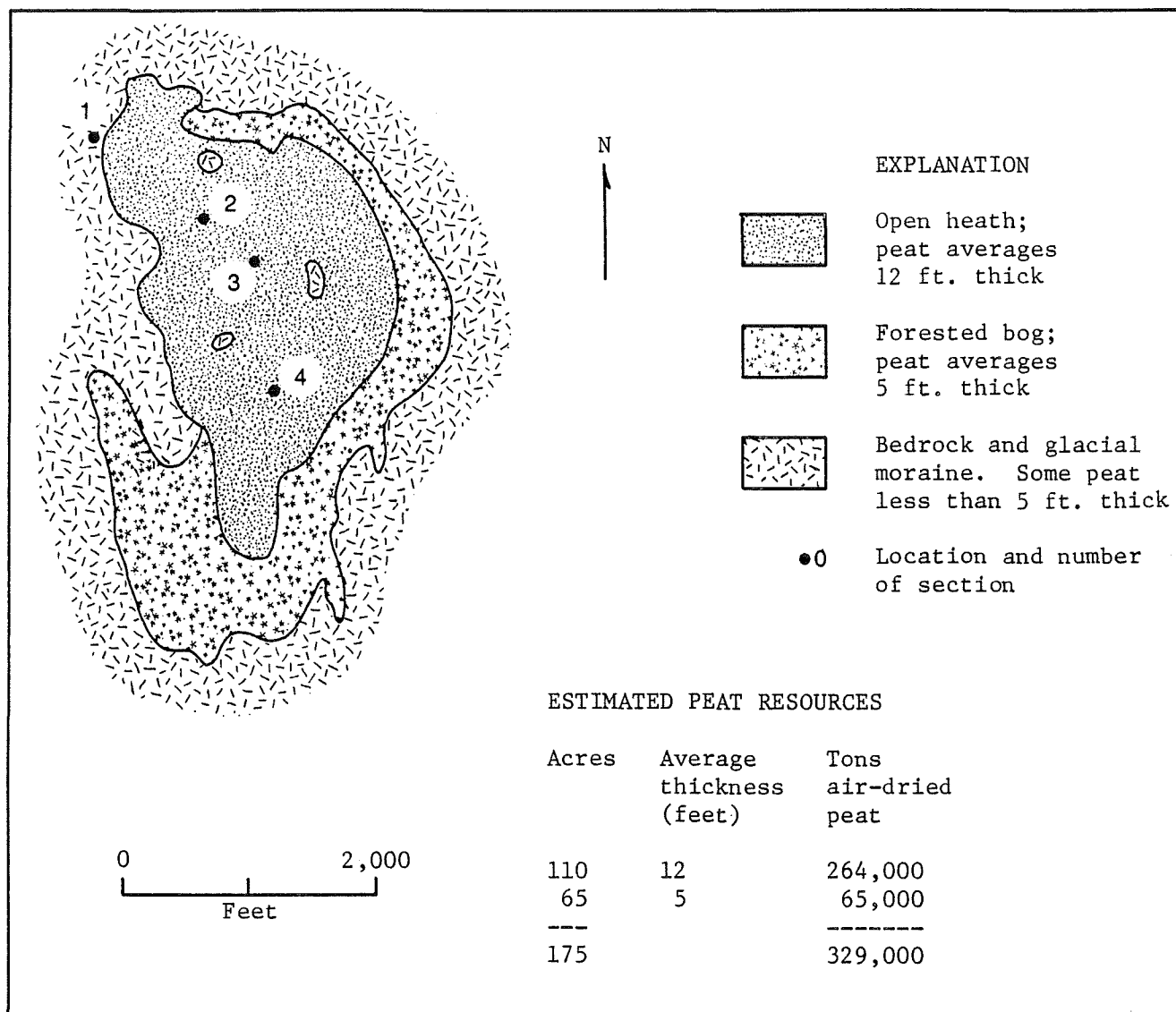


Figure 39. Sketch map of bog southeast of Harris dam at outlet of Indian Pond, T1 R6 BKP EKR (Indian Stream Twp.) and T2 R5 BKP EKR (Squarctown Twp.), The Forks 15 minute Quadrangle, Somerset County, Maine. (Number 38 on Index Map).

EXPLANATION OF SECTIONS

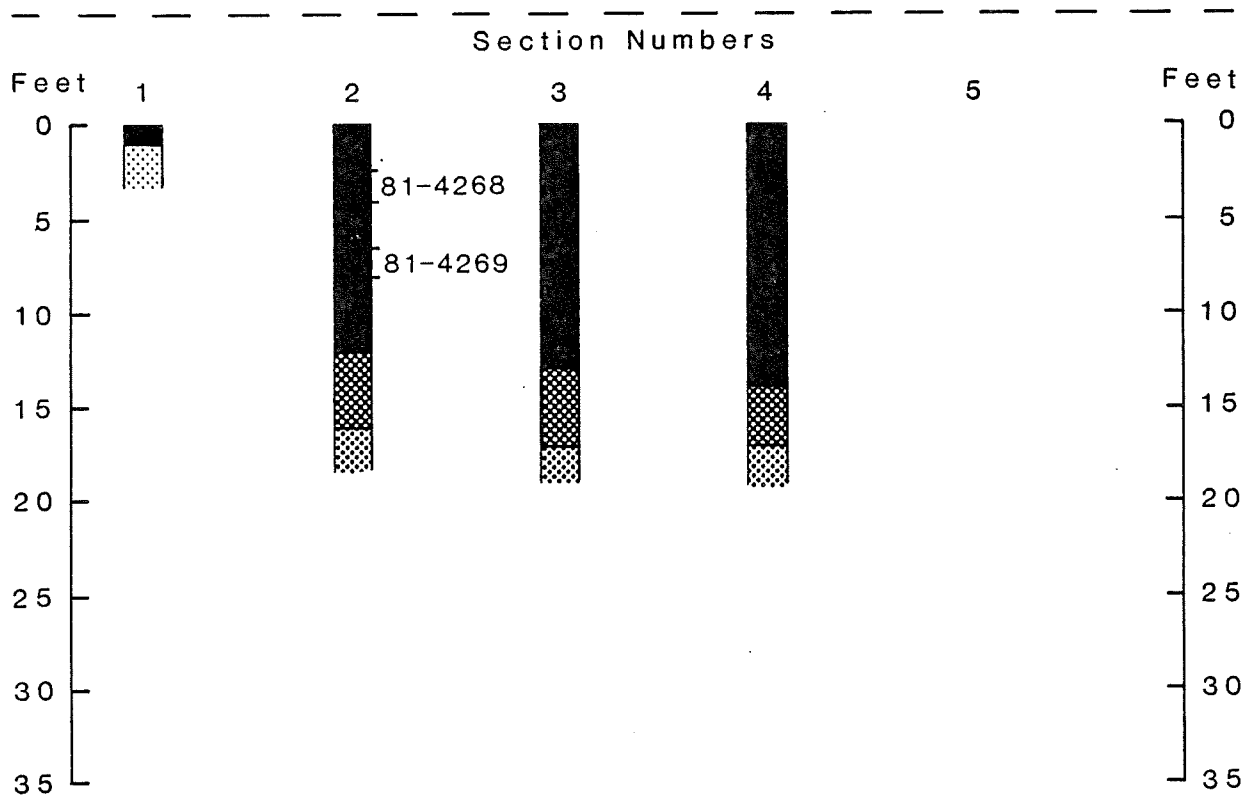
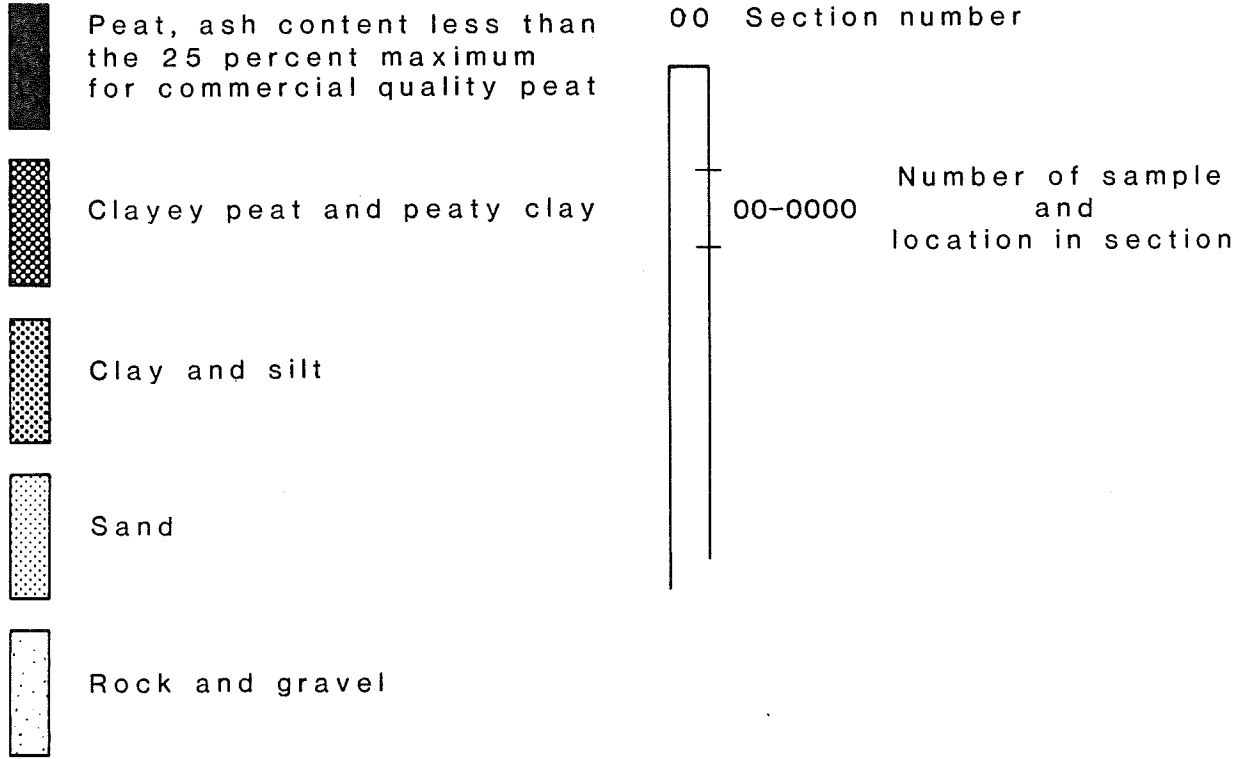


Figure 39a
SECTIONS AND SAMPLE LOCATIONS

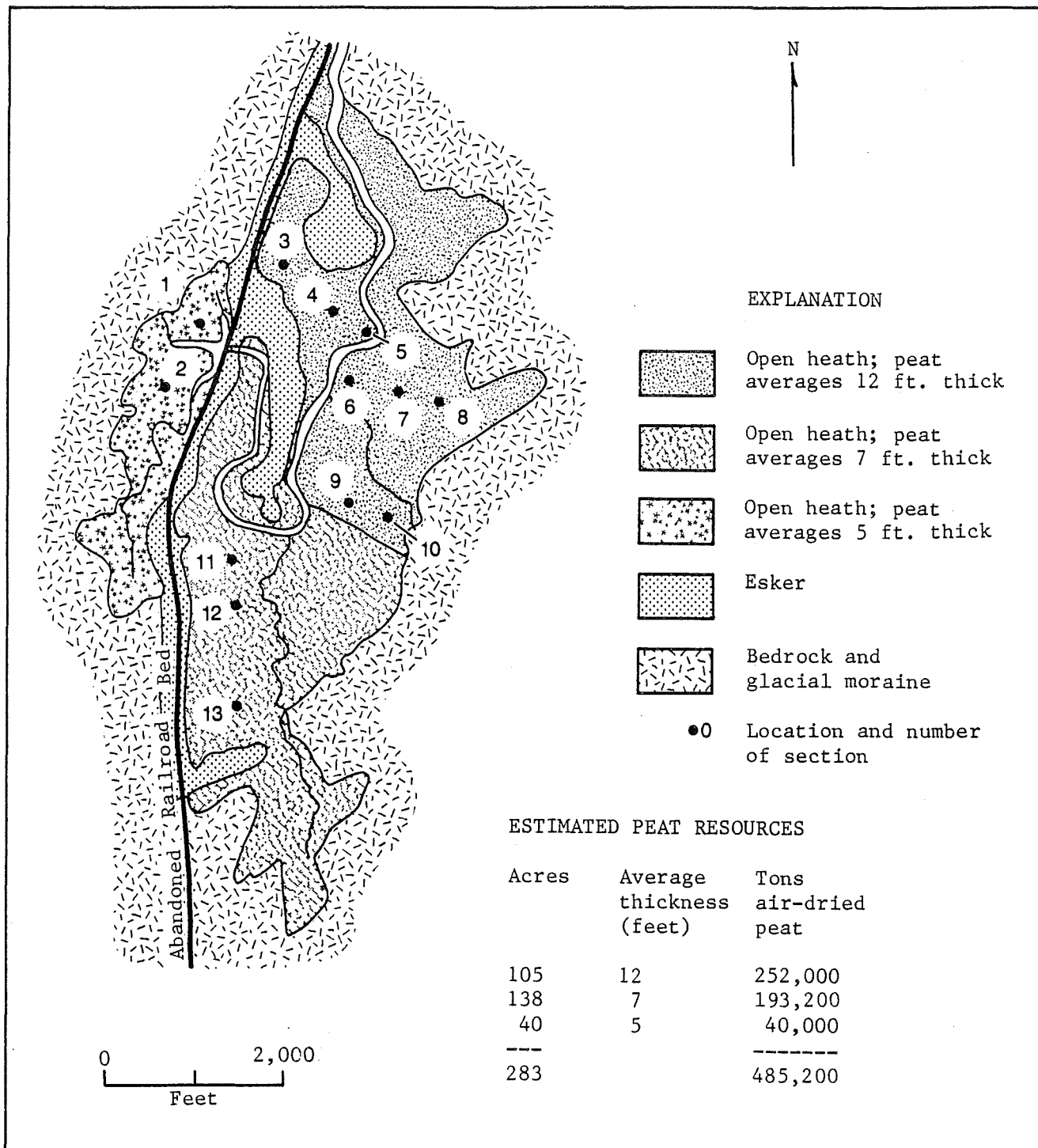


Figure 40. Sketch map of bog one mile south of Greenville Junction, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 39 on Index Map).

EXPLANATION OF SECTIONS

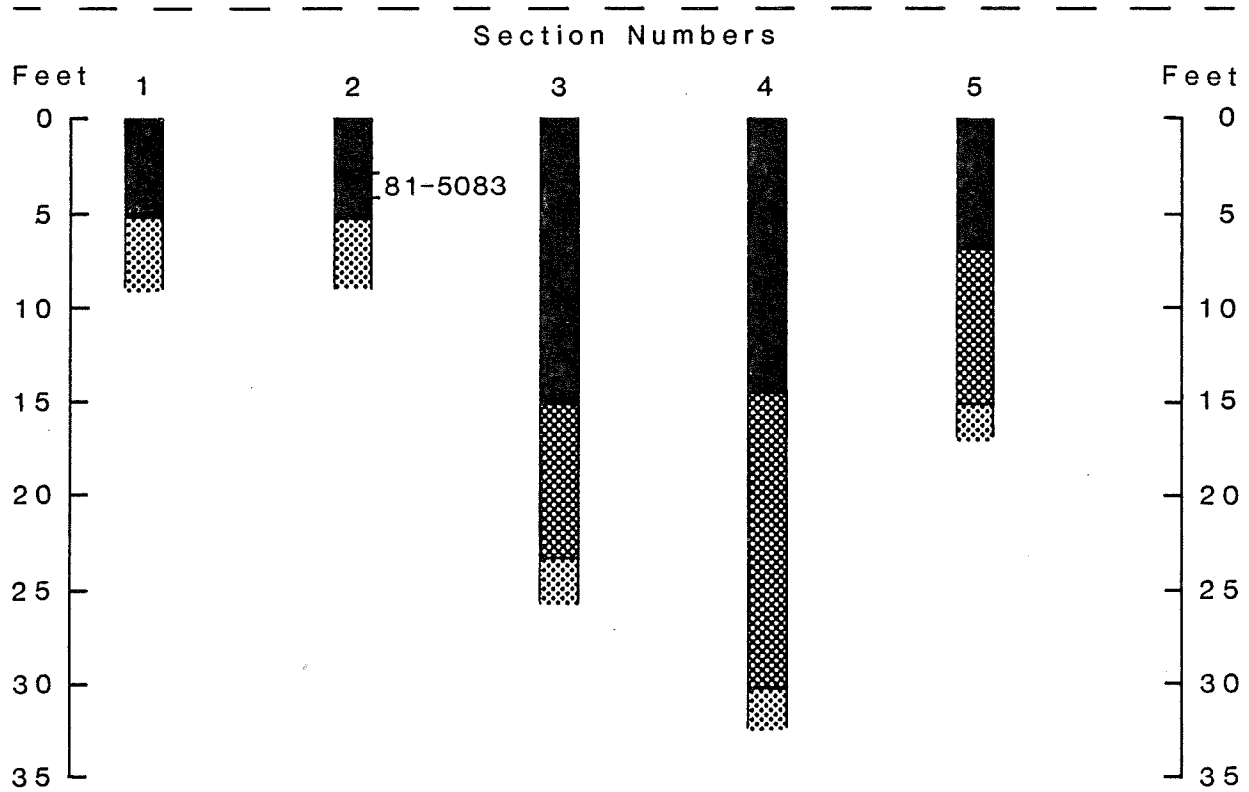
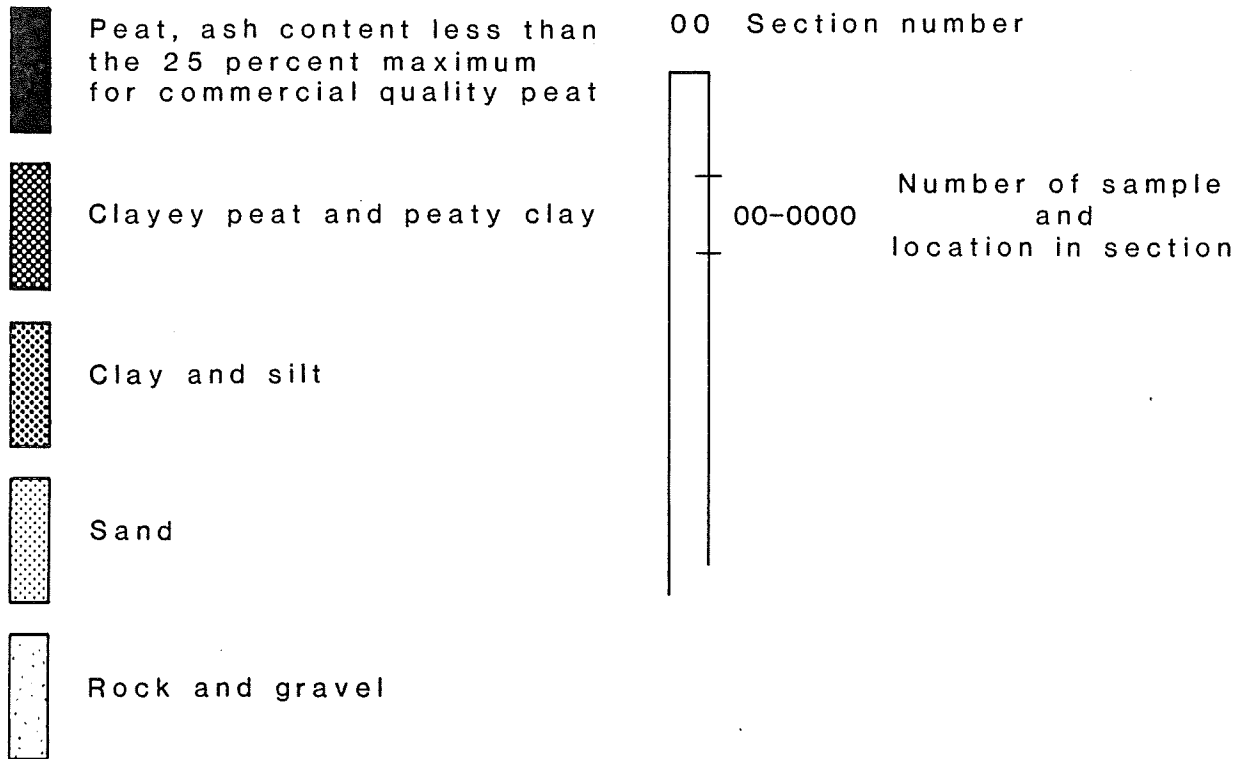


Figure 40a
SECTIONS AND SAMPLE LOCATIONS

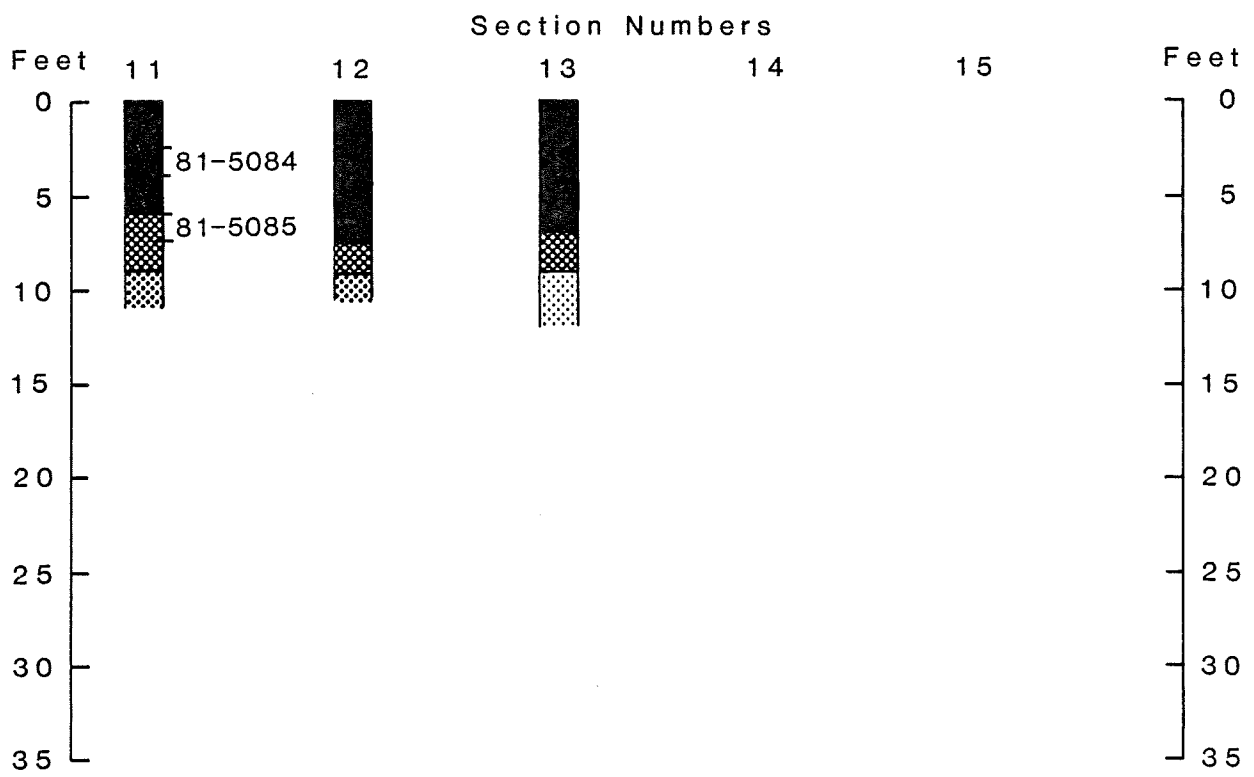
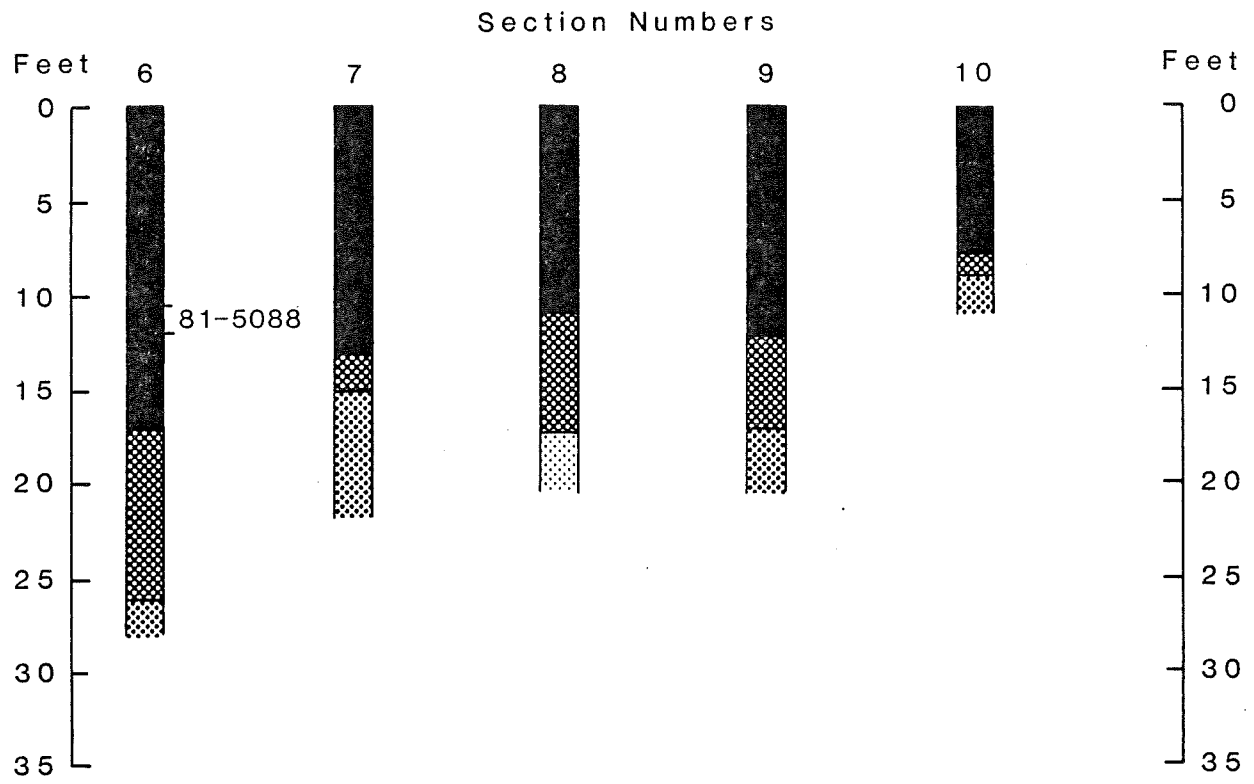


Figure 40a - Continued
SECTIONS AND SAMPLE LOCATIONS

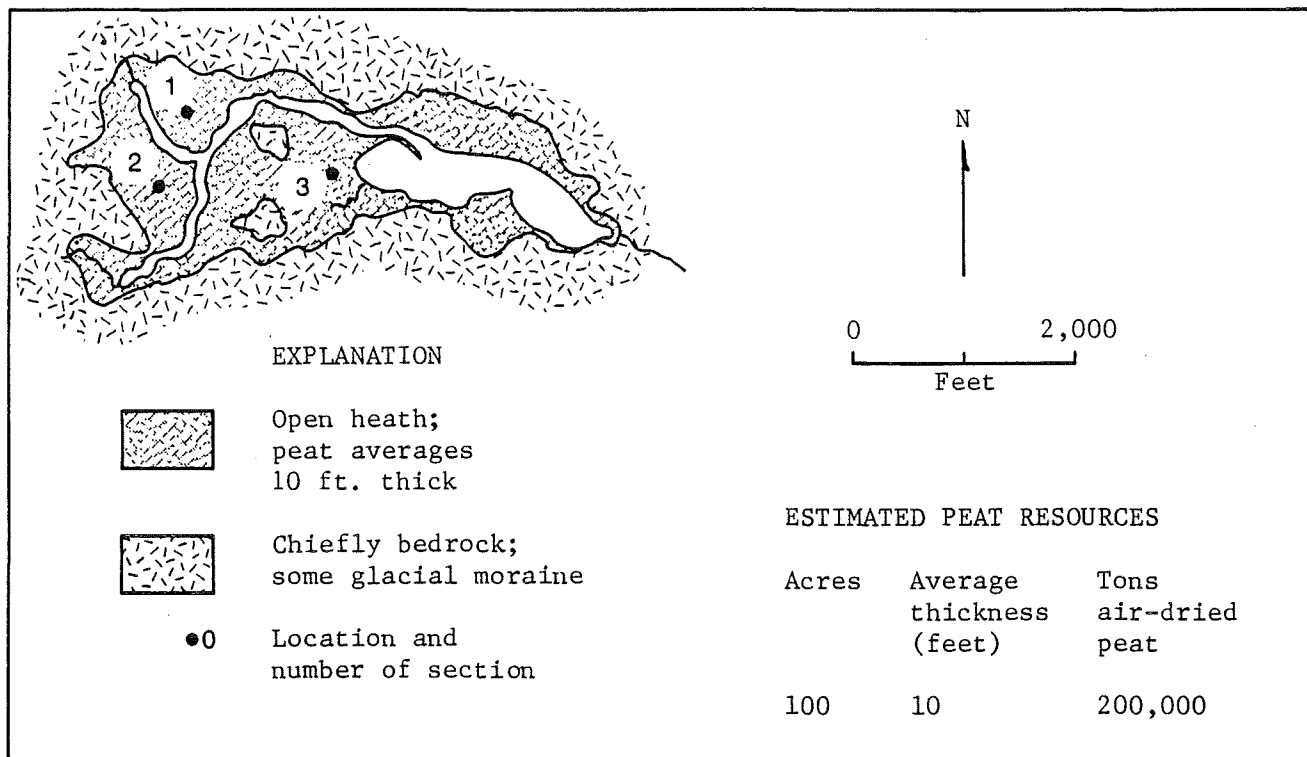


Figure 41. Sketch map of Ira Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 40 on Index Map).

