UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Sketch maps, sections and laboratory analyses of peat resources in deposits in and near Piscataquis and Somerset Counties and northeastern Aroostook County, Maine

by

Cornelia C. Cameron

and

Michael K. Mullen

Open-File Report 82-454

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by

Cornelia C. Cameron

and

Michael K. Mullen*

ABSTRACT

Peat deposits in and near Piscataquis and Somerset Counties and northeastern Aroostook County, Maine, were investigated for their estimated potential as peat resources suitable for energy, horticultural, and agricultural uses. Fifty sketch maps with sections and laboratory analyses illustrate the amount and quality of peat resources. The total yield of commercial quality peat is estimated at 23,670,000 short tons air-dried peat.

INTRODUCTION

General nature and classifications of peat

Peat is light-brown to dark-brown or almost black residuum formed by the partial decay and disintegration of plants that grew in marshes and swamps or in damp places such as heaths. It may be (1) fibrous matted material composed of mosses, ferns, grasses, rushes, reeds, sedges, and woody material from trees and shrubs; (2) finely divided plants so decomposed that their biological identity has been lost; or (3) nonfibrous, plastic colloidal, and macerated material deposited at the bottom of lakes or other bodies of water. The U.S. Bureau of Mines classifies peat in three general types. Material derived from moss is moss peat; that from reed, sedge, shrub, and tree groups is classified as reed-sedge peat; and material so decomposed that its botanical identity has been obscured and its further oxidation impeded is classified as humus peat. The American Society for Testing and Materials (ASTM) refined these definitions in 1969 to include in commercial-quality peat only that having an ash content of not more than 25 percent. To avoid confusion with soil-science terminology, sphagnum moss peat in this report is equivalent to fibric peat, reed-sedge peat is equivalent to hemic herbaceous peat, and humus peat is equivalent to sapric peat (Olson and others, 1979).

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Uses of peat and outlook for peat industry

Virtually, all peat sold in the United States in 1979 was used for agricultural and horticultural purposes. It was marketed through nurseries, garden centers, and chain stores chiefly in suburban areas of the North-Central, Northeast, and Middle Atlantic States and Florida. Production during 1980 in the United States was estimated (Searles, 1981) at 790,000 short tons for agricultural use. Value of the 1980 production was about $17,000,000 f.o.b. (freight on board) mine, and the average value per ton was about $21.80. Apparent consumption of peat in the United States during 1980, however, was 1,115,000 short tons, of which imports composed 355,000 short tons.

Demand for peat in the production of food is expected to increase from the 1978 demand at an average annual rate of about 3 percent to 1.4 million short tons in 1985 (Searles, 1981). The demand for peat in the production of energy is also expected to begin. Experimental studies on the gasification of peat continue in the Midwest, and a large industrial corporation in North Carolina is investigating and promoting the possible commercial generation of electrical power from steam produced by direct burning of peat.

Scope of report

The purpose of this report is to make the 50 sketch maps immediately available for use in assessing peat resources in Maine. The complete study is an expansion of studies begun earlier in Washington, southeastern Aroostook, Hancock, and Penobscot Counties (Cameron, 1975; Cameron and Massey, 1978; Cameron and Anderson, 1979, 1980). The locations of the 50 peat deposits mapped for this report are shown in the index map (figure 1), and described in more detail in the captions of the individual deposit maps (figures 2-51). All estimates given in figures 2-51 are in short tons.

Method of study

Field studies consisted of pace and compass traverses for determining extent of deposits. Stratigraphy was examined in cores taken by use of Macaulay augers and Davis peat samplers. Proximate and ultimate analyses of samples were obtained at the U.S. Department of Energy laboratories at Grand Forks, South Dakota.

Estimates of commercial-quality resources were based on acre-feet of peat where it was 5 or more feet thick and had an ash content not greater than 25 percent; this definition of commercial-quality peat resources is in accord with ASTM (1969) standards. The formula for converting acre-feet of peat to short tons of air-dried peat was devised by E. S. Bastin and C. A. Davis (1909) of the U.S. Geological Survey during their study to determine the extent and value of Maine's peat deposits as sources of potential fuel and as raw materials for various other uses. Bastin and Davis (1909, p. 24) stated, "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 assuming that it will yield at least 200 tons of dry machine-made fuel per acre, for each foot in depth." This formula was based on the following figures (Bastin and Davis, 1909, p. 62):

> "The specific gravity of the dry peat substance is slightly but not much greater than that of water. A cubic foot of water weighs 62.5 pounds. It is probable that a cubic foot of wet peat as it comes from the bog will weigh more than this, probably somewhat over 65 pounds...many peats as they come from the bog contain 85 to 90 percent of water by weight. In others the water percentage is lower, but for purposes of a conservative estimate it may be assumed that the vegetable matter constitutes only 10 to 15 percent by weight of the wet peat. On this basis, a cubic foot of wet peat would contain only 10 to 15 percent of 65 pounds or 6.5 to 9.75 pounds of vegetable material.
>
> The water contained in air-dried machine peat will probably average about 25 percent by weight, but a conservative estimate may assume that it constitutes only 20 percent...Forty pounds may be taken as an average figure (for the weight of air-dried machine peat per cubic foot). Of this about 80 percent, or 32 pounds, would be vegetable material.
>
> As each cubic foot of peat as it comes from the bog contains 6.5 to 9.75 pounds of vegetable matter, it would take...5 to 3.2 cubic feet of wet peat to make 1 cubic foot of air-dried machine peat. If we assume 4 cubic feet of wet peat as an average figure, we have the following relations:

$$\frac{\text{Volume of wet peat in bog, in cubic feet}}{\text{(number of cubic feet of wet peat equal to 1 cubic foot of machine peat)}} \times \frac{\text{(average weight in pounds of 1 cubic foot of machine peat)}}{\text{(pounds in short ton)}} = \frac{\text{Volume of wet peat in bog, in cubic feet}}{200} = \text{Number of tons of air-dried machine peat which the bog can produce."}$$

Acknowledgments

The Maine Geological Survey supported this study with assistance from the Maine Office of Energy Resources, Augusta, Maine. Appreciation is especially extended to Carolyn A. Lepage, Robert A. Johnston, Robert D. Tucker, and Bennett J. Wilson, Maine Geological Survey, for assistance in preparation of this report. The excellent field assistance by Vernon L. Shaw and David N. Brown, also with the Maine Geological Survey is gratefully acknowledged.

RESOURCES

Forty-eight of the 50 deposits studied have a minimum thickness of 5 feet and a maximum ash content of 25 percent on the dry basis. Resources in these peat deposits occupy a total of 14,262 acres and will yield 23,670,000 short tons air dried peat (table 1). Figures 2a-51a show that these resources are as much as 18 feet thick in some deposits. Laboratory analyses (tables 2-50) show that 6.9 percent of the 48 deposits containing potential peat resources have ash content below 6 percent and a BTU range of 9,118 to 10,627. Twenty one percent have an ash content of 6 to 11 percent and a BTU range of 8,978 to 9,445. Eight percent have ash content ranging from 11 to 16 percent and BTU from 8,368 to 9,199. Ash content in the remaining 2 percent is 22 percent on the dry basis and BTU is 8,185. Almost all the resources may be classed as moss (fibric) peat and reed-sedge (femic) peat.

Table 1. Estimated peat resources in the 50 studied areas, Maine

INDEX MAP (Fig. 1) LOC. NUMBER	ACRES	SHORT TONS AIR-DRIED PEAT
1	262	314,400
2	50	88,000
3	309	450,000
4	45	54,000
5	44	71,000
6	115	153,000
7	235	392,000
8	235	188,000
9	362	626,000
10	200	224,000
11	947	1,160,000
12	202	323,200
13	185	222,000
14	100	100,000
15	50	50,000
16	250	250,000
17	210	348,000
18	55	110,000
19	87	121,800
20	117	117,000
21	56	101,000
22	Too thin and poor in quality to be a peat resource.	
23	170	238,000
24	Too thin and poor in quality to be a peat resource.	
25	85	85,000
26	167	200,400
27	214	282,000
28	348	405,600
29	170	216,000
30	125	125,000
31	153	367,200
32	1,344	3,204,800
33	170	240,000
34	345	345,000
35	510	886,000
36	430	810,000
37	360	557,000
38	175	329,000
39	283	485,200
40	100	200,000
41	515	813,000
42	115	170,000

Table 1.--continued

INDEX MAP (Fig. 1) LOC. NUMBER	ACRES	SHORT TONS AIR-DRIED PEAT
43	235	469,000
44	710	1,042,000
45	460	900,000
46	130	338,000
47	805	1,221,000
48	665	2,023,400
49	630	1,059,800
50	732	1,171,200
TOTAL	14,262	23,670,000

REFERENCES CITED

American Society for Testing and Materials, 1969, D2607-69, Standard classification of peats, mosses, humus and related products: 1916 Race Street, Philadelphia, Pa. 19103, 1 p.

Bastin, E. S., and Davis, C. A., 1909, Peat deposits of Maine: U.S. Geological Survey Bulletin 376, 125 p.

Cameron, C. C., 1975, Some peat deposits in Washington and southeastern Aroostook Counties, Maine: U.S. Geological Survey Bulletin 1317-C, 40 p.

Cameron, C. C., and Anderson, W. A., 1979, Some peat deposits in Penobscot County, Maine: U.S. Geological Survey Open-File Report 79-1096, 31 p.

_____ 1980, Peat resources of the Great Heath, Washington County, Maine: U.S. Geological Survey Open-File Report 80-379, 31 p.

_____ 1980, Some peat deposits in northern Penobscot, eastern Piscataquis, and eastern Aroostook Counties, Maine: U.S. Geological Survey Open-File Report 80-718, 47 p.

Cameron, C. C., and Massey, W. D., 1978, Some peat deposits in northern Hancock County, Maine: U.S. Geological Survey Open-File Report 78-210, 19 p.

Olson, D. J., Malterer, T. J., Mellem, D. R., Levelling, B., and Tome, E. J., 1979, Inventory of peat resources in S.W. St. Louis County, Minnesota: St. Paul, Minnesota Department of Natural Resources, Peat Inventory Project, 76 p.

Searles, J. P., 1981, Peat, in U.S. Bureau of Mines Mineral commodity summaries 1981: Washington, D.C., U.S. Government Printing Office, p. 108-109.

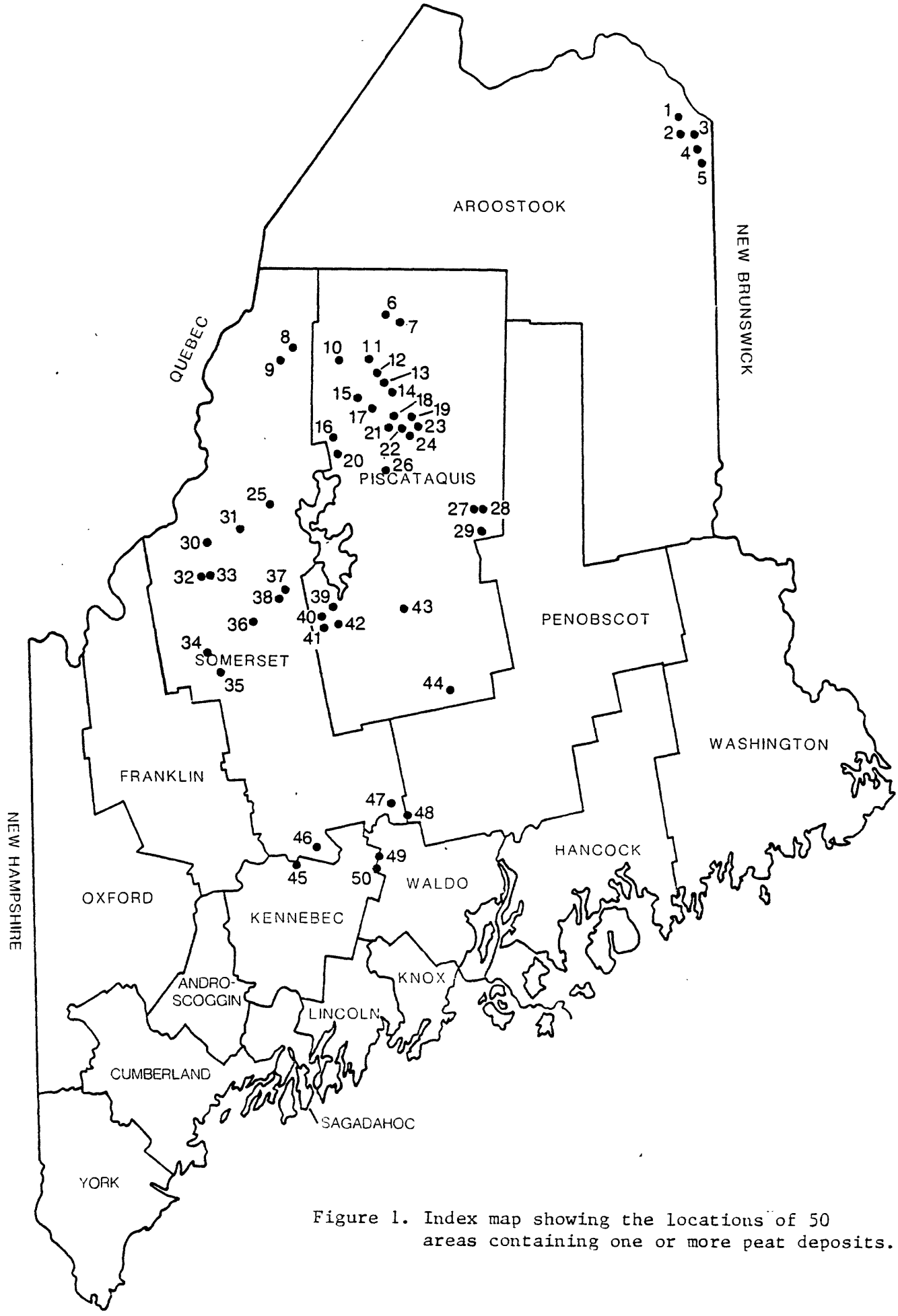


Figure 1. Index map showing the locations of 50 areas containing one or more peat deposits.

Explanation of section shown in all figures.

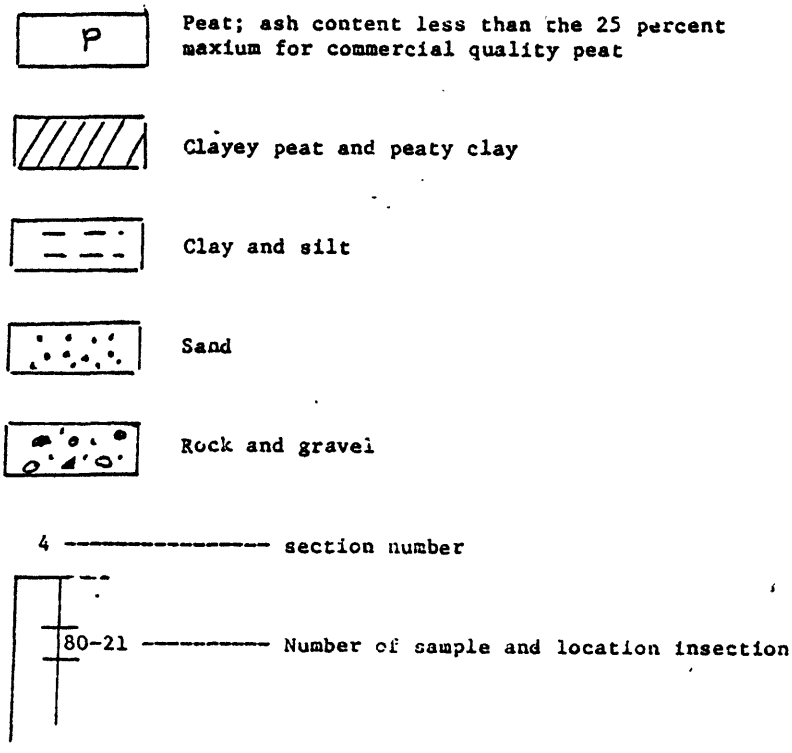


Figure 1a.

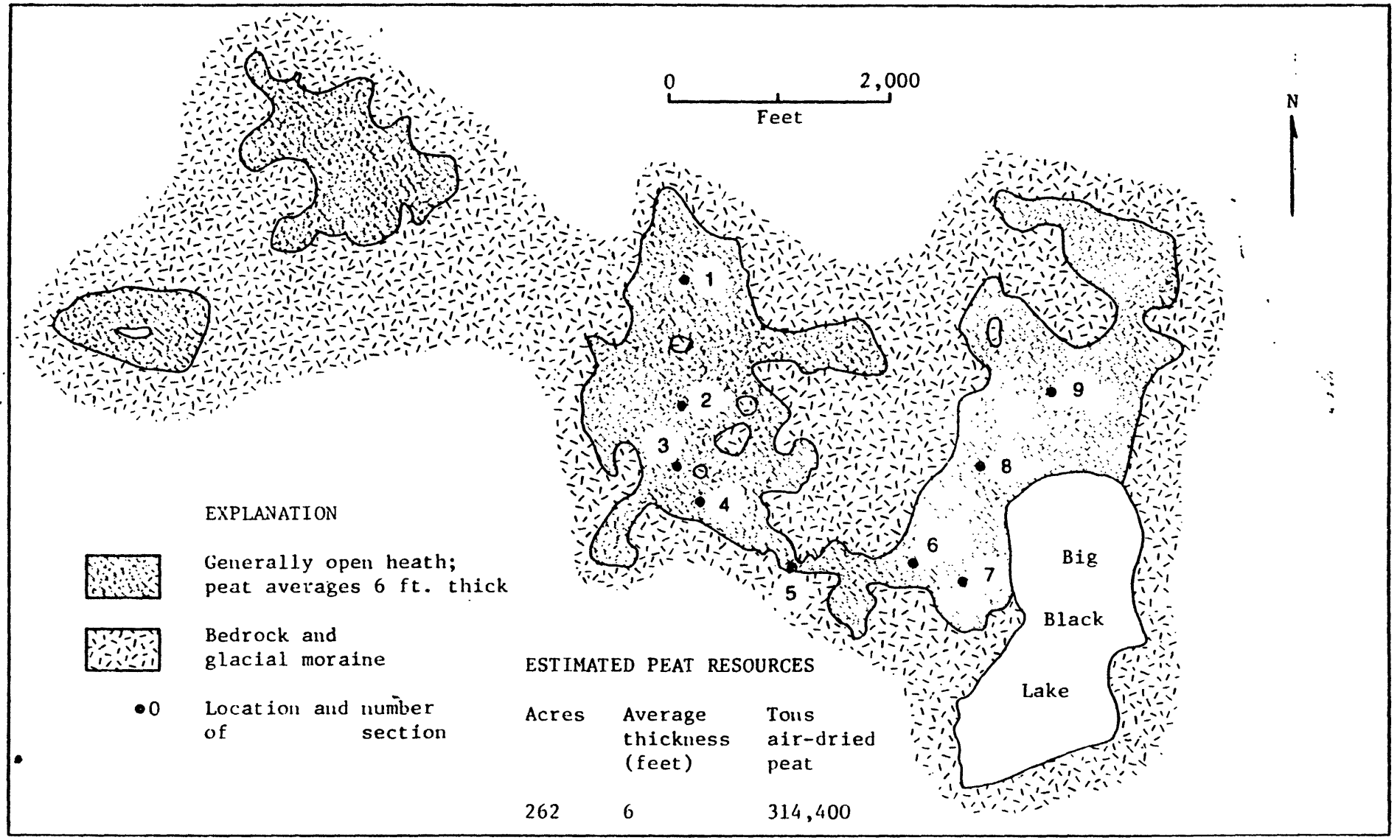


Figure 2. Sketch map of Orchard Bog, Caswell Plt., Van Buren 15-minute Quadrangle, Aroostook County, Maine. (Number 1 on Index Map).

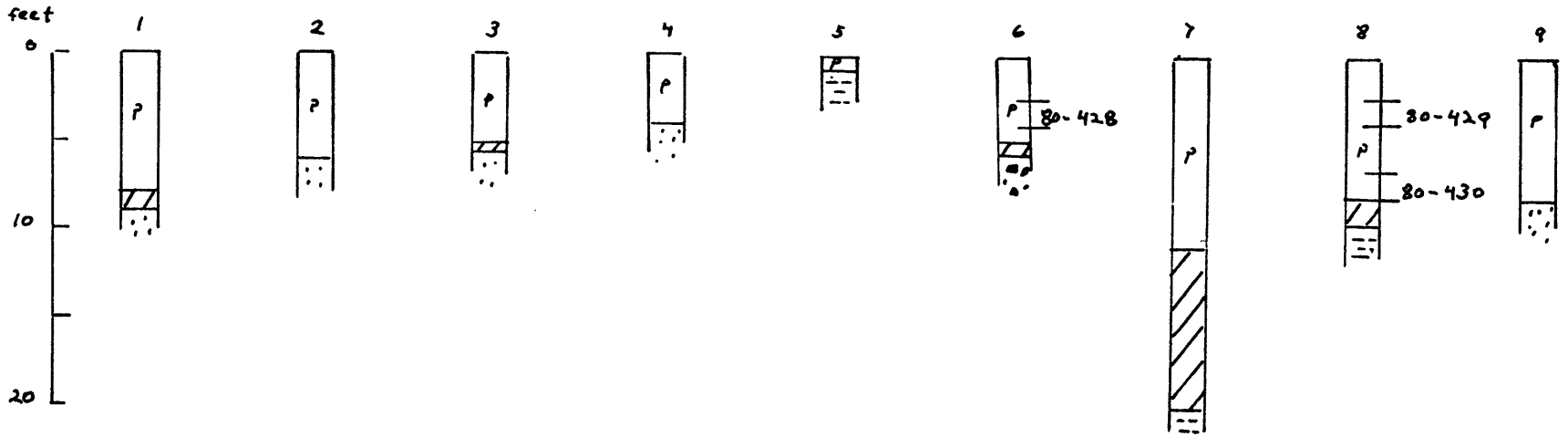
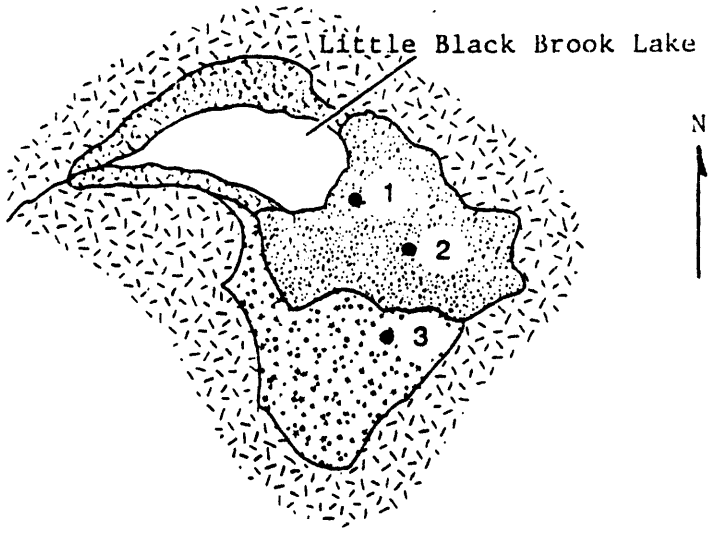


Figure 2a.--Sections and sample locations.

Table 2.--Analyses of samples located in sections in figure 2a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
428	61.90	5.99	1.61	0.14	1.7	86.0	69.4	10,890
429	59.33	5.36	1.69	0.15	1.4	86.2	67.4	10,134
430	54.35	5.01	2.46	0.18	6.1	91.7	65.2	9,372
Average commercial quality peat (ash content less than 25%)	58.53	5.45	1.92	0.16	3.07	88.0	67.3	10,132



EXPLANATION

- Open heath; peat averages 10 ft. thick
- Open heath; peat averages 6 ft. thick
- Forested bog; peat 0-3 ft. thick
- Bedrock and glacial moraine
- •0 Location and number of section

0 2,000
Feet

ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
35	10	70,000
15	6	18,000
---		------
50		88,000

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

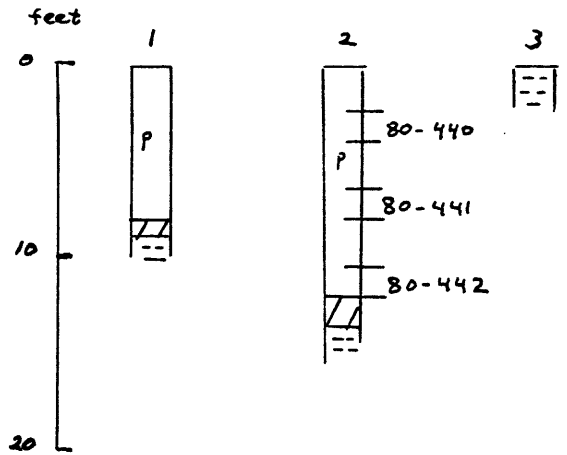


Figure 3a.--Sections and sample locations.

Table 3.--Analyses of samples in sections located in figure 3a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
440	56.66	4.98	1.40	0.14	1.4	--	68.0	9,648
441	58.85	4.60	1.32	0.19	2.2	89.6	65.2	9,947
442	55.53	5.16	1.95	0.44	4.2	90.5	66.2	9,595
Average commerical quality peat (ash content less than 25%)	57.01	4.91	1.56	0.36	3.6	90.1	66.5	9,730

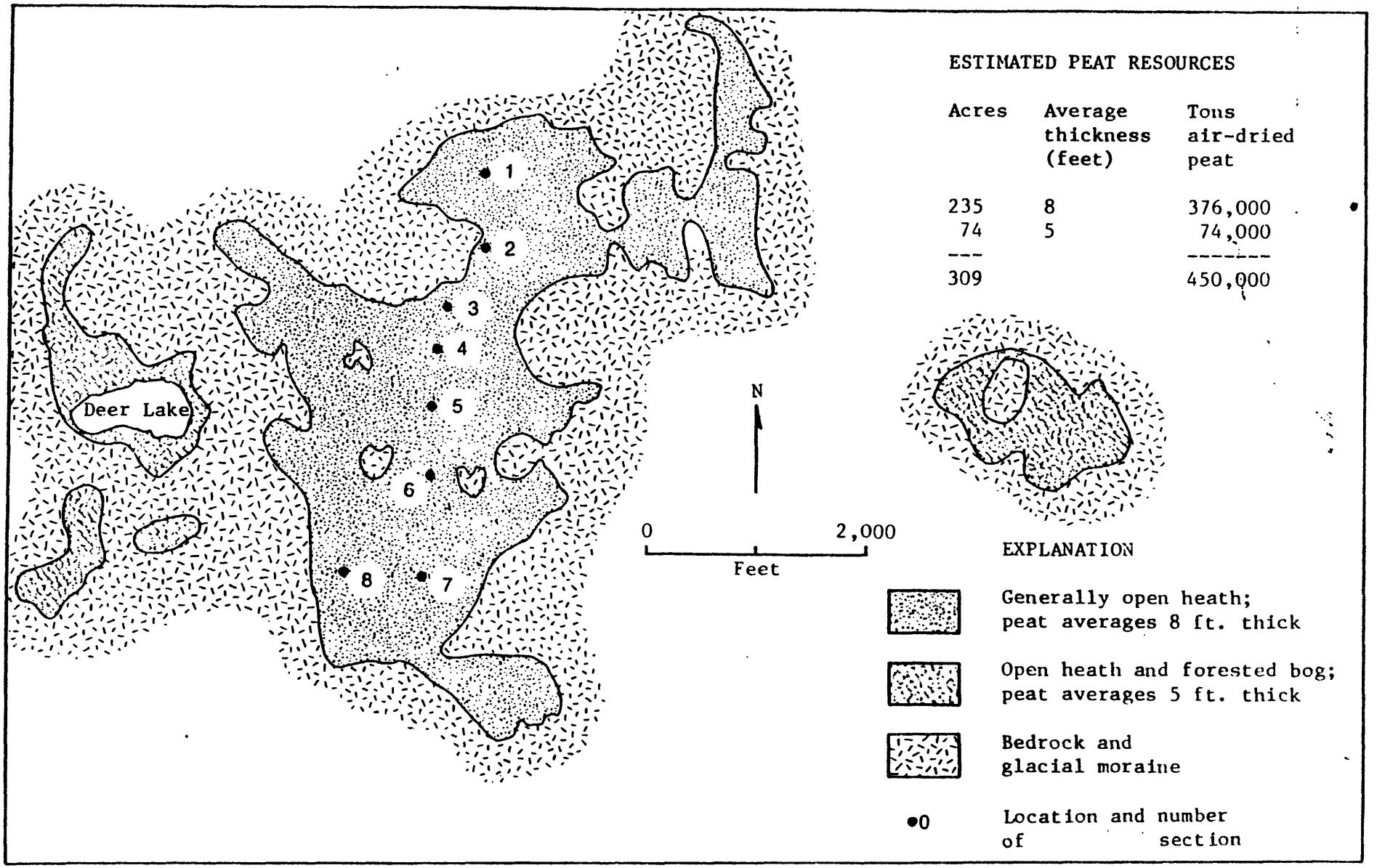


Figure 4. Sketch map of bogs between Deer and Mud Lakes, Caswell Plt., Van Buren 15-minute Quadrangle, Aroostook County, Maine. (Number 3 on Index Map).

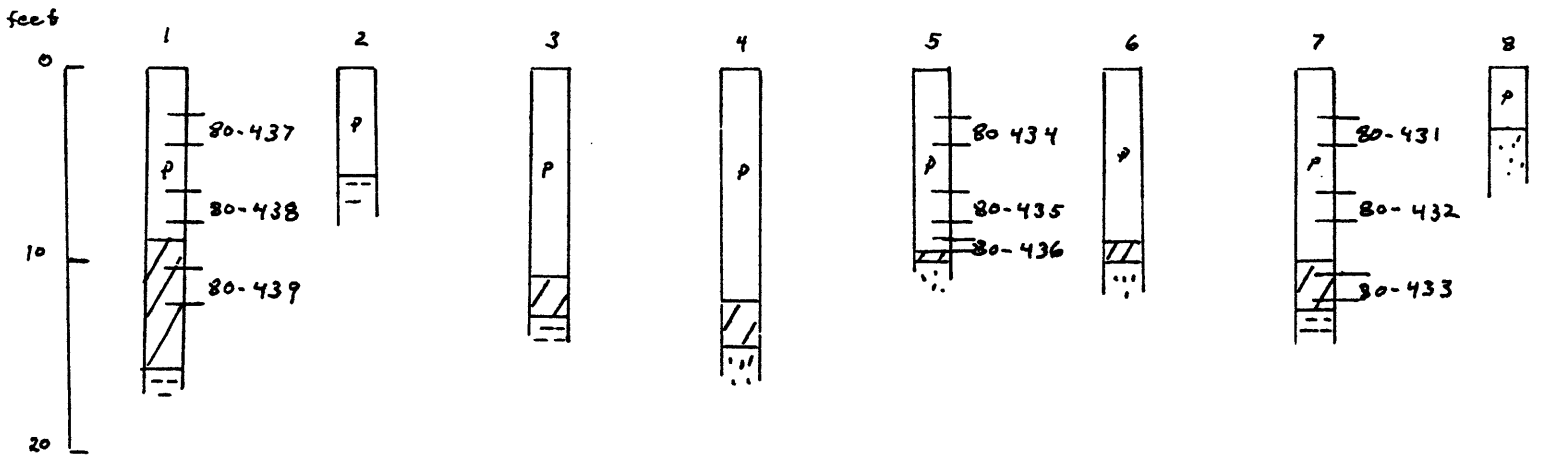


Figure 4a.--Sections and sample locations.

Table 4.--Analyses of samples located in sections in figure 4a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
431	57.91	5.51	1.85	0.16	1.4	88.6	69.0	10,106
432	55.78	4.03	1.89	0.21	6.4	88.0	63.4	9,217
433	40.91	4.70	3.50	0.53	25.2	91.6	59.8	7,475
434	58.07	5.28	1.69	0.13	2.4	87.7	68.1	10,158
435	55.77	4.21	1.57	0.38	6.7	86.5	61.9	9,365
436	54.81	4.32	1.86	0.33	6.2	89.0	62.6	9,308
437	54.24	4.78	2.04	0.13	2.4	88.5	70.8	9,262
438	55.52	4.94	2.52	0.16	4.6	93.3	68.6	9,734
439	38.98	4.22	3.13	0.59	29.0	93.5	56.8	7,088
Average commercial quality peat (ash content less than 25%)	56.01	4.72	1.92	0.21	4.2	89.2	66.3	9,592

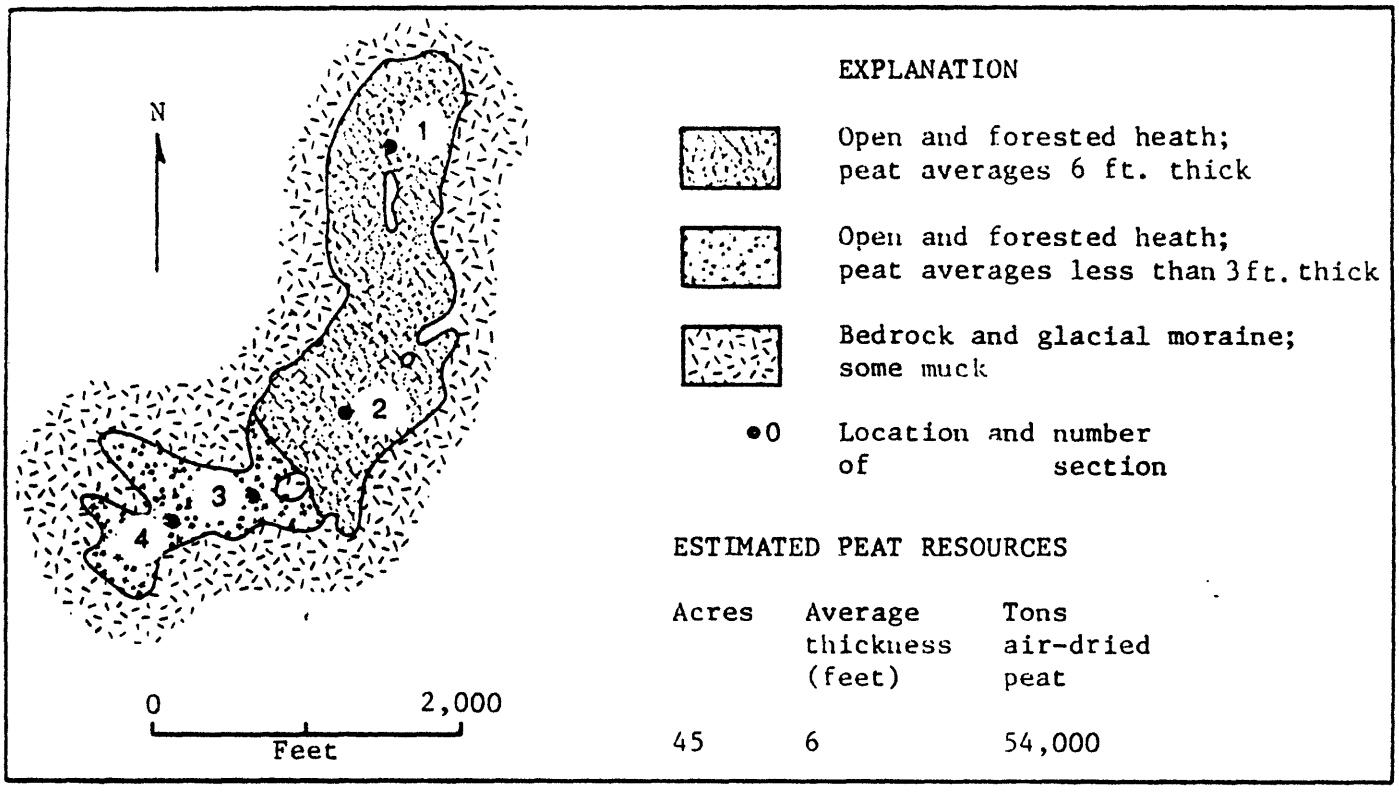


Figure 5. Sketch map of bog northwest of Pierce Lake and west of Route 165, Caswell Plt., northeast corner of Fort Fairfield 15-minute Quadrangle, Aroostook County, Maine. (Number 4 on Index Map).

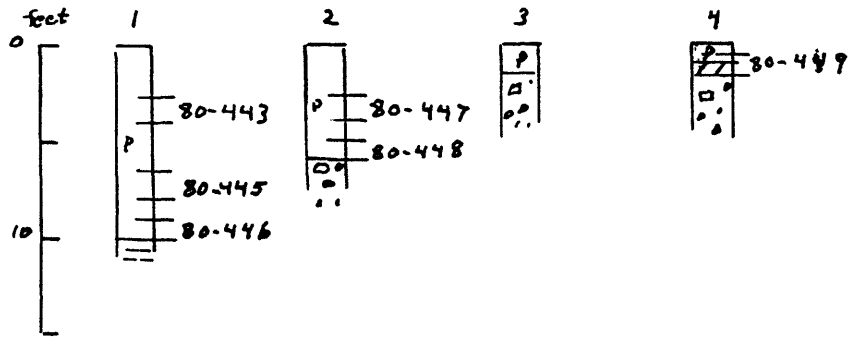
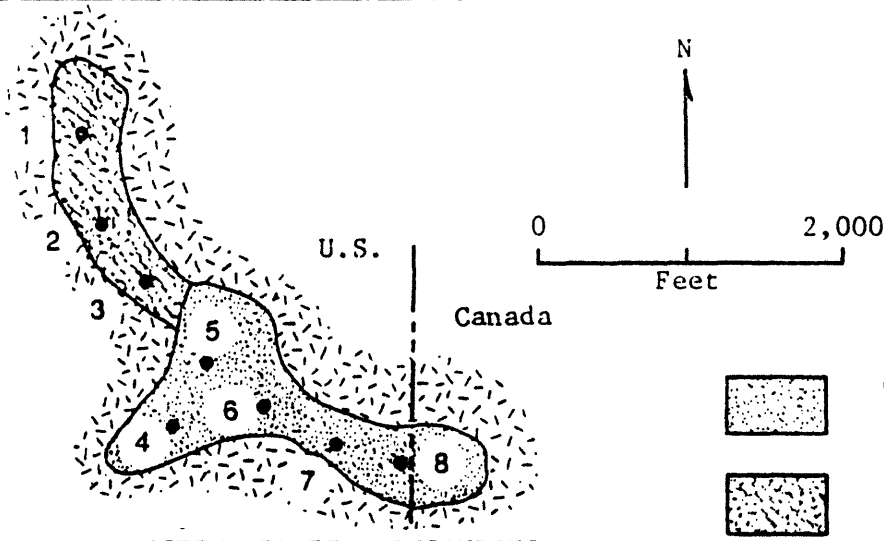


Figure 5a.--Sections and sample locations.

Table 5.--Analyses of samples located in sections in figure 5a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
443	54.09	4.78	1.18	0.13	0.7	90.1	68.8	9,107
445	55.53	5.30	1.40	0.17	1.2	91.0	68.9	9,624
446	51.72	5.81	2.43	0.34	17.8	87.2	62.0	9,471
447	61.82	5.90	1.52	0.19	2.0	85.9	67.0	10,899
448	49.57	4.67	1.91	0.39	10.7	81.6	62.0	8,673
449	43.03	4.46	1.34	0.17	26.2	--	54.1	7,542
Average commercial quality peat (ash content less than 25%)	54.55	5.29	1.59	0.24	5.48	87.16	65.74	9,555



EXPLANATION

Generally open heath; peat averages 10 ft. thick

Open heath and forested bog; peat averages 5 ft. thick

Bedrock and glacial moraine

•0 Location and number of section

ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
27	10	54,000
17	5	17,000
44		71,000

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).

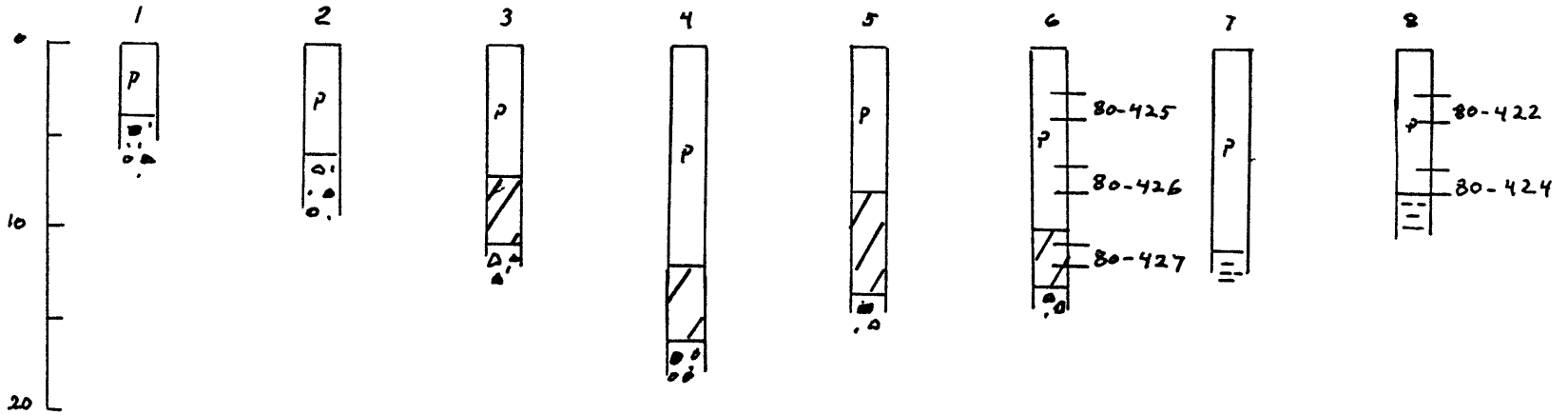
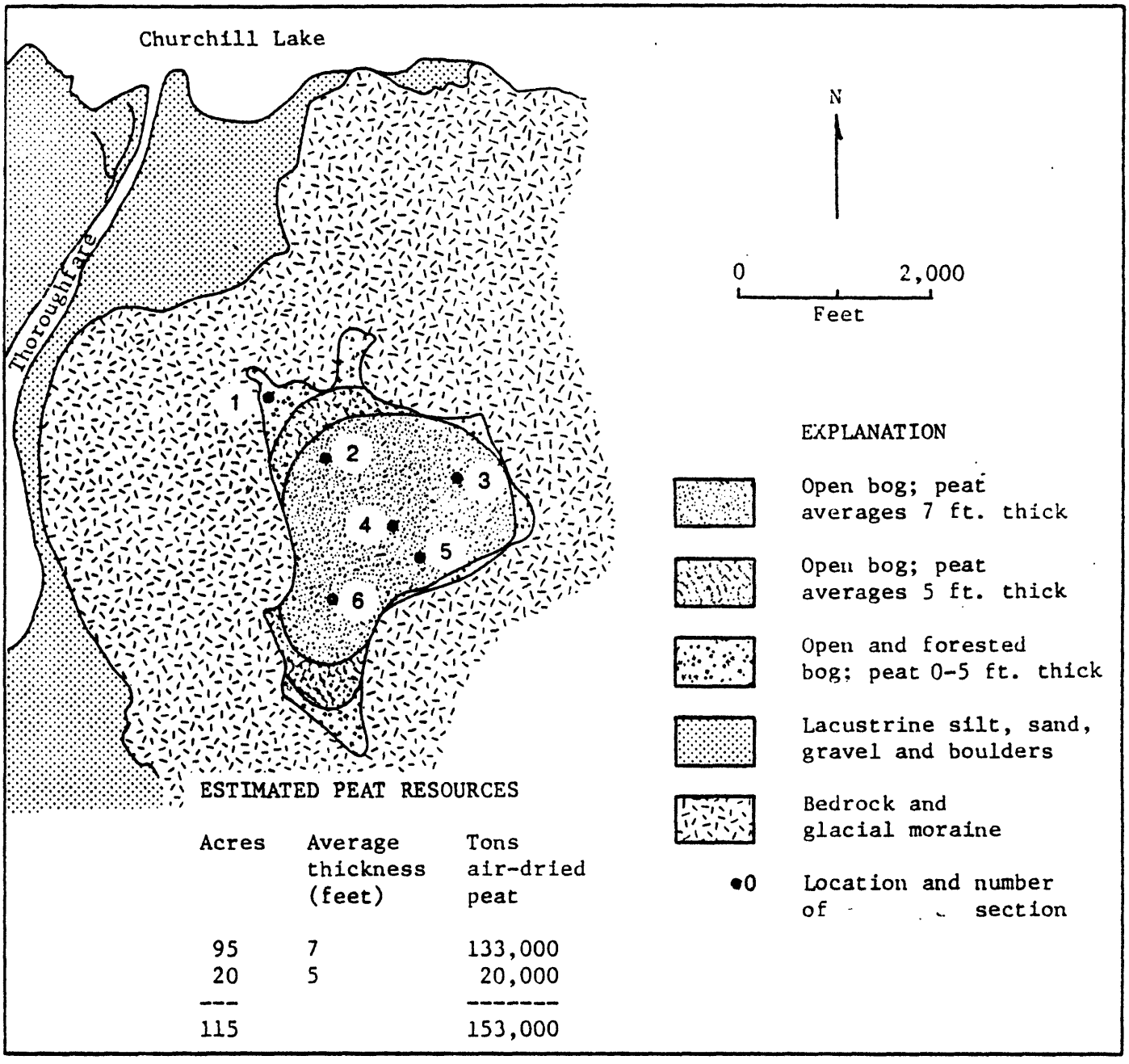


Figure 6a.--Sections and sample locations.