EXPLANATION OF SECTIONS

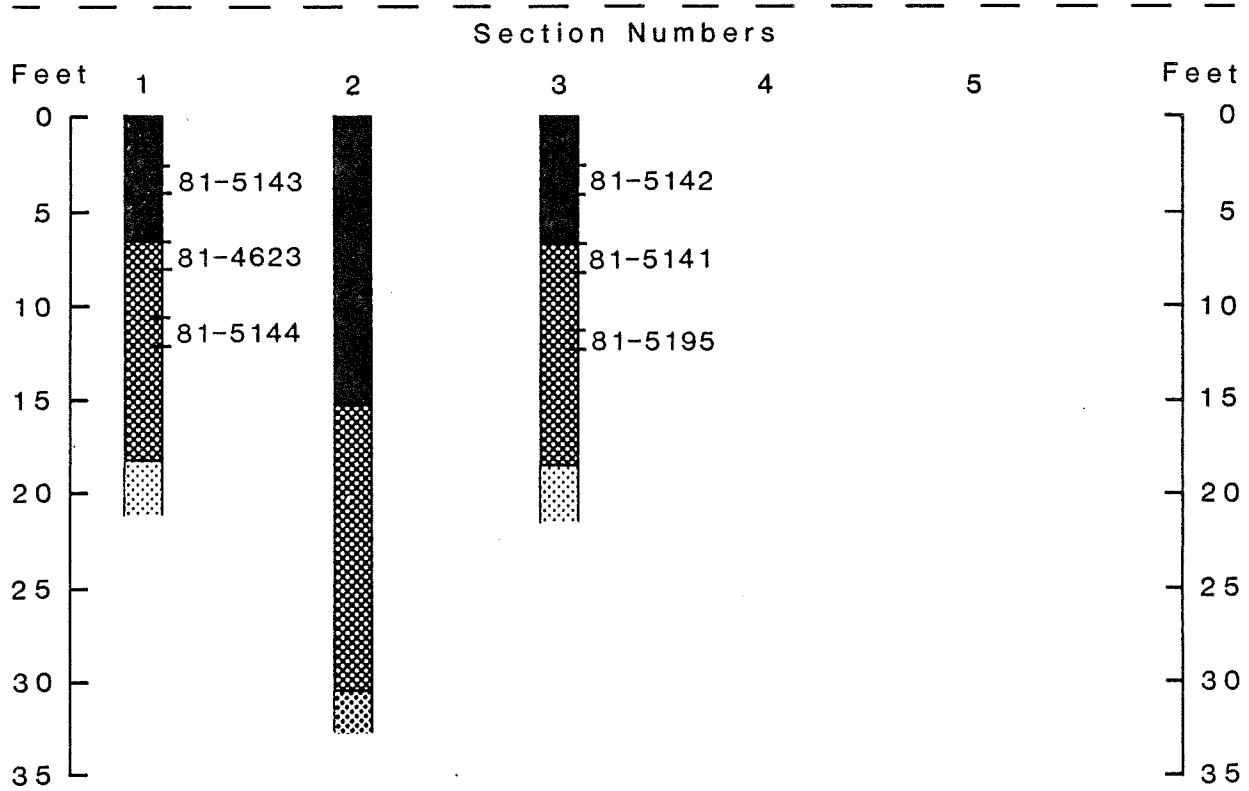
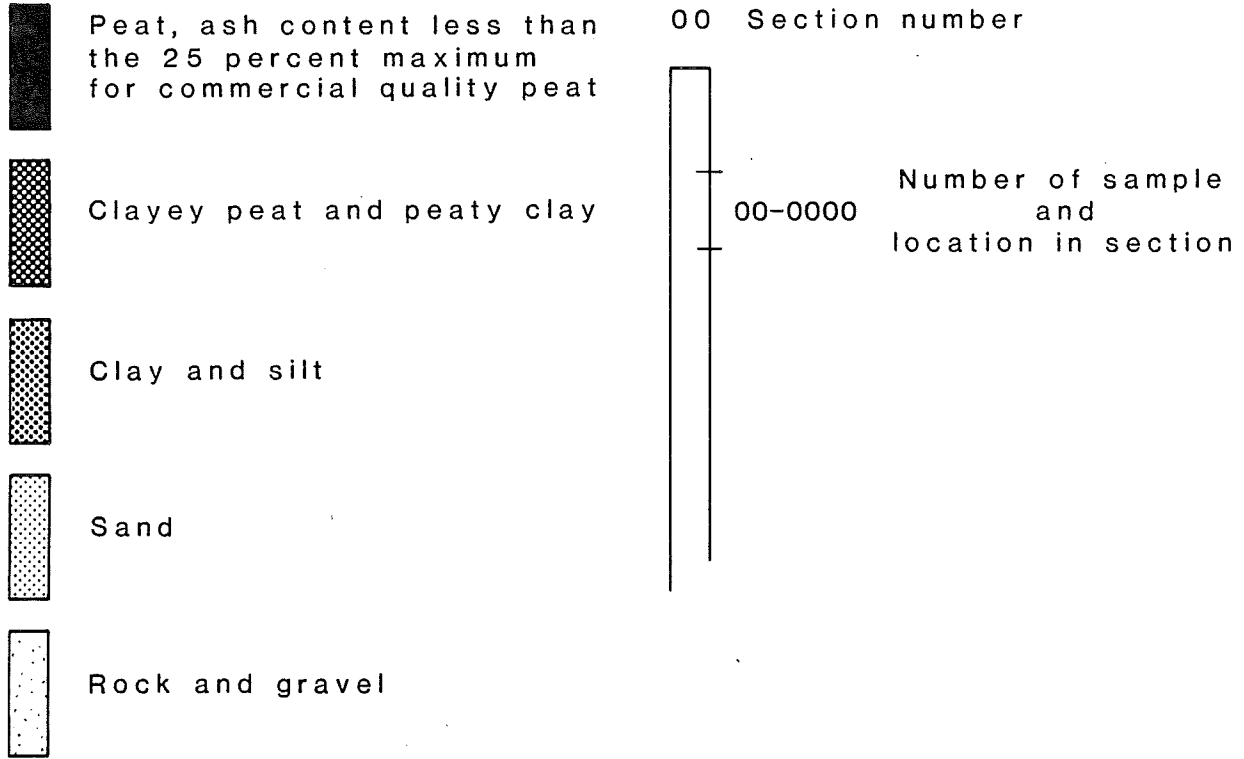


Figure 41a
SECTIONS AND SAMPLE LOCATIONS

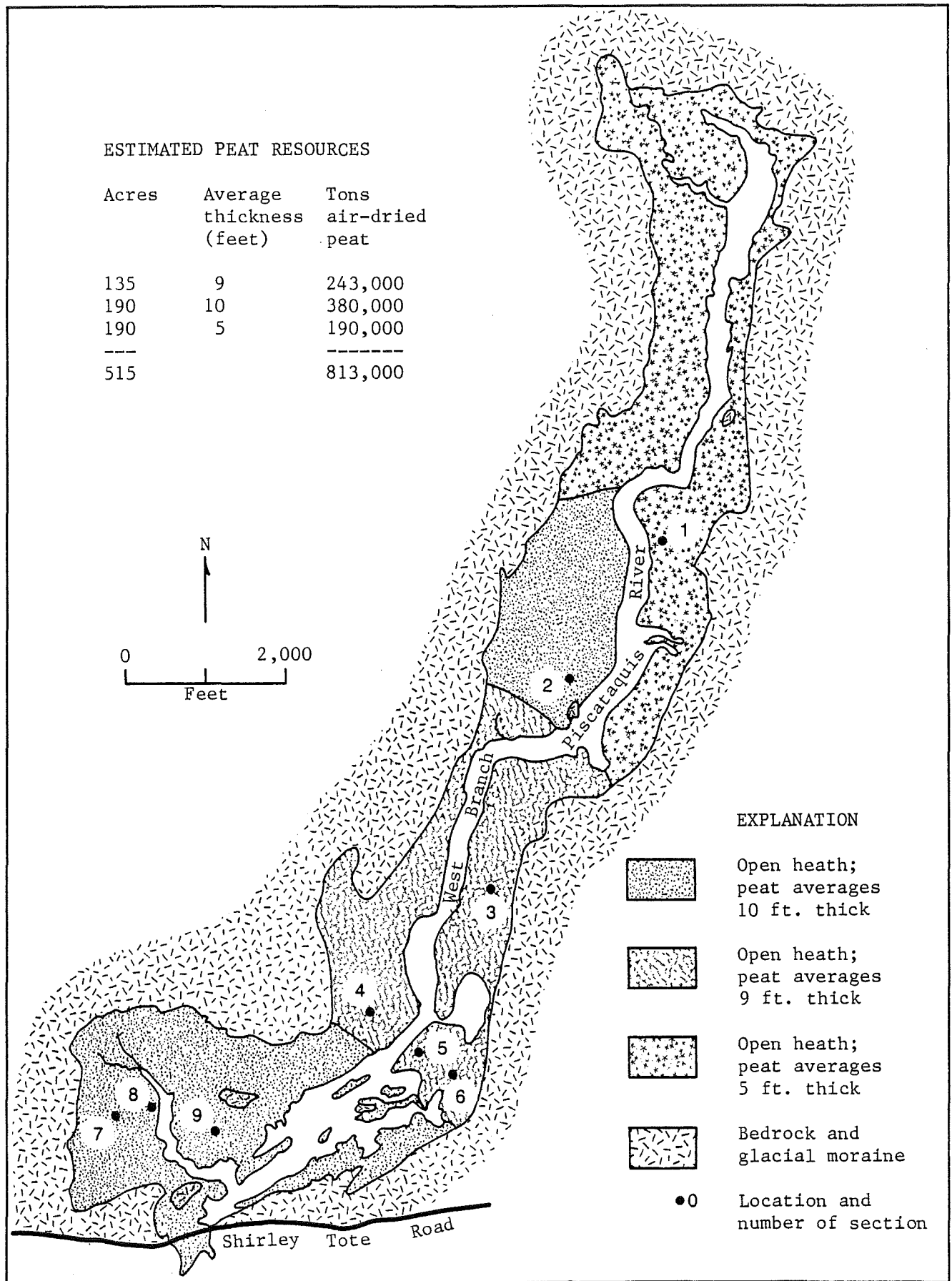


Figure 42. Sketch map of West Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 41 on Index Map).

EXPLANATION OF SECTIONS

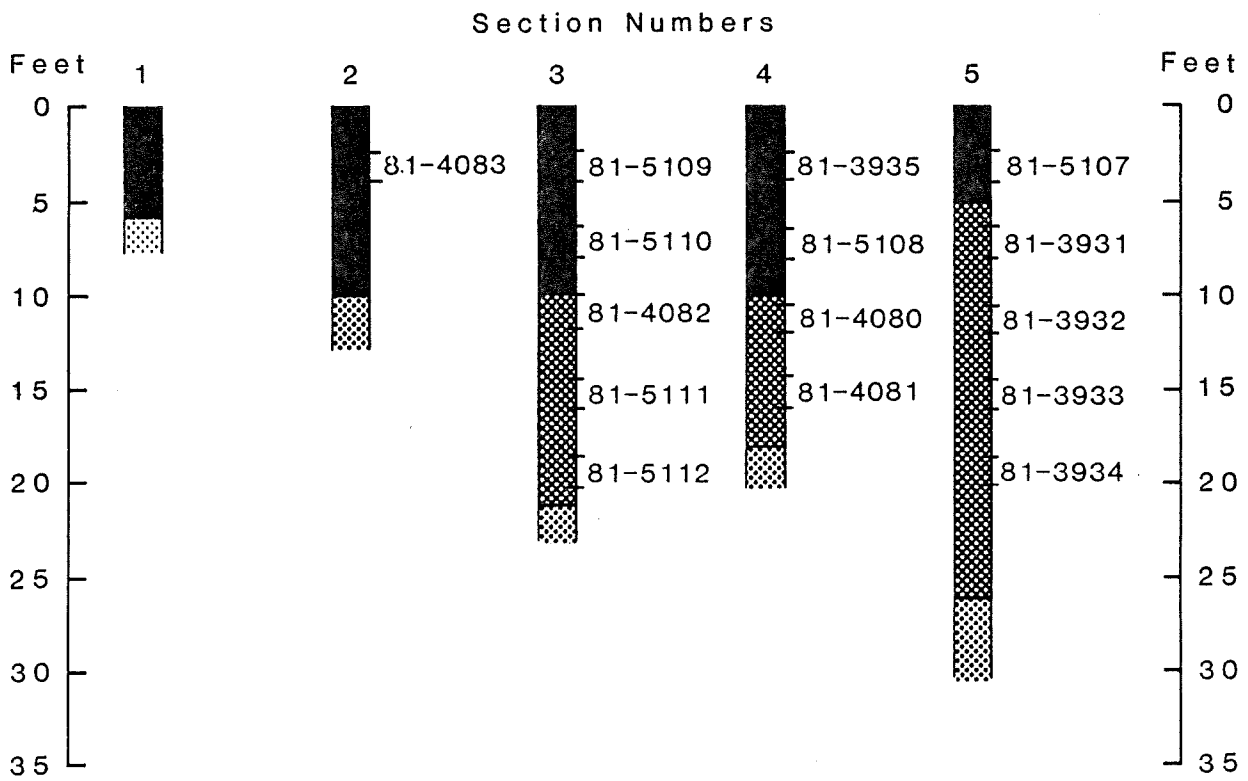
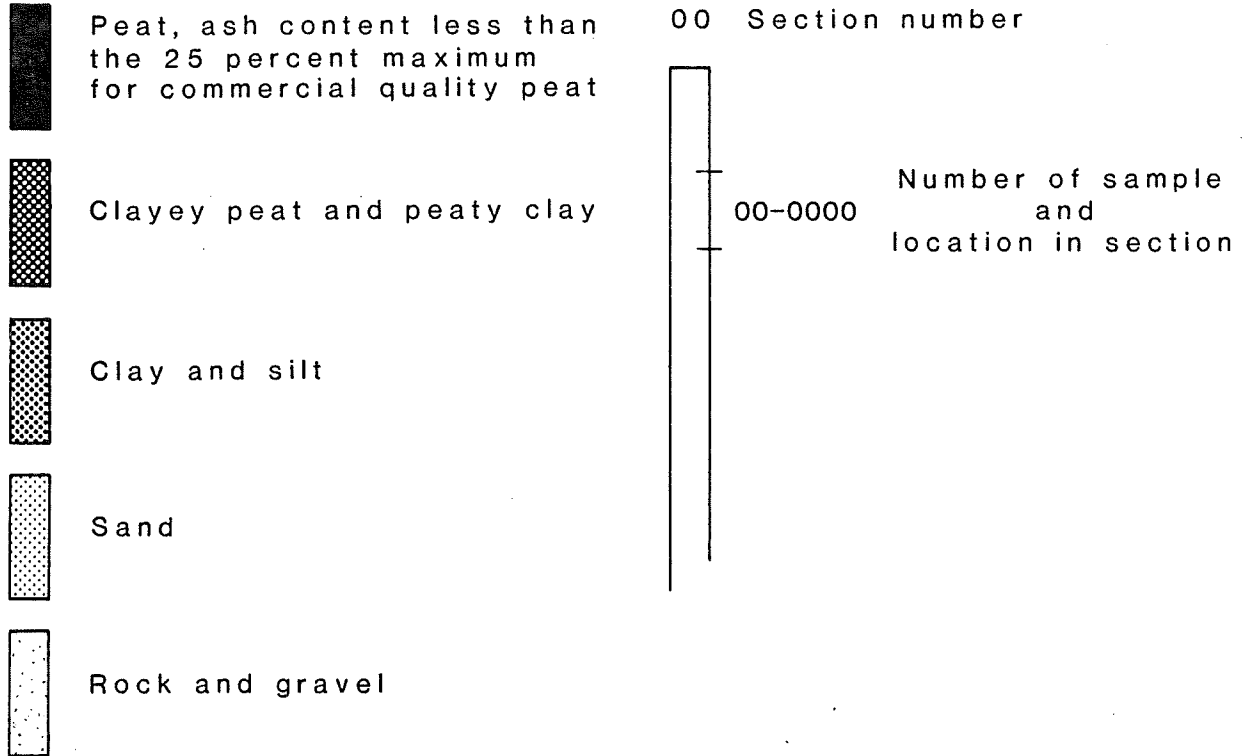


Figure 42a
SECTIONS AND SAMPLE LOCATIONS

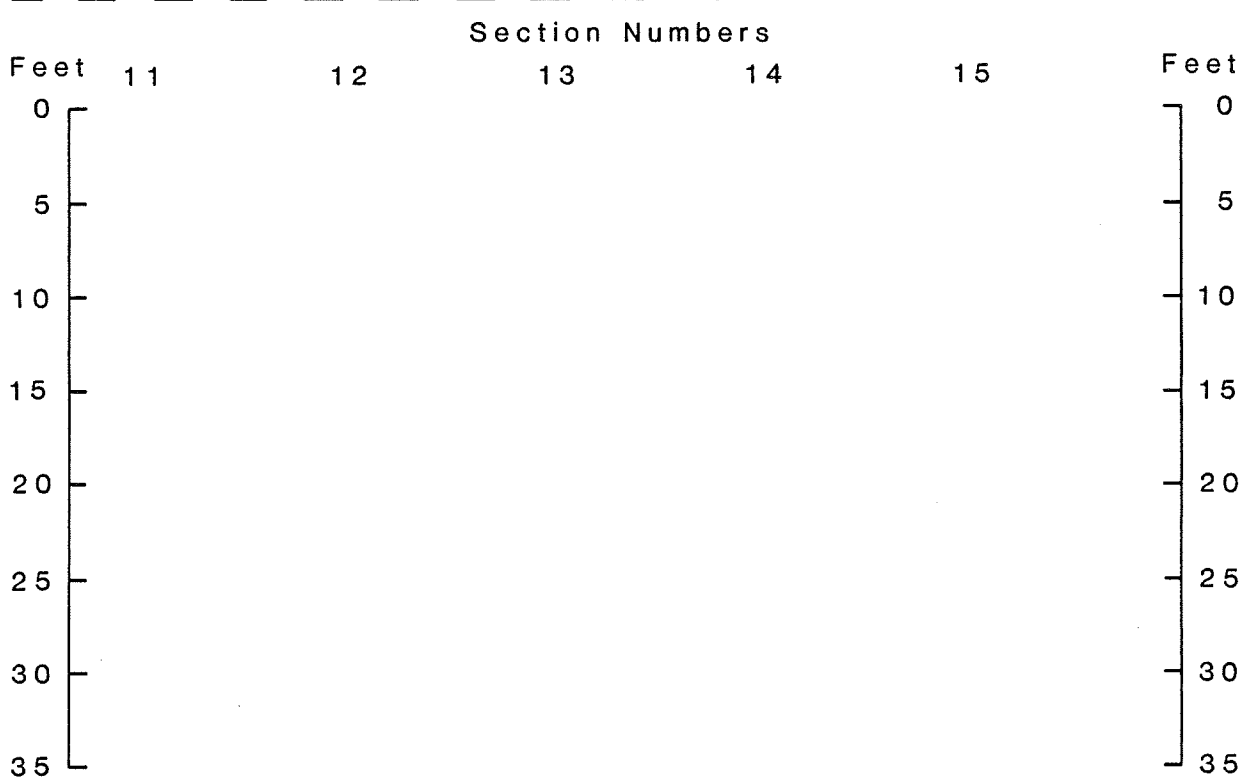
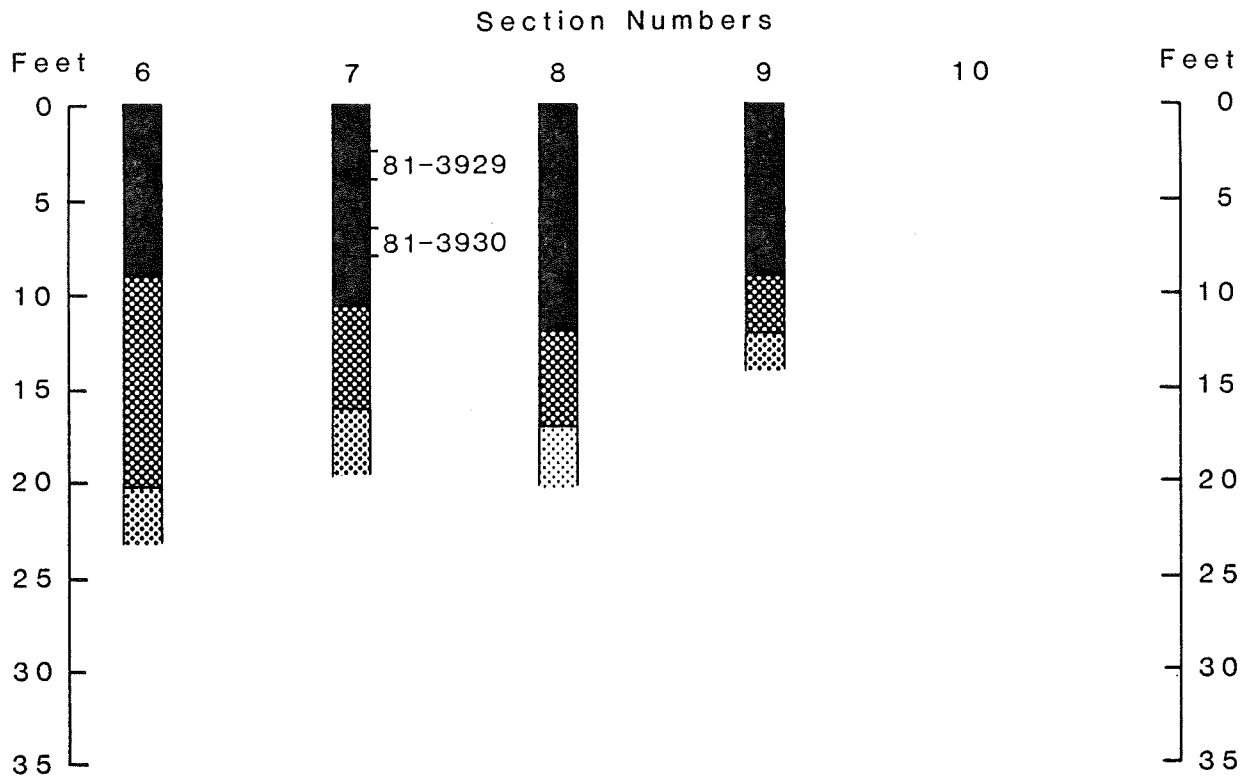


Figure 42a - Continued
SECTIONS AND SAMPLE LOCATIONS

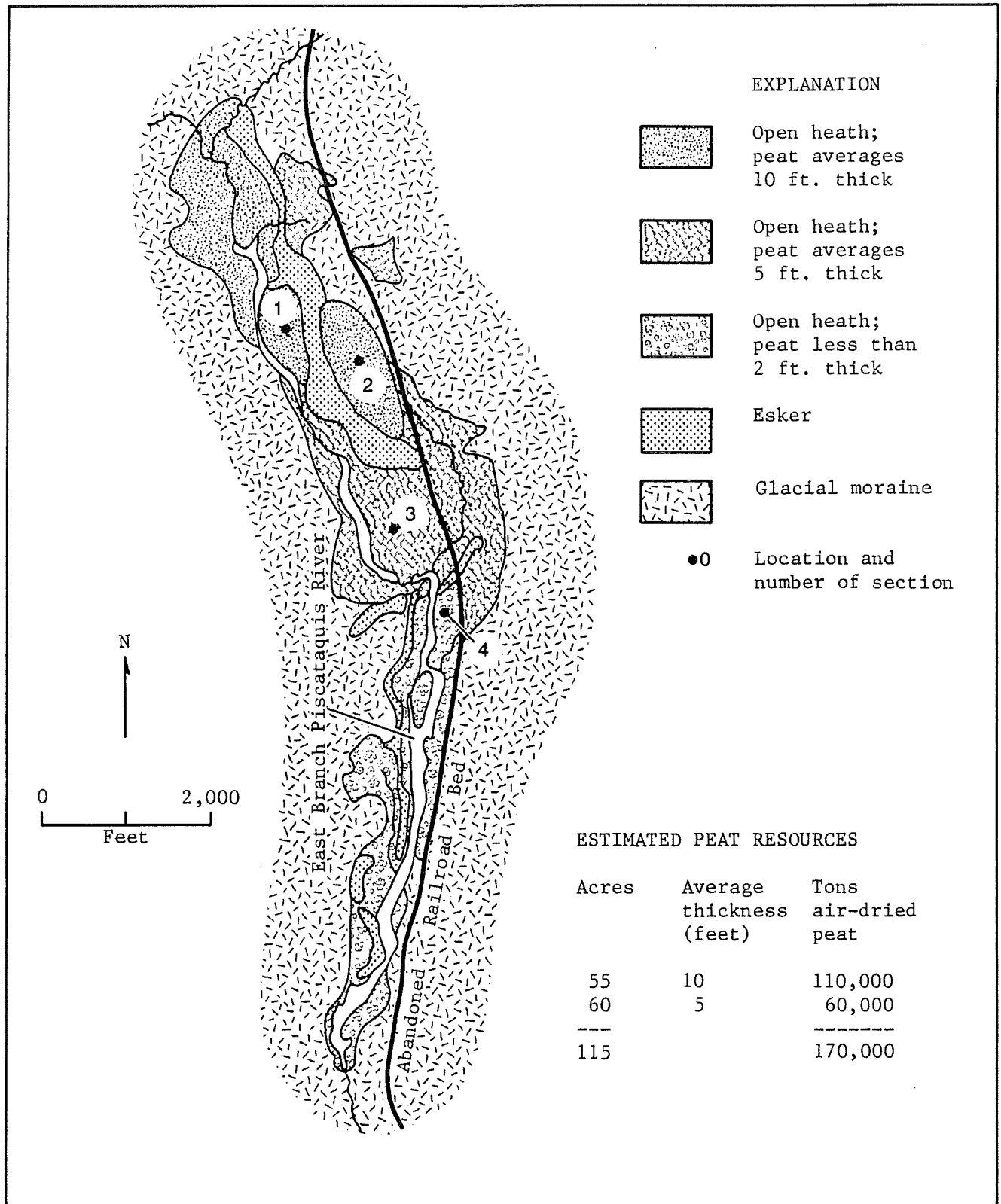


Figure 43. Sketch map of East Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 42 on Index Map).

EXPLANATION OF SECTIONS

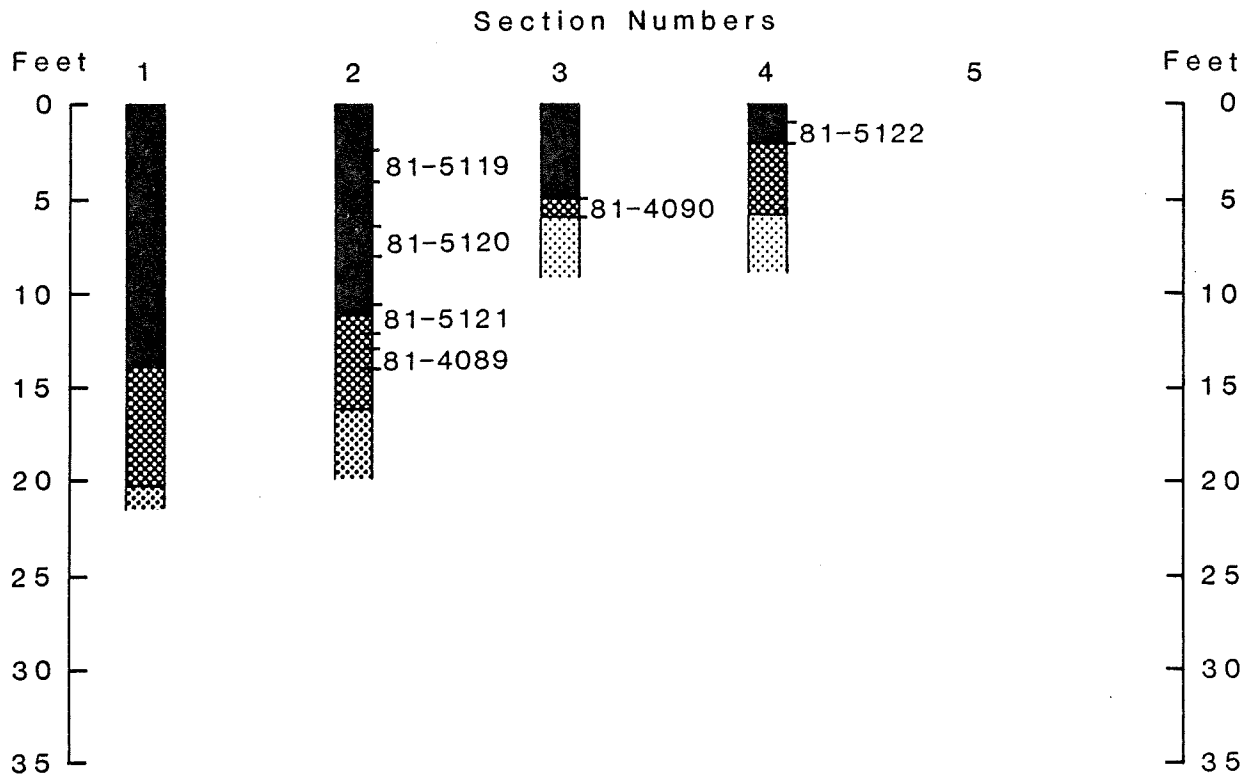
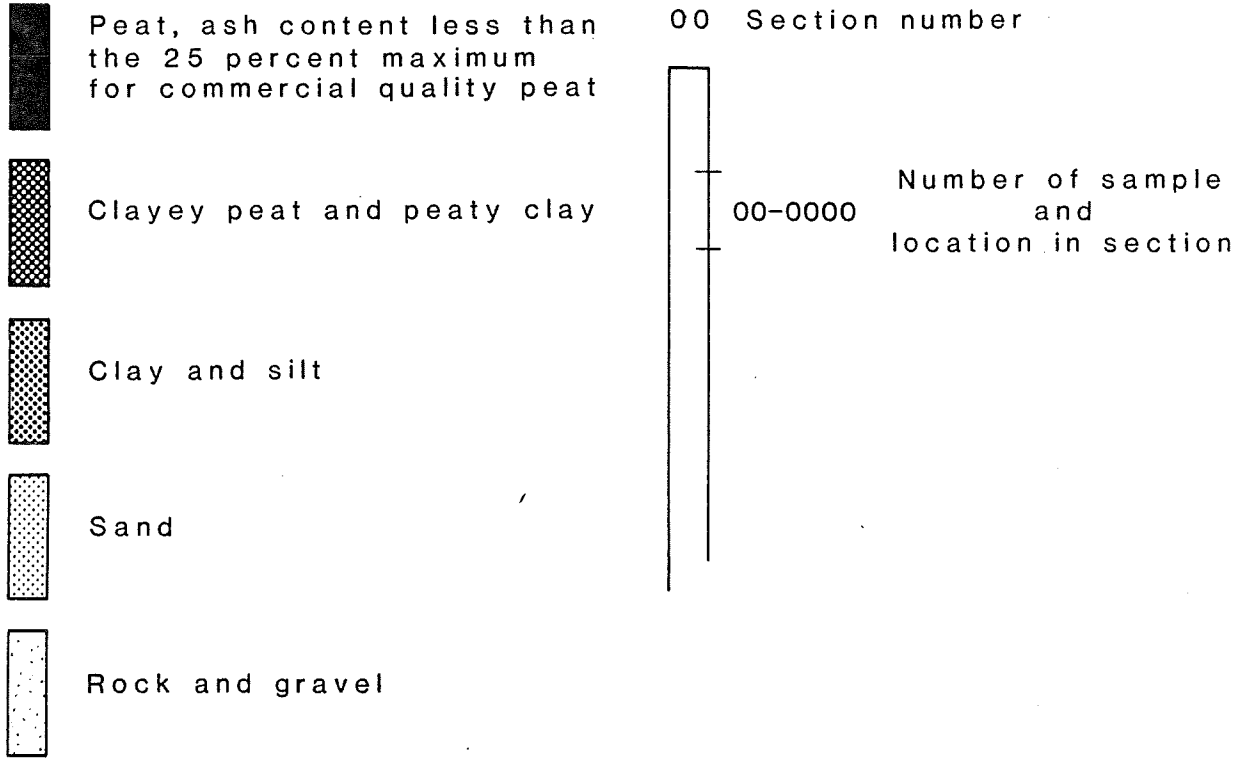


Figure 43a
SECTIONS AND SAMPLE LOCATIONS

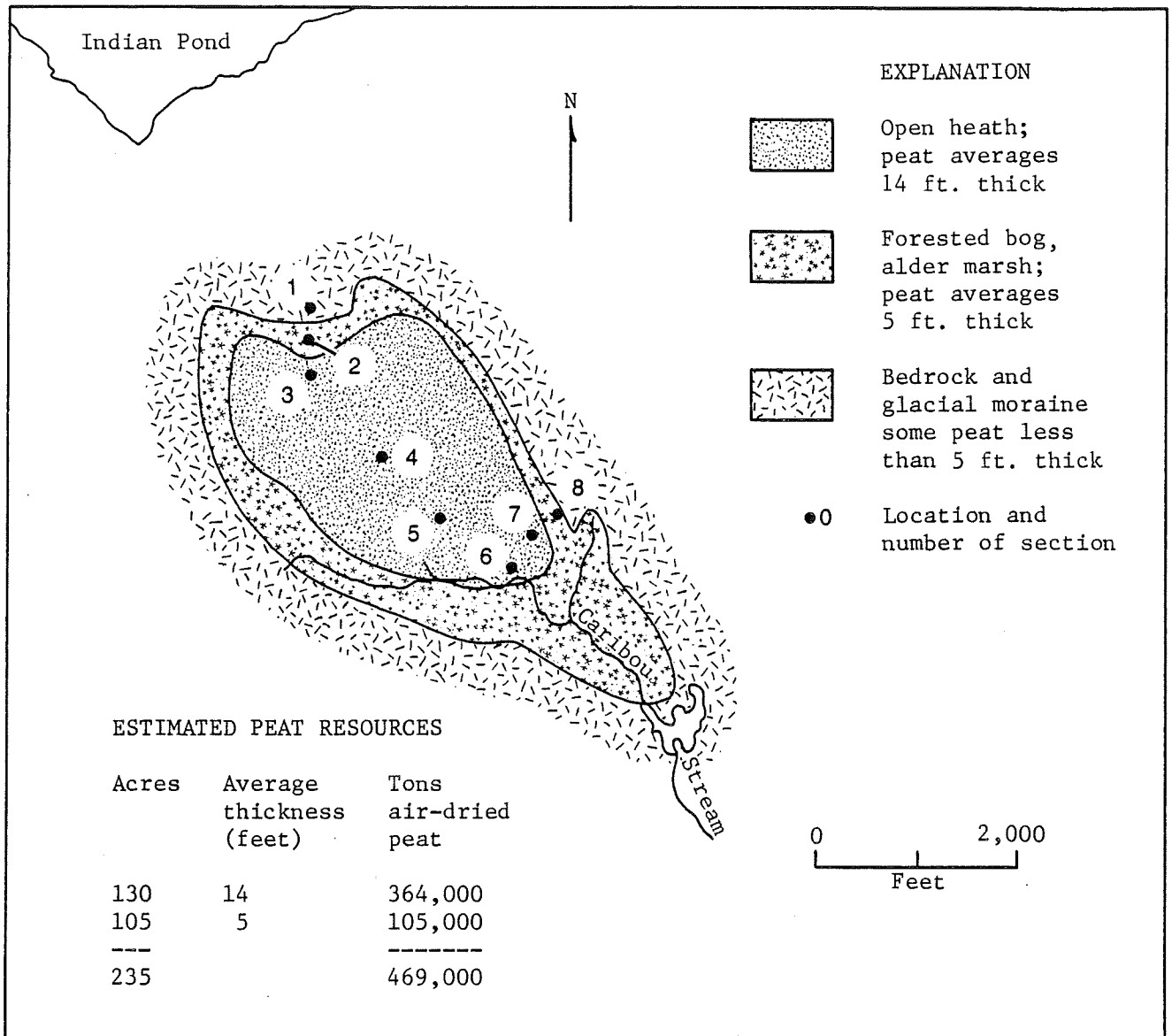


Figure 44. Sketch map of Caribou Bog south of Indian Pond, T7 R9 NWP, Sebec Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 43 on Index Map).

EXPLANATION OF SECTIONS

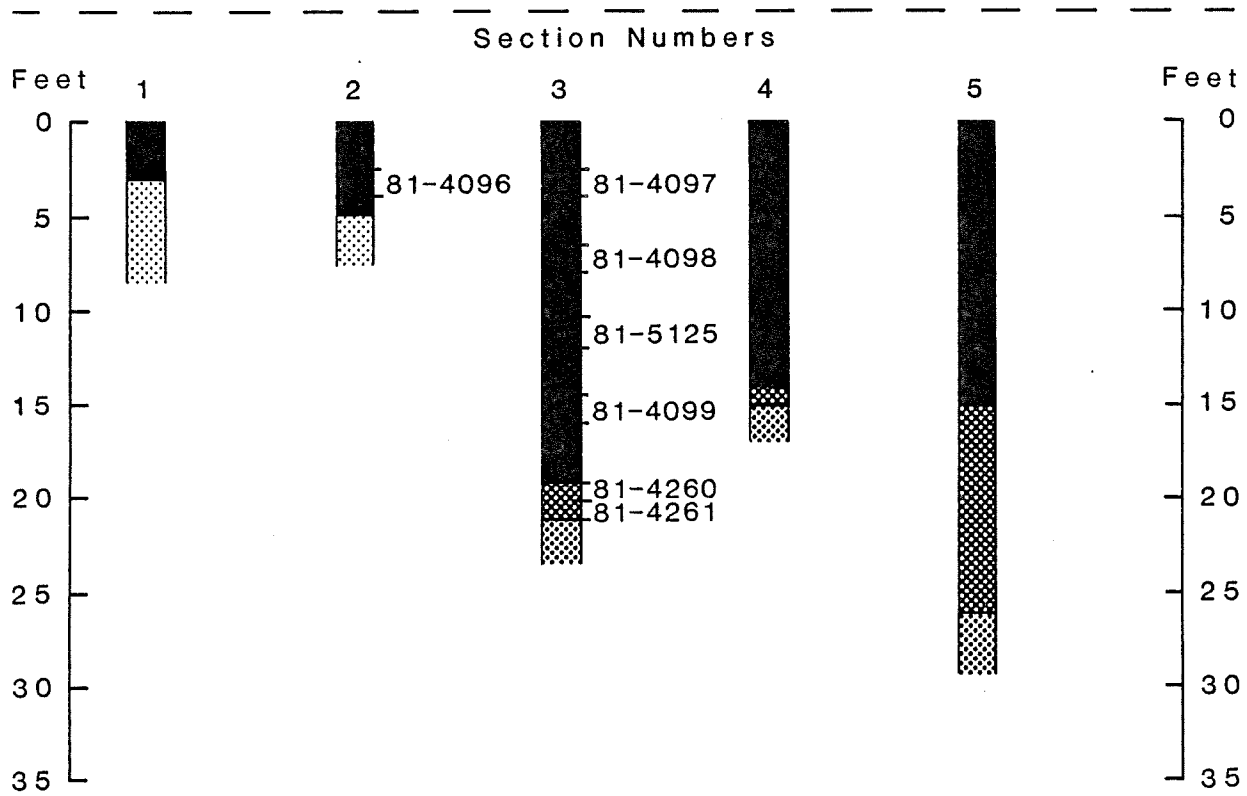
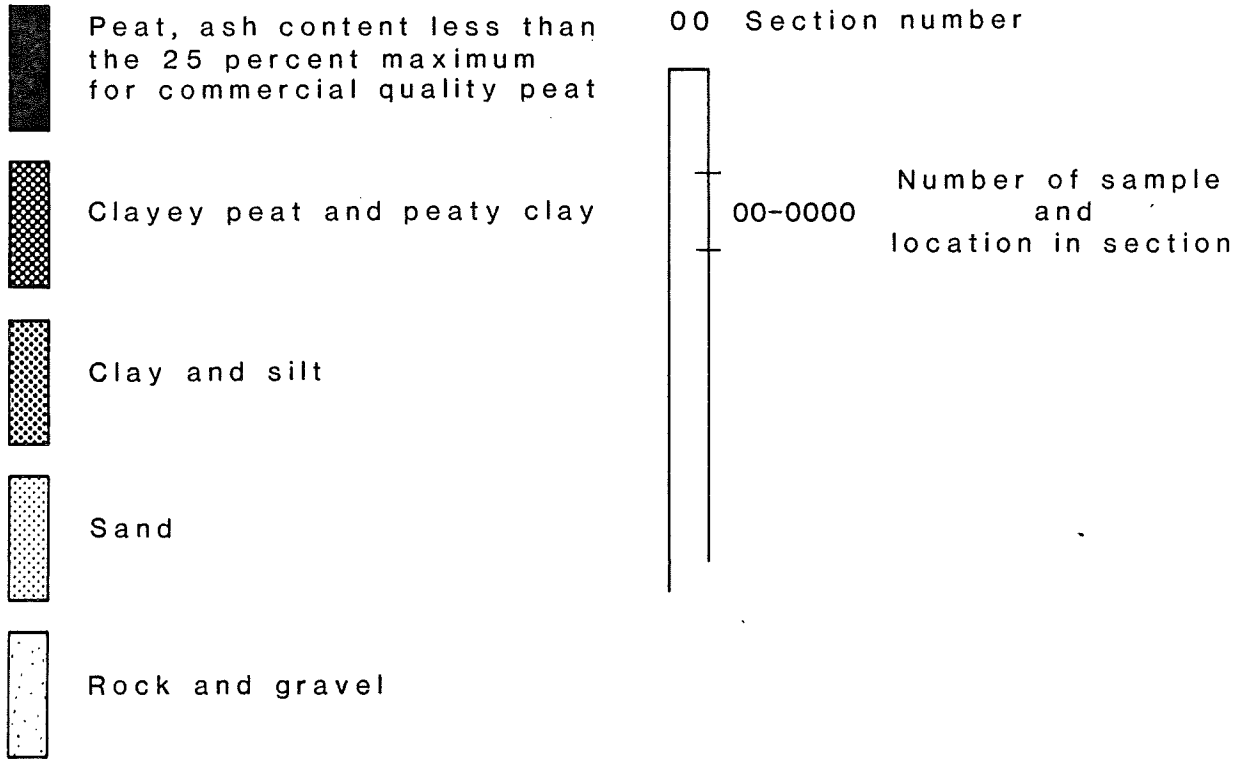


Figure 44a
SECTIONS AND SAMPLE LOCATIONS

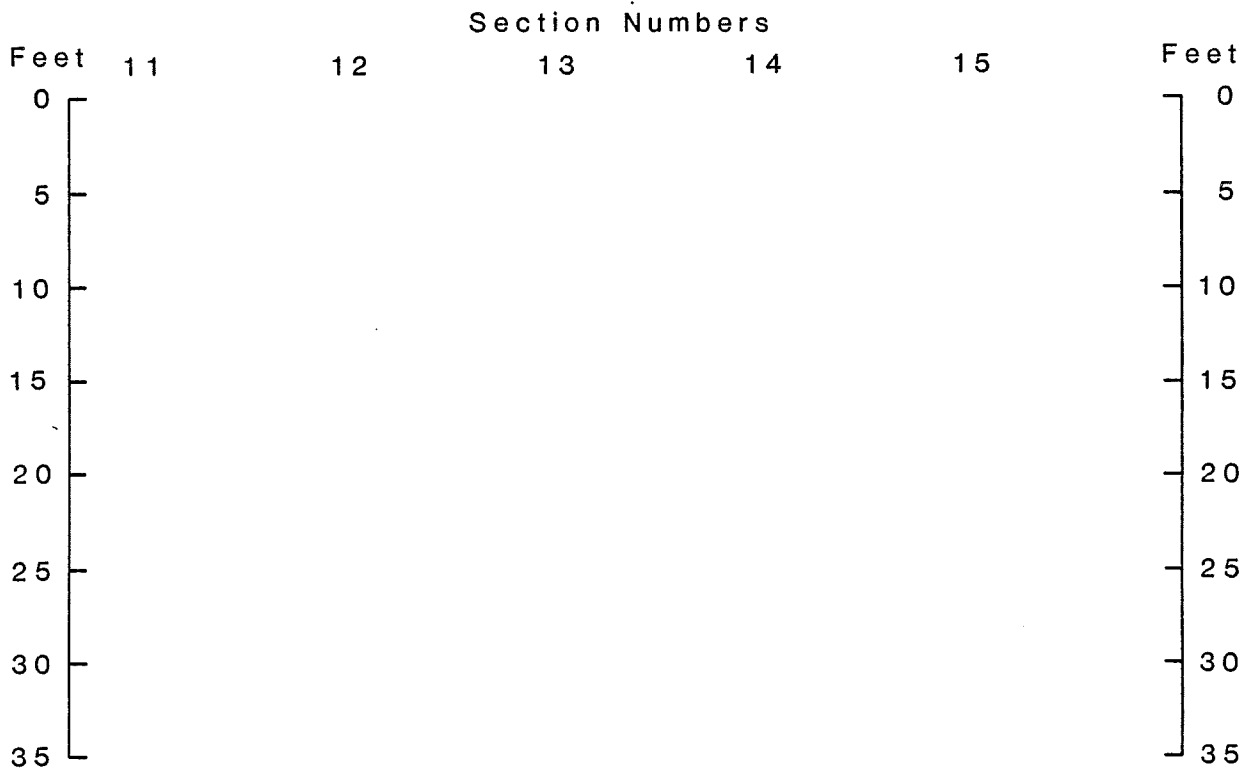
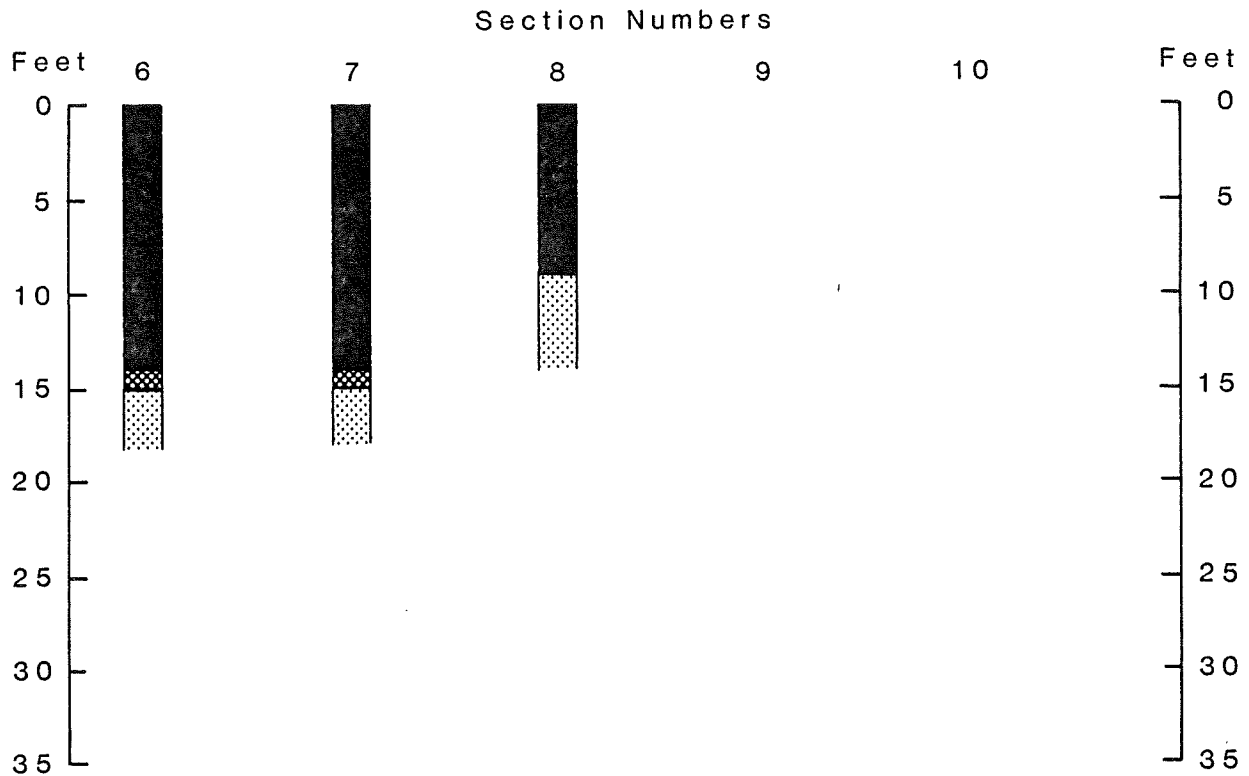


Figure 44a - Continued
SECTIONS AND SAMPLE LOCATIONS

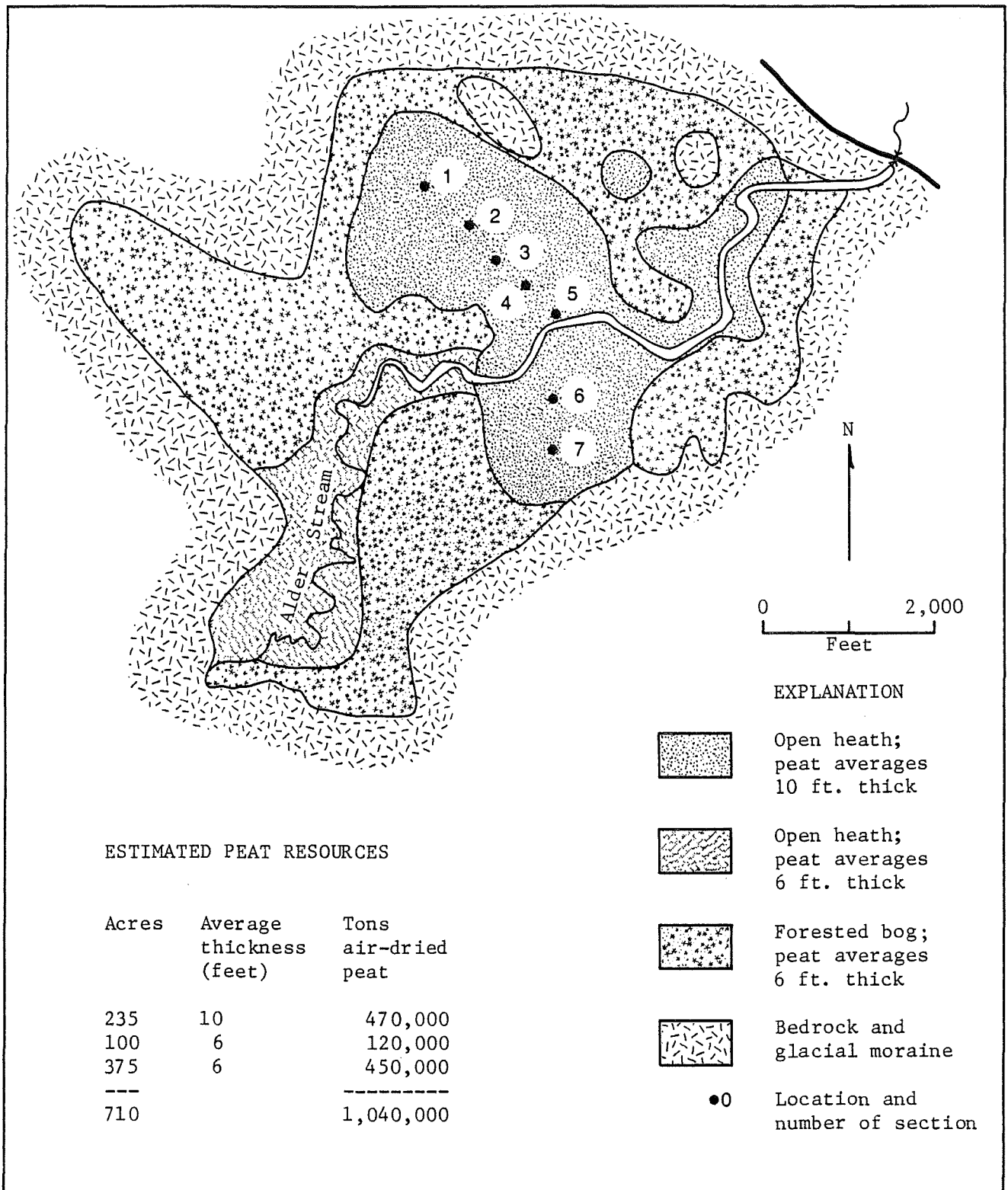


Figure 45. Sketch map of bog along Alder Stream 2 miles northeast of Atkinson Mills, Atkinson Twp., Dover-Foxcroft 15 minute Quadrangle, Piscataquis County, Maine. (Number 44 on Index Map).