Table 6.--Analyses of samples located in sections in figure 6a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
422	58.03	5.17	1.54	0.12	1.3	88.9	67.2	9,931
424	57.68	5.09	1.44	0.15	5.5	86.1	63.4	9,975
425	52.85	5.01	1.43	0.10	1.3	89.9	72.1	9,005
426	57.00	5.58	2.03	0.15	1.3	90.5	69.1	9,846
427	43.12	4.33	2.60	0.33	25.6	89.6	53.2	7,776
Average commerical quality peat (ash content less than 25%)	56.39	5.21	1.61	0.13	2.4	88.9	68.0	9,939



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
95	7	133,000
20	5	20,000
115		153,000

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

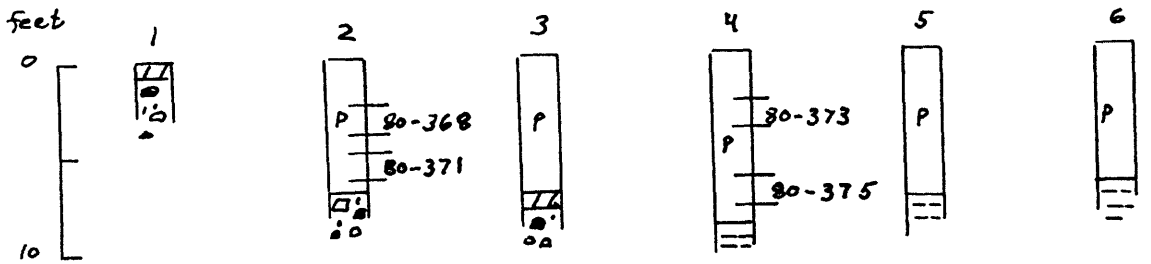
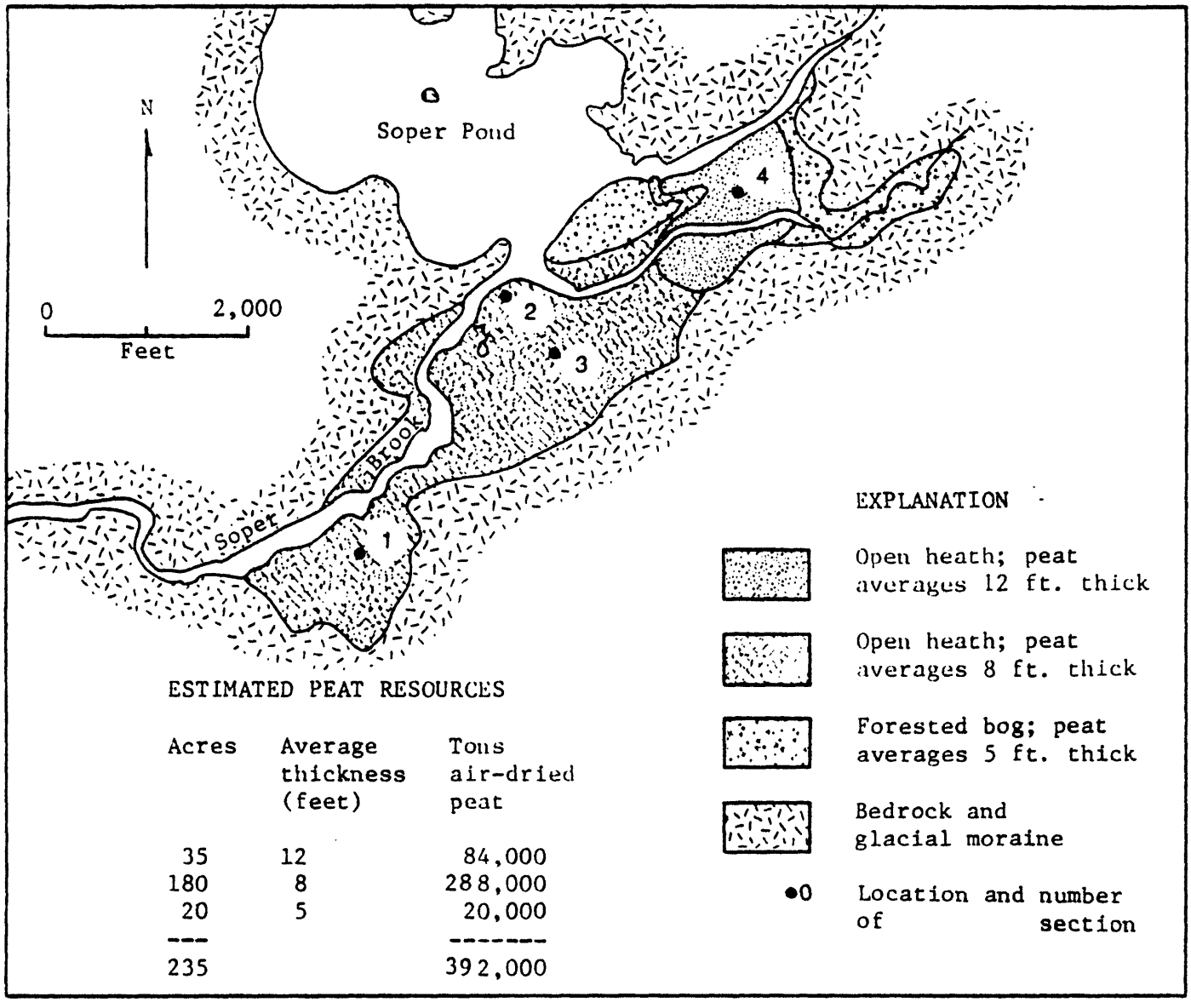


Figure 7a.--Sections and sample locations.

Table 7.--Analyses of samples located in sections in figure 7a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
368	60.54	5.88	1.81	0.15	2.6	86.6	70.1	10,902
371	56.55	5.51	2.22	0.12	4.3	88.0	66.6	9,984
373	60.38	5.76	1.72	0.16	2.5	86.6	69.4	10,699
375	55.19	4.99	2.39	0.19	5.0	91.9	66.1	9,582
Average commerical quality peat (ash content less than 25%)	58.17	5.54	2.04	0.16	3.6	88.3	68.1	10,292



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
35	12	84,000
180	8	288,000
20	5	20,000
235		392,000

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

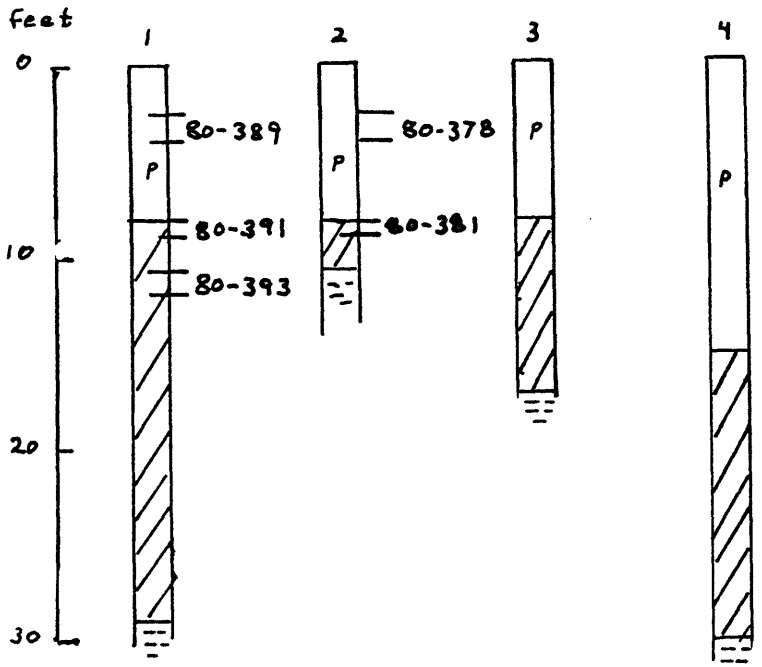


Figure 8a.--Sections and sample locations.

Table 8.--Analyses of samples located in sections in figure 8a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
378	54.40	4.88	2.31	0.38	5.0	87.8	66.6	9,334
381	33.34	3.60	2.63	1.25	37.2	91.1	50.5	5,869
389	52.38	4.95	1.62	0.15	4.0	90.4	69.9	8,902
391	37.60	4.30	2.67	0.77	27.3	93.3	58.9	6,697
393	33.82	3.92	3.12	1.35	33.5	93.4	53.2	6,075
Average commercial quality peat (ash content less than 25%)	53.39	4.92	1.97	1.27	4.5	89.1	68.3	9,118

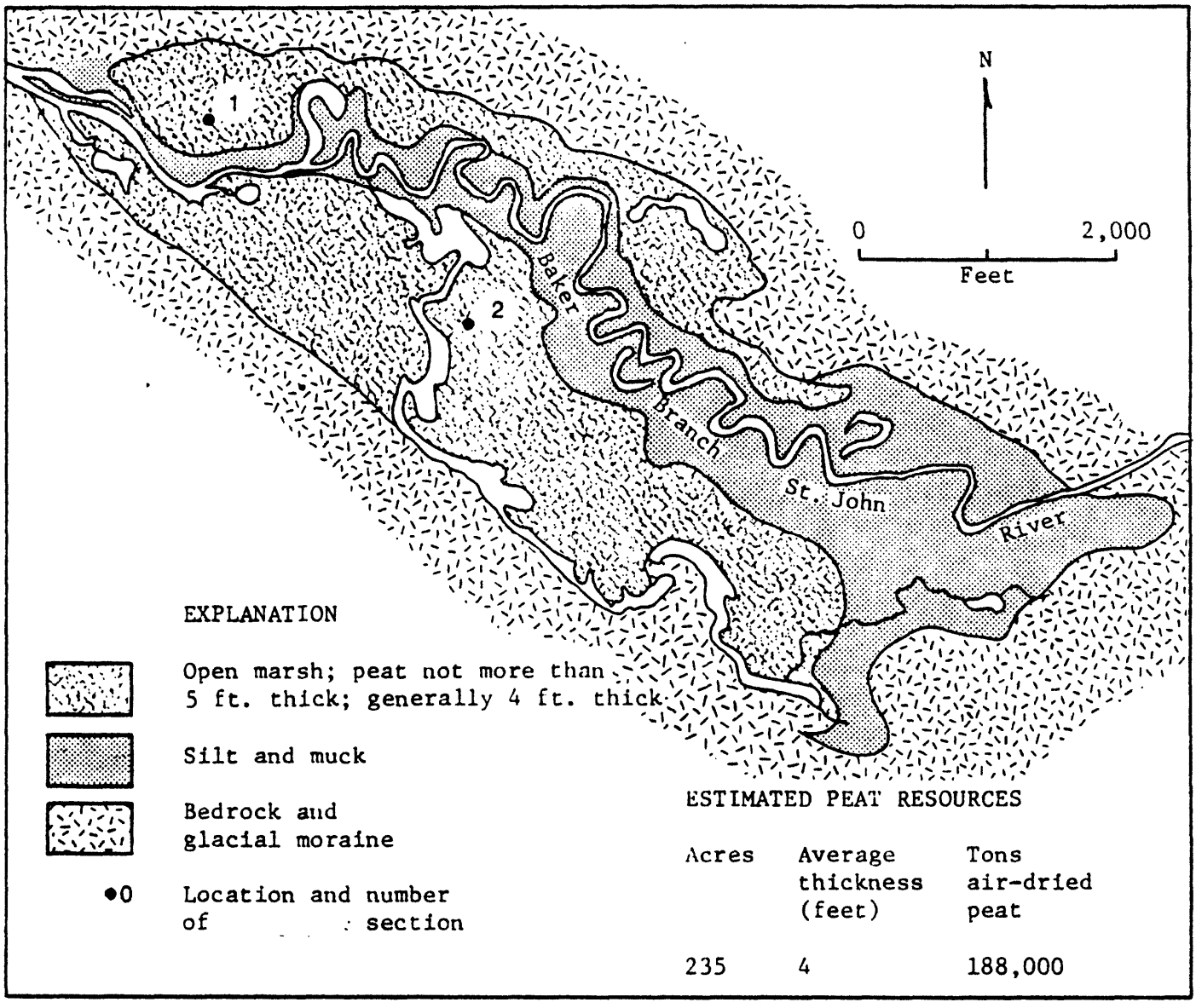


Figure 9. Sketch map of marsh along Baker Branch, St. John River, T10 R16, Baker Lake and Saint John Pond 15-minute Quadrangles, Somerset County, Maine. (Number 8 on Index Map).

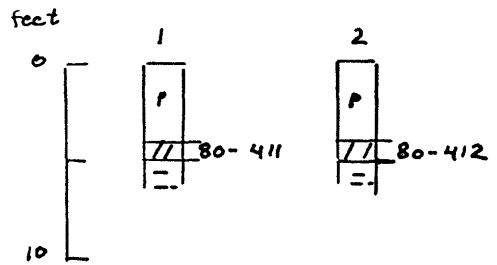


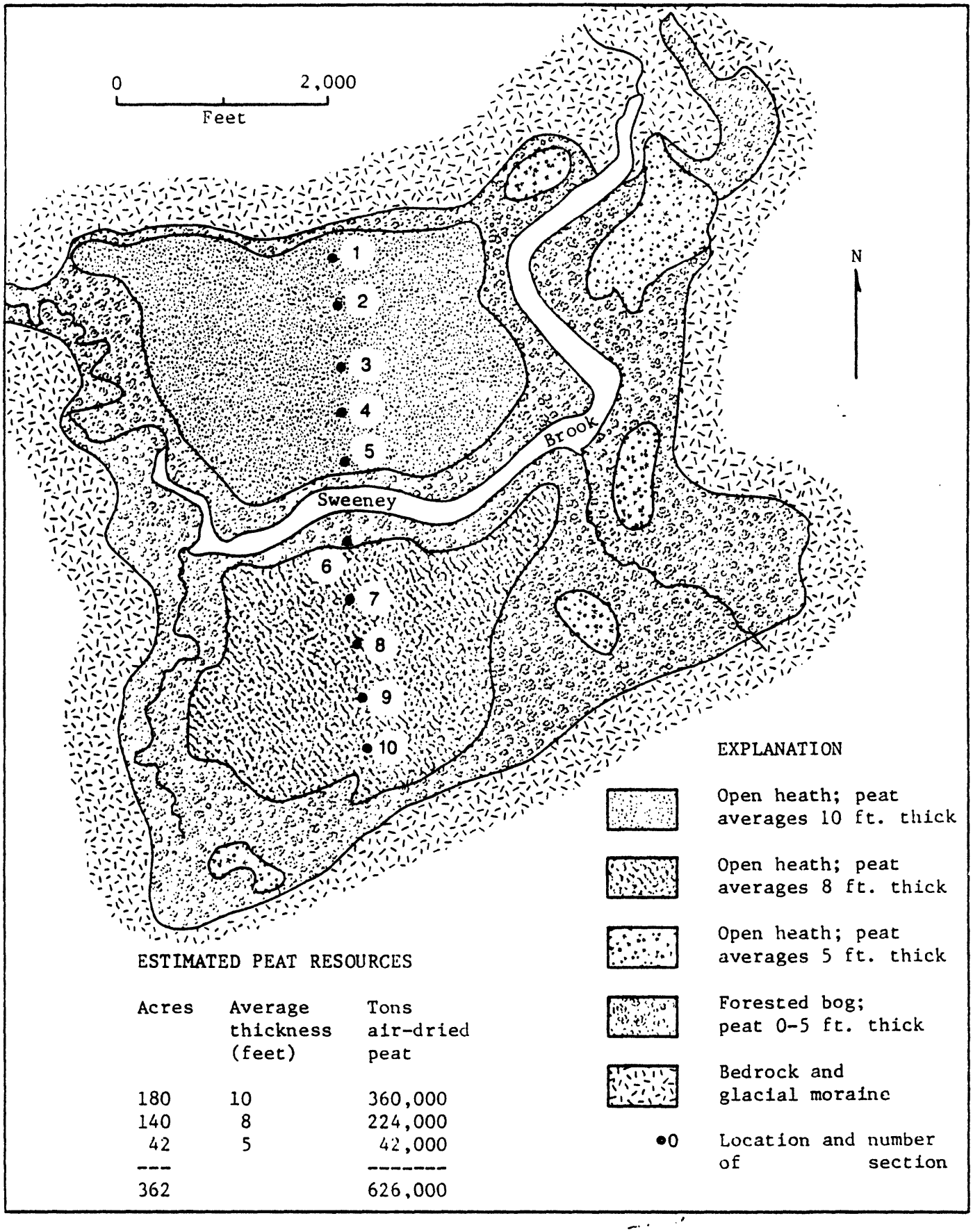
Figure 9a.--Sections and sample locations.

Table 9.--Analyses of samples located in sections in figure 9a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
411	21.28	1.93	1.09	0.21	61.3	72.0	28.6	3,692
412	37.04	3.25	1.91	0.32	36.2	78.3	45.3	6,337

Ash content at depths greater than four feet exceed maximum ash content for commercial quality peat.



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
180	10	360,000
140	8	224,000
42	5	42,000
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362		626,000

Figure 10. Sketch map of Sweeney Bog, T6 R13, Saint John Pond 15-minute Quadrangle, Somerset County, Maine. (Number 9 on Index Map).

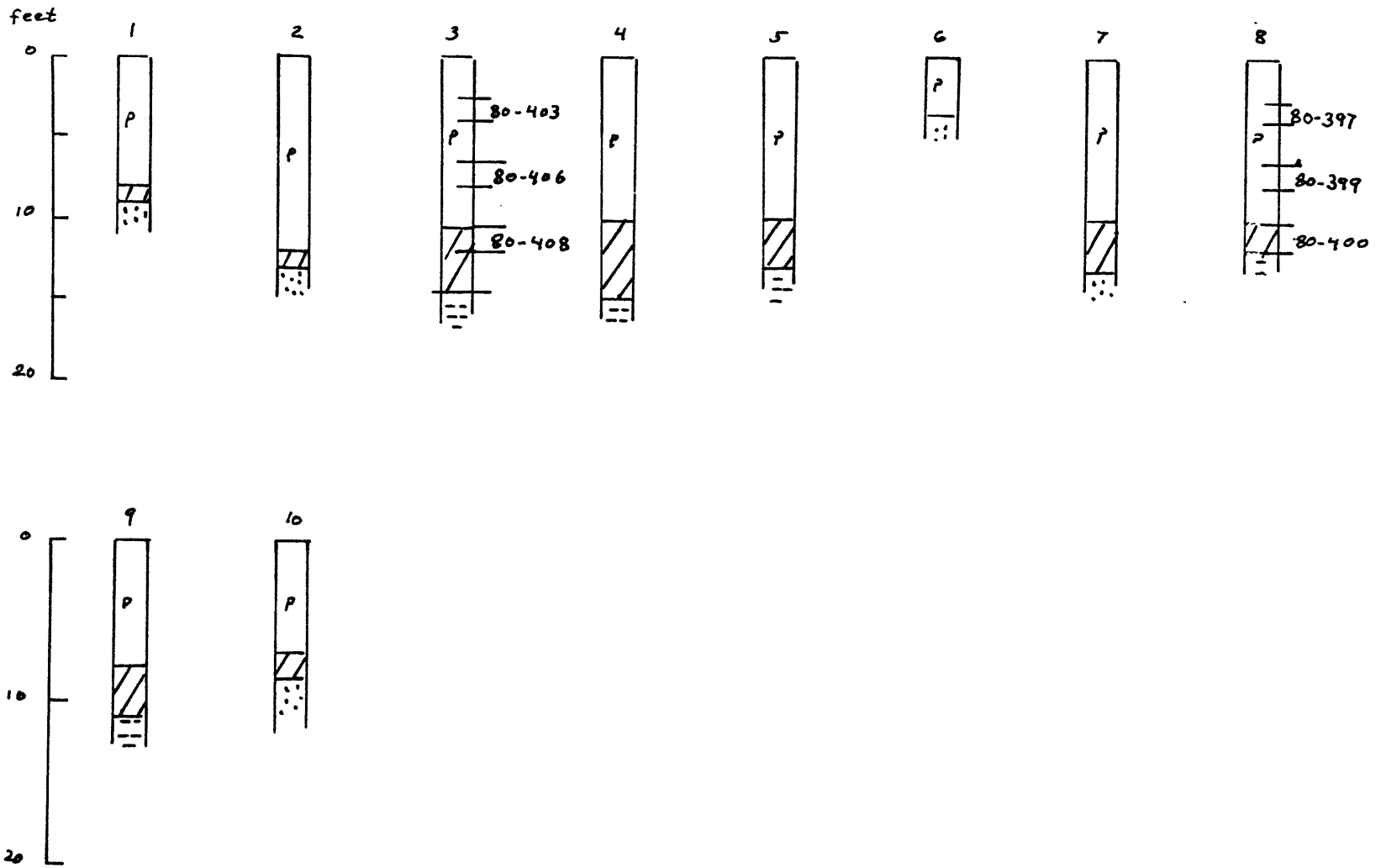


Figure 10a.--Sections and sample locations.

Table 10.--Analyses of samples located in sections in figure 10a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
397	59.00	5.47	1.58	0.15	1.3	87.9	67.6	10,305
399	56.45	4.74	1.20	0.18	4.0	89.4	64.2	9,545
400	22.21	2.42	1.57	0.83	55.8	87.3	34.8	3,861
403	57.16	5.33	1.71	0.14	1.4	81.2	69.3	9,868
406	57.15	4.83	2.27	0.18	3.8	90.6	65.5	9,854
408	26.08	2.47	1.63	0.41	52.5	87.1	34.9	4,558
Average commercial quality peat (ash content less than 25%)	57.44	5.09	1.69	0.16	2.6	84.8	66.7	9,893

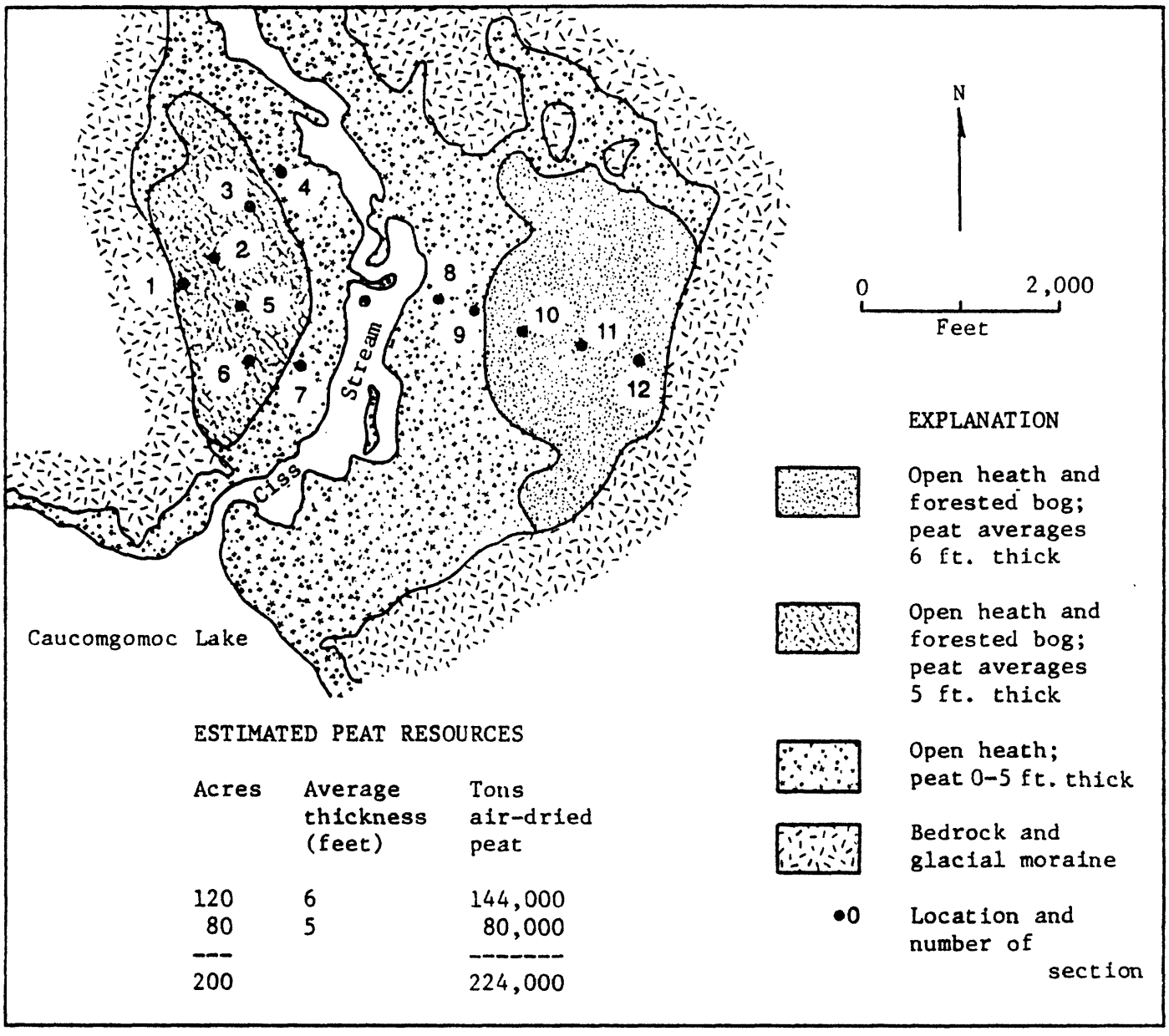


Figure 11. Sketch map of bogs along Ciss Stream, T6 R14, Caucomgomoc Lake 15-minute Quadrangle, Piscataquis County, Maine. (Number 10 on Index Map).

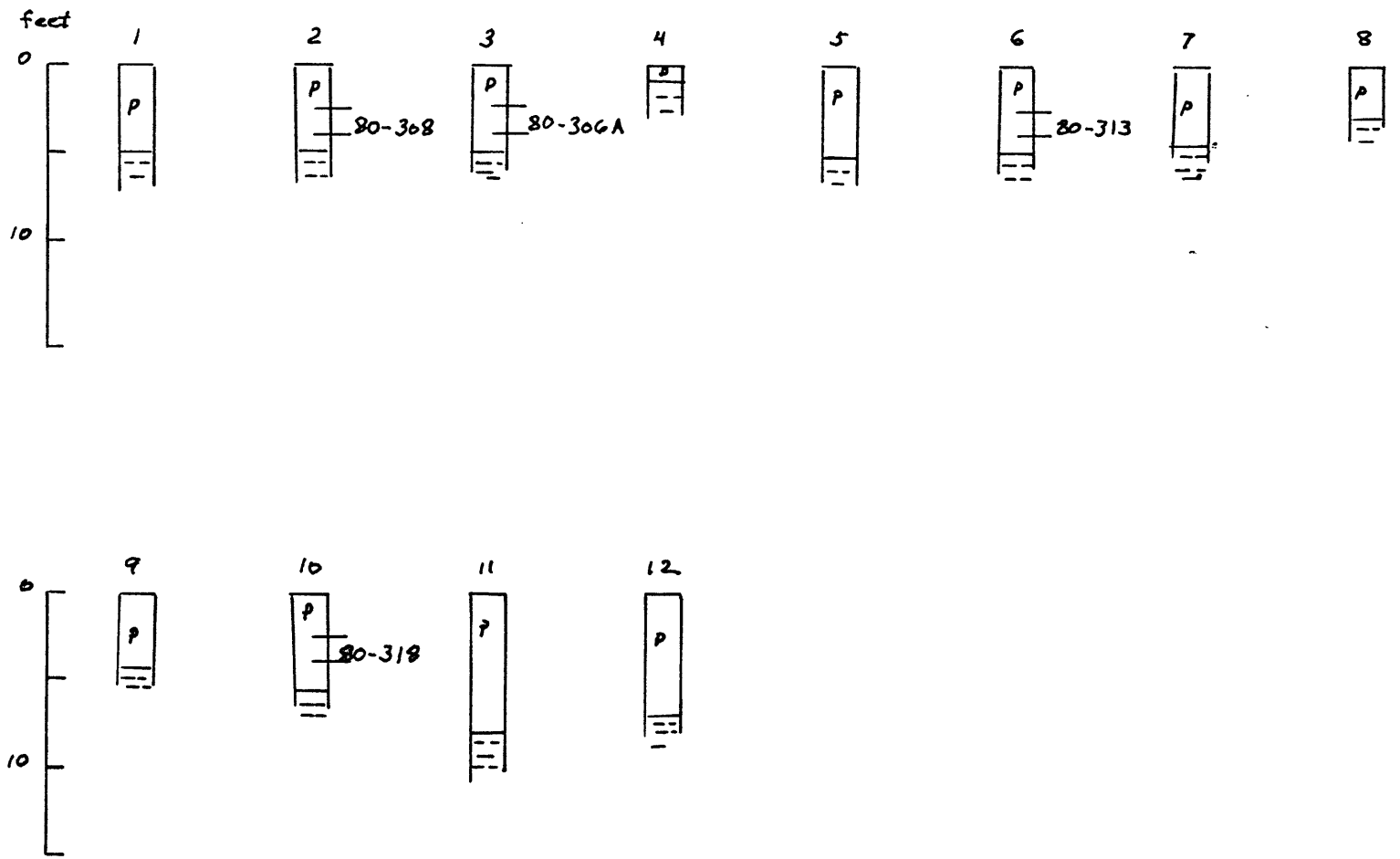


Figure 11a.--Sections and sample locations.

Table 11.--Analyses of samples located in sections in figure 11a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
306A	52.81	4.24	1.90	0.90	11.7	84.5	59.3	8,865
308	55.89	4.18	1.76	0.62	6.3	83.5	62.4	9,286
313	56.42	4.43	1.72	0.31	6.7	86.2	62.9	9,654
318	55.68	4.76	1.65	0.47	8.7	85.6	61.8	9,606
Average commercial quality peat (ash content less than 25%)	55.20	4.40	1.76	0.58	8.4	85.0	61.6	9,253

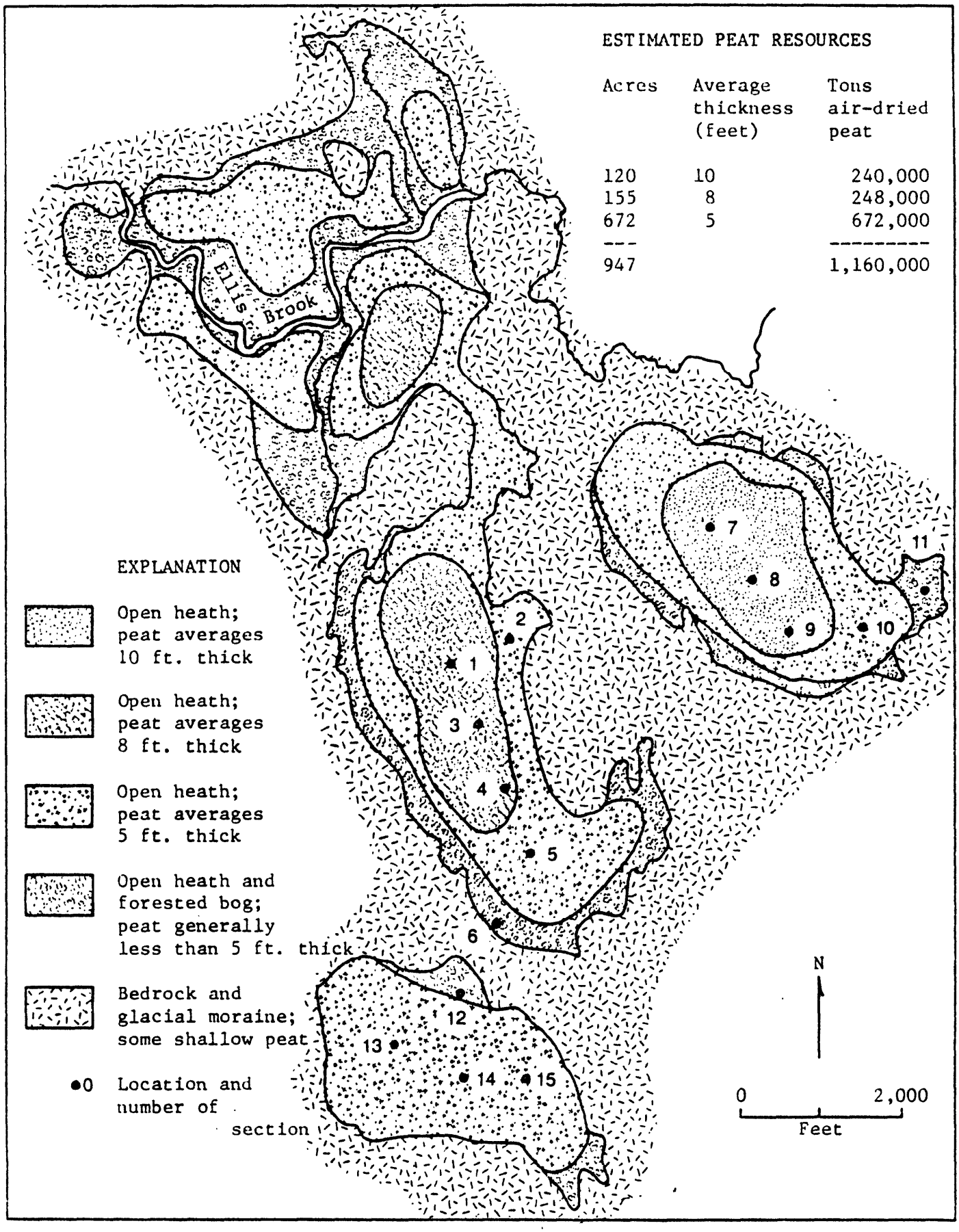


Figure 12. Sketch map of Ellis Bog complex, T6 R13 and T7 R13, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 11 on Index Map).

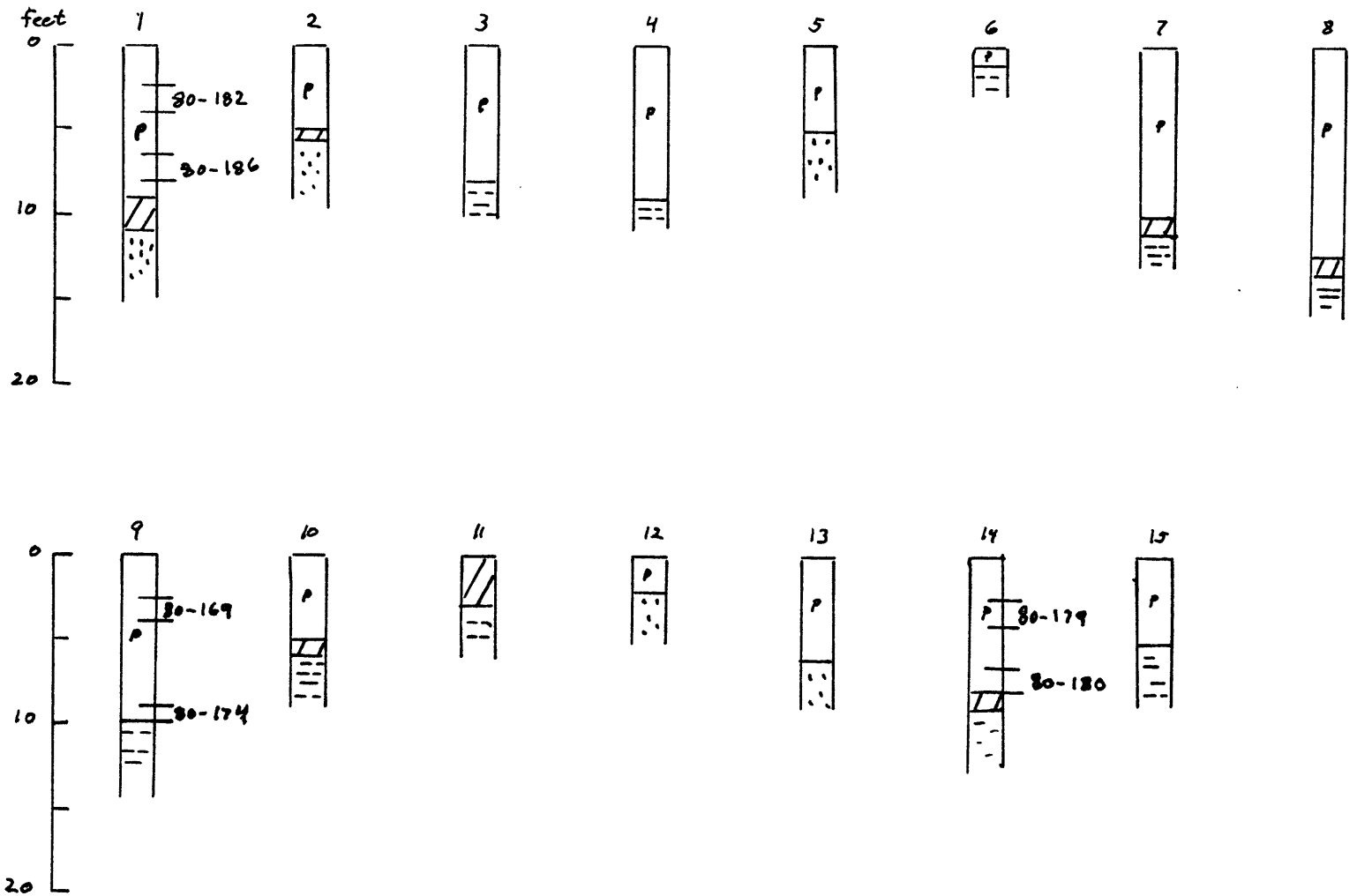


Figure 12a.--Sections and sample locations.

Table 12.--Analyses of samples located in sections in figure 12a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
169	55.44	4.80	1.54	0.22	5.6	89.2	65.1	9,516
174	57.13	4.52	1.97	0.23	3.7	--	63.0	9,520
179	58.28	5.51	1.60	0.18	1.9	--	67.6	10,123
180	49.17	4.28	2.46	0.31	14.0	90.6	60.0	8,521
182	57.89	5.14	2.05	0.19	4.2	89.1	66.8	10,200
186	56.52	4.68	1.76	0.33	6.1	--	63.1	9,555
Average commercial quality peat (ash content less than 25%)	55.74	4.82	1.90	0.24	5.9	89.6	64.27	9,572

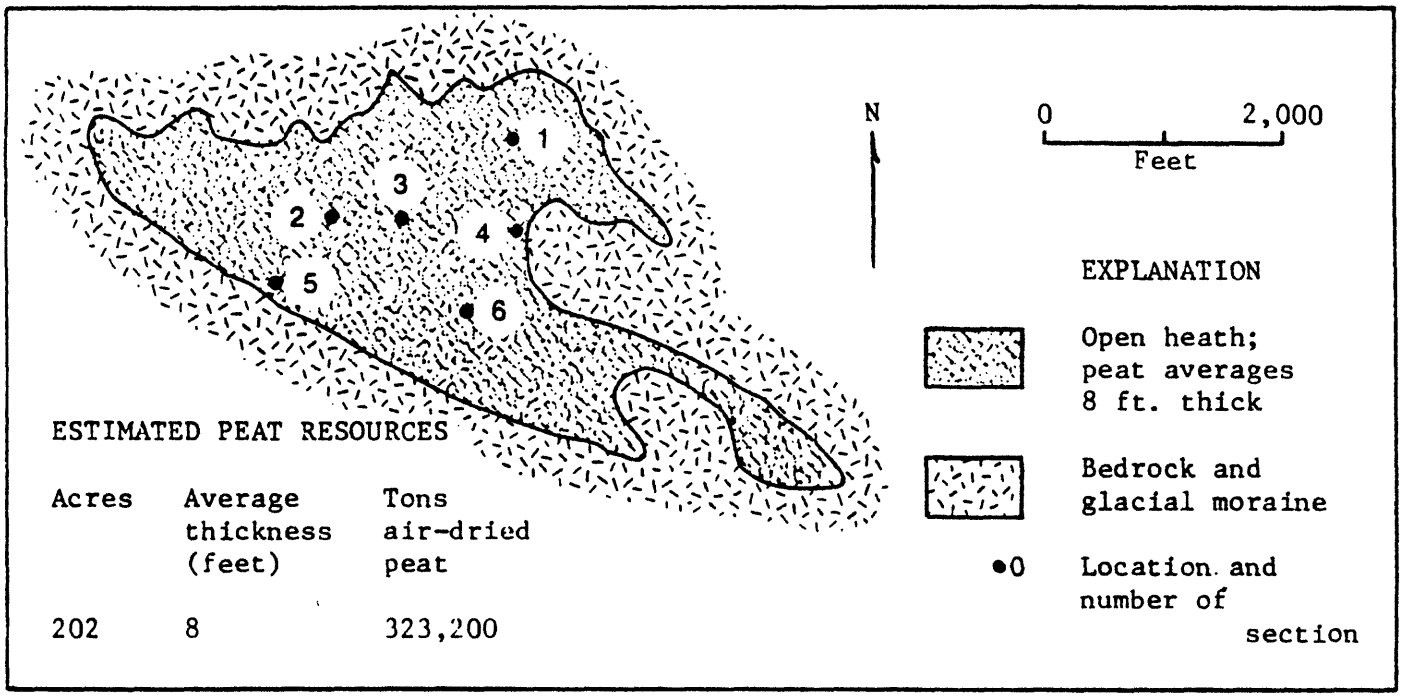


Figure 13. Sketch map of Carry Bog, T6 R13, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 12 on Index Map).

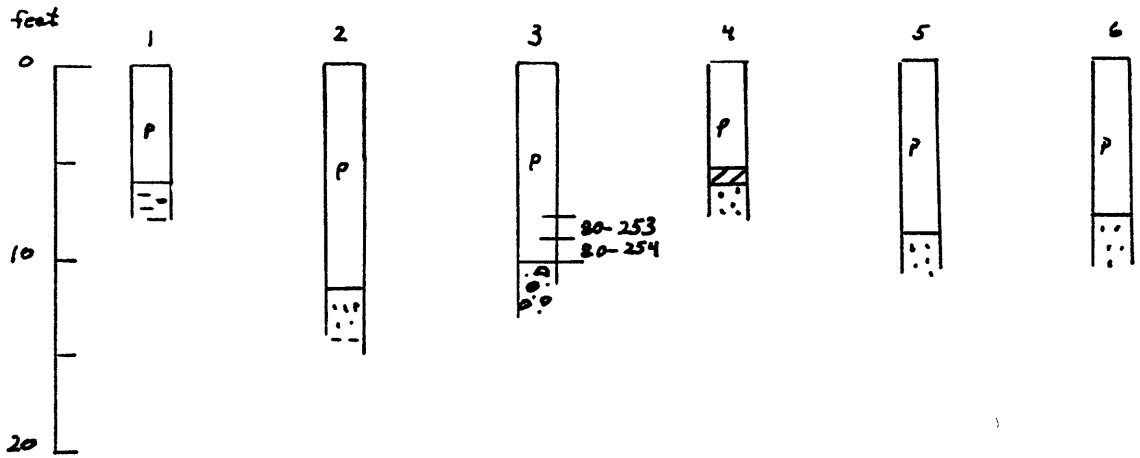


Figure 13a.--Sections and sample locations.