EXPLANATION OF SECTIONS

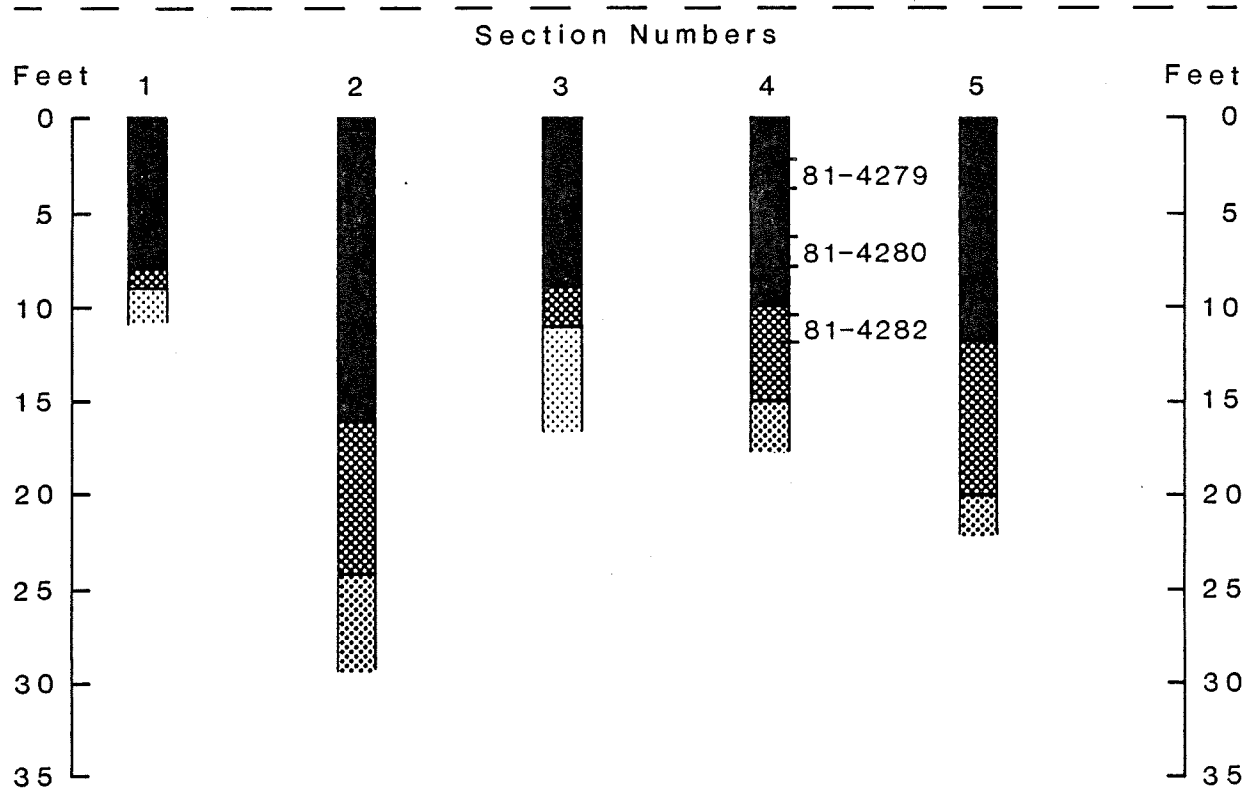
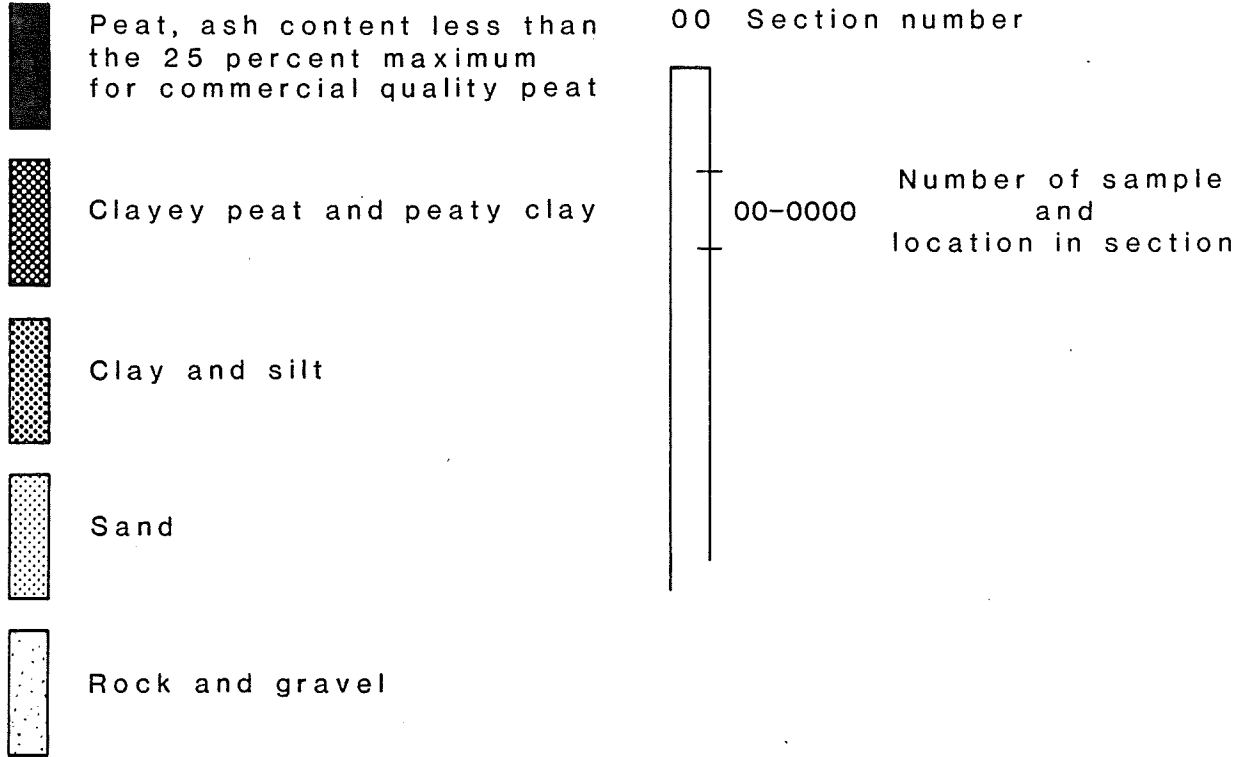


Figure 45a
SECTIONS AND SAMPLE LOCATIONS

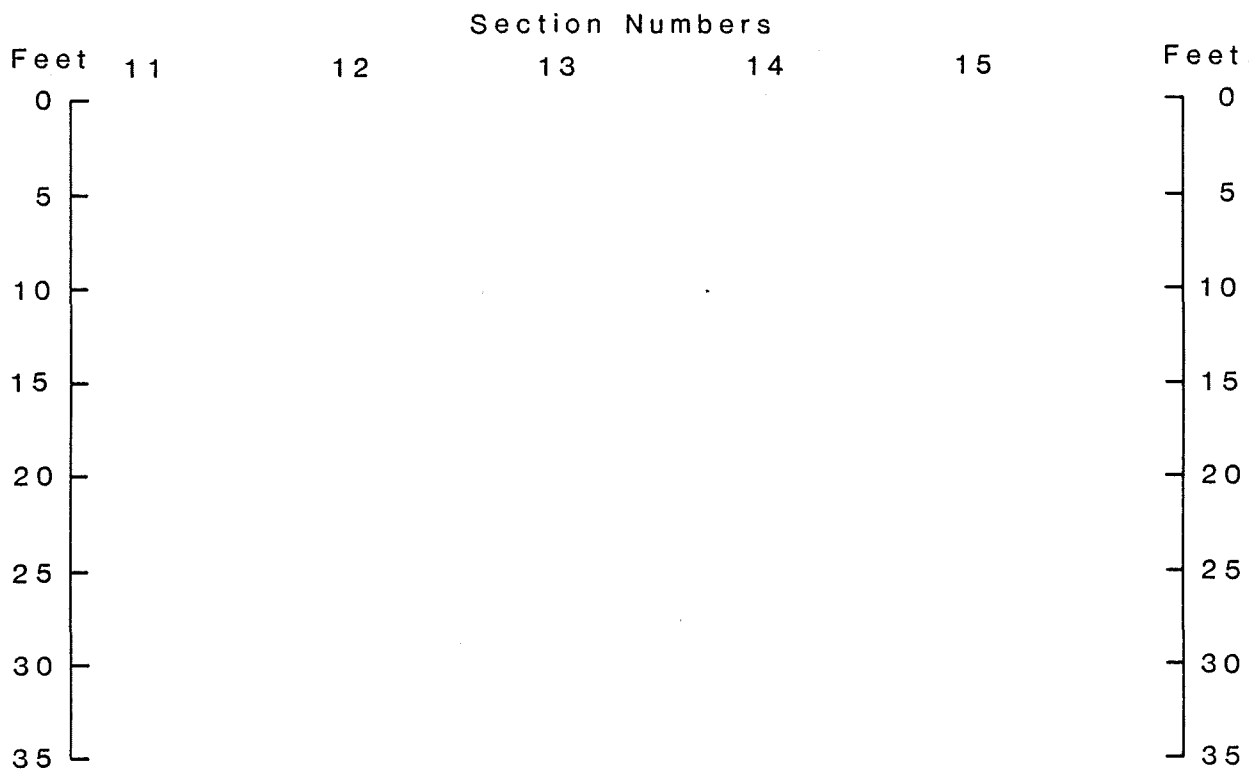
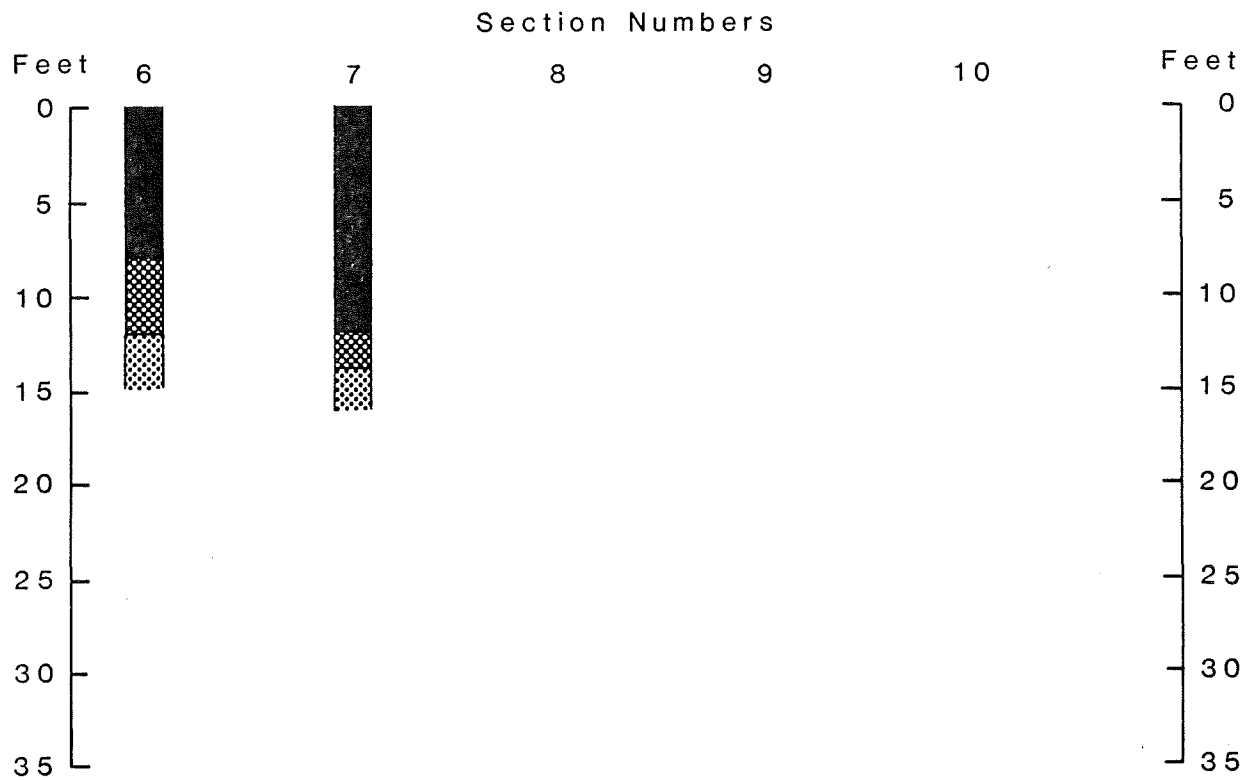


Figure 45a - Continued
SECTIONS AND SAMPLE LOCATIONS

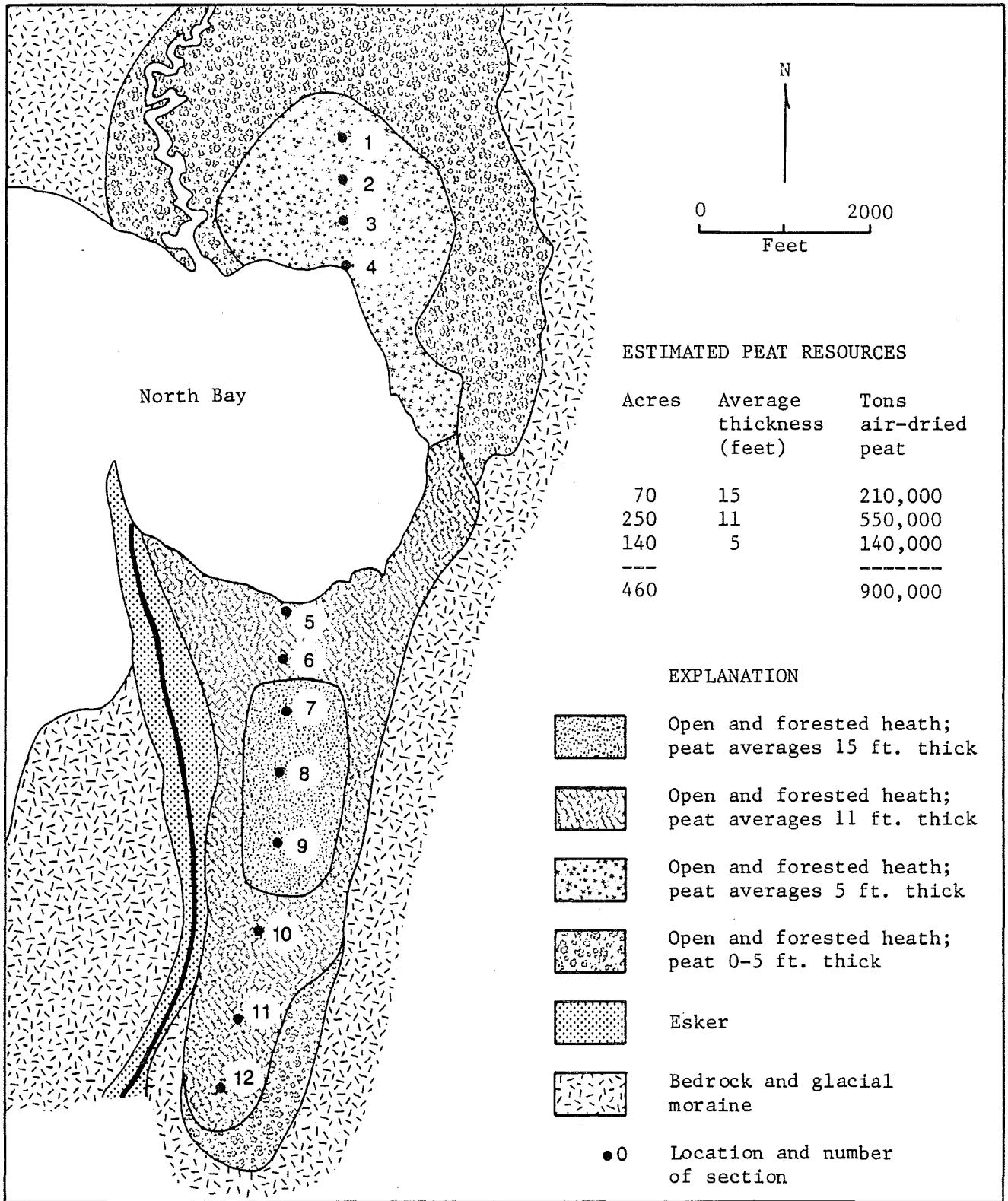


Figure 46. Sketch map of bogs adjacent to North Bay and west of Varney Hill and Bickford Hill, Smithfield and Belgrade Twps., Norridgewock 15 minute Quadrangle, Somerset and Kennebec Counties, Maine. (Number 45 on Index Map).

EXPLANATION OF SECTIONS

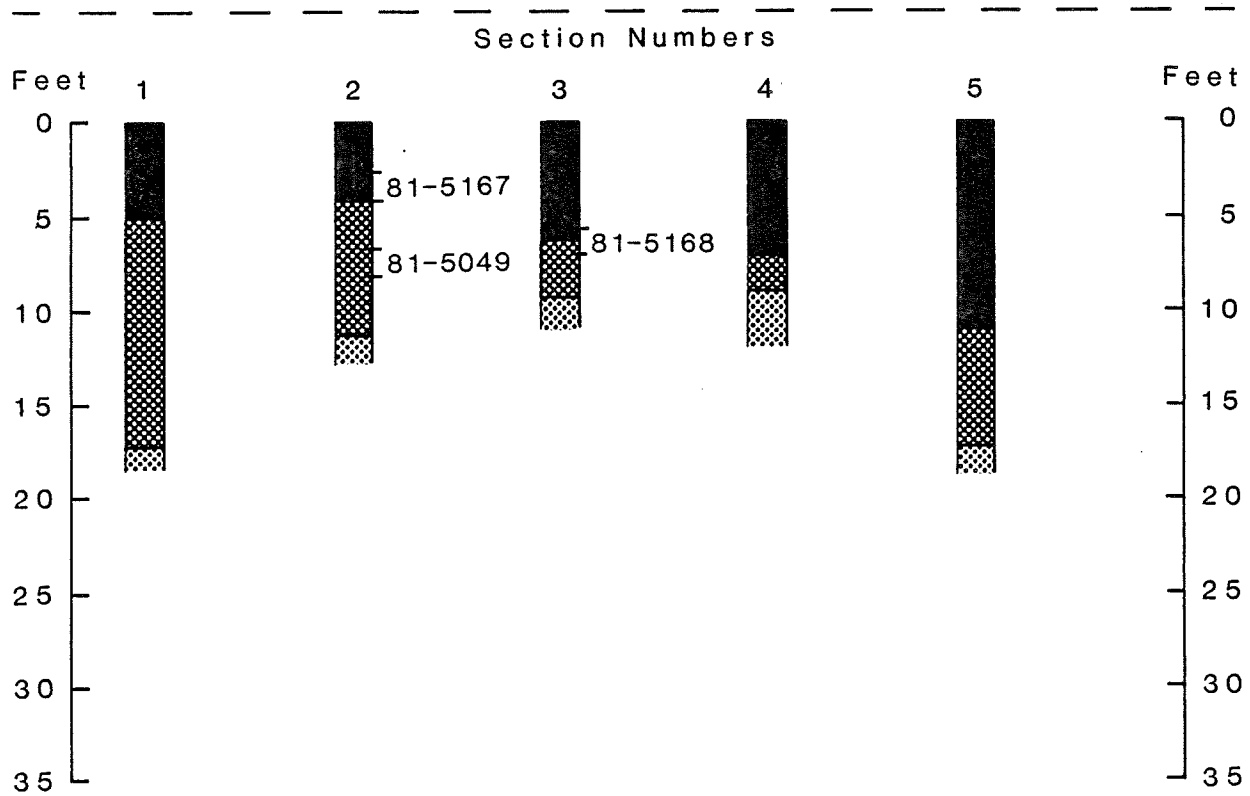
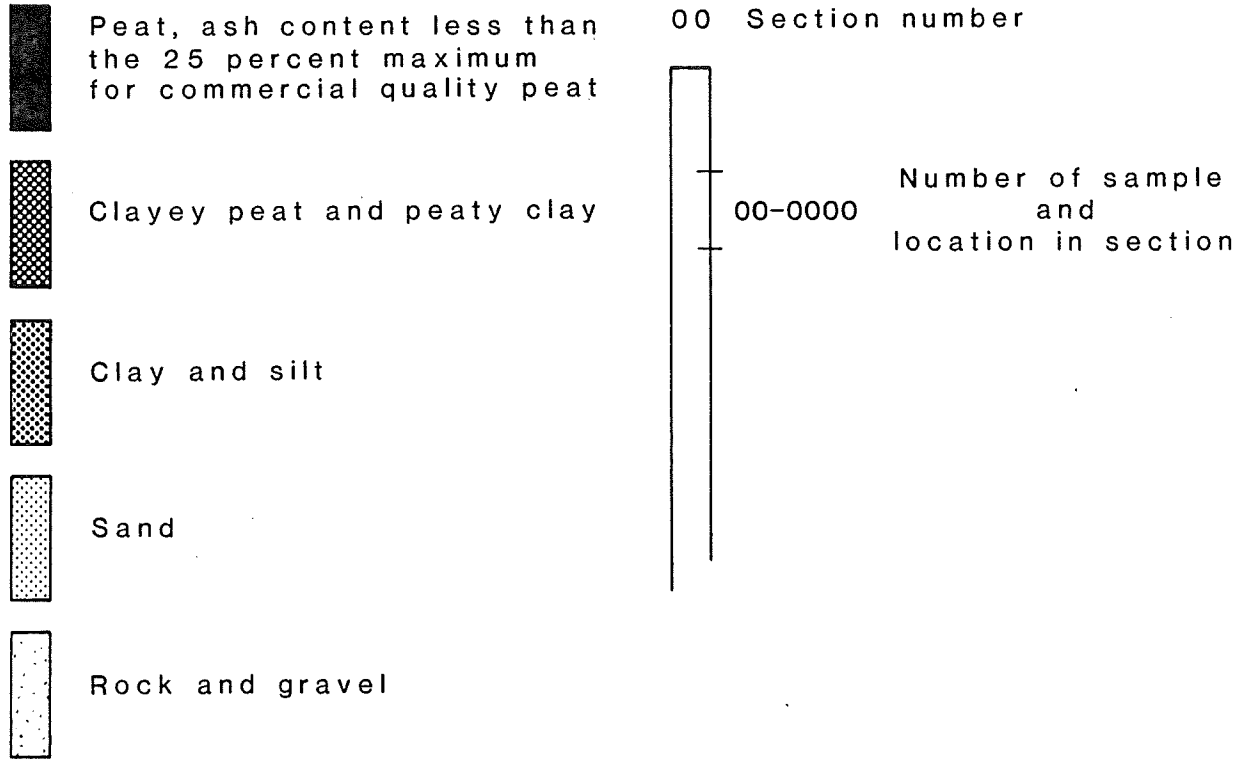


Figure 46a
SECTIONS AND SAMPLE LOCATIONS

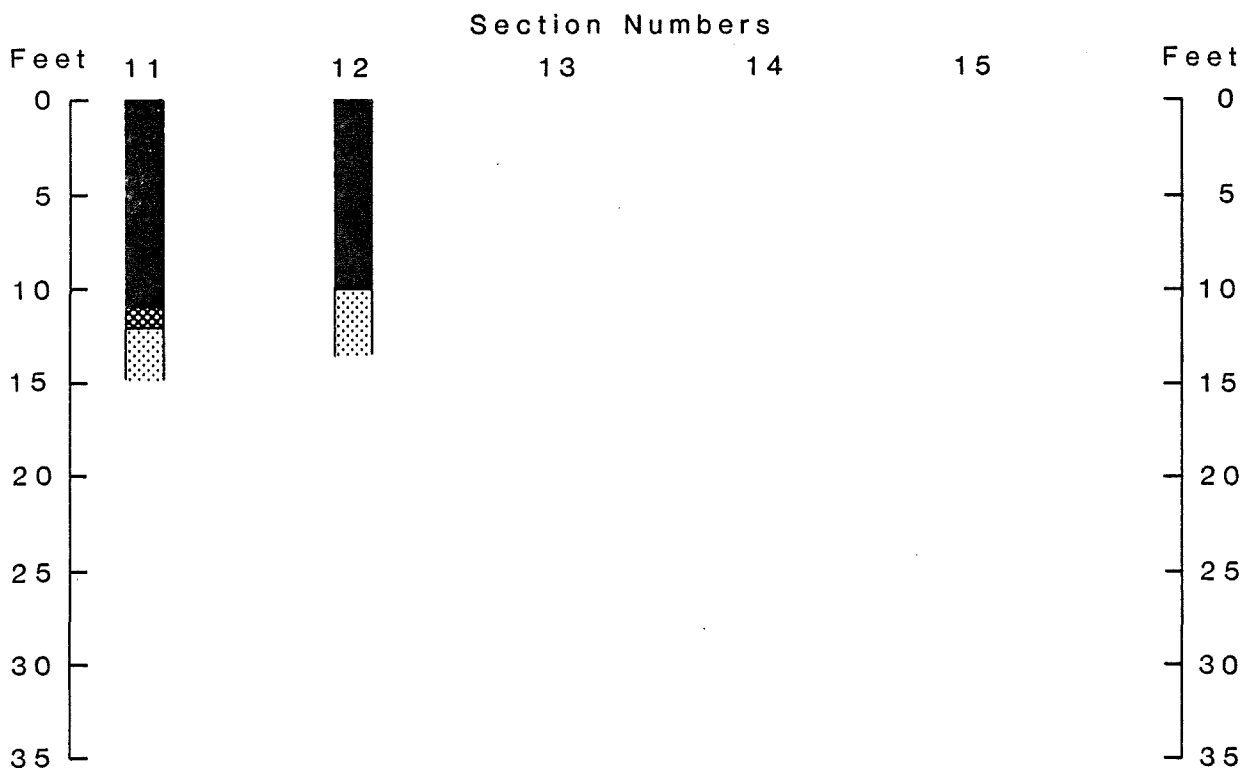
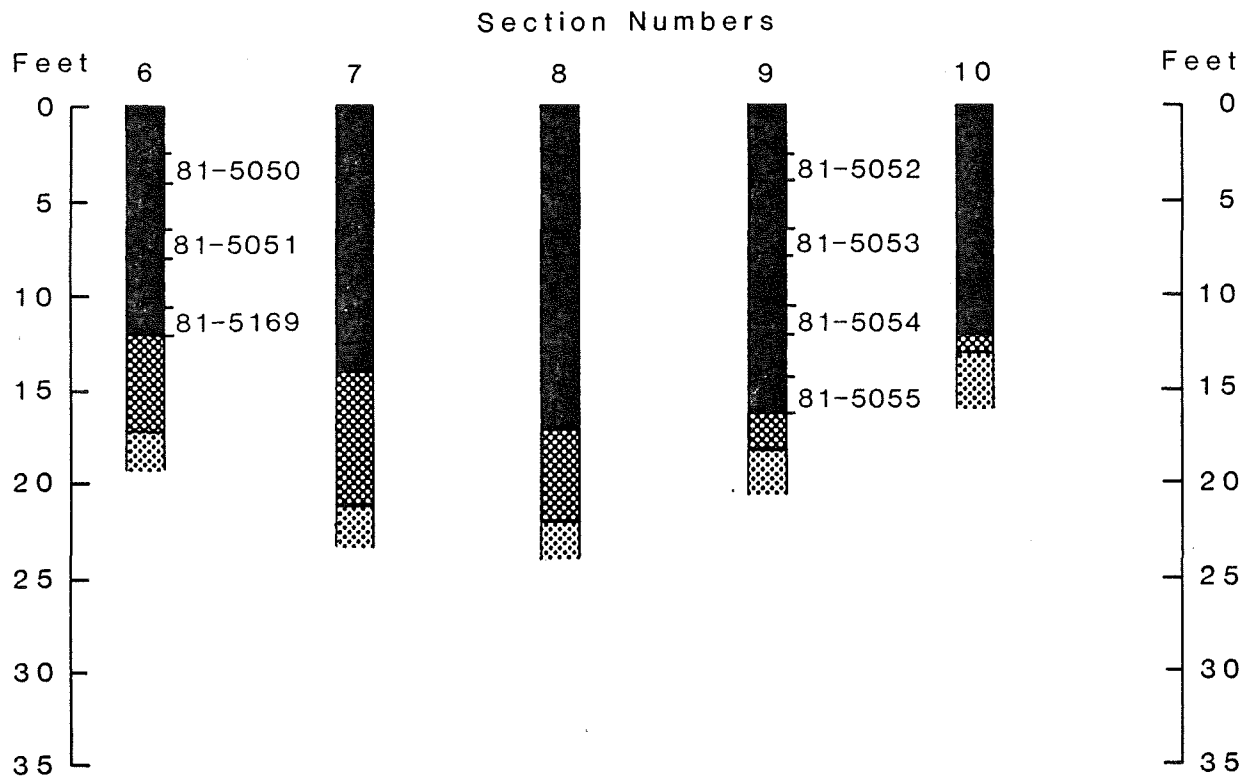


Figure 46a - Continued
SECTIONS AND SAMPLE LOCATIONS

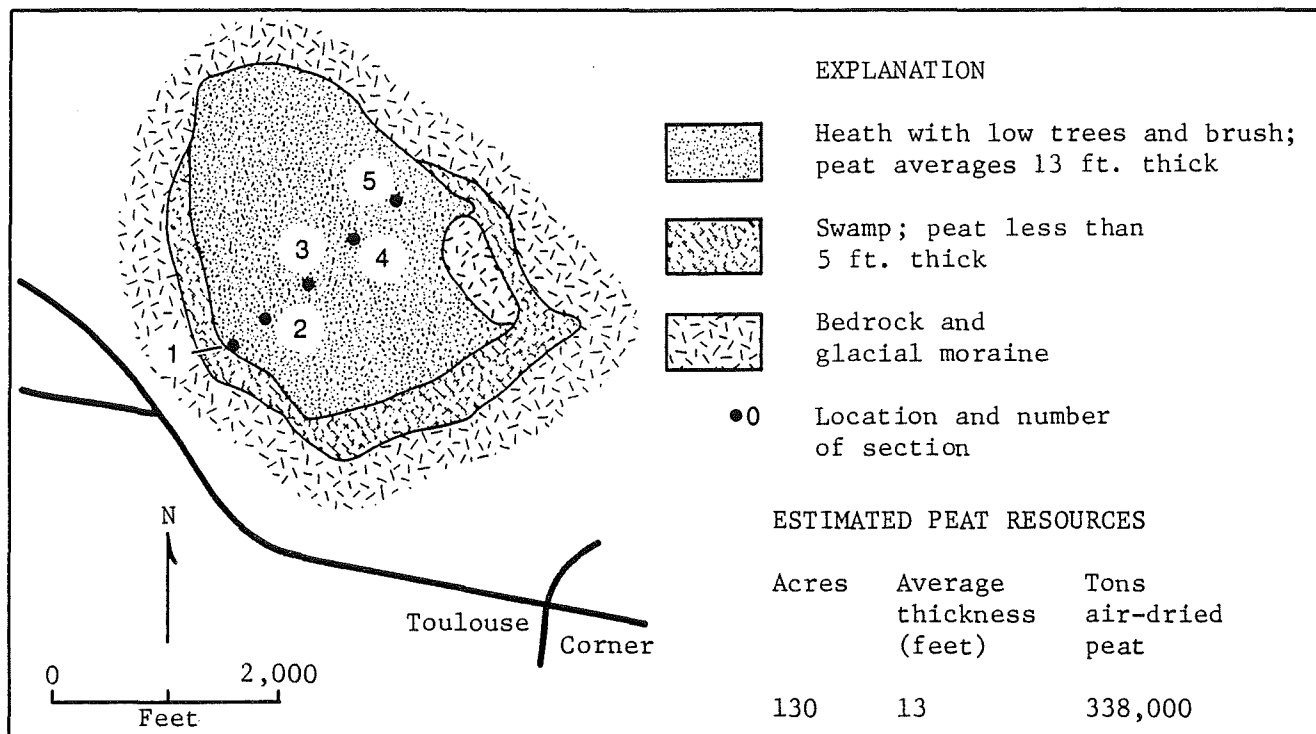


Figure 47. Sketch map of bog northwest of Toulouse Corner, Fairfield Twp., Waterville 15 minute Quadrangle, Somerset County, Maine. (Number 46 on Index Map).

EXPLANATION OF SECTIONS

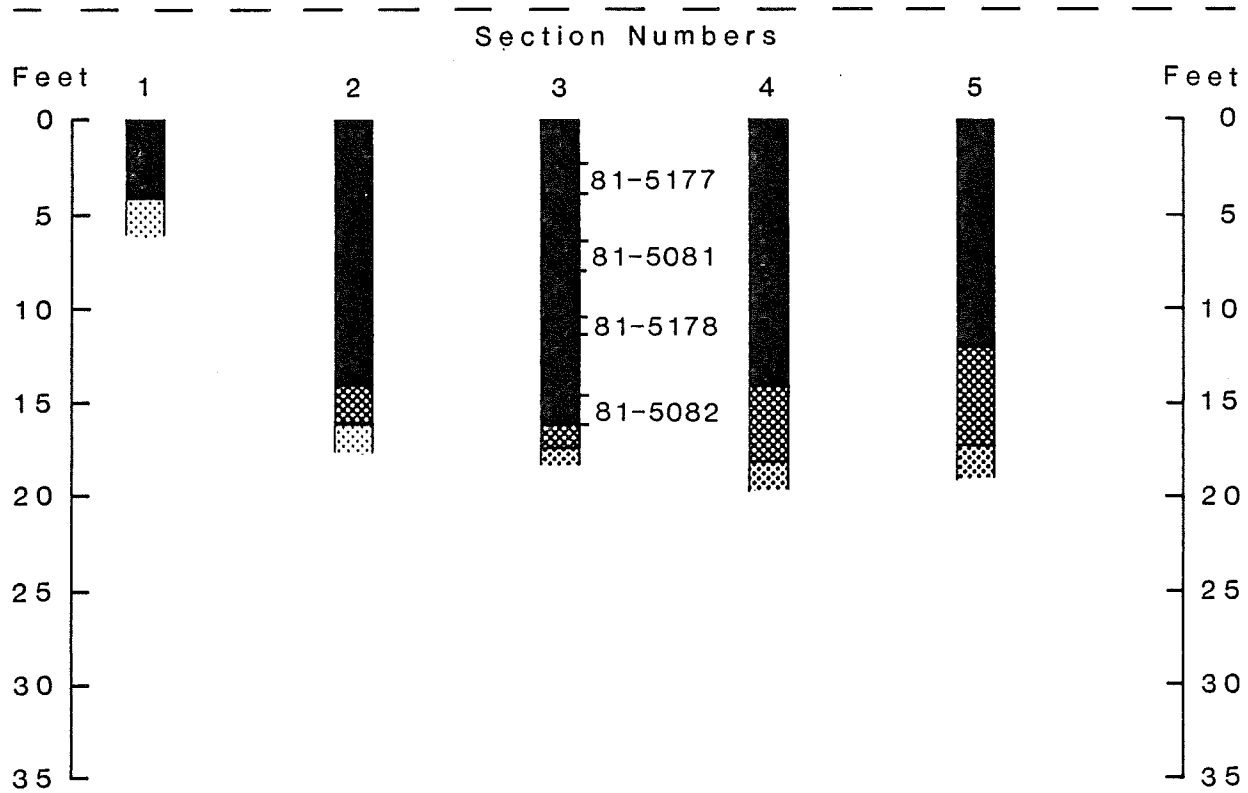
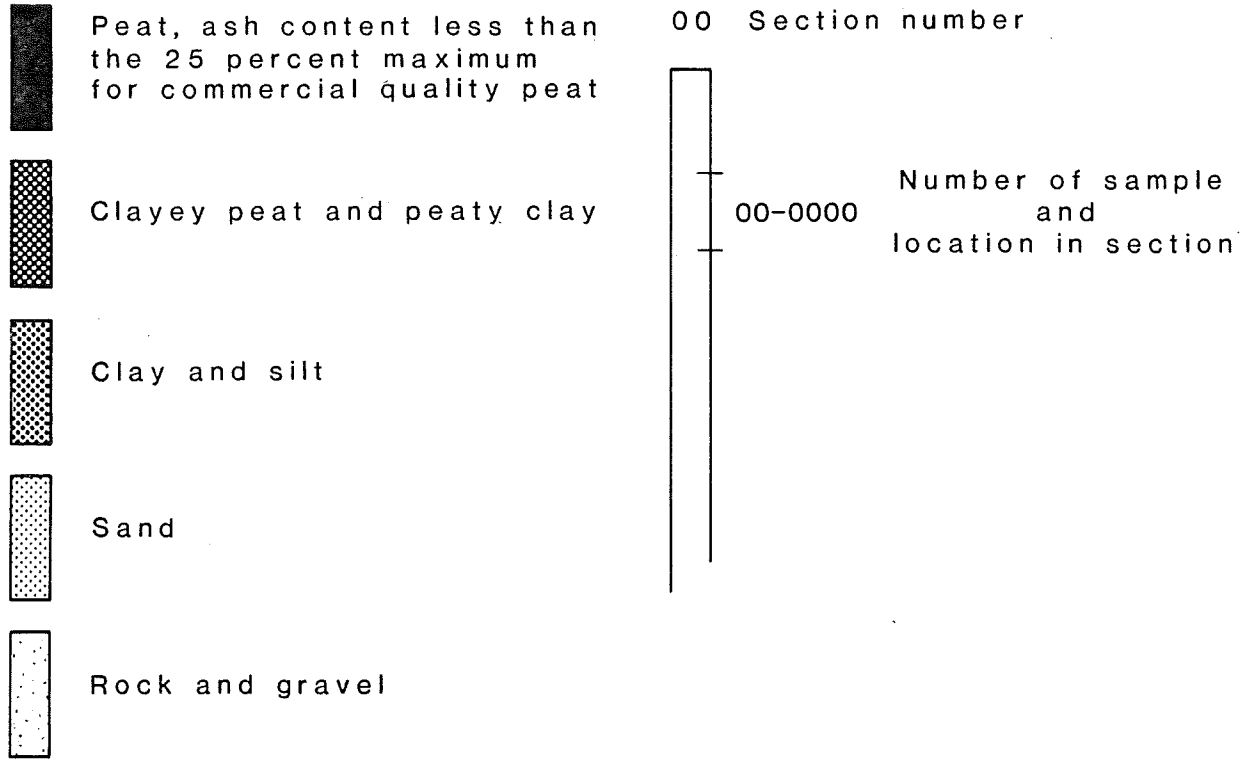


Figure 47a
SECTIONS AND SAMPLE LOCATIONS

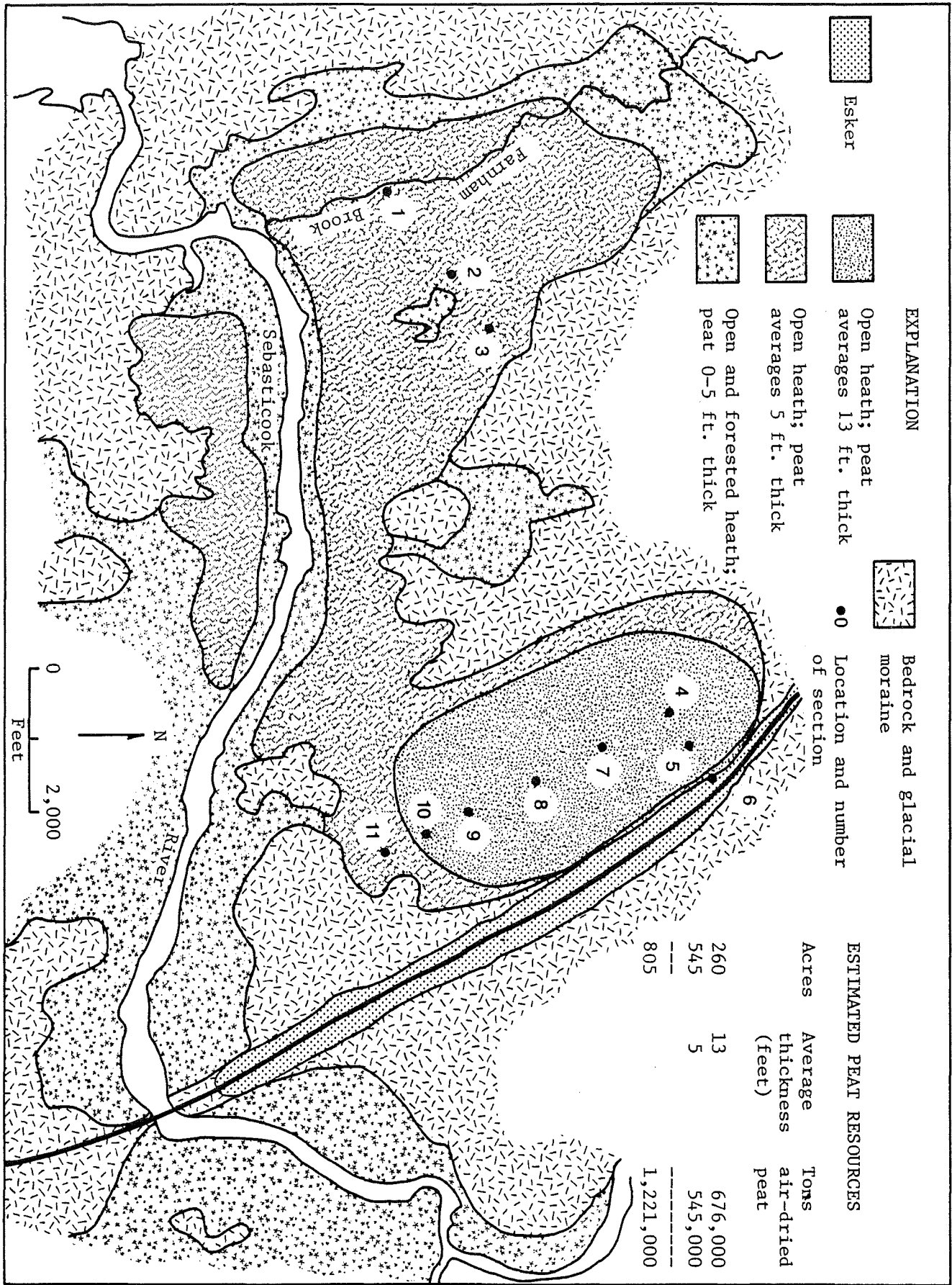


Figure 48. Sketch map of Big Meadow Bog south of Pittsfield, Pittsfield and Detroit Twp., Pittsfield 15 minute Quadrangle, Somerset County, Maine. (Number 47 on Index Map).

EXPLANATION OF SECTIONS

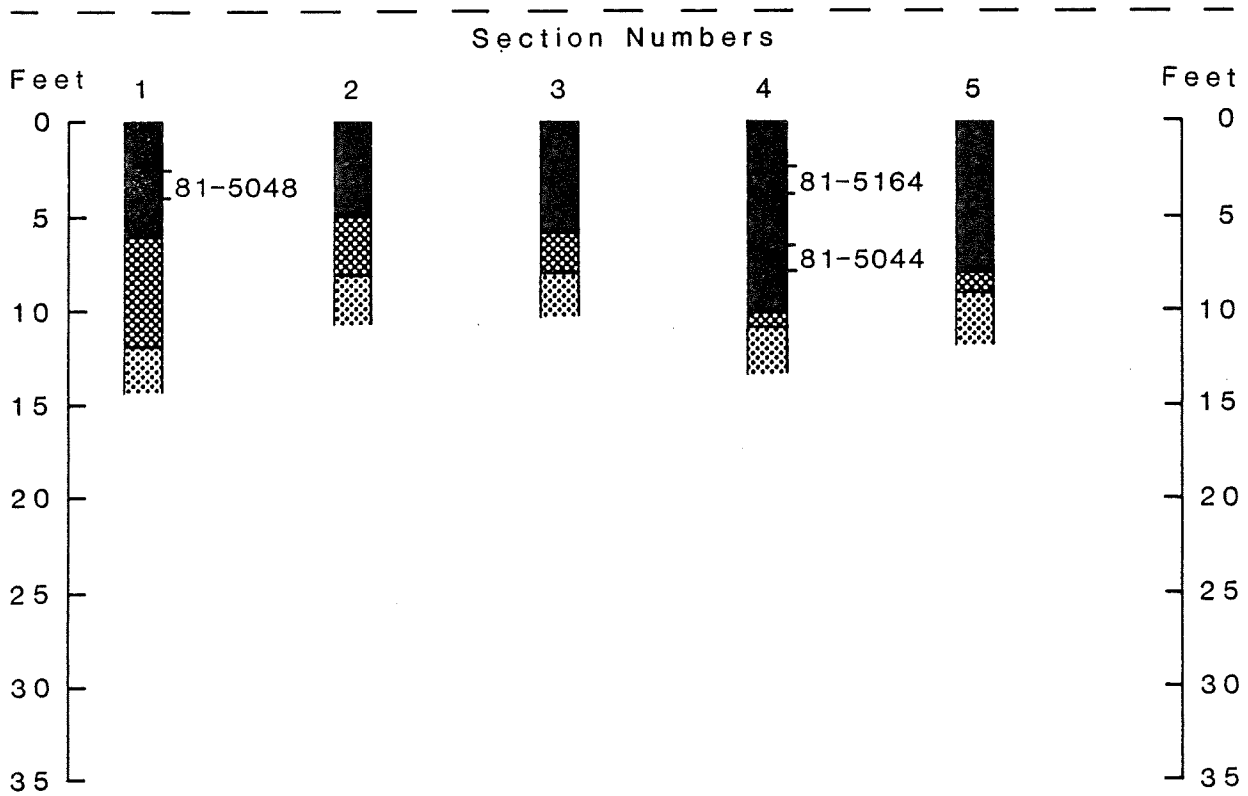
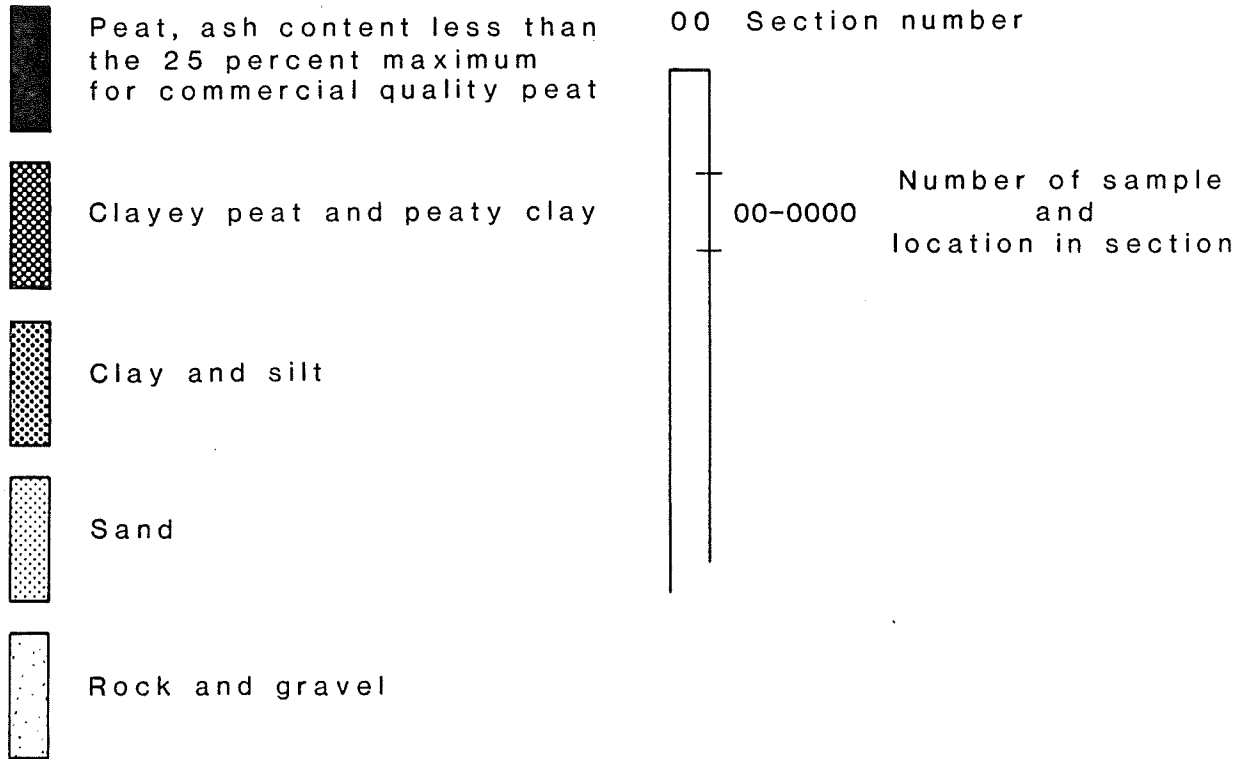


Figure 48a
SECTIONS AND SAMPLE LOCATIONS

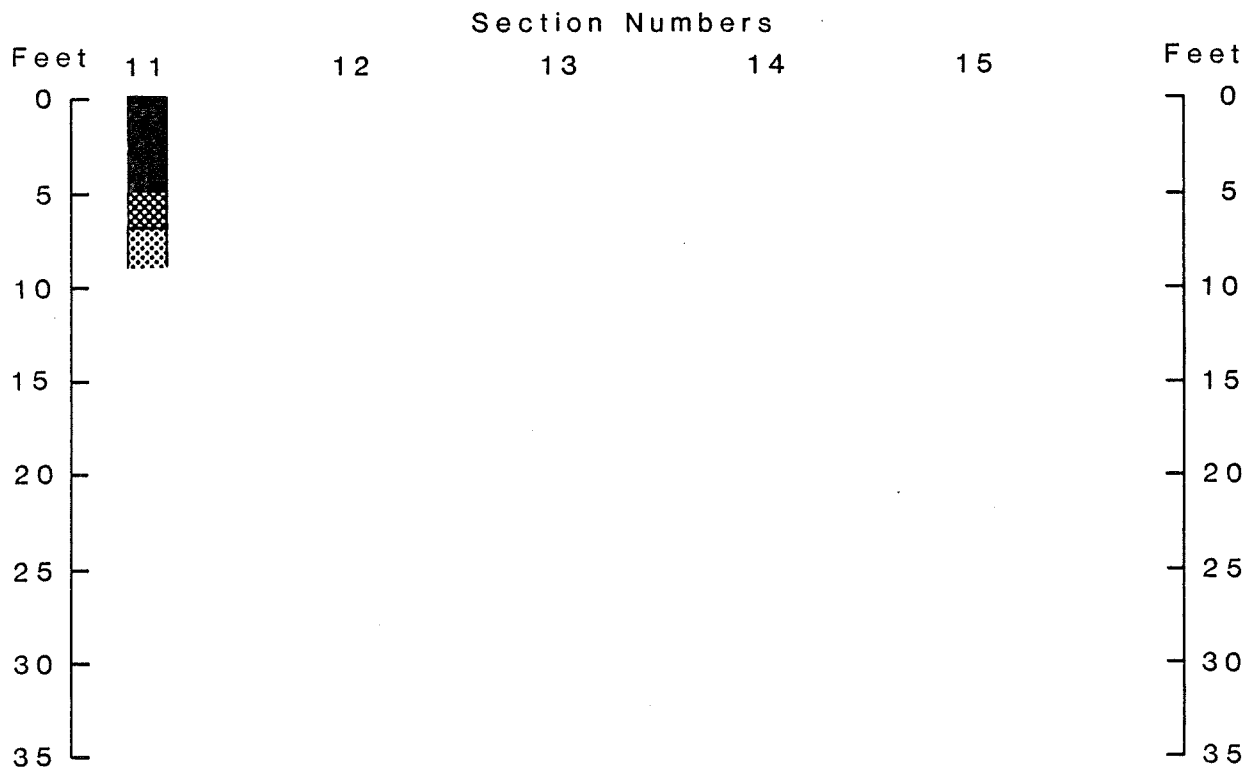
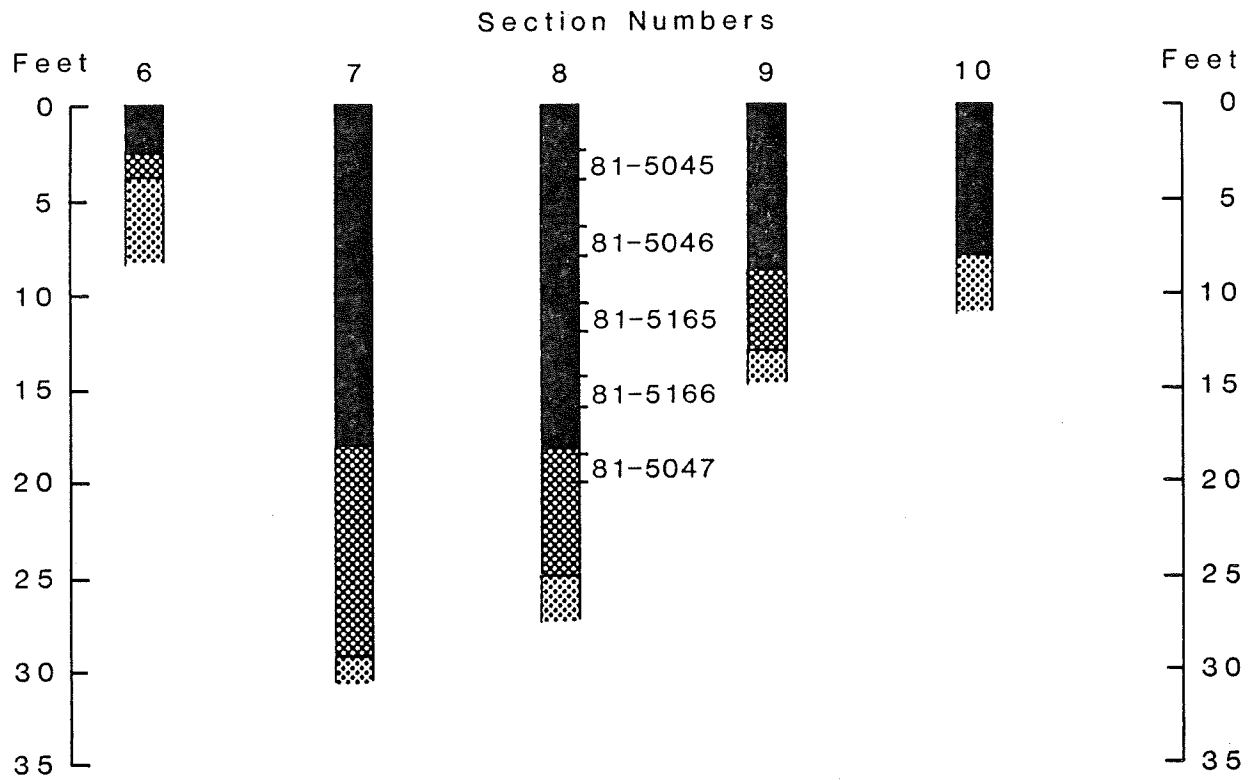


Figure 48a - Continued
SECTIONS AND SAMPLE LOCATIONS

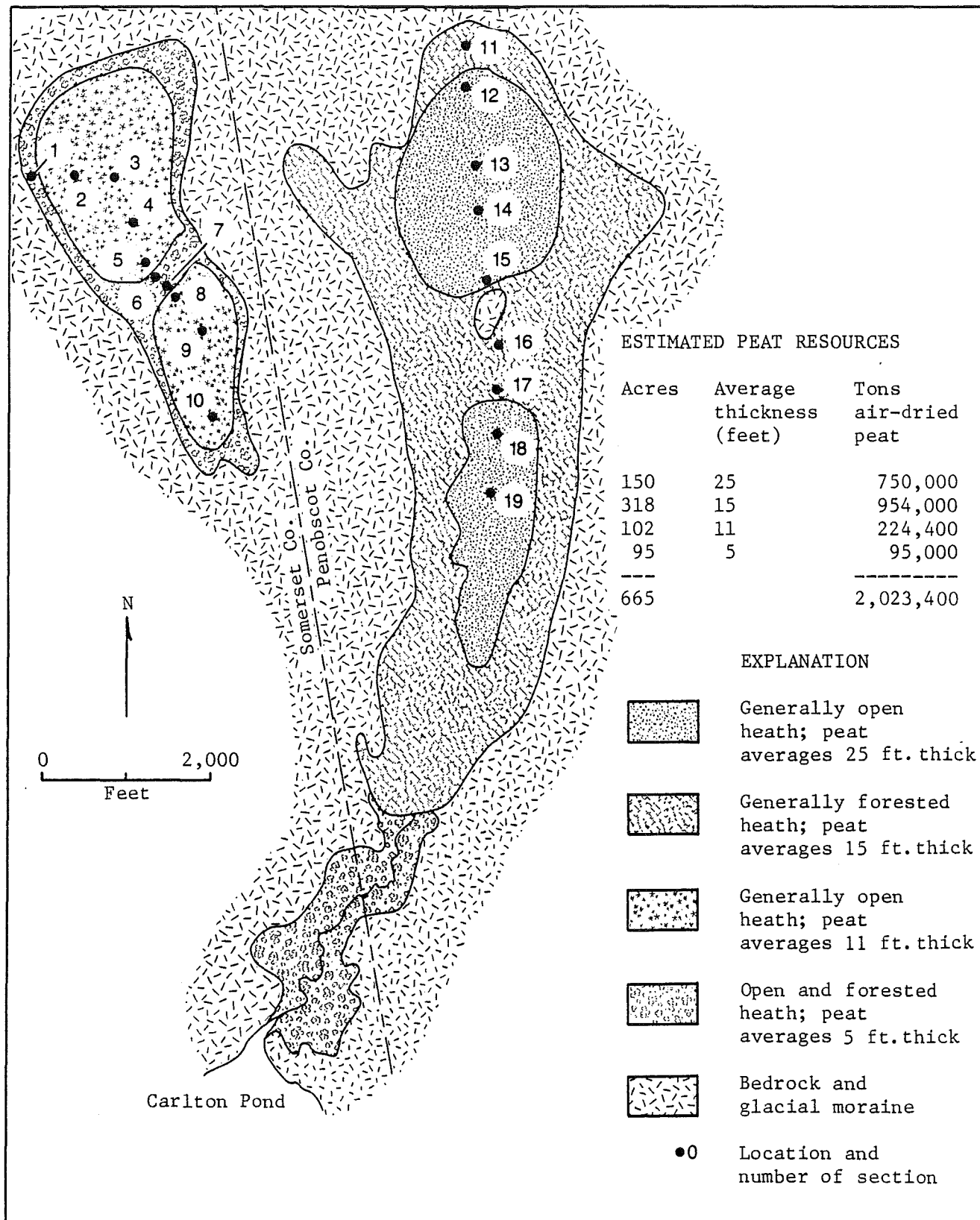


Figure 49. Sketch map of bogs south of Detroit and north of Carlton Pond, Detroit and Plymouth Twps., Pittsfield and Burnham 15 minute Quadrangles, Somerset and Penobscot Counties, Maine. (Number 48 on Index Map).