Table 13.--Analyses of samples located in sections in figure 13a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
253	58.78	4.65	2.13	0.11	4.3	89.0	66.1	10,056
254	55.88	4.58	2.13	0.18	4.6	90.7	65.4	9,599
Average commercial quality peat (ash content less than 25%)	57.33	4.62	2.13	0.15	4.5	89.9	65.8	9,828

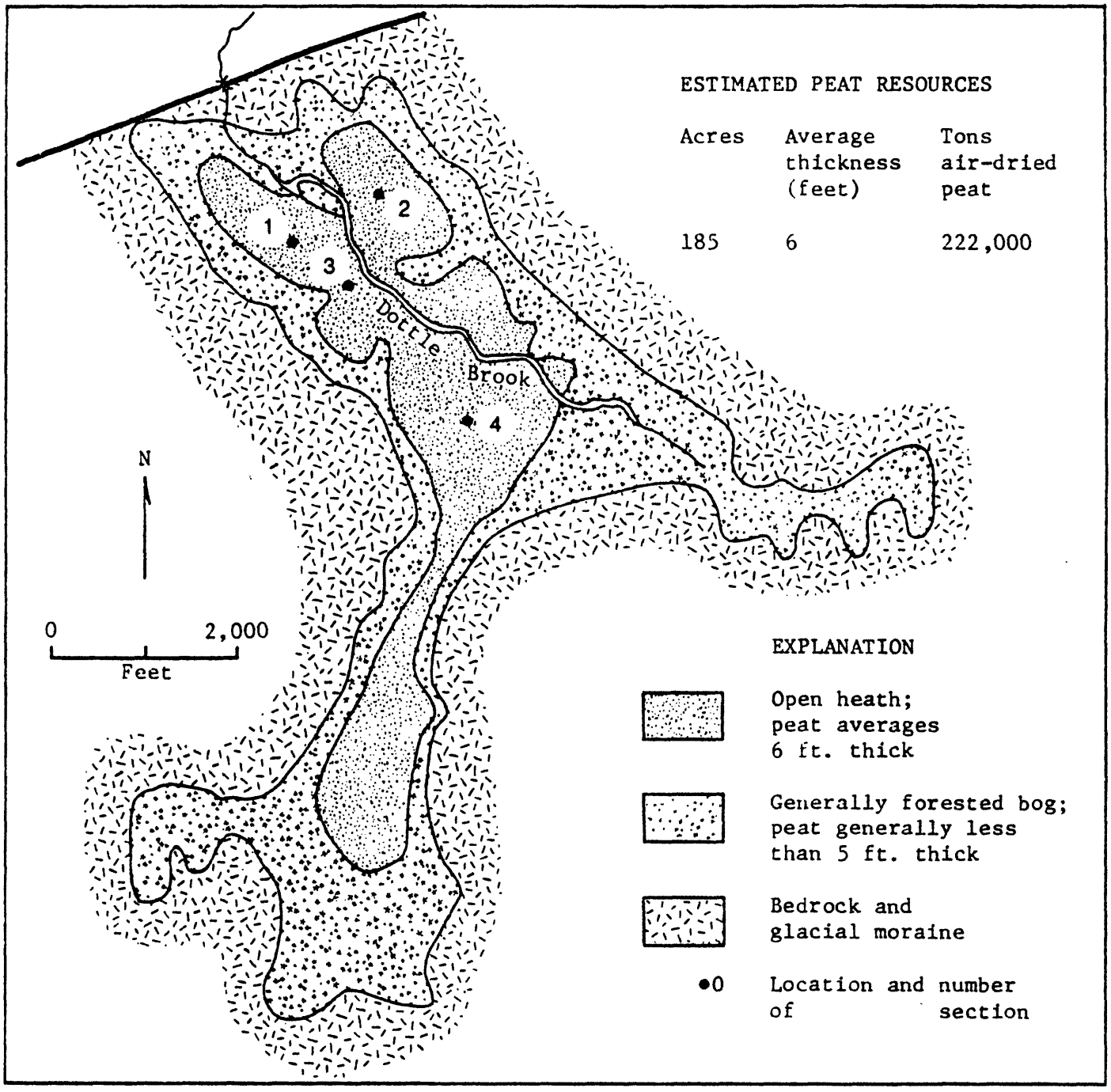


Figure 14. Sketch map of bog along Dottle Brook, T6 R12, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 13 on Index Map).

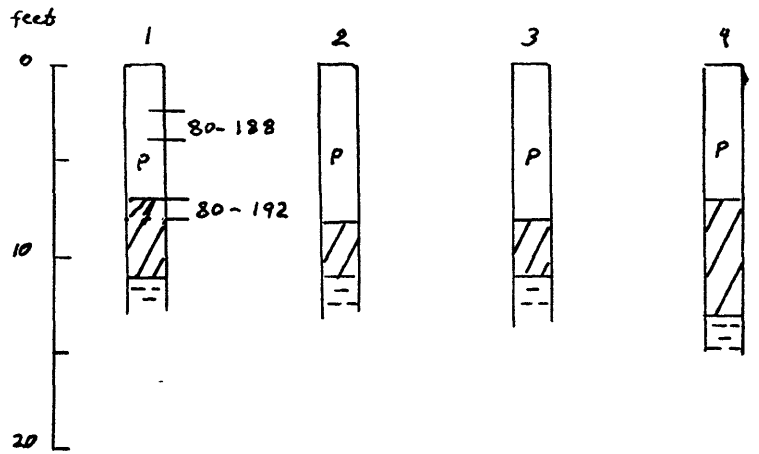


Figure 14a.--Sections and sample locations.

Table 14.--Analyses of samples located in sections in figure 14a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
188	59.37	5.66	1.50	0.18	1.9	--	67.7	10,269
192	30.41	3.64	2.34	0.55	43.2	--	45.6	5,463
Average commercial quality peat (ash content less than 25%)	59.37	5.66	1.50	0.18	1.9	--	67.7	10,269

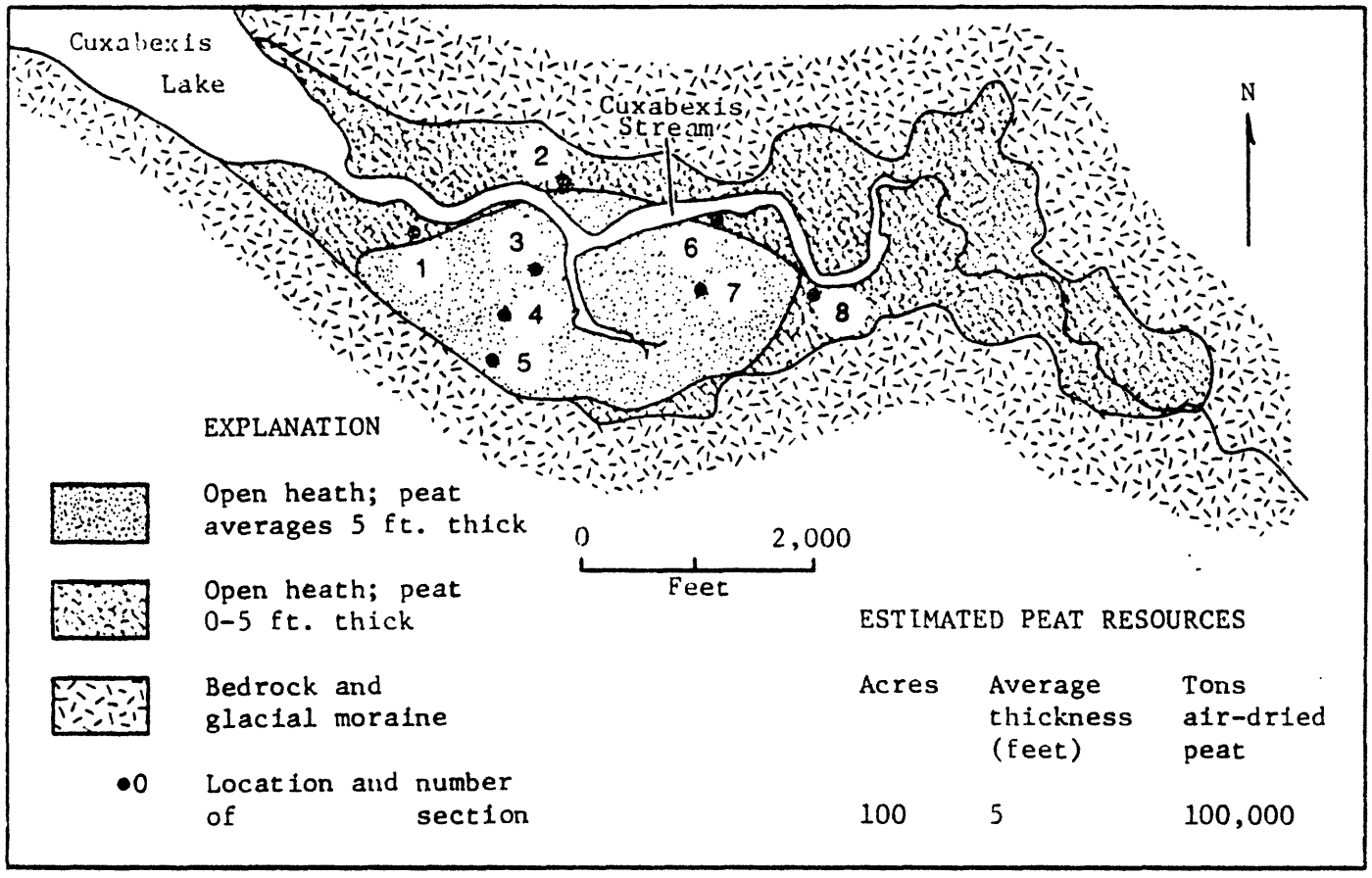


Figure 15. Sketch map of bog along Cuxabexis Stream at southeast end of Cuxabexis Lake, T5 R12, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 14 on Index Map).

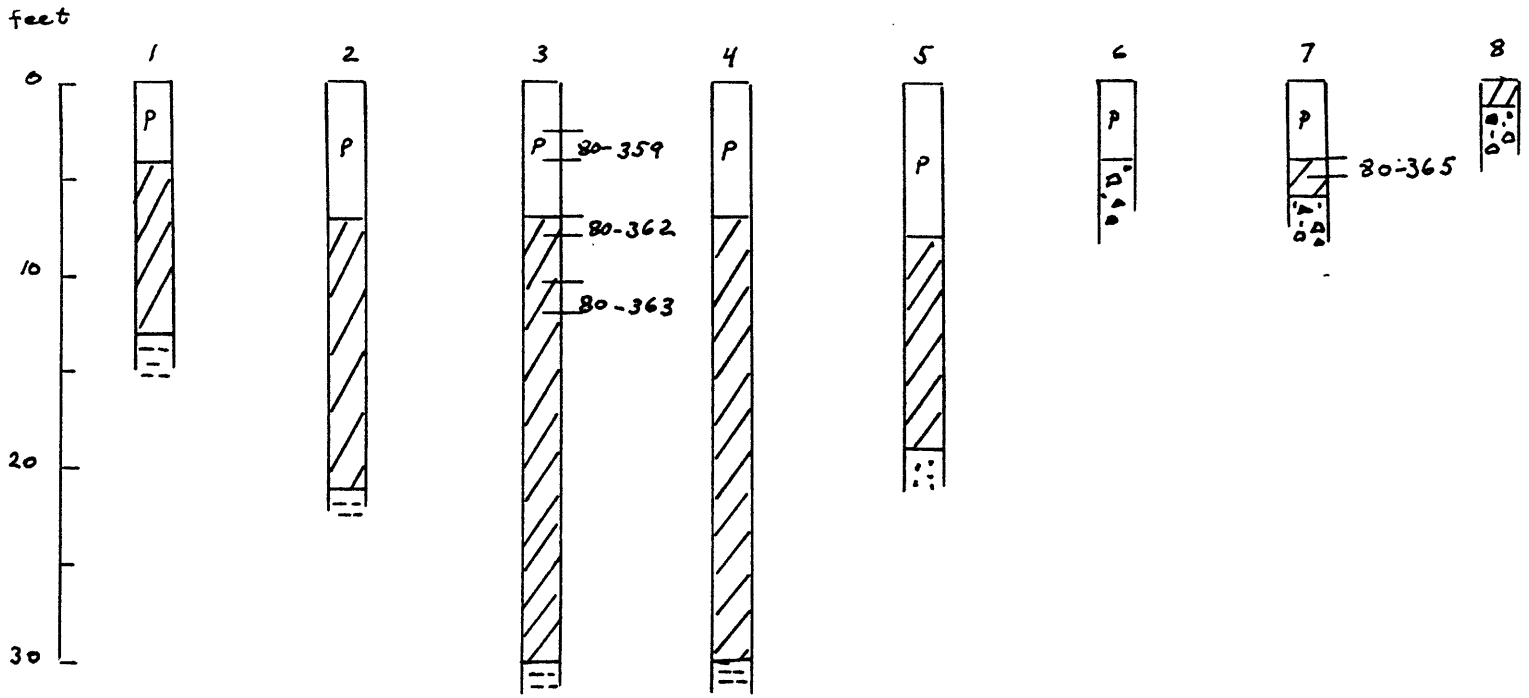


Figure 15a.--Sections and sample locations.

Table 15.--Analyses of samples located in sections in figure 15a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
359	48.82	4.25	2.06	0.26	15.2	--	57.6	8,368
362	19.37	1.78	1.51	0.21	64.4	79.2	26.7	3,318
363	15.15	1.46	0.95	0.18	71.6	79.0	22.5	2,594
365	31.15	2.93	1.63	0.24	44.0	85.1	39.8	5,378
Average commercial quality peat (ash content less than 25%)	48.82	4.25	2.06	0.26	15.2	--	57.6	8,368

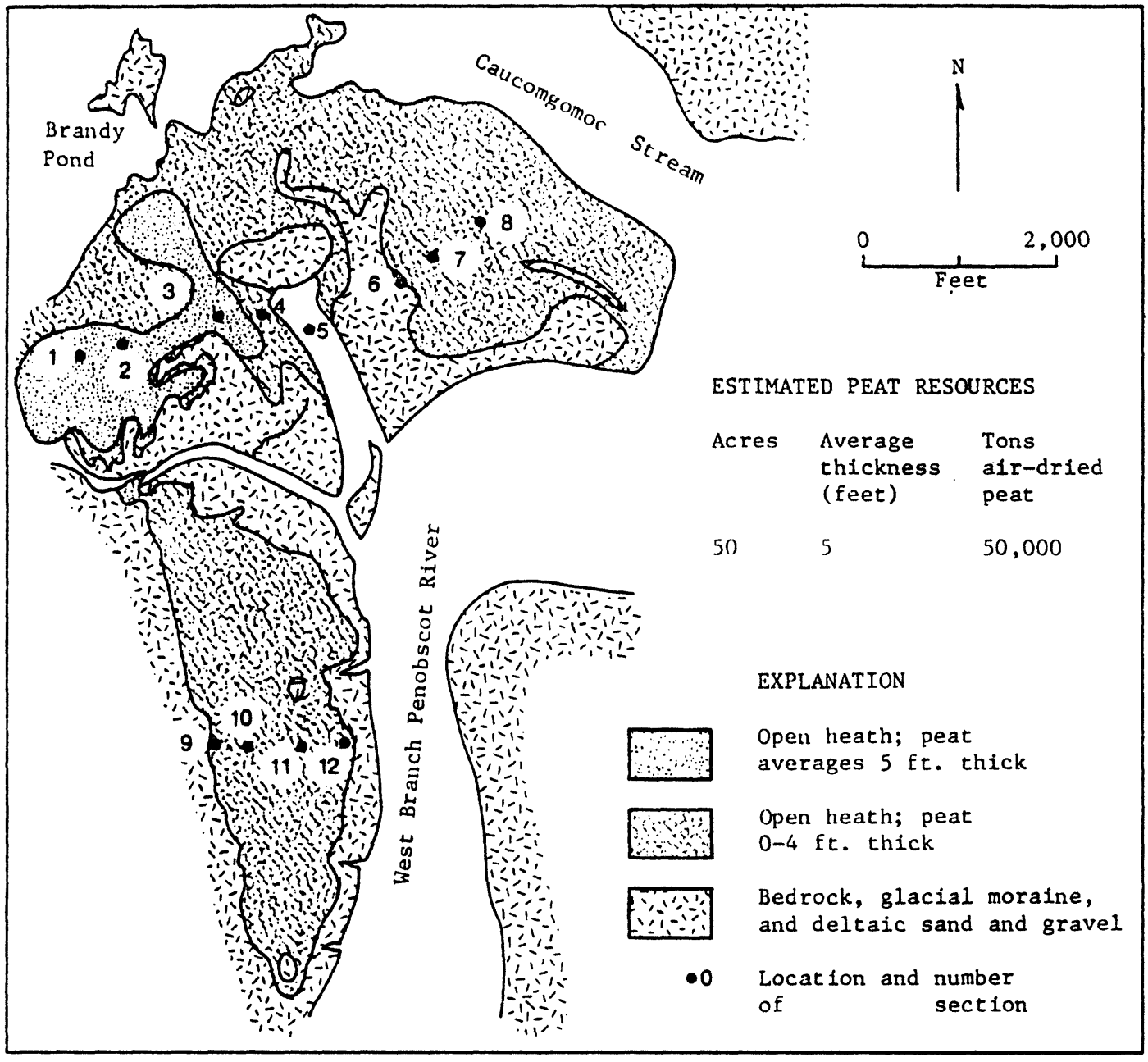


Figure 16. Sketch map of bogs at mouth of the West Branch of Penobscot River and east of Brandy Pond, T5 R13, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 15 on Index Map).

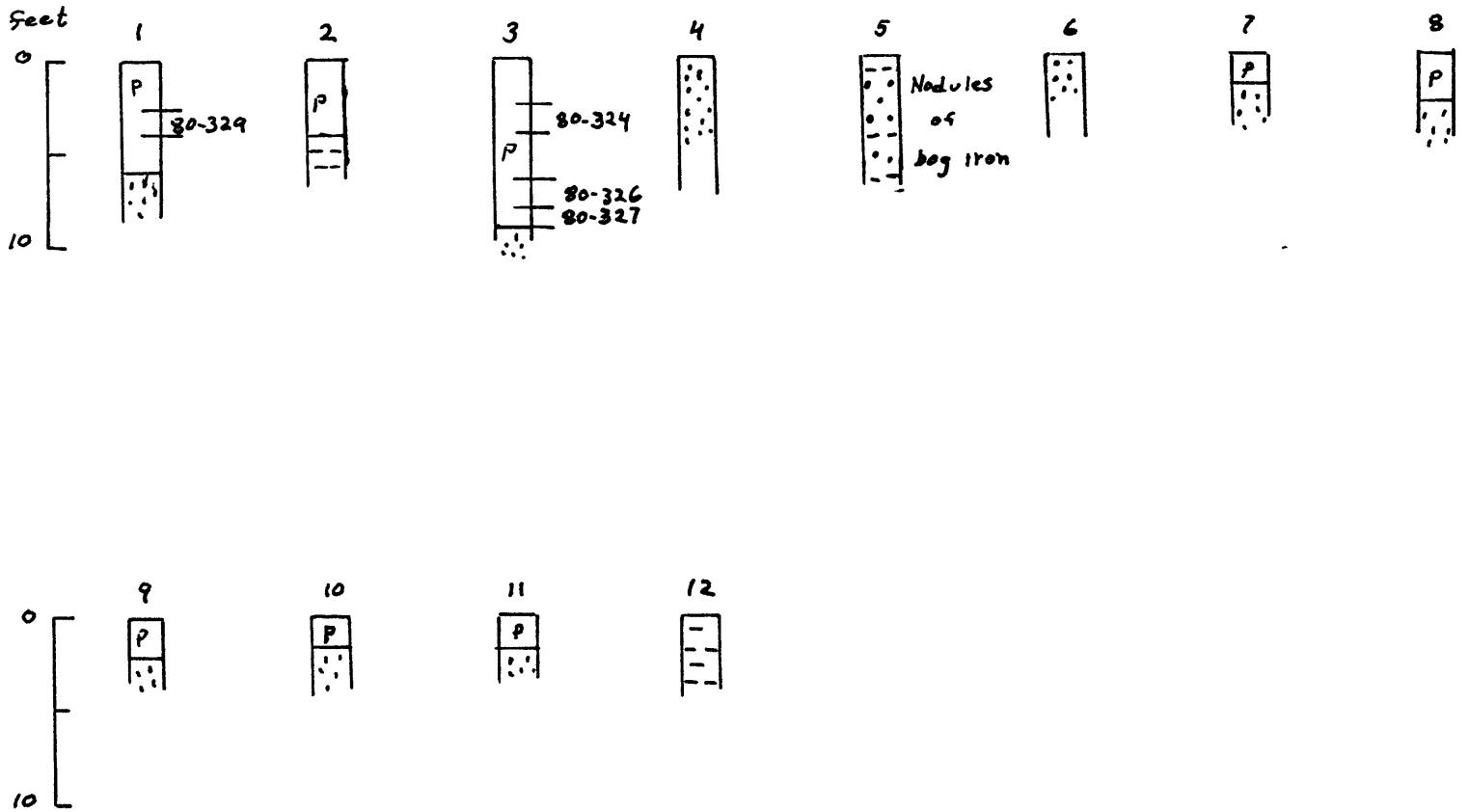


Figure 16a.--Sections and sample locations.

Table 16.--Analyses of samples located in sections in figure 16a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
324	61.27	6.08	1.54	0.18	1.7	--	67.9	10,893
329	60.82	5.89	1.59	0.10	1.8	83.9	68.0	10,910
Average commercial quality peat (ash content less than 25%)	61.27	6.08	1.54	0.18	1.7	--	67.9	10,893

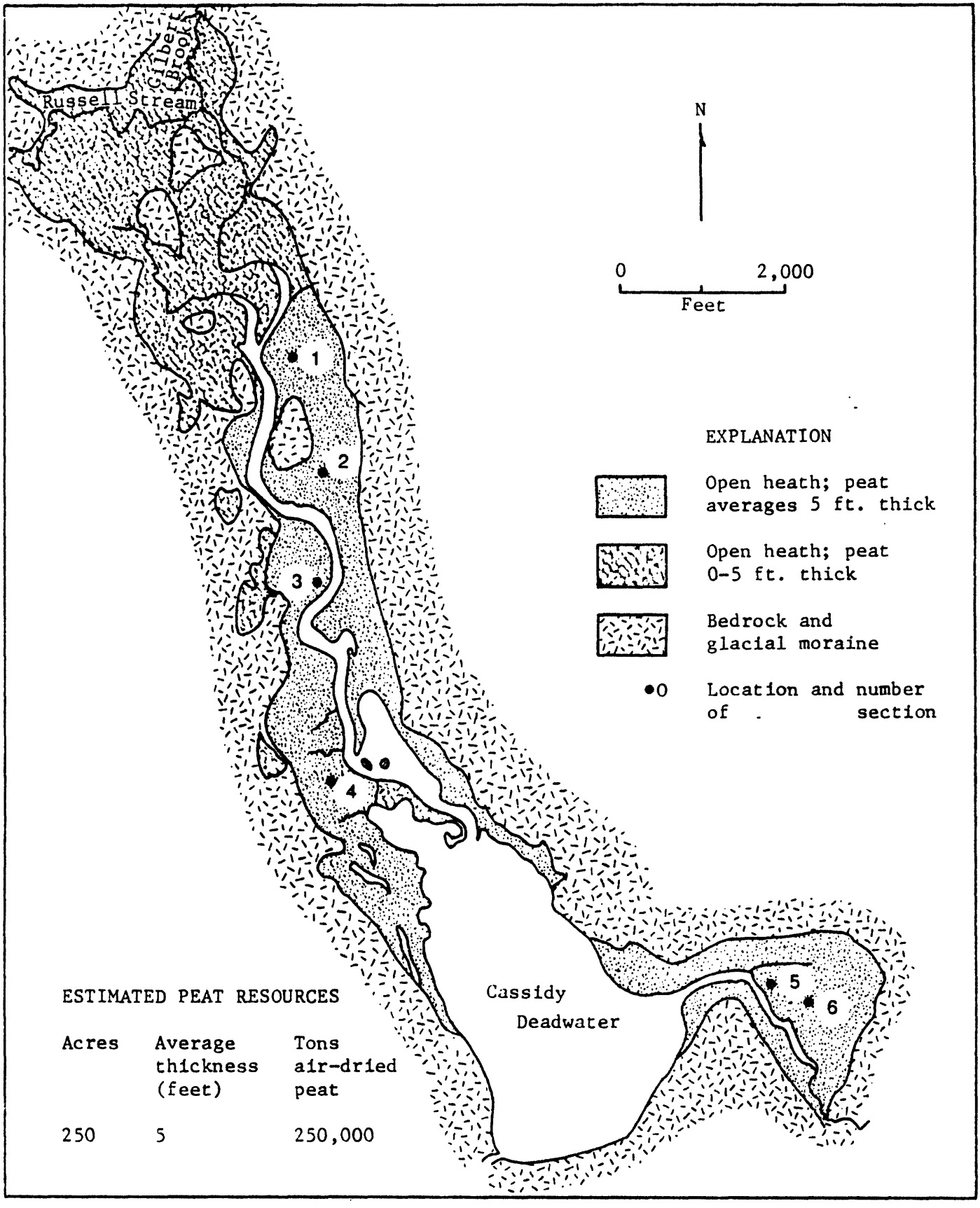


Figure 17. Sketch map of bogs at Cassidy Deadwater, T4 R15, Caucomgomoc Lake and North East Carry 15-minute Quadrangles, Piscataquis County, Maine. (Number 16 on Index Map).

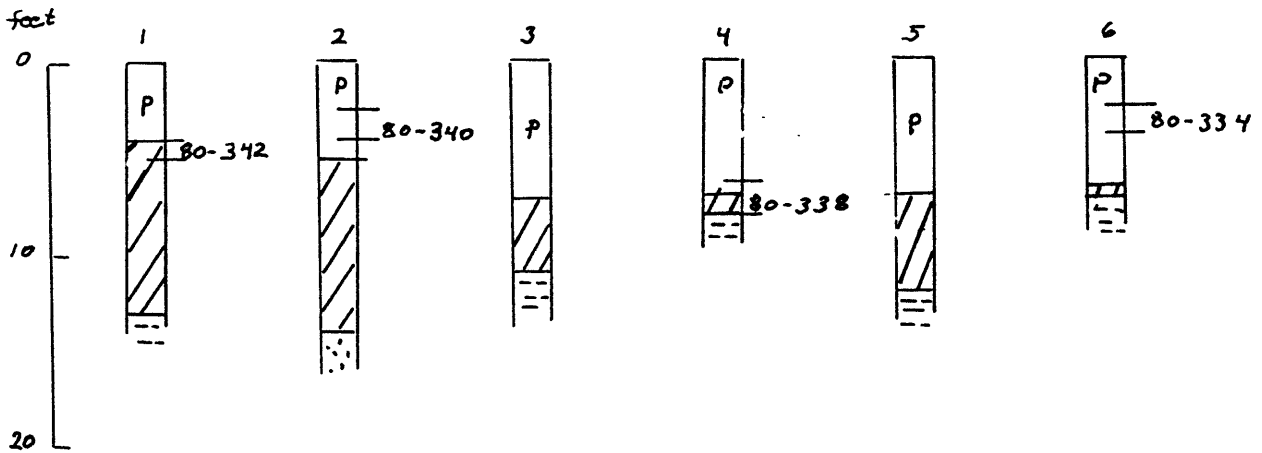


Figure 17a.--Sections and sample locations.

Table 17.--Analyses of samples located in sections in figure 17a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
334	53.53	4.57	2.11	0.24	8.3	89.4	61.6	9,144
338	20.15	2.26	1.55	0.42	59.5	--	33.3	3,487
340	48.80	4.05	1.98	0.18	14.6	87.1	57.8	8,408
342	14.15	1.43	1.05	0.18	72.6	75.6	21.6	2,457
Average commercial quality peat (ash content less than 25%)	51.17	4.31	2.04	0.21	11.5	88.3	59.7	8,776

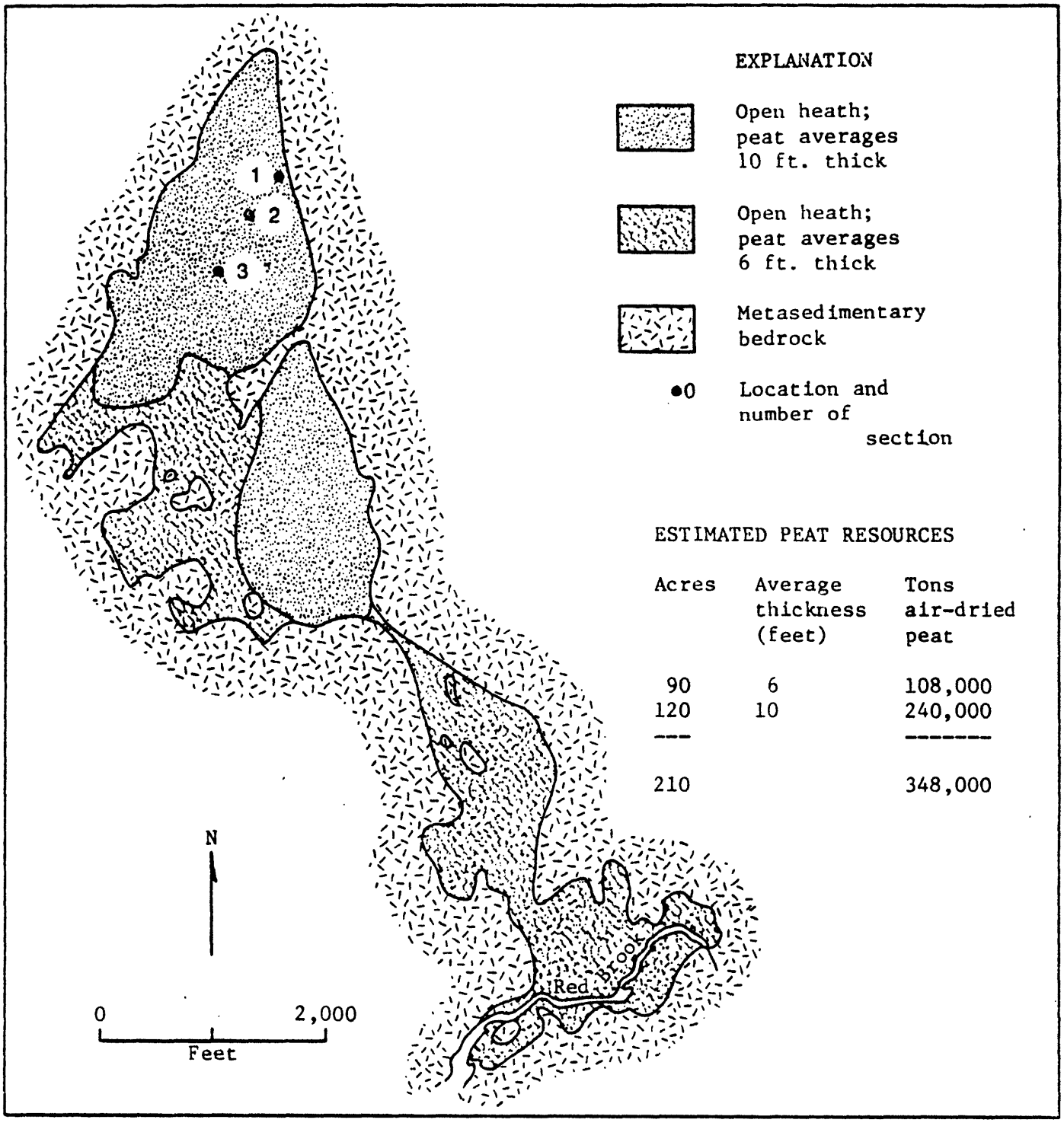


Figure 18. Sketch map of bog south of Duck Pond, T4 R12, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 17 on Index Map).

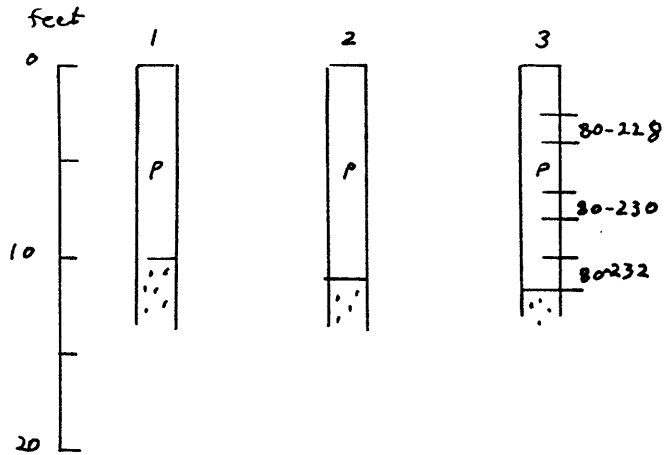


Figure 18a.--Sections and sample locations.

Table 18.--Analyses of samples located in sections in figure 18a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
228	58.70	5.94	1.78	0.20	1.3	--	70.0	10,366
230	56.69	5.11	2.63	0.15	2.0	89.1	68.7	10,099
232	41.55	4.19	2.98	0.70	23.6	91.4	57.2	7,243
Average commercial quality peat (ash content less than 25%)	52.31	5.08	2.46	0.35	9.0	90.3	65.3	9,236

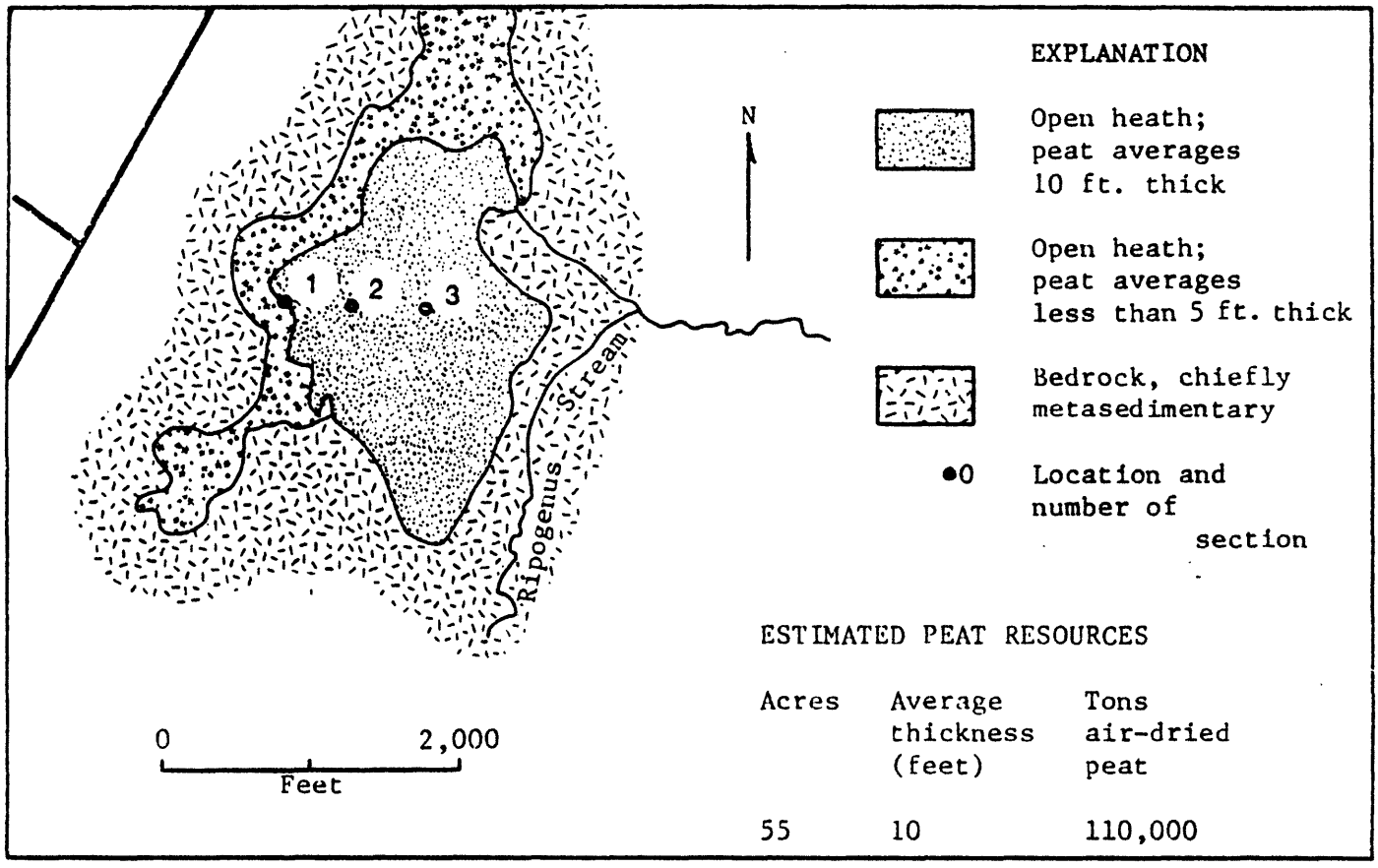


Figure 19. Sketch map of bog on Ripogenus Stream north of Ripogenus Pond, T4 R12, Chesuncook 15-minute Quadrangle, Piscataquis County, Maine. (Number 18 on Index Map).

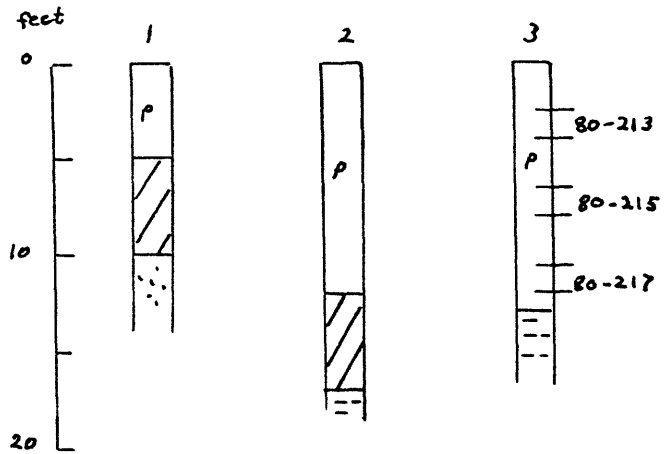


Figure 19a.--Sections and sample locations.

Table 19.--Analyses of samples located in sections in figure 19a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
213	58.16	5.33	2.14	0.21	1.3	--	67.5	10,061
215	57.88	5.11	1.68	0.20	2.8	--	64.4	9,880
217	40.11	4.41	2.99	1.06	24.4	--	58.0	7,152
Average commercial quality peat (ash content less than 25%)	52.05	4.95	2.27	0.49	9.5	--	63.3	9,031

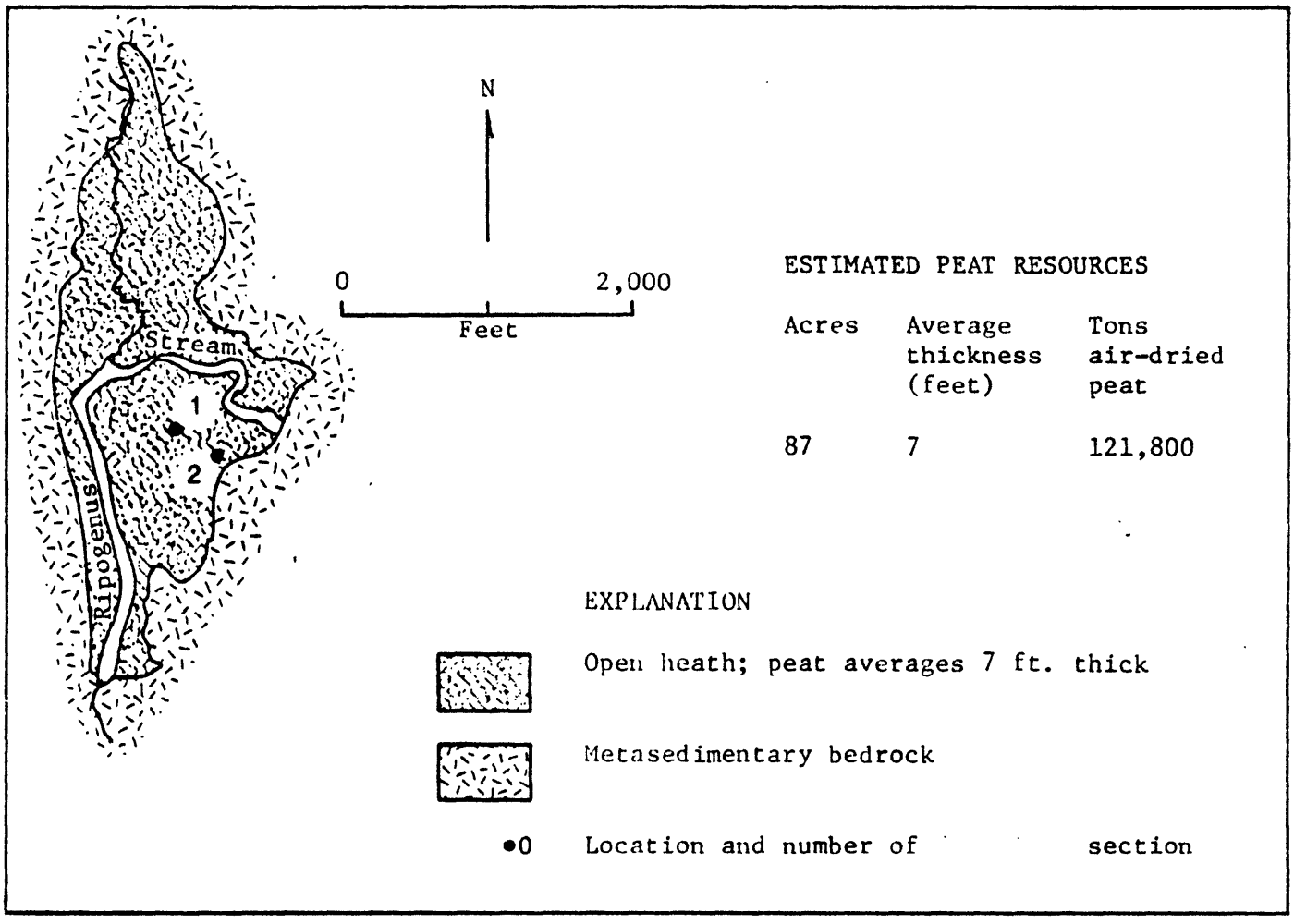


Figure 20. Sketch map of bog on Ripogenus Stream, T4 R12, Telos Lake 15-minute Quadrangle, Piscataquis County, Maine. (Number 19 on Index Map).

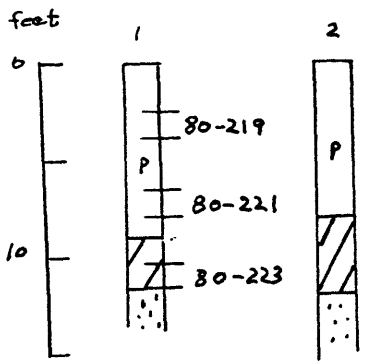


Figure 20a.--Sections and sample locations.