EXPLANATION OF SECTIONS

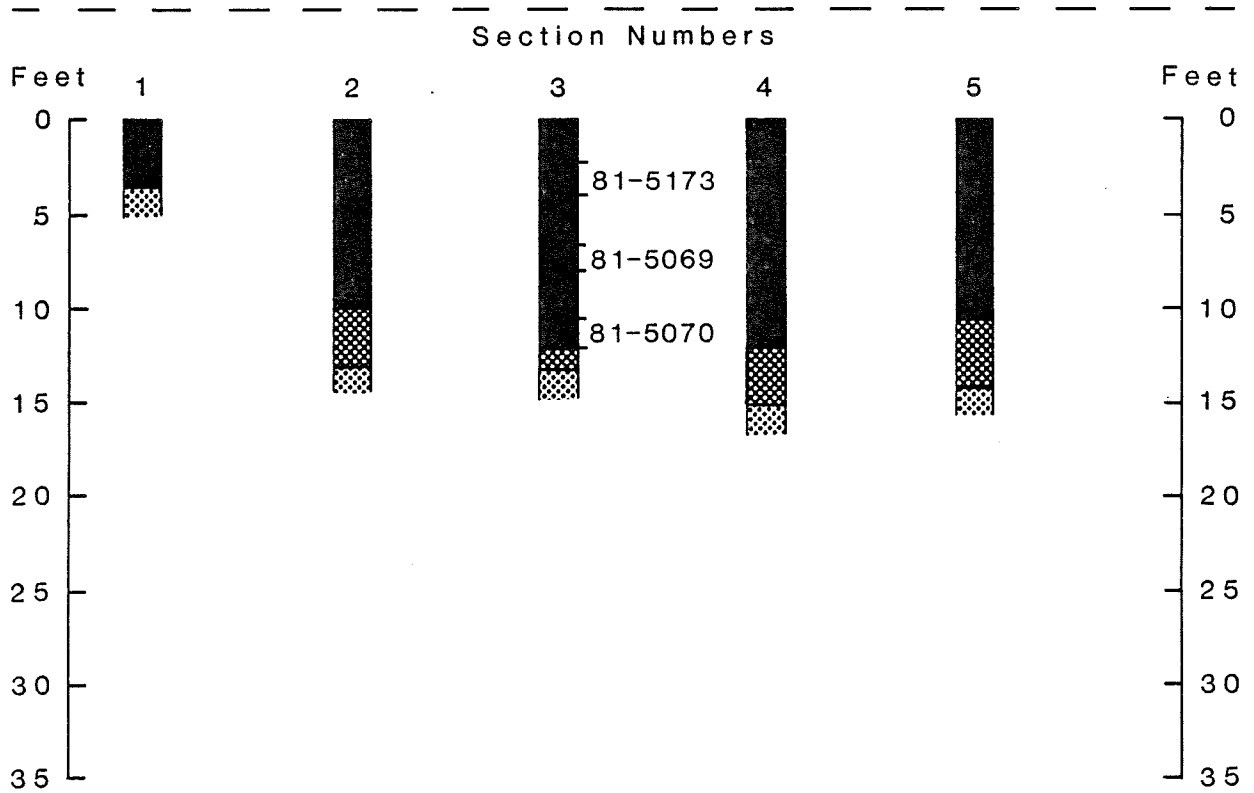
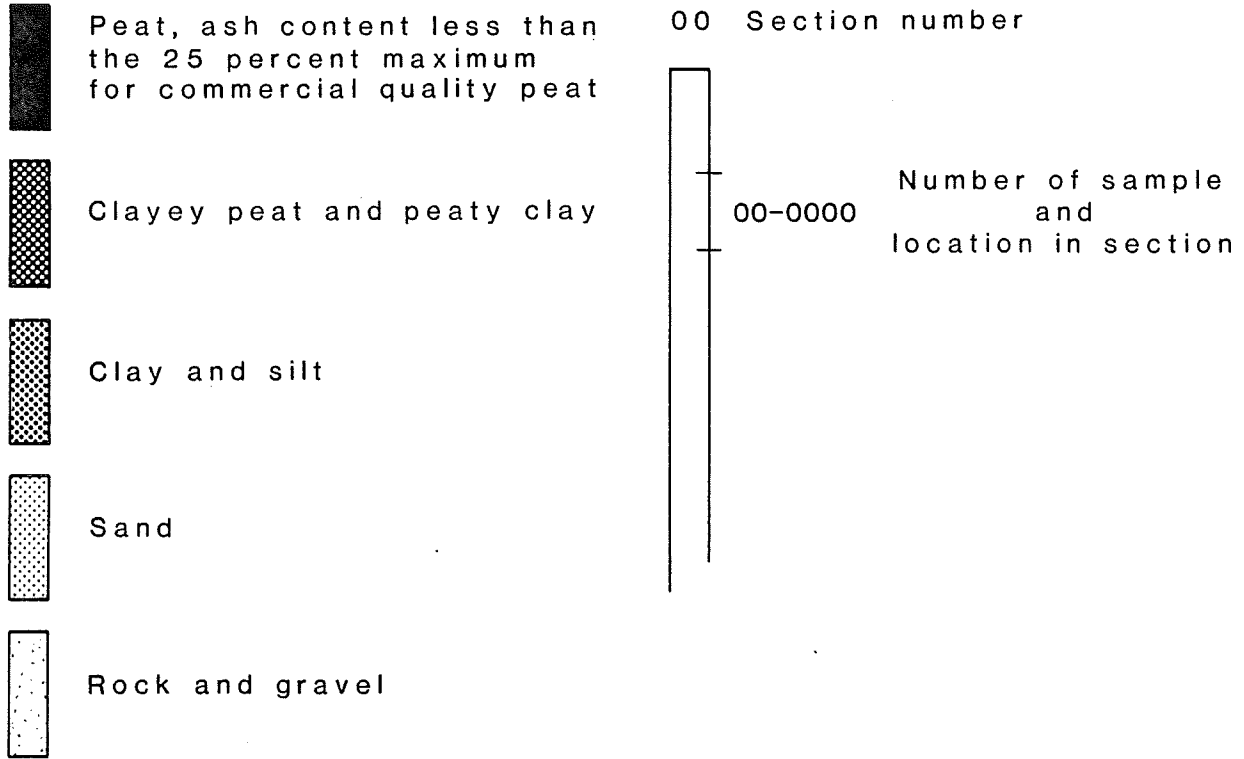


Figure 49a
SECTIONS AND SAMPLE LOCATIONS

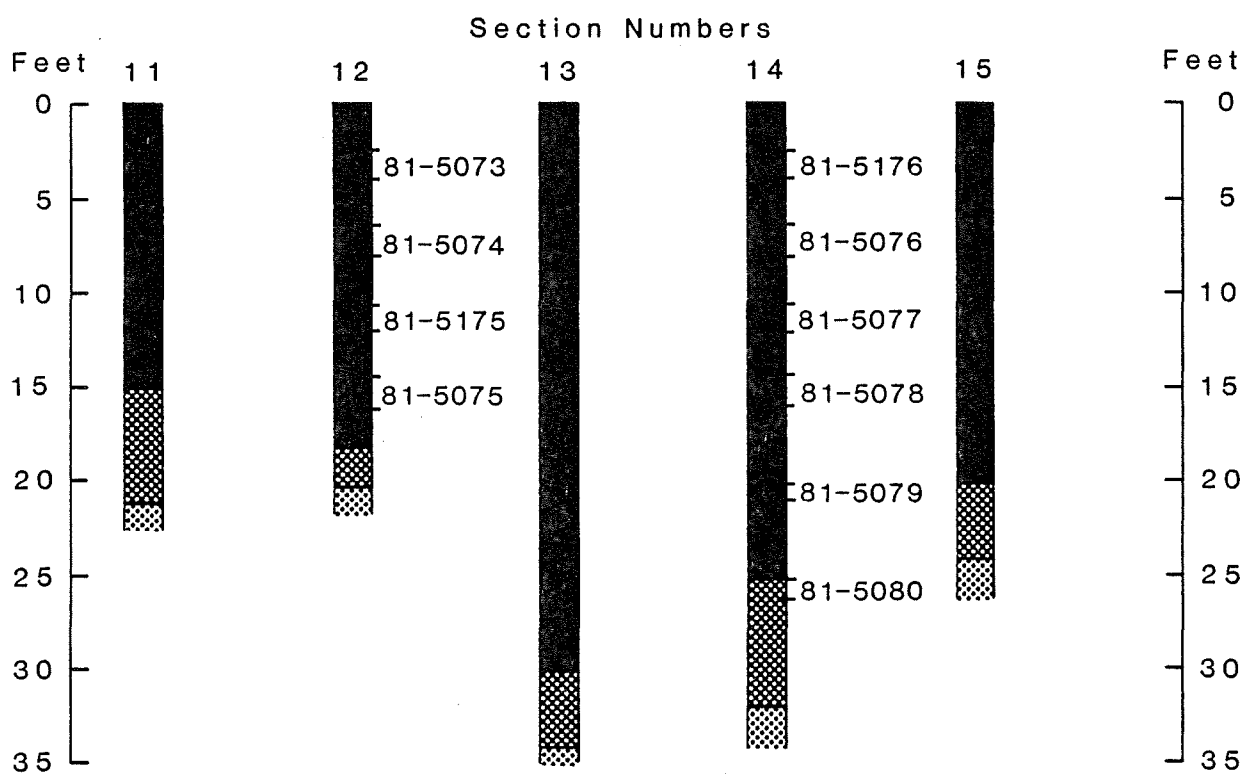
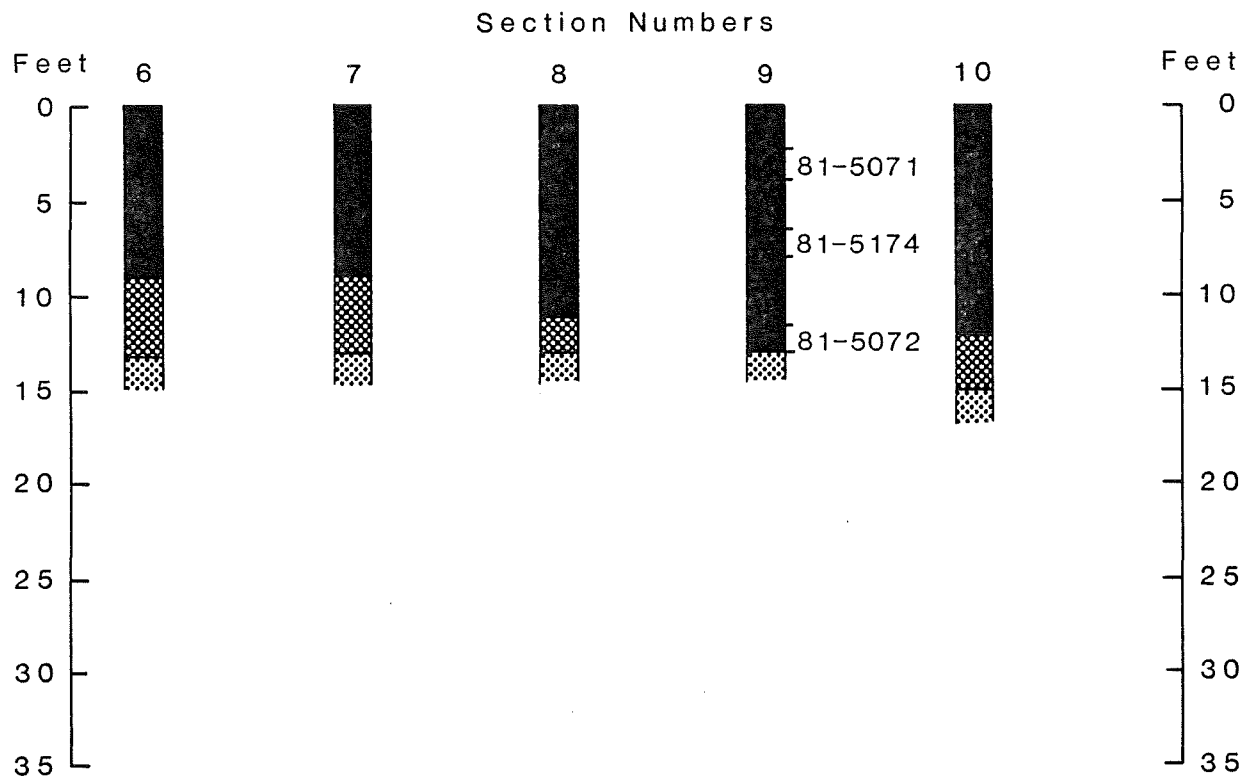


Figure 49a - Continued
SECTIONS AND SAMPLE LOCATIONS

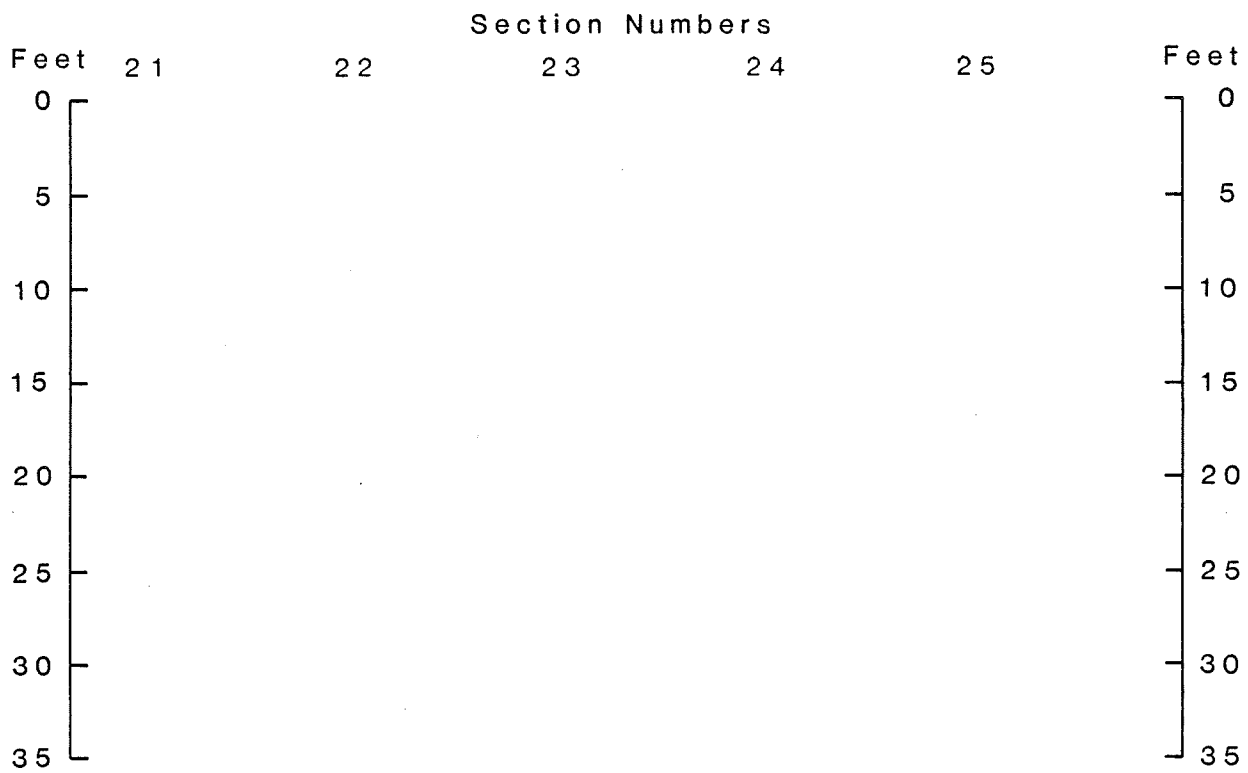
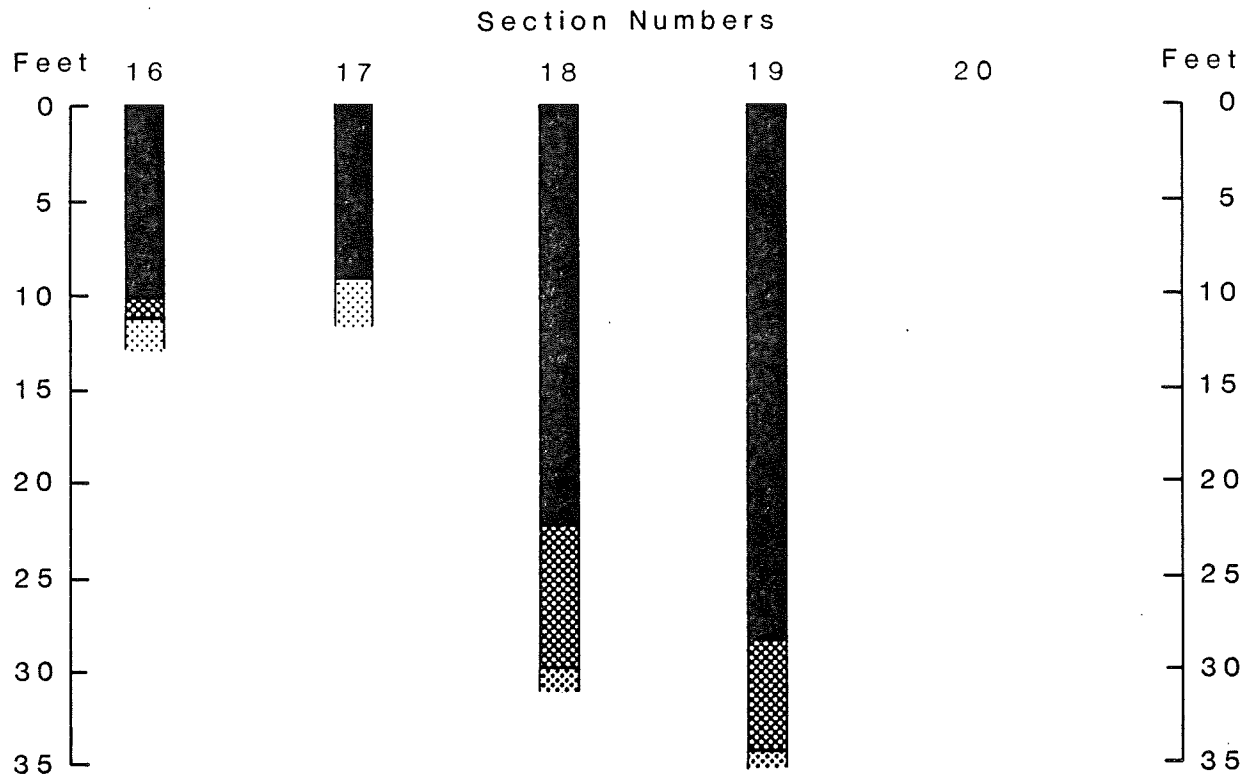


Figure 49a - Continued
SECTIONS AND SAMPLE LOCATIONS

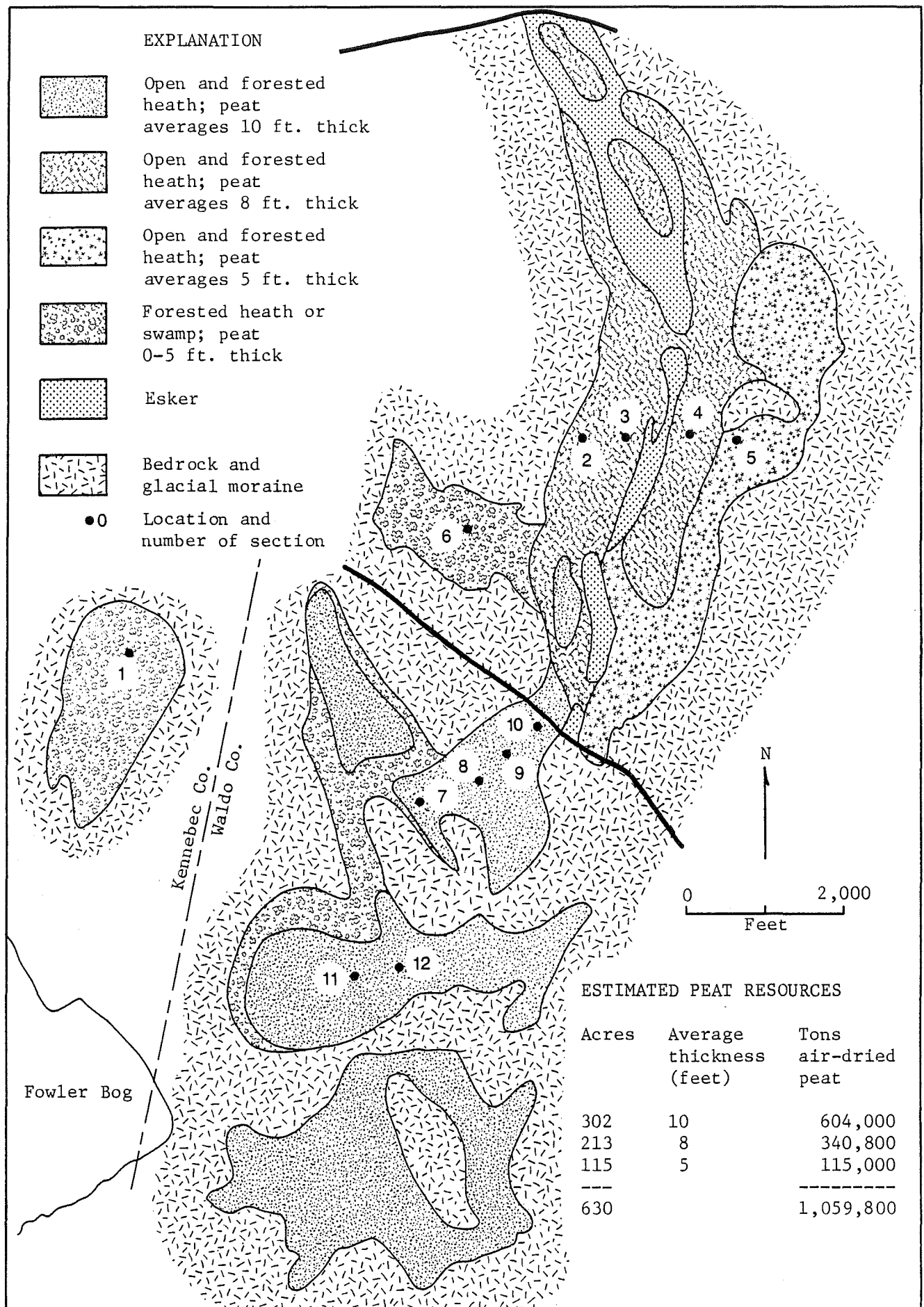


Figure 50. Sketch map of bogs north and east of Fowler Bog, Unity Twp., Burnham 15 minute Quadrangle, Kennebec and Waldo Counties, Maine. (Number 49 on Index Map). 149

EXPLANATION OF SECTIONS

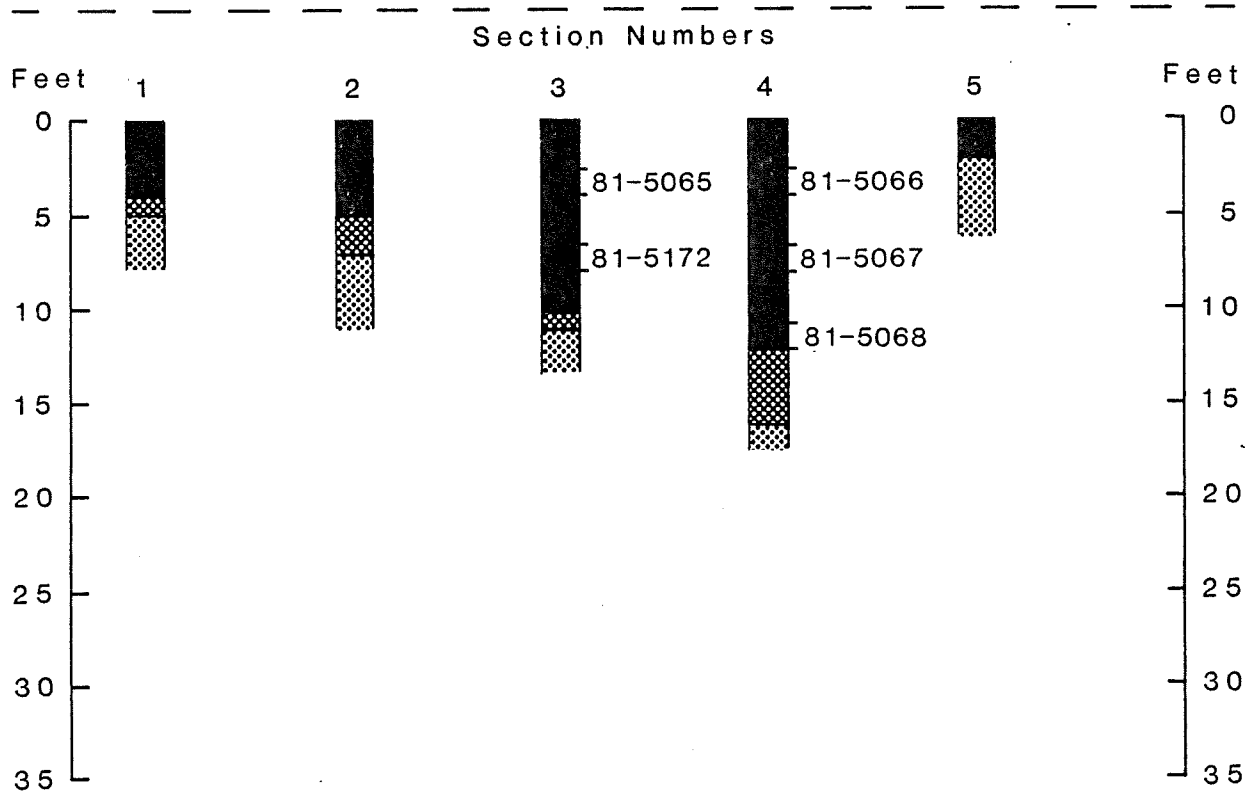
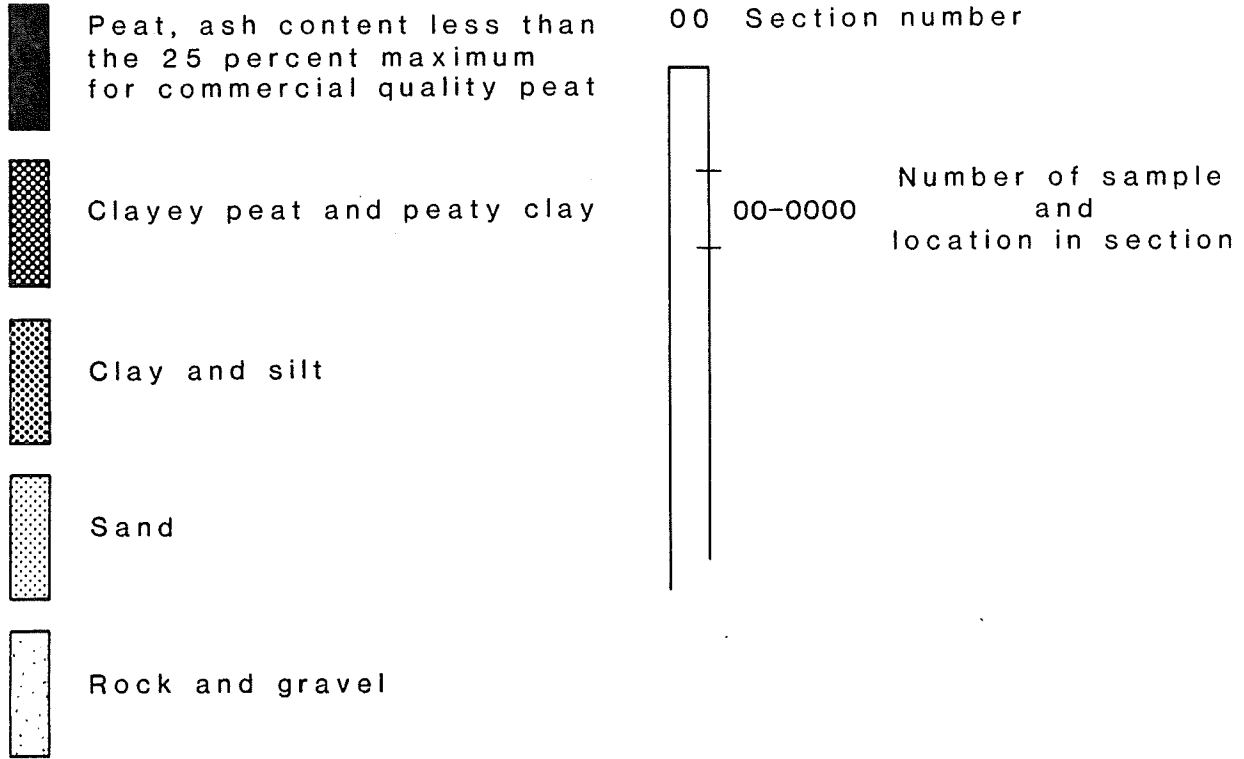