Table 20.--Analyses of samples located in sections in figure 20a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
219	58.18	5.23	1.34	0.13	1.2	90.2	68.0	9,973
221	45.13	4.10	4.02	0.41	21.3	91.0	56.4	7,841
223	26.10	2.61	1.97	1.05	49.8	87.8	39.8	4,557
Average commercial quality peat (ash content less than 25%)	51.66	4.67	2.68	0.27	11.25	90.6	62.2	8,907

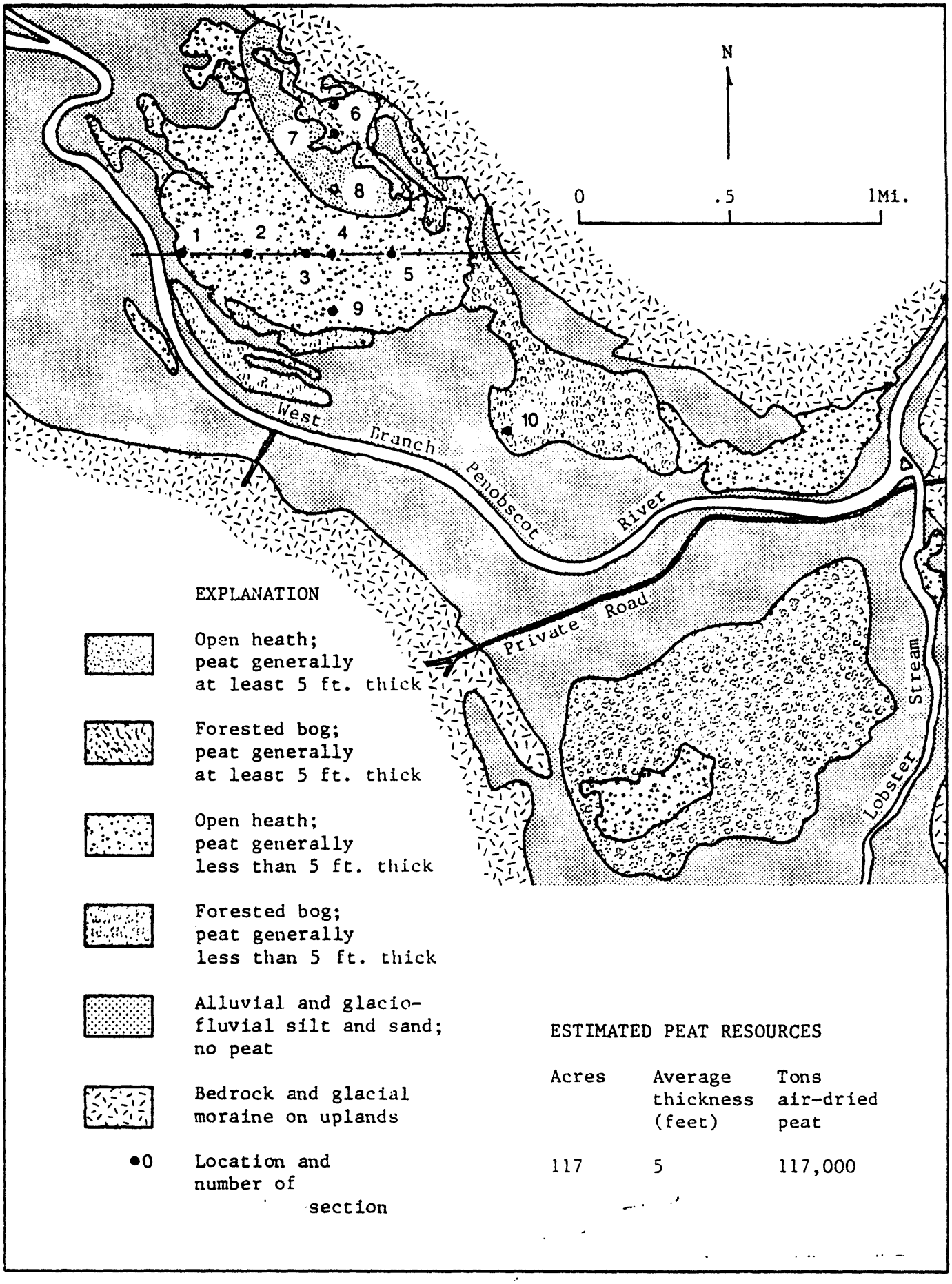


Figure 21. Sketch map of surficial geology along the West Branch of the Penobscot River and Lobster Stream, T3 R15, North East Carry 15-minute Quadrangle, Piscataquis County, Maine. (Number 20 on Index Map).

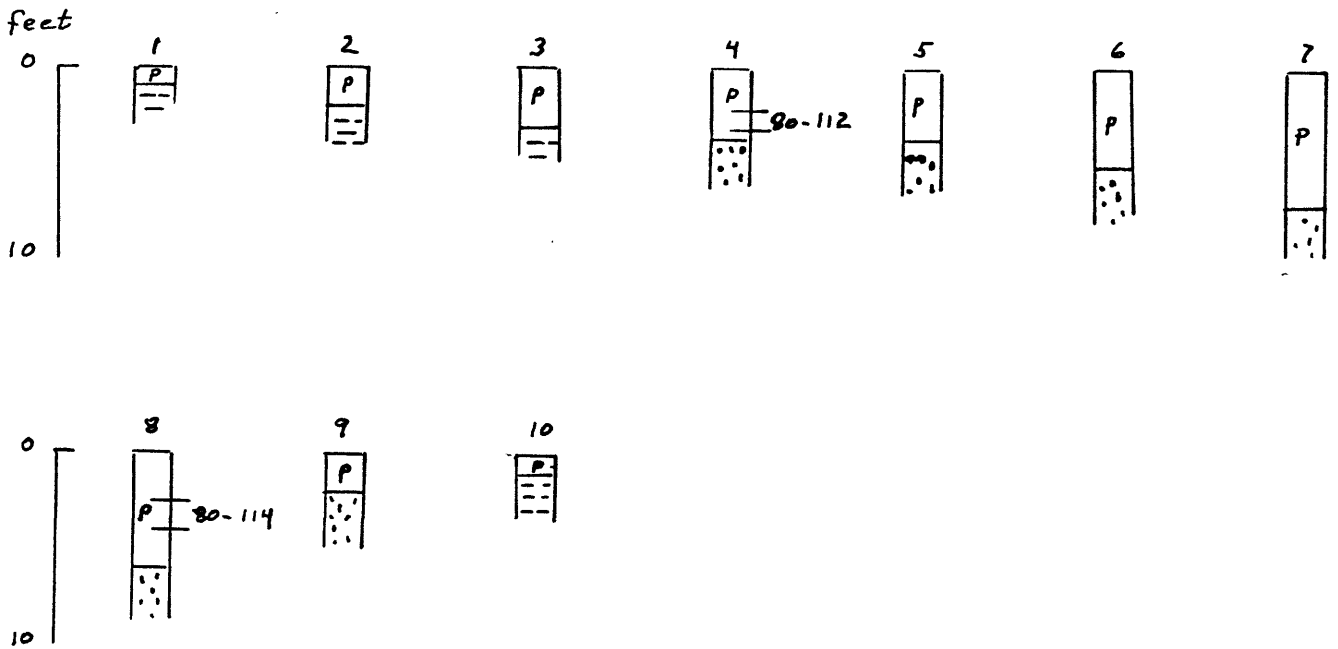


Figure 21a.--Sections and sample locations.

Table 21.--Analyses of samples located in sections in figure 21a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
112	53.80	4.92	2.66	0.24	10.8	--	63.5	9,380
114	51.75	3.75	2.49	0.18	13.6	86.5	60.1	9,017
Average commercial quality peat (ash content less than 25%)	52.28	4.34	2.58	0.21	12.2	86.5	61.8	9,199

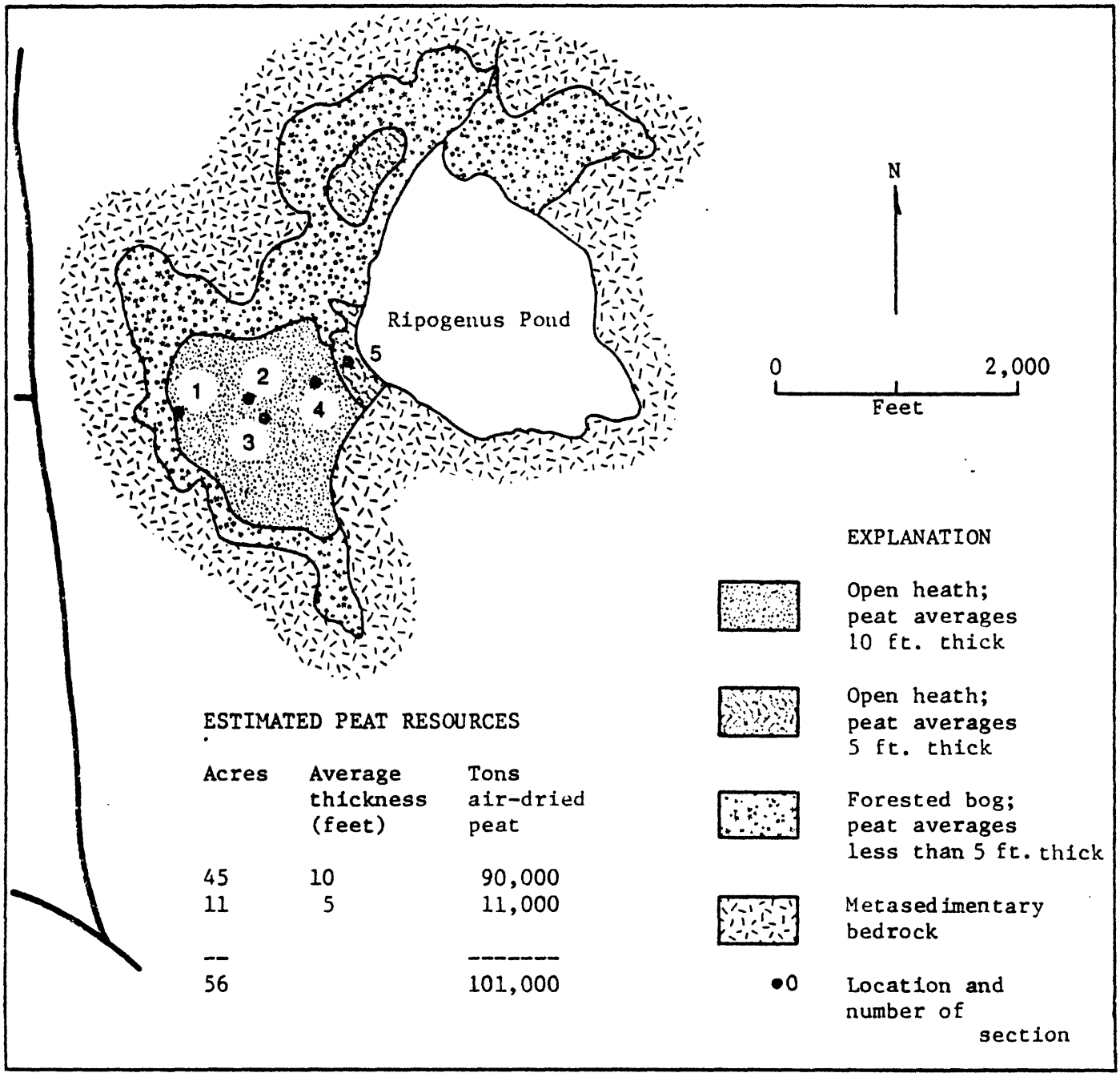


Figure 22. Sketch map of bog at Ripogenus Pond, T4 R12, Ragged Lake 15. minute Quadrangle, Piscataquis County, Maine. (Number 21 on Index Map).

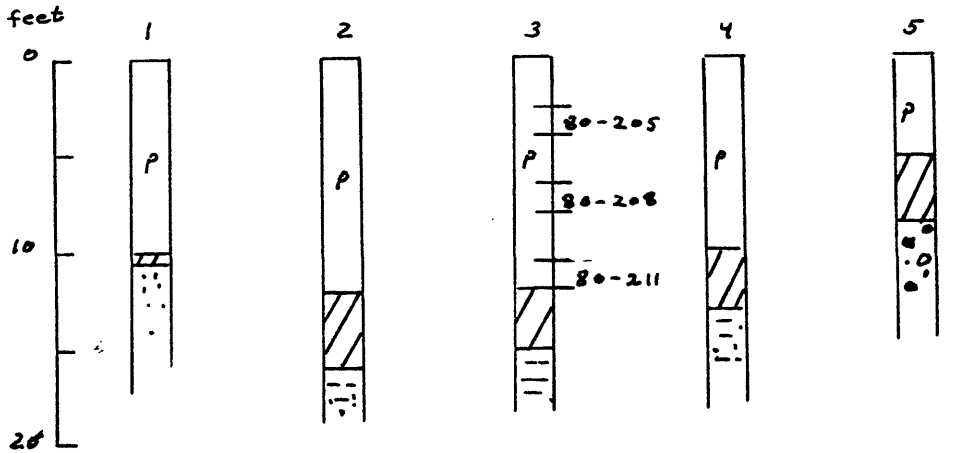


Figure 22a.--Sections and sample locations.

Table 22.--Analyses of samples located in sections in figure 22a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
205	55.51	5.36	1.33	0.16	3.2	--	66.0	9,403
208	57.74	5.42	1.39	0.16	3.3	--	53.9	9,973
211	54.93	5.01	2.46	0.27	6.1	89.4	65.7	9,573
Average commercial quality peat (ash content less than 25%)	56.06	5.26	1.69	0.20	4.2	89.4	61.9	9,650

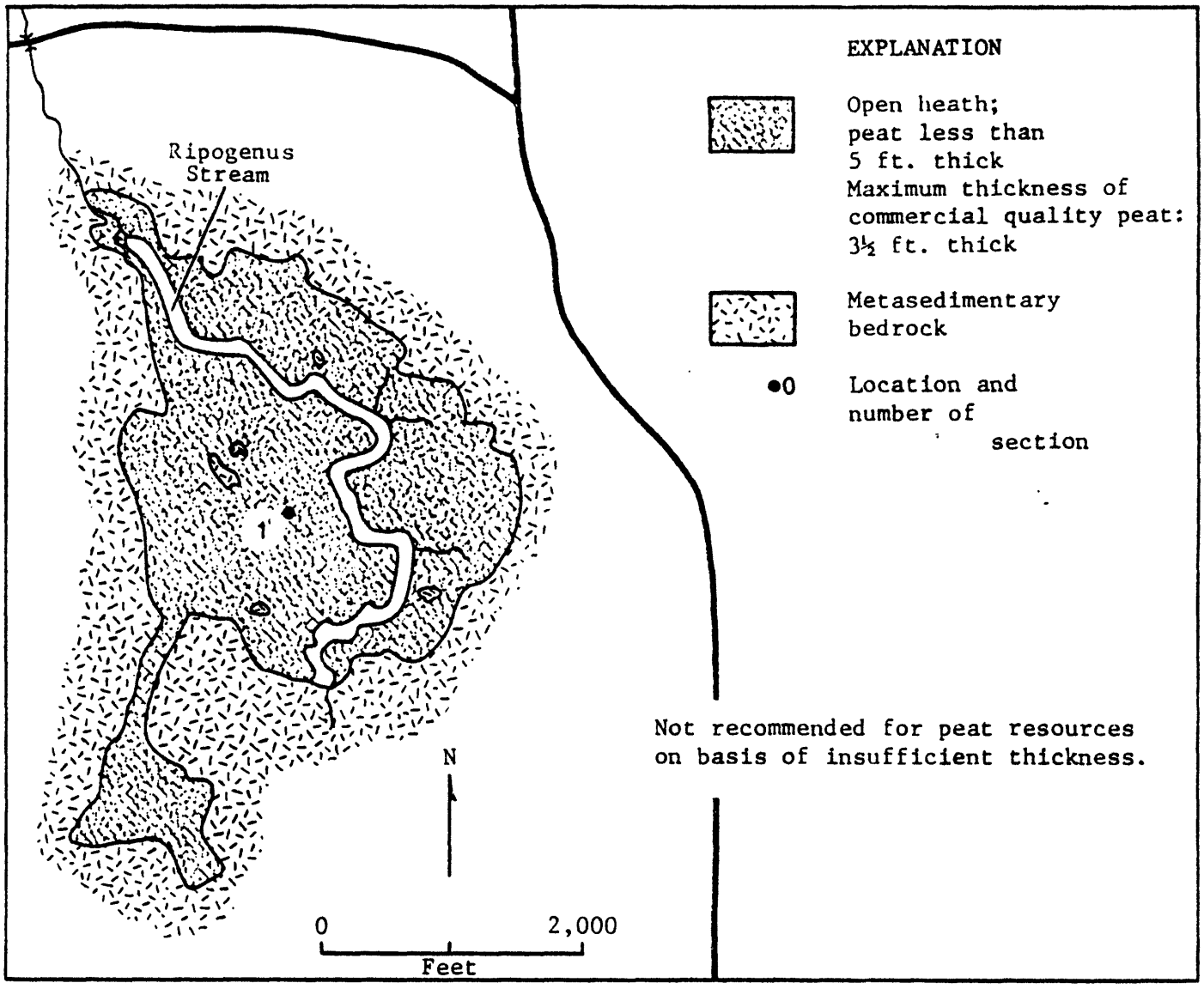


Figure 23. Sketch map of bog west of Soubunge Mountain, T4 R12, Harrington Lake 15-minute Quadrangle, Piscataquis County, Maine. (Number 22 on Index Map).

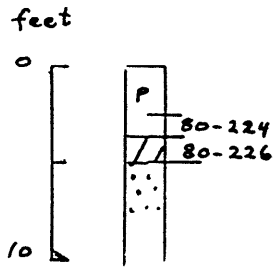


Figure 23a.--Sections and sample locations.

Table 23.--Analyses of samples located in sections in figure 23a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
224	56.76	3.53	1.51	0.16	6.0	88.8	63.0	9,546
226	31.86	3.16	1.94	1.09	37.5	88.0	47.9	5,697
Average commercial quality peat (ash content less than 25%)	56.76	3.53	1.51	0.16	6.0	88.8	63.0	9,546

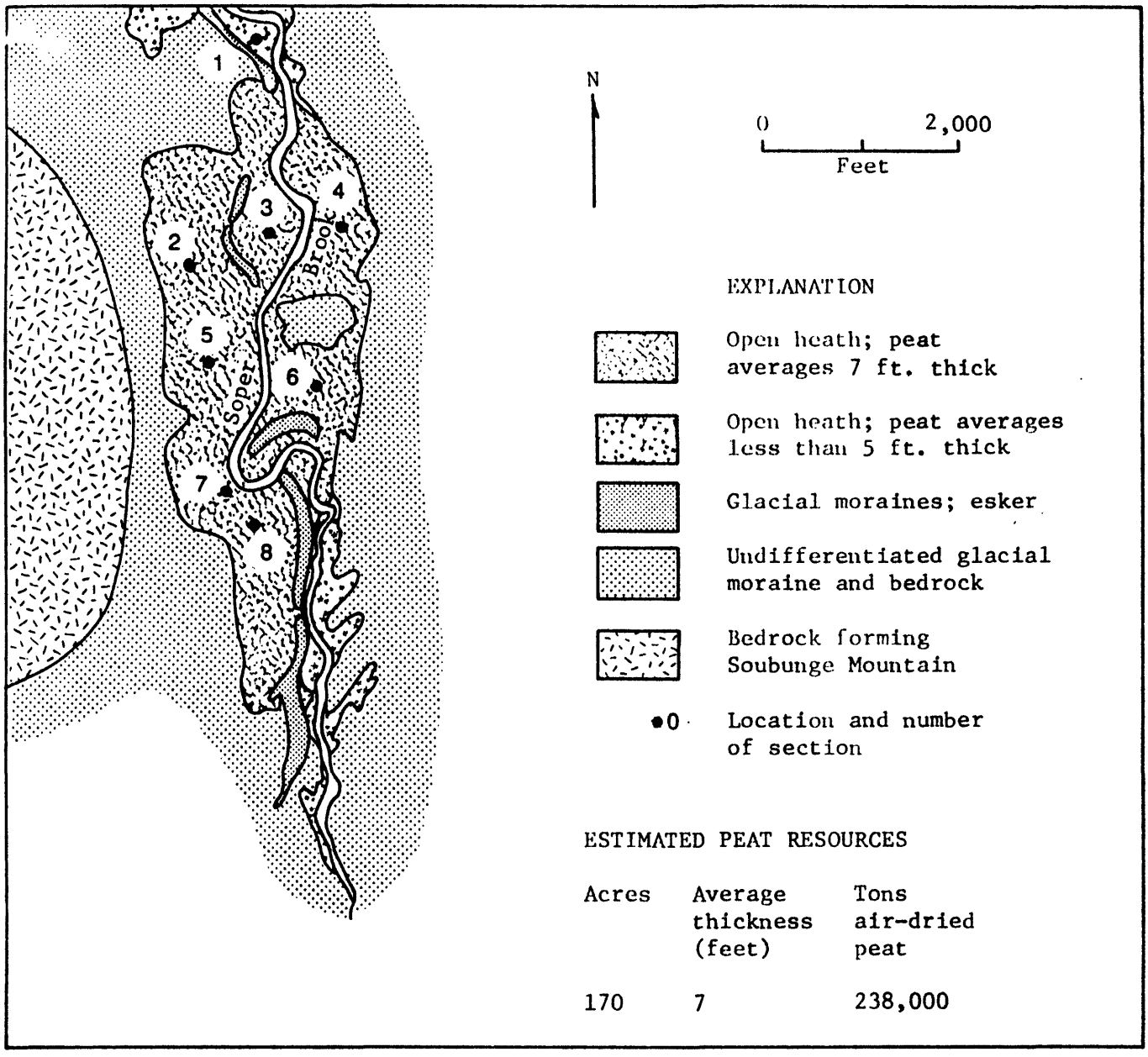


Figure 24. Sketch map of bog along Soper Brook, T4 R11 WELS, Harrington Lake 15 minute Quadrangle, Piscataquis County, Maine. (Number 23 on Index Map).

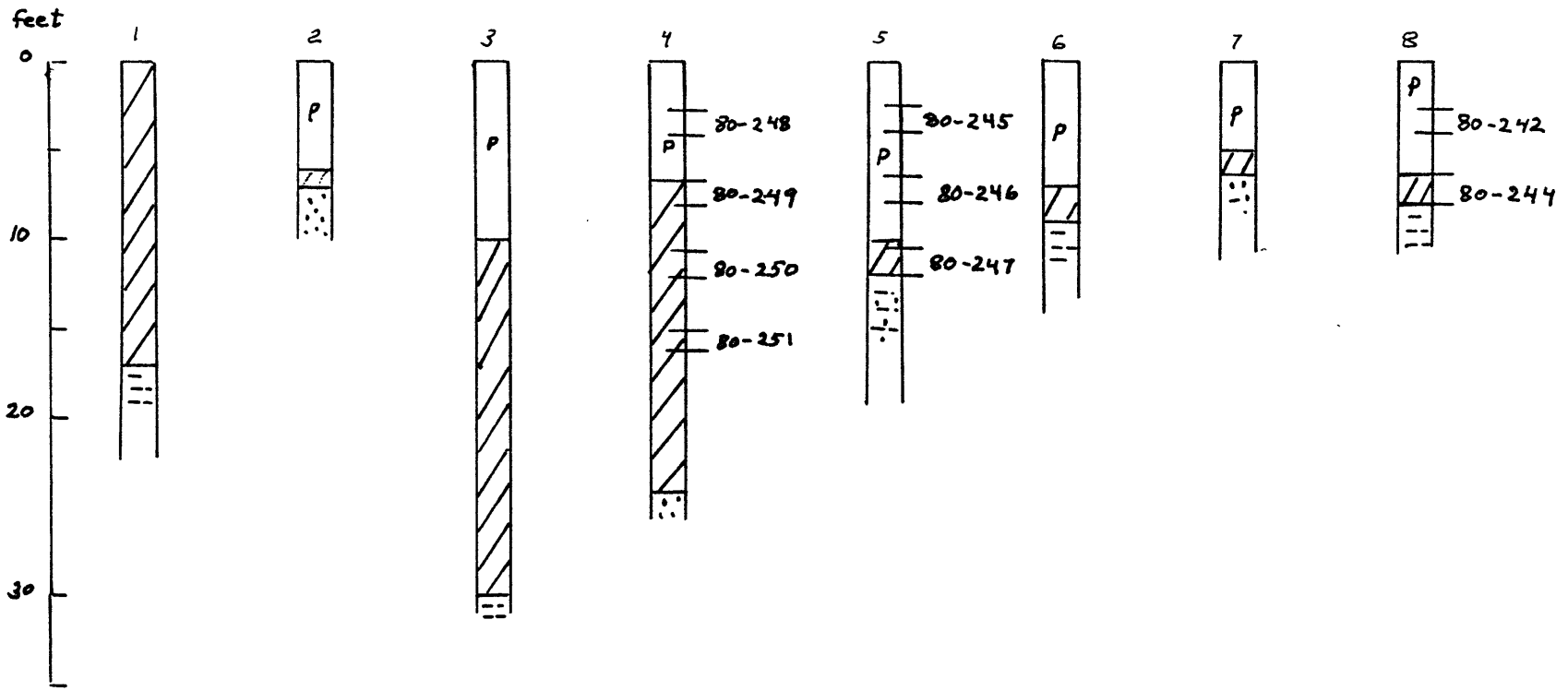


Figure 24a.--Sections and sample locations.

Table 24.--Analyses of samples located in sections in figure 24a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
242	59.41	5.29	1.66	0.25	2.6	--	65.0	10,310
244	33.42	3.76	2.31	1.45	33.8	90.6	52.5	5,873
245	58.57	5.12	1.53	0.15	1.0	89.2	67.6	10,316
246	56.57	4.31	1.59	0.20	3.2	89.9	64.6	9,691
247	22.18	2.15	1.57	1.02	56.1	86.9	35.4	3,933
248	56.40	3.67	2.17	0.27	5.2	87.2	62.8	9,364
249	34.38	2.58	1.70	0.37	39.0	84.1	43.4	5,799
250	20.39	1.77	1.49	0.28	61.2	85.8	29.7	3,543
251	14.45	1.31	1.14	0.21	72.2	82.3	23.8	2,319
Average commercial quality peat (ash content less than 25%)	57.74	4.60	1.74	0.22	3.0	88.8	65.0	9,920

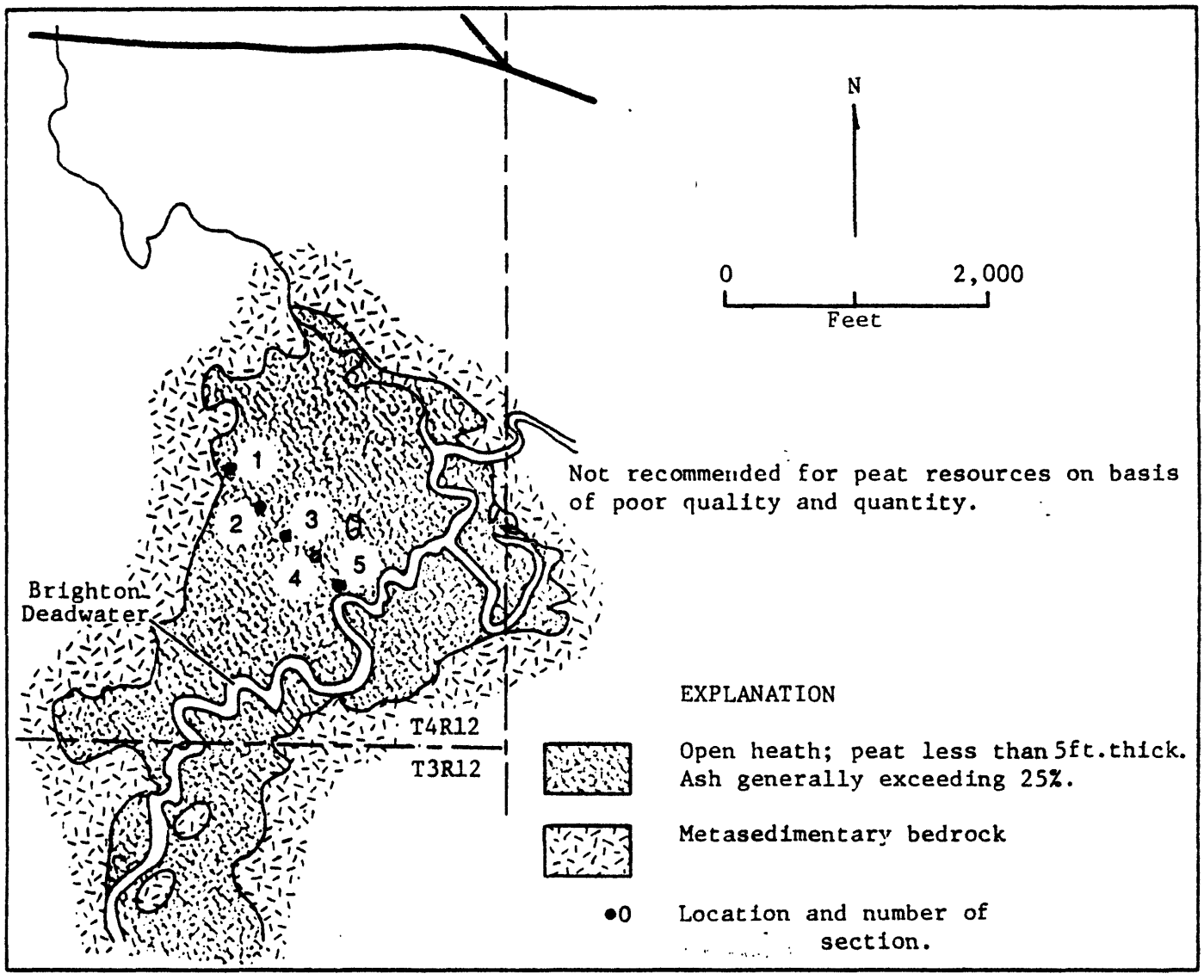


Figure 25. Sketch map of bog at Brighton Deadwater, southeast corner T4 R12, Harrington Lake 15-minute Quadrangle, Piscataquis County, Maine. (Number 24 on Index Map).

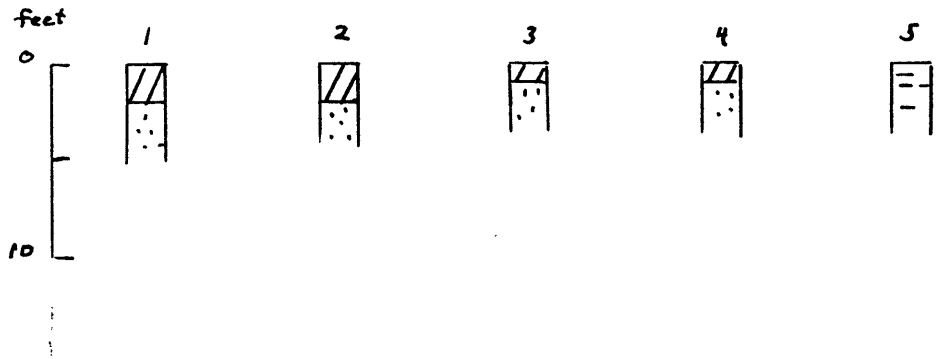


Figure 25a.--Sections and sample locations.

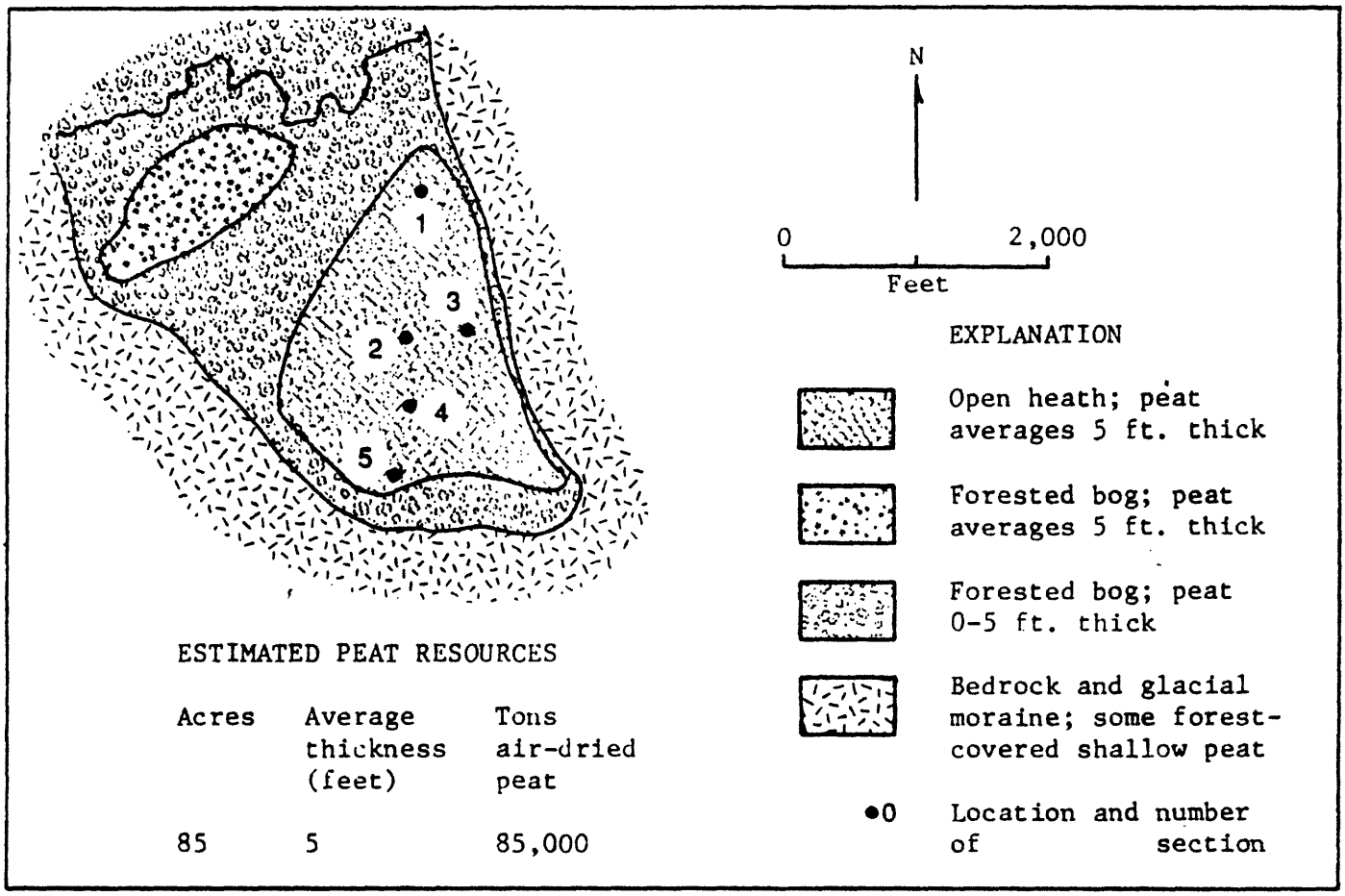


Figure 26. Sketch map of bogs southwest of Tomhegan Pond, T2 R3, Seboomook Lake 15-minute Quadrangle, Somerset County, Maine. (Number 25 on Index Map).

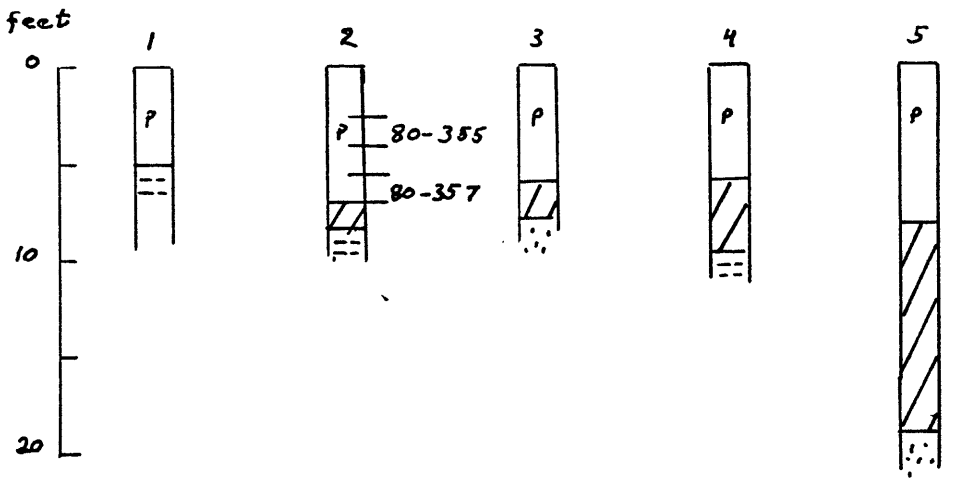


Figure 26a.--Sections and sample locations.

Table 25.--Analyses of samples located in sections in figure 26a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
357	52.56	4.51	1.87	0.24	10.4	90.8	61.0	8,990
355	60.11	5.83	1.49	0.17	1.8	--	68.3	10,682
Average commercial quality peat (ash content less than 25%)	56.34	5.17	1.68	0.20	6.1	90.8	64.7	9,836

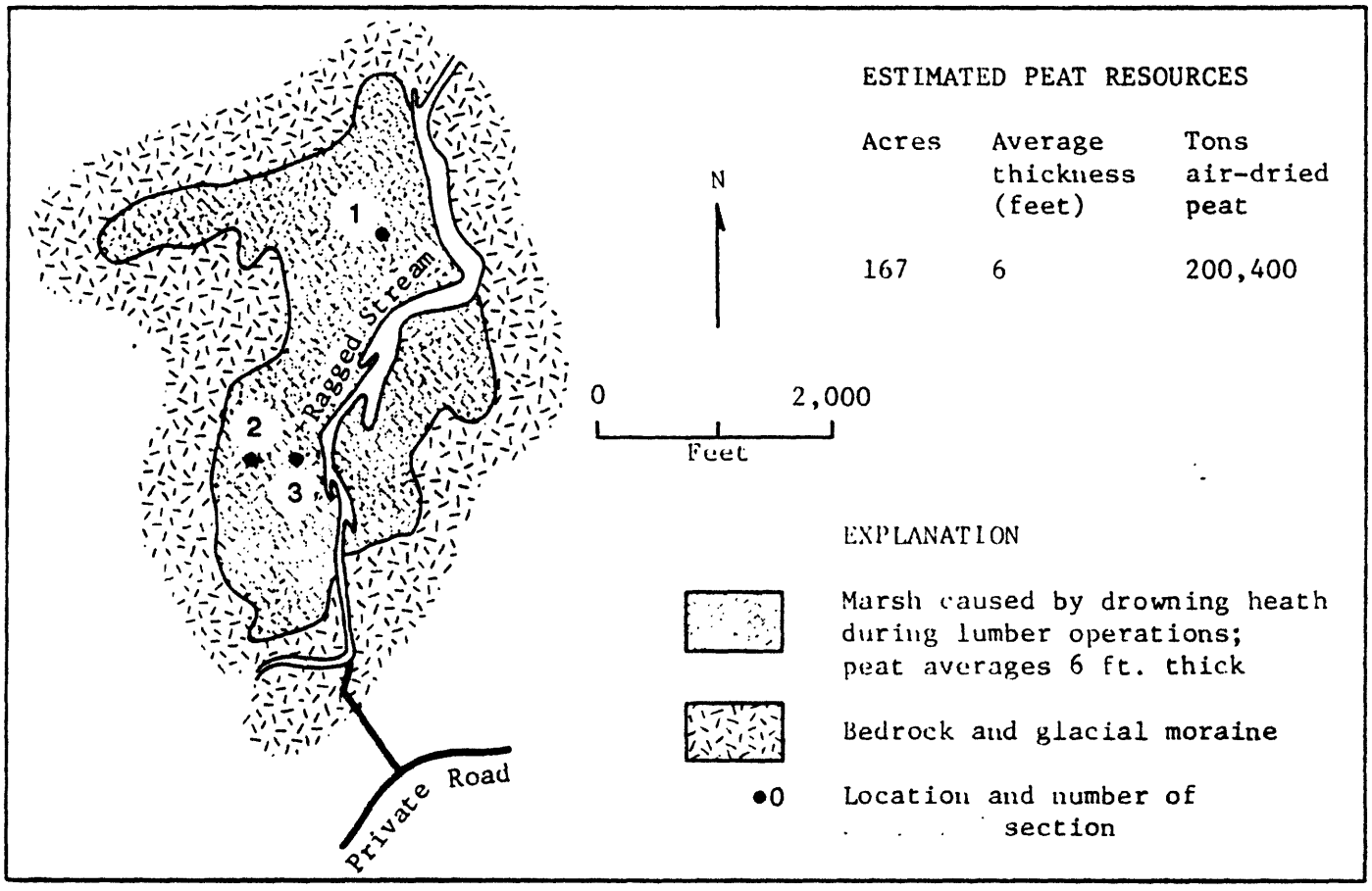


Figure 27. Sketch map of bog along Ragged Stream, T2 R12, Ragged Lake 15-minute Quadrangle, Piscataquis County, Maine. (Number 26 on Index Map).

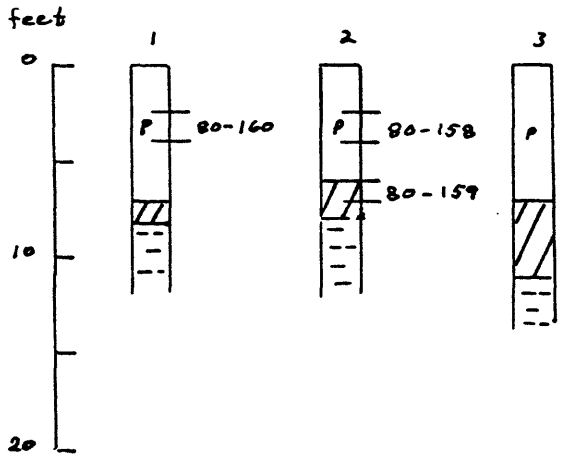
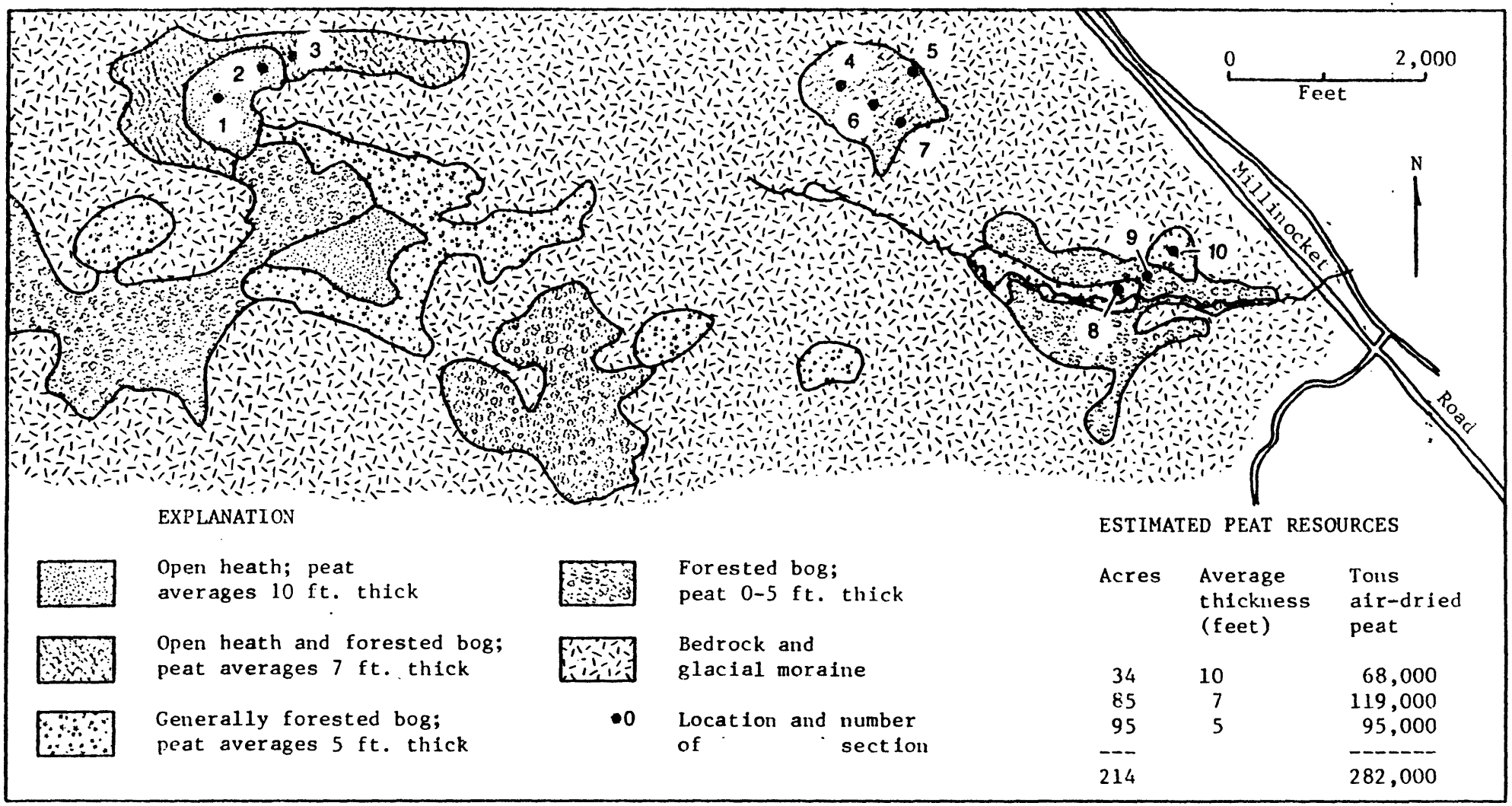


Figure 27a.--Sections and sample locations.

Table 26.--Analyses of samples located in sections in figure 27a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
158	56.66	4.42	2.00	0.55	4.8	88.6	63.9	9,636
159	31.48	2.70	1.80	0.96	41.0	88.0	64.7	5,883
160	58.30	5.22	1.58	0.23	2.7	--	65.2	10,066
Average commercial quality peat (ash content less than 25%)	57.48	4.82	1.79	0.39	3.8	88.6	64.2	9,851



EXPLANATION

- Open heath; peat averages 10 ft. thick
- Open heath and forested bog; peat averages 7 ft. thick
- Generally forested bog; peat averages 5 ft. thick
- Forested bog; peat 0-5 ft. thick
- Bedrock and glacial moraine
- •0 Location and number of section

ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
34	10	68,000
85	7	119,000
95	5	95,000
214		282,000

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

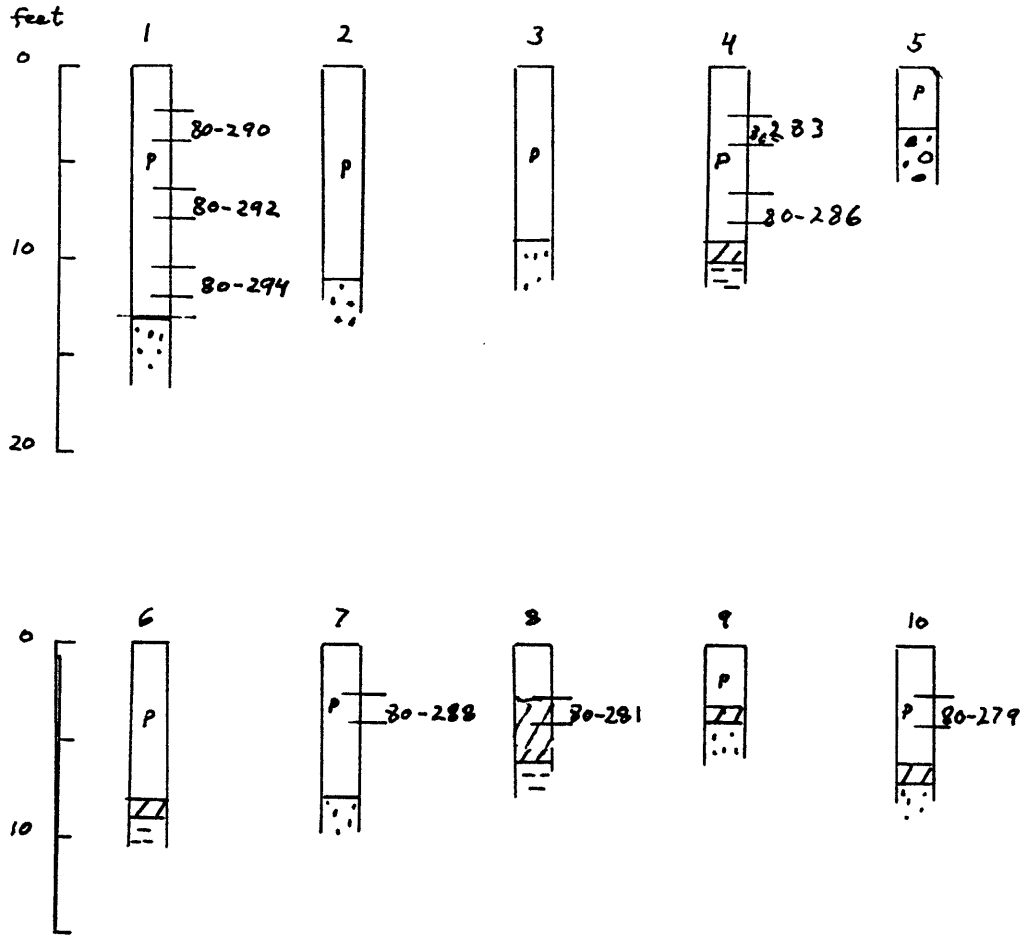


Figure 28a.--Sections and sample locations.

Table 27.--Analyses of samples located in sections in figure 28a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
279	60.32	5.18	1.28	0.17	2.9	--	64.5	10,428
281	39.01	3.23	1.76	0.53	32.5	--	64.3	6,689
283	58.02	5.17	1.59	0.17	1.9	--	66.0	9,933
286	56.06	4.44	1.59	0.27	5.6	--	61.8	9,355
288	55.35	4.75	1.49	0.22	4.6	--	65.7	9,380
290	57.74	5.06	1.64	0.19	4.3	--	64.8	9,969
292	57.58	5.09	1.78	0.18	2.5	--	66.5	9,847
294	58.79	5.23	1.88	0.20	2.5	--	65.8	10,198
Average commercial quality peat (ash content less than 25%)	57.69	4.99	1.61	0.20	3.47	--	65.01	9,872

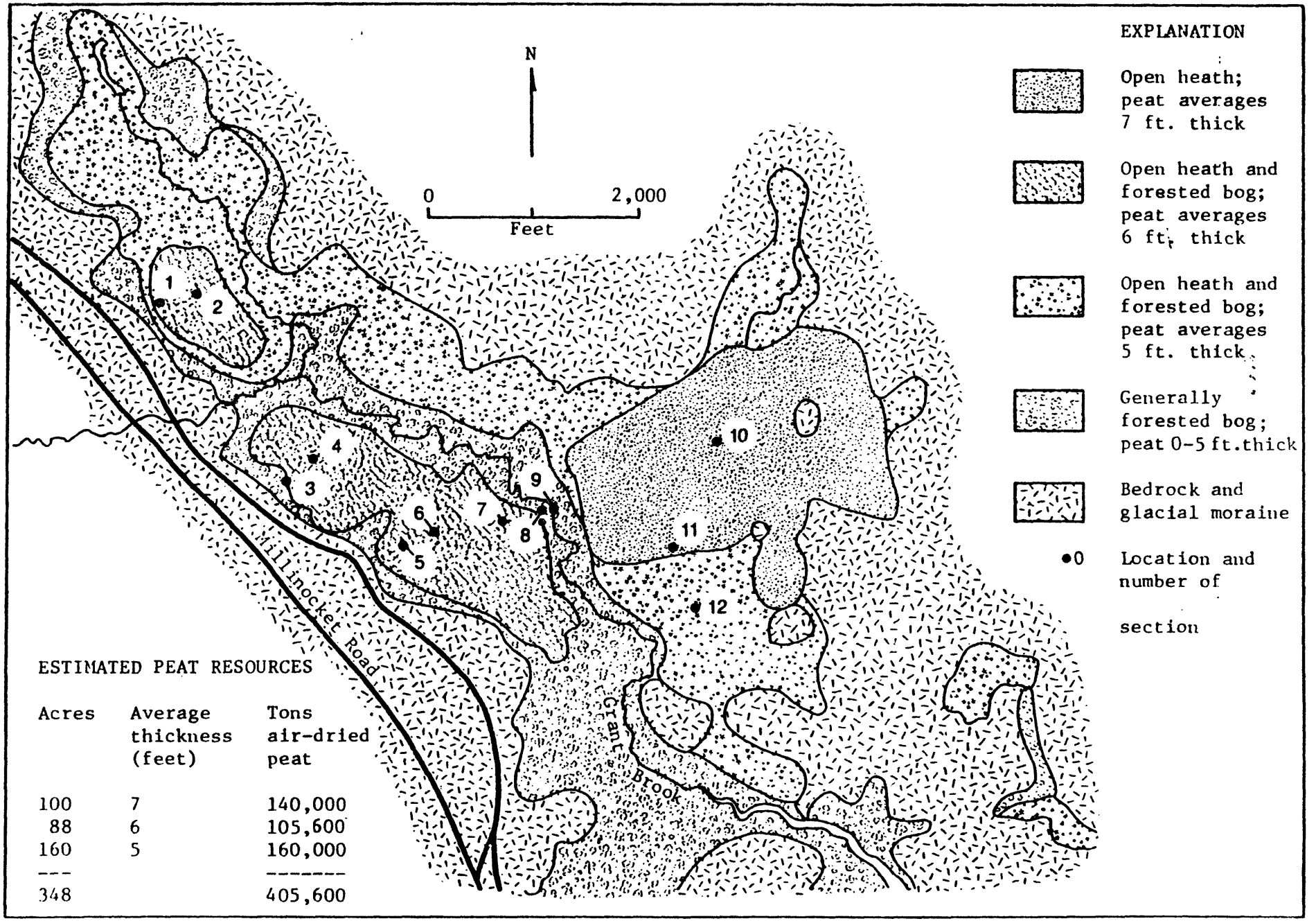


Figure 29. Sketch map of bogs east of Millinocket Road and adjacent to south boundary of 2 R9, Katahdin 15-minute Quadrangle, Piscat-

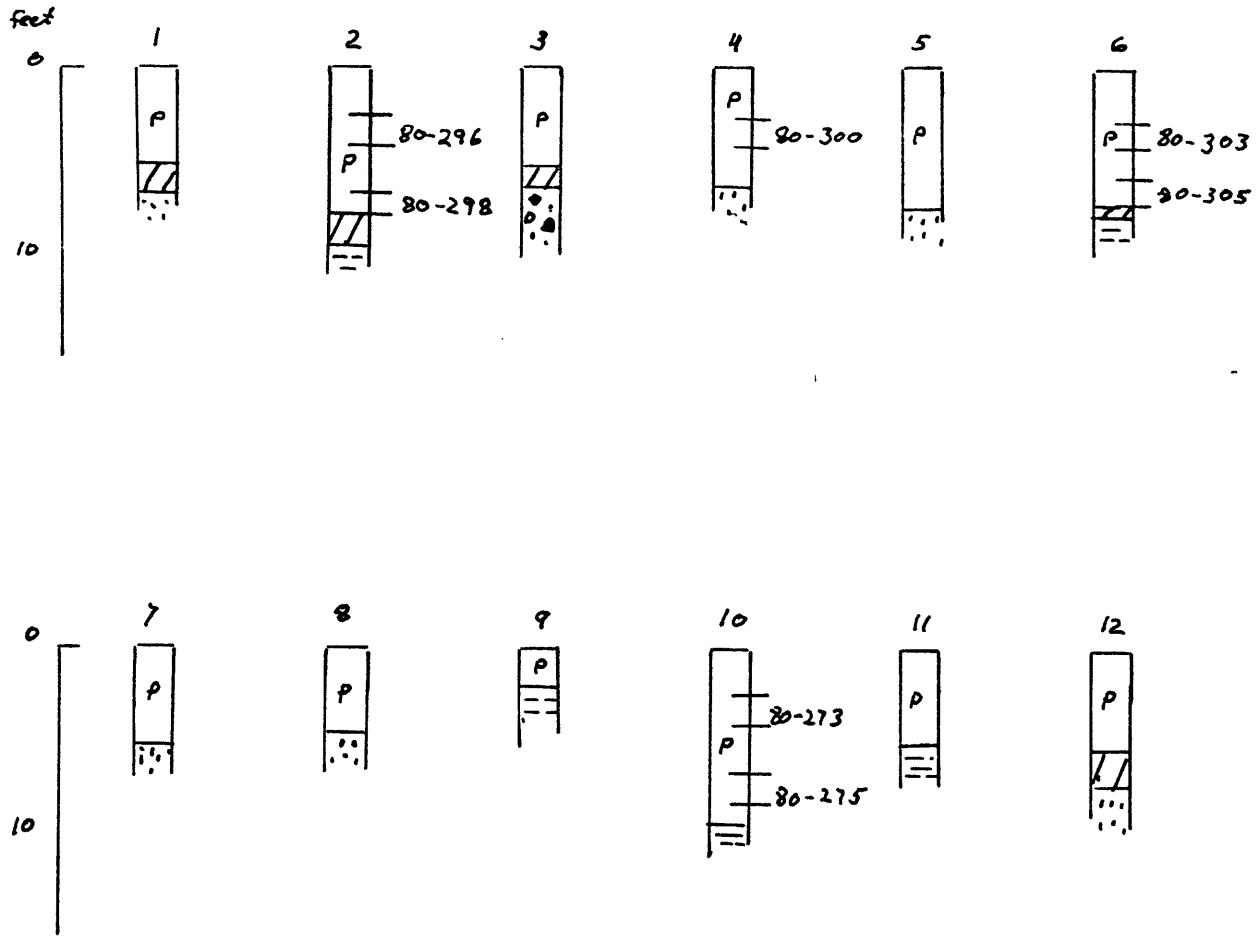


Figure 29a.--Sections and sample locations.

Table 28.--Analyses of samples located in sections in figure 29a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
273	56.56	4.70	1.29	0.11	1.0	91.1	68.5	9,666
275	55.87	4.82	1.36	0.22	3.0	--	63.9	10,233
296	57.86	4.30	1.21	0.13	4.4	87.6	63.6	9,830
298	54.26	4.42	1.55	0.78	9.1	88.3	62.0	9,369
300	57.59	4.66	1.50	0.20	2.2	--	63.7	9,597
303	58.73	4.99	1.55	0.18	3.6	--	64.5	10,002
305	56.70	5.02	1.84	0.24	9.9	80.8	61.7	9,965
Average commercial quality peat (ash content less than 25%)	56.80	4.70	1.48	0.27	4.7	87.0	63.99	9,808

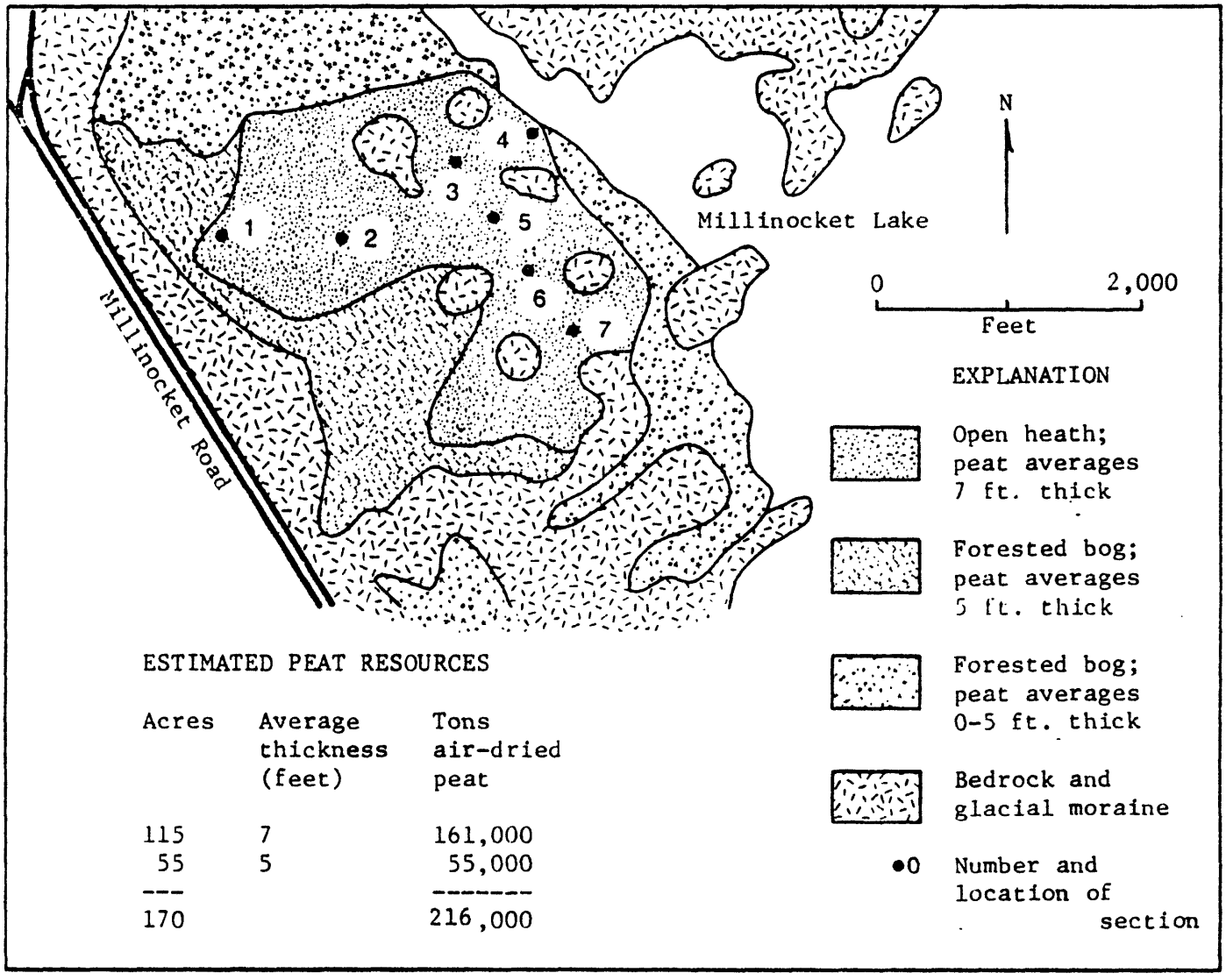


Figure 30. Sketch map of bog between Millinocket Lake and Millinocket Road in northeast corner of T1 R9, Norcross 15-minute Quadrangle, Piscataquis County, Maine. (Number 29 on Index Map).

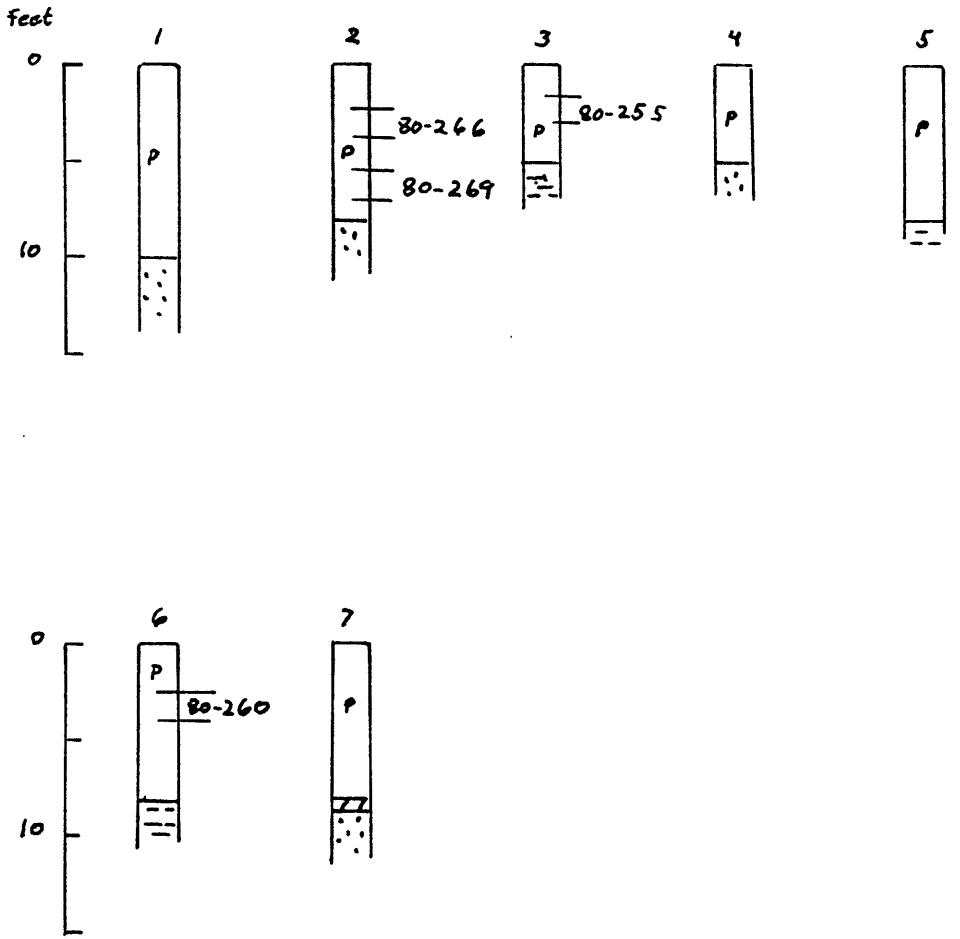


Figure 30a.--Sections and sample locations.

Table 29.--Analyses of samples located in sections in figure 30a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
255	59.20	5.08	1.64	0.21	5.2	--	63.5	10,321
260	59.50	4.91	1.94	0.17	3.4	89.4	65.6	10,339
266	59.48	5.29	2.10	0.18	3.8	89.1	66.7	10,313
269	55.62	4.60	2.22	0.22	5.9	89.2	64.2	9,588
Average commercial quality peat (ash content less than 25%)	58.2	4.97	1.98	0.20	4.6	89.2	65.0	10,140

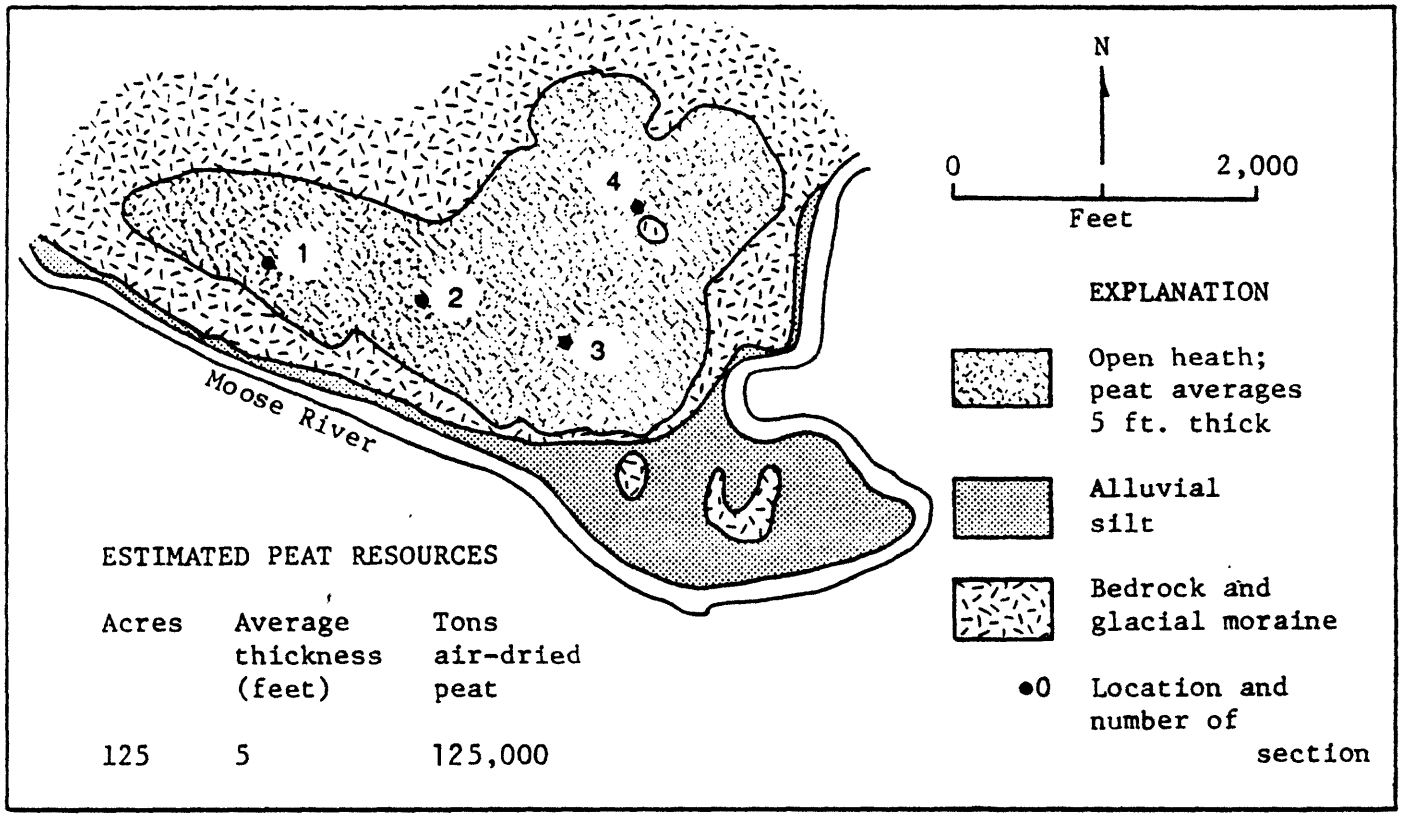


Figure 31. Sketch map of bog north of Moose River and south of Jackman Mill, Jackman Twp., Long Pond 15-minute Quadrangle, Somerset County, Maine. (Number 30 on Index Map).

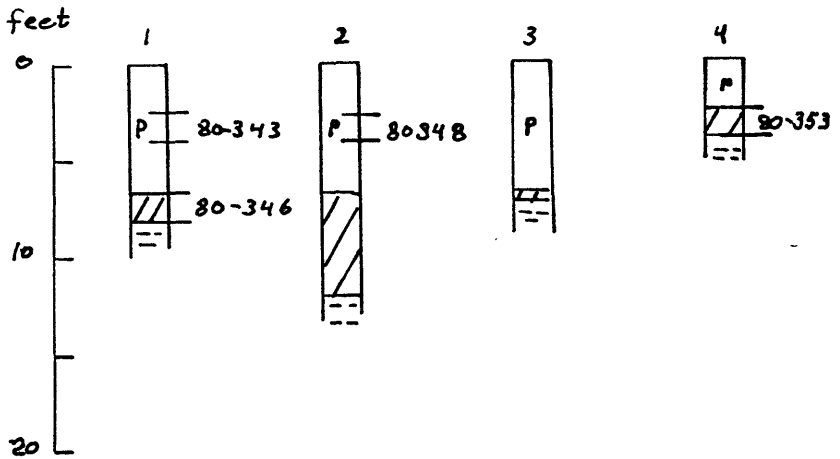


Figure 31a.--Sections and sample locations.

Table 30.--Analyses of samples located in sections in figure 31a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
343	59.59	5.71	1.85	0.16	3.1	87.7	67.3	10,731
346	31.72	2.72	1.60	0.37	44.4	83.4	37.8	5,544
348	59.05	5.63	2.15	0.13	1.7	88.5	67.8	10,524
353	38.73	3.55	1.59	0.20	34.9	80.9	44.7	6,779
Average commercial quality peat (ash content less than 25%)	59.32	5.67	2.00	0.15	2.4	88.1	67.6	10,627

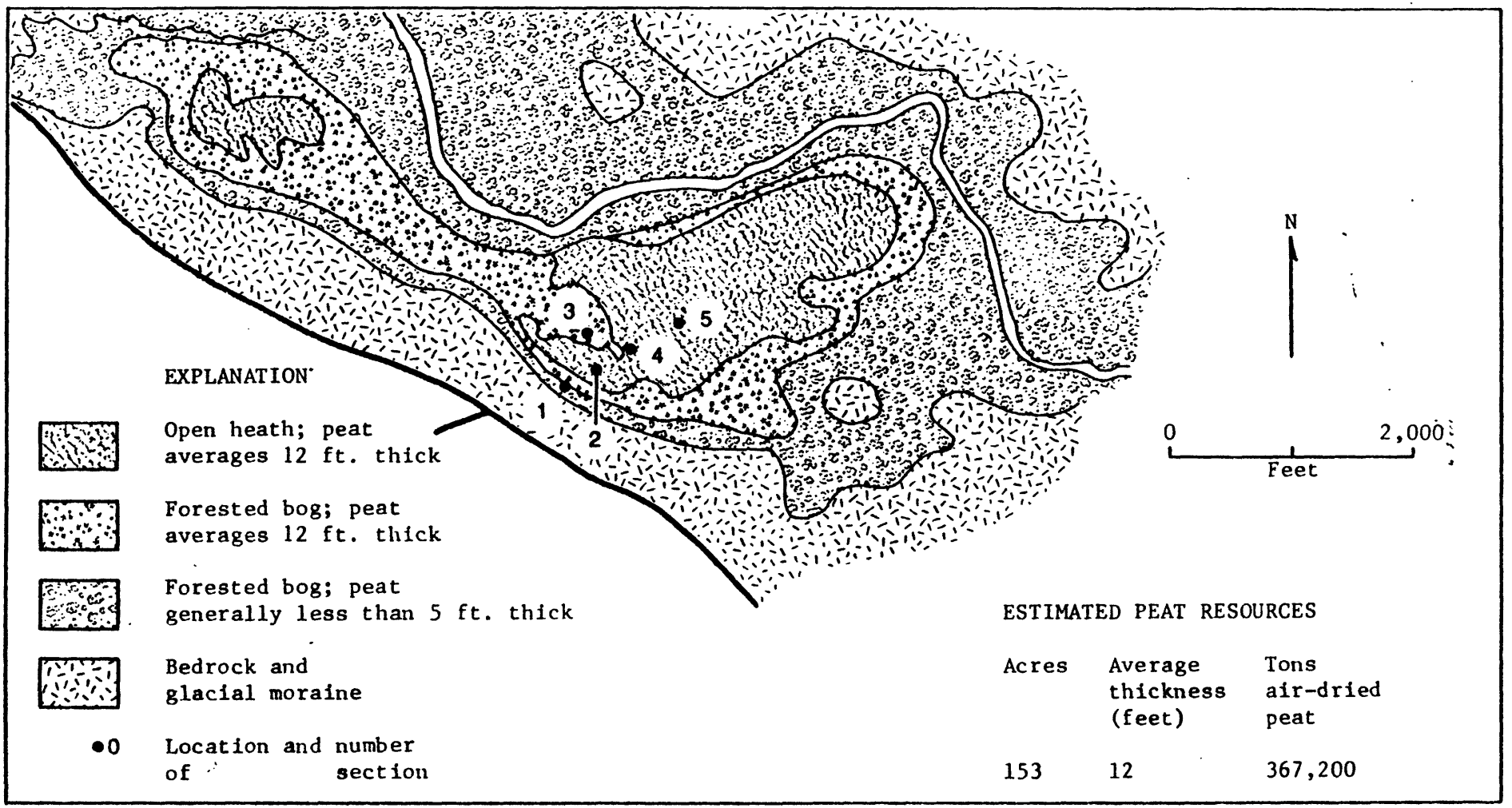


Figure 32. Sketch map of Twelve Mile Bog, Long Pond Twp., Long Pond 15-minute Quadrangle, Somerset County, Maine. (Number 31 on Index Map).

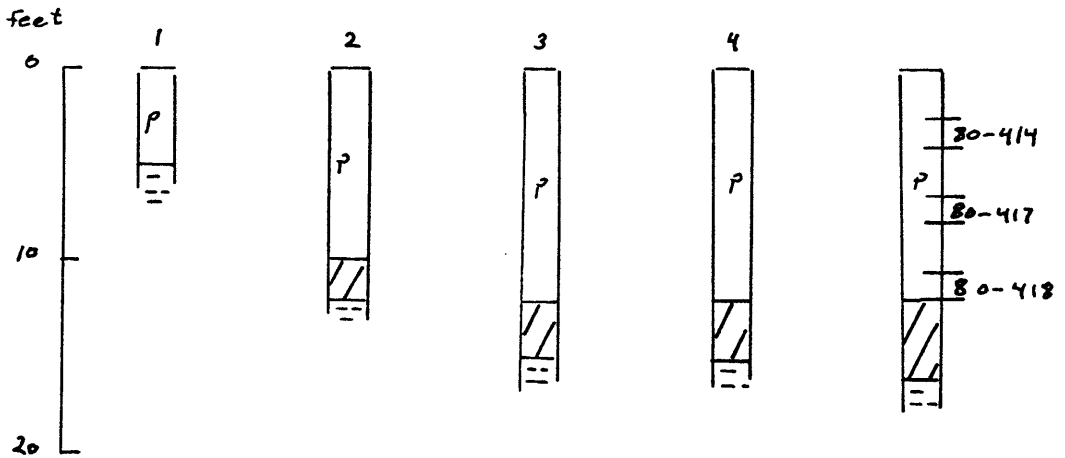


Figure 32a.--Sections and sample locations.

Table 31.--Analyses of samples located in sections in figure 32a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
414	57.96	4.99	2.14	0.16	3.6	88.2	66.2	9,836
417	57.49	4.64	1.97	0.14	5.5	88.2	64.2	9,754
418	56.59	4.81	2.08	0.20	4.2	89.0	65.7	9,704
Average commercial quality peat (ash content less than 25%)	57.34	4.81	2.06	0.17	4.4	88.5	65.4	9,765

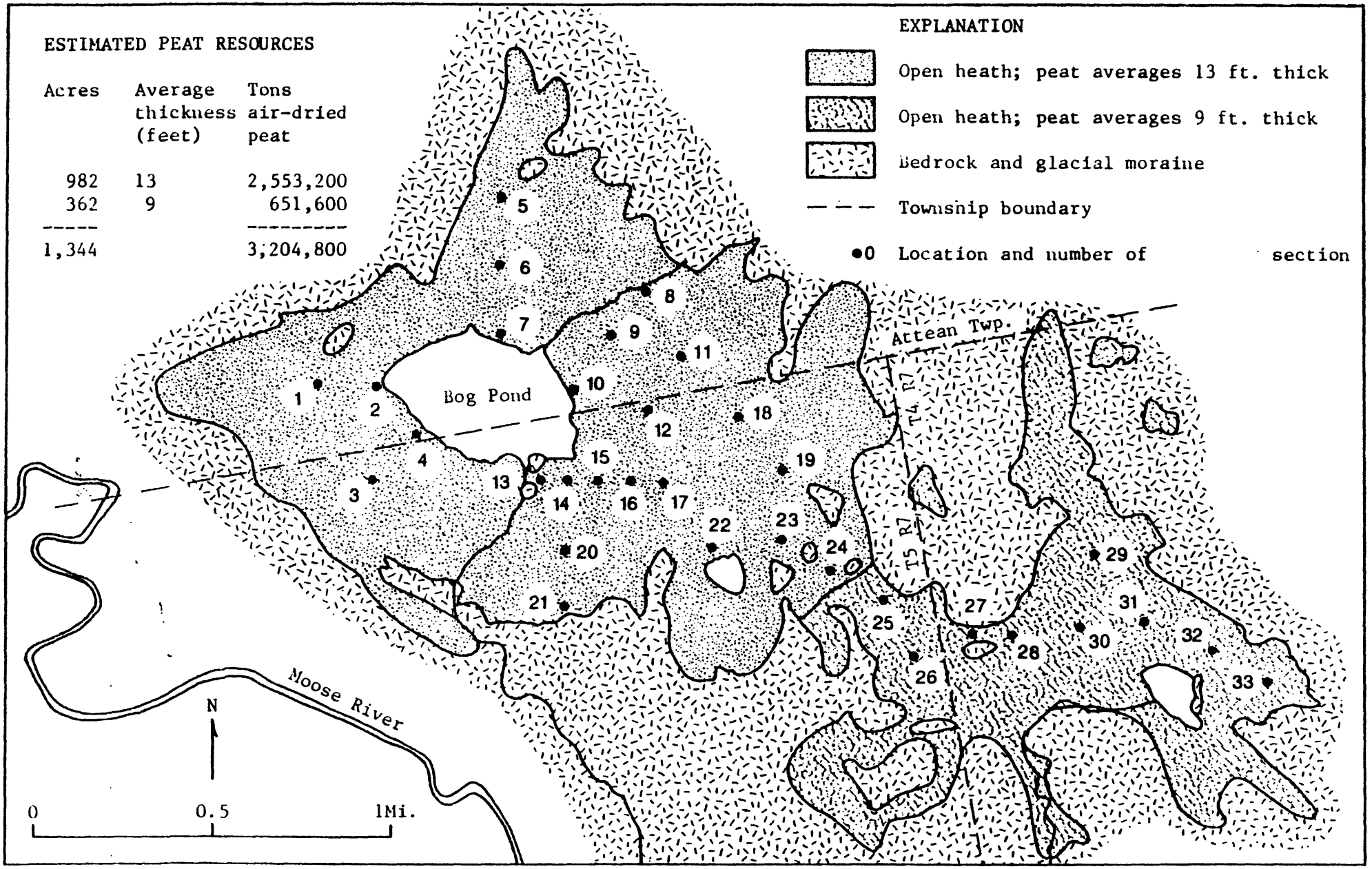


Figure 33. Sketch map of No. 5 Bog south of Attean Pond, Attean Twp., T4 R7 and T5 R7, Attean 15-minute Quadrangle, Somerset County, Maine. (Number 32 on Index Map).

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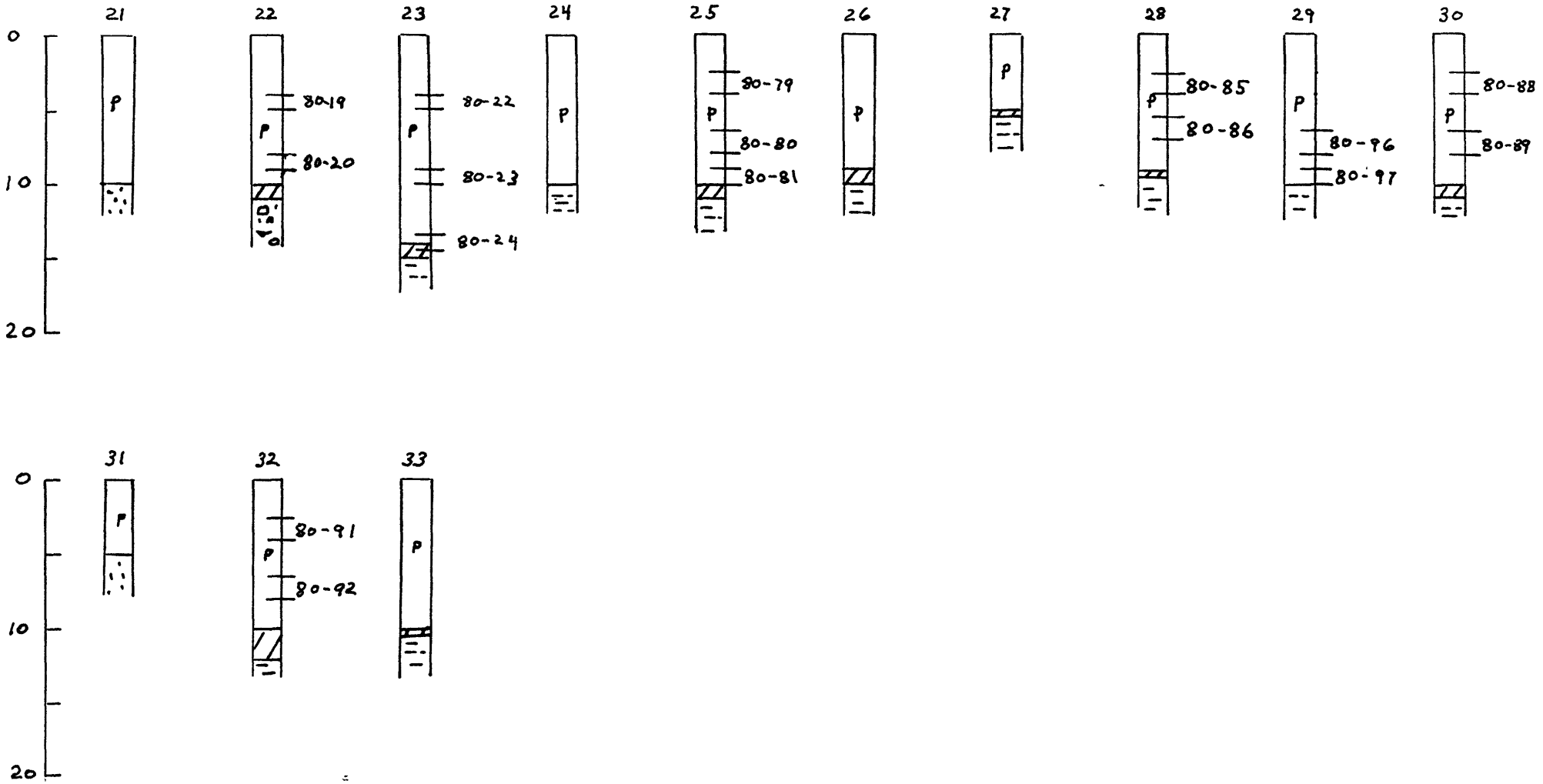


Figure 33a.--Sections and sample locations.

Table 32.--Analyses of samples located in sections in figure 33a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
8	59.26	5.55	2.62	0.22	3.2	--	67.0	10,380
9	49.06	4.99	1.52	0.41	12.6	--	62.7	8,483
15	60.68	5.38	1.92	0.21	2.1	--	67.3	10,557
16	57.68	5.17	1.83	0.21	3.6	--	65.8	10,049
17	56.72	4.44	1.43	0.23	2.0	--	65.5	9,422
19	54.74	5.55	1.30	0.15	1.4	--	70.9	9,387
20	60.28	5.72	2.35	0.20	2.3	--	67.7	10,560
22	55.91	5.09	1.28	0.20	2.0	--	69.3	9,620
23	51.17	4.34	1.88	0.22	13.0	--	58.9	8,734
24	40.18	4.34	3.43	1.19	26.8	--	58.1	7,224
27	58.55	5.83	2.64	0.20	1.7	--	69.2	10,214
28	56.58	5.25	1.81	0.33	6.2	--	63.5	9,896
29	56.83	3.47	1.97	0.24	5.2	92.1	65.7	9,569
34	54.10	5.31	1.51	0.15	1.0	--	70.6	9,168
36	43.91	3.98	1.73	0.22	26.1	--	50.3	7,506
39	59.62	4.79	2.31	0.17	3.2	90.0	71.31	10,434
41	55.26	5.20	1.50	0.15	2.3	--	68.4	9,293
42	57.47	4.44	2.36	0.17	4.3	89.6	66.4	10,095
43	56.10	4.45	2.49	0.17	5.1	91.2	66.8	9,718
47	56.18	5.00	2.31	0.13	3.1	88.7	70.4	9,906
48	58.11	4.80	2.16	0.15	3.1	91.6	67.5	10,227
49	56.44	4.69	2.07	0.23	4.0	--	63.4	9,602
52	53.88	5.14	2.36	0.24	7.2	--	63.7	9,438
53	52.61	4.64	3.02	0.20	11.0	90.0	70.2	9,477
54	53.54	4.94	2.25	0.24	9.6	--	63.3	9,240
57	58.39	4.71	2.59	0.15	2.4	88.7	69.9	10,333
58	56.00	4.48	3.28	0.17	6.3	90.3	65.6	9,705
79	58.68	5.42	2.16	0.23	3.4	--	66.6	10,271
80	57.55	5.26	2.16	0.20	4.4	--	65.3	9,863
81	49.79	5.02	2.73	0.33	15.3	--	61.4	8,641
85	57.85	3.93	2.08	0.11	5.8	89.2	65.8	8,785
86	50.00	3.64	2.12	0.22	11.7	89.7	63.2	8,484
88	58.31	5.28	1.85	0.19	2.8	--	67.9	10,205
89	55.84	5.12	3.34	0.13	5.4	92.0	68.2	9,905
91	54.10	4.16	1.28	0.07	3.8	89.6	70.0	9,097
92	52.45	5.34	3.21	0.26	10.3	--	64.3	9,323
96	57.33	5.16	2.07	0.19	4.7	--	63.7	9,791
97	50.58	5.90	2.11	0.18	12.8	89.0	60.2	8,675
Average commercial quality peat (ash content less than 25%)	55.77	4.88	2.16	0.20	4.8	90.8	66.3	9,648

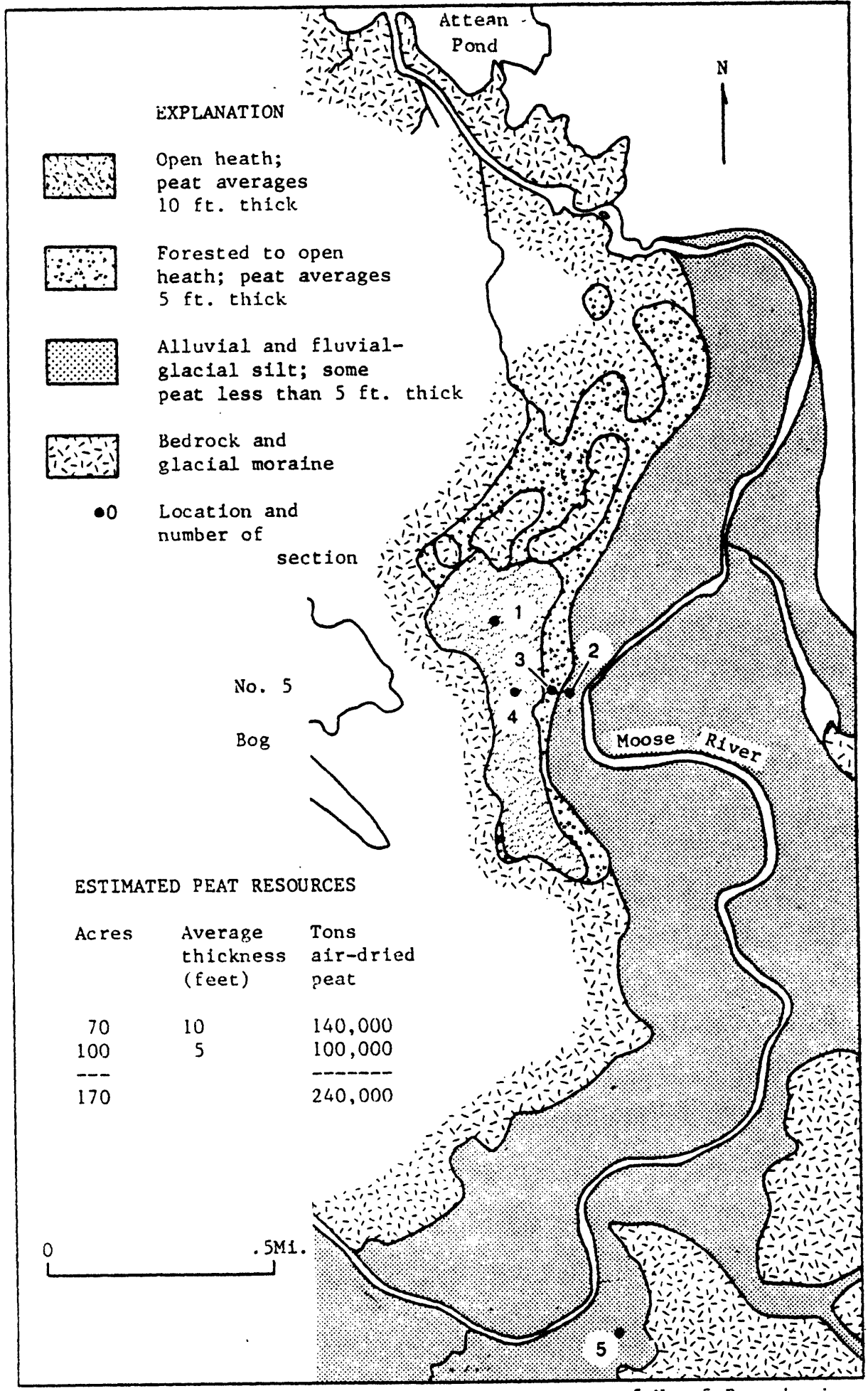


Figure 34. Sketch map of the Moose River area east of No. 5 Bog showing geologic setting of peat deposits and resources, T4 R7, Attean and Long Pond 15-minute Quadrangles, Somerset County, Maine. (Number 33 on Index Map).