Figure 50a
SECTIONS AND SAMPLE LOCATIONS

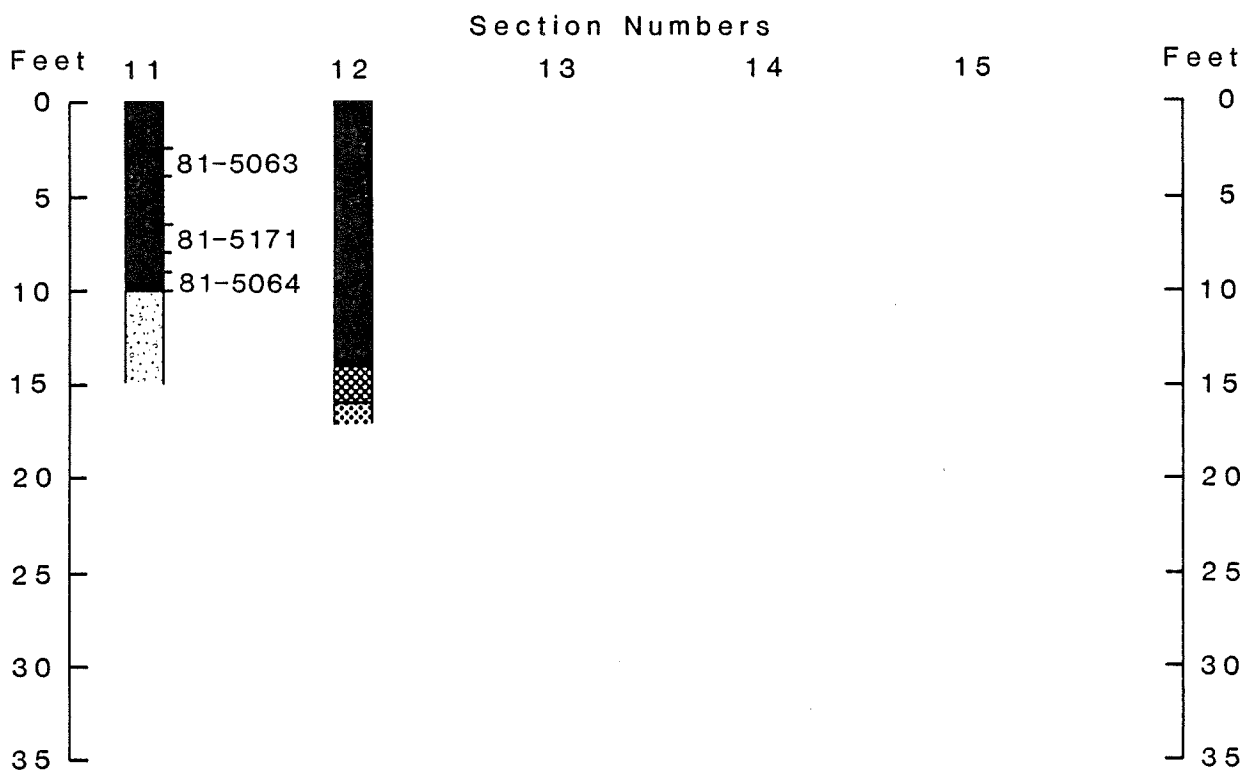
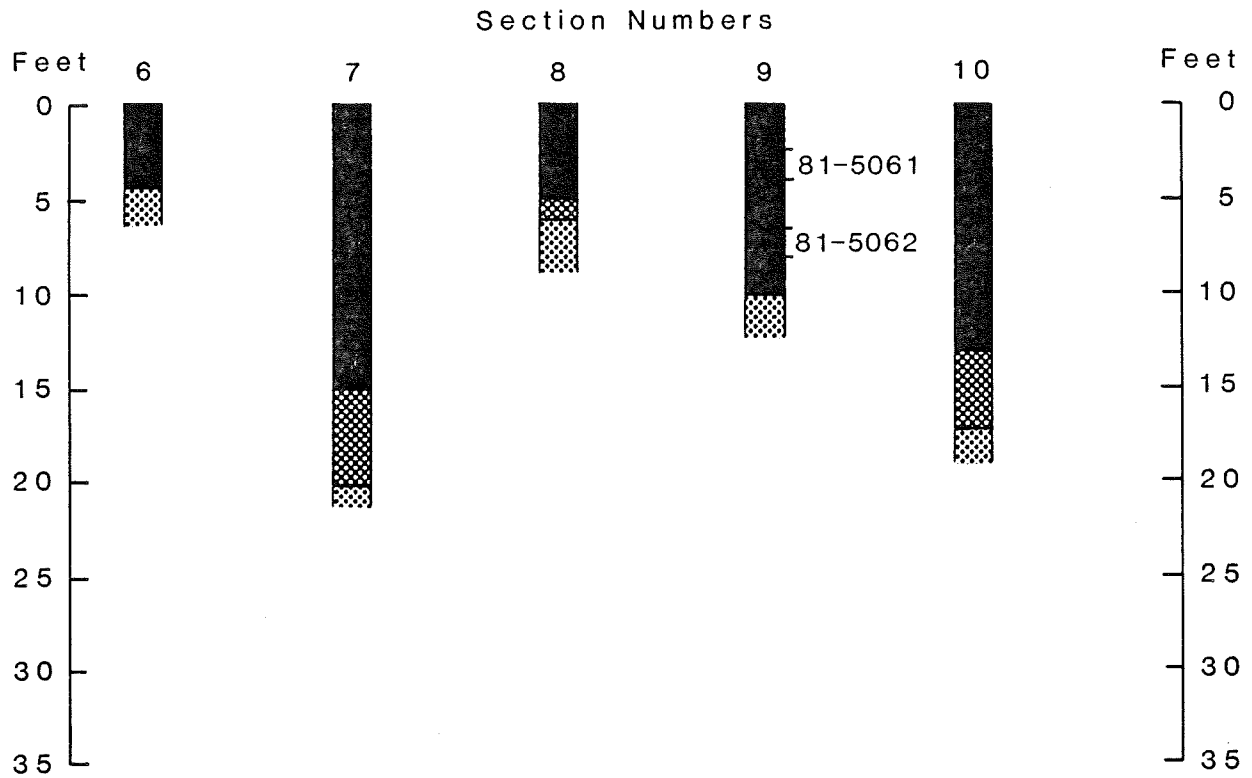


Figure 50a - Continued
SECTIONS AND SAMPLE LOCATIONS

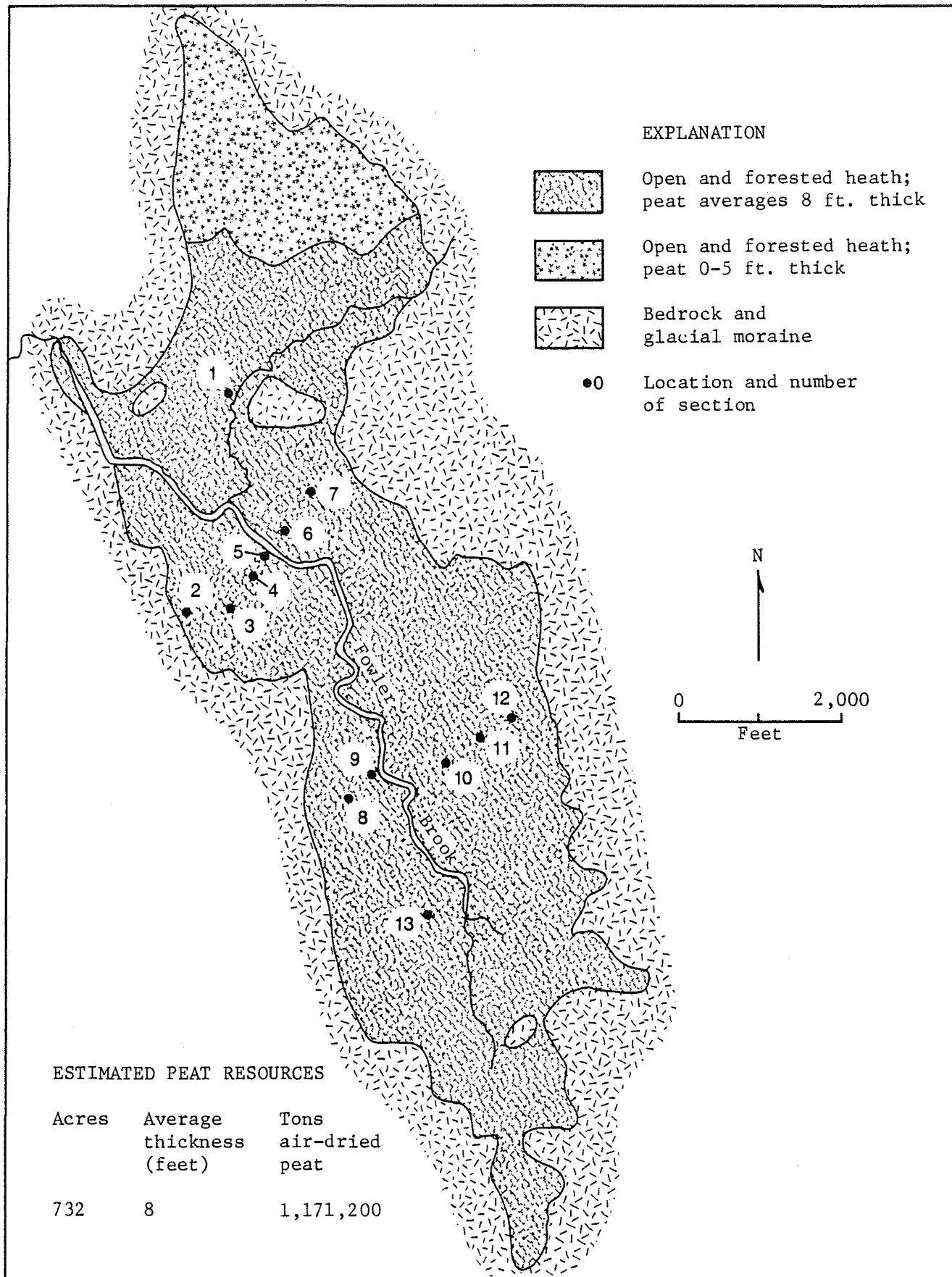


Figure 51. Sketch map of Fowler Bog, Albion and Unity Twps., Burnham 15 minute Quadrangle, Kennebec and Waldo Counties, Maine. (Number 50 on Index Map).

EXPLANATION OF SECTIONS

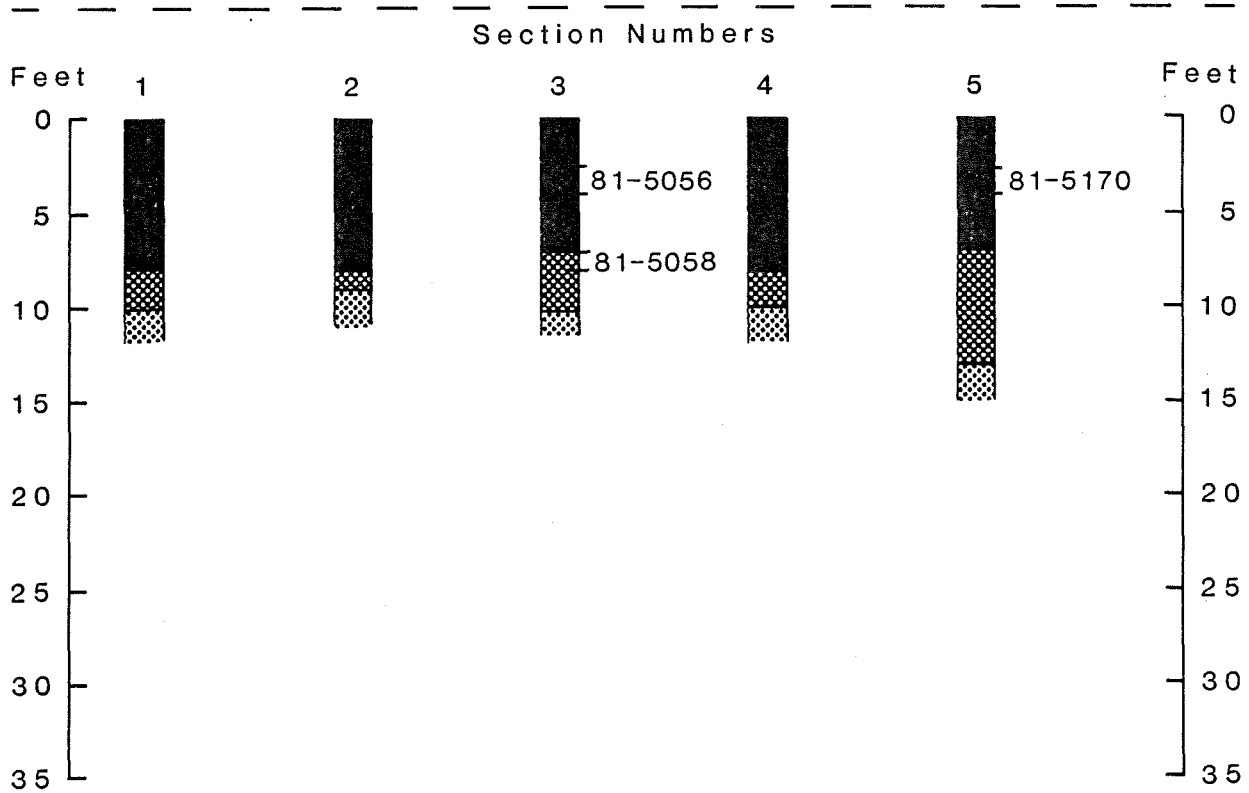
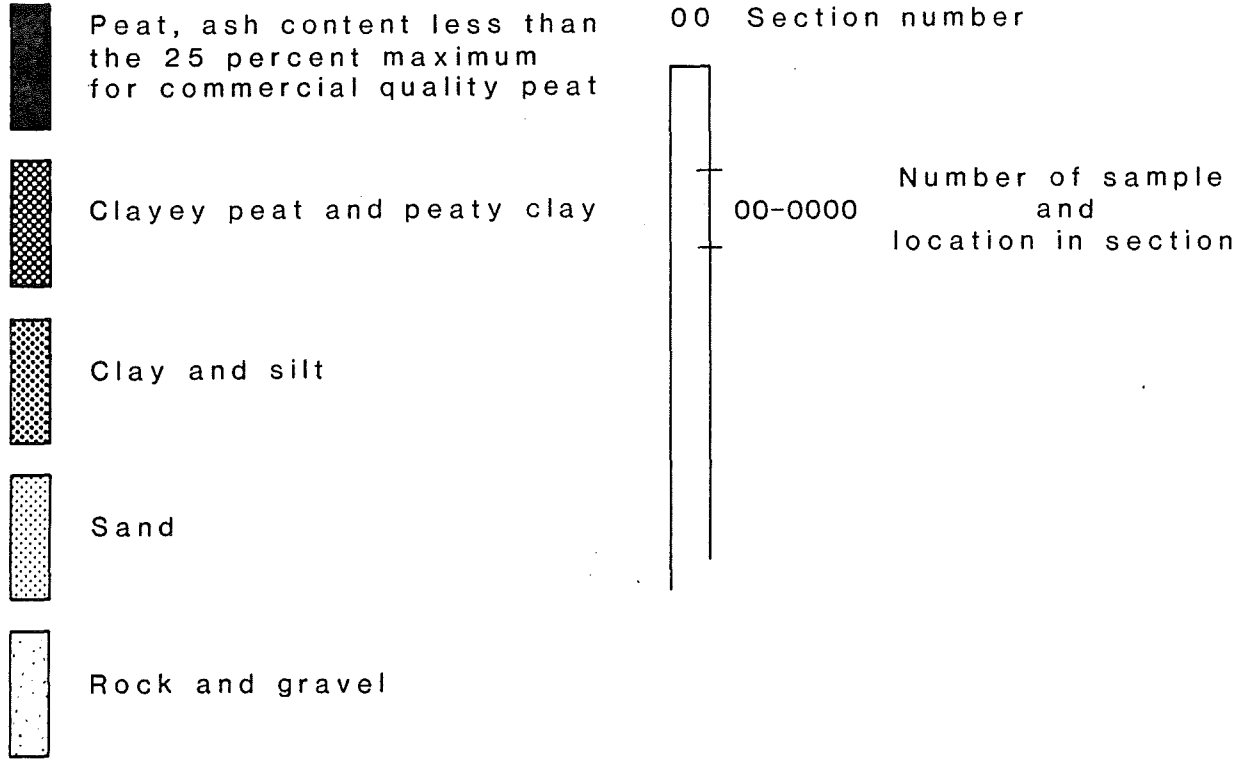


Figure 51a
SECTIONS AND SAMPLE LOCATIONS

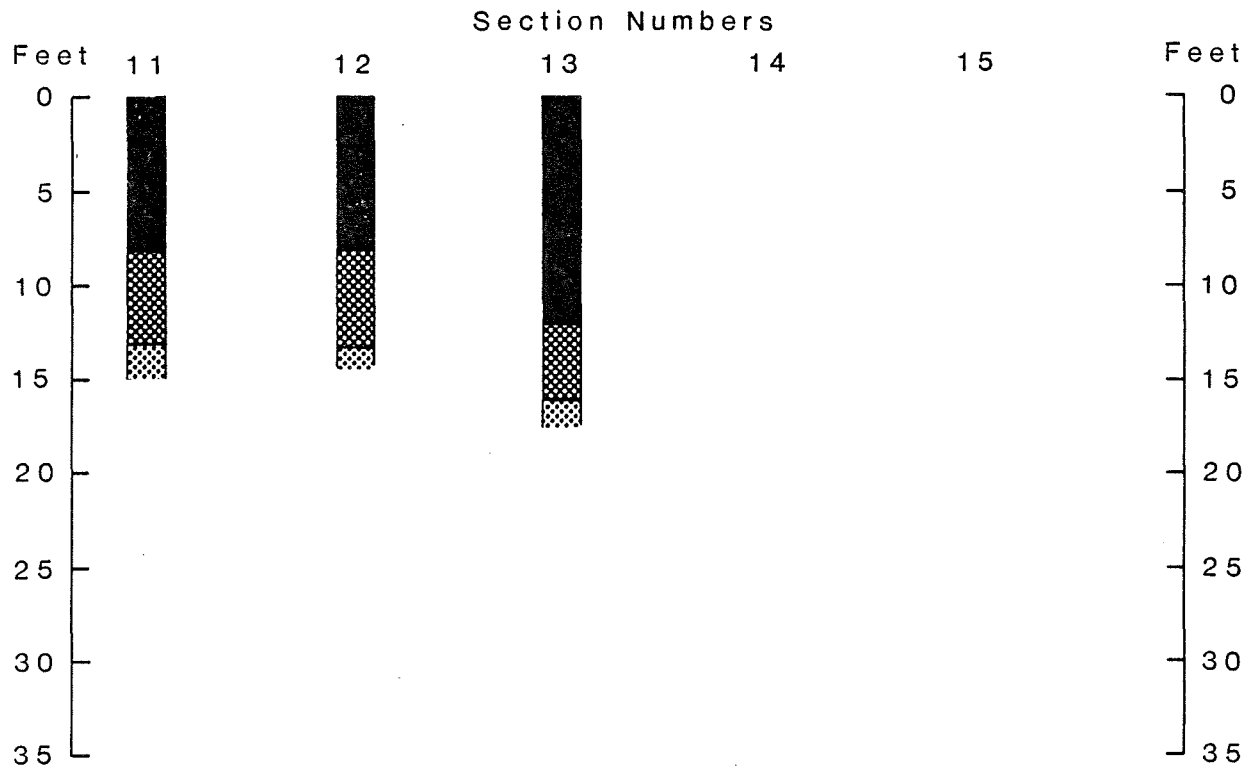
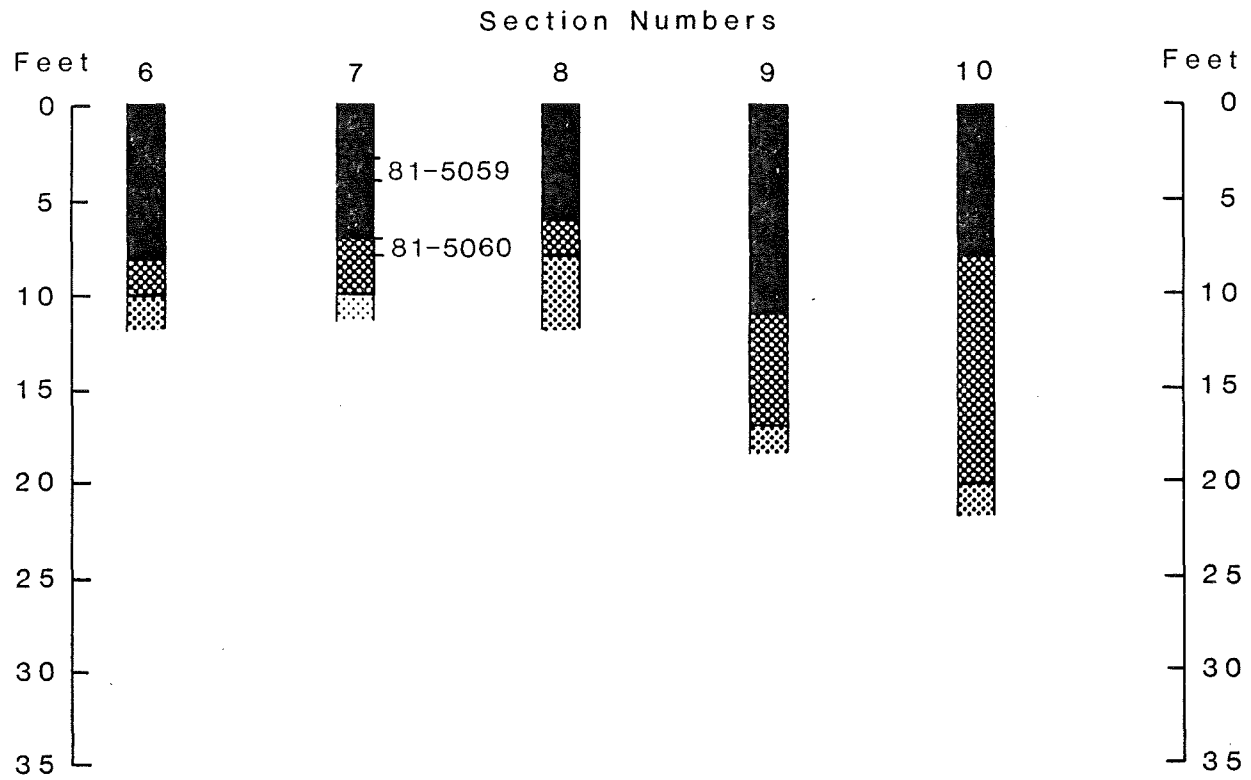


Figure 51a - Continued
SECTIONS AND SAMPLE LOCATIONS

Table 4. Bulk densities of selected peat samples collected during the 1980 field season.

Index Map Number	Section Number	Sample Number	Bulk Density lb./cu.ft.
6	2	CC 80-370	9.304
7	2	CC 80-379	5.416
9	3	CC 80-405	5.920
10	6	CC 80-315	8.386
11	9	CC 80-170	6.627
11	9	CC 80-173	4.474
11	9	CC 80-175	5.857
11	14	CC 80-177	4.709
11	14	CC 80-181	5.793
11	1	CC 80-185	7.022
11	1	CC 80-187	7.587
12	3	CC 80-252	6.787
13	2	CC 80-191	5.294
14	3	CC 80-361	6.365
20	4	CC 80-111	6.519
21	3	CC 80-207	6.194
21	3	CC 80-210	5.023
23	8	CC 80-243	6.409
27	4	CC 80-285	6.888
28	4	CC 80-302	7.892
29	3	CC 80-258	7.067
29	6	CC 80-263	7.053
30	1	CC 80-345	7.482
31	5	CC 80-416	6.003
32	10	CC 80-39A	5.713
32	7	CC 80-46	5.584
32	2	CC 80-51	4.649
33	1	CC 80-121	5.840
35	5	CC 80-195	5.941
36	3	CC 80-132	3.537
36	5	CC 80-157	5.217
37	2	CC 80-138	7.283
37	3	CC 80-142	5.450
39	1	CC 80-1	6.780
40	1	CC 80-238	4.954
40	1	CC 80-240	5.905
42	2	CC 80-103	5.991
44	4	CC 80-166	6.833
44	4	CC 80-167	6.246
44	4	CC 80-168	13.505

Table 5. Proximate and ultimate analyses and heating values of samples collected during the 1980 field season. Samples were taken from peat, clayey peat and peaty clay.

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
----- Percent -----										
1	81-4764	86.0	69.4	28.9	1.7	5.99	61.90	1.61	0.14	10,890
	81-4765	86.2	67.4	31.2	1.4	5.36	59.33	1.69	0.15	10,134
	81-4766	91.7	65.2	28.7	6.1	5.01	54.35	2.46	0.18	9,372
2	*81-5162	89.2	68.0	30.6	1.4	4.98	56.66	1.40	0.14	9,648
	81-5038	89.6	65.2	32.6	2.2	4.60	58.85	1.32	0.19	9,947
	81-5057	90.5	66.2	29.6	4.2	5.16	55.53	1.95	0.44	9,595
	81-4767	88.6	69.0	29.6	1.4	5.51	57.91	1.85	0.16	10,108
	81-4768	88.0	63.4	30.2	6.4	4.03	55.78	1.89	0.21	9,217
3	81-4769	91.0	59.3	15.5	25.2	4.70	40.91	3.50	0.53	7,475
	81-4770	87.7	68.1	29.5	2.4	5.28	58.07	1.69	0.13	10,158
	81-4771	86.5	61.9	31.4	6.7	4.21	55.77	1.57	0.38	9,365
	81-4772	89.0	62.6	31.2	6.2	4.32	54.81	1.86	0.33	9,308
	81-4773	88.5	70.8	26.8	2.4	4.78	54.24	2.04	0.13	9,262
	81-4774	93.3	68.6	27.4	4.0	4.94	55.52	2.52	0.16	9,734
	81-4775	93.5	56.8	14.2	29.0	4.22	38.98	3.13	0.59	7,088
4	81-5039	90.1	68.8	30.5	0.7	4.78	54.09	1.18	0.13	9,107
	81-5040	91.0	68.9	29.9	1.2	5.30	55.53	1.40	0.17	9,624
	81-5041	87.2	62.0	20.2	17.8	5.81	51.72	2.43	0.34	9,471
	81-5042	85.9	67.0	31.0	2.0	5.90	61.82	1.52	0.19	10,899
	81-5043	81.6	62.0	27.3	10.7	4.67	49.57	1.91	0.39	8,672
	*81-5163	43.1	54.1	19.7	26.2	4.46	43.03	1.34	0.17	7,542

*Bag torn; moisture content not accurate.