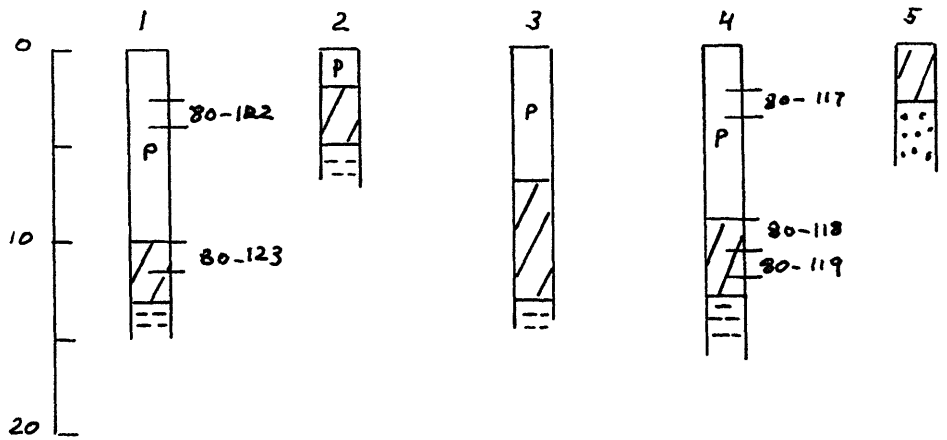


Figure 34a.--Sections and sample locations.

Table 33.--Analyses of samples located in sections in figure 34a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
117	56.44	5.15	2.01	0.20	3.5	--	65.4	9,672
118	32.91	2.80	1.87	0.15	42.3	83.3	41.5	5,629
119	11.68	0.92	0.89	0.27	71.6	70.3	19.4	1,849
122	58.79	3.99	2.65	0.11	2.6	88.0	69.2	9,971
123	40.48	2.49	2.00	0.19	26.8	85.8	48.7	6,930
Average commercial quality peat (ash content less than 25%)	57.62	4.57	2.33	0.16	3.05	88.0	67.3	9,823

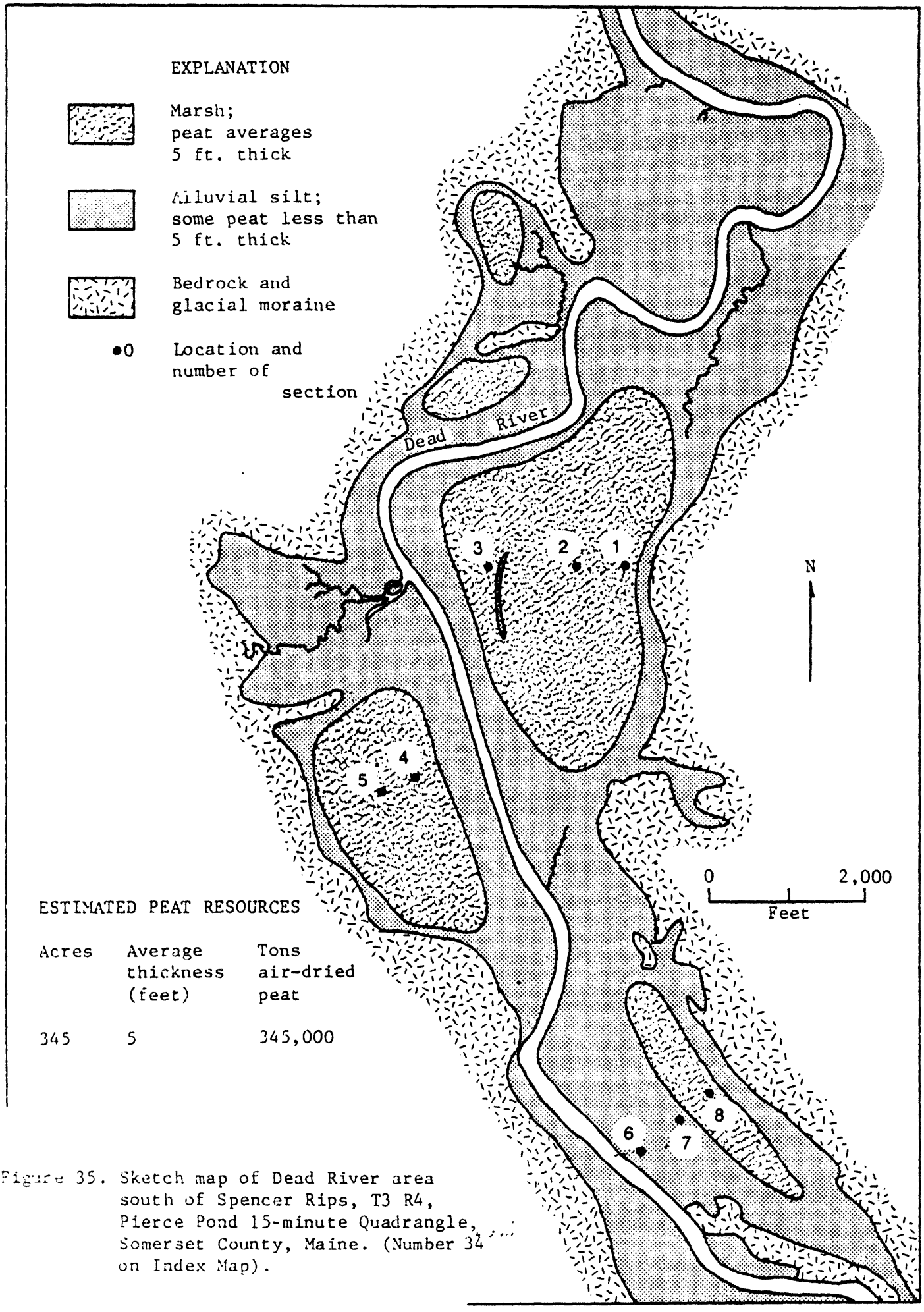


Figure 35. Sketch map of Dead River area south of Spencer Rips, T3 R4, Pierce Pond 15-minute Quadrangle, Somerset County, Maine. (Number 34 on Index Map).

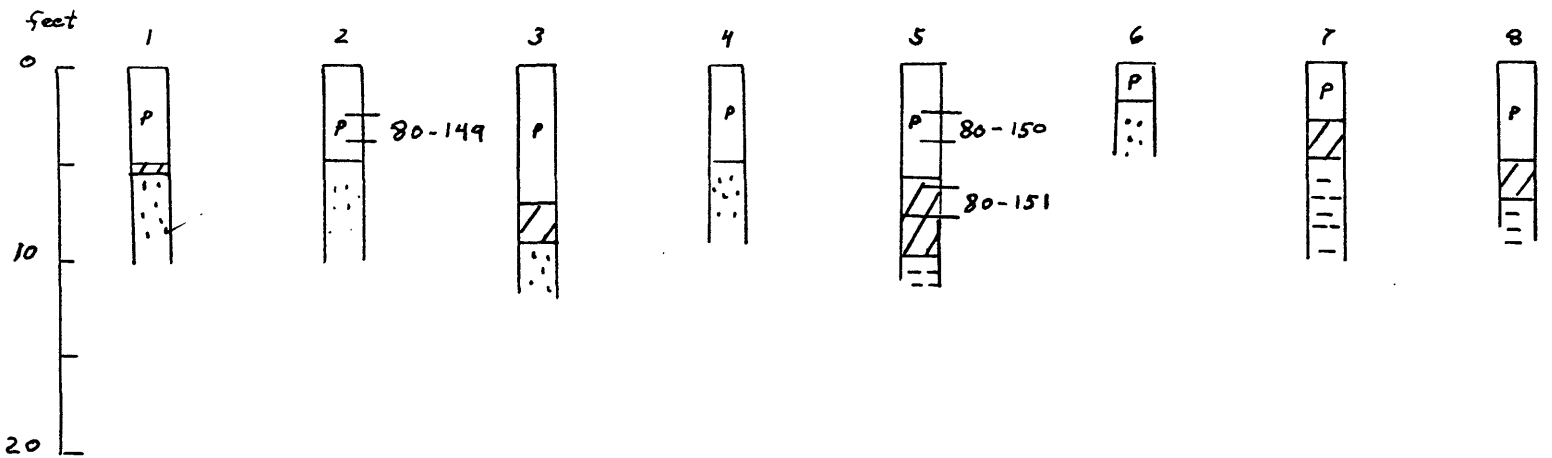


Figure 35a.--Sections and sample locations.

Table 34.--Analyses of samples located in sections in figure 35a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
149	48.52	3.79	1.28	0.14	21.8	80.5	53.3	8,362
150	45.92	3.91	2.02	0.38	22.9	83.9	55.5	8,008
151	22.81	1.84	1.09	0.37	99.9	78.3	29.9	4,041
Average commercial quality peat (ash content less than 25%)	47.22	3.85	1.65	0.21	22.35	82.2	54.4	8,185

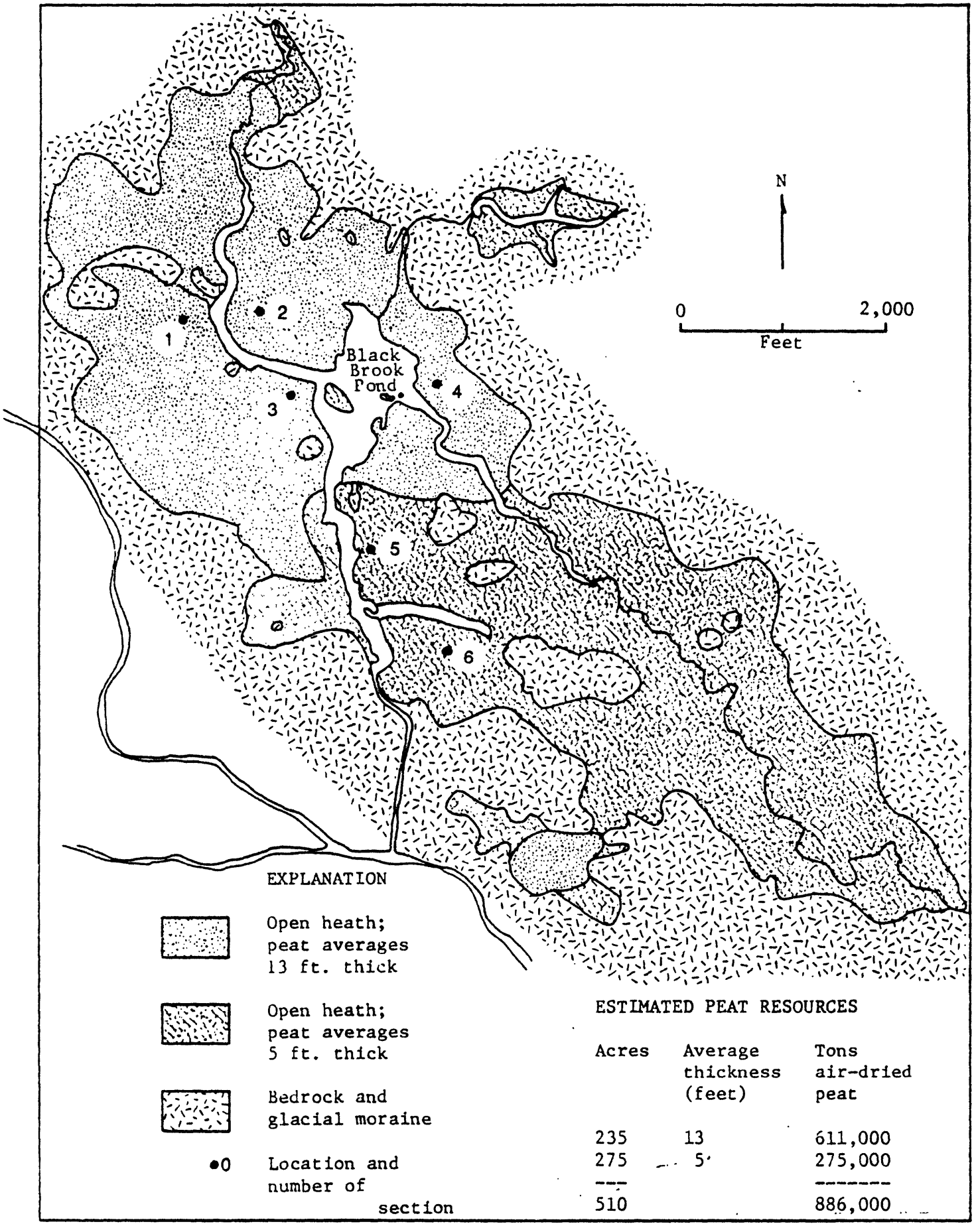


Figure 36. Sketch map of bog at Black Brook Pond, T2 R4, Little Bigelow Mountain 15-minute Quadrangle, Somerset County, Maine. (Number 35 on Index Map).

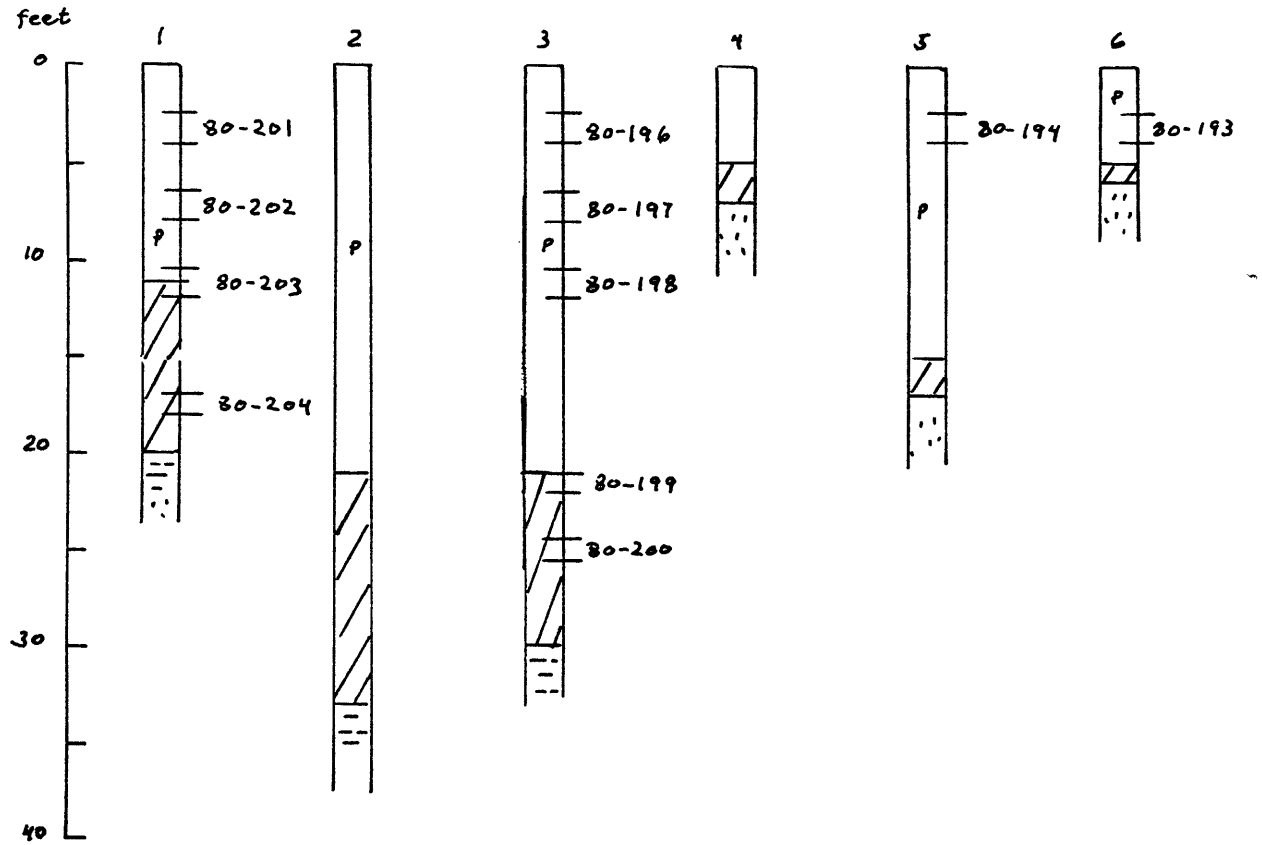


Figure 36a.--Sections and sample locations.

Table 35.--Analyses of samples located in sections in figure 36a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
193	54.02	4.14	1.89	0.46	8.1	90.0	65.7	9,097
194	54.81	4.23	3.47	0.38	6.2	88.2	66.5	9,353
196	56.09	4.45	1.53	0.23	4.0	89.2	64.6	9,501
197	53.53	3.92	1.48	0.25	4.8	90.8	65.3	8,918
198	53.76	3.90	1.24	0.35	5.7	88.2	66.8	8,848
199	30.02	2.47	3.13	1.08	41.6	92.7	46.6	5,260
200	25.72	2.62	3.03	0.91	49.2	90.1	41.1	4,486
201	55.40	4.51	4.31	0.16	4.9	90.3	67.0	9,387
202	56.40	5.15	1.27	0.27	4.1	--	65.0	9,593
203	37.26	3.82	2.74	0.88	30.1	--	67.5	6,535
204	10.14	1.15	0.75	1.19	77.0	79.1	19.6	1,710
Average commercial quality peat (ash content less than 25%)	54.86	4.33	2.19	0.25	5.4	89.45	65.8	9,242

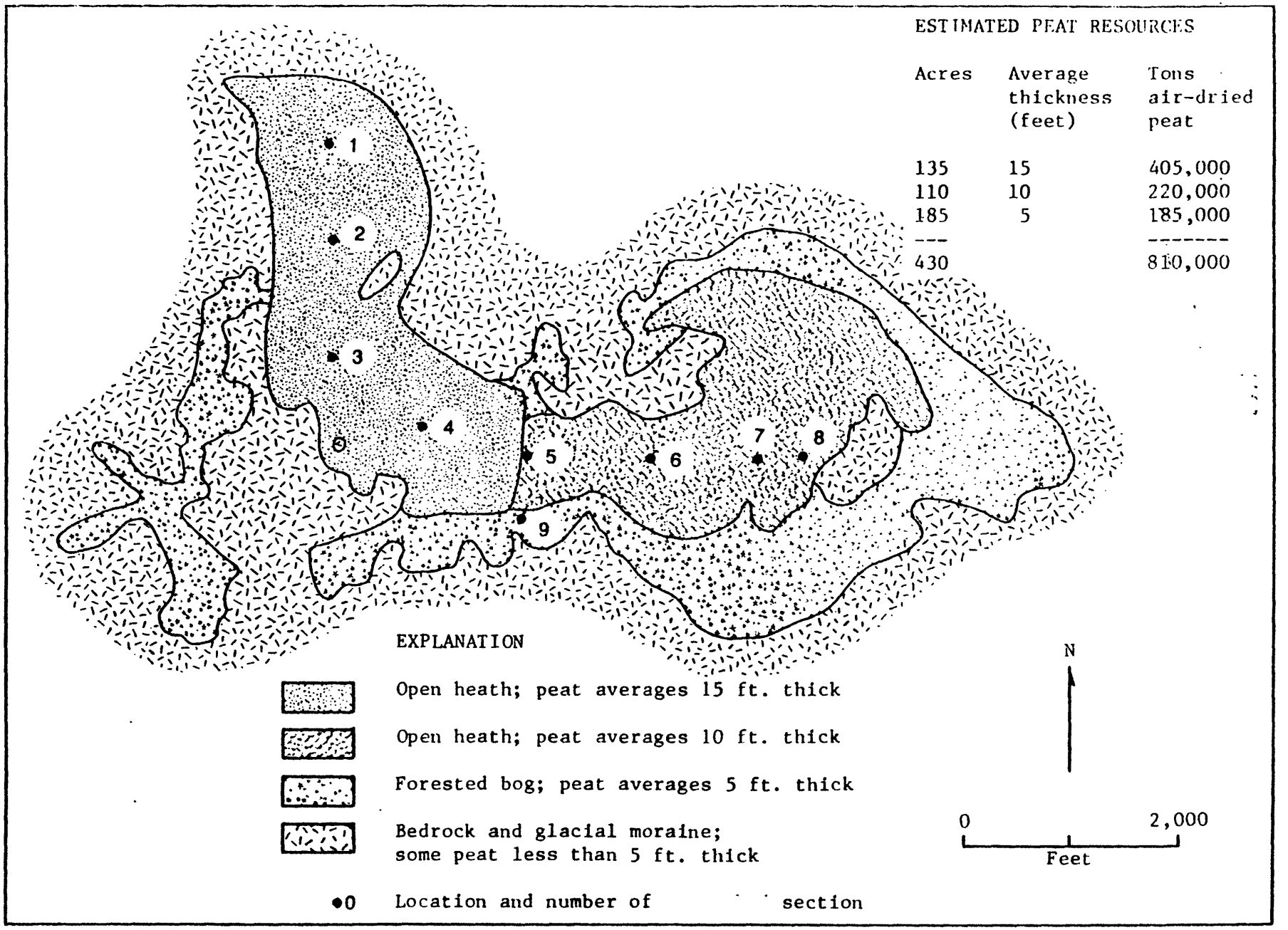


Figure 37. Sketch map of Johnson Bog, West Forks Twp., Pierce Pond 15-minute Quadrangle, Somerset County, Maine. (Number 36 on Index Map)

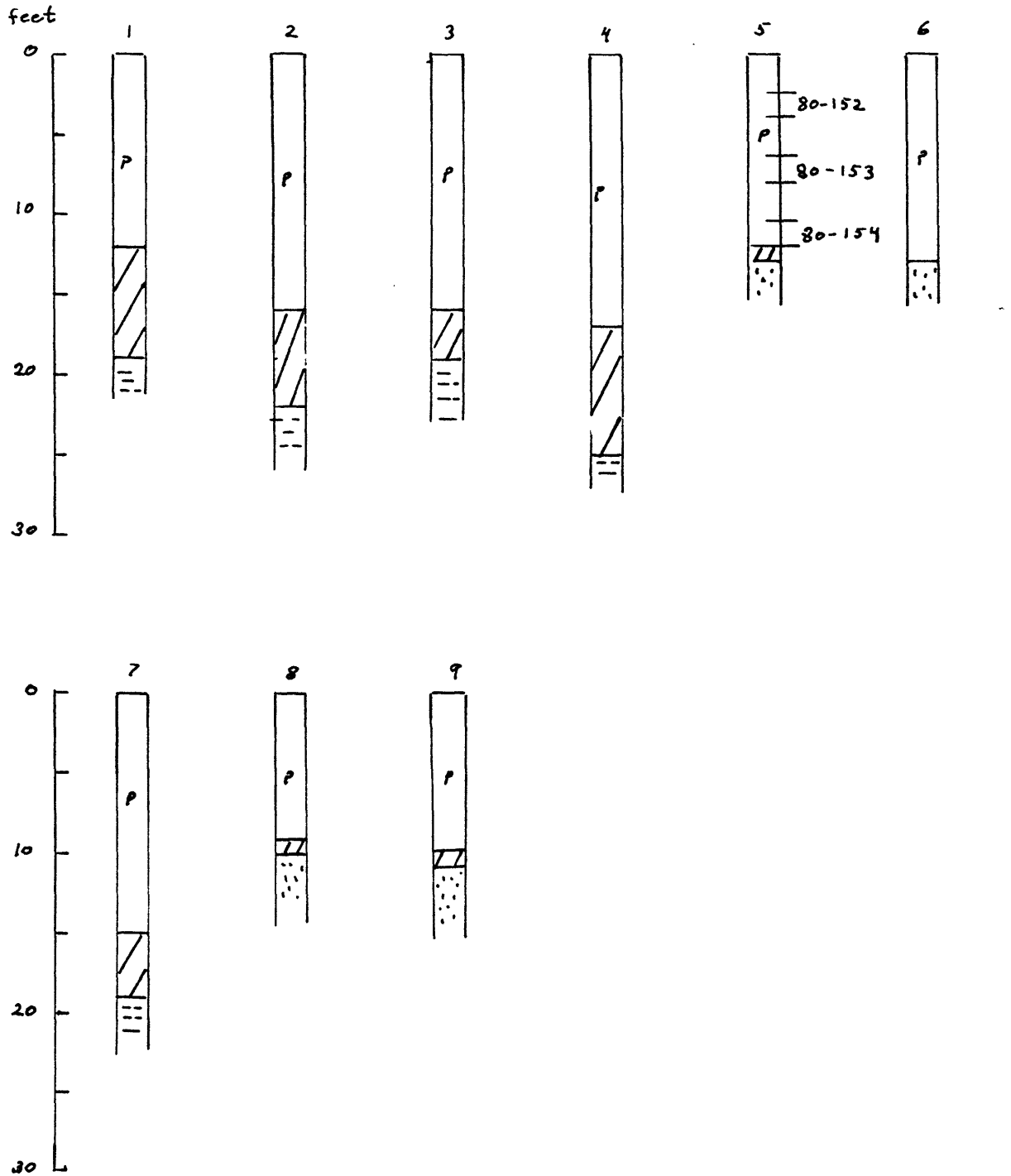
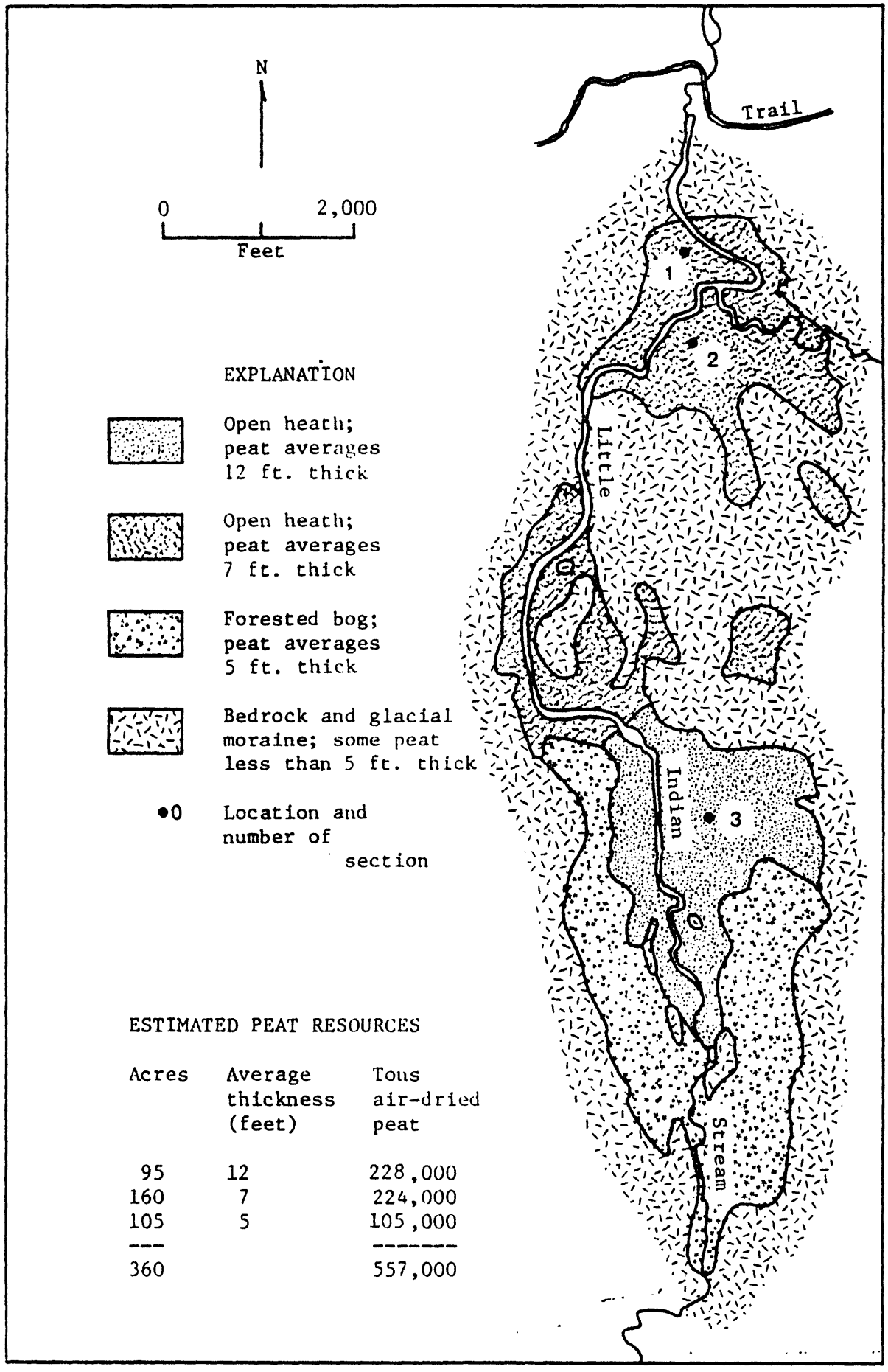


Figure 37a.--Sections and sample locations.

Table 36.--Analyses of samples located in sections in figure 37a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
152	57.75	4.68	1.81	0.19	4.4	90.0	65.4	9,978
153	56.12	3.98	1.60	0.25	5.1	89.0	64.3	9,487
154	54.98	4.44	1.85	0.32	5.7	90.7	63.8	9,395
Average commercial quality peat (ash content less than 25%)	56.28	4.33	1.75	0.25	5.06	89.9	61.2	9,620



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
95	12	228,000
160	7	224,000
105	5	105,000
360		557,000

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

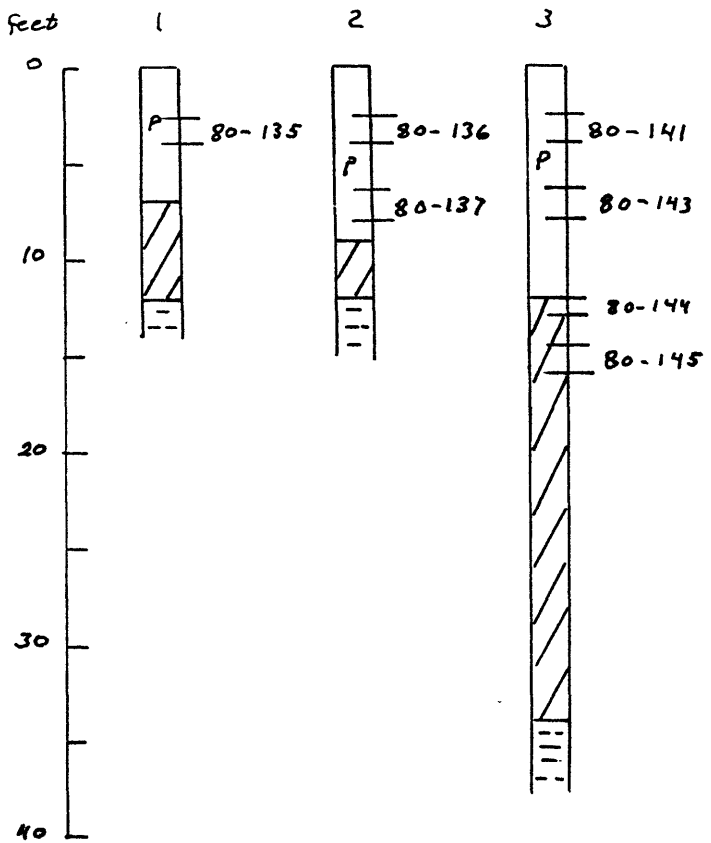
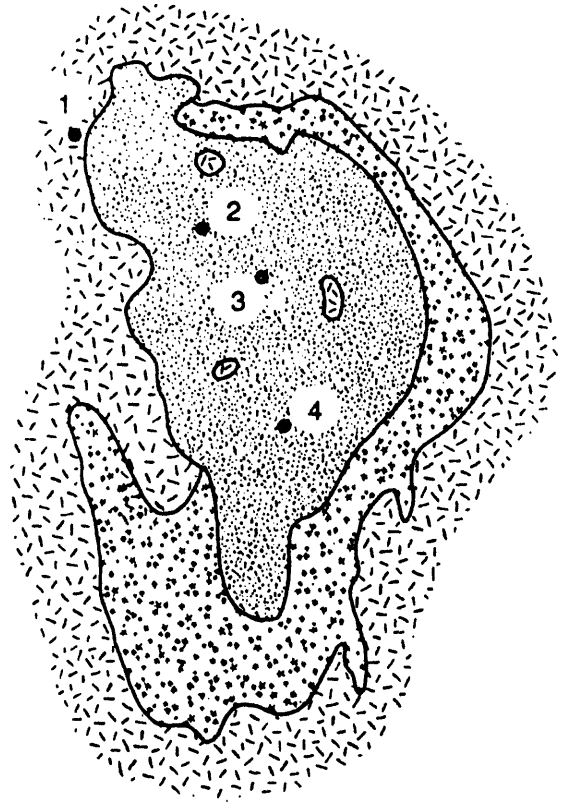


Figure 38a.--Sections and sample locations.

Table 37.--Analyses of samples located in sections in figure 38a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
135	53.84	3.71	2.03	0.25	7.8	87.2	62.6	9,055
136	54.27	4.15	2.19	0.65	9.9	--	60.5	9,145
137	43.63	3.55	2.29	0.73	22.7	90.7	56.2	7,495
141	51.61	4.50	1.68	0.14	5.4	87.9	68.7	8,779
143	56.04	4.89	1.88	0.11	2.9	89.6	68.6	9,612
144	35.91	2.92	2.21	0.30	33.7	90.1	46.1	6,196
145	36.43	3.32	2.68	0.52	32.8	92.7	52.6	6,347
Average commercial quality peat (ash content less than 25%)	53.94	4.31	1.95	0.29	6.5	88.2	65.1	9,147



N

EXPLANATION

Open heath; peat averages 12 ft. thick

Forested bog; peat averages 5 ft. thick

Bedrock and glacial moraine. Some peat less than 5 ft. thick

•0 Location and number of section

0 2,000

Feet

ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
110	12	264,000
65	5	65,000
175		329,000

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 (Squaretown Twp.), The Forks 15 minute Quadrangle, Somerset County, Maine. (Number 38 on Index Map).

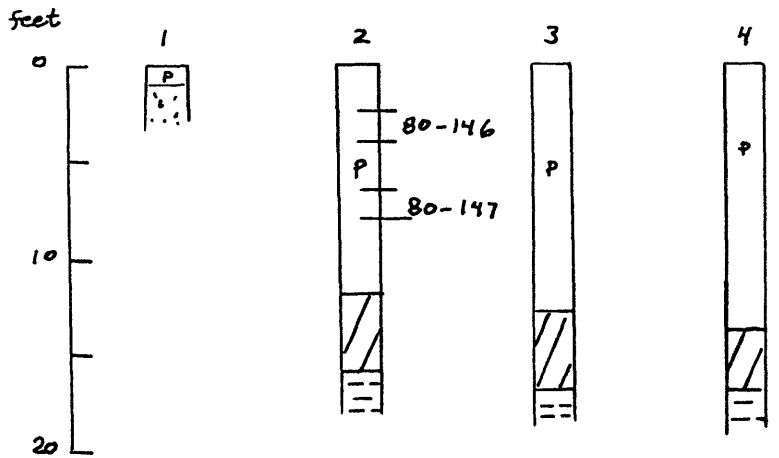
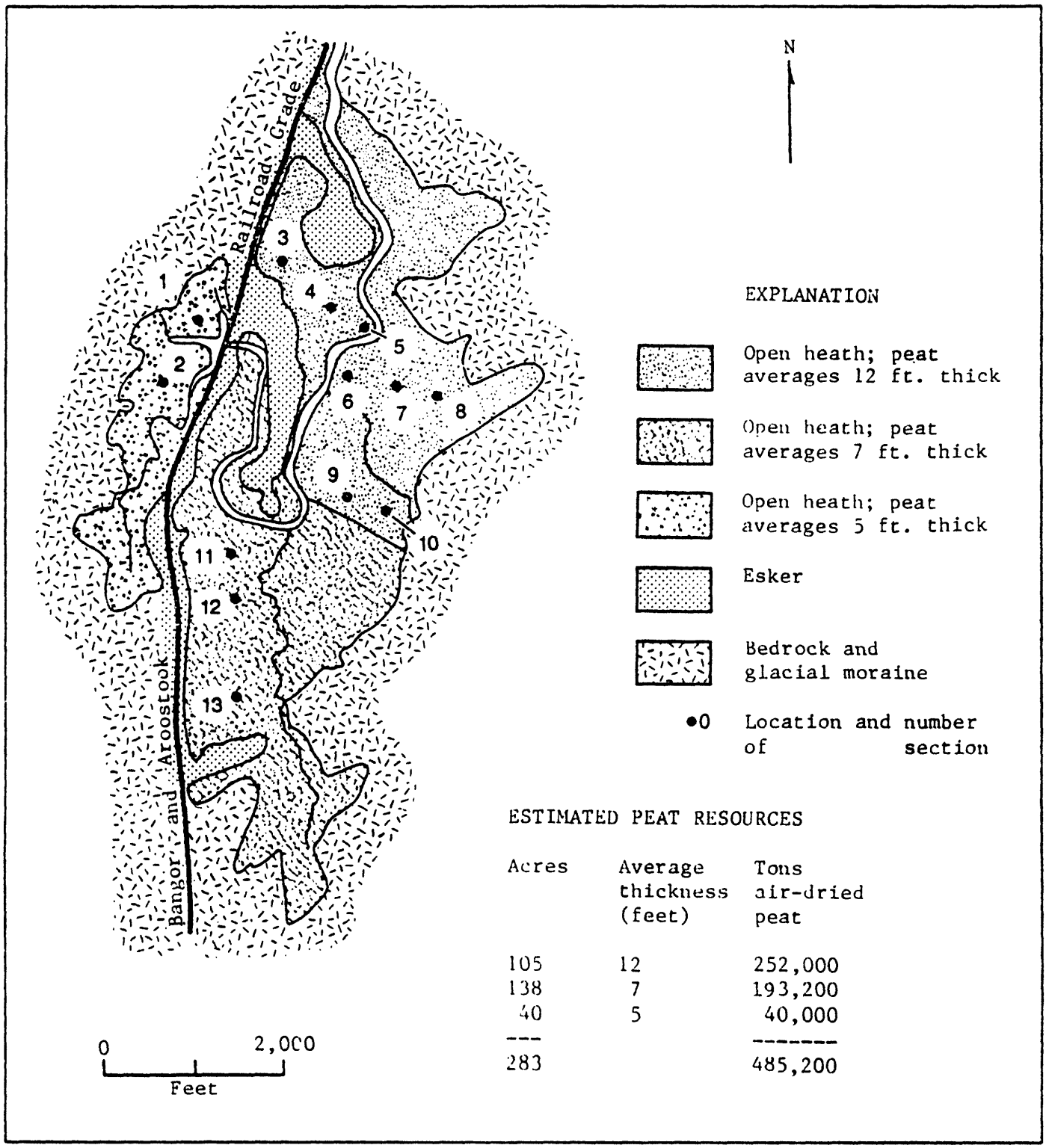


Figure 39a.--Sections and sample locations.

Table 38.--Analyses of samples located in sections in figure 39a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
146	55.74	4.90	2.08	0.14	6.8	88.0	65.3	9,646
147	53.94	4.23	1.58	0.11	7.9	89.1	61.7	9,161
Average commercial quality peat (ash content less than 25%)	54.84	4.56	1.83	0.13	7.35	88.55	63.5	9,404



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
105	12	252,000
138	7	193,200
40	5	40,000
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283		485,200

Figure 40. Sketch map of bog one mile south of Greenville Junction, Greenville 15-minute Quadrangle, Piscataquis County, Maine. (Number 39 on Index Map).

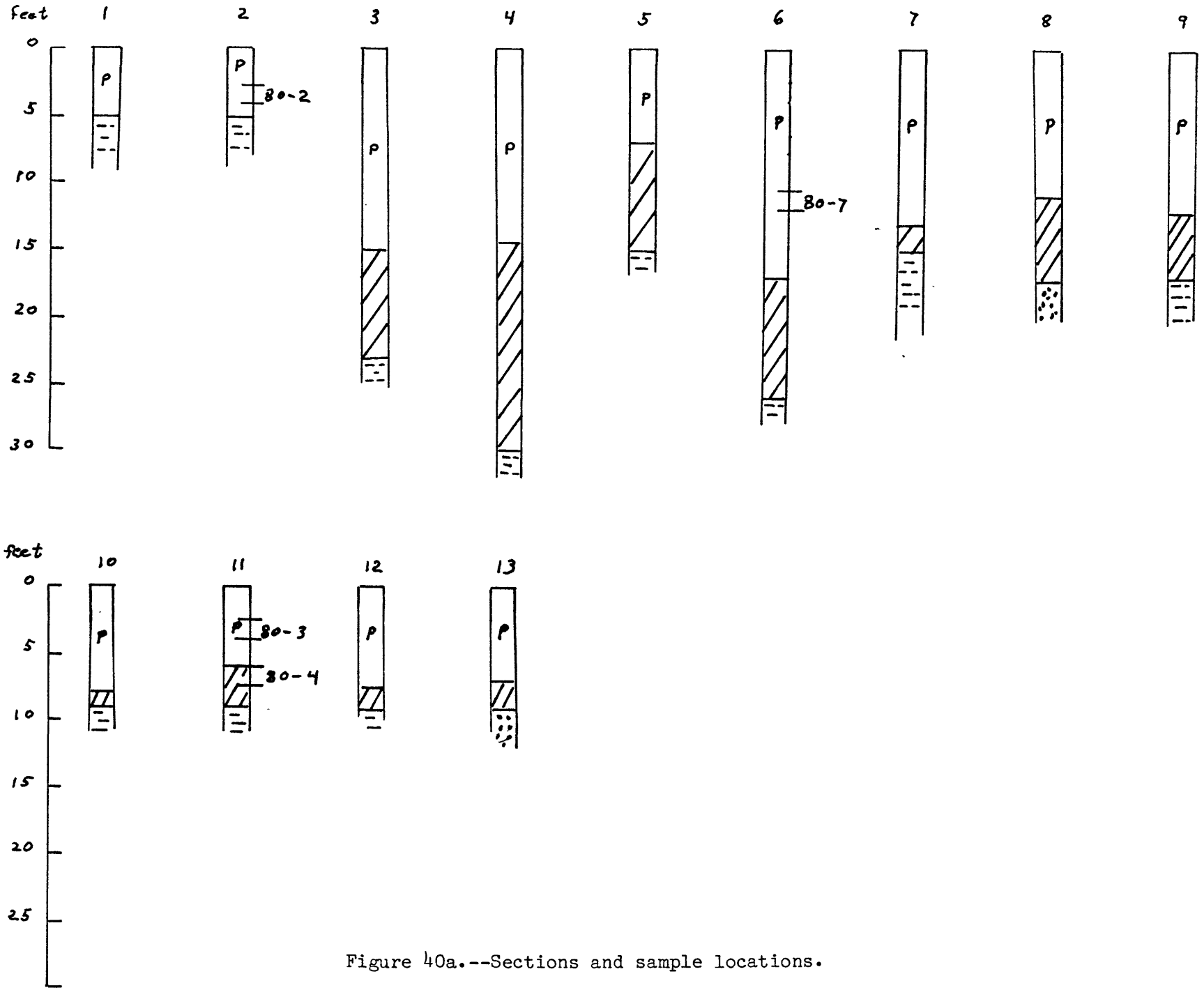
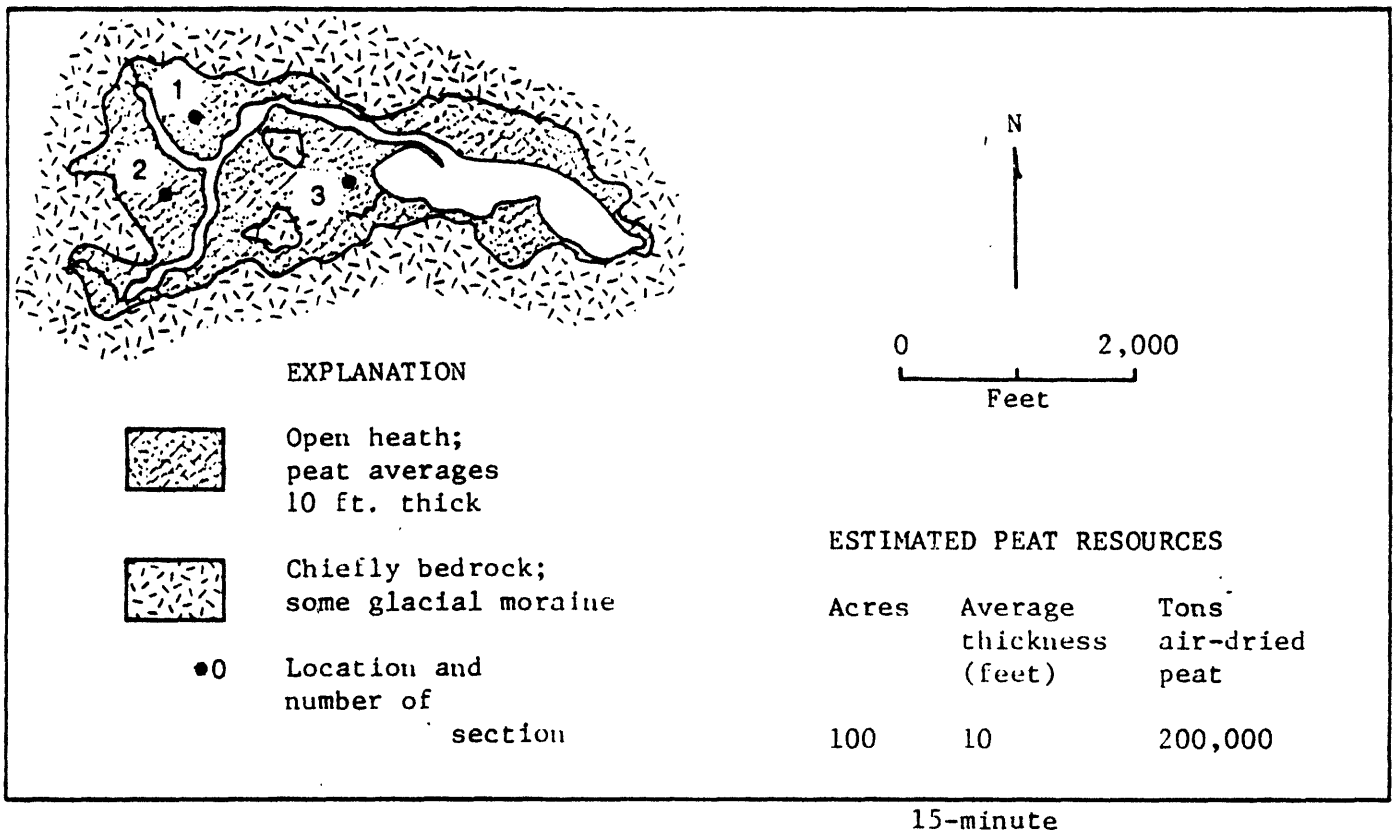


Figure 40a.--Sections and sample locations.

Table 39.--Analyses of samples located in sections in figure 40a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
2	55.57	4.60	1.01	0.24	3.0	--	65.4	9,300
3	59.32	5.40	1.52	0.19	2.2	--	66.6	10,129
4	35.99	3.90	2.56	1.11	32.6	--	50.5	6,368
7	47.04	4.54	1.19	0.18	20.6	--	55.8	8,102
Average commercial quality peat (ash content less than 25%)	53.98	4.85	1.24	0.20	8.6	--	62.6	9,177



15-minute

Figure 41. Sketch map of Ira Bog, T3 R5, Greenville/Quadrangle, Piscataquis County, Maine. (Number 40 on Index Map).

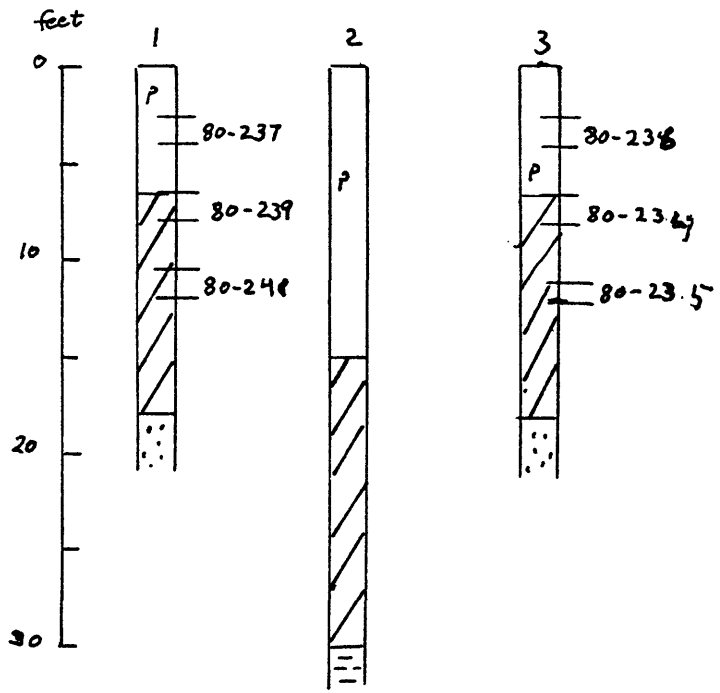


Figure 41a.--Sections and sample locations.

Table 40.--Analyses of samples located in sections in figure 41a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
234	29.18	2.74	1.68	0.41	46.4	--	40.3	5,149
235	22.42	2.34	1.41	0.44	58.6	--	32.3	3,974
236	54.91	4.87	0.65	0.13	1.0	--	66.7	9,096
237	57.17	4.80	1.16	0.18	3.1	--	64.0	9,581
239	30.36	2.40	1.85	0.48	45.3	89.8	39.3	5,474
241	26.46	2.77	2.01	1.19	47.3	--	41.1	4,675
Average commercial quality peat (ash content less than 25%)	56.04	4.84	0.91	0.16	2.1	--	65.35	9,339

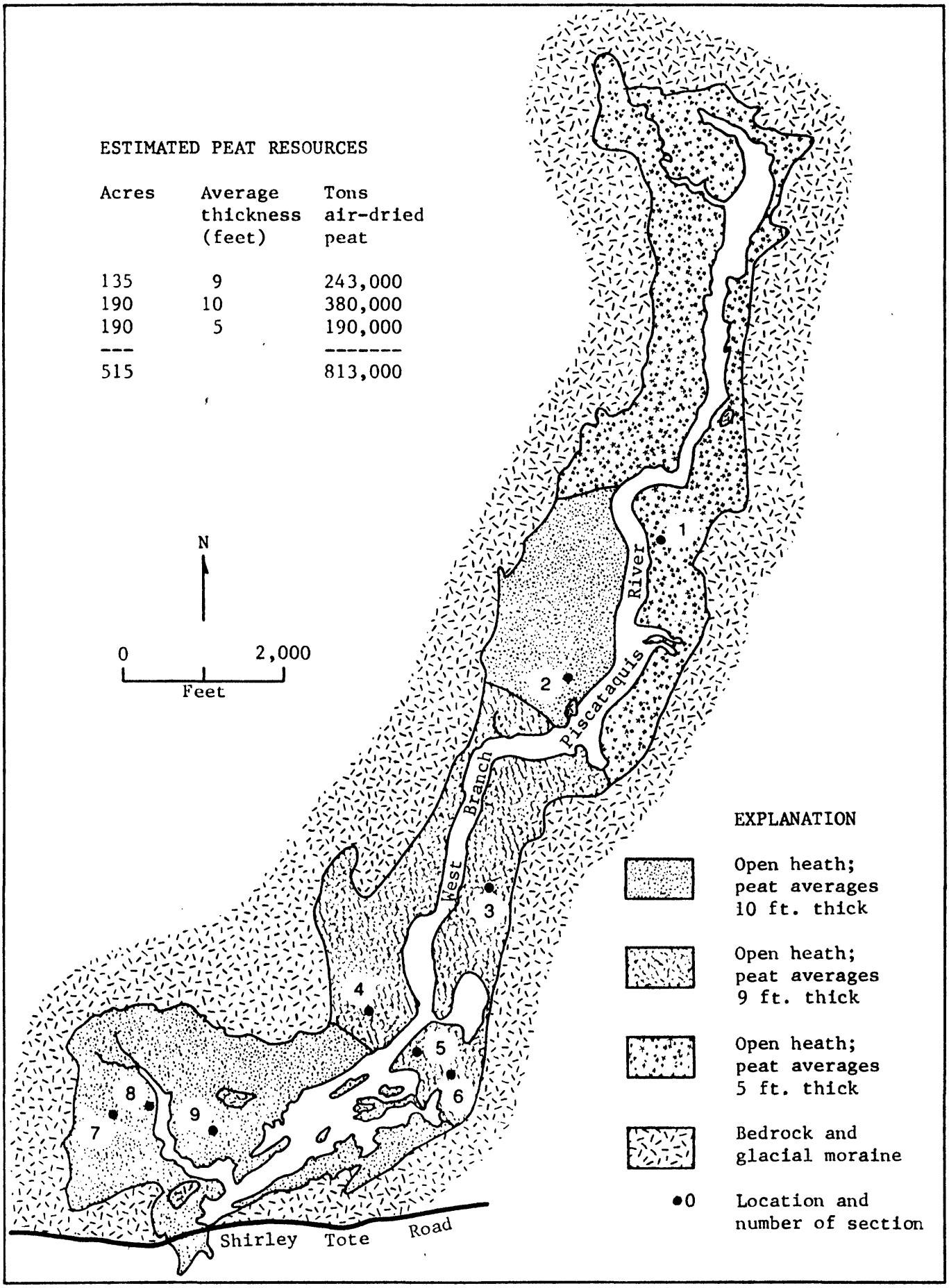


Figure 42. Sketch map of West Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 41 on Index Map).

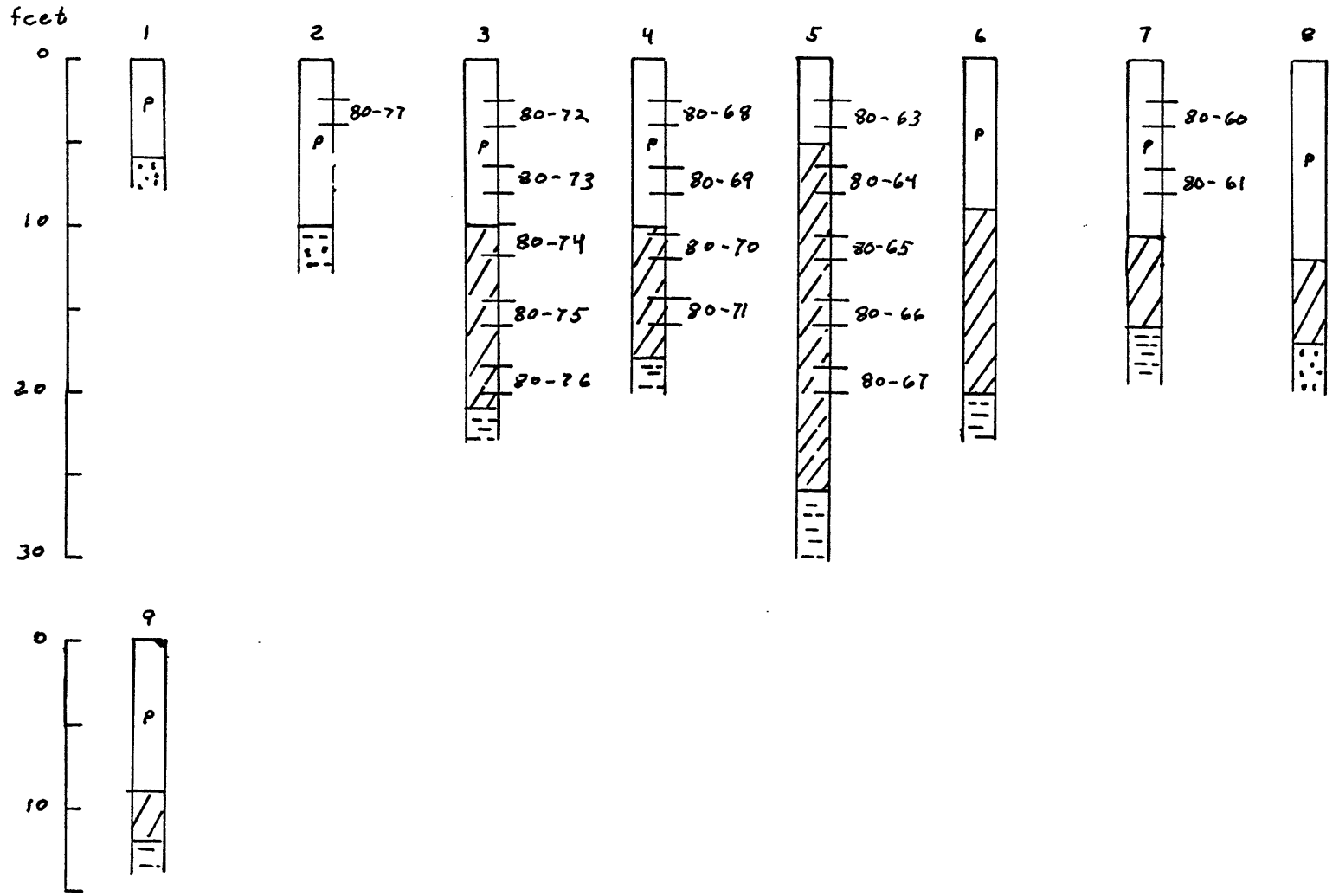


Figure 42a.--Sections and sample locations.

Table 41.--Analyses of samples located in sections in figure 42a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
60	56.74	4.92	3.67	0.13	4.3	89.3	66.8	9,862
61	49.79	3.93	5.10	0.17	17.8	90.1	58.3	8,457
63	55.37	4.91	1.54	0.21	4.1	--	65.9	9,489
64	27.44	1.85	1.76	0.38	51.7	83.6	36.0	4,783
65	27.17	2.11	1.69	0.31	52.4	83.3	37.9	4,689
66	20.63	1.13	1.62	0.28	62.8	84.7	32.1	3,512
67	26.49	2.33	2.29	0.28	50.2	87.5	40.8	4,693
68	50.31	4.17	1.73	0.16	14.3	91.1	64.4	8,594
69	53.94	4.45	1.36	0.17	8.0	--	62.5	9,077
70	39.18	2.88	2.42	0.58	30.1	91.4	51.2	6,790
71	29.00	2.50	1.94	0.75	46.9	90.1	42.0	4,965
72	55.76	4.81	1.30	0.16	2.0	--	66.5	9,429
73	53.78	4.47	1.80	0.45	8.9	--	61.2	9,029
74	38.36	2.88	1.74	0.31	34.3	90.4	48.3	6,567
75	43.96	3.46	2.46	0.69	24.0	--	53.8	7,633
76	31.62	3.29	2.36	1.09	39.7	--	46.6	5,589
77	54.62	3.47	2.29	0.23	7.4	88.3	63.5	9,236
Average commercial quality peat (ash content less than 25%)	52.70	4.29	2.36	0.26	10.09	89.70	62.5	8,978

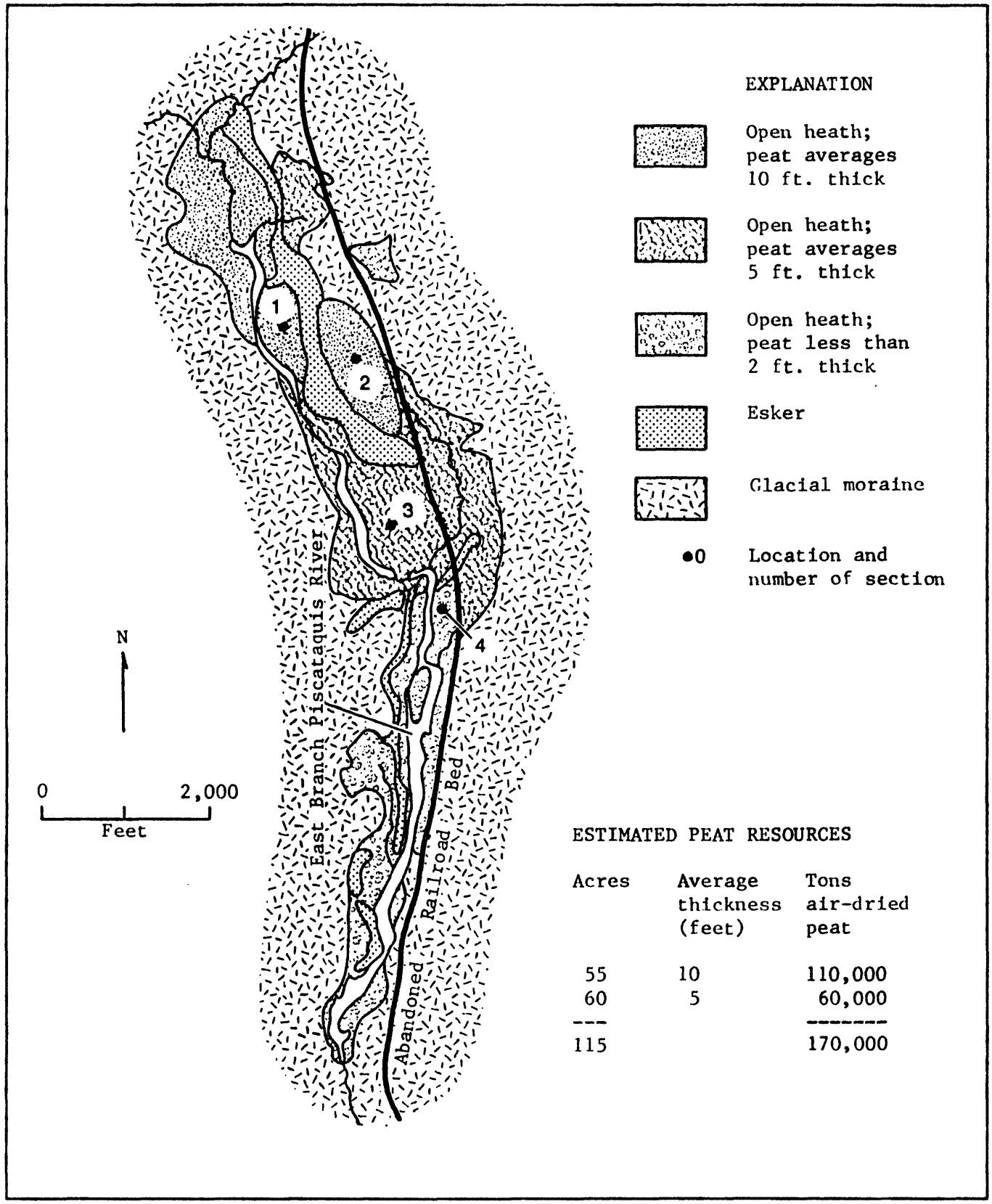


Figure 43. Sketch map of East Shirley Bog, T3 R5 BKP EKR (Little Squaw Twp.), Greenville 15 minute Quadrangle, Piscataquis County, Maine. (Number 42 on Index Map).

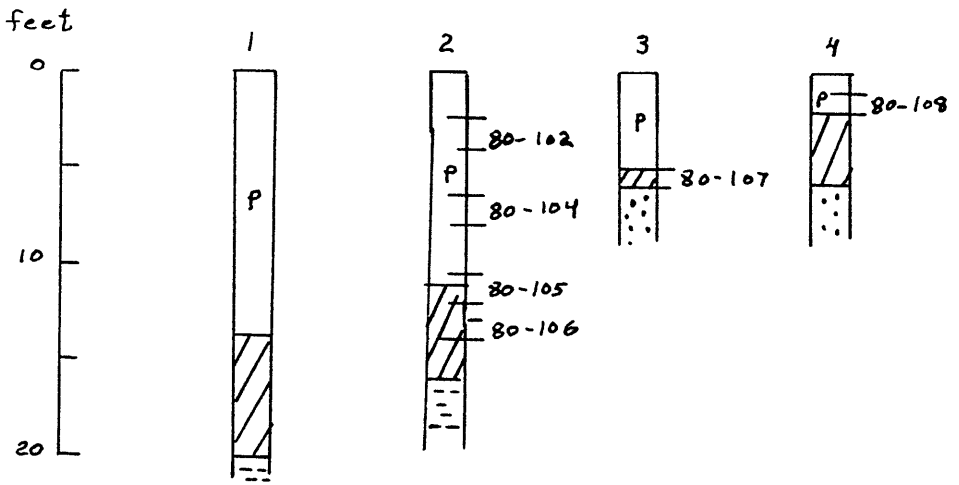
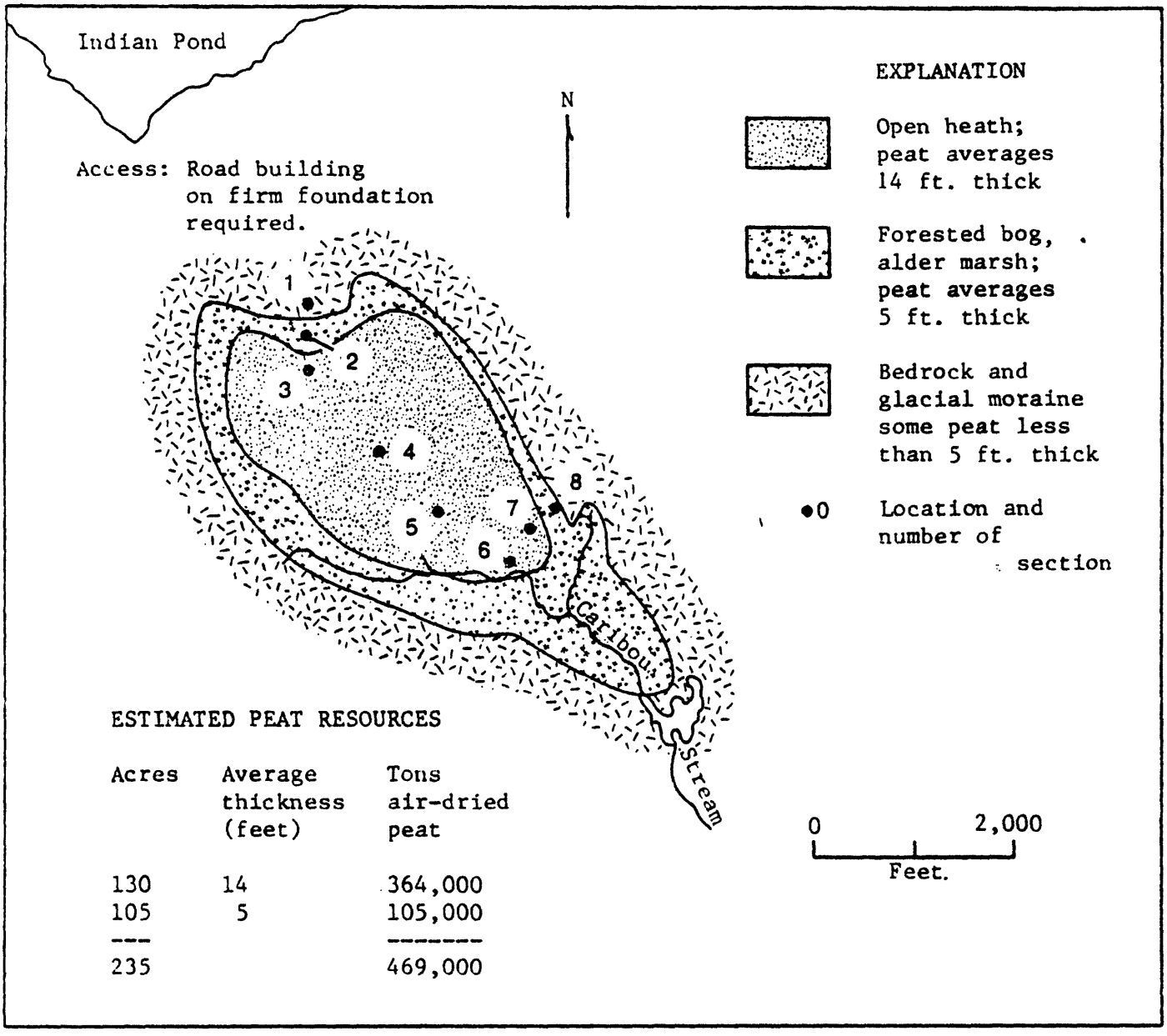


Figure 43a.--Sections and sample locations.

Table 42.--Analyses of samples located in sections in figure 43a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
102	57.54	5.42	1.68	0.17	1.3	--	66.9	9,990
104	58.16	5.43	1.75	0.17	1.8	--	67.8	9,943
105	40.45	4.18	2.56	0.56	29.1	--	51.4	7,110
106	28.94	2.44	2.11	0.32	46.1	91.7	43.6	5,069
107	32.54	2.17	1.77	0.34	44.9	82.0	40.4	5,533
108	48.44	4.60	1.75	1.03	17.4	--	57.7	8,401
Average commercial quality peat (ash content less than 25%)	54.71	5.15	1.36	0.42	6.8	--	60.8	9,445



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
130	14	364,000
105	5	105,000
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235		469,000

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

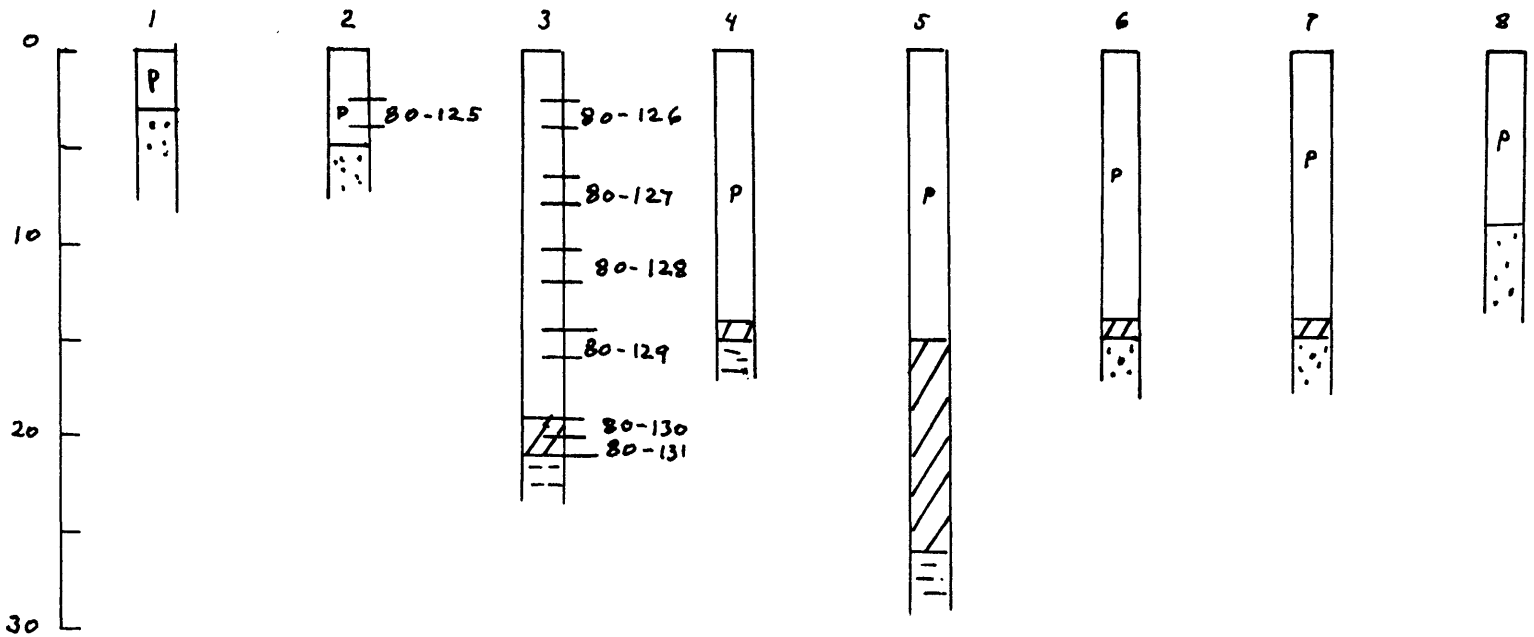
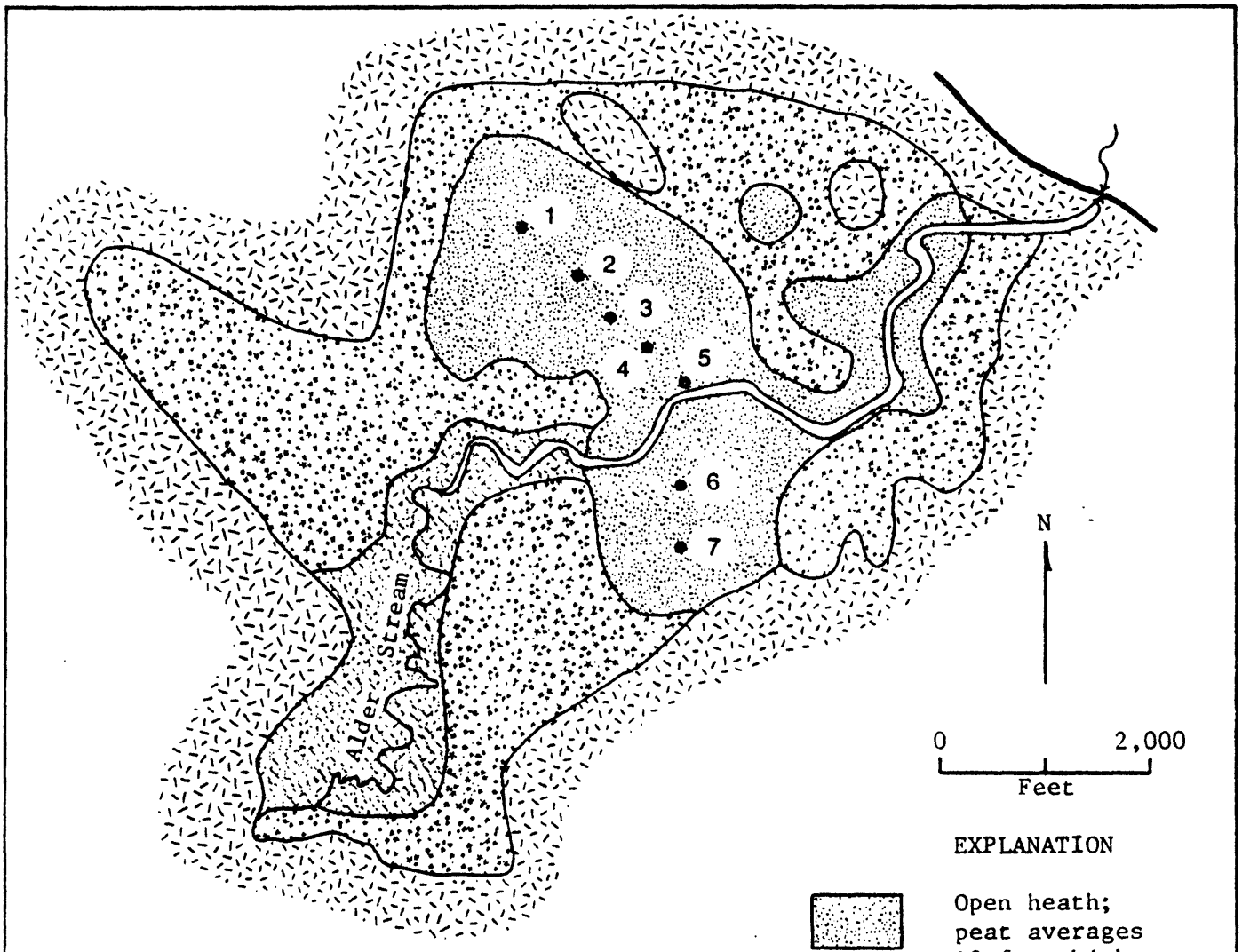


Figure 44a.--Sections and sample locations.

Table 43.--Analyses of samples located in sections in figure 44a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
125	57.20	3.61	1.47	0.10	1.5	91.4	69.2	9,563
126	50.57	3.85	0.99	0.12	6.1	91.0	68.6	8,434
127	53.18	4.06	0.91	0.13	1.6	90.8	69.3	8,919
128	55.91	5.34	0.84	0.15	0.9	--	68.2	9,383
129	56.96	4.37	1.28	0.15	2.0	90.2	66.7	9,727
130	38.36	3.35	2.46	0.59	30.8	86.9	51.4	6,694
131	20.73	1.96	1.41	0.60	61.2	79.2	31.8	3,709
Average commercial quality peat (ash content less than 25%)	54.76	3.37	1.10	0.13	2.4	90.9	68.4	9,205



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
235 acres open heath	10	470,000
100 acres open heath	6	120,000
375 acres forested bog	6	450,000
710 acres		1,040,000

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).

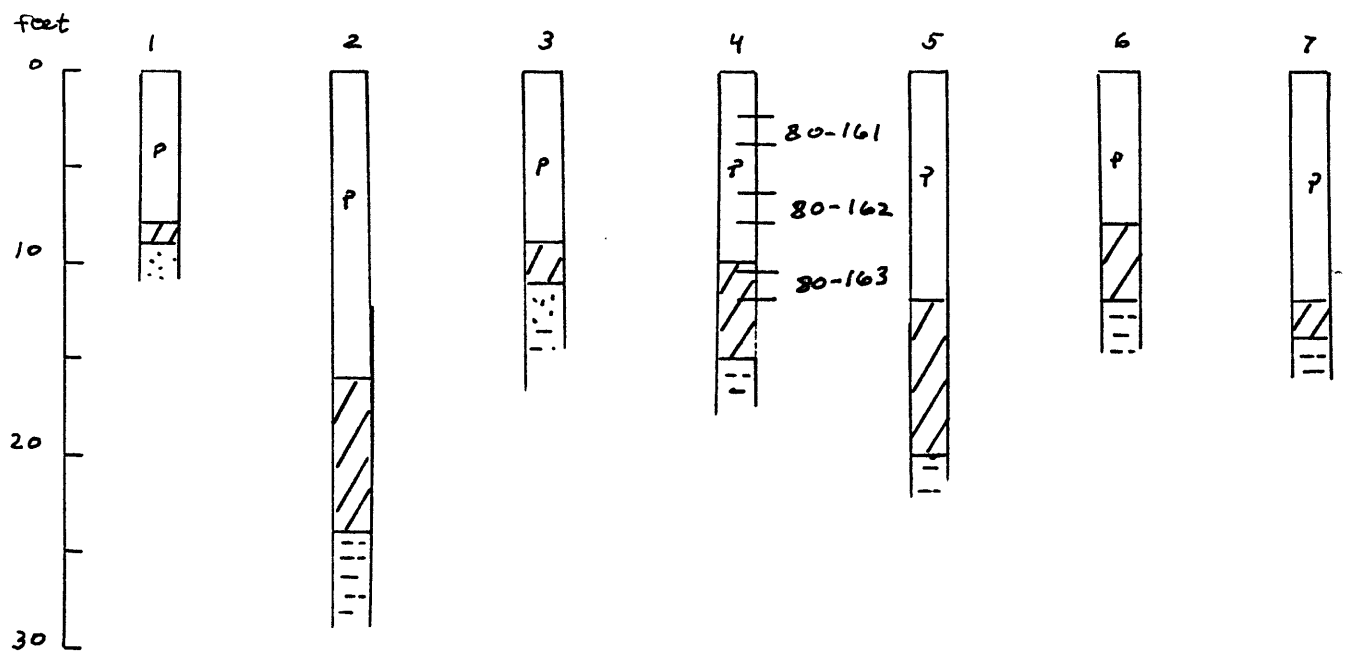


Figure 45a.--Sections and sample locations.

Table 44.--Analyses of samples located in sections in figure 45a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
161	56.07	4.19	1.35	0.25	5.5	86.5	63.1	9,583
162	55.84	4.21	1.94	0.81	5.8	90.2	63.4	9,485
163	16.55	1.57	1.22	0.14	68.6	81.3	21.9	2,877
Average commercial quality peat (ash content less than 25%)	55.95	4.20	1.65	0.53	5.65	88.4	63.3	9,534

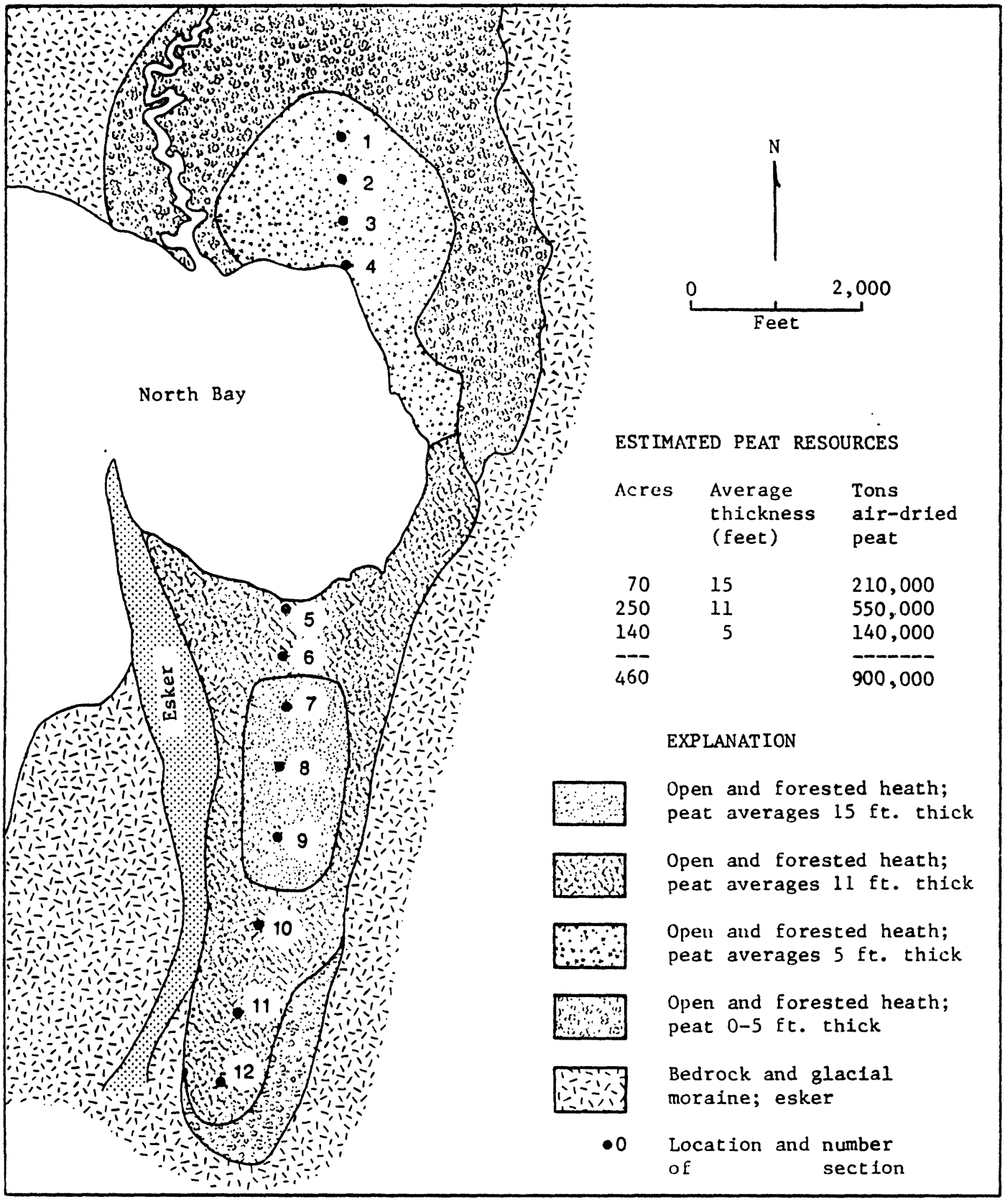


Figure 46. Sketch map of bogs adjacent to North Bay and west of Barney Hill and Bickford Hill, Smithfield and Belgrade Twps., Norridgewock 15-minute Quadrangle, Somerset and Kennebec Counties, Maine. (Number 45 on Index Map).