PROXIMATE ANALYSIS

ULTIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
Percent										
5	81-4759	88.9	67.2	31.5	1.3	5.17	58.03	1.54	0.12	9,931
	81-4760	86.1	63.4	31.1	5.5	5.09	57.68	1.44	0.15	9,975
	81-4761	89.9	72.1	26.6	1.3	5.01	52.85	1.43	0.10	9,005
	81-4762	90.5	69.1	29.8	1.1	5.58	57.00	2.03	0.15	9,846
	81-4763	89.6	53.2	21.2	25.6	4.33	43.12	2.60	0.33	7,776
6	81-4697	86.6	70.1	27.3	2.6	5.88	60.54	1.81	0.15	10,902
	81-4740	88.0	66.6	29.1	4.3	5.51	56.55	2.22	0.12	9,984
	81-4741	86.6	69.4	28.1	2.5	5.76	60.38	1.72	0.16	10,699
	81-4742		66.1	28.9	5.0	4.99	55.19	2.39	0.19	9,582
7	81-4743	87.8	66.6	28.4	5.0	4.88	54.40	2.31	0.38	9,334
	81-4744	91.1	50.5	12.3	37.2	3.60	33.34	2.63	1.25	5,369
	81-4745	90.4	69.9	26.1	4.0	4.95	52.38	1.62	0.15	8,902
	81-4746	93.3	58.9	13.8	27.3	4.30	37.60	2.67	0.77	6,697
	81-4747	93.4	53.2	13.3	33.5	3.92	33.82	3.12	1.35	6,075
8	81-4754	72.0	28.6	10.1	61.3	1.93	21.28	1.09	0.21	3,692
	81-4755	78.3	45.3	18.5	36.2	3.25	37.04	1.91	0.32	6,337
9	81-4748	87.9	67.6	31.1	1.3	5.47	59.00	1.58	0.15	10,305
	81-4749	89.4	64.2	31.8	4.0	4.74	56.45	1.20	0.18	9,545
	81-4750	87.3	34.8	9.4	55.8	2.42	22.21	1.57	0.83	3,861
	81-4751	81.2	69.3	29.3	1.4	5.33	57.16	1.71	0.14	9,868
	81-4752	90.6	65.5	30.7	3.8	4.83	57.15	2.27	0.18	9,354
	81-4753	87.1	34.9	12.6	52.5	2.47	26.08	1.63	0.41	4,558

*Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS					ULTIMATE ANALYSIS					Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Moisture free Carbon	Nitrogen	Sulfur	Heating Value (BTU/lb)		
Percent												
10	81-4681	84.5	59.3	29.0	11.7	4.24	52.81	1.90	0.90	8,865		
	81-4682	83.5	62.4	31.3	6.3	4.18	55.89	1.76	0.62	9,086		
	81-4683	86.2	62.9	30.4	6.7	4.43	56.42	1.72	0.31	9,654		
	81-4684	85.6	61.8	29.5	8.7	4.76	55.68	1.65	0.47	9,606		
11	81-4281	89.2	65.1	29.3	5.6	4.00	55.44	1.54	0.22	9,516		
	*81-5128	16.2	63.0	33.3	3.7	4.52	57.13	1.97	0.23	9,520		
	*81-5129	11.2	67.6	30.5	1.9	5.51	58.28	1.60	0.18	10,123		
	81-4283	90.6	60.0	26.0	14.0	4.28	49.17	2.46	0.31	8,521		
	81-4284	89.1	66.8	29.0	4.2	5.14	57.89	2.05	0.19	10,200		
*81-5130	13.4	63.1	30.8	6.1	4.68	56.52	1.76	0.33	9,555			
12	81-4632	89.0	66.1	29.6	4.3	4.65	58.78	2.13	0.11	10,056		
	81-4633	90.7	65.4	30.0	4.6	4.58	55.88	2.13	0.18	9,599		
13	*81-5131	11.9	67.7	30.4	1.9	5.66	59.37	1.50	0.18	10,269		
	*81-5132	87.5	45.6	11.2	43.2	3.64	30.41	2.34	0.55	5,463		
14	*81-5161	81.0	57.6	27.2	15.2	4.25	48.82	2.06	0.26	8,368		
	81-4694	79.2	26.7	8.9	64.4	1.78	19.37	1.51	0.21	3,318		
	81-4695	79.0	22.5	5.9	71.6	1.46	15.15	0.95	0.18	2,594		
	81-4696	85.1	39.8	16.2	44.0	2.93	31.19	1.63	0.24	5,378		
15	*81-5157	78.8	67.9	30.4	1.7	6.08	61.27	1.54	0.18	10,893		
	81-4685	83.9	68.0	30.2	1.8	5.89	60.82	1.59	0.10	10,918		

*Bag torn; moisture content not accurate.

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
Percent										
16	81-4686	89.4	61.6	30.1	8.3	4.57	53.53	2.11	0.24	9,144
	*81-5159	65.7	33.1	7.4	59.5	2.26	20.15	1.55	0.42	3,487
	81-4687	87.1	67.8	17.6	14.6	4.05	48.80	1.98	0.18	8,408
	81-4688	75.6	21.6	5.8	72.6	1.43	14.19	1.05	0.18	2,457
17	*81-5140	85.9	70.0	28.7	1.3	5.94	58.70	1.78	0.20	10,366
	81-4621	89.1	68.7	29.3	2.0	5.11	56.69	2.63	0.15	10,099
	81-4622	91.4	57.2	19.2	23.6	4.19	41.55	2.98	0.70	7,243
18	*81-5137	66.3	67.5	31.2	1.3	5.33	58.16	2.14	0.21	10,061
	*81-5138	87.5	64.4	32.8	2.8	5.11	57.88	1.68	0.20	9,880
	*81-5139	14.5	58.0	17.6	24.4	4.41	40.11	2.99	1.06	7,152
19	81-4616	90.2	68.0	30.8	1.2	5.23	58.18	1.34	0.13	9,973
	81-4617	91.0	56.4	22.3	21.3	4.10	45.13	4.02	0.41	7,841
	81-4618	87.8	39.8	10.4	49.8	2.61	26.10	1.97	1.05	4,557
20	*81-5123	10.2	63.5	25.7	10.8	4.92	53.80	2.66	0.24	9,380
	81-4091	86.5	60.1	26.3	13.6	3.75	51.75	2.49	0.18	9,017
21	*81-5135	6.5	66.0	30.8	3.2	5.36	55.51	1.33	0.16	9,403
	*81-5136	14.3	53.9	15.8	30.3	5.42	57.74	1.39	0.16	9,973
	81-4615	89.4	65.7	28.2	6.1	5.01	54.93	2.46	0.27	9,573

*Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
----- Percent -----										
22	81-4619	88.8	63.0	31.0	6.0	3.53	56.76	1.51	0.16	9,546
	81-4620	88.0	47.9	14.6	37.5	3.16	31.86	1.94	1.09	5,697
23	*81-5145	79.0	65.0	32.4	2.6	5.29	59.41	1.66	0.25	10,310
	81-4624	90.6	52.5	13.7	33.8	3.76	33.42	2.31	1.45	5,873
	81-4625	89.2	67.6	31.4	1.0	5.12	58.57	1.53	0.15	10,316
	81-4626	89.9	64.6	32.2	3.2	4.31	56.57	1.59	0.20	9,691
	81-4627	86.9	35.4	8.5	56.1	2.15	22.18	1.57	1.02	3,933
	81-4628	87.2	62.8	32.0	5.2	3.67	56.40	2.17	0.27	9,364
	81-4629	84.1	43.4	17.6	39.0	2.58	34.38	1.70	0.37	5,799
	81-4630	85.8	29.7	9.1	61.2	1.77	20.39	1.49	0.28	3,543
	81-4631	82.3	23.8	4.0	72.2	1.31	14.45	1.14	0.21	2,319
	81-5160	11.9	68.3	29.9	1.8	5.83	60.11	1.49	0.17	10,682
25	*81-5160	90.8	61.0	28.6	10.4	4.51	52.56	1.87	0.24	8,990
	81-4693									
26	81-4277	88.6	63.9	31.3	4.8	4.42	56.66	2.00	0.55	9,636
	81-4278	88.0	44.7	14.3	41.0	2.70	31.48	1.80	0.96	5,883
	*81-5127	13.4	65.2	32.1	2.7	5.22	58.30	1.58	0.23	10,066
27	*81-5148	32.1	64.5	32.6	2.9	5.18	60.32	1.28	0.17	10,428
	*81-5149	64.5	46.3	21.2	32.5	3.23	39.01	1.76	0.53	6,689
	*81-5150	87.3	66.0	32.1	1.9	5.17	58.02	1.59	0.17	9,933
	*81-5151	87.0	61.8	32.6	5.6	4.44	56.06	1.59	0.27	9,355
	*81-5087	77.2	65.7	29.7	4.6	4.75	55.35	1.49	0.22	9,380
	*81-5152	54.7	64.8	30.9	4.3	5.06	57.74	1.64	0.19	9,969
	*81-5153	87.3	66.5	31.0	2.5	5.09	57.58	1.78	0.18	9,847
	*81-5154	82.0	65.8	31.7	2.5	5.23	58.79	1.88	0.20	10,198

Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS					ULTIMATE ANALYSIS				
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Moisture free Nitrogen	Sulfur	Heating Value (BTU/lb)	
----- Percent -----											
28	81-4677	91.1	68.5	30.5	1.0	4.70	56.56	1.29	0.11	9.666	
	*81-5147	73.1	63.9	33.1	3.0	4.82	55.87	1.36	0.22	10,233	
	81-4678	87.6	63.6	32.0	4.4	4.30	57.86	1.21	0.13	9,830	
	81-4679	88.3	62.0	28.9	9.1	4.42	54.26	1.55	0.76	9,369	
	*81-5155	62.4	63.7	34.1	2.2	4.66	57.59	1.50	0.20	9,597	
	*81-5156	80.3	64.5	31.9	3.6	4.99	58.73	1.55	0.18	10,002	
	81-4680	80.8	61.7	28.4	9.9	5.02	56.70	1.84	0.24	9,965	
29	*81-5146	84.6	63.5	31.3	5.2	5.08	59.20	1.64	0.21	10,321	
	81-4634	89.4	65.6	31.0	3.4	4.91	59.50	1.94	0.17	10,339	
	81-4635	89.1	66.7	29.5	3.8	5.29	59.48	2.10	0.18	10,313	
	81-4636	89.2	64.2	29.9	5.9	4.60	55.62	2.22	0.22	9,588	
30	81-4689	87.7	67.3	29.6	3.1	5.71	59.59	1.85	0.16	10,731	
	81-4690	83.4	37.8	17.8	44.4	2.72	31.72	1.60	0.37	5,544	
	81-4691	88.5	67.8	30.5	1.7	5.63	59.05	2.15	0.13	10,524	
	81-4692	80.9	44.7	20.4	34.9	3.55	38.73	1.59	0.20	6,779	
31	81-4756	88.2	66.2	30.2	3.6	4.99	57.96	2.14	0.16	9,836	
	81-4757	88.2	64.2	30.3	5.5	4.64	57.49	1.97	0.14	9,754	
	81-4758	89.0	65.7	30.1	4.2	4.81	56.59	2.08	0.20	9,704	
32	*81-5089	12.2	67.0	29.8	3.2	5.55	59.26	2.62	0.22	10,380	
	*81-5090	11.8	62.7	24.7	12.6	4.99	49.06	1.52	0.41	8,483	
	*81-5091	9.2	67.3	30.6	2.1	5.38	60.68	1.92	0.21	10,557	
	*81-5092	10.2	65.8	30.6	3.6	5.17	57.68	1.83	0.21	10,049	
	*81-5093	11.2	65.5	32.5	2.0	4.44	56.71	1.43	0.23	9,422	
	*81-5094	60.0	70.9	27.7	1.4	5.55	54.74	1.30	0.15	9,387	
	*81-5095	13.0	67.7	30.0	2.3	5.72	60.28	2.35	0.20	10,560	
	*81-5096	10.3	69.3	28.7	2.0	5.09	55.91	1.28	0.20	9,620	
	*81-5097	10.4	58.1	15.1	26.8	4.34	40.18	3.43	1.17	7,224	
	*81-5098	9.8	58.9	28.1	13.0	4.34	51.17	1.88	0.22	8,734	

*Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Moisture free Nitrogen	Sulfur	
Percent										
32 cont'd.	*81-5099	11.5	69.2	29.1	1.7	5.83	58.55	2.64	0.20	10,214
	*81-5100	51.3	63.5	30.3	6.2	5.25	56.58	1.81	0.33	9,896
	81-3920	92.1	65.7	29.1	5.2	3.47	56.83	1.97	0.24	9,569
	*81-5101	12.7	70.6	28.4	1.0	5.31	54.10	1.51	0.15	9,168
	*81-5102	76.1	50.3	23.6	26.1	3.98	43.91	1.73	0.22	7,506
	81-3921	90.0	71.3	25.5	3.2	4.79	59.62	2.31	0.17	10,434
	*81-5103	13.8	68.4	29.3	2.3	5.20	55.26	1.50	0.15	9,293
	81-3922	89.6	66.4	29.3	4.3	4.44	57.47	2.36	0.17	10,095
	81-3923	91.2	66.8	28.1	5.1	4.45	56.10	2.49	0.17	9,718
	81-3924	88.7	70.4	26.5	3.1	5.00	56.18	2.31	0.13	9,906
	81-3925	91.6	67.5	29.4	3.1	4.80	58.11	2.16	0.15	10,227
	*81-5104	69.8	63.4	32.6	4.0	4.69	56.44	2.07	0.23	9,602
	*81-5105	88.2	63.7	29.1	7.2	5.14	53.88	2.36	0.24	9,438
	81-3926	90.9	70.2	18.8	11.0	4.64	52.61	3.02	0.20	9,477
	*81-5106	10.8	63.3	27.1	9.6	4.94	53.54	2.25	0.24	9,240
	81-3927	89.7	69.9	27.7	2.4	4.71	58.39	2.59	0.15	10,333
	81-3928	90.3	65.6	28.1	6.3	4.48	56.00	3.28	0.17	9,705
	*81-5113	54.4	66.6	30.0	3.4	5.42	58.68	2.16	0.23	10,271
	*81-5114	86.7	65.3	30.3	4.4	5.26	57.55	2.16	0.20	9,863
	*81-5115	84.2	61.4	23.3	15.3	5.02	49.79	2.73	0.33	8,641
	81-4084	89.2	65.8	28.4	5.8	3.93	57.65	2.08	0.11	9,785
	81-4085	89.7	63.2	25.1	11.7	3.64	50.00	2.12	0.22	8,484
	*81-5116	13.8	67.9	29.3	2.8	5.28	58.31	1.85	0.19	10,205
	81-4086	92.0	68.2	26.4	5.4	5.12	55.84	3.34	0.13	9,905
	81-4087	89.6	70.0	26.2	3.8	4.16	54.10	1.28	0.07	9,097
	*81-5117	20.6	64.3	25.4	10.3	5.34	52.49	3.21	0.26	9,323
	*81-5118	15.2	63.7	31.6	4.7	5.16	57.33	2.07	0.19	9,791
	81-4088	89.0	60.2	27.0	12.8	3.90	50.58	2.11	0.18	8,675

*Bag torn; moisture content not accurate

PROXIMATE ANALYSIS

ULTIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Moisture free Nitrogen	Sulfur	
Percent										
33	*81-5124	22.9	65.4	31.1	3.5	5.15	56.44	2.01	0.20	9,672
	81-4092	83.3	41.5	16.2	42.3	2.30	32.91	1.87	0.15	5,629
	81-4093	70.3	19.4	9.0	71.6	0.92	11.68	0.89	0.27	1,849
	81-4094	88.0	69.2	28.2	2.6	3.99	58.79	2.65	0.11	9,971
	81-4095	85.8	48.7	24.5	26.8	2.49	40.48	2.00	0.19	6,930
34	81-4271	80.5	53.3	24.9	21.8	3.79	48.52	1.28	0.14	8,362
	81-4272	83.9	55.5	21.6	22.9	3.91	45.92	2.02	0.38	8,008
	81-4273	78.3	29.9	10.2	59.9	1.84	22.81	1.09	0.37	4,041
	81-4285	90.0	65.7	26.2	8.1	4.14	54.02	1.89	0.46	9,097
35	81-4286	88.2	66.5	27.3	6.2	4.23	54.81	3.47	0.39	9,353
	81-4287	89.2	64.6	31.4	4.0	4.45	56.09	1.53	0.23	9,501
	81-4288	90.8	65.3	29.9	4.8	3.92	53.53	1.48	0.25	8,918
	81-4289	88.2	66.8	27.5	5.7	3.90	53.76	1.24	0.35	8,848
	81-4290	92.7	46.6	11.8	41.6	2.47	30.02	3.13	1.08	5,260
	81-4612	90.1	41.1	9.7	49.2	2.62	25.72	3.03	0.91	4,486
	81-4613	90.3	67.0	28.1	4.9	4.51	55.40	4.31	0.16	9,387
	*81-5133	14.2	65.0	30.9	4.1	5.15	56.40	1.27	0.27	9,593
	*81-5134	53.3	67.5	2.4	30.1	3.82	37.26	2.74	0.88	6,535
	81-4614	79.1	19.6	3.4	77.0	1.15	10.14	0.75	1.19	1,710
	36	81-4274	90.0	65.4	30.2	4.4	4.68	57.75	1.81	0.19
81-4275		89.0	64.3	30.6	5.1	3.98	56.12	1.60	0.25	9,487
81-4276		90.7	63.8	30.5	5.7	4.44	54.98	1.85	0.32	9,395
37	81-4262	87.2	62.62	29.6	7.8	3.71	53.84	2.03	0.25	9,055
	*81-5126	12.4	60.5	29.6	9.9	4.15	54.27	2.19	0.65	9,145
	81-4263	90.7	56.2	21.1	22.7	3.55	43.63	2.29	0.73	7,495
	81-4264	87.9	68.7	25.9	5.4	4.50	51.61	1.68	0.14	8,779
	81-4265	89.6	68.6	28.5	2.9	4.89	56.04	1.88	0.11	9,612
	81-4266	90.1	46.1	20.2	33.7	2.92	35.91	2.21	0.30	6,196
81-4267	92.7	52.6	14.6	32.8	3.32	36.43	2.68	0.52	6,347	

*Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS					ULTIMATE ANALYSIS					Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur			
												Percent
38	81-4268	88.0	65.3	27.9	6.8	4.50	55.74	2.08	0.14	9,646		
	81-4269	89.1	61.7	30.4	7.9	4.23	53.94	1.58	0.11	9,161		
39	*81-5083	74.7	65.4	31.6	3.0	4.60	55.57	1.01	0.24	9,300		
	*81-5084	72.4	66.6	31.2	2.2	5.40	59.32	1.52	0.19	10,129		
	*81-5085	85.3	50.5	19.9	32.6	3.90	35.99	2.56	1.11	6,363		
	*81-5088	22.9	55.8	24.6	20.6	4.54	47.04	1.19	0.18	8,102		
40	*81-5141	80.4	40.3	13.3	46.4	2.74	29.18	1.68	0.41	5,149		
	*81-5195	76.7	32.3	9.1	58.6	2.34	22.42	1.41	0.44	3,974		
	*81-5142	86.0	66.7	32.3	1.0	4.87	54.91	0.65	0.13	9,096		
	*81-5143	39.6	64.0	32.9	3.1	4.80	57.17	1.16	0.18	9,581		
	81-4623	89.8	39.3	15.4	45.3	2.40	30.36	1.85	0.48	5,474		
	*81-5144	72.3	41.1	11.6	47.3	2.77	26.46	2.01	1.19	4,675		
41	81-3929	89.3	66.8	28.9	4.3	4.92	56.74	3.67	0.13	9,862		
	81-3930	90.1	58.3	26.9	14.8	3.93	49.79	5.10	0.17	8,457		
	*81-5107	13.2	65.9	30.0	4.1	4.91	55.37	1.54	0.21	9,489		
	81-3931	83.6	36.0	12.3	51.7	1.85	27.44	1.76	0.38	4,783		
	81-3932	83.3	37.9	9.7	52.4	2.11	27.17	1.69	0.31	4,689		
	81-3933	84.7	32.1	5.1	62.8	1.13	20.63	1.62	0.28	3,512		
	81-3934	87.5	40.8	9.0	50.2	2.33	26.49	2.29	0.28	4,693		
	81-3935	91.1	64.4	21.3	14.3	4.17	50.13	1.73	0.16	8,594		
	*81-5108	14.7	62.5	29.5	8.0	4.45	53.94	1.36	0.17	9,077		
	81-4080	91.4	51.2	18.7	30.1	2.88	39.18	2.42	0.58	6,790		
81-4081	90.1	42.0	11.1	46.9	2.50	29.00	1.94	0.75	4,965			
*81-5109	13.1	66.5	31.5	2.0	4.81	55.76	1.30	0.16	9,429			

*Bag torn; moisture content not accurate.

PROXIMATE ANALYSIS

ULTIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
Percent										
42	*81-5110	26.3	61.2	29.9	8.9	4.47	53.78	1.80	0.45	9,029
	81-4082	90.4	48.3	17.4	34.3	2.28	38.36	1.74	0.31	6,567
	*81-5111	12.6	53.8	22.2	24.0	3.46	43.96	2.46	0.69	7,633
	*81-5112	24.2	46.6	13.7	39.7	3.29	31.62	2.36	1.09	5,589
	81-4083	88.3	63.5	29.1	7.4	3.47	54.62	2.29	0.23	9,236
	*81-5119	69.5	66.9	31.8	1.3	5.42	57.54	1.68	0.17	9,990
	*81-5120	55.0	67.8	30.4	1.8	5.43	58.16	1.75	0.17	9,943
	*81-5121	19.0	51.4	19.5	19.1	4.18	40.45	2.56	0.56	7,110
	81-4089	91.7	43.6	10.3	46.1	2.44	28.94	2.11	0.32	5,069
	81-4090	82.0	40.4	14.7	44.9	2.17	32.54	1.77	0.34	5,533
*81-5122	84.3	57.7	24.9	17.4	4.60	48.44	1.75	1.03	8,401	
43	81-4096	91.4	69.2	29.3	1.5	3.61	57.20	1.47	0.10	9,563
	81-4097	91.0	68.6	25.3	6.1	3.85	50.57	0.99	0.12	8,434
	81-4098	90.8	69.3	29.1	1.6	4.06	53.18	0.91	0.13	8,919
	*81-5125	14.1	68.2	30.9	0.9	5.34	55.91	0.84	0.15	9,383
	81-4099	90.2	66.7	31.3	2.0	4.37	56.96	1.28	0.15	9,727
	81-4260	86.9	51.4	17.8	30.8	3.35	38.36	2.46	0.59	6,694
	81-4261	79.2	31.8	7.0	61.2	1.96	20.73	1.41	0.60	3,709
	81-4279	86.5	63.1	31.4	5.5	4.19	56.07	1.35	0.25	9,583
	81-4280	90.2	63.4	30.8	5.8	4.21	55.84	1.94	0.81	9,485
	81-4282	81.3	21.9	9.5	68.6	1.57	16.55	1.22	0.14	2,877

*Bag torn; moisture content not accurate.

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS				ULTIMATE ANALYSIS				Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur	
Percent										
45	*81-5167	11.1	63.1	34.1	2.8	5.09	59.17	1.26	0.30	10,150
	81-5049	76.5	21.4	6.5	72.1	1.26	14.72	1.02	0.32	2,499
	*81-5168	45.7	47.2	21.6	31.2	3.52	39.85	2.08	0.83	6,955
	81-5050	91.2	66.9	32.1	1.0	4.71	54.94	0.64	0.13	9,033
	81-5051	90.5	60.2	25.8	14.0	4.52	49.65	2.06	0.51	8,571
	*81-5169	89.9	59.8	25.5	14.7	4.82	49.21	2.57	0.80	8,641
	81-5052	90.8	67.0	32.3	0.7	4.84	56.02	0.67	0.13	9,190
	81-5053	90.7	65.8	32.8	1.4	4.96	57.57	1.25	0.16	9,653
	81-5054	89.9	63.0	33.5	3.5	4.72	57.07	1.80	0.52	9,541
	81-5055	91.1	57.7	23.9	18.4	4.61	47.67	2.99	1.01	8,211
46	*81-5177	12.8	64.4	33.5	2.1	5.10	57.96	0.96	0.15	9,726
	81-5081	91.8	64.6	33.9	1.5	4.60	56.56	0.92	0.19	9,390
	*81-5178	77.3	65.5	33.1	1.4	5.25	58.41	1.16	0.16	9,829
	*81-5082	91.5	59.5	16.3	24.2	4.88	42.03	3.87	0.82	7,653
47	*81-5164	27.9	66.9	31.8	1.3	5.27	58.09	1.05	0.16	9,947
	81-5044	87.6	61.1	33.6	5.3	3.62	55.88	1.94	0.39	9,081
	81-5045	90.1	67.4	31.7	0.9	5.12	55.32	1.03	0.15	9,248
	81-5046	87.3	62.7	34.5	2.8	4.48	58.81	1.29	0.22	9,766
	*81-5165	89.8	66.6	30.4	3.0	4.77	56.25	1.78	0.24	9,673
	*81-5166	90.4	61.7	32.5	5.8	4.26	54.67	1.98	0.70	9,097
	81-5047	90.5	46.6	13.5	39.9	3.51	31.59	2.49	1.48	5,654
	81-5048	87.7	55.0	23.2	21.8	4.01	45.05	2.69	1.08	7,914
48	*81-5173	14.5	67.9	31.4	0.7	5.02	56.24	0.71	0.12	9,265
	81-5069	89.1	60.8	36.0	3.2	3.43	57.99	1.52	0.33	9,453
	81-5070	90.4	67.5	28.8	3.7	6.52	56.68	2.67	0.46	9,919
	81-5071	89.8	65.6	33.2	1.2	4.73	56.97	0.93	0.14	9,417

*Bat torn; moisture content not accurate

ULTIMATE ANALYSIS

PROXIMATE ANALYSIS

Deposit number	DOE Sample number	PROXIMATE ANALYSIS					ULTIMATE ANALYSIS					Heating Value (BTU/lb)
		Moisture as received	Moisture free Volatile matter	Fixed carbon	Ash	Hydrogen	Carbon	Nitrogen	Sulfur			
Percent												
	*81-5174	87.7	65.7	31.5	2.8	5.08	57.04	1.77	0.19	9,690		
	81-5072	90.8	65.6	30.5	3.9	5.12	58.09	1.79	0.22	10,064		
	81-5073	89.8	65.8	32.5	1.7	4.93	56.76	1.44	0.19	9,630		
	81-5074	87.3	65.3	33.4	1.3	4.78	57.96	1.21	0.16	9,652		
	*81-5175	14.4	62.4	32.0	5.6	4.72	56.12	1.86	0.40	9,178		
	81-5075	90.0	61.9	33.4	4.7	4.24	56.02	2.09	0.66	9,250		
	*81-5176	12.4	68.3	30.9	0.8	5.21	57.23	0.96	0.12	9,596		
	81-5076	91.9	66.7	32.3	1.0	4.86	56.93	0.82	0.14	9,393		
	81-5077	90.6	63.4	34.0	2.6	3.64	57.74	1.59	0.22	9,401		
	81-5078	90.6	64.8	33.2	2.0	4.79	56.99	1.60	0.21	9,621		
	81-5079	90.7	65.0	32.5	2.5	4.77	56.27	1.43	0.34	9,569		
	81-5080	92.8	49.9	17.1	33.0	3.75	37.15	2.64	0.68	6,631		
49	81-5061	87.7	64.8	33.4	1.8	4.88	58.27	1.05	0.17	9,721		
	81-5062	88.7	61.1	34.0	4.9	3.96	56.39	1.83	0.52	9,293		
	81-5063	88.7	62.0	35.3	2.7	4.70	58.18	1.51	0.32	9,761		
	*81-5171	12.5	60.8	34.4	4.8	4.37	56.77	1.29	0.44	9,512		
	81-5064	90.2	63.0	33.8	3.2	5.13	57.28	1.55	0.46	9,812		
	81-5065	84.9	61.8	34.2	4.0	4.19	58.70	1.19	0.49	9,895		
	*81-5172	89.3	61.0	34.9	4.1	4.43	57.70	1.39	0.49	9,566		
	81-5066	86.9	60.8	34.1	5.1	4.17	56.69	1.67	0.32	9,390		
	81-5067	89.5	63.5	33.9	2.6	4.49	56.48	1.29	0.28	9,389		
	81-5068	91.6	60.1	20.3	19.6	4.61	45.05	2.96	0.96	8,065		
50	*81-5170	88.3	64.0	33.0	3.0	4.46	58.62	1.34	0.27	9,847		
	81-5056	87.3	65.7	32.6	1.7	4.98	59.53	1.00	0.18	10,086		
	81-5058	90.7	55.9	19.1	25.0	4.15	41.76	2.48	1.53	7,282		
	81-5059	88.4	64.1	31.3	4.6	4.71	56.76	1.25	0.36	9,648		
	81-5060	88.9	51.3	15.7	33.0	3.80	36.07	2.60	1.49	6,420		

*Bag torn; moisture content not accurate.