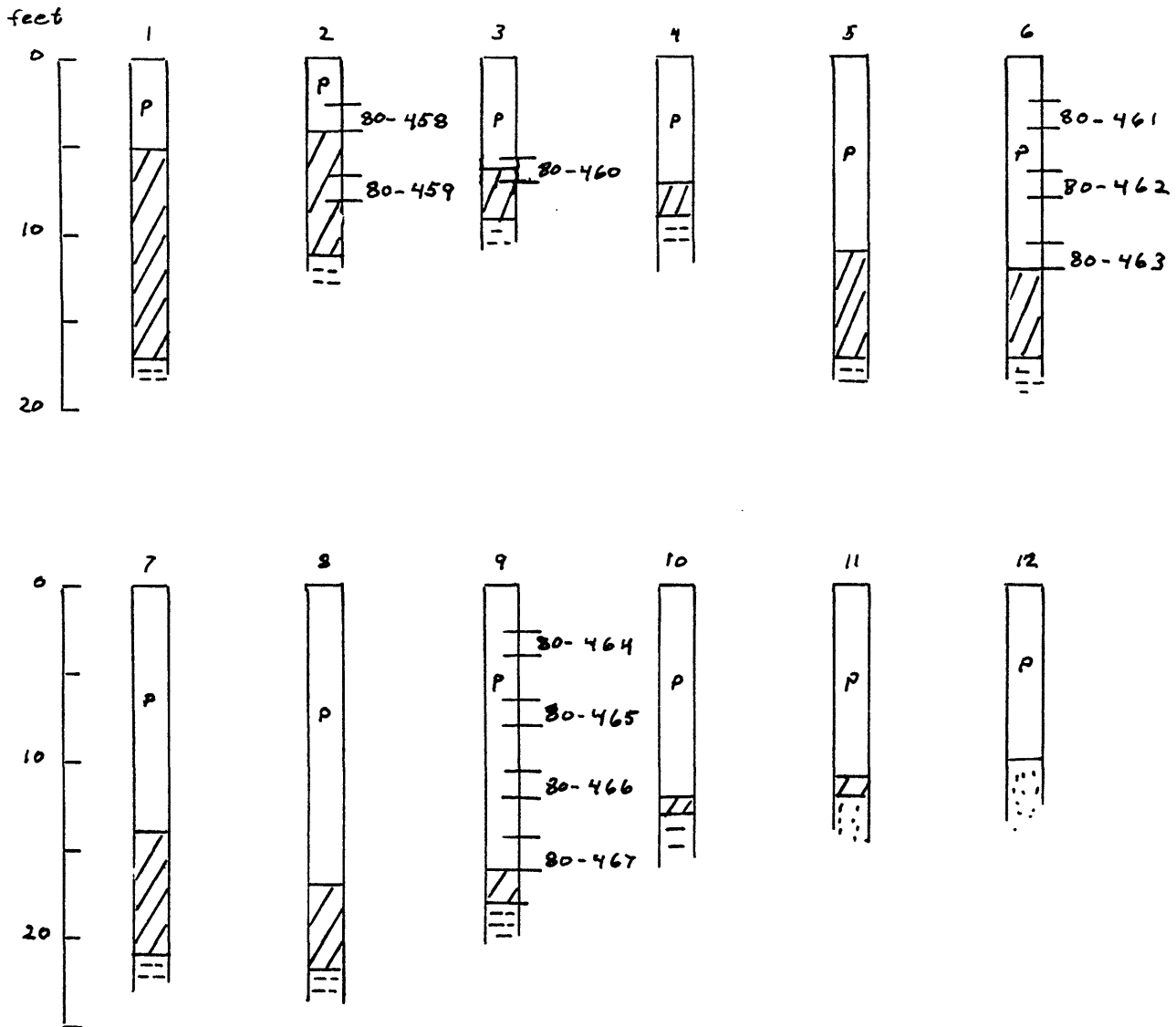


Figure 46a.--Sections and sample locations.

Table 45.--Analyses of samples located in sections in figure 46a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
458	59.17	5.09	1.26	0.30	2.8	--	63.1	10,150
459	14.72	1.26	1.02	0.32	72.1	76.5	21.4	2,499
460	39.85	3.52	2.08	0.83	31.2	--	47.2	6,955
461	54.94	4.71	0.64	0.13	1.0	91.2	66.9	9,033
462	49.65	4.52	2.06	0.51	14.0	90.5	60.2	8,571
463	49.21	4.82	2.57	0.80	14.7	--	59.8	8,641
464	56.02	4.89	0.67	0.13	0.7	90.8	67.0	9,190
465	57.57	4.96	1.25	0.16	1.4	90.7	65.8	9,653
466	57.07	4.72	1.80	0.52	3.5	89.9	63.0	9,541
467	47.67	4.61	2.99	1.01	18.4	91.1	57.7	8,211
Average commercial quality peat (ash content less than 25%)	53.91	4.79	1.66	0.45	7.06	90.70	62.94	9,123

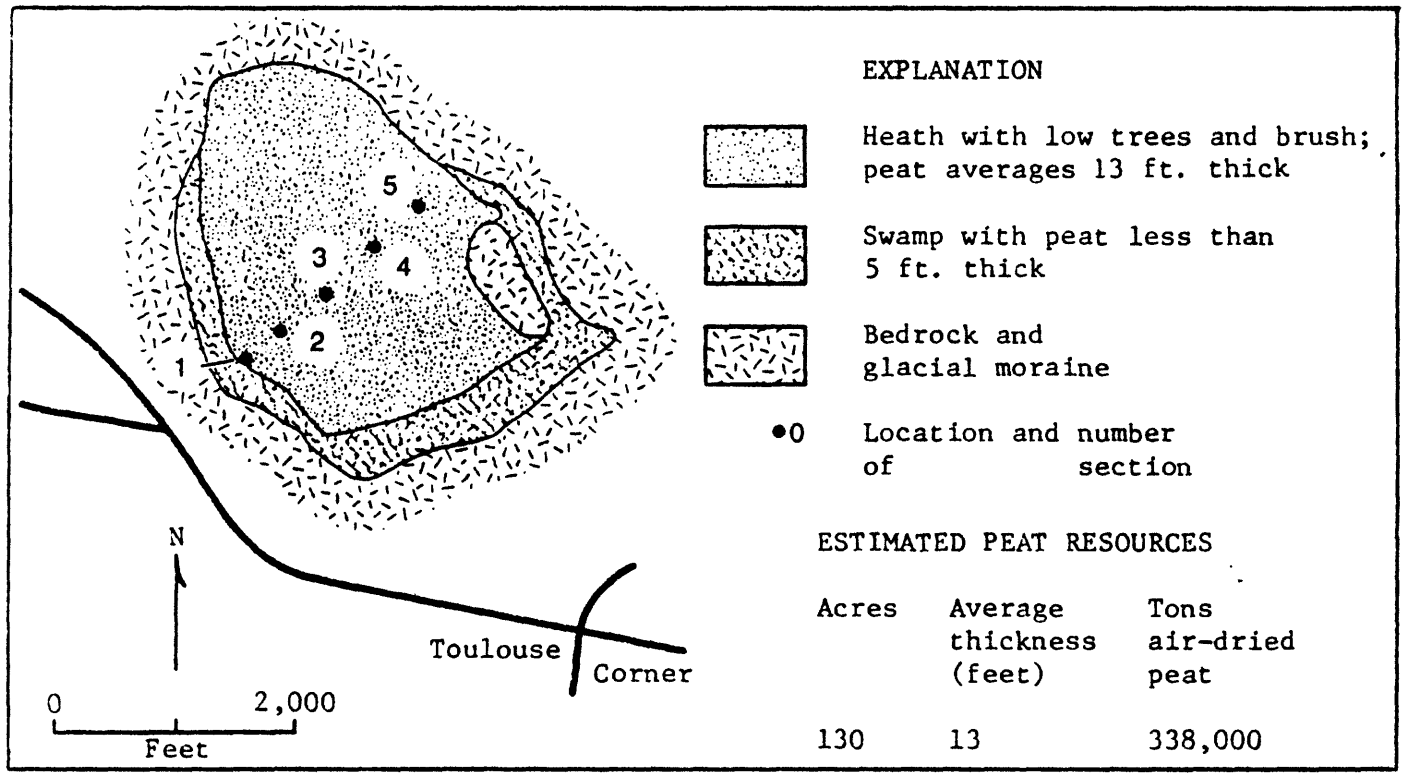


Figure 47. Sketch map of bog northwest of Toulouse Corner, Fairfield Twp., Waterville 15-minute Quadrangle, Somerset County, Maine. (Number 46 on Index Map).

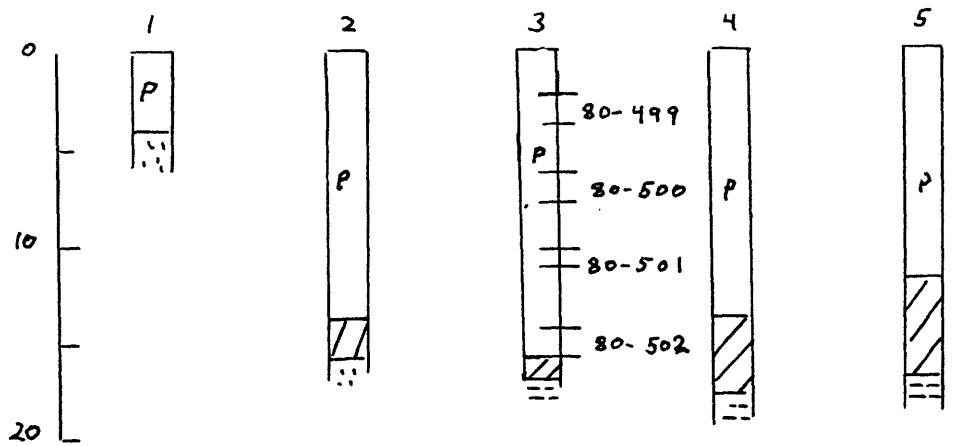


Figure 47a.--Sections and sample locations.

Table 46.--Analyses of samples located in sections in figure 47a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
499	57.96	5.10	0.96	0.15	2.1	--	64.4	9,726
500	56.56	4.60	0.92	0.19	1.5	91.8	64.6	9,390
501	58.41	5.25	1.16	0.16	1.4	--	65.5	9,829
502	42.03	4.88	3.87	0.82	24.2	91.5	59.5	7,653
Average commercial quality peat (ash content less than 25%)	53.74	4.96	1.73	0.33	7.3	91.7	63.5	9,150

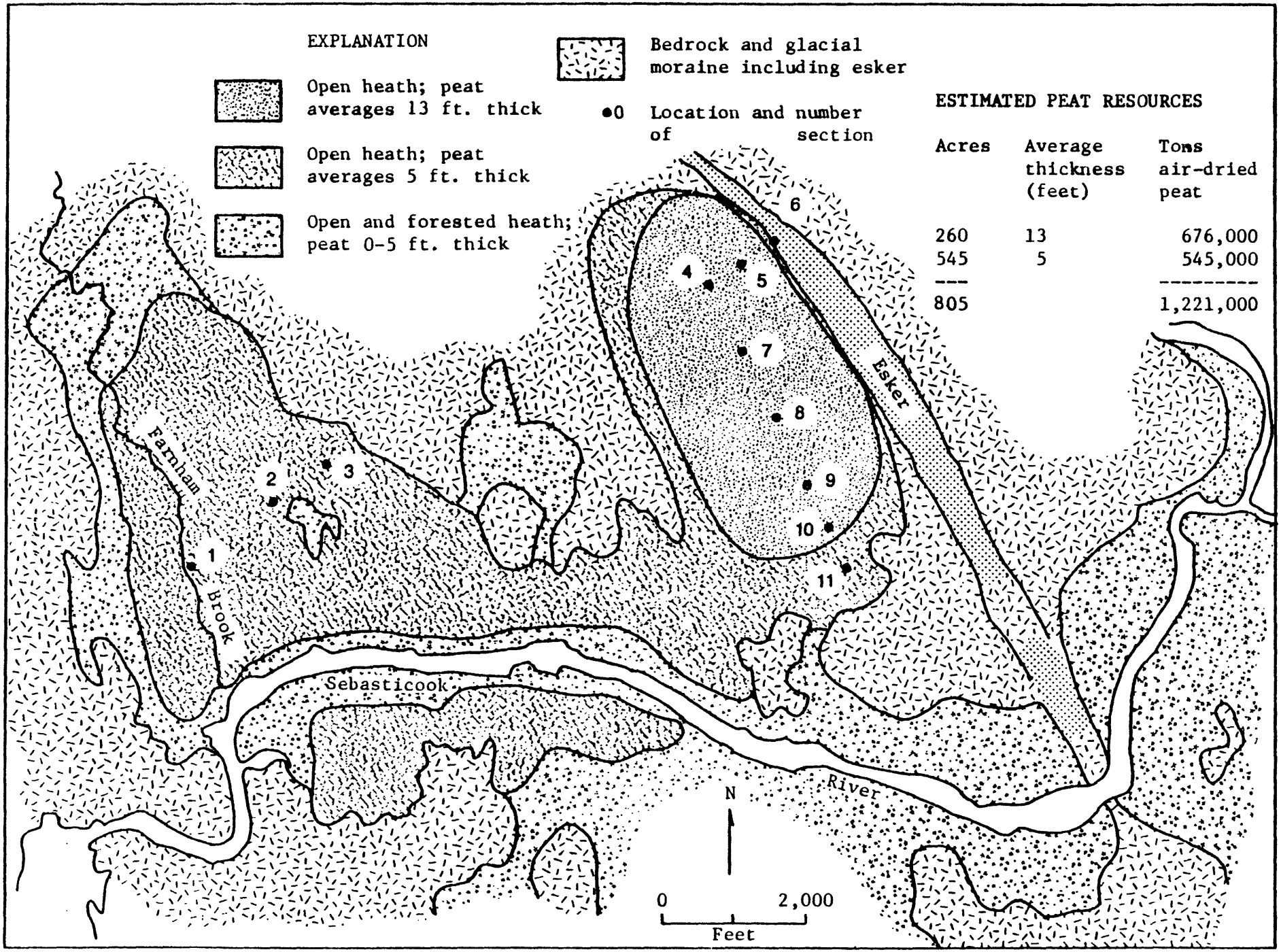


Figure 48. Sketch map of Big Meadow Bog south of Pittsfield, Pittsfield and Detroit Twps., Pittsfield 15-minute Quadrangle, Somerset County, Maine. (Number 47 on Index Map)

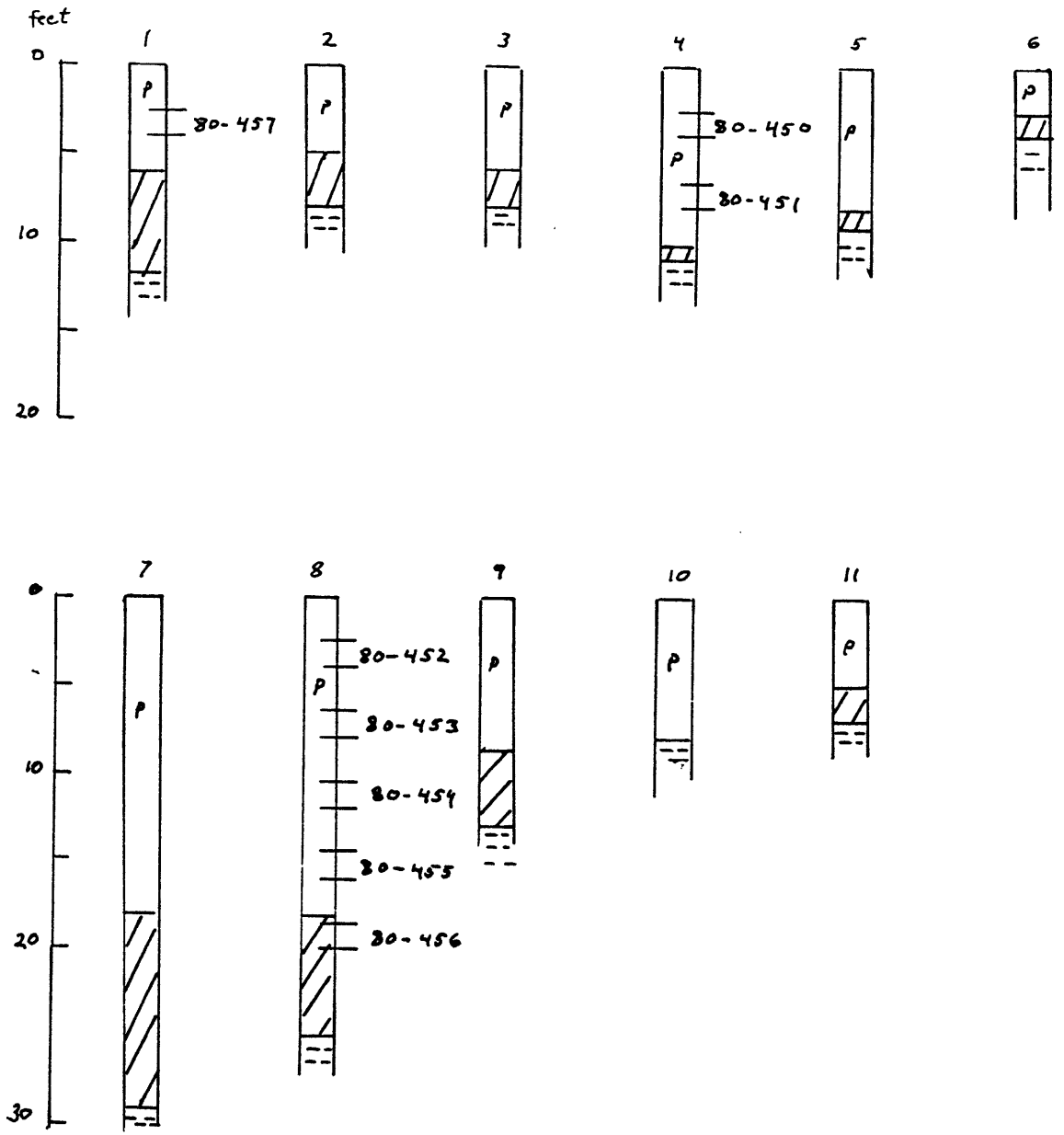


Figure 48a.--Sections and sample locations.

Table 47.--Analyses of samples located in sections in figure 48a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
450	58.09	5.27	1.05	0.16	1.3	--	66.9	9,947
451	55.88	3.62	1.94	0.39	5.3	87.6	61.1	9,081
452	55.32	5.12	1.03	0.15	0.9	90.1	67.4	9,248
453	58.81	4.48	1.29	0.22	2.8	87.3	62.7	9,766
454	56.25	4.77	1.78	0.24	3.0	--	66.6	9,673
455	54.67	4.26	1.98	0.70	5.8	--	61.7	9,097
456	31.39	3.51	2.49	1.48	39.9	90.5	46.6	5,654
457	45.05	4.01	2.69	1.08	21.8	87.7	55.0	7,914
Average commercial quality peat (ash content less than 25%)	54.87	4.50	1.68	0.42	5.84	88.18	63.1	9,246

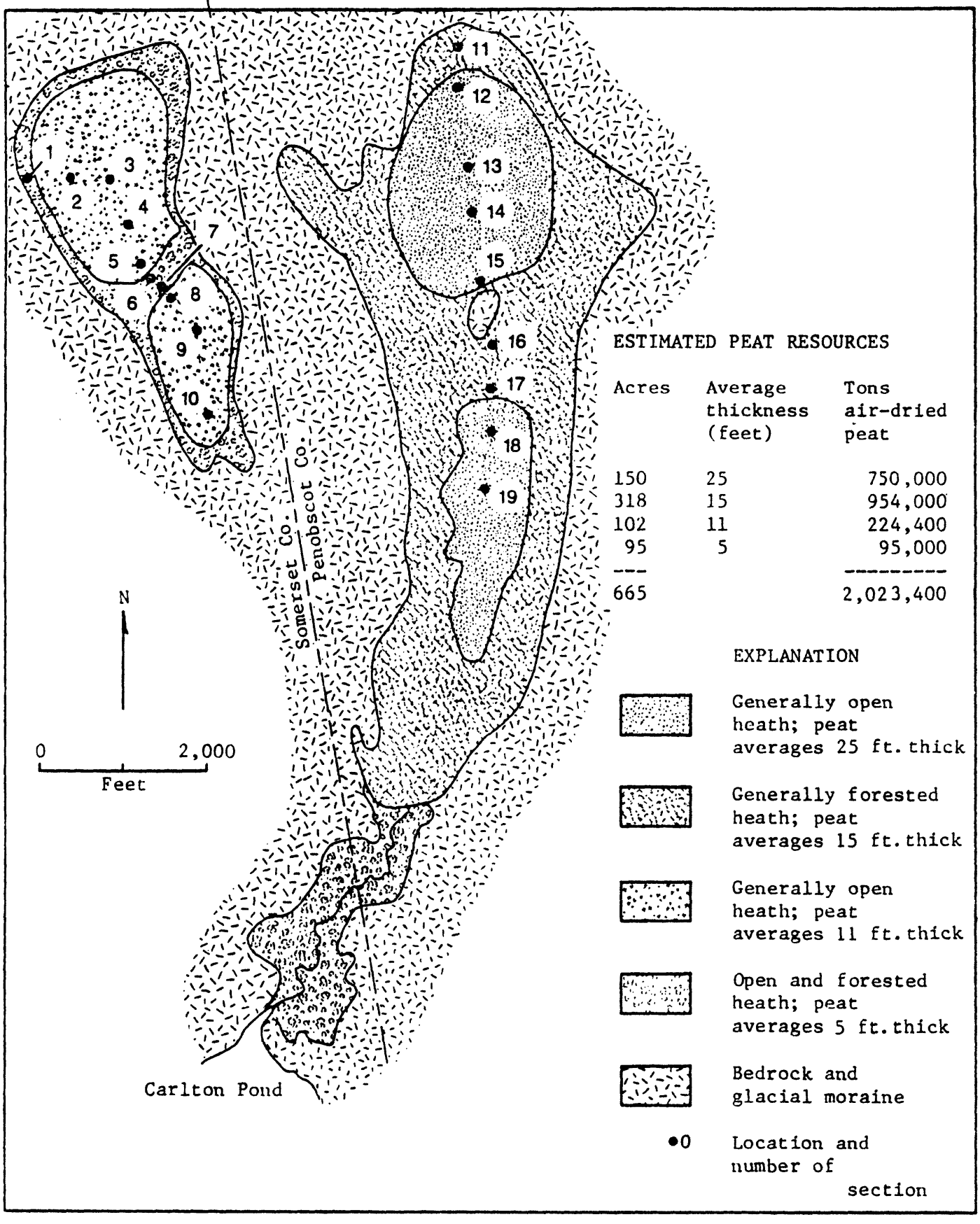


Figure 49. Sketch map of bogs southeast of Detroit and north of Carlton Pond, Pittsfield and Burnham 15-minute Quadrangles, Somerset and Penobscot Counties, Maine. (Number 48 on Index Map).

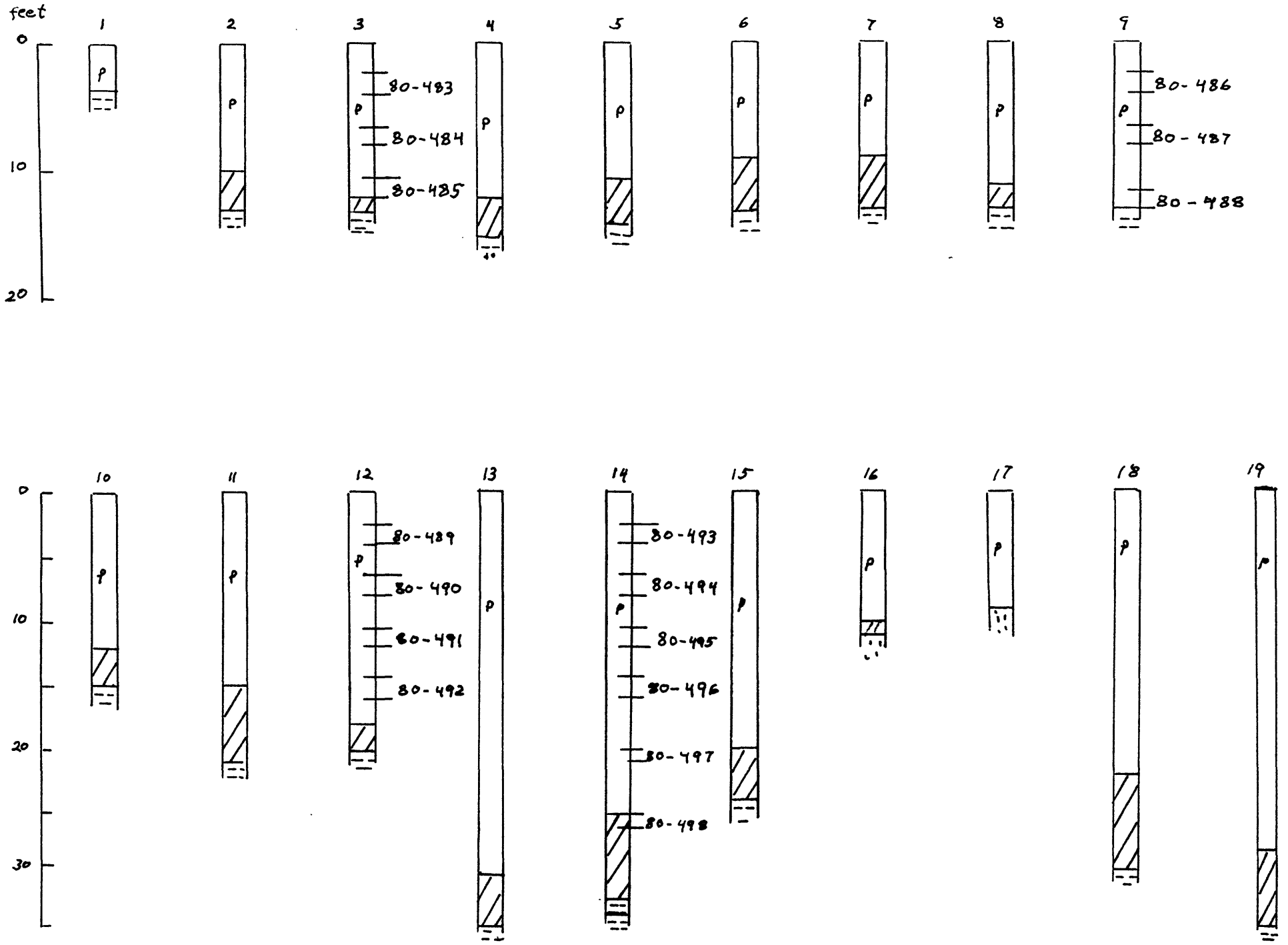


Figure 49a.--Sections and sample locations.

Table 48.--Analyses of samples located in sections in figure 49a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
483	56.24	5.02	0.71	0.12	0.7	--	67.9	9,265
484	57.99	3.43	1.52	0.33	3.2	89.1	60.8	9,453
485	56.68	6.52	2.67	0.46	3.7	90.4	67.5	9,919
486	56.97	4.73	0.93	0.14	1.2	89.8	65.6	9,417
487	57.04	5.08	1.77	0.19	2.8	--	65.7	9,690
488	58.09	5.12	1.79	0.22	3.9	90.8	65.6	10,064
489	56.76	4.93	1.44	0.19	1.7	89.8	65.8	9,630
490	57.96	4.78	1.21	0.16	1.3	87.3	65.3	9,652
491	56.12	4.72	1.86	0.40	5.6	--	62.4	9,178
492	56.02	4.24	2.09	0.66	4.7	90.0	61.9	9,250
493	57.23	5.21	0.96	0.12	0.8	--	68.3	9,596
494	56.93	4.86	0.82	0.14	1.0	91.9	66.7	9,393
495	57.74	3.64	1.59	0.22	2.6	90.6	63.4	9,401
496	56.99	4.79	1.60	0.21	2.0	90.6	64.8	9,421
497	56.27	4.77	1.43	0.34	2.5	90.7	65.0	9,569
498	37.15	3.75	2.64	0.68	33.0	92.8	49.9	6,631
Average commercial quality peat (ash content less than 25%)	56.99	4.44	1.49	0.26	2.51	90.09	65.11	9,461

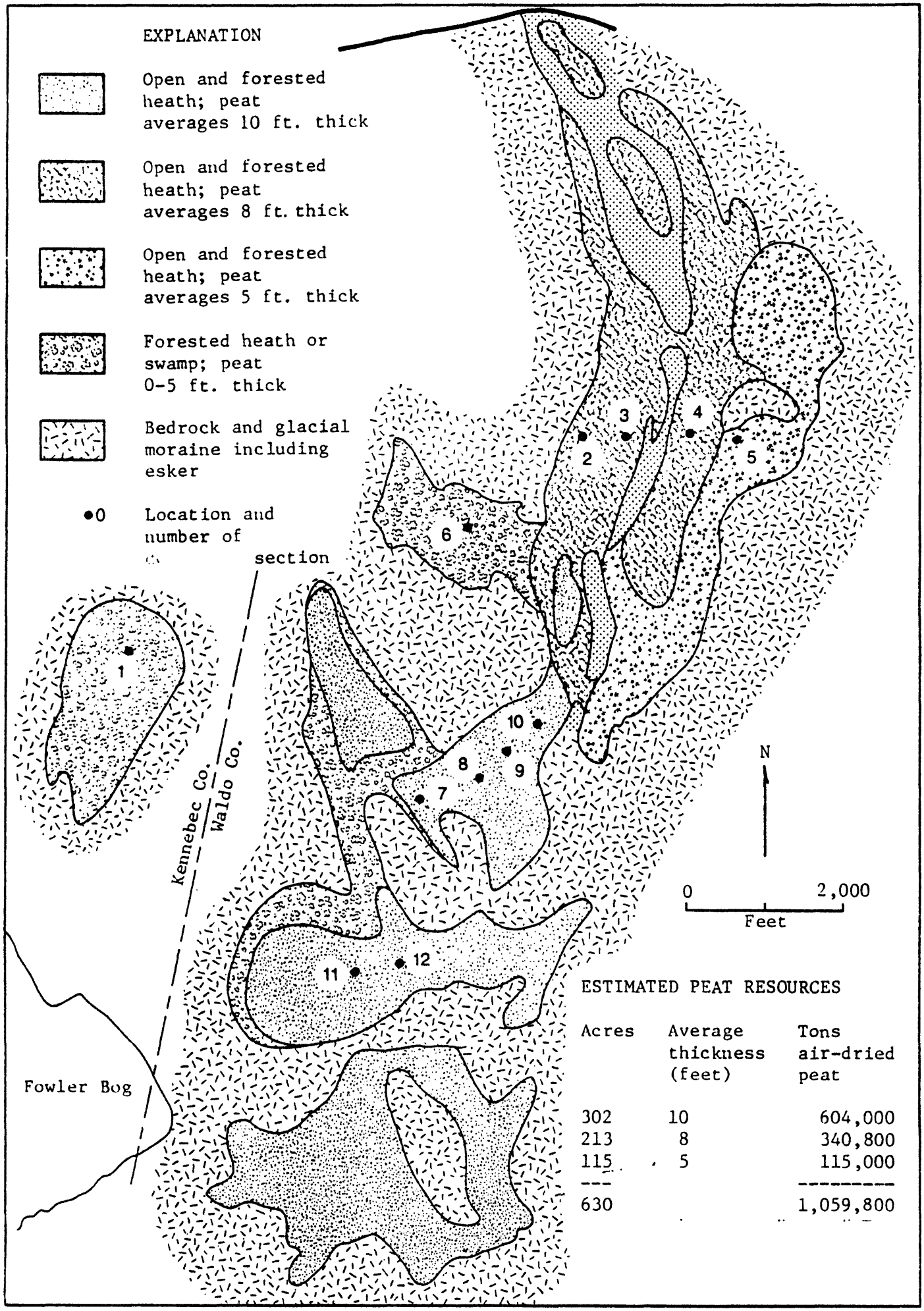


Figure 50. Sketch map of bogs north and east of Fowler Bog, Unity Twp., Burnham 15-minute Quadrangle, Kennebec and Waldo Counties.

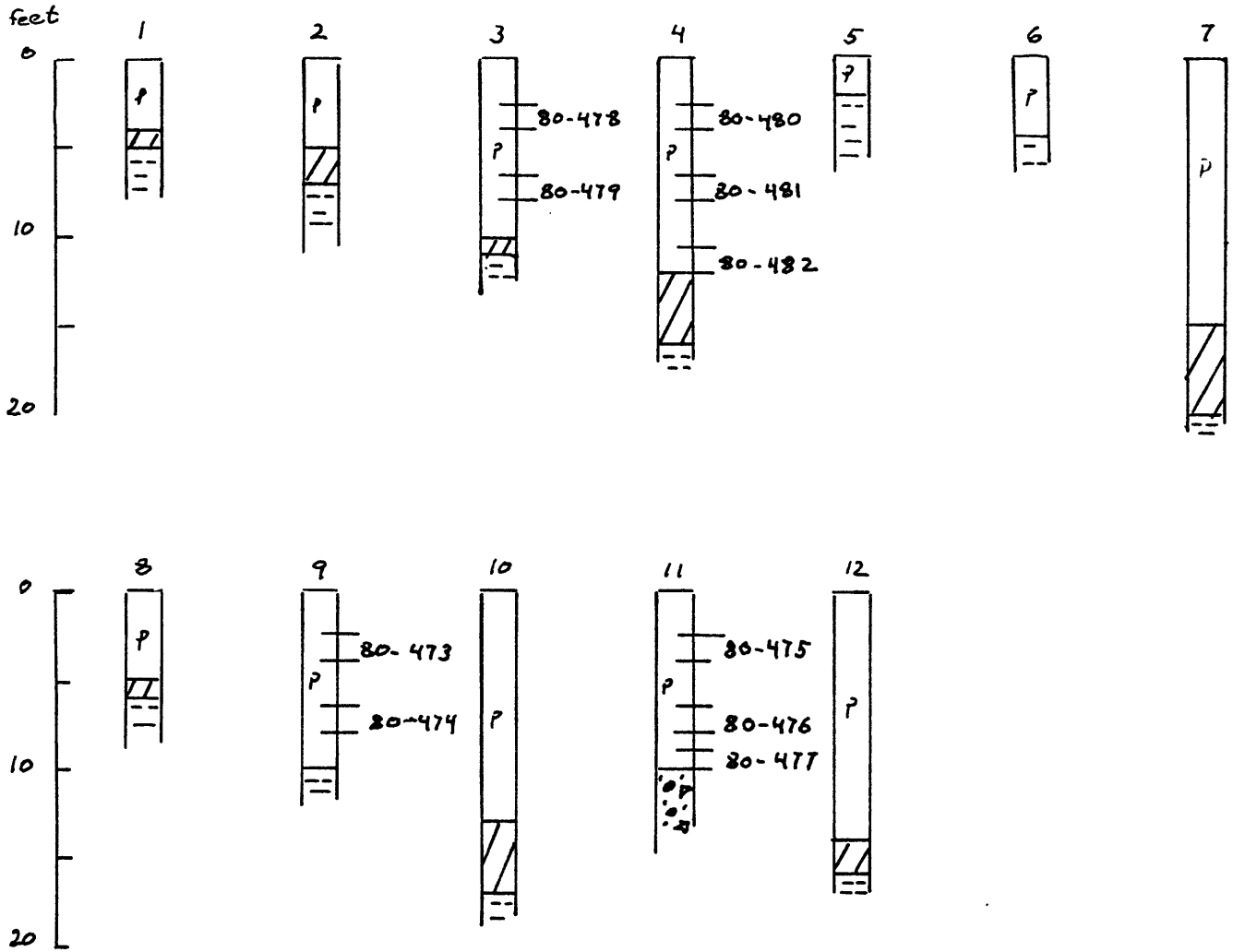
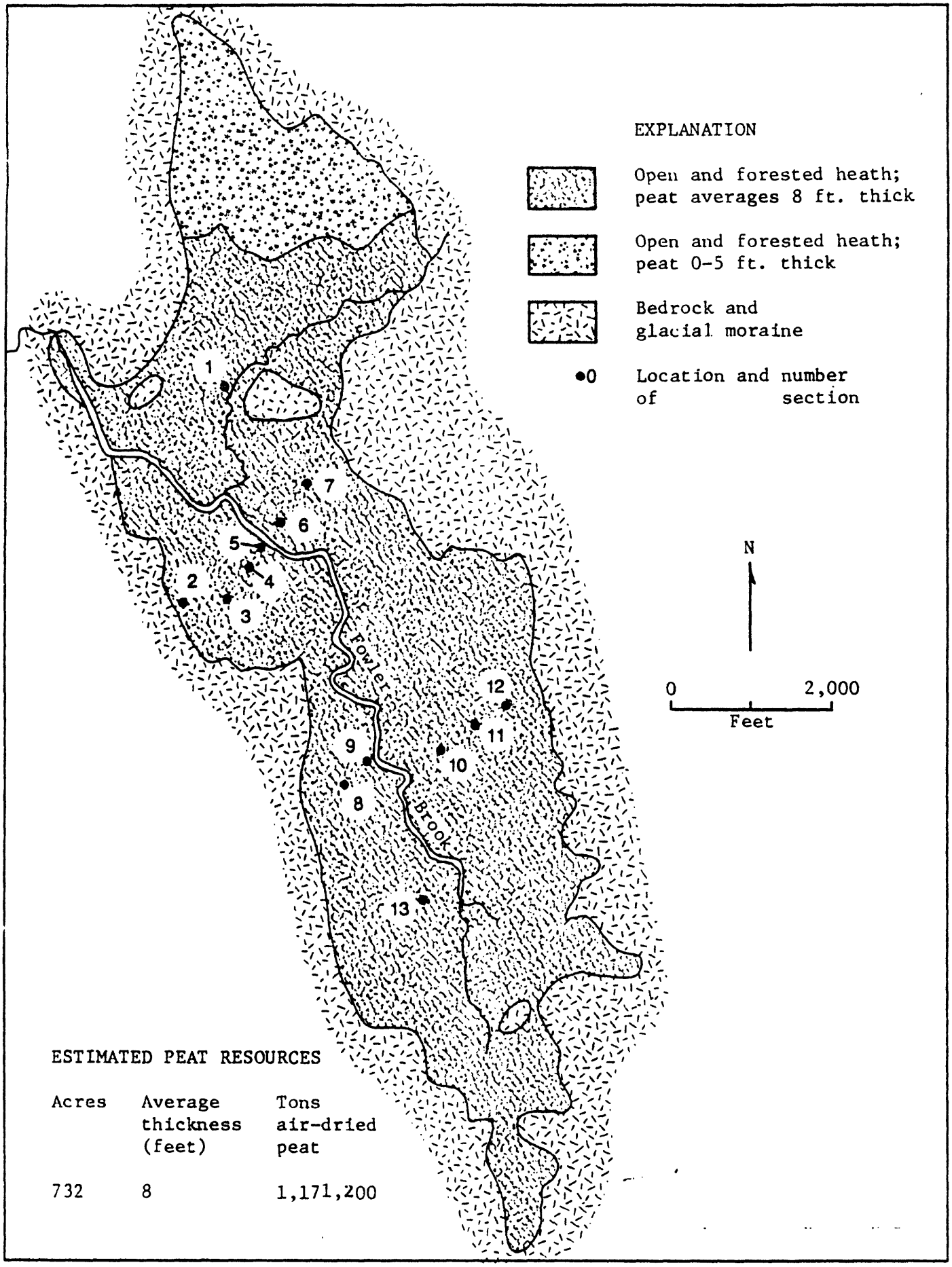


Figure 50a.--Sections and sample locations.

Table 49.--Analyses of samples located in sections in figure 50a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
473	58.27	4.88	1.05	0.17	1.8	87.7	64.8	9,721
474	56.39	3.96	1.83	0.52	4.9	88.7	61.1	9,293
475	58.18	4.70	1.51	0.32	2.7	88.7	62.0	9,761
476	56.77	4.37	1.29	0.44	4.8	--	60.8	9,512
477	57.28	5.13	1.55	0.46	3.2	90.2	63.0	9,812
478	58.70	4.19	1.19	0.49	4.0	84.9	61.8	9,895
479	57.70	4.43	1.39	0.49	4.1	--	61.0	9,566
480	56.69	4.17	1.67	0.32	5.1	86.9	60.8	9,390
481	56.48	4.49	1.29	0.28	2.6	89.5	63.5	9,389
482	45.05	4.61	2.96	0.96	19.6	91.6	60.1	8,065
Average commercial quality peat (ash content less than 25%)	56.15	4.49	1.57	0.45	5.28	88.5	61.9	9,440



ESTIMATED PEAT RESOURCES

Acres	Average thickness (feet)	Tons air-dried peat
732	8	1,171,200

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).

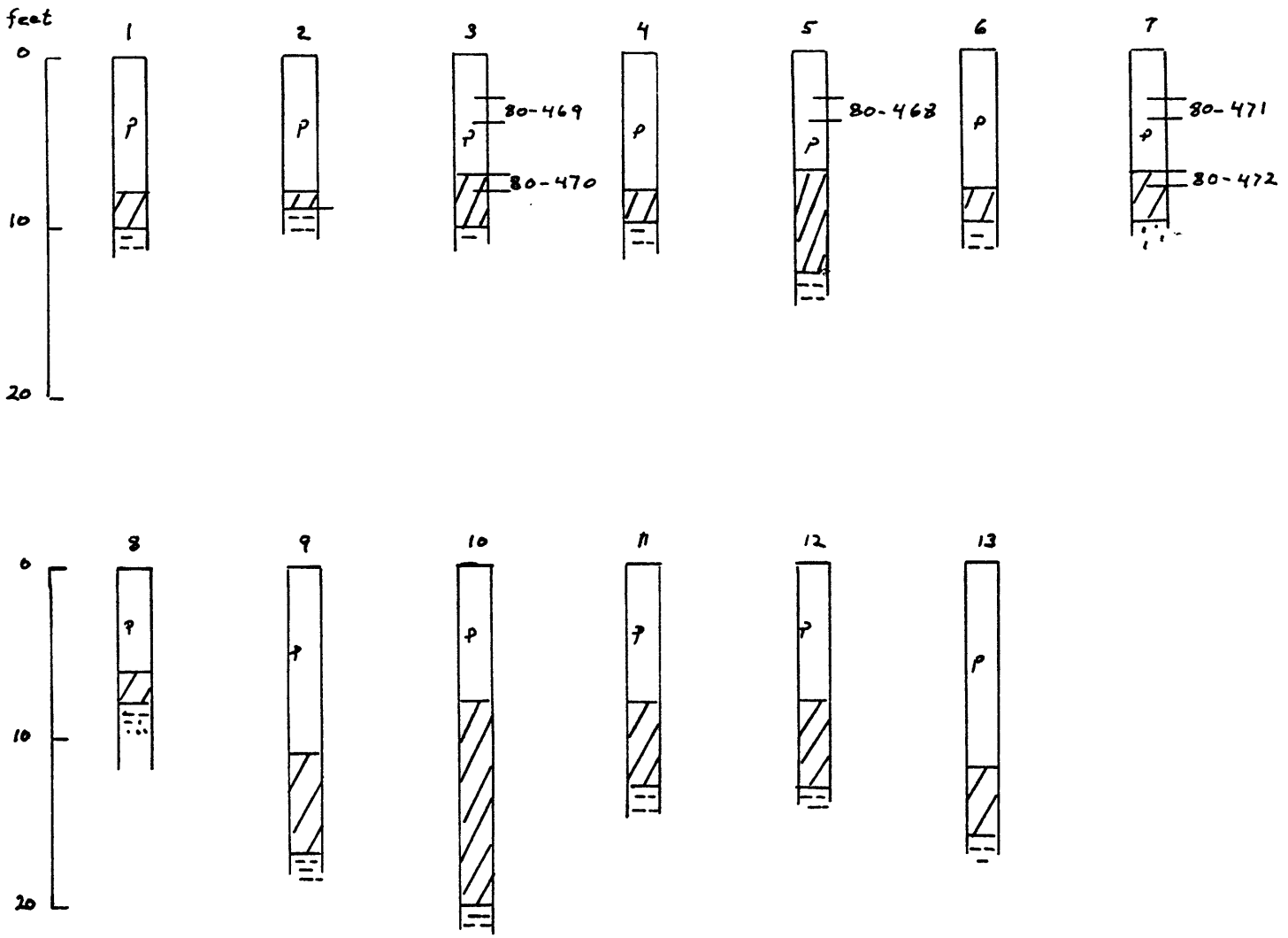


Figure 51a.--Sections and sample locations.

Table 50.--Analyses of samples located in sections in figure 51a.

Sample Analyses

CC80	Percent dry weight					Percent H_2O as Received	Dry weight	
	C	H	N	S	Ash		Percent Volatile Matter	BTU
468	58.62	4.46	1.34	0.27	3.0	--	64.0	9,847
469	59.53	4.98	1.00	0.18	1.7	87.3	65.7	10,086
470	41.76	4.15	2.48	1.53	25.0	90.7	55.9	7,282
471	56.76	4.71	1.25	0.36	4.6	88.4	64.1	9,648
472	36.07	3.80	2.60	1.49	33.0	88.9	51.3	6,420
Average commercial quality peat (ash content less than 25%)	58.30	4.72	1.20	0.27	3.1	87.9	64.6	9,